

Our Ref: MCR-19-241

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Dear Professor Menezes

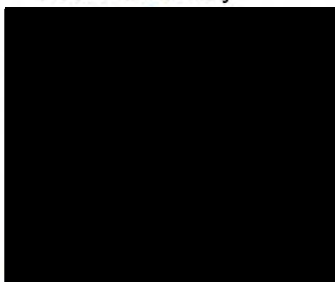
**SUBMISSION: QUEENSLAND COMPETITION AUTHORITY'S DECLARATION REVIEW**

On 18 December 2018 the Queensland Competition Authority (**QCA**) released its Draft Recommendation on its review of the declaration of services provided by Queensland Rail. In providing the Draft Recommendation the QCA sought submissions from interested parties on whether the services described in s. 250 of the *Queensland Competition Authority Act 1997* should be declared, declared in part, or not declared.

I am pleased to attach Queensland Rail's submission responding to the QCA's Draft Recommendation for your consideration.

If you have any questions in relation to this submission questions please do not hesitate to contact Douglas Jasch, Manager Policy and Regulation, on 3072 0544.

Yours sincerely



QUEENSLAND RAIL COMMERCIAL-IN-CONFIDENCE

# Declaration Review: Queensland Rail's Response to the QCA's Draft Recommendation

11 March 2019

 QueenslandRail

# Contents

|   |           |
|---|-----------|
| <b>Introduction</b> .....   | <b>4</b>  |
| Criterion (a) is not satisfied .....  | 4         |
| The QCA must be affirmatively satisfied .....   | 5         |
| Queensland Rail Access Framework .....  | 5         |
| <b>The QCA's Review</b> .....   | <b>7</b>  |
| Queensland Rail .....   | 7         |
| The declaration due to expire .....   | 8         |
| Declaration of services under Part 5 of the QCA Act.....  | 8         |
| <b>Preliminary Matters</b> .....  | <b>10</b> |
| Service and facility definitions .....  | 10        |
| Relevance of New Access Framework to the QCA's Review .....   | 14        |
| <b>Criterion (a)</b> .....  | <b>15</b> |
| Summary .....   | 15        |
| Application and interpretation of criterion (a).....  | 16        |
| No ability or incentive to exercise market power in the provision of below rail services to freight operators ..... | 21        |
| Evidence of constraints other than declaration.....   | 23        |
| Constraints in the provision of below rail services to freight operators .....                                      | 25        |
| No ability or incentive to use any market power to affect passenger service markets .....                           | 38        |
| No two-period hold-up problem.....  | 38        |
| New Access Framework .....  | 39        |
| Dependent markets will remain effectively competitive .....   | 46        |
| Conclusion on criterion (a).....  | 47        |
| <b>Criterion (b)</b> .....  | <b>48</b> |
| Summary .....   | 48        |
| Application and interpretation of criterion (b).....  | 48        |
| Criterion (b) issues.....   | 49        |
| Conclusion on criterion (b).....  | 54        |
| <b>Criterion (c)</b> .....  | <b>55</b> |
| Summary .....   | 55        |
| Application and interpretation of criterion (c).....  | 55        |
| Criterion (c) issues.....   | 63        |
| Conclusion on criterion (c) .....   | 74        |
| <b>Criterion (d)</b> .....  | <b>75</b> |
| Summary .....   | 75        |
| Application and interpretation of criterion (d).....  | 75        |
| Draft Recommendation and overview of Queensland Rail's response .....   | 77        |
| Criterion (d) not satisfied as no economic benefits flow from declaration .....                                     | 79        |
| Investment effects .....  | 80        |
| Administrative and compliance costs .....   | 84        |
| Alternative regulatory arrangements are in the public interest.....   | 87        |
| Policy reasons .....  | 88        |
| Service by service analysis.....  | 89        |
| Conclusion on criterion (d).....  | 91        |

## Attachments

- Confidential Attachment A: Queensland Rail's Network
- Confidential Attachment B: HoustonKemp Economists, *Does Queensland Rail's rail network satisfy criterion (a)?*, March 2019
- Confidential Attachment C: Ranbury Management Group, *North Coast Line Capacity Improvement Study - Final Report for the Department of Main Roads and Transport*, February 2015
- Confidential Attachment D: PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains Working Paper*, August 2016
- Attachment E: Executed Deed Poll, Queensland Rail Access Framework and Standard Access Agreement
- Attachment F: Deed Poll (changes to June 2018 version marked up)
- Attachment G: Access Framework (changes to June 2018 version marked up)
- Attachment H: Excerpts from Standard Access Agreement (changes to June 2018 version marked up)
- Attachment I: Consistency of Access Framework with Competition Principles Agreement Table

# Introduction

- 1 Queensland Rail welcomes and endorses the Draft Recommendation of the Queensland Competition Authority (**QCA**) of December 2018 (**Draft Recommendation**) that:
  - 1.1 the Queensland Rail service currently deemed to be declared does not satisfy the access criteria and should not be declared; and
  - 1.2 the services provided by Queensland Rail on the South Western, Western, Central Western and Tablelands Systems (**Other Systems**), when considered individually, do not satisfy the access criteria and should not be declared.
- 2 However, the QCA is proposing to recommend that services provided by Queensland Rail using the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System should be declared for a period of 15 years. Queensland Rail considers that none of the services provided by these systems satisfy the access criteria for the reasons set out in this submission and accordingly the QCA must ultimately recommend that no Queensland Rail service should be declared after the expiry of the current declaration on 8 September 2020.
- 3 In essence the significant and fundamental changes to the rail industry since 1998 when the services were initially declared, is a factor that the QCA must have regard to both in terms of ownership and management of assets and above rail operations, and increasingly intense competition in the provision of freight transportation services from road operators. Queensland Rail submits that these changes are such that the QCA cannot be affirmatively satisfied that any of the services provided by Queensland Rail satisfy each of the four access criteria in the QCA Act, in particular, criterion (a).
- 4 Further, the Draft Recommendation does not demonstrate consideration of the material facts of the subsidies received by Queensland Rail to operate relevant railway lines and the inability of Queensland Rail to price at or near the relevant ceiling limits.
- 5 Queensland Rail recognises the QCA's request in its Draft Recommendation for additional information and in providing the information requested by the QCA demonstrates that such unequivocal material facts are inconsistent with any proposition that Queensland Rail has such a degree of market power that it could, or would endeavour to, adversely impact competition in a relevant market.

## Criterion (a) is not satisfied

- 6 Queensland Rail does not have the ability or incentive to control its rail systems to limit effective competition in dependent markets and as a result the QCA cannot be affirmatively satisfied that access criterion (a) is met in respect of any of Queensland Rail's services (however defined).
- 7 First, Queensland Rail is no longer a vertically integrated service provider of rail transport services as its predecessor was at the time the services were first declared by regulation. While Queensland Rail continues to provide below rail services and some passenger services, Queensland Rail does not provide above rail freight services and the passenger services provided by Queensland Rail are provided subject to Queensland legislation, and do not compete with any third party passenger services.
- 8 Secondly, Queensland Rail has excess capacity on its network. A non-vertically integrated service provider with excess capacity has strong economic incentives to maximise utilisation on its network (so as to recover some proportion of its fixed costs) and thus has an incentive to promote (rather than limit) competition in downstream markets.
- 9 Thirdly, Queensland Rail is materially constrained in the provision of below rail services to freight operators. Most significantly, for all freight other than some bulk commodities being transported over long distances (such as coal on the West Moreton System), Queensland Rail faces intense and increasing competition from road operators. Road transportation offers an effective substitute service to rail, which has a significant and direct downward impact on the prices that Queensland Rail negotiates with access seekers. For freight services provided

using the West Moreton System, if the development of the New Acland mine does not proceed, Queensland Rail's customer's ability to pay will constrain the access prices that can be imposed by Queensland Rail. These same factors constrain Queensland Rail in negotiating non-price terms and conditions.

## The QCA must be affirmatively satisfied

- 10 To recommend declaration, the QCA is required under the QCA Act to be affirmatively satisfied that Queensland Rail has an ability or incentive to exercise market power. There is no evidence before the QCA for it to be affirmatively satisfied that Queensland Rail has an ability or incentive to exercise market power.
- 11 This is demonstrated by the following two unequivocal facts.
- 12 First, with the exception of the West Moreton System where reference tariffs currently apply, the prices for access currently charged by Queensland Rail result in revenues well below the ceiling limits contained in the QCA approved access undertaking dated 11 October 2016 (**2016 Access Undertaking**). If Queensland Rail had the ability and incentive to exercise market power, the prices for access currently charged would result in revenues at the ceiling; that is, Queensland Rail would be constrained only by the regulatory regime and not market forces that require it to accept revenues below the regulated ceiling.
- 13 Secondly, with the exception only of the Mount Isa Line, each of Queensland Rail's systems are supported by, and are commercially viable only because Queensland Rail receives, transport service payments from the State of Queensland. Such subsidies would not be required if Queensland Rail had the ability to exercise market power.
- 14 For these reasons Queensland Rail submits that the QCA cannot be affirmatively satisfied that criterion (a) is met. To reach a contrary position the QCA must have before it substantial and compelling evidence to negate the two unequivocal facts above.

## Queensland Rail Access Framework

- 15 In any event, irrespective of the QCA's conclusions as to Queensland Rail's ability and incentive to exercise market power, Queensland Rail has now executed an irrevocable Deed Poll, which creates a binding and enforceable fit for purpose Access Framework in the future without declaration of services provided using the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System.
- 16 The Access Framework is based on the QCA approved 2016 Access Undertaking that is currently in force and accordingly provides as much regulatory certainty for access seekers and access holders as currently exists and as much regulatory certainty as would exist in the future with declaration. The fit for purpose Access Framework retains each of the key features of the 2016 Access Undertaking, with amendments made primarily to allow for administrative or process changes to improve efficiency for access seekers, access holders and Queensland Rail. The Access Framework will ensure continued access to the services provided by Queensland Rail using the relevant systems on reasonable and conditions terms even if the services are not declared in future. As such there can be no change to (and certainly no material increase in) competition in any dependent market as a result of declaration.
- 17 Accordingly, Queensland Rail has no ability to exercise market power to a degree materially different to what it can presently under the QCA approved 2016 Access Undertaking. Therefore, there can be no difference in the consequences for competition in dependent markets under the 2016 Access Undertaking and the Queensland Rail Access Framework and thus criterion (a) cannot be satisfied in respect of the services provided by Queensland Rail.
- 18 Queensland Rail also submits that the QCA cannot be affirmatively satisfied that each of the other access criteria are satisfied.
- 19 The balance of these submissions:
  - 19.1 provides background to the QCA's review;

- 19.2 addresses two key preliminary matters relevant to the QCA's review (being the approach to defining the services and facilities and the relevance of the Access Framework); and
- 19.3 outlines, criterion by criterion, the reasons why the services provided by Queensland Rail do not meet the access criteria in the QCA Act, and thus why the QCA is required to recommend that the services provided by Queensland Rail not be declared.

# The QCA's Review

20 The declaration review currently being undertaken by the QCA concerns (among others) a Queensland Rail service taken to be declared by the Ministers under Part 5 of the QCA Act. Part 5 of the QCA Act establishes a regime for access regulation of services provided by significant infrastructure facilities where there may be a lack of effective competition.

## Queensland Rail

- 21 Queensland Rail is a statutory authority established under the *Queensland Rail Transit Authority Act 2013* (Qld) (**QRTA Act**).<sup>1</sup> It is a railway manager for the purposes of the *Transport Infrastructure Act 1994* (Qld) (**TI Act**).
- 22 Queensland Rail's rail network extends more than 6,600 kilometres across Queensland and is used by freight and passenger trains. The network comprises seven regional systems and the Metropolitan System.
- 23 The most significant volumes of freight are carried on the West Moreton System (thermal coal), the Mount Isa Line (metals, minerals concentrate and chemicals) and the North Coast Line (intermodal freight and sugar). These three systems carried approximately 98.7% of the freight tonnage transported on Queensland Rail's network in 2017-18.
- 24 The key passenger operations on Queensland Rail's systems are:
- 24.1 the Citytrain service on the Metropolitan System; and
  - 24.2 long distance passenger services on the North Coast Line.
- 25 Each of Queensland Rail's systems, with the exception only of the Mount Isa Line, are supported by, and are commercially viable only because Queensland Rail receives, transport services payments in respect of its infrastructure services under a Transport Services Contract (**TSC**) with the Queensland government.
- 26 Further information about Queensland Rail's network, including the actual train paths used (by freight and passenger trains) and tonnage of commodities transported on each system for each of the five financial years to 2017-18, is included in **Confidential Attachment A**.
- 27 Queensland Rail's predecessor (a statutory Government Owned Corporation named 'Queensland Rail') owned and managed the rail network and was a monopoly provider of above rail transport services.<sup>2</sup> However, Queensland Rail is no longer vertically integrated in a way that is significant for the purposes of assessing whether or not its services should be declared. While it provides below rail services, Queensland Rail does not (and does not expect to) provide above rail freight services. Queensland Rail does provide some passenger services, however, these services are subject to existing Queensland legislation and the subject of substantial transport support payments under the TSC, and do not compete with any third party passenger services. That is, Queensland Rail does not relevantly compete with other users seeking to access its services for the purpose of providing passenger services. Each of the passenger services provided by Queensland Rail are only commercially viable because of the TSC subsidies.
- 28 The Queensland Rail Board is accountable to two responsible Ministers. Each year, the Queensland Rail Board submits an operational plan and strategic plan for approval by the responsible Ministers in accordance with the QRTA Act.<sup>3</sup> Under the QRTA Act, Queensland Rail must comply with its strategic and operational plans for a financial year.<sup>4</sup>

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<sup>1</sup> Section 6 of the QRTA Act. See section 63 as to the change of name from 'Queensland Rail Transit Authority' to 'Queensland Rail'.

<sup>2</sup> Regulation 17 of the *Government Owned Corporations (Queensland Rail) Regulation 1995* (Qld) and section 76 of the TI Act as in force at the time.

<sup>3</sup> Chapter 2, division 4 of the QRTA Act.

<sup>4</sup> Section 51 of the QRTA Act.



- 29 Under the QRTA Act, Queensland Rail and its Board are subject to a range of reporting requirements.<sup>5</sup> Queensland Rail must also comply with written directions from responsible Ministers.<sup>6</sup>

## The declaration due to expire

- 30 Section 250(1)(b) of the QCA Act provides that the following service is taken to be a declared service for the purposes of Part 5:<sup>7</sup>

*the use of rail transport infrastructure for providing transportation by rail if the infrastructure is used for operating a railway for which Queensland Rail Limited, or a successor, assign or subsidiary of Queensland Rail Limited, is the railway manager[,]*

**(deemed declared service).**

- 31 Section 250(1)(b) stops having effect (i.e. the current declaration expires) at the end of 8 September 2020.<sup>8</sup>
- 32 The deemed declared service definition included in the QCA Act has its origins in the *Queensland Competition Authority Regulation 1997 (Qld)*.<sup>9</sup> That regulation was made under section 97 of the QCA Act as in force at that time, which allowed for declaration of a service by regulation without any assessment of whether the service should be declared by reference to the access criteria. The regulation was also made at a time when Queensland Rail was a vertically integrated provider of above and below rail services.
- 33 The regulation based avenue to declaration was removed from the QCA Act in 2010. The explanatory notes to the amending legislation stated the following:<sup>10</sup>
- The Bill will provide increased certainty for stakeholders by ensuring that all decisions which affect the coverage of the Regime will be made with explicit reference to the legislated access criteria and with the express involvement of the [QCA].*
- 34 The current review is the first time the QCA has had the opportunity to assess whether or not the services provided by Queensland Rail meet the access criteria and should be declared under the access regime established by Part 5 of the QCA Act. It is also the first time the declaration of services provided by Queensland Rail has been considered against the background of Queensland Rail providing only below rail services and limited above rail passenger services and thus ceasing to be vertically integrated in any relevant sense.

## Declaration of services under Part 5 of the QCA Act

- 35 The object of Part 5 of the QCA Act is to promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets.<sup>11</sup>
- 36 Part 5 provides for the QCA to recommend declaration of, and the Minister to declare, a service provided by means of a facility. 'Service' is defined in section 72(1) to include 'the use of a facility (including, for example a road or a railway line)'. 'Facility' is defined in section 70(1) to include 'rail transport infrastructure' as defined in the TI Act (being, broadly, facilities necessary for operating a railway).<sup>12</sup> Section 73 of the QCA Act provides that a reference to a facility in association with a reference to a service or part of a service is a reference to the facility used, or to be used, to provide the service or part of the service.

<sup>5</sup> Sections 12 and 38 to 40 of the QRTA Act.

<sup>6</sup> Section 12 of the QRTA Act.

<sup>7</sup> Section 249 provides that Part 5 of the QCA Act does not apply to the use of rail transport infrastructure for providing transportation by rail between Queensland and another State if: (a) the infrastructure is standard gauge track; and (b) the transportation is effected by using standard gauge rolling stock.

<sup>8</sup> Section 250(2) of the QCA Act.

<sup>9</sup> The relevant regulation (regulation 4) was inserted by *Queensland Competition Authority Amendment Regulation (No. 1) 1998*.

<sup>10</sup> Explanatory Notes to Motor Accident Insurance and Other Legislation Amendment Bill 2010, p. 4.

<sup>11</sup> Section 69E of the QCA Act.

<sup>12</sup> Schedule 2 of the QCA Act.

- 37 Under the QCA Act, the QCA is required to review a declaration of a service that is due to expire and make a recommendation to the Minister at least six months and not more than 12 months before the expiry date of the declaration of a service.<sup>13</sup> For the purposes of the review, the QCA must recommend to the Minister either that:<sup>14</sup>
- 37.1 the service be declared;
  - 37.2 part of the service, that is itself a service, be declared; or
  - 37.3 the service not be declared.
- 38 The recommendation to be made by the QCA is critically dependent on whether the access criteria are met in respect of the service or part of the service to be declared. In order to recommend that a service be declared the QCA must be affirmatively satisfied about all of the access criteria for the service. If it is not affirmatively satisfied about all of the access criteria for the service, the QCA must make a recommendation that the service not be declared.<sup>15</sup>
- 39 The access criteria are as follows:<sup>16</sup>
- (a) *that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the service;*
  - (b) *that the facility for the service could meet the total foreseeable demand in the market—*
    - (i) *over the period for which the service would be declared; and*
    - (ii) *at the least cost compared to any 2 or more facilities (which could include the facility for the service);*
  - (c) *that the facility for the service is significant, having regard to its size or its importance to the Queensland economy;*
  - (d) *that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote the public interest.*
- 40 The access criteria in the QCA Act are intended to reflect those contained in the national access regime established by Part IIIA of the *Competition and Consumer Act 2010* (Cth) (CCA). They were most recently amended in March 2018, in order to reflect the recent amendments to the CCA following the Productivity Commission's Inquiry into the national access regime of October 2013.
- 41 The access criteria, and the application of the criteria to the services provided by Queensland Rail, are discussed in turn below, after an introductory observation about the services provided and facilities operated by Queensland Rail.

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<sup>13</sup> Section 87A(1) of the QCA Act.

<sup>14</sup> Section 87A(1) of the QCA Act.

<sup>15</sup> Section 87C of the QCA Act.

<sup>16</sup> Section 76 of the QCA Act.

# Preliminary Matters

## Service and facility definitions

- 42 Part 5 of the QCA Act provides for the declaration of a service provided by means of a facility, rather than declaration of the facility itself. The starting point for considering whether to declare a service is therefore to define that service.<sup>17</sup>
- 43 While criterion (a) and criterion (d) require an assessment of the 'service', criterion (b) and criterion (c) require an assessment by reference to the 'facility for the service'. The next step is therefore to define the facility for the service.
- 44 For a service to be declared, the service that is defined must satisfy criteria (a) and (d), and the facility for that same service must satisfy criteria (b) and (c).
- 45 The issues raised by the service and facility definitions in the context of the QCA's review of the services provided by Queensland Rail are described further below.

## Service definitions

- 46 Queensland Rail agrees with the QCA that each of the services it provides entails the use of rail transport infrastructure for providing transportation by rail.<sup>18</sup> However, Queensland Rail submits that such a definition (as set out by the QCA in the Draft Recommendation<sup>19</sup>) lacks the specificity required for regulation under Part 5 of the QCA Act.
- 47 As recognised by the National Competition Council (**NCC**),<sup>20</sup> services must be defined with sufficient specificity to allow parties involved in the decision making process to make the assessments and judgments required by the regulatory framework. In the present circumstances, this requires each service being assessed to be defined by reference to the sections of railway line used to provide the service.
- 48 This approach is implicit in the specification of the service in section 250(1)(b) of the QCA Act, wherein the service is defined by reference to the railway for which Queensland Rail is the railway manager (i.e. the whole of Queensland Rail's narrow gauge network). It is also implicit in the QCA's approach to identifying parts of the service, whereby the QCA concludes that the use of Queensland Rail's eight rail systems constitutes eight 'services' for the purposes of section 72 of the QCA Act,<sup>21</sup> and has been adopted in prior NCC decisions in relation to railways.<sup>22</sup>
- 49 In making its Draft Recommendation, the QCA has first assessed whether the service as specified in section 250(1)(b) of the QCA Act (being the use of the entire network) satisfies the access criteria.<sup>23</sup> However, the QCA states that:<sup>24</sup>
- where evidence arises that demonstrates that any part of the service, that is itself a service, has characteristics which require different or further consideration from that given to the service as a whole, the QCA considers that it is then appropriate to assess that part of the service individually against the access criteria.*
- 50 The QCA concludes that there are 'compelling reasons' why each of criterion (a) and criterion (d) should be applied to parts of the deemed declared service and that it is appropriate to do

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<sup>17</sup> This is consistent with the approach adopted by the NCC: NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [2.1].

<sup>18</sup> QCA Draft Recommendation, Part B, pp 9-10.

<sup>19</sup> QCA Draft Recommendation, Part B, p 9.

<sup>20</sup> NCC, *Application for declaration of the Goldsworthy Railway*, August 2008 at [2.29], [2.32].

<sup>21</sup> QCA Draft Recommendation, Part B, p 12.

<sup>22</sup> In NCC, *Application for declaration of the Goldsworthy Railway*, August 2008, for example, the NCC accepted the service as use of the Goldsworthy Railway.

<sup>23</sup> QCA Draft Recommendation, Part B, p 4.

<sup>24</sup> QCA Draft Recommendation, Part B, p 4. See also p 12.

so.<sup>25</sup> That is, where the access criteria require consideration of the effects of access to the service as a result of declaration, the QCA indicates it will assess the services provided through the use of each of Queensland Rail's systems individually. Queensland Rail supports this approach. It is required given the significant variation in the systems' supply chain dynamics, rail corridor characteristics and geographic locations.

- 51 In any event, the QCA concludes that the deemed declared service, being the use of the entire network, does not satisfy the declaration criteria.<sup>26</sup> The only relevant inquiry for the QCA is therefore whether to recommend declaration of any part of the deemed declared service. That is, the only relevant inquiry is whether to recommend declaration of any of Queensland Rail's services, defined by reference to use of only part of Queensland Rail's network.
- 52 Queensland Rail submits that it provides eight services, being the use of the following eight sections of its network<sup>27</sup>:
- 52.1 the Mount Isa Line, being that part of the network bounded to the east by (and including) Stuart and to the west by (and including) Mount Isa and including all branch lines comprised in that part of the network;
  - 52.2 the North Coast Line, being those parts of the network bounded to the south by (and including) Nambour station, to the north by (and including) Cairns and to the west by (but excluding) Stuart and including all branch lines, comprised in that part of the network, including those in the Maryborough area and Taragoola to Graham;
  - 52.3 the West Moreton System, means that part of the network comprising the rail corridor from (and including) Rosewood to Miles, excluding all branch lines not directly connecting coal mine loading facilities to that rail corridor;
  - 52.4 the Western System, being those parts of the network bounded to the east by (and including) Miles and to the west by (and including) Quilpie and including all branch lines comprised in that part of the network, but excluding those parts of the network that are part of the West Moreton System;
  - 52.5 the South Western System, being that part of the network bounded to the west by (and including) Thallon, to the north by (and including) Toowoomba and to the south by (and including) Wallangarra and including all branch lines comprised in that part of the network including Wyreema to Millmerran branch line;
  - 52.6 the Central Western System, being that part of the network bounded to the east by (and including) Nogoia, to the north by (and including) Clermont and to the west by (and including) Winton and including all branch lines comprised in that part of the network;
  - 52.7 the Tablelands System, being those parts of the network bounded to the west by (and including) Normanton and to the east by (and including) Cairns and including all branch lines comprised in those parts of the network; and
  - 52.8 the Metropolitan System, being that part of the network bounded to the north by (and including) Nambour station and to the west by (and including) Rosewood and including all branch lines comprised in that part of the network.
- 53 The QCA is satisfied that each of these services would constitute a 'service' for the purposes of section 72 of the QCA Act.<sup>28</sup>

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<sup>25</sup> QCA Draft Recommendation, Part B, pp 26, 93-94.

<sup>26</sup> QCA Draft Recommendation, Part B, pp 7, 25-27, 92-94.

<sup>27</sup> Queensland Rail's network is the rail transport infrastructure (as defined in the TI Act) for which Queensland Rail is the accredited rail infrastructure manager (as defined in the *Rail Safety National Law (Queensland)*) and which is owned or leased by Queensland Rail or Queensland Rail's successor, assignor or subsidiary, but excluding rail transport infrastructure which is standard gauge track and over which the transportation is effected using standard gauge rolling stock.

<sup>28</sup> QCA Draft Recommendation, Part B, p 12.

- 54 The QCA is thus required to assess criterion (a) and criterion (d) in respect of these services individually.
- 55 In assessing criterion (a), the QCA considers each of these services individually, with the following exceptions:
- 55.1 the QCA considers the services provided using the North Coast Line and Metropolitan System together; and
- 55.2 the QCA considers the services provided using the West Moreton System and Metropolitan System together,
- in each case 'as the commercial reality of the use of these systems together demonstrates that it is necessary to do so'.<sup>29</sup> In the case of the North Coast Line, the QCA explains that this is because access to the Metropolitan System enables freight operators to access the intermodal terminals at Acacia Ridge and Tennyson, and the import/export terminals at the Port of Brisbane, and allows operators to connect to the interstate rail system south into New South Wales.<sup>30</sup> In the case of the West Moreton System, access to the Metropolitan System is required for coal and agricultural products to be delivered to the Port of Brisbane for export.<sup>31</sup>
- 56 Queensland Rail respectfully submits that such an approach is unnecessary, as access applications can be made in respect of more than one service. However, if the QCA is minded to consider the Metropolitan System together with the North Coast Line and the West Moreton System, the appropriate way in which to do so would be to amend the definition of services offered over the North Coast Line and West Moreton System respectively so that the relevant sections of the Metropolitan System used to provide the service are captured in the service definitions for the North Coast Line and West Moreton System. That is:
- 56.1 the North Coast Line service would also include use of the Metropolitan System from Nambour to Roma Street and to Fisherman Islands, Moolabin or Acacia Ridge; and
- 56.2 the West Moreton System service would also include use of the Metropolitan System from Rosewood to Corinda, Yerongpilly and to Fisherman Islands.
- 57 In the event the QCA were to adopt such an approach, Queensland Rail observes that the relevant services should be defined so that use of the Metropolitan System that is not in conjunction with use of the North Coast Line or West Moreton System (as relevant) is not captured by the definitions. For example, an access seeker seeking to use only the Metropolitan System should not be acquiring a declared service by reason of the West Moreton System service or North Coast Line service being declared.
- 58 The remainder of this submission addresses the services as defined in 52 above. Queensland Rail notes, however:
- 58.1 The arguments set out in respect of each of these services apply equally if a service provided by the whole of Queensland Rail's narrow gauge network is considered.
- 58.2 Amending the service definitions in the way described in paragraph 56 above would not change the analysis set out in this submission in respect of the services provided using the North Coast Line and West Moreton System, or the facilities for those services.

## Facility definitions

- 59 For the reasons outlined in paragraphs 46 to 54 above, the services to be assessed by the QCA in the present review are those eight services set out in paragraph 52 above (broadly, the services provided by use of each of Queensland Rail's eight railway systems). For the

<sup>29</sup> QCA Draft Recommendation, Part B, pp 34, 60.

<sup>30</sup> QCA Draft Recommendation, Part B, p 35.

<sup>31</sup> QCA Draft Recommendation, Part B, p 61.

purposes of applying criterion (b) and (c) therefore, the QCA is required to identify, for each service, the 'facility for the service'.

60 Given what is to be declared is the service rather than the facility, it is the service that drives the definition of the facility. In *Re Sydney International Airport* [2000] ACompT 1, the Australian Competition Tribunal described (at [192]) its approach to defining the facility, and the significance of defining the facility correctly, as follows:<sup>32</sup>

*A key issue is the minimum bundle of assets required to provide the relevant services subject to declaration. The more comprehensive the definition of the set of the physical assets ... the less likely it is that anyone (even the incumbent infrastructure owner) would find it economical to develop "another facility" within a meaningful timescale. Conversely, the narrower the definition of the facility, the lower the investment hurdle and inhibition on development facing the incumbent or new entrant.*

61 Accordingly, the QCA's task in considering what the facility is (or facilities are) for present purposes is to define the minimum bundle of assets required to provide the relevant individual services.

62 This approach is consistent with the policy rationale of ensuring that an access regime facilitates access only where this is required to ensure that competitive forces are not unduly stifled in industries which rely upon a natural monopoly at some stage in the production process.

63 As the Hilmer Review noted in recommending the introduction of the national access regime:<sup>33</sup>

*As a general rule, the law imposes no duty on one firm to do business with another. The efficient operation of a market economy relies on the general freedom of an owner of property and/or supplier of services to choose when and with whom to conduct business dealings and on what terms and conditions. This is an important and fundamental principle based on notions of private property and freedom to contract, and not one to be disturbed lightly.*

...

*The Committee is conscious of the need to carefully limit the circumstances in which one business is required by law to make its facilities available to another. Failure to provide appropriate protection to the owners of facilities has the potential to undermine incentives for investment.*

64 In the present circumstances, the inquiry as to the minimum bundle of assets required to provide the relevant service is simplified given the services are defined by reference to the relevant parts of Queensland Rail's network; the facility to which the access criteria (b) and (c) are to be applied is that set out in the service definition.

65 In assessing criterion (b), the QCA states that it is not necessary to consider criterion (b) on a system by system basis.<sup>34</sup> The QCA reasons that as the 'product' dimension of the service provided by Queensland Rail (being the use of rail transport infrastructure for providing transportation by rail) is consistent across all of its systems, the nature of the market in which use of all of the rail systems, and the network as a whole, is provided, is the same.<sup>35</sup>

66 As a preliminary matter, Queensland Rail observes that the QCA has not engaged with the question required of it. That is, what is the 'facility for the service' for each of the eight services set out in paragraph 52 above. When this inquiry is made, it is clear that there are eight facilities.

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<sup>32</sup> While the Tribunal's findings were made in respect of a provision of the TPA, they are equally applicable in the present context given the amendments to the QCA Act were intended to restore the test applied by the Tribunal under the TPA in that case: Report No. 2, 56th Parliament, Economics and Governance Committee, March 2018, p. 5.

<sup>33</sup> Hilmer Review, pp. 242, 248.

<sup>34</sup> QCA Draft Recommendation, Part B, p 13.

<sup>35</sup> QCA Draft Recommendation, Part B, p 13.

- 67 It can be seen that this is the correct inquiry if a hypothetical scenario is considered. If the QCA were to consider the approach to defining the facility if an application for declaration of a service provided by a single system (and not the entire network), the entirety of the network would not be included in the definition for the 'facility for the service'. For example, there would be no basis for including any of the other systems in the definition of the facility used to provide services on the Tablelands System if an application for declaration were considered in respect of the service on that system alone. To do so would not be consistent with the objective of access regulation to provide for access only where access to the service is required to ensure that competitive forces are not unduly stifled.
- 68 While the QCA leaves open the possibility that it is not required to consider each of the systems separately in the context of criterion (c),<sup>36</sup> the same reasoning as outlined above in respect of criterion (b) applies.
- 69 Finally, there is no basis on which to apply different definitions of 'the facility for the service' for the purposes of criterion (b) and criterion (c) as the QCA appears to contemplate it can. The language of the provisions is identical; both relate to the same service and should therefore be identical. To Queensland Rail's knowledge, there has never been a recommendation for declaration of a facility in which the definition of the facility differed in the application of criterion (b) and criterion (c).<sup>37</sup> Consistent with this, the NCC's Guide to Declaration discusses how to define the facility only once, and not separately in the context of criterion (b) and (c).<sup>38</sup>
- 70 Queensland Rail thus submits that the QCA is required to consider each of the separate facilities described in the service definitions in paragraph 52 above.
- 71 In considering the systems individually for criterion (c) in the Draft Recommendation, the QCA considered the West Moreton System and Metropolitan System together. Queensland Rail respectfully submits such an approach is unnecessary, as access applications can be made in respect of more than one service. However, in the event the QCA is minded to conduct such an analysis, the appropriate way in which to do so would be to amend the definition of the service offered over West Moreton System so that the relevant part of the Metropolitan System is captured in the service definition for the West Moreton System (see paragraph 56.2 above). Doing so would not change the analysis set out in this submission in respect of the West Moreton System.

## Relevance of New Access Framework to the QCA's Review

- 72 In making its Draft Recommendation, the QCA did not take into account the access framework proposed by Queensland Rail on the basis it had not been executed and there was no certainty as to its terms.<sup>39</sup>
- 73 Queensland Rail has now executed an irrevocable Deed Poll, which means that a new Access Framework will be legally binding on Queensland Rail and enforceable by a specified class of third parties in the future without declaration for services provided using the Mount Isa Line, North Coast Line, West Moreton System and Metropolitan System. The QCA is thus required to consider the Deed Poll and Access Framework in assessing the future without declaration of the services provided on those systems.

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<sup>36</sup> QCA Draft Recommendation, Part B, p 76.

<sup>37</sup> By way of example, see NCC, *Final recommendation re Port of Newcastle application*, 2 November 2015, in which the NCC defines the facility as the facility providing the service for which declaration is sought for criterion (b) and (c) at [5.1] and [6.1]; NCC, *Final recommendation - Application for declaration for access to services provided by the Herbert River tramway network*, 22 March 2010, in which the NCC defines the facility by reference to the service sought to be declared for criterion (b) and (c) at [6.1] and [7.2]; NCC, *Application for declaration of the Robe Railway*, 18 January 2008, at [5.1] and [6.2]; NCC, *Application for declaration of the Goldsworthy Railway*, 17 November 2007, at [5.1] and [6.2].

<sup>38</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018, Chapter 2.

<sup>39</sup> QCA Draft Recommendation, Part B, pp 29-30, 95-96.

# Criterion (a)

## Summary

- 74 The QCA's view in the Draft Recommendation is that the deemed declared service does not satisfy the access criteria.<sup>40</sup> The QCA thus is considering whether to declare parts of that service.
- 75 In order to recommend that a service be declared, the QCA must be positively satisfied that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the service.
- 76 An assessment of whether criterion (a) is satisfied typically involves the following two steps:
- 76.1 Identifying the relevant upstream and downstream dependent markets, which are separate from the market for the service in respect of which declaration is being considered.
- 76.2 Assessing whether access (or increased access) to the service as a result of declaration will promote a material increase in competition in a dependent market. This involves a comparison of a future scenario in which the service is declared against a future in which there is no declaration.
- 77 As reflected in the QCA's analysis, a key matter relevant to assessing the effects of declaration of competition is whether or not a service provider has the ability and incentive to exercise market power so as to affect competition in a dependent market in the future without declaration.
- 78 While the QCA concludes that criterion (a) is not satisfied in respect of the deemed declared service or the services provided using the Other Systems, the QCA's preliminary view is that criterion (a) is satisfied in respect of services provided on the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System.
- 79 Queensland Rail submits that criterion (a) is not satisfied in relation to any of the services it provides because, contrary to the QCA's preliminary findings, Queensland Rail does not have the ability or incentive to exercise market power to adversely affect competition in any dependent market. This is because:
- 79.1 Queensland Rail is no longer a vertically integrated service provider of rail transport services as its predecessor was at the time the services were first declared by regulation. While Queensland Rail continues to provide below rail services and some passenger services, Queensland Rail does not provide above rail freight services and the passenger services provided by Queensland Rail are provided subject to Queensland legislation, and do not compete with third party passenger services.
- 79.2 Queensland Rail has excess capacity on its network. A non-vertically integrated service provider with excess capacity has strong economic incentives to maximise utilisation on its network (so as to recover some proportion of its fixed costs) and thus has an incentive to promote (rather than limit) competition in downstream markets.
- 79.3 Queensland Rail is materially constrained in the provision of below rail services to freight operators. Most significantly, for all freight other than some bulk commodities being transported over long distances (such as coal on the West Moreton System), Queensland Rail faces intense and increasing competition from road operators. Road transportation offers an effective substitute service to rail, which has a significant and direct downward impact on the prices that Queensland Rail negotiates with access seekers. For freight services provided

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<sup>40</sup> QCA Draft Recommendation, Part B, pp 7, 25-27, 92-94.



using the West Moreton System, if the development of the New Acland mine does not proceed, Queensland Rail's customers' ability to pay will constrain the access prices that can be imposed by Queensland Rail. These same factors constrain Queensland Rail in negotiating non-price terms and conditions.

- 80 There are two factual matters that clearly demonstrate that Queensland Rail has no ability or incentive to exercise market power.
- 81 First, with the exception of the West Moreton System where reference tariffs currently apply, the prices for access currently charged by Queensland Rail result in revenues well below the ceiling limits imposed by the 2016 Access Undertaking. If Queensland Rail had the ability and incentive to exercise market power, the prices for access currently charged would result in revenues at the ceiling; that is, Queensland Rail would be constrained only by the regulatory regime and not market forces that require it to accept revenues below the regulated ceiling.
- 82 Secondly, with the exception only of the Mount Isa Line, each of Queensland Rail's systems are supported by, and are commercially viable only because Queensland Rail receives, transport service payments from the State of Queensland. Such subsidies would not be required if Queensland Rail had the ability to exercise market power.
- 83 Further, and in any event, in the future without declaration, Queensland Rail has executed an irrevocable Deed Poll which gives rise to a binding and enforceable access framework in the form of the Access Framework provided with this submission. The Access Framework ensures that access to the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System will continue to be available on reasonable terms and conditions in the future without declaration, irrespective of whether the market and other constraints identified by Queensland Rail in paragraph 79 above are binding.
- 84 Queensland Rail engaged HoustonKemp Economists (**HoustonKemp**) to consider whether the services the QCA has proposed recommending be declared are likely to satisfy access criterion (a). HoustonKemp's confidential expert report, *Does Queensland Rail's rail network satisfy criterion (a)?* of March 2019 (**HoustonKemp Expert Report**) is included at **Confidential Attachment B** to this submission. HoustonKemp concludes that even without the Access Framework, Queensland Rail does not have the ability or incentive to increase access prices or impose unreasonable terms and conditions on its systems, except perhaps for the West Moreton System if a high tonnage scenario eventuates. It follows that access charges and conditions will not change in the future with or without declaration. In any event, HoustonKemp considers that the similarities between the current regulatory arrangements and Access Framework means there will be no difference in market outcomes in the future with and without declaration.
- 85 Accordingly, criterion (a) is not satisfied and the QCA should not recommend that any of Queensland Rail's services be declared, irrespective of whether the other three criteria are met.

## Application and interpretation of criterion (a)

- 86 Criterion (a) requires:<sup>41</sup>

*That access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the service[.]*

- 87 An assessment of whether criterion (a) is satisfied typically involves the following two steps:
- 87.1 Identifying the relevant upstream and downstream (dependent) markets, which are separate from the market for the service in respect of which declaration is being considered.
- 87.2 Assessing whether access (or increased access) to the service as a result of declaration will promote a material increase in competition in at least one

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<sup>41</sup> Section 76(2)(a) of the QCA Act.

dependent market. This involves a comparison of a future scenario in which the service is declared (with access or increased access granted on reasonable terms and conditions) against a future in which there is no declaration.

- 88 These steps are described further below, followed by an overview of the application of criterion (a) to Queensland Rail's services.

## Dependent markets

- 89 For the purposes of considering competition effects, markets are conventionally defined in terms of three dimensions: product or service; geographic area; and functional level (i.e. vertical stage of production within a supply chain at which the relevant economic activities occur).

- 90 While identifying dependent markets is typically the first step in assessing whether criterion (a) is met, precise dependent market definitions are not always required and assessing whether criterion (a) is met may require an assessment of only one or two most likely and significant dependent markets. As the guide to the declaration of services published by the NCC states:<sup>42</sup>

*Although the Council generally identifies dependent markets in terms of the dimensions set out above, an assessment of criterion (a) may not always require a precise delineation of the boundaries of the market for the service. What must be determined is whether any market in which competition is said to be materially promoted (a dependent market) is distinct from the market for the service and the effect declaration will have on the conditions for competition in that dependent market.*

*Criterion (a) is satisfied if access or increased access on reasonable terms and conditions will materially promote competition in one or more dependent markets as a result of declaration. In practice, it may be unnecessary for the Council to examine more than the one or two most likely and significant dependent markets in relation to an application for declaration.*

## Effect of declaration on competition

### *Material increase in competition 'as a result of a declaration'*

- 91 The March 2018 amendments to the access criteria in the QCA Act included amendments to criterion (a) to reframe the test to ensure that it is a test of whether declaration (not access) would promote competition.

- 92 In describing the changes to criterion (a), the Explanatory Memorandum to the *Competition and Consumer Amendment (Competition Policy Review) Bill 2017*, which amended criterion (a) under the CCA in the same manner as the QCA Act was amended, noted that the amendments to criterion (a) 'focus the test on the effect of declaration, rather than merely assessing whether access (or increased access) would promote competition'.<sup>43</sup> The Explanatory Memorandum stated that, in comparing the two future scenarios:<sup>44</sup>

*...it must be the case that it is the declaration resulting in access (or increased access) on reasonable terms and conditions that promotes the material increase in competition.*

*What are reasonable terms and conditions is not defined in the legislation. This is an objective test that may involve consideration of market conditions. It does not require that the Council or Minister come to a view on the outcomes of a Part IIIA negotiation or arbitration. The requirement that access is on reasonable terms and conditions is*

<sup>42</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.13]-[3.14].

<sup>43</sup> Explanatory Memorandum to the *Competition and Consumer Amendment (Competition Policy Review) Bill 2017* at 12.19.

<sup>44</sup> Explanatory Memorandum to the *Competition and Consumer Amendment (Competition Policy Review) Bill 2017* at 12.20 to 12.21.

*intended to minimise the detriment to competition in dependent markets that may otherwise be caused by the exploitation of monopoly power. Reasonable terms and conditions include those necessary to protect the legitimate interests of the owner of the facility.*

- 93 Accordingly, the second step in considering criterion (a) involves a comparison between the future in which the deemed declared service (or part of the service) is declared and the future in which the service (or part of the service) is not declared (with access to the service on the terms and conditions that would apply if the service, or part of the service, was not declared). This is consistent with the approaches outlined in the QCA Issues Paper<sup>45</sup> and the HoustonKemp Expert Report.<sup>46</sup>

#### *Promotion of a 'material increase' in competition*

- 94 Criterion (a) requires consideration of whether declaration would 'promote a material increase in competition'. Previously, the provision required consideration of whether declaration would 'promote competition'. Criterion (a) was amended by the insertion of the words 'a material increase in' after the word promote following a review by the Productivity Commission and changes to criterion (a) under the *Trade Practices Act 1974* (Cth) (now the CCA) to address concerns that the decision of the Australian Competition Tribunal (**Tribunal**) in *Sydney International Airport* [2000] ACompT 1 (**Sydney Airport Decision**) set a threshold for criterion (a) that was too low.<sup>47</sup>
- 95 In that decision, the Tribunal interpreted the phrase 'promote competition' as involving the idea of creating the conditions or environment for improving competition from what it would otherwise be. The Productivity Commission rejected such an interpretation in its inquiry into the national access regime in 2001, noting that:<sup>48</sup>

*If as a result of mandated access there were only a minor improvement in competition, declaration would be of little practical benefit and, given the potential costs of intervention, could be damaging for the economy. It might seem unlikely that the regulator or the courts would regard a marginal increase in competition as sufficient for declaration. Yet the Sydney Airport case indicated that criterion (a) could be interpreted in this way. The Commission therefore felt that shifting the balance to require a material effect would be desirable.*

- 96 The explanatory material and second reading speech relating to the amendments to the *Trade Practices Act 1974* (Cth) (now CCA) noted that the amendment to criterion (a) to require a 'material increase' was in response to the Productivity Commission's 2001 report, which 'identified that the current declaration criteria do not sufficiently address the situation where, irrespective of the significance of the infrastructure, a declaration would result in only marginal increases in competition', and that the amendment would 'ensure access declarations are only sought where increases in competition are not trivial'.<sup>49</sup>
- 97 In its Draft Recommendation, the QCA endorses the approach to criterion (a) described by the Tribunal in the Sydney Airport Decision and the NCC (which mirrors the language of the Tribunal in that Decision, albeit reflecting the addition of the word 'material' in the legislative test).

<sup>45</sup> QCA Issues Paper, pp 16-17 (section 4.1).

<sup>46</sup> See section 2.1 of the HoustonKemp Expert Report.

<sup>47</sup> See also *Port of Newcastle Operations Pty Ltd v Australian Competition Tribunal and others* (2017) 346 ALR 669 at [121]; NCC, *Final recommendation - Declaration of the shipping channel service at the Port of Newcastle*, 2 November 2015 at [4.86].

<sup>48</sup> Productivity Commission, *Review of the National Access Regime - Inquiry Report*, Report No. 17, 28 September 2001, p 171.

<sup>49</sup> Explanatory Memorandum to the *Trade Practices Amendment (National Access Regime) Bill 2005*; Second reading speech, *Trade Practices Amendment (National Access Regime) Bill 2005*. Similarly, the Explanatory Notes to the *Motor Accident Insurance and Other Legislation Amendment Bill 2010* (Qld), which introduced the phrase 'material increase in' to criterion (a) in the QCA Act, noted that '[t]his will prevent the declaration of services where only a trivial increase in competition is expected to result': Explanatory Notes to the *Motor Accident Insurance and Other Legislation Amendment Bill 2010*, p 16. See also *Application by Glencore Coal Pty Ltd* [2016] ACompT 6 at [85].

- 98 Queensland Rail respectfully does not agree with this interpretation. Such a threshold is too low and is contrary to the stated legislative intention of increasing the threshold to ensure that declarations are only sought when increases in competition are not trivial in amending criterion (a). Further, the interpretation is based on the Tribunal's decision in the Sydney Airport Decision,<sup>50</sup> whereas the Tribunal in that decision was interpreting criterion (a) as it then was (i.e. an inquiry into whether declaration would 'promote competition'), and not criterion (a) in its current form (which requires an inquiry into whether declaration would 'promote a material increase in competition'). While the Tribunal rejected the notion that 'promoting competition' requires an increase in competition,<sup>51</sup> this is precisely what is required having regard to the words of criterion (a) in its current form.
- 99 The requirement that declaration promote a 'material increase' in competition thus requires that, in order to recommend declaration, the QCA must be affirmatively satisfied that declaration would promote a significant and non-trivial increase in competition.<sup>52</sup>

### *Assessing effects on competition*

- 100 As reflected in the QCA's analysis, and outlined in the NCC's guide to declaration,<sup>53</sup> a key matter relevant to assessing the effects of declaration on competition and whether criterion (a) is met is whether or not a service provider has the ability and incentive to exercise market power so as to affect competition in a dependent market in the future without declaration.
- 101 The NCC's guide to declaration notes that, if a service provider is unable to exercise market power in a dependent market, then declaring the service so as to provide an enforceable mechanism to determine the terms and conditions of access to the service would not promote competition or efficiency in that market.<sup>54</sup>
- 102 The NCC goes on to state:<sup>55</sup>
- Where competition in a dependent market(s) is not workable or effective, a service provider may still lack the incentive to exercise market power to adversely affect competition in a dependent market. In some situations, a service provider may have an incentive to engage in strategies designed to increase competition in a dependent market(s). If, for example, a service provider has no vertical interests in a dependent market(s), and its facility has excess capacity, then it may be profit maximising for the service provider to promote competition in the dependent market(s), reduce margins and prices in the dependent market(s), and increase incremental demand for the services provided by the facility. In these circumstances, the service provider would not have an incentive to engage in the conduct described in the above and declaration is unlikely to promote competition in the dependent market (emphasis added).*
- 103 The state of competition in the dependent market is also relevant. It is well established that if a dependent market is already workably or effectively competitive, improved access is unlikely to promote a material increase in competition and declaration of the service is therefore unlikely to satisfy criterion (a).<sup>56</sup>

<sup>50</sup> QCA Draft Recommendation, p 21.

<sup>51</sup> *Sydney International Airport* [2000] ACompT 1 at [106].

<sup>52</sup> See also *Application by Glencore Coal Pty Ltd* [2016] ACompT 6 at [85] and [106].

<sup>53</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.26]-[3.32].

<sup>54</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.29].

<sup>55</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.31]. See also *Virgin Blue Airlines Pty Ltd* [2005] ACompT 5 at [156].

<sup>56</sup> *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2 at [1068], where the Tribunal stated that 'if a dependent market is already effectively competitive, intervention is not called for. That is, we read criterion (a) as having no application to a market which is effectively competitive'; NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.25]; Productivity Commission, *Productivity Commission Inquiry Report, National Access Regime*, No. 66, 25 October 2013, p 172.

## Draft Recommendation and overview of Queensland Rail's response

- 104 In its Draft Recommendation, the QCA concludes that criterion (a) is not satisfied in respect of the deemed declared service or the services provided using the Other Systems. However, the QCA's preliminary view is that criterion (a) is satisfied in respect of services provided on the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System.
- 105 In its Draft Recommendation, the QCA considers the services provided using the:
- 105.1 North Coast Line and Metropolitan System together;
  - 105.2 Mount Isa Line;
  - 105.3 West Moreton System and Metropolitan System together; and
  - 105.4 Other Systems separately.
- 106 For the reasons outlined, Queensland Rail submits the relevant services are those described in paragraph 52 above. The correct approach is to make the assessments separately in respect of each of these services.
- 107 While there may be scope to debate the way in which the markets dependent on these services are defined in this review, the precise market definitions do not change the competition analysis of the likely future with or without declaration in this instance as Queensland Rail will continue to provide access on reasonable terms and conditions in the future without declaration. This is because:
- 107.1 Contrary to the QCA's preliminary findings in relation to the North Coast Line, Mount Isa Line and West Moreton System/Metropolitan System,<sup>57</sup> Queensland Rail does not have the ability or incentive to exercise market power to adversely affect competition in any dependent market. To the contrary, Queensland Rail has incentives to promote utilisation of its network and thus incentives to increase competition in dependent markets.
  - 107.2 Further, and in any event, in the future without declaration, Queensland Rail has executed an irrevocable Deed Poll which gives rise to a binding and enforceable access framework in the form of the Access Framework provided with this submission. The Access Framework ensures that access to the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System will continue to be available on reasonable terms and conditions in the future without declaration. As such there can be no change to (and certainly no material increase in) competition in any dependent market as a result of declaration.
- 108 The balance of this submission sets out the following:
- 108.1 The reasons why Queensland Rail does not have the ability or incentive to exercise market power in the provision of below rail services to freight operators.
  - 108.2 The evidence that there are constraints other than those arising due to declaration.
  - 108.3 Constraints in the provision of below rail services to freight operators (by system).
  - 108.4 The reasons why Queensland Rail does not have the ability or incentive to exercise market power in the provision of below rail services to passenger operators.
  - 108.5 The reasons why there is no 'two-period hold-up problem' as described by the QCA.
  - 108.6 The effect of Queensland Rail's Access Framework, which will apply to the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System to the extent services provided on those systems are not declared.
  - 108.7 The relevance of the competitive nature of key dependent markets.

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<sup>57</sup> QCA Draft Recommendation, Part B, pp 46, 58, 66.

## No ability or incentive to exercise market power in the provision of below rail services to freight operators

- 109 As detailed in the HoustonKemp Expert Report, there are three reasons why Queensland Rail has no ability or incentive to exercise market power. These are that:
- 109.1 Queensland Rail is no longer relevantly vertically integrated.
  - 109.2 There is excess capacity on the network.
  - 109.3 There are material market and other constraints on Queensland other than regulation.
- 110 Each is discussed in turn.

## No relevant vertical integration

- 111 As noted in the NCC's guide to declaration of services, criterion (a) will more likely be satisfied where the service provider is vertically integrated into the dependent market(s).<sup>58</sup> Indeed, as the Federal Court stated in *BHP Billiton Iron Ore Pty Ltd v The National Competition Council* [2006] FCA 1764, 'it is the very prevention of a vertically integrated organisation using its control over access to an essential facility to limit effective competition in dependent markets that is a key activity that the access regime seeks to deal'.<sup>59</sup>
- 112 Queensland Rail is not (and does not intend to become) vertically integrated in a way that would give it an ability and incentive to leverage any market power into a dependent market.
- 113 The provision of track services and the running of freight trains can be provided separately and occur in functionally distinct markets. Currently, Aurizon and Pacific National provide freight services on Queensland Rail's systems. Queensland Rail provides below rail services on its systems but does not operate freight trains. As a result, Queensland Rail is not vertically integrated in a relevant way and has no incentive to leverage any market power in the provision of below rail services to advantage a related entity providing above rail freight transport services. This will not change in the future without declaration.<sup>60</sup>
- 114 While Queensland Rail operates passenger services on the North Coast Line, it does not compete with other above rail operators providing passenger services. This was acknowledged by the QCA in relation to 2016 Access Undertaking, with the QCA noting that 'Queensland Rail's existing operational structure means ring-fencing issues are unlikely to affect competition, as Queensland Rail's passenger operations do not compete with other above-rail operators' and that the QCA did not consider that this was likely to change during the term of 2016 Access Undertaking.<sup>61</sup> There is similarly no expectation that such interests are likely to arise during the term of the Access Framework.
- 115 Passenger services are provided subject to Queensland legislation. The TI Act, for example, enshrines protections for passengers services that will exist in future with or without declaration. In particular, the TI Act:
- 115.1 Provides that a railway manager must endeavour to bring a passenger service that is delayed back to its scheduled running time (and in doing so must not distinguish between different types of regularly scheduled passenger services).<sup>62</sup>
  - 115.2 Includes a process whereby a railway manager may be required to give priority to passenger service requirements in allocating train paths.<sup>63</sup>

<sup>58</sup> NCC, *Declaration of Services, A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018, p 30.

<sup>59</sup> *BHP Billiton Iron Ore Pty Ltd v The National Competition Council* [2006] FCA 1764 at [45].

<sup>60</sup> The Queensland Rail 2017 – 2023 Strategic Plan and FY2017/18 Operational Plan (with which Queensland Rail is required to comply under the QRTA Act) do not contemplate Queensland Rail participating in the above rail freight market. Queensland Rail could not enter the above rail freight market without the approval of responsible Ministers through the approval of future strategic and operational plans.

<sup>61</sup> QCA, Decision - Queensland Rail's Draft Access Undertaking (June 2016), page 8.

<sup>62</sup> Sections 265(1) and (2) of the TI Act.

<sup>63</sup> Section 266 of the TI Act.

- 116 A failure on the part of the railway manager to comply with these requirements may result in civil penalties.<sup>64</sup> Queensland Rail is thus required to give priority to passenger trains in this way irrespective of whether or not its below rail services are declared, which will mean declaration cannot be said to promote a material increase in competition in a downstream freight market arising from the allocation of train paths.
- 117 Queensland Rail is thus not vertically integrated in a relevant way and has no ability or incentive to leverage any market power in the provision of below rail services to advantage a related entity providing above rail services or otherwise affect competition in a downstream market. This will not change in the future without declaration.

### **There is excess capacity on the network**

- 118 Queensland Rail has excess capacity on its network. A non-vertically integrated service provider with excess capacity has strong economic incentives to maximise utilisation on its network (so as to recover some proportion of its fixed costs) and thus has an incentive to promote (rather than limit) competition in downstream markets.<sup>65</sup>
- 119 As detailed in the HoustonKemp Expert Report, Queensland Rail has significant spare capacity on each of its systems. HoustonKemp observes that a consequence of spare capacity (in combination with the constraint imposed by market factors and, in the case of the West Moreton System under the low tonnage scenario, ability to pay constraints) is that an access seeker that can be charged any positive margin over the incremental cost of providing the service represents a contribution to Queensland Rail's substantial fixed cost base.<sup>66</sup> As such, Queensland Rail has an incentive to maximise demand for its services (rather than price).
- 120 In *Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2, the Tribunal accepted that Duke had strong commercial incentives to increase the throughput of the pipeline given its high capital cost, low operating costs and spare capacity.<sup>67</sup> Similar factors (such as high capital costs and spare capacity) create strong incentives for Queensland Rail to increase demand for and utilisation of its services.
- 121 These incentives are enshrined in Queensland Rail's confidential pricing principles for freight access charges. The principles include that prices should be set to optimise the use of the existing rail network, including attracting freight from road to rail, where access prices can at least cover the incremental costs of providing access for the train service and prices.<sup>68</sup>

### **Queensland Rail is materially constrained by market and other factors**

- 122 Queensland Rail is materially constrained in the provision of below rail services to freight operators. Most significantly, for all freight other than some bulk commodities being transported over long distances (such as coal on the West Moreton System), Queensland Rail faces intense and increasing competition from road operators. Road transportation offers an effective substitute service to rail, which has a significant and direct downward impact on the prices that Queensland Rail negotiates with access seekers. For freight services provided using the West Moreton System, if the New Acland development does not proceed, Queensland Rail's ability to pay constraints suppress the access prices that can be imposed by Queensland Rail.
- 123 These matters and the other relevant constraints are discussed by system below, after the evidence that constraints other than declaration exist is set out.

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<sup>64</sup> Section 266B of the TI Act.

<sup>65</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.31]. See also *Virgin Blue Airlines Pty Ltd* [2005] ACompT 5 at [156].

<sup>66</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, sections 4.1.3, 4.2.3, 4.3.2, 4.3.3, and 4.3.4.

<sup>67</sup> *Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2 at [117]. See also NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [3.31].

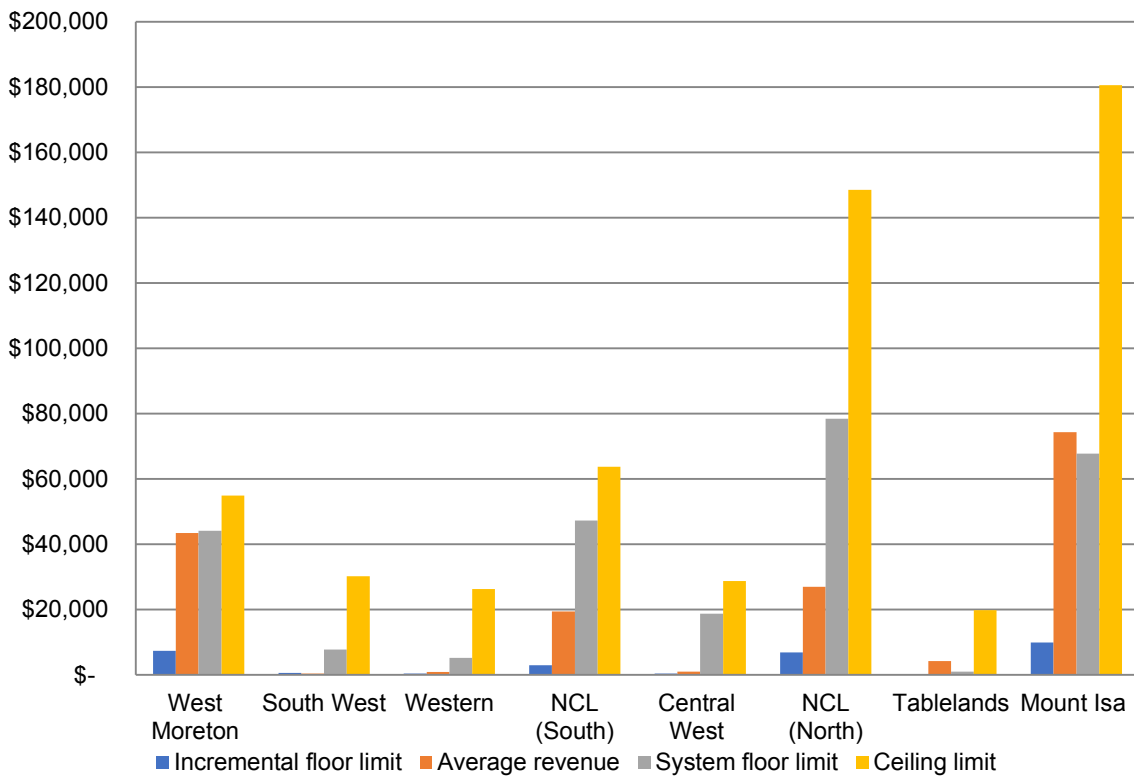
<sup>68</sup> Queensland Rail, *Confidential Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), p 3.

## Evidence of constraints other than declaration

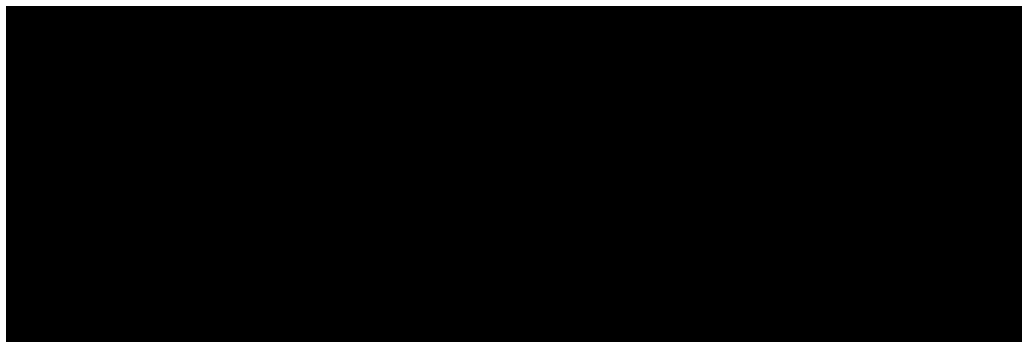
- 124 With the exception of the West Moreton System, the existing regulatory arrangements are not the binding constraint on Queensland Rail's provision of services on its network. This can be readily seen as the prices for access currently charged by Queensland Rail result in revenues well below the revenue ceiling limits imposed by the 2016 Access Undertaking, and near to the floor. Rather, Queensland Rail is constrained by market and other factors (discussed in respect of each service below).
- 125 Queensland Rail has calculated the floor revenue limit for all systems and ceiling revenue limits for the West Moreton System and Mount Isa Line under the 2016 Access Undertaking. The characteristics of the North Coast Line and Other Systems do not justify the considerable expense of Queensland Rail undertaking full asset valuations for these systems. Rather, to give access seekers comfort that proposed access charges for these systems would result in revenues well below the ceiling revenue limit, Queensland Rail provides them with an 'indicative' asset value based on the written down value of the assets. The written down value of the assets is considerably lower than a depreciated optimised replacement cost valuation (which is the methodology Queensland Rail would use to determine the actual ceiling revenue limit) and thus the indicative ceiling revenue limit based on the indicative asset value is well below the actual ceiling revenue limit.
- 126 Figure 1 below (being Figure 3.1 from the HoustonKemp Expert Report) shows the ceiling revenue limit calculated for the West Moreton System and Mount Isa Line, and the indicative ceiling revenue limit based upon the written down value of assets for the North Coast Line and Other Systems. It also shows for each system estimates of the incremental floor limit (being the estimate of the incremental cost of providing an individual train service) and the system floor limit (being the estimate of the incremental cost of providing all trains services on the system). Figure 1 shows that access revenue on each system, exclusive of TSC payments, is considerably below the ceiling limit or indicative ceiling limit. Further, in all cases except the Mount Isa Line, access revenue is below the system floor limit. The system revenues cover the incremental floor revenue limit for individual train services on each system but, except in the case of the Mount Isa Line, only meet the floor revenue limit for the combination of train services on the system when TSC subsidies are taken into account.



**Figure 1: 2017-18 access revenue, floor and ceiling limits by system (\$'000)<sup>69</sup>**



127 Queensland Rail's inability (and lack of incentive) to impose prices at a level so as to recover revenues equal to the ceiling limit, or even near the ceiling limit, is reflected in Queensland Rail's confidential internal pricing principles for freight access charges. That document states:<sup>70</sup>



128 In addition, with the exception only of the Mount Isa Line, each of Queensland Rail's systems are supported by, and are commercially viable only because Queensland Rail receives, transport service payments under the TSC with the State of Queensland. In 2017-18:<sup>71</sup>

128.1 the North Coast Line received \$152.3 million in TSC payments and generated only \$46.4 million in access revenue;

128.2 the West Moreton System received \$0.74 million in TSC payments and generated \$45.2 million in access revenue; and

<sup>69</sup> HoustonKemp Expert Report, Figure 3.1.

<sup>70</sup> Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), p 13.

<sup>71</sup> Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, p 4. <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

- 128.3 the Other Systems received \$413.6 million in TSC payments and generated only \$25.4 million, including \$19.3 million in Metropolitan System coal in access revenue (accounting for 'internal charges' recorded as access revenue in the below rail financial statements).
- 129 The adequacy of the access charges declines even further when capital expenditure and a return on capital are taken into account. Accordingly, the absence of TSC payments would result in large parts of the rail network becoming commercially unviable, as providing customers with access to the rail network on a commercial basis would not generally be affordable for customers.

## Constraints in the provision of below rail services to freight operators

### North Coast Line

- 130 The existing regulatory arrangements are not a binding constraint on Queensland Rail's provision of services on the North Coast Line; Queensland Rail's access revenue on the North Coast Line is significantly below the price ceiling established by these arrangements, where access revenue only accounts for 32% of operating costs of providing the service, let alone a return on capital.<sup>72</sup>
- 131 Rather, Queensland Rail is constrained by market and other factors. The material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the North Coast Line include the following:
- 131.1 Competition by road operators, which provides a substitute service in respect of the transportation of freight other than some bulk commodities over long distances. Parties requiring freight transportation services can readily shift to moving freight by road rather than rail in the event of an increase in access price and/or decline in quality of service provided.
- 131.2 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans, as well as its obligations under the TSC.
- 131.3 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.
- 132 Each constraint is discussed in turn below.
- 133 Further, as highlighted by HoustonKemp, Queensland Rail is constrained by customers' ability to pay and countervailing power on the North Coast Line.<sup>73</sup>

### Road transport competition

- 134 While the QCA considers that there is only a subset of the above-rail market in respect of which road operators can be said to be competing with rail operators (namely, the transportation of non-bulk freight for a distance between 600km and 1,000km),<sup>74</sup> Queensland Rail submits that road operators provide a competitive constraint for all freight types on the North Coast Line. This is discussed in section 4.2. of the HoustonKemp Expert Report and below.
- 135 As a preliminary matter, Queensland Rail notes the difficulties with considering a small but significant non-transitory increase in price (**SSNIP**) to determine the relevant market in circumstances where prices are below the prices would occur in a workably competitive market that are described in section 3.3 of the HoustonKemp Expert Report (the 'reverse cellophane fallacy'). Given Queensland Rail's access prices result in revenues below the regulated ceiling limits and are subsidised by considerable TSC payments, the QCA cannot

<sup>72</sup> Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, p 4, <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

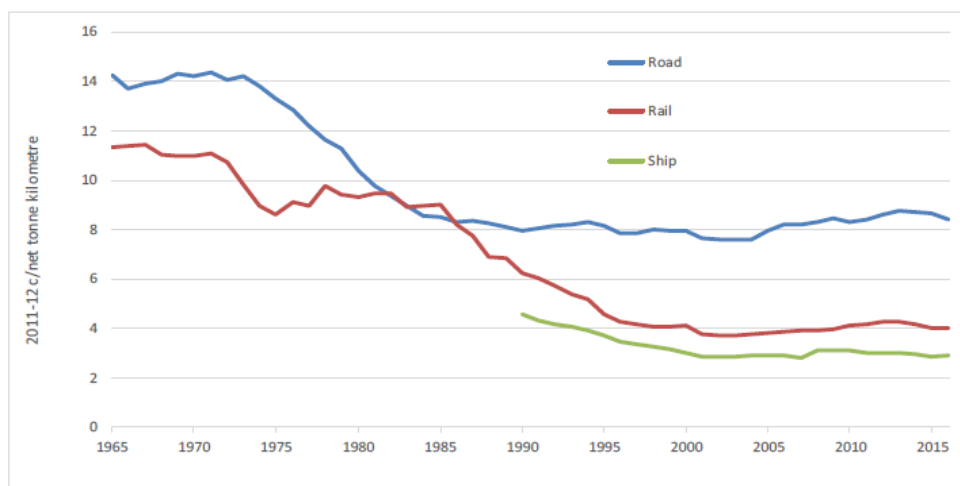
<sup>73</sup> HoustonKemp Expert Report, section 4.2.4.

<sup>74</sup> QCA Draft Recommendation, Part B, p 37.

apply a straight SSNIP analysis; doing so would result in too narrow a market definition (in this instance by excluding road transport competition).

- 136 It is well established that road transport dominates the carriage of non-bulk freight on all major freight corridors in Australia except the East-West (Melbourne to Perth) corridor.<sup>75</sup>
- 137 Intrastate freight in Queensland is primarily moved by road, with 33% of the freight task in 2013-14 being moved by rail.<sup>76</sup> Queensland Rail's share of the freight task was just three per cent, the bulk of intrastate rail freight in Queensland being coal movements on Aurizon's Central Queensland Coal Network (**CQCN**).
- 138 The competition posed to rail in the transportation of freight by road operators has intensified in recent years given significant improvements in road vehicle productivity and substantial investment in road networks, a trend which is set to continue. Accordingly, over the last decade, Queensland Rail has seen freight traditionally moved by rail switch to road transport. This includes cement and fuel, containerised grain, sugar and some minerals concentrate.
- 139 The alternative offered by road means that end customers have alternative avenues open to them other than to using Queensland Rail's systems. This provides end customers with significant countervailing power, as the option of road transport means that they can make a credible threat to withdraw from negotiations with Queensland Rail (or an above rail provider) and switch to using road transport if a competitive price and reasonable terms and conditions are not offered by Queensland Rail for the below rail service.<sup>77</sup> For instance, the Ranbury Management Group Pty Ltd (**Ranbury**), in its report titled *North Coast Line Capacity Improvement Study — Final Report* for the Department of Main Roads and Transport of February 2015 (**2015 Ranbury Report**), included as **Confidential Attachment C**, observes that rail generally has had to significantly undercut road pricing to gain business.<sup>78</sup> This is common for rail pricing, with the Bureau of Infrastructure, Transport and Regional Economics (**BITRE**) showing that interstate rail freight rates have been consistently below interstate road freight rates since the late 1980s, with the gap appearing to grow over time (see Figure 2 below).

**Figure 2: Real interstate road, rail and sea freight rates<sup>79</sup>**



- 140 Rail pricing at this level is not commercially sustainable, as evidenced by the substantial payments under the TSC required to maintain the viability of the North Coast Line.

141

<sup>75</sup> Productivity Commission, *Road and Rail Freight Infrastructure Pricing*, Report No. 41, December 2006, p 13.

<sup>76</sup> Queensland Rail estimate. Australian Bureau of Statistics Road Freight Movements, Australia, 12 months ended 31 October 2014, Queensland Rail total net tonnes 2013-15, coal movements on the Central Queensland Coal Network 2013-14.

<sup>77</sup> Cf. *Virgin Blue Airlines Pty Limited* [2005] ACompT 5 at [484]-[485].

<sup>78</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 11.

<sup>79</sup> BITRE, *Information Sheet 90*, 2017.

142

- 143 Rail has a number of challenges compared to road freight, both generally and specific to the categories of freight carried on the North Coast Line. These are discussed below, followed by specific examples of these challenges impacting on rail's ability to compete with road on the North Coast Line.

*Challenges of rail compared to road transport*

- 144 Rail suffers a range of challenges compared to road freight. These were summarised in the 2015 Ranbury Report as follows:<sup>83</sup>

***Transit Time:*** *Even if rail could match road on the line-haul transit time (which it does not), rail cannot match door-door transit time, due to the Pick Up and Delivery (PUD) legs at each end, and the extra rail terminal times (including waiting for loading/unloading, waiting for the train departure time slot, and the activities post-train arrival). This is exacerbated by the limitations on train scheduling imposed by sharing track with passenger services (in Sydney and Brisbane), and the constraints of single track corridors.*

***Greater complexity and lack of responsiveness:*** *The complexity of the rail transport chain, with its numerous participants, the rigidity of the network and its operation, and*

<sup>80</sup> Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), p 7.

<sup>81</sup> Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), pp 15-16.

<sup>82</sup> Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), p 16.

<sup>83</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, pp 10 to 11.

the impact each participant has on the overall transport outcome. There is no single point of accountability, compared to the "single truck and driver" road option.

**Greater unreliability and less availability:** Due to a combination of infrastructure performance and reliability outcomes, complexity of the infrastructure, rail operator equipment and terminal operations, and the work practices and culture of the participants in the rail logistics chain.

**Price:** Rail's major point of differentiation is price, with rail generally having to significantly undercut road pricing to gain business.

145 These matters are discussed further in turn below.

145.1 **Transit time:** The 2015 Ranbury Report set out northbound travel and transit times for road and rail along the length of the longest line in the Queensland Rail network, the North Coast Line. These are replicated in Table 1 below.

**Table 1: Regional travel distance and travel time<sup>84</sup>**

|                    | Road          |                               | Rail   |                          |  |
|--------------------|---------------|-------------------------------|--|--------------------------|--|
|                    | Distance (km) | Travel time (no rest periods) | Travel time + 7hrs stationary rest + 1hr general | Green light transit time | Average Master Train Plan transit time |
| <b>Brisbane to</b> |               |                               |  |                          |  |
| <b>Rockhampton</b> | 660           | 8hrs 44m                      | -  | 9hrs 39m                 | 13hrs 46m                              |
| <b>Mackay</b>      | 990           | 13hrs 1m                      | -  | 14hrs 26m                | 20hrs 14m                              |
| <b>Townsville</b>  | 1,379         | 18hrs 24m                     | 26hrs 24m  | 19hrs 37m                | 27hrs 32m                              |
| <b>Cairns</b>      | 1,721         | 23hrs 10m                     | 31hrs 10m  | 25hrs 29m                | 34hrs 24m                              |

If rest periods are not taken into account (which may be achieved by road operators through driver shift changes or two-up driving), road is significantly faster than rail. Even when rest periods are taken into account, transit times over long distances are comparable. However, whereas the road travel times above include the direct door-door journey, the rail transit times are terminal-terminal only and do not take into account the additional time taken for rail freight transport arising from.<sup>85</sup>

145.1.1 the pick-up and delivery legs at each end of the rail trip;

145.1.2 the waiting times and handling times within the terminals (including allowances for road delivery cut-off time, freight pick-up availability time, waiting time for trucks at the terminals, train loading and waiting time for pre-despatch and post-arrival activities such as shunting and train examinations);

145.1.3 the rigidities of rail time-tabling and time spent waiting for the specific train path; and

145.1.4 the requirement to aggregate loads for train transport.

Once these matters are taken into account, it is evident that road transport provides a significantly more timely service than rail across all relevant distances. That rail cannot compete with road on transit time is generally accepted.<sup>86</sup>

145.2 **Greater complexity and lack of responsiveness:** A customer wishing to transport freight by rail requires the services of multiple parties: below rail service

<sup>84</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, pp 86, 147.

<sup>85</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, pp 86, 147-148, 150.

<sup>86</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 86; ACCC, *Statement of Issues, Pacific National / Linfox - Proposed acquisitions of intermodal assets from Aurizon*, 15 March 2018 at [78].

providers; above rail service providers; logistics providers offering pick-up and delivery services; and terminal handling service providers. While freight forwarders may acquire rail linehaul services 'wholesale' then provide end customers with an end-to-end freight solution, the provision of the service is still critically dependent on the performance of a range of operators. This creates issues of accountability and implementing customer service initiatives is more difficult. By contrast, road transport offers customers a single interface, with responsibility for delivery resting on one service provider. Customers value this greater accountability and flexibility to respond to customer needs.<sup>87</sup>

145.3 **Greater unreliability and less availability:** Issues associated with unreliability and availability make rail less attractive to end customers. Given the single track nature of a rail network, the availability of rail transportation is more affected by both planned maintenance and unplanned incidents than road transportation, which allows competitors to utilise alternative route options in the event of service disruptions. The consequences of reliability are also exacerbated in the case of rail given it affects 'full train' loads, compared to the 'single truck' consequences for road reliability.<sup>88</sup>

Unplanned incidents causing disruptions to rail services can include flooding and cyclones, excessive heat, high winds, derailments and level crossing incidents. Each of Queensland Rail's systems are affected by flooding (though flood damage is typically more serious in north Queensland). The 2015 Ranbury Report noted that based on event experience (and while the time will vary depending on the event and the damage caused), the expected recovery time to reopen a track after a flood is usually approximately three days. This includes waiting for the flood water to recede, performing damage inspections, mobilisation, repair work and track certification.<sup>89</sup>

There has been substantial investment in the Bruce Highway freight infrastructure network in the last ten years which has enhanced the operational efficiency of road providers. Specifically, the Federal and Queensland governments announced the \$8.5 billion Bruce Highway Upgrade Program in 2012,<sup>90</sup> and the Federal Government committed an additional \$3.3 billion in 2018.<sup>91</sup> As well as improving transit times, such upgrades significantly improve road transport competitiveness in terms of transit time reliability.

145.4 **Price:** Even if rail operators can demonstrate a high level of reliability, the high levels of risk and consequential impacts of service delivery failures mean that rail operators must still provide equivalent or greater value for money compared to road based operators.<sup>92</sup> Shorter road vehicle replacement cycles (compared to longer life rail fleets) and changes in government policy have resulted in improved vehicle productivity and fuel efficiency, as well as rapid adoption of technology, in the road freight industry. This has significantly improved the cost effectiveness of road transport operators in recent years.

146 A further challenge of rail transportation in Queensland when compared to road transport is the significant investment required by above rail operators/end customers and the risk of asset stranding. Whereas the investment required to provide road haulage services is readily made and transferable, this is not the case for above rail services. The capital investment required is substantial and there are limited uses for the narrow gauge rolling stock required for Queensland Rail's network. Above rail operators therefore require longer term take or pay contracts to make such investment viable. There is a reluctance on the part of customers

<sup>87</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 105.

<sup>88</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 73.

<sup>89</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 58.

<sup>90</sup> Department of Transport and Main Roads, <https://www.tmr.qld.gov.au/Projects/Featured-projects/About-the-Bruce-Highway-Upgrade-Program> [accessed 8 March 2019].

<sup>91</sup> Department of Transport and Main Roads, <https://www.tmr.qld.gov.au/Projects/Featured-projects/About-the-Bruce-Highway-Upgrade-Program> [accessed 8 March 2019]; See also Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 72.

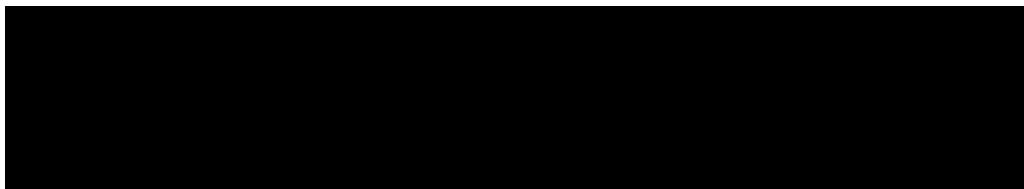
<sup>92</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 104.

(particularly intermodal customers) to enter into such contracts.<sup>93</sup> This has been recognised by the ACCC in its Statement of Issues regarding Aurizon's intermodal assets, which states that narrow gauge rolling stock and locomotives, as well as sufficient customer contracts or volume, are high barriers to entry into intermodal rail linehaul in Queensland.<sup>94</sup>

147 Further to the above, there are a number of competitiveness issues faced by rail that are specific to the freight task. For instance, on the North Coast Line, intermodal freight and sugar account for 98 per cent of freight tonnage along most sections of the Line. Other freight carried includes livestock, grain and freight carried from the Mount Isa System between Stuart and the Port of Townsville. Challenges for rail specific to these categories of freight include the following:

147.1 **Intermodal:** Changes to regulations to allow higher mass load limits for road transport have had a significant impact on rail freight. Australia now has some of the most liberal heavy road vehicle mass limits for operating trucks on public roads in the world.

Other factors impacting road versus rail competition include significant investment in the road highway network including the Bruce Highway and Townsville Port Access Road, which has reduced travel time and improved road productivity.



147.2 **Sugar (bulk raw sugar and molasses):** Bulk raw sugar is transported from sugar mills to the nearest export terminal. Many of the mills are located close to export terminals, resulting in short hauls that make it difficult for (heavy) rail to compete with road. The mills also have limited storage capacity for raw sugar, which means that they rely on continual clearing of bins to avoid delays to crushing. [REDACTED]



147.3 **Grain (wheat, barley, sorghum, chickpeas):** There is an increasingly diverse range of products (differing by supplier, purchaser, product and quality, requiring segregation throughout the transport chain), which is more suited to truck and container loading than full train loads. [REDACTED]



In 2015-16, BITRE estimated that 46% of grain movements to port in Queensland were by rail,<sup>100</sup> a significant reduction from a market share of 95% of export grain

<sup>93</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 105.

<sup>94</sup> ACCC, *Statement of Issues, Pacific National / Linfox - Proposed acquisitions of intermodal assets from Aurizon*, 15 March 2018 at [91]-[92].

<sup>95</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 20.

<sup>96</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 22.

<sup>97</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 20.

<sup>98</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 28-30. See also the 2015 Ranbury Report (p 48), which states that the relatively short distances between the mills and ports serviced by the North Coast Line make the sugar task vulnerable to a switch to road.

<sup>99</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 23-27.

<sup>100</sup> BITRE, *Trainline 3, Statistical Report*, November 2015, p 25.

and 56% in the movement of domestic grain in 2004.<sup>101</sup> Queensland Rail estimates that bulk grain movements were around 23% of grain exports in 2016-17.

147.4 **Livestock (live cattle):** Cattle producers and feedlots are widely dispersed across Queensland, whereas the rail coverage is limited. Processors are not willing to commit to using rail services, with the result that there are minimal incentives to invest in the single use infrastructure, rolling stock and associated equipment required for transporting livestock. Total volumes (and individual consignments) are relatively small and are seasonal, making it less attractive for investment by rail operators. [REDACTED]

148 Finally, rigidities around Citytrain network train scheduling place some limitations on the scheduling of trains that need to traverse the Metropolitan System from the North Coast Line.

*Evidence of road contestability with rail on the North Coast Line*

149 There is significant evidence of recent substitution on the North Coast Line. For example:

149.1 As noted in the 2015 Ranbury Report:<sup>103</sup>

*Rail has been losing market share to road freight on this corridor, a situation mirroring that happening along the east coast South–North corridor. Rail is struggling to compete with road freight transport, in an environment of a significant uplift in road vehicle productivity, and massive investment in the highway network between Melbourne and Brisbane, and now planned for Brisbane – Cairns.*

The volumes of intermodal freight transported along the North Coast Line have been in decline since the peak of 2007-2008, with a 21% reduction since that time, from approximately 3.8 million tonnes of product to 3.0 million tonnes in 2016-17.

149.2 The degree of substitutability between road and rail on the North Coast Line is also highlighted by the fact that much of the intermodal rail freight on the North Coast Line is transferred to road during periods when the North Coast Line is not available during scheduled closures or due to unscheduled disruptions.

149.3 Regarding sugar, escalating rail transport costs has resulted in a movement away from rail to trucks for transporting raw sugar from mills to export terminals.<sup>104</sup> In 2014, approximately 1.4 million tonnes of raw sugar was transported from mills to export terminals by public rail, while 2 million tonnes was transported by road.<sup>105</sup> By way of specific example, Plane Creek Mill at Sarina used the North Coast Line until 2012, when it shifted to road to transport its raw sugar to the export terminal at Mackay. [REDACTED]

150 The competitive constraint posed by road operators is also evident in the views expressed by those who operate in the market. For instance:

<sup>101</sup> Booz Allen Hamilton, Advice to Queensland Rail, 2004.

<sup>102</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 30-35.

<sup>103</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 10.

<sup>104</sup> Department of Infrastructure and Regional Development, Bureau of Infrastructure, Transport and Regional Economics, *Freightline 3 — Australian sugar freight transport*, December 2015, p 12.

<sup>105</sup> Department of Infrastructure and Regional Development, Bureau of Infrastructure, Transport and Regional Economics, *Freightline 3 — Australian sugar freight transport*, December 2015, p 12.

<sup>106</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 30.



- 150.1 Pacific National considers that it 'faces significant competition from road operators along all of its key freight corridors, particularly the North Coast line corridor and the Mt Isa to Townsville corridor'.<sup>107</sup> Further Pacific National consider that there is 'modal substitution between road and rail' in the above-rail haulage market.<sup>108</sup>
- 150.2 Aurizon considered that it competed fiercely with road operators for the haulage of intermodal freight on the North Coast Line, citing road competition as a key market characteristic contributing to its decision to exit intermodal in August 2017.<sup>109</sup>
- 150.3 The ARTC states that rail faces significant competitive constraints via competition from road in the intermodal freight market.<sup>110</sup>
- 151 Regulators have also consistently recognised that intermodal freight corridors subject to competition with road transport substantially constrain both below and above-rail operators.<sup>111</sup>

#### Queensland Rail's statutory obligations and position as statutory authority and recipient of TSC payments

- 152 As a statutory authority, Queensland Rail is one of the avenues through which the Queensland Government achieves its rail policy objectives. One such objective is to facilitate the efficient movement of freight through expanding the use of rail.<sup>112</sup> Increasing access charges would be inconsistent with this objective.
- 153 In the event of conduct by Queensland Rail that compromised the Queensland Government's objectives (for example, limiting access to its network), the responsible Ministers have powers including in particular the powers under the QRTA Act to:
- 153.1 control strategic and operational plans (with which Queensland Rail must comply); and
- 153.2 issue written directions to Queensland Rail.
- 154 Given the extensive reporting requirements required to be completed by Queensland Rail, both under the QRTA Act and the TSC, the responsible Ministers can readily ascertain whether any such issues need to be addressed.

#### The threat of regulation or declaration

- 155 Both the NCC and the Tribunal have accepted that the threat of regulation provides some constraint on service providers.<sup>113</sup> Queensland Rail would be constrained in the future without declaration by the threat of regulation and declaration under the QCA Act. In particular, Part 3 of the QCA Act provides for the declaration of 'monopoly business activities', which enables investigations and reporting on price practices and price monitoring, and Part 5

<sup>107</sup> Pacific National submission to the QCA Declaration Review, p 12.

<sup>108</sup> Pacific National submission to the QCA Declaration Review, p 13.

<sup>109</sup> Rail Express, *Aurizon to sell Queensland Intermodal to PN/Infox, will close interstate terminals*, August 2017, <https://www.railexpress.com.au/aurizon-to-sell-queensland-intermodal-to-pnlinfox-will-close-interstate-terminals/>

<sup>110</sup> ARTC Submission to the QCA Declaration Review, p 9.

<sup>111</sup> For example, the Essential Services Commission in Victoria considers that 'the rail supply chain in Victoria does not have sustainable market power against road transport alternatives' and that 'this is further evidenced by the subsidies currently provided by the Victorian Government towards maintaining both the regional and metropolitan networks': *Review of the Victorian Rail Access Regime*, February 2010, p 14,

<https://www.esc.vic.gov.au/sites/default/files/documents/0a75bcfc-1fe2-47c1-a1d6-eb5f7fd147dd.pdf> [accessed 8 March 2019]; Essential Services Commission of South Australia, *South Australian Rail Access Regime Review: Final Report*, August 2015, p 20; See also Harper et al, *Competition Policy Review (Final Report)*, March 2015, p 211, providing that competition with road has 'reduced the need for heavy-handed regulation in much of the rail sector'.

<sup>112</sup> Department of Transport and Main Roads, *Moving Freight, A strategy for more efficient freight movement*, December 2013, pp 4, 34-38.

<sup>113</sup> *Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2 at [130]; NCC, *Application for revocation of coverage of the Moomba to Adelaide Pipeline System under the National Gas Access Regime - Final Recommendation*, 14 December 2005 at [6.122].

provides for the declaration of services for the purposes of the access regime established by that part. In either case, the threat of regulation, with its associated compliance and regulatory costs, would deter Queensland Rail from exercising any market power to hinder competition in dependent markets.

## Mount Isa Line

- 156 Access revenues on the Mount Isa Line cover incremental operating costs, however Queensland Rail does not generate sufficient access revenues to cover the total economic cost of providing the service with regard to the substantial fixed cost base of the system.<sup>114</sup>
- 157 The existing regulatory arrangements are not a binding constraint on Queensland Rail provision of services on the Mount Isa Line; Queensland Rail's access revenue on this Line is significantly below the ceiling limit established by these arrangements.
- 158 Rather, Queensland Rail is constrained by market and other factors. The material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the Mount Isa Line include the following:
- 158.1 Competition by road operators, which provides a substitute service in respect of the transportation of freight other than some bulk commodities over long distances. Parties requiring freight transportation services can readily shift to moving freight by road rather than rail in the event of an increase in access price and/or decline in quality of service provided.
- 158.2 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans.
- 158.3 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.
- 159 The nature of these constraints are largely as discussed above in relation to the North Coast Line. Further, as highlighted by HoustonKemp, Queensland Rail is constrained by customers' ability to pay and countervailing power on the Mount Isa Line.<sup>115</sup>
- 160 In relation to competition by road operators, while the 2015 Ranbury Report relates to the North Coast Line, the matters outlined in relation to rail's competitiveness with road affect each of the categories of freight on each of Queensland Rail's systems. In addition, investment in road infrastructure and changes to regulations to allow higher mass load limits for road transport have had a particularly significant impact on the Mount Isa Line:
- 160.1 There has been substantial investment by the Federal and Queensland governments in the Flinders Highway (parallel to the Mount Isa Line) in the last ten years. This includes \$55 million on several upgrades between 2010-2012,<sup>116</sup> \$25 million in 2015,<sup>117</sup> and \$42 million in 2016<sup>118</sup> to improve road freight transit

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<sup>114</sup> Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, p 4, <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

<sup>115</sup> HoustonKemp Expert Report, section 4.1.4.

<sup>116</sup> Queensland Government, Minister for Main Roads, Media Release, *North Queensland Roads Boosted by Huge Reconstruction Investment*, July 2011, <https://www.capitalmonitor.com.au/Display.aspx?TempLock=SaWoRiwSbxu6EMJxef0Xki54ZWISjLHB>

[accessed 8 March 2019]; Queensland Government Minister for Main Roads, Media release, *Fixing the flood-damaged Flinders Highway*, December 2010, <https://www.capitalmonitor.com.au/Display.aspx?TempLock=6F1%2bJ0LbsttAwFHMN7Dbx9BzBBawU1dC>

[accessed 8 March 2019]; Australian Government, Department of Infrastructure Regional Development and Cities, *Cloncurry Bypass (Online)*, [https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=044468-11QLD-OFF](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=044468-11QLD-OFF) [accessed 8 March 2019].

<sup>117</sup> Australian Government, Department of Infrastructure Regional Development and Cities, *Flinders Highway - Hughenden to Cloncurry - Pavement Widening and Strengthening (Online)*, [https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=044468-11QLD-OFF](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=044468-11QLD-OFF) [accessed 8 March 2019].

<sup>118</sup> Australian Government, Department of Infrastructure Regional Development and Cities, *Flinders Highway (Charters Towers - Richmond) Culvert upgrades (Package 1) (Online)*, [https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=044468-11QLD-OFF](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=044468-11QLD-OFF) [accessed 8 March 2019].

times, improve network resilience to weather events and promote freight efficiency.<sup>119</sup>

160.2 With a heavy mass limit permit trucks on the Flinders Highway can operate up to 130 gross tonnes whereas in the United States and many European countries trucks on public roads are limited to 45 gross tonnes or less. The operation of triple road-trains on the Flinders Highway and the ability for trucks to 'back load' means that commodities traditionally moved by rail can now be hauled competitively by road.

161 Queensland Rail also faces the following challenges of rail specific to the freight carried on the Mount Isa Line:

161.1 **Minerals and mineral concentrates (lead, zinc and copper):** [REDACTED]

There has been a trend toward miners moving minerals concentrates as containerised freight on intermodal trains, to avoid the costs of specific bulk wagons and loading/unloading facilities. However, moving minerals concentrates in containers is less efficient (and more costly and thus less competitive) than a bulk transport solution.

161.2 **Chemicals (fertiliser and sulphuric acid):** [REDACTED]

162 Evidence of the increasing competition from road operators on the Mount Isa Line includes the following.

163 On 31 January 2017, Aurizon ceased its intermodal service between Townsville and Mount Isa following Glencore's decision to move around [REDACTED] tonnes of its intermodal freight to Pacific National. At the time, Aurizon had been moving around [REDACTED] per annum on the service. Pacific National did not have intermodal wagons available to take up the [REDACTED] tonnes of freight it had contracted with Glencore to transport and for a period of time the entire [REDACTED] of freight previously transported by Aurizon was moved by road.

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[https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=067211-16QLD-NAR](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=067211-16QLD-NAR) [accessed 8 March 2019].

<sup>119</sup> ; Australian Government, Department of Infrastructure Regional Development and Cities, *Flinders Highway (Townsville - Torrens Creek) Pavement Strengthening and Rehabilitation (Package 1)*,

[https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=067212-16QLD-NAR](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=067212-16QLD-NAR) [accessed 8 March 2019].

<sup>120</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 12.

<sup>121</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 13.

<sup>122</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 12.

<sup>123</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 19-22.

For approximately 18 months, the remaining [REDACTED] tonnes per annum of freight (including cement, lead, sulphur and fuel) was moved by road. In October 2018, Aurizon recommenced a combination bulk/intermodal train service with two return services between Mount Isa and Townsville per week with approximately [REDACTED] tonnes being returned to rail but still some [REDACTED] tonnes remain on road. This provides clear evidence of the contestability of traffics between road and rail on this line.

- 164 The residual freight, including lead, cement and fuel switched to road transport. Lead and cement in particular have traditionally been considered as primarily rail transport commodities given their weight and the distance being hauled.
- 165 While this is heavy freight, which is not time sensitive and thus ideal for transportation by rail, Queensland Rail understands that factors causing users to continue to use road transport include a reluctance of end-customers to enter into longer term take or pay contracts that rail operators seek and the flexibility of road to chase backloading opportunities to be more competitive.
- 166 While rail was once the primary mode of transport for fuel from ports to regional areas, the final remaining bulk fuel service (on the Mount Isa Line) ceased in 2016-17.
- 167 Investment in the Port Access Road in Townsville allowed high capacity Type 2 Road Trains direct access to the port, which has facilitated mode shift of minerals products from the Mount Isa Line catchment. Also smaller scale mines on the Mount Isa Line wanting to reduce upfront capital costs on train loading and unloading facilities may choose an intermodal logistics solution that road can compete on.
- 168 The increasing competition from road on the Mount Isa Line is also discussed in section 4.2.1 of the HoustonKemp Expert Report.

## West Moreton System

- 169 As outlined in the HoustonKemp Expert Report, there is considerable uncertainty around the future volume of coal that will be transported on the West Moreton System.<sup>124</sup> The most likely scenarios are that it will either increase to nine mtpa (across two mines with the development of the New Acland mine) (high tonnage scenario) or decrease to two mtpa (with closure of the New Acland mine) (low tonnage scenario) within the next five years.
- 170 In the low tonnage scenario, it is likely that the level of access charge required to cover the costs of providing Queensland Rail's services would exceed the ability of the remaining mine to pay.<sup>125</sup> The likely access prices would instead result in revenues below the revenue ceiling limit. As described by HoustonKemp, in these circumstances, and given the West Moreton System would be underutilised, Queensland Rail would have very strong incentives to negotiate a price with the remaining mine that maximises utilisation and to promote competition in dependent markets so as to maximise demand for services on the West Moreton System (including by facilitating access to the system). HoustonKemp therefore concludes that the volumes and access prices on the West Moreton System would be the same in the future with or without declaration. As such, declaration can have no impact on dependent markets and it follows that criterion (a) cannot be satisfied in respect of the use of the West Moreton System.<sup>126</sup>
- 171 In the high tonnage scenario, for the reasons outlined in the HoustonKemp Expert Report, Queensland Rail still has a strong incentive to increase mining output and it is not clear that the use of the West Moreton System satisfies criterion (a).<sup>127</sup>

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<sup>124</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.3.2.

<sup>125</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.3.3.

<sup>126</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.3.3.

<sup>127</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy Criterion (a)?*, March 2019, section 4.3.4.

- 172 Freight on the West Moreton System other than coal is contestable with road, for the reasons outlined above in respect of the North Coast Line (including rigidities around Citytrain network train scheduling place some limitations on the scheduling of trains that need to traverse the Metropolitan System from the West Moreton System).
- 173 While bulk grain can be operated competitively with road on this system, the 15.75 TAL on this system makes competition with road transport challenging for containerised products such as grain and cotton.
- 174 The other material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the West Moreton System include those discussed above in respect of the North Coast Line, namely:
- 174.1 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans.
- 174.2 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.

## Other Systems

- 175 Only a very low volume of freight is transported on Central Western, Western and South Western Systems. The freight transported is primarily grain and livestock. As outlined above in respect of the North Coast Line, such freight is highly contestable by road. In fact, general freight demand on these systems is so low it does not amount to efficient train load quantities.
- 176 Freight on the Other Systems is contestable with road, for the reasons outlined above in respect of the North Coast Line (including rigidities around Citytrain network train scheduling place some limitations on the scheduling of trains originating from the South Western, Western and Central Western Systems that need to traverse the Metropolitan System).
- 177 Older infrastructure with low axle loads is a barrier to entry, particularly for the South Western, Western, Central Western and Tablelands Systems.
- 178 A Queensland Parliament Committee report *Rail freight use by the agriculture and livestock industries* of June 2014 noted comments from a range of interested stakeholders including the following:<sup>128</sup>
- 178.1 The competitiveness of rail is impacted by infrastructure limitations including certain agricultural products such as containerised grain are not able to be freighted by rail due to their weight.
- 178.2 The Port of Brisbane pointed to the fact that the deregulation of the grain market has seen a shift toward containerised products to provide more market flexibility, but the rail system with a 15.75 TAL weight limitation cannot accommodate many containerised products, resulting in higher volumes being moved by road.
- 179 [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] Road has no such limitations.
- 180 Evidence of the constraint posed by road transport on the Central Western, Western and South Western Systems includes the following:

<sup>128</sup> Transport, Housing and Local Government Committee, *Rail freight use by the agriculture and livestock industries*, Report No. 45, June 2014, p 24, <http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2014/5414T5368.pdf> [accessed 8 March 2019].

<sup>129</sup> PwC, *Queensland Regional Rail Network Review, Network Infrastructure & Utilisation*, August 2016, pp 11-12.

<sup>130</sup> PwC, *Queensland Regional Rail Network Review, Network Infrastructure & Utilisation*, August 2016, pp 11-12.

- 180.1 **Grain:** [REDACTED]  
[REDACTED]  
[REDACTED]
- 180.2 **Livestock:** [REDACTED]  
[REDACTED]  
[REDACTED] Queensland is the only State where cattle are still transported by rail<sup>134</sup> and the traffic is subsidised under the Livestock Transport Services Contract between the Queensland Government and Aurizon. Without such subsidies, it would not be commercially viable for these services to be provided.
- 180.3 **Central Western System:** Aurizon provides subsidised freight services on the Central Western System pursuant to the Regional Freight Transport Services Contract with the Queensland Government. Without such subsidies, it would not be commercially viable for these services to be provided.
- 180.4 **South Western System:** There has been significant change in the transport market in the South West, with all cotton movements from the South West switching from rail to road from 2014-15. As a result of increases to heavy vehicle mass limits, over 85% of grain is moved in containers by trucks from the South West to the Port of Brisbane.<sup>135</sup>
- 181 The other material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the Other Systems include those discussed above in respect of the North Coast Line, namely:
- 181.1 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans.
- 181.2 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.
- 182 No freight is transported on the Tablelands System.

### Metropolitan System

- 183 To the extent the Metropolitan System is used to provide freight services, the analysis set out above for the other Queensland Rail systems is relevant.
- 184 The remaining traffic on the Metropolitan System comprises:
- 184.1 Citytrain, the commuter passenger service on the Metropolitan System; and
- 184.2 infrequent or ad hoc heritage tourist services.
- 185 Queensland Rail therefore has no ability or incentive to exercise market power in the provision of below rail services for the purposes of providing these services for the reasons Queensland Rail has no ability or incentive to use any market power to affect passenger service markets set out below.

<sup>131</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 27.

<sup>132</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 24-25, 27.

<sup>133</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 35.

<sup>134</sup> PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 32.

<sup>135</sup> The Port of Brisbane advised a Queensland Parliamentary committee that over the past three years there had been a modal shift from 85 per cent of agriculture on rail down to 15 per cent today and declining, Transport, Housing and Local Government Committee, *Rail freight use by the agriculture and livestock industries*, June 2014, p 6, <https://www.parliament.qld.gov.au/Documents/TableOffice/TabledPapers/2014/5414T5368.pdf> [accessed 8 March 2019].

## No ability or incentive to use any market power to affect passenger service markets

- 186 Many of the constraints described above in relation to the provision of below rail services for the purposes of freight transportation on its regional systems will also constrain Queensland Rail in the provision of below rail services for the purposes of providing passenger services. For instance:
- 186.1 Road transport is a substitute for passenger rail services.
  - 186.2 Queensland Rail must comply with written directions from the responsible Ministers and comply with strategic and operational plans.
  - 186.3 Queensland Rail would be constrained in the future without regulation by the threat of regulation and declaration under the QCA Act.
- 187 However, more significantly is that the provision of passenger train services is heavily subsidised. Specifically:
- 187.1 Queensland Rail is the exclusive provider of passenger transport services (Citytrain) and track services in south east Queensland on behalf of the state.
  - 187.2 Each of Queensland Rail's passenger transport services are subsidised by the Queensland Government and would not be commercially viable without transport support payments under the TSC. Only one additional operator, Cairns Kuranda Steam, provides regular tourist passenger services on one section of the Tablelands System. Cairns Kuranda Steam also receives transport support payments from the Queensland Government and would not be commercially viable without these.
  - 187.3 The majority of the costs associated with operation of the passenger network are supported by subsidies through the TSC.<sup>136</sup> Accordingly, passenger network revenues do not cover a small fraction of incremental costs let alone contribute towards Queensland Rail's substantial fixed costs.
- 188 The remaining infrequent and ad hoc passenger services operating on Queensland Rail's systems are dependent on volunteer labour and donations to remain viable.
- 189 There is not, in such circumstances, any ability to leverage any market power into a dependent market for the provision of passenger services.

## No two-period hold-up problem

- 190 For each of the services it proposes to recommend declaration of, the QCA describes a two-period hold-up problem:
- 190.1 In respect of the North Coast Line, the QCA is concerned that all market participants will therefore face material uncertainties relating to price and non-price terms, particularly at the time of contract renewal.<sup>137</sup> This is not alleviated by existing arrangements as Queensland Rail's agreements do not contain 'evergreen' renewal clauses.<sup>138</sup> The QCA considers the above-rail operator can foresee this risk and this is sufficiently material to deter entry in the first place and undermine incentives for future efficient action by existing operators.
  - 190.2 In respect of the Mount Isa Line, the QCA is concerned that miners will be in a less favourable bargaining position in negotiating access agreements subsequent to the first agreement. The QCA considers that this may deter investment in the

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<sup>136</sup> Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, pp 4, 15, <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

<sup>137</sup> QCA Draft Recommendation, Part B, p 47.

<sup>138</sup> QCA Draft Recommendation, Part B, pp 44, 47.

North West Queensland minerals tenement market by way of new entry and undermine incentives for efficient actions in relation to existing tenements.<sup>139</sup>

- 190.3 In respect of the West Moreton System, the QCA is concerned that miners will be in a less favourable bargaining position in negotiating access agreements subsequent to the first agreement.<sup>140</sup> The QCA considers that this may deter investment in the West Moreton region coal tenements market by way of new entry and undermine incentives for efficient actions in relation to existing tenements.
- 191 The HoustonKemp Expert Report describes why there is no two-period hold-up problem arising in respect of Queensland Rail's services provided using the North Coast Line, Mount Isa Line and West Moreton System.<sup>141</sup> The reasons include that:
- 191.1 users can (and do) negotiate longer term contracts where required; and
- 191.2 Queensland Rail does not have an incentive to take advantage of users in the second round of negotiations given Queensland Rail is involved in multiple rounds of negotiations with multiple users. Taking advantage of users in second round negotiations would give rise to reputational damage, which would in turn erode Queensland Rail's financial viability.
- 192 As outlined by HoustonKemp, if the two-period hold-up problem described by the QCA did exist, it would arise under the current regulatory arrangements. Given the revenues resulting from Queensland Rail's access prices are well below the ceiling limits, Queensland Rail could, if it had the ability and incentive to do so, increase prices in the second round under the current regulatory arrangements. It does not do so.

## New Access Framework

- 193 In addition to (and independently of) the constraints described above, to the extent Queensland Rail's services are not declared, Queensland Rail will provide open access to the Mount Isa Line, North Coast Line, West Moreton System and Metropolitan System on substantially the same terms as it currently does. Queensland Rail will provide services, for the purposes of both freight and passenger rail services, in accordance with a binding and enforceable access framework in the future without declaration.
- 194 While the QCA did not take the proposed access framework into account in making the Draft Recommendation on the basis it had not been executed and there was no certainty as to when it would commence, the QCA indicated it would be willing to reconsider this position if evidence is provided that the proposed access framework has been duly executed, with a certain commencement date.<sup>142</sup>
- 195 Queensland Rail has now executed an irrevocable Deed Poll, which will give rise to a binding and enforceable fit for purpose Access Framework in the future without declaration of services on the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System. The Deed Poll, Access Framework, and Standard Access Agreement are included as **Attachment E** to this submission. Versions of the Deed Poll, Access Framework and excerpts of the Standard Access Agreement showing changes to the version submitted to the QCA on 18 June 2018 is included as **Attachment F**, **Attachment G** and **Attachment H** respectively.
- 196 The fit for purpose Access Framework is based on the 2016 Access Undertaking currently in force and accordingly provides as much regulatory certainty for access seekers and access holders as currently exists. The HoustonKemp Expert Report at section A.1 includes a table setting out the rationale for and effect of each of the changes to the 2016 Access Undertaking.

<sup>139</sup> QCA Draft Recommendation, Part B, p 60.

<sup>140</sup> QCA Draft Recommendation, Part B, pp 67-68.

<sup>141</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 3.2.

<sup>142</sup> QCA Draft Recommendation, Part B, pp 29-30.



- 197 The Access Framework recognises the primacy of contractual negotiations by adopting a negotiate/arbitrate model, which facilitates the commercial negotiation of access agreements between railway owners and access seekers. It requires extensive information to be provided to access seekers, including details as to how proposed access prices are derived and capacity information, so addressing potential information asymmetries and providing an effective basis for negotiation. The Access Framework also sets a revenue ceiling limit for Queensland Rail that ensures Queensland Rail cannot earn revenues that exceed its efficient economic cost of providing the services. Queensland Rail will thus be constrained in the future without declaration from imposing excessive access charges, even if it otherwise had the ability and incentive to do so (which it does not).
- 198 The enforceability of the Access Framework and the key terms of the Access Framework are discussed in turn below.

*Enforceability of the Access Framework and dispute resolution mechanism under the Access Framework*

- 199 Queensland Rail has now executed an irrevocable Deed Poll, which will give rise to a binding and enforceable Access Framework in the future without declaration of services on the North Coast Line, Mount Isa Line, West Moreton System and Metropolitan System. The terms of the Deed Poll are summarised in Box 1 below.
- 200 The Deed Poll includes a covenant in favour of access seekers who have signed an access application or renewal access application, access holders and the Treasurer of the State of Queensland that, subject to certain rights relating to the amendment of the Access Framework, the Access Framework will remain in effect for the term of the Access Framework and Queensland Rail will comply with it.
- 201 The provisions of the Deed Poll governing Queensland Rail in amending the Access Framework provide for the following:
- 201.1 Queensland Rail can amend the Access Framework so long as the amendments are:
- 201.1.1 not inconsistent with the objective of the Access Framework; and
- 201.1.2 are appropriate having regard to specified mandatory considerations.
- The objective of the Access Framework is defined as the object of Part 5 of the QCA Act as set out in section 69E of the Act, as amended from time to time (which is currently to promote the economically efficient operation of, use of and investment in significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets).
- The mandatory considerations are based on the matters set out in sections 138(2) and 168A of the QCA Act, being mandatory considerations to which the QCA must have regard in deciding whether to approve a draft access undertaking in respect of a declared service.
- 201.2 Queensland Rail will consult with access seekers who have signed an access application or renewal access application and access holders regarding proposed amendments. In doing so, Queensland Rail must follow a prescribed process, including allowing at least 45 days for comments.
- 201.3 Following its review of comments made, Queensland Rail will publish the final form of proposed amendments to the Access Framework for a period of not less than 121 days.
- 201.4 The proposed amendments will become effective only in the event no covenantee commences legal proceedings to challenge the validity of the amendments within 120 days or, in the event legal proceedings are commenced, only after the court dismisses the application.

202 In the Draft Recommendation, the QCA raised a number of possible concerns regarding the Deed Poll and Access Framework.<sup>143</sup> These concerns, and Queensland Rail's response are set out in Table 2 below .

**Table 2: QCA possible concerns regarding Deed Poll and Access Framework**

| QCA's possible concern   | Queensland Rail's response  |
|--|---|
| Legal proceedings are the only avenue for recourse in relation to amendments to the Access Framework and legal challenges may be expensive and potentially protracted. | The Queensland courts are the appropriate forum for resolving disputes regarding any amendments to the Access Framework. The courts are well versed in overarching objective provisions and having regard to mandatory considerations and are equipped to efficiently determine a dispute arising under the Deed Poll, including in relation to amendments to the Access Framework.   |
| Legal proceedings can only be instituted within 90 days of amendments being published.   | Under the executed Deed Poll, covenantees have 120 days within which to commence any legal proceedings, rather than 90 days.  |
| Damages are not available as a remedy, even if amendments to the Access Framework are determined to be in breach of the deed poll and access framework.                | Damages are no longer excluded as a remedy under the executed Deed Poll. Further, Queensland Rail observes that covenantees will have the opportunity to commence legal proceedings and have these resolved prior to any amendments to the Access Framework becoming effective. That is, any disputes in relation to amendments will be resolved before the amendments come into effect and thus no damage will have been incurred as a result of amendments. |

203 In making its Draft Recommendation regarding the handling of coal at the Dalrymple Bay Coal Terminal, the QCA also outlined a concern that DBCT Management would have considerable discretion to amend its access framework and, whereas under declaration the QCA would have the ability to choose the optimal outcome from the range of outcomes that promote the objective of the regime, a court would be considering only whether the outcome chosen by DBCT Management falls within the range of acceptable outcomes.<sup>144</sup>

204 The QCA's discussion appears to be informed by a debate previously arising in respect of economic regulation of the electricity sector which led to amendments to energy legislation to the effect that, if there are two or more possible decisions that will promote the objective of that legislation, the decision maker is required to make the decision that will or is likely to contribute to the objective to the greatest degree.<sup>145</sup> However, it is relevant to note that the decisions under the electricity legislation are concerned with decisions that set the prices or revenue of distribution and transmission network service providers.<sup>146</sup> They have a direct impact on the revenue received by those providers and rely on a wide range of forecasts, economic and technical expertise and assessments of likely future events impacting on the cost of providing distribution and transmission services. Such a decision is of a very different nature to a decision regarding amendment of the Access Framework, which establishes the framework for the negotiation / arbitration of access agreements (rather than setting access charges and conditions). Given this, it is appropriate for the decision to rest with Queensland Rail, with review by the court, by reference to the objective of the Access Framework and the mandatory considerations.

**Box 1: Summary of the terms of Queensland Rail's Deed Poll<sup>147</sup>**

The Deed Poll will be signed by Queensland Rail in favour of the following third party Covenantees:

- Access Seekers who have signed an Access Application or Renewal Access Application (Confirmed Access Seekers);
- Access Holders, including Access Holders as at the date of this Deed Poll and entities who become Access Holders in the future; and

<sup>143</sup> QCA Draft Recommendation, Part B, pp 30-31.

<sup>144</sup> QCA Draft Recommendation, Part C, p 68.

<sup>145</sup> Section 16(1)(d)(i) of the National Electricity Law; section 28(1)(b)(iii)(a) of the National Gas Law.

<sup>146</sup> See the definition of 'review regulatory determination' in section 71A.

<sup>147</sup> Capitalised terms in this Box have the same meaning as the meaning given to those terms in clause 1.1 of the Deed Poll.

- the State.

Pursuant to the terms of the Deed Poll, Queensland Rail covenants in favour of the Covenantees that, inter alia:

- it will not revoke or amend this Deed Poll until the expiry of the Term;
- subject to certain rights relating to the amendment of the Access Framework, the Access Framework will remain in effect for the Term;
- it will comply with the Access Framework for the Term;
- it can amend the Access Framework so long as the amendments are not inconsistent with the Framework Objective (being the object of Part 5 of the QCA Act as set out in section 69E of the QCA Act as amended from time to time) and are appropriate having regard to certain specified mandatory considerations (which considerations are based on the matters set out in sections 138(2) and 168A of the QCA Act, being mandatory considerations to which the QCA must have regard in deciding whether to approve a draft access undertaking in respect of a declared service);
- when making any amendments, it will follow a prescribed consultation process, including allowing at least 45 days for Confirmed Access Seekers and Access Holders to provide comments in relation to the proposed amendments;
- following its review of comments made, Queensland Rail will publish the final form of proposed amendments to the Access Framework for a period of not less than 121 days; and
- the proposed amendments will become effective only in the event no Covenantee commences legal proceedings to challenge the validity of the amendments or, in the event legal proceedings are commenced, only after the court has dismissed the proceedings.

The Deed Poll is governed by the laws of the State of Queensland. Access Seekers and Access Holders may enforce the terms of the Deed Poll against Queensland Rail by bringing proceedings in the courts of Queensland (who have exclusive jurisdiction to determine any disputes arising under the Deed Poll).

The nature of the Disputes which may arise under the Deed Poll may relate to:

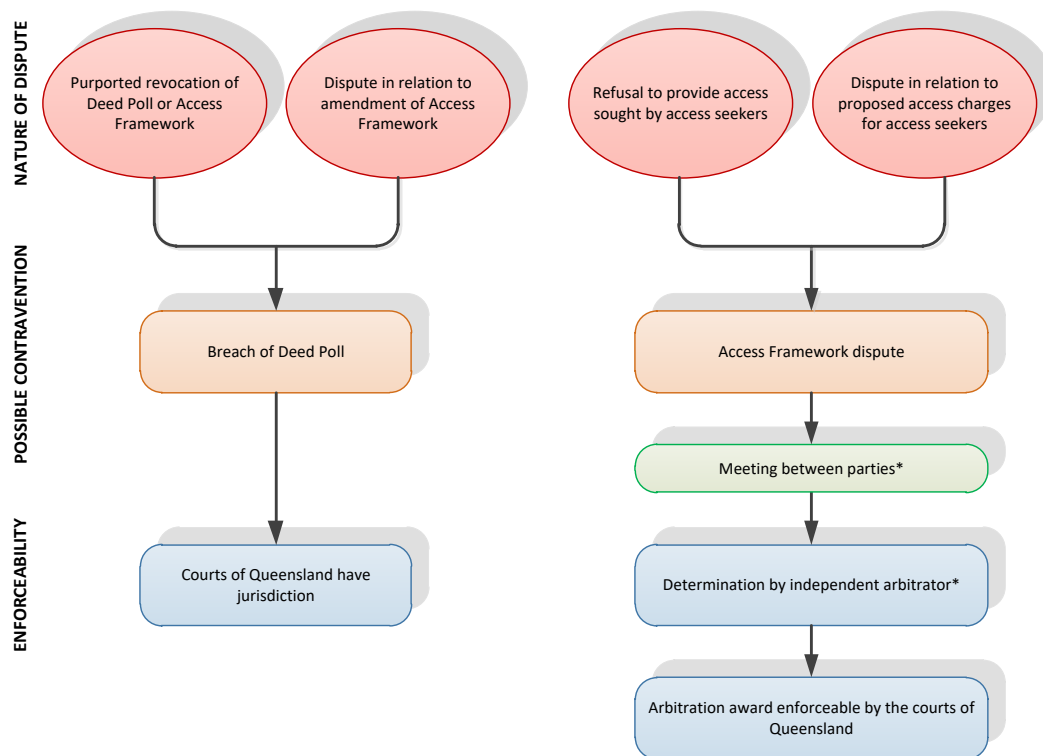
- a purported revocation of the Deed Poll or the Access Framework;
- an alleged breach in relation to Queensland Rail's notice of intention to renew or not to renew the Access Framework; and / or
- any amendment(s) that Queensland Rail may make to the Access Framework pursuant to the terms of the Deed Poll.

The covenants that Queensland Rail provides in Deed Poll in favour of the Covenantees are conditional upon:

- specific performance not being a remedy for breach of the provisions of the Deed Poll relating to amendment of the Access Framework; declaratory relief and/or damages are the only appropriate remedies;
- if a Covenantee alleges that Queensland Rail has not complied with the Access Framework, any dispute arising being determined in accordance with the dispute resolution provisions contained in the Access Framework and not the Deed Poll;
- the Covenantees filing and serving any proceedings to challenge the validity of amendments to the Access Framework within 120 days of the Final Proposed Amendments being published;
- the Covenantees filing and serving any proceedings for an alleged breach of the Deed Poll within 120 days of the date of the alleged breach;
- the courts of Queensland having exclusive jurisdiction to determine any disputes; and
- the Deed Poll being governed by Queensland law.

- 205 In the event of negotiations failing to achieve a commercial outcome, the Access Framework provides that a dispute in relation to any provision of the Access Framework, a request for access or the negotiation of an access agreement under the Access Framework will be resolved through a meeting between the parties' senior management and, if required, arbitration. In the event the dispute is submitted to arbitration, the Access Framework prescribes certain matters to which the arbitrator must have regard when making a determination. These matters reflect the matters to which the QCA must have regard in making an access determination in respect of declared services, which are set out in section 120 of the QCA Act, and will ensure consistency in the dispute resolution process.
- 206 An arbitrator's award in respect of a dispute arising in relation to the Access Framework will be enforceable in the courts of Queensland in accordance with Part 8 of the *Commercial Arbitration Act 2013* (Qld).
- 207 The Deed Poll and Access Framework will thus give rise to a binding and legally enforceable access regime, which will provide stakeholders with appropriate recourse in the event of disputes that cannot be resolved agreement.
- 208 Examples of the kinds of disputes that may arise and the dispute resolution mechanisms provided for in the Deed Poll and / or Access Framework are shown in Figure 3.

**Figure 3: Examples of disputes and dispute resolution mechanisms under Deed Poll and Access Framework**



\* Nothing in the dispute resolution provisions prevents a party from seeking urgent injunctive relief from a court

- 209 For completeness, Queensland Rail observes that disputes arising out of an access agreement will be resolved in accordance with the dispute resolution mechanism included in the relevant access agreement. The Standard Access Agreement provides that disputes in relation to the agreement are to be dealt with by negotiation and, if required, resolution by an independent expert and/or arbitrator. Regarding these provisions, Queensland Rail notes:

209.1 The terms governing the independent expert under the Standard Access Agreement are the same as those included in the standard access agreement accompanying the 2016 Access Undertaking.

- 209.2 The Standard Access Agreement also provides that disputes can be submitted to arbitration (rather than going to litigation), which will provide access holders and Queensland Rail with an additional and effective dispute resolution process that is common in the industry. The Standard Access Agreement mirrors the Access Undertaking in prescribing certain matters to which the arbitrator must have regard when making a determination. These matters reflect the matters to which the QCA must have regard in making an access determination in respect of declared services, which are set out in section 120 of the QCA Act, and will ensure consistency in the dispute resolution process under the Standard Access Agreement.
- 209.3 Nothing in the disputes provisions of the Standard Access Agreement prevents a party from seeking urgent injunctive relief from the Courts of Queensland.

*Terms of the Access Framework*

Key features of the 2016 Access Undertaking retained

- 210 With a view to providing as much regulatory certainty as possible for stakeholders, the Access Framework is substantially the same as the 2016 Access Undertaking approved by the QCA.
- 211 The Access Framework has a term of five years (except in the event the services provided using all of the relevant systems or each of the systems individually, are declared, in which case it terminates at that time). A five year term is consistent with the term of the 2016 Access Undertaking (as well as other rail access undertakings approved by the QCA) and strikes the appropriate balance between providing regulatory certainty and allowing the arrangements evolve to reflect unforeseen future circumstances. Queensland Rail observes that the factors that mean any declaration should only be for a period of five years (described in respect of criterion (b) below), also mean that five years is an appropriate term for the Access Framework.
- 212 The Access Framework is considered in detail in section 5 of the HoustonKemp Expert Report, and a comprehensive list of the differences between the Access Framework and the 2016 Access Undertaking and a discussion of their impact are set out in Appendix A1 to that Report. HoustonKemp concludes that in specifying the Access Framework, Queensland Rail has retained all the features of the 2016 Access Undertaking that aid access and that are pro-competitive.
- 213 With the exception of changes to the pricing principles for coal-carrying trains on the West Moreton and Metropolitan System, the changes to the 2016 Access Undertaking are largely administrative or process changes to improve efficiency for access seekers, access holders and Queensland Rail. Many of these changes are desirable given Queensland Rail does not provide above rail freight services and thus is not vertically integrated in a way that requires such a high degree of regulation as exists in the 2016 Access Undertaking, which gives rise to associated costs.
- 214 Queensland Rail observes that the Access Framework provides as much regulatory certainty for access seekers and access holders using those systems as currently exists. As the QCA considers that the current terms of access provide guidance as to the access regime likely to be in place in a future with declaration,<sup>148</sup> the Access Framework also provides as much regulatory certainty in the future without declaration as is likely to exist in the future with declaration.
- 215 The Access Framework will ensure that access will be available on reasonable terms and conditions in the future without declaration, such that declaration will not promote a material increase in competition in any dependent markets. Given the Access Framework retains all of the key features of the 2016 Access Undertaking, which was approved by the QCA, it can readily be concluded that it is reasonable and appropriate having regard to the factors set out in section 138(2) of the QCA Act (being the factors the QCA is required to have regard to in approving a draft access undertaking), including the objective of Part 5 of the QCA Act.

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<sup>148</sup> QCA Draft Recommendation, Part B, p 33.

216 However, the nature of the assessment to be undertaken by the QCA in considering the Access Framework in determining whether access will be available on reasonable terms and conditions in the future without declaration does not require a clause by clause assessment of the Access Framework. The QCA need not (and ought not) undertake an assessment at that granular level (akin, for example, to the process it generally seeks to undertake in approving an access undertaking under Part 5 of the QCA Act). Rather, the process the QCA ought to undertake is analogous to the process undertaken by the NCC and the Minister in determining whether a state or territory regime is an 'effective access regime' under Division 2A of Part IIIA of the CCA, such that the national access regime in Part IIIA of the CCA need not apply.<sup>149</sup>

Access Framework satisfies the principles for effective access regimes set out in the CPA

- 217 In making a recommendation to the Minister as to whether or not to certify that an access regime is an 'effective access regime', the NCC is required to:<sup>150</sup>
- 217.1 assess whether the access regime is an effective access regime by applying the relevant principles set out in the Competition Principles Agreement between the Commonwealth of Australia and the States of New South Wales, Victoria, Queensland, Western Australia, South Australia and Tasmania and the Australian Capital Territory and Northern Territory, entered into on 11 April 1995 and as amended 13 April 2007 (**CPA**);
  - 217.2 have regard to the objects of Part IIIA of the CCA (being to promote the economically efficient operation of, use of and investment in the infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets and provide a framework and guiding principles to encourage a consistent approach to access regulation in each industry<sup>151</sup>); and
  - 217.3 subject to section 44DA, not consider any other matters.
- 218 The relevant principles in the CPA are those set out in clause 6 of the CPA. In particular, clause 6(3) states that:
- 218.1 a state or territory regime 'should reasonably incorporate each of the principles referred to in [subclauses (4) and (5)]'; and
  - 218.2 '[t]here may be a range of approaches available to a State or Territory Party to incorporate each principle. Provided the approach adopted in a State or Territory access regime represents a reasonable approach to the incorporation of a principle in subclause (4) or (5), the regime can be taken to have reasonably incorporated that principle'.
- 219 Section 44DA(1) of the CCA provides that, for the purposes of the requirement set out above, the NCC must treat each relevant principle as having the status of a guideline rather than a binding rule. Section 44DA(2) states that an effective access regime may contain additional matters that are not inconsistent with the CPA.
- 220 Parallel requirements apply to the Minister in deciding whether to certify an access regime as effective.<sup>152</sup>
- 221 Accordingly, the NCC has stated that the principles do not impose a high threshold for an access regime to be certified.<sup>153</sup> The NCC has stated that it 'does not consider the process of certification to involve an assessment of whether an access regime is "optimal" and that 'certification does not necessarily require that the particular regime provides the most

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<sup>149</sup> Section 44F(1)(a) provides that a service that is the subject of a regime which has been certified as an effective access regime cannot be the subject of an application for declaration under Part IIIA of the CCA.

<sup>150</sup> Section 44M(4) of the CCA.

<sup>151</sup> Section 44AA of the CCA.

<sup>152</sup> Section 44N(2) of the CCA.

<sup>153</sup> NCC, *South Australian Water Access Regime, Application for certification under section 44M of the Competition and Consumer Act 2010 (Cth), Final Recommendation*, 22 March 2017 at [4.15].

effective means of achieving efficient access outcomes'.<sup>154</sup> Rather, what is required is an assessment only that the particular regime satisfactorily addresses the clause 6 principles and accords with the objects of Part IIIA.<sup>155</sup> The NCC has stated that section 44DA gives the NCC and the Minister considerable flexibility in applying the CPA principles<sup>156</sup> and recognises that a range of regulatory arrangements are capable of delivering efficient outcomes.<sup>157</sup>

- 222 In assessing whether an access regime is an effective access regime, the NCC organises its consideration of the regime by dividing the clause 6 principles into five categories.<sup>158</sup> Adopting this same approach, the reasons why the Access Framework reasonably incorporate the CPA principles are set out in a table contained in **Attachment I**.
- 223 Attachment I shows that the Access Framework, although not a 'State or Territory access regime', meets the relevant criteria set out for certifying such an access regime as an 'effective access regime' under the CCA. This means that, irrespective of the other constraints on Queensland Rail (which mean Queensland Rail has no ability or incentive to exercise any market power in any event), the existence of the Access Framework alleviates any perceived need for regulated access under Part 5 of the QCA Act. The Access Framework ensures access to Queensland Rail's services will continue to be available on reasonable terms and conditions in the future without declaration as the framework for establishing those terms and conditions satisfy the principles for effective access regimes set out in the CPA. That is to say, the Access Framework is a regime that justifies allowing declaration of (and thus regulated access to) Queensland Rail's services to expire.

## Dependent markets will remain effectively competitive

- 224 As noted in paragraph 103 above, it is well accepted that criterion (a) has no application to a dependent market that is workably or effectively competitive.<sup>159</sup> The QCA acknowledges the NCC's guidance in this regard, but considers that given the QCA is considering services already declared 'existing competitive conditions in a dependent market do not necessarily represent the "future without" declaration; they in fact represent the future with'.<sup>160</sup>
- 225 Although Queensland Rail does not consider that it is necessary to definitively define dependent markets for the purposes of criterion (a) in this instance, Queensland Rail notes that key relevant dependent markets are effectively competitive, and would be with and without declaration such that there can be no material increase in competition as a result of declaration. For example, it is accepted that coal is an internationally traded commodity with prices set by reference to international spot prices. Similarly, sugar is an internationally traded product, with the returns to sugar producers in Australia (predominantly Queensland) determined primarily by the world futures price for sugar.<sup>161</sup> Declaration of Queensland Rail's

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<sup>154</sup> NCC, *Queensland Rail Access Regime, Application for certification under s44M of the Trade Practices Act 1974, Final Recommendation*, 22 November 2010 at [4.18]. See also the NCC's most recent certification decision: NCC, *South Australian Water Access Regime, Application for certification under section 44M of the Competition and Consumer Act 2010 (Cth), Final Recommendation*, 22 March 2017 at [4.14].

<sup>155</sup> NCC, *Queensland Rail Access Regime, Application for certification under s44M of the Trade Practices Act 1974, Final Recommendation*, 22 November 2010 at [4.18]. See also NCC, *South Australian Water Access Regime, Application for certification under section 44M of the Competition and Consumer Act 2010 (Cth), Final Recommendation*, 22 March 2017 at [4.15].

<sup>156</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [3.3].

<sup>157</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [3.3].

<sup>158</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [3.5]-[3.6]. The linkages between the categories and the clause 6 CPA principles are shown in Figure 1 on p 18 of the NCC's guide.

<sup>159</sup> *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2 at [1068]. The Productivity Commission has also stated that the criterion (a) test should not be satisfied where there is already effective competition in dependent markets because declaration would be unlikely to promote a material increase in competition: Productivity Commission, *Productivity Commission Inquiry Report - National access Regime*, 25 October 2013, p 172.

<sup>160</sup> QCA Draft Recommendation, p 22.

<sup>161</sup> Australian Government Department of Agriculture and Resources, *Sugar*, December 2018, <http://www.agriculture.gov.au/ag-farm-food/crops/sugar#marketing> [accessed 8 March 2019].

services cannot be said to have affected the level of competition in those markets to date and thus the accepted approach of concluding that criterion (a) cannot be met where dependent markets are effectively competitive should be applied.

### **Conclusion on criterion (a)**

226 For the reasons outlined above, access (or increased access) to the deemed declared service (or any part of the service), on reasonable terms and conditions, as a result of a declaration would not promote a material increase in competition in any market. Accordingly, criterion (a) is not satisfied in respect of either the deemed declared service or any part of the service and the QCA is required to recommend to the Minister that the deemed declared service not be declared.



# Criterion (b)

## Summary

- 227 In order to recommend that the deemed declared service (or part of the service) be declared, the QCA must be satisfied about all of the access criteria for the service, including access criterion (b) in section 76(2)(b) of the QCA Act in relation to the facility for the service (sections 76(1) and 87C(1) of the QCA Act).
- 228 The QCA's view in the Draft Recommendation is that the deemed declared service does not satisfy the access criteria.<sup>162</sup> The QCA thus is considering whether to declare parts of that service.
- 229 Access criterion (b) requires the QCA to be satisfied that each of the facilities for the services could meet the total foreseeable demand in a market that encompasses the relevant service over the period for which the service would be declared and at the least cost compared to any two or more facilities (which could include the facility for the service).
- 230 The QCA does not consider it necessary to consider criterion (b) on a system by system basis. For the reasons set out in paragraphs 59 to 70 above, however, Queensland Rail respectfully submits that the QCA is required to consider, in respect of each service, whether the facility for the service satisfies criterion (b). The relevant facilities are those described in the service definitions set out in paragraph 54 above (being the eight rail systems operated by Queensland Rail) and the inquiry into what is the relevant market begins with the service defined by reference to particular infrastructure.
- 231 The QCA concludes in the Draft Recommendation that criterion (b) is satisfied for each of the services defined by reference to Queensland Rail's eight systems (irrespective of whether the facility for each of the services is the whole network or the individual system).
- 232 However, as set out in this submission, there are a number of issues the QCA has to satisfy itself of in order to be satisfied of criterion (b) when considering Queensland Rail's systems individually. Where the QCA cannot be satisfied of criterion (b) in respect of a particular facility, the QCA cannot recommend declaration of the service provided using that facility.

## Application and interpretation of criterion (b)

- 233 In order to recommend that a service be declared by the Minister under section 87A of the QCA Act, the QCA must be affirmatively satisfied that the facility for the service could meet the total foreseeable demand in the market over the period for which the service would be declared and at the least cost compared to any two or more facilities (which could include the facility for the service) (sections 76(1) and 87C(1) of the QCA Act).
- 234 Conversely, the QCA must recommend that a service not be declared if it is not affirmatively satisfied that the facility for the service could meet the total foreseeable demand in the market over the period for which the service would be declared or at the least cost compared to any two or more facilities (which could include the facility for the service) (section 87C(2) of the QCA Act).
- 235 Access criterion (b) in section 76(2)(b) of the QCA Act is:
- that the facility for the service could meet the total foreseeable demand in the market—*
- (i) over the period for which the service would be declared; and*
- (ii) at the least cost compared to any 2 or more facilities (which could include the facility for the service)[.]*
- 236 In addition, sections 76(3) and (4) of the QCA Act provide:

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<sup>162</sup> QCA Draft Recommendation, Part B, p 4.

- (3) For subsection (2)(b), if the facility for the service is currently at capacity, and it is reasonably possible to expand that capacity, the authority and the Minister may have regard to the facility as if it had that expanded capacity.
- (4) Without limiting subsection (2)(b), the cost referred to in subsection (2)(b)(ii) includes all costs associated with having multiple users of the facility for the service, including costs that would be incurred if the service were declared.
- 237 As part of the March 2018 amendments to the QCA Act, section 76(2)(b) of the QCA Act was amended to restore a natural monopoly test for access criteria (b),<sup>163</sup> criterion (b) in Part IIIA of the CCA having most recently been interpreted as a private profitability test.<sup>164</sup>
- 238 In order to be satisfied of criterion (b), the QCA must be satisfied that the facility for the service could meet the total foreseeable demand in the market over the period for which the service would be declared; and the facility could meet that demand at the least cost compared to any 2 or more facilities (which could include the facility for the service).
- 239 The requirement that the facility meets total foreseeable demand in the market *over the period for which the service would be declared* means that if the facility cannot meet total foreseeable demand in the market at any stage over the declaration period, then criterion (b) is not satisfied. Similarly, if the facility cannot meet total foreseeable demand in the market at the least cost at any stage of the declaration period, then criterion (b) is not satisfied.
- 240 Having regard to the text of section 76(2)(b) of the QCA Act, an assessment of access criterion (b) involves the following:
- 240.1 identifying the service to be assessed;
- 240.2 identifying the facility for the service;
- 240.3 considering the period for which the service would be declared if it were to satisfy all of the access criteria;
- 240.4 identifying the market in which the service is supplied;
- 240.5 estimating total foreseeable demand in the market in which the service is supplied over the period the decision-maker is considering for declaration of the service;
- 240.6 assessing whether the facility could meet total foreseeable market demand for the service over the declaration period and at the least cost compared to two or more facilities (which could include the first mentioned facility).
- 241 This process is to occur separately for each of the eight services Queensland Rail provides in order for a service to be declared. Given the discrete nature of the services under consideration, the markets in which the services are supplied and the foreseeable demand in each of those markets, varies considerably.

## Criterion (b) issues

### Service and facility definitions

- 242 Queensland Rail disagrees with the QCA's view that it 'does not consider that it is necessary to consider criterion (b) on a rail system-by-rail system basis'.<sup>165</sup> The QCA's reasoning for its conclusion is as follows:<sup>166</sup>
- 242.1 The service provided by Queensland Rail is 'the use of rail transport infrastructure for providing transportation by rail'.

<sup>163</sup> Economics and Governance Committee, *Queensland Competition Authority Amendment Bill 2018, Report No. 2*, 56th Parliament, March 2018, p 5; Explanatory Notes to the *Queensland Competition Authority Amendment Bill 2018*. See also Explanatory Memorandum, *Competition and Consumer Amendment (Competition Policy Review) Bill 2017* at [12.22].

<sup>164</sup> *Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* (2012) 246 CLR 379.

<sup>165</sup> QCA Draft Recommendation, Part B, p 13.

<sup>166</sup> QCA Draft Recommendation, Part B, p 13.

- 242.2 Criterion (b) requires an analysis of the market in which the service is provided. Although different rail systems may have differing dependent markets, the nature of the market in which the use of rail systems (and network as a whole) is provided is the same (being the market for the use of below rail services).
- 243 However, as noted paragraphs 46 to 54 above, the QCA's definition of the service provided by Queensland Rail set out in paragraph 242.1 above lacks the specificity required for the purposes of declaration under the QCA Act and the services should be defined by reference to the relevant systems.
- 244 Further, the QCA considers that the broadly defined deemed declared service (being that provided using the entire Queensland Rail narrow gauge network) does not satisfy the access criteria and should not be declared. Accordingly, the QCA is considering whether to declare parts of that service. The analysis therefore requires consideration of the separately defined parts of the services and the markets in which each of those individual services is provided.
- 245 For the reasons outlined in paragraphs 59 to 70 above, Queensland Rail thus submits that the QCA is required to consider each of the separate facilities described in the service definitions in paragraph 52 above. To define the facility for the service as the entire Queensland Rail network (which is the approach implicit in the QCA's preferred approach of applying criterion (b) to the network as a whole) would be to specify a bundle of assets significantly broader than the minimum bundle required to provide the service in each case.
- 246 In any event, it is evident that Queensland Rail's network encompasses a number of geographically distinct rail infrastructure facilities that provide below rail services for a range of different purposes. They were brought together into a single service definition in the deemed declared service definition solely by reason of Queensland Rail being the common railway manager. The operator of the railway is not an appropriate basis on which to define a facility; the nature of the infrastructure itself and the services provided using that infrastructure should be examined.

## Period of declaration

- 247 The QCA has adopted a 15 year period of declaration for each of the services it proposes to recommend declaration of in accordance with the submissions of Glencore and Pacific National.<sup>167</sup>
- 248 Queensland Rail submits that if the QCA recommends that services to be provided over a particular system are to be declared, the period of declaration should be tailored to reflect changing market developments and dynamics relating to the particular system and service.<sup>168</sup> The factors relevant to determining the period of declaration by service are set out in Table 3 below.

**Table 3: Factors relevant to the period of declaration**

| Service                 | Factors relevant to the period of declaration  |
|-------------------------|--|
| <b>North Coast Line</b> | <p>As described in respect of criterion (a) above, road freight is a strong substitute for the main commodities transported on the North Coast Line (general freight (intermodal) and sugar) and the volume transported by rail has been in decline since 2007-08.</p> <p>Development of road infrastructure including upgrades to the Bruce Highway<sup>169</sup> and investments in higher-productivity vehicles including in relation to the Performance Based Standards (PBS) scheme administered by the National Heavy Vehicle Regulator will likely continue to increase the competitiveness of road with the service provided by means of the use of the North Coast Line such that any period of declaration should not exceed five years.</p> |
| <b>Mount Isa Line</b>   | <p>As described in respect of criterion (a) above, the competitive environment for freight operators on the Mount Isa Line has changed significantly recently and rail operators have lost significant freight to road</p>   |

<sup>167</sup> QCA Draft Recommendation, Part B, p 20.

<sup>168</sup> See also HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 2.2.

<sup>169</sup> Minister for Transport and Main Roads, Media Statements, Budget delivers more record road and transport spending for Northern Queensland, June 2018, <http://statements.qld.gov.au/Statement/2018/6/22/budget-delivers-more-record-road-and-transport-spending-for-northern-queensland> [accessed 8 March 2019].

| Service                    | Factors relevant to the period of declaration   |
|----------------------------|---|
|                            | <p>operators in the last five years.</p> <p>Development of road infrastructure including upgrades to the Flinders Highway pursuant to the Northern Australian Roads Program<sup>170</sup> and investments in higher-productivity vehicles including in relation to the Performance Based Standards (PBS) scheme administered by the National Heavy Vehicle Regulator will likely further disrupt the competitive environment of the service provided by means of the use of the Mount Isa Line such that any period of declaration should not exceed five years.</p>  |
| <b>West Moreton System</b> | <p>The development of the Inland Rail project if it continues in its current proposed form will likely affect the competitive environment of the service provided by means of the use of the West Moreton System.<sup>171</sup> The Inland Rail project is currently scheduled for completion in 2024-25.<sup>172</sup> The Inland Rail Business Case is predicated on picking up thermal coal volumes from the Moreton basin currently transported on the West Moreton System,<sup>173</sup> providing that 'up to 19.5 million tonnes of coal is expected to use Inland Rail as a result of offering a more efficient rail connection to the Port of Brisbane'.<sup>174</sup></p> <p>In addition, there are proposals to develop a Surat Basin Rail link from the Wandoan project to the Port of Gladstone together with a Central Surat Rail link.<sup>175</sup> To the extent that this project is developed, then this will affect the West Moreton System's competitive environment.</p> <p>Further, even in the absence of the Inland Rail, there is significant uncertainty around the expected volumes of freight on the West Moreton Line going forward, which will significantly impact market dynamics over the next five years.</p> <p>Accordingly, if it is to be declared, a declaration period of no more than five years is warranted in light of the significant expected changes in the West Moreton System's competitive environment.</p> |
| <b>Metropolitan System</b> | <p>Given the use of the Metropolitan System that the QCA is considering recommending declaration of pertains to services originating from or travelling to the North Coast Line or West Moreton System, the factors relevant to the term of declaration outlined above in respect of those systems apply equally to the Metropolitan System.</p>  |

- 249 Queensland Rail also refers to section 2.2 of the HoustonKemp Expert Report, in which HoustonKemp concludes that if any of Queensland Rail's services were to be declared, then the appropriate declaration period should be much shorter than 15 years.
- 250 Accordingly, if the QCA is satisfied that any of Queensland Rail's services should be declared, Queensland Rail submits that a declaration period of five years should be adopted, rather than a period of 15 years.

### Meeting total foreseeable market demand at least cost

- 251 The need to determine whether each of the facilities could meet total foreseeable demand in the market means that the scope of the markets in which each of the eight rail services are provided must be identified.

<sup>170</sup> Minister for Transport and Main Roads, Media Statements, Budget delivers more record road and transport spending for Northern Queensland, June 2018, <http://statements.qld.gov.au/Statement/2018/6/22/budget-delivers-more-record-road-and-transport-spending-for-northern-queensland> [accessed 8 March 2019]; Department of Infrastructure, Regional Development and Cities, Northern Australia Roads Program, [https://investment.infrastructure.gov.au/infrastructure\\_investment/northern\\_australia\\_roads.aspx](https://investment.infrastructure.gov.au/infrastructure_investment/northern_australia_roads.aspx) [accessed 8 March 2019]; Queensland Government, Department of Transport and Main Roads, June 2016, [https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=054704-14QLD-NHU](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=054704-14QLD-NHU) [accessed 8 March 2019]; Queensland Government, Department of Transport and Main Roads, September 2018, <https://www.tmr.qld.gov.au/Projects/Name/F/Flinders-Highway-widening-Townsville-to-Torrens-Creek> [accessed 8 March 2019]; Australian Government, Department of Infrastructure, Regional Development and Cities, [https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project\\_id=067211-16QLD-NAR](https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=067211-16QLD-NAR) [accessed 8 March 2019] (expected to be completed by mid-2019).

<sup>171</sup> ARTC, Inland Rail Business Case, August 2015, pp 64, 83, 121, 124, 125.

<sup>172</sup> ARTC, Inland Rail Programme (Online), <https://inlandrail.artc.com.au/programme> [accessed 8 March 2019]; QCA Draft Recommendation, Part B, p 21.

<sup>173</sup> ARTC, Inland Rail Business Case, August 2015, p 128-129.

<sup>174</sup> ARTC, Inland Rail Business Case, August 2015, p 119.

<sup>175</sup> Queensland Government, Department of State Development, Manufacturing Infrastructure and Planning, *Surat Basin Rail Project*, <https://www.statedevelopment.qld.gov.au/assessments-and-approvals/surat-basin-rail.html> and <http://statedevelopment.qld.gov.au/coordinator-general/surat-basin-infrastructure-corridor-state-development-area.html> [accessed 8 March 2019].

- 252 In this context, the QCA first considers the 'primary' market, which it defines as access to the below rail service. The QCA considers whether, if the cost of rail infrastructure increased relative to road, would above-rail operators switch from using rail infrastructure to using road infrastructure instead, concluding that this would be highly unlikely.<sup>176</sup>
- 253 The QCA then goes on to consider three categories of derived demand: bulk goods, non-bulk goods and passengers, and the extent to which end customers in each of these categories would respond to a SSNIP of the below rail service.<sup>177</sup> The QCA concludes that the majority of customers (across the network) would not switch away from the use of above-rail transport in response to a SSNIP.
- 254 Queensland Rail submits that the markets to be considered in assessing whether criterion (b) is met are to be defined by reference to the individual service under consideration. Queensland Rail provides eight distinct services by means of eight distinct facilities. The differing nature of each of Queensland Rail's services mean the relevant markets can only be properly assessed having regard to the derived demand specific to the service under consideration.
- 255 It follows that an appropriate way to define the relevant markets must address, for each service:
- 255.1 The extent to which rail haulage services provided using alternative rail infrastructure will be a substitute for the service over the period under consideration. Queensland Rail observes that the Inland Rail project is likely to result in a railway that can be used to provide services in competition with the service provided using the West Moreton System.
- 255.2 The extent to which road haulage services are a substitute to rail haulage services having regard to the derived demand for the particular service under consideration. Queensland Rail considers that there is evidence to suggest the markets for the relevant services may include road haulage services as a hypothetical monopolist providing rail haulage services to customers may not be able to profitably impose a SSNIP without losing significant volumes to road haulage services for all but the service provided using the West Moreton System (given the significant amount of coal being transported).
- 255.3 The difficulties of applying a SSNIP analysis in circumstances where current access prices are not those that would occur in a workably competitive market. As outlined in section 3.3 of the HoustonKemp Expert Report, application of a SSNIP under the hypothetical monopolist test framework involves hypothesising the effect of an increase in price from a workably competitive price. The revenue from Queensland Rail's access charges are significantly below the ceiling limits. Further, the rail systems managed by Queensland Rail, with the exception of the Mount Isa Line, are supported by, and commercially viable only because Queensland Rail receives, substantial TSC payments from the Queensland Government. These subsidies have the effect of reducing access prices. HoustonKemp considers that much caution should be exercised when defining markets in such a scenario and that it is erroneous to apply a SSNIP test without being aware of the fact that subsidised prices will be significantly lower than those dictated by a competitive market and the competitive impact of road will be underestimated. The HoustonKemp Expert Report concludes that the consequence of applying a SSNIP would lead to a much broader characterisation of the market in relation to the North Coast Line and Mount Isa Line, where prevailing (subsidised) prices are approximately 60 per cent and 78 per cent lower than the ceiling for Mount Isa and North Coast Line respectively.<sup>178</sup>
- 256 Key issues in identifying total foreseeable market demand for each of the rail systems are:

<sup>176</sup> QCA Draft Recommendation, Part B, p 16.

<sup>177</sup> QCA Draft Recommendation, Part B, pp 17-20.

<sup>178</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, sections 3.3.4, 4.1.2, 4.2.2.

- 256.1 Identifying foreseeable demand for the derivative service of transport on each rail system for each of the main freight tasks (i.e., bulk freight, intermodal freight, livestock and passengers). The nature of demand for each of these derivative services varies depending on the service. For example, all of the rail systems carry passengers and in some cases the passenger travel is tourism based. Further, all of the rail systems, except the Tablelands System, also carry various kinds of freight (refer to Table A1 in Attachment A).
- 256.2 Identifying all of the foreseeable demand in the relevant market over the declaration period. Where road services are also encompassed by the relevant market for the service, total foreseeable market demand would include the demand for rail services *and* the demand for road services over the declaration period. These amounts would need to be summed to arrive at total foreseeable market demand.
- 257 Determining whether the rail systems can meet total foreseeable market demand and at the least cost will require, for each rail system, a consideration of issues that include the following:
- 257.1 the nature of the substitute services – i.e. road services;
- 257.2 whether total foreseeable market demand is greater than the capacity of the rail system;
- 257.3 whether expanding the rail system to accommodate total foreseeable market demand is reasonably possible and, if so, the costs and timing;
- 257.4 the resource costs involved in carrying total foreseeable demand on the rail system;
- 257.5 the resource costs involved in carrying part of total foreseeable demand on the rail system and part of that demand on an alternative facility (e.g. road); and
- 257.6 whether the resource costs of carrying total foreseeable demand on the rail system are lower or higher than the resource costs of carrying part of total foreseeable demand on the rail system and part of that demand on an alternative facility (e.g. road).
- 258 Some of the key issues relevant to assessing the market, foreseeable demand in the market and whether foreseeable market demand can be met at the least cost, for each Queensland Rail service are set out in Table 4 below.

**Table 4: Factors relevant to assessing criterion (b)**

| Service          | Factors relevant to assessing criterion (b)  |
|------------------|--|
| North Coast Line | <p>The QCA must assess the extent to which road haulage services compete with rail haulage services in servicing the derived demand for the transport of intermodal and sugar freight in the North Coast corridor.</p> <p>As noted in respect of criterion (a), there is strong evidence that the derived demand for the supply of rail intermodal freight services on the North Coast Line by beneficial freight owners and freight forwarders includes demand for the supply of road intermodal freight services on the North Coast freight corridor. This is supported by the views of industry participants outlined in paragraph 150 above. When applying principles of market definition, the views and practices of those within the industry are 'often most instructive on the question of achieving a realistic definition of the market',<sup>179</sup> and that the best evidence will often 'come from those who work in the market'.<sup>180</sup></p> <p>This conclusion is strengthened if the TSC subsidies to both Queensland Rail and above-rail operators on the North Coast Line are considered in a SSNIP analysis, which increases the extent to which road is a substitute and reflects the commercial reality that road competition necessitates significant subsidisation of the North Coast Line.</p> <p>When foreseeable demand in the market includes the demand for road freight services, then the North Coast Line fails criterion (b) as the relevant freight transport infrastructure servicing derived demand</p> |

<sup>179</sup> *Boral Besser Masonry Ltd v Australian Competition and Consumer Commission* [2003]; 215 CLR 374 at 457 [257] per McHugh J, citing *Arnotts Ltd v Trade Practices Commission* (1990) 24 FCR 313 at 334 per Lockhart, Wilcox and Gummow JJ.

<sup>180</sup> J D Heydon, *Trade Practices Law* at [30.245], cited with approval in *ACCC v Metcash Trading Ltd* (2011) 198 FCR 297 at [312]; *ACCC v Pfizer* (2018) 356 ALR 582; [2018] FCAFC 78.

| Service                    | Factors relevant to assessing criterion (b)  |
|----------------------------|--|
|                            | <p>includes the North Coast Line and the Bruce Highway freight network.</p> <p>Regarding sugar, as noted in respect of criterion (a), many of the mills are located close to export terminals, resulting in short hauls that mean transportation by road is substitutable for transportation by rail on the North Coast Line and the market includes sugar transported by road.</p> <p>Queensland Rail observes that there is no demand for access to the below rail services to operate long distance passenger services on the North Coast Line since no third party operator can provide these services without substantial subsidies from the Queensland government. Queensland Rail is not aware of any such subsidies being available.</p>   |
| <b>Mount Isa Line</b>      | <p>The QCA must assess the extent to which road haulage services compete with rail haulage services in servicing the derived demand for the transport of freight in the Mount Isa Freight corridor.</p> <p>As noted in respect of criterion (a), while rail has economic advantages to road for certain bulk haulage tasks, the constraint imposed by road operators is nonetheless significant on the Mount Isa freight corridor as market developments and investment in road infrastructure are contributing to increasing competition from road for the haulage of historically transported by rail. There have been significant recent examples of freight being moved from road to rail, including freight traditionally considered as primarily rail transport commodities such as lead, cement and fuel. Accordingly, the total foreseeable demand includes the demand for competing road services.</p> <p>While not accounting for a significant proportion of traffic on the Line, Queensland Rail observes that there is no demand for access to the below rail services to operate long distance passenger services on the Mount Isa Line since no third party operator can provide these services without substantial subsidies from the Queensland government. Queensland Rail is not aware of any such subsidies being available. The demand for passenger rail services is also able to be met by alternative road transportation options.</p> |
| <b>West Moreton System</b> | <p>The operation of the Inland Rail is likely to significantly impact on the service provided using the West Moreton System. The Inland Rail business case is predicated on picking up the West Moreton coal volumes, and highlights that it is at least foreseeable that demand will firstly increase beyond the West Moreton System's capacity (i.e. it will be a catalyst for additional coal exports from South East Queensland through the Port of Brisbane), and secondly, that this demand will be wholly, or partially, serviced by the Inland Rail project.<sup>181</sup> In addition, there are proposals to develop a Surat Basin Rail link from the Wandoan project to the Port of Gladstone together with a Central Surat Rail link.<sup>182</sup> To the extent that this project is developed, this will affect the West Moreton System's competitive environment.</p>  |
| <b>Metropolitan System</b> | <p>There is no demand for access to the below rail services to operate metropolitan rail services or long distance services that traverse the Metropolitan System since no third party operator can provide those services without substantial subsidies from the Queensland government. Queensland Rail is not aware of any such subsidies being available. The demand for passenger rail services is also able to be met by alternative road transportation options.</p>   |
| <b>Other Systems</b>       | <p>These systems are used for various freight and passenger services.</p> <p>As outlined in respect of criterion (a), the rail freight services compete with road freight services provided on Queensland's extensive road freight infrastructure. Accordingly, the total foreseeable demand includes the demand for competing road services.</p> <p>Queensland Rail observes that there is no demand for access to the below rail services to operate long distance passenger services on the Other Systems since no third party operator can provide these services without substantial subsidies from the Queensland government. Queensland Rail is not aware of any such subsidies being available. The demand for passenger rail services is also able to be met by alternative road transportation options.</p>  |

## Conclusion on criterion (b)

259 For the reasons outlined above, there are a number of issues that the QCA is required to consider in assessing whether Queensland Rail's services satisfy criterion (b). Queensland Rail submits that the QCA cannot be affirmatively satisfied that the services satisfy criterion (b).

<sup>181</sup> ARTC, Inland Rail Business Case, August 2015, pp 128-129.

<sup>182</sup> Queensland Government, Department of State Development, Manufacturing Infrastructure and Planning, *Surat Basin Rail Project*, <https://www.statedevelopment.qld.gov.au/assessments-and-approvals/surat-basin-rail.html> and <http://statedevelopment.qld.gov.au/coordinator-general/surat-basin-infrastructure-corridor-state-development-area.html> [accessed 8 March 2019].

# Criterion (c)

## Summary

- 260 In order to recommend that the deemed declared service (or part of the service) be declared, the QCA must be affirmatively satisfied about all of the access criteria for the service, including access criterion (c) in section 76(2)(c) of the QCA Act, which is that the facility for the service is significant, having regard to its size or importance to the Queensland economy.<sup>183</sup>
- 261 In the QCA's Draft Recommendation the QCA considered that:
- 261.1 Queensland Rail's entire network, assessed 'as a whole', is of state significance with regard to its size and its importance to the Queensland economy to satisfy criterion (c);<sup>184</sup> and
  - 261.2 each individual system is of state significance with regard to its size and/or its importance to the Queensland economy to satisfy criterion (c).
- 262 Queensland Rail accepts that if the network is to be assessed 'as a whole', the entire network satisfies criterion (c). For the reasons set out paragraphs 42 to 71 above, however, this conclusion is non-consequential given the deemed declared service provided by the network 'as a whole' does not satisfy the other access criteria. The relevant inquiry is whether the eight facilities for the eight distinct and separate services provided by Queensland Rail satisfy criterion (c).
- 263 When assessed individually, Queensland Rail considers that:
- 263.1 the Metropolitan System, Mount Isa Line and North Coast Line are of state significance with regard to their 'size' and 'importance to the Queensland economy' and satisfy criterion (c). This is consistent with the QCA's Draft Recommendation; and
  - 263.2 the West Moreton System, the Western System, the South Western System, the Central Western System and the Tablelands System are not facilities of state significance with regard to their 'size' or 'importance to the Queensland economy' and do not satisfy criterion (c).

## Application and interpretation of criterion (c)

### The nature of the test to be applied

- 264 The test to be applied in relation to criterion (c) is a legal and economic test. The objects clause of Part 5 of the QCA Act provides that the regime is directed towards the 'economically efficient operation of, use of and investment in, *significant infrastructure* by which services are provided, with the effect of promoting *effective competition* in upstream and downstream markets (emphasis added).<sup>185</sup>
- 265 The QCA has acknowledged Queensland Rail's submission that it is critical that the QCA does not conflate economic significance with cultural, historical or societal significance when applying criterion (c).<sup>186</sup> While many of Queensland Rail's systems have undoubted importance from a heritage, regional, societal and/or cultural perspective, the cultural or historic 'significance' of a railway is not a relevant consideration when applying criterion (c) to the various systems operated by Queensland Rail.

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<sup>183</sup> Sections 76(2)(c) and 87C(1) of the QCA Act.

<sup>184</sup> QCA Draft Recommendation, Part B, p 72.

<sup>185</sup> Section 69E of the QCA Act.

<sup>186</sup> QCA Draft Recommendation, Part B, p 89.



266 Further, it is important to recognise the intentionally rigorous threshold for a facility to be declared under Part 5 of the QCA Act. A facility may be important to Queensland, even in an economic sense, but nonetheless fall short of satisfying criterion (c).

### **Facility to which the test is to be applied**

267 In its Draft Recommendation, the QCA considered criterion (c) on a whole of system basis, as well as in respect of individual systems.<sup>187</sup> Queensland Rail recognises that if the relevant 'facility' encompasses Queensland Rail's entire rail infrastructure network, the network is of 'state significance' with regard to its size and importance to the Queensland economy.

268 This conclusion is non-consequential, however, as the QCA considers that the 'service' provided by the whole network does not satisfy criterion (a) or criterion (d). The QCA is therefore considering whether to recommend declaration of any part of the deemed declared service (which is itself a service). The relevant inquiry is thus whether the facility for each service defined at paragraph 52 above satisfies criterion (c).

269 As discussed further at paragraphs 46 to 71, Queensland Rail submits that there are eight facilities for eight separate and distinct services. While the QCA has considered the West Moreton and Metropolitan Systems together for the purposes of assessing criterion (c),<sup>188</sup> this does not conform with the assessment required under the QCA Act. The difficulties in the QCA's approach can be seen if, hypothetically, the QCA were to consider the approach to defining the facility if an application for declaration of only the service provided by the West Moreton System (and not the service provided using the Metropolitan System). The entirety of the Metropolitan System would not be included in the 'facility' for the service for the purposes of the QCA's assessment of criterion (c).

270 Consistent with this, the NCC has previously accepted that, as a general rule, there should be consistency between the treatment of the criteria that specifically address the facility providing the service (i.e. criterion (c) and criterion (b)).<sup>189</sup> Accordingly, as the natural monopoly test in criterion (b) can only sensibly be applied to the below track facilities on a rail system by rail system basis, the criterion (c) assessment of whether a facility is of state significance must also be undertaken on a rail system by rail system basis. The analysis below therefore proceeds in respect of the eight facilities used to provide the relevant services set out at paragraph 52, or alternatively 56, above.

### **The application and interpretation of criterion (c)**

271 For a facility to satisfy criterion (c), the QCA must be affirmatively satisfied that the facility for the service is significant, having regard to its size or importance to the Queensland economy. The relevant assessment is whether a particular infrastructure facility is regarded as 'significant' against one of the two specified measures. The facility's 'size' and 'importance to the Queensland economy' are matters to have regard to in assessing if a facility is 'significant'.

272 Section 44CA(1) of the CCA sets out the applicable declaration criteria for a service under that Act. Section 44CA(1)(c) broadly reflects criterion (c) under the QCA Act, save that:

272.1 there is a third matter to which regard must be had when applying the test, namely 'the importance of the facility to constitutional trade or commerce'; and

272.2 the relevant facility's importance to the 'national economy' (rather than the Queensland economy) must be assessed.

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<sup>187</sup> QCA Draft Recommendation, pp 72, 76-77.

<sup>188</sup> QCA Draft Recommendation, Part B, pp 82-83.

<sup>189</sup> NCC, *Final recommendation - Application for declaration of services provided by Queensland Rail*, 27 May 1997, p 56; See for example the consistency of definition of facility in application of criterion (b) and criterion (c) at NCC, *Final recommendation - Declaration of a service provided by the Goldsworthy Railway*, 29 August 2008 at [5.1] and [6.2]; *Final recommendation - Declaration of a service provided by the Robe Railway*, 29 August 2008 at [5.1] and [6.2]; and *Final recommendation - Declaration of a service provided by the Hamersley Railway*, 29 August 2008 at [5.1] and [6.2].

- 273 Notwithstanding these differences, the application of the criterion under the CCA by the NCC, and statements addressing the criterion from the Productivity Commission, are directly relevant in interpreting and applying section 76(2)(c) of the QCA Act.
- 274 The NCC has described criterion (c) as a 'test of materiality, placing less important facilities outside the scope of Part IIIA'.<sup>190</sup>
- 275 The Productivity Commission considers that:
- 275.1 the purpose of criterion (c) is to ensure that only facilities 'with a significant role in the economy fall within the scope of Part IIIA' (emphasis added);<sup>191</sup>
- 275.2 'given the costs of inappropriate application of access regulation, Part IIIA should cover only those infrastructure facilities which are of significance for the Australian economy' (emphasis added);<sup>192</sup>
- 275.3 the test is 'a subjective test, with no clear threshold for a facility to be judged as nationally significant' (emphasis added);<sup>193</sup> and
- 275.4 while no clear criteria are provided with respect to how 'size' is relevant to national significance, 'the discretionary nature of the national significance test means that there are unlikely to be significant gains from removing 'the size of the facility' (emphasis added) as a matter expressly listed in criterion (c).<sup>194</sup>
- 276 Criterion (c) has rarely been the subject of extensive analysis in previous NCC determinations. The NCC:
- 276.1 has regularly been satisfied that the criterion was satisfied in the relevant matter, even where (as has regularly been the case) the NCC has elected to recommend that the relevant facility not be declared;<sup>195</sup> and
- 276.2 in a number of recent matters, has noted that it did not receive any submissions arguing that the relevant facilities are not nationally significant.<sup>196</sup>
- 277 In its Draft Recommendation, the QCA noted the High Court's observation that the term 'national significance' in Part IIIA of the CCA 'may also direct attention to matters of broad judgment of a generally political kind' and stated as a result that it has approached the assessment of state significance as a matter of judgment rather than determination by precise calculation.<sup>197</sup>

<sup>190</sup> NCC, *Issues Paper - Application by Fortescue Metals Group Limited for declaration of services provided by BHP Billiton Ore Pty Ltd*, March 2005 at [7.1].

<sup>191</sup> Productivity Commission, *Review of the National Access Regime - Inquiry Report*, Report No.17, 28 September 2001 at p 168.

<sup>192</sup> Productivity Commission, *Review of the National Access Regime - Inquiry Report*, Report No. 17, 28 September 2001 at p 172.

<sup>193</sup> Productivity Commission, *Productivity Commission Inquiry Report, National Access Regime*, No. 66, 25 October 2013, p 174.

<sup>194</sup> Productivity Commission, *Productivity Commission Inquiry Report, National Access Regime*, No. 66, 25 October 2013, at p 174 which provides that the 'size' limb has often been the subject of policy discussion in relation to proposals to remove the limb altogether as it does not materially assist or contribute to the materiality threshold required under criterion (c).

<sup>195</sup> See, for example: NCC, *Final recommendation - Declaration of a service provided by the Mt Newman Railway*, 23 March 2006 at [8.9]; *Final recommendation - Declaration of a service provided by the Robe Railway*, 29 August 2008 at [6.11]; *Final recommendation - Declaration of a service provided by the Hamersley Railway*, 29 August 2008 at [6.11]; *Draft recommendation - Declaration of four services comprising the Central Queensland Coal Rail Network*: [application withdrawn], 14 September 2010 at [7.14]. The NCC's *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.39] is a notable exception (where the NCC was not satisfied that the application satisfied criterion (c), and recommended that the relevant service not be declared).

<sup>196</sup> See, for example: NCC, *Final recommendation - Declaration of a service provided by the Goldsworthy Railway*, 29 August 2008 at [6.12]; *Final recommendation - Declaration of a service provided by the Robe Railway*, 29 August 2008 at [6.9]; *Final recommendation - Declaration of a service provided by the Hamersley Railway: Final Recommendation*, 29 August 2008 at [6.9]; and *Draft recommendation - Declaration of four services comprising the Central Queensland Coal Network* [application withdrawn], 14 September 2010 at [7.11].

<sup>197</sup> QCA Draft Recommendation, Part B, p 27.

278 The measures against which significance is to be considered under criterion (c) are discussed further below.

*What does 'size' mean?*

279 In detailing its approach to interpreting and applying the access criteria, the QCA expanded on the considerations relevant to considering 'size' as 'including the physical and geographic dimensions of the facility (for example, the size of its footprint or its start and end points), the physical capacity of the facility, and the throughput of goods and services using the facility'.<sup>198</sup>

280 While Queensland Rail accepts the factors highlighted by the QCA may be relevant, Queensland Rail submits that the following principles should be adopted when assessing the size of each facility in the context of criterion (c):

280.1 first, the economic significance of the facility must be taken into account when assessing whether the facility is of sufficiently significant 'size' to be of 'significance', notwithstanding the use of the word 'or' in criterion (c); and

280.2 secondly, a rail system's length or geographic coverage should not, in and of itself, be determinative of whether the facility is of sufficient 'size' to be of 'significant'.

281 Such an application of the test is supported by the comments made by the Productivity Commission in paragraph 275 above.

282 Given the 'subjective' and 'discretionary' nature of the test, Queensland Rail submits that the fundamental question to be addressed by criterion (c), with due regard to the objects clause of Part 5 of the QCA Act, is a consideration of whether the facility is of sufficient economic significance to be the proper subject of access regulation under Part 5 of the QCA Act.

283 The assessment of 'size' therefore extends to considerations beyond the length of a particular railway track, and calls for a practical assessment of the use of the facility and a consideration of whether the scale of operations is of sufficient 'size' for the facility to be of state significance. That is, length is a relevant, though not of itself determinative, consideration in assessing if a particular facility is of state significance.

284 Queensland Rail submits that this approach is purposive, comports with the object of the Part 5 regime, and is consistent with the NCC's assessment of criterion (c) as ultimately a 'test of materiality, placing less important facilities outside the scope of Part IIIA'.<sup>199</sup>

285 Queensland Rail provides support for each of these submissions below.

*What does 'or' mean in criterion (c)?*

286 Section 76(2)(c) requires the facility to be significant with regard to its size or its importance to the Queensland economy. The QCA has interpreted the use of the word 'or' to mean that only one of the specified factors needs to be satisfied for criterion (c) to be satisfied.<sup>200</sup> However, the interpretation of the meaning of 'size' is often contextualised and significantly affected by the mutually supportive consideration of the economic 'importance' of a facility.

287 In practice it is apparent that the NCC's assessment of the economic significance of a facility will significantly colour its view as to whether or not the facility is of sufficient 'size' to be of significance:

287.1 In the Herbert Cane Railway matter, the fact that the relevant network was 530 km in length was not sufficient to satisfy the 'size' test in terms of national significance. In that matter, the NCC also concluded that the network was not economically significant for the purposes of criterion (c). Queensland Rail submits that these conclusions as to size and economic significance were mutually supportive in that matter. See also paragraph 293 below.

<sup>198</sup> QCA, Draft Recommendation, Part B, p 26.

<sup>199</sup> NCC, *Issues Paper - Application by Fortescue Metals Group Limited for declaration of services provided by BHP Billiton Ore Pty Ltd*, March 2005 at [7.1].

<sup>200</sup> QCA, Draft Recommendation, p 26 and Part B, p 88.

- 287.2 Further, the NCC provided no guidance as to why the relevant facilities were of sufficient 'size' to satisfy the criterion (c) in the Goldsworthy, Hamersley and Robe Railway Services matters. Queensland Rail submits that this is due to the clear economic importance of the Pilbara railways, which facilitated the transportation of approximately 95% of Australia's iron-ore production.<sup>201</sup>
- 288 Significantly, the NCC has not previously concluded that a facility was of national significance solely because of its 'size' on physical dimensions alone, without supporting evidence pertaining to the economic importance of the facility.<sup>202</sup>
- 289 By comparison, the QCA's Draft Recommendation considers that the South Western System, the Western System, the Central Western System, and the Tablelands system, satisfy criterion (c) solely on the basis of 'size', in circumstances where the QCA also consider that these systems are not of sufficient importance to the Queensland economy.
- 290 Queensland Rail respectfully submits this approach cannot be sustained with due regard to the paramount consideration of criterion (c) and the object of the Part 5 of the QCA Act.

*What is relevant in considering if a facility is of sufficient 'size' to be 'significant'?*

- 291 The NCC has observed that.<sup>203</sup>
- The Council does not consider that any single dimension of a facility will be determinative in terms of its size. Rather, the Council considers various indicators in assessing the 'size' element of criterion (c). A facility's size is considered in the context of assessing whether the facility is of national significance. The Council considers that the question it must ask itself is whether it is satisfied that the facility is nationally significant, in light of relevant indicators of size (emphasis added).
- 292 As noted above, the QCA has highlighted the physical and geographic dimensions of the facility are relevant to criterion (c). However, as the NCC has stated that 'physical size is not of itself determinative'.<sup>204</sup> It is merely 'something to have regard to in assessing whether a facility is of national significance'.<sup>205</sup> For example, whilst the overall track length of the Herbert River cane railway was approximately 530 km, the NCC noted that the network serviced 55,000 hectares, was utilised by 575 growers and lay within the Hinchinbrook Shire with a population of 12,513.<sup>206</sup>
- 293 In concluding that the Herbert River cane railway network was not 'of such size as to be nationally significant', the NCC noted key matters such as:
- 293.1 'the Council does not accept that physical size alone is determinative. Rather, physical size is something to have regard to in assessing significance';<sup>207</sup>
- 293.2 the NCC considered that comparisons with the Bondi reticulation network (considered in the Services Sydney matter) was instructive as the cane railway, like the Bondi reticulation network, was 'reticulated rather than linear'. By

<sup>201</sup> NCC, *Final recommendation - Declaration of a service provided by the Goldsworthy Railway*, 29 August 2008 at [6.4].

<sup>202</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.10], noting that 'the question of national significance solely on the basis of size has not previously been a decisive issue in a final recommendation by the Council'.

<sup>203</sup> NCC, *Draft recommendation - Declaration of four services comprising the Central Queensland Coal Rail Network* [application withdrawn], 14 September 2010 at [7.4].

<sup>204</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010, p 45 at [7.11]. See also the Tribunal's consideration of the amount of information stored by a computer network as a means of applying the 'size' test for the purposes of the criterion (c): *Re: Application for Review of the Decision by the Commonwealth Treasurer Published on 14 August 1996 not to Declare the 'Austudy Payroll Deduction Service' Under Part IIIA of the Trade Practices Act 1974 & By: Australian Union of Students* [1997] ACompT 1, p 26; see also the South West Producers Initial Submission endorsing this at p 43.

<sup>205</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.14].

<sup>206</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.4] and [7.16].

<sup>207</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.14].

comparison there were significant differences in the respective number of persons serviced by the Bondi reticulation network compared with the Herbert River cane railway which substantiated the cane railway's insufficient 'size';<sup>208</sup> and

- 293.3 while the network was 'big' in some dimensions, it was not 'big' in others (e.g. comparing total track length with haulage distance and importance).<sup>209</sup>
- 294 Queensland Rail submits that the NCC's conclusions with respect to the 'size' of Herbert river cane railway network are highly material when assessing the various systems operated by Queensland Rail in relation to the relevant 'size' of each facility. In that matter, the relevant network was 530 km in length, and yet this was not sufficient to satisfy the NCC that the network was of sufficient 'size'.
- 295 The QCA has also recognised that the throughput of goods or services using a facility can be relevant to assessing 'size' in in the context of criterion (c).<sup>210</sup>
- 296 This principle is grounded in the jurisprudence and past regulatory determinations. For example, in the *Virgin Blue Airlines Pty Limited* [2005] ACompT 5, the Tribunal concluded:<sup>211</sup>
- We are satisfied that the facility at Sydney Airport is of national significance having regard to its size, its importance to constitutional trade and commerce, and its importance to the national economy. As noted earlier, approximately 50% of all international passengers arriving in Australia pass through Sydney Airport, as do approximately 30% of all domestic passengers in Australia. It is thus a major international gateway for Australia's tourism industry, and also makes a substantial and significant contribution to trade in Australia.*
- 297 For the relevant railway systems operated by Queensland Rail, throughput will consist of the amount of freight transported by each line (volume and value), and the volume of passenger services operated per year. By this measure, rail systems with comparatively low levels of traffic are unlikely to satisfy the 'size' test in relation to criterion (c).

#### *What does 'importance to the Queensland economy' mean?*

- 298 In detailing its approach to interpreting and applying the access criteria, the QCA expanded on the considerations that are relevant to assessing the importance of a facility to the Queensland economy to include 'its contribution to employment, exports, and gross state product (GSP)'.<sup>212</sup>
- 299 In conducting its analysis, the QCA also states that 'importance to the Queensland economy' may include contributions to employment, regional development, economic growth and productivity.<sup>213</sup>
- 300 Each of these matters however are relevant only to the extent they establish a facility's economic significance. They are not relevant in and of themselves as they may be when assessing criterion (d) (whether access would promote the public interest). For example, 'economic and regional development issues, including employment and investment growth' were previously expressly identified as matters to which the QCA (and the Minister) were required to have regard in considering criterion (d) and are matters which the QCA can continue to have regard to in considering criterion (d).
- 301 Queensland Rail recognises that, logically, the requirement that the facility be of significance to the Queensland economy must be a lower threshold than that of national significance required under Part IIIA of the CCA. Notwithstanding this, Queensland Rail submits that the

<sup>208</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.16]. The NCC noted that more than 260,000 use the Bondi reticulation network daily, compared with the 575 growers and 12,513 population serviced by the Herbert river cane railway.

<sup>209</sup> NCC, *Final recommendation - Declaration of services provided by the Herbert River cane railway*, 16 July 2010 at [7.18].

<sup>210</sup> QCA Draft Recommendation, p 26.

<sup>211</sup> *Virgin Blue Airlines Pty Limited* [2005] ACompT 5 at [78].

<sup>212</sup> QCA, Draft Recommendation, Part B, p 26-27.

<sup>213</sup> QCA, Draft Recommendation, Part B, p 72.

principles for determining national significance are of direct relevance for the QCA in applying criterion (c) to the various systems operated by Queensland Rail.

- 302 In assessing importance of the facility to the national economy, the NCC focuses on the dependent markets that will be affected by access. Moreover, the NCC considers that the relevant upstream or downstream markets must be significant markets of themselves, for the relevant facility to be considered nationally significant for the purposes of the criterion (c).
- 303 The NCC has stated that it 'generally considers national significance to be established if the dependent market provides substantial annual sales revenue to participating businesses.'<sup>214</sup> Further, as evidenced in the Pilbara railway recommendations, the significance of the export market serviced by the facility is highly relevant in applying criterion (c).<sup>215</sup>
- 304 Similarly, in determining the economic significance of a facility, the Tribunal has had regard to the total value of trade that depends on the facility. For example:
- 304.1 the Tribunal considered the fact that greater than \$20 billion of in-bound and out-bound freight was cleared at Sydney International Airport in 1997 among other relevant matters) demonstrated that the facility was nationally significant;<sup>216</sup> and
- 304.2 the Tribunal in deciding that criterion (c) was not satisfied in the *Re Australian Union of Students* case, considered that:<sup>217</sup>
- 304.2.1 whilst the receipt of an Austudy allowance was important to students, it had no significant impact on trade or commerce; and
- 304.2.2 even if every Austudy recipient in Australia were a member of a student union, access would still only result in \$1.5 million in payments to the union annually, which was a very small sum when compared to the Australian economy.

### Application of these principles

- 305 Queensland Rail submits that with regard to the critical importance of economic considerations in applying criterion (c), and with regard to the fact dependent nature of the assessment of each system, the following approach reflects an accurate application of the law, and the economic principles underpinning the law, for each relevant facility which should assist the QCA in making its final recommendation.
- 305.1 First, regarding 'size', the physical dimensions, whilst relevant, are to be informed by a consideration of the relevant economic activity facilitated by the system.
- 305.2 Secondly, regarding 'importance to the Queensland economy':
- 305.2.1 the total value and volume of throughput is highly relevant, especially with regard to the extent this throughput contributes to Queensland exports, movement of imports from Queensland ports, and regional development and employment in the Queensland freight industry;
- 305.2.2 the utilisation of the facility is highly relevant, reflecting the level of economic demand for the service provided by the facility; and
- 305.2.3 the commercial viability of the facility is relevant, reflecting the economic viability of the infrastructure.

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<sup>214</sup> NCC, *Draft recommendation - Declaration of four services comprising the Central Queensland Coal Rail Network* [application withdrawn], 14 September 2010 at [7.7].

<sup>215</sup> NCC, *Final recommendation - Declaration of a service provided by the Goldsworthy Railway*, 29 August 2008 at [6.12]; *Final recommendation - Declaration of a service provided by the Robe Railway*, 29 August 2008 at [6.10]; and *Final recommendation - Declaration of a service provided by the Hamersley Railway*, 29 August 2008 at [6.10].

<sup>216</sup> *Sydney International Airport* [2000] ACompT 1 at [208].

<sup>217</sup> *Re: Application for Review of the Decision by the Commonwealth Treasurer Published on 14 August 1996 not to Declare the 'Austudy Payroll Deduction Service' Under Part IIIA of the Trade Practices Act 1974 & By: Australian Union of Students* [1997] ACompT 1, p 26.

- 305.3 Accordingly, Queensland Rail proposes the following approach, subject to data availability issues, for the assessment of the criterion (c) for each relevant facility:
- 305.3.1 First, consider the length of each facility and strategic importance of the route, noting that physical length, of itself, is not determinative;
- 305.3.2 Second, estimate the volume and value of each type of commodity transported by each system in 2016-17:
- 305.3.3 Third, for freight tasks involved in export supply chains, determine the proportion of this volume/value of freight:
- (a) as a fraction of the total *volume* of the relevant exported commodity from Queensland ports;
  - (b) as a proportion of the total *value* of the relevant exported commodity from Queensland ports; and
  - (c) as a fraction of the total amount of Queensland GSP for 2016-17.
- 305.3.4 For freight tasks involved in the movement of imported goods from ports, determine the proportion of this volume/value of freight:
- (a) as a fraction of the total *volume* of the relevant imported commodity;
  - (b) as a proportion of the total *value* of the relevant imported commodity; and
  - (c) as a fraction of the total amount of Queensland GSP for 2016-17.
- 305.3.5 For 'domestic' freight tasks: determine the proportion of the volume and value of the freight:
- (a) as a fraction of the total *volume* of the domestic freight task for the relevant commodity;
  - (b) as a proportion of the total *value* of the domestic freight task for the relevant commodity; and
  - (c) as a fraction of the total amount of Queensland GSP for 2016-17.
- 305.3.6 For passenger services:
- (a) for regular passenger services, determine the amount of annual trips as a proportion of total Queensland passenger numbers; or
  - (b) for tourism services, determine expenditure on such services as a proportion of total tourism expenditure in Queensland.
- 306 While accepting criterion (c) requires an exercise of judgment, Queensland Rail submits that these proportions will guide the qualitative assessment of each system's 'size' and 'importance to the Queensland economy'. Noting that a 'precise calculation' is not the objective, the approach is intended to guide the making of a discretionary judgment as to whether a particular facility is of state significance.

## Statistical methodology

- 307 For simplicity of analysis, Queensland Rail makes the following conservative assumptions:
- 307.1 for rail systems with multiple corridors (with multiple origin: destination pairs), Queensland Rail will assume that the relevant freight tonnage is the *highest* volume freight task for a transported commodity on any individual rail corridor in 2016-17; and

- 307.2 in determining 'value' of the freight task, Queensland Rail has made estimates of the value of product based on publicly available information. However there are data limitations which impact the extent to which this can be reliably achieved for some freight movements, particularly domestic intermodal freight.
- 308 The assumption is conservative as it maximises the volume, and thus value of the freight task.

## Criterion (c) issues

### Overview

- 309 Consistent with the QCA's Draft Recommendation, Queensland Rail considers that:
- 309.1 the Metropolitan network satisfies criterion (c) due to its clear importance to the Queensland economy;
  - 309.2 the Mount Isa Line satisfies criterion (c) due to its importance to the Queensland economy's transportation of bulk minerals and industrial products; and
  - 309.3 the North Coast Line satisfies criterion (c) due to its physical size and its strategic alignment servicing four significant ports and major centres in Queensland.
- 310 However, Queensland Rail considers that the West Moreton System is not relevantly of state significance due to the low volume of freight hauled compared to Queensland's total coal exports.
- 311 In addition, Queensland Rail considers that the Western System, South Western System, Central Western System or Tablelands System do not satisfy criterion (c). These systems are not significant for the purposes of criterion (c) for several reasons relating to a lack of economic significance due to:
- 311.1 the low volume/value of freight hauled on each system with regard to contribution to, as appropriate, Queensland's exports, imports, or the domestic freight industry;
  - 311.2 low utilisation rates, often related to the impact of modal competition with road; and
  - 311.3 the high degree of dependence on TSC revenue on these facilities indicating a lack of commercial viability.
- 312 In making this submission, Queensland Rail is not asserting that any of Queensland Rail's systems are not of cultural, societal or regional significance, nor that the movement of freight on these systems is not critical or important to the end users, but rather that each is merely beneath the threshold required for the imposition of access regulation under Part 5 of the QCA Act. That is, the facilities do not meet the legal and economic test required to be applied.
- 313 Further details are provided in respect of each facility below.

### Metropolitan System

- 314 Queensland Rail's above-rail Citytrain business operated more than 51 million passenger trips in the 2016-17 financial year. Queensland Rail agrees with the QCA<sup>218</sup> that this service is of sufficient 'size' and 'importance to the Queensland economy' to satisfy criterion (c).

### North Coast Line

#### Size

- 315 The North Coast Line extends approximately 1,428km between Nambour (near Brisbane) to Cairns, excluding Parana to Rocklands and Kali and Durroburra. The North Coast Line

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<sup>218</sup> QCA, Draft Recommendation, Part B, p 88.



services major population centres in Brisbane, Bundaberg, Gladstone, Rockhampton, Mackay, Townsville and Cairns and services four ports — Townsville, Mackay, Gladstone (Auckland Point) and Port of Brisbane (connection through the Metropolitan System).

- 316 The physical size of the facility, of itself, is not determinative of the criterion (c) test. 'Size' must be considered in light of additional indicators of size including physical capacity and throughput of the facility and is coloured by its 'importance' to the Queensland economy.

#### *Importance to the Queensland economy*

- 317 Six regional passenger services operate along different parts of the North Coast Line, totalling around 65 paths per week.

- 318 Relevant freight haulage data for the North Coast Line in 2016-17 is summarised below:<sup>219</sup>

| Commodity                                 | Queensland exports of commodity 2016-17 (tpa)             | Relevant % of Qld exports of the commodity (volume) | Estimate of contribution to Qld intermodal freight task | Price per tonne (\$) | Relevant % of GSP |
|---|---|---|---|----------------------|-------------------|
| <b>Sugar</b>                              | 4,316,392   | 40%   |   | \$527 <sup>220</sup> | 0.30%             |
| <b>Freight (intermodal/containerised)</b> | n.a.  | n.a.  | 12%   | n.a.                 | n.a.              |
| <b>Grain</b>                              | 2,811,544   | 6%  |   |                      |                   |
| <b>Livestock</b>                          | 1,243,546*<br>[Note includes meat and livestock products] | 5%  |   |                      |                   |
| <b>Mineral &amp; containerised coal</b>   | n.a.  | n.a.  |   |                      |                   |

- 319 In 2016-17, the North Coast Line hauled approximately 40% of Queensland's total sugar exports, and approximately 12% of Queensland's total intermodal/containerised freight volumes for 2016-17.<sup>221</sup>

- 320 The North Coast Line is underutilised, and competes with road freight in the intermodal market. Intermodal freight growth on the North Coast Line has been constant at best over the last four years, with Ranbury estimating that intermodal freight tonnes moved on the North Coast Line have decreased by around 20% since 2007-08.<sup>222</sup>

- 321 The North Coast Line receives substantial financial support through payments by the Queensland Government to Queensland Rail under the TSC. In 2017-18 the North Coast Line received \$152.3 million in TSC funding. Earnings before interest and tax, excluding TSC funding for 2017-18, was negative \$94.9 million.<sup>223</sup>

<sup>219</sup> Queensland Rail haulage data and publicly sourced exports, GSP, and commodity price data.

<sup>220</sup> Queensland Sugar Limited Net ICE 11 Pool, *QSL Annual Report 2016-17*, p 5.

<sup>221</sup> Australian Bureau of Statistics, ABS Cat No. 9223.0, *Road freight movements*, 12 months ended 31 October 2014 (latest available); supplemented with Queensland Rail data.

<sup>222</sup> Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 10.

<sup>223</sup> Calculations based on Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2017, p 4; <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

## Queensland Rail's view

322 On balance, Queensland Rail agrees with the QCA that the North Coast Line is a facility that is of state significance with regard to its size or importance to the Queensland economy in servicing four significant ports and major centres.

## Mount Isa Line

### Size

323 The Mount Isa Line extends 1039 kilometres from Stuart (near Townsville) to Mount Isa and includes to the Phosphate Hill Branch. The line transports bulk freight from the North West Minerals Province to the Port of Townsville. Further, the system has a significant 'back-haul' freight task delivering mining and industrial inputs for the Mount Isa region.

324 Of itself, the length of the track whilst relevant, is not determinative. Accordingly, the determination of 'size' must be informed by additional indicators of size and a consideration of the use of the facility and its 'importance'.

### Importance to the Queensland economy

325 Relevant haulage data for the Mount Isa line in 2016-17 is summarised below:<sup>224</sup>

| Commodity  | Max. 2016-17 throughput on any individual section of line (tonnes per annum) | Exports of commodity 2016-17 (tonnes per annum) out of Queensland Ports | Approximate relevant % of exports of particular commodity | Price per tonne (\$)  | Relevant % of GSP |
|--|--|---|---|-----------------------|-------------------|
| <b>Industrial products &amp; fuel (including cement and mining inputs)</b> | 236,127  | n.a   | n.a.  | n.a.                  | n.a.              |
| <b>Chemicals</b>   | 2,337,710  | 872,428 <sup>225</sup>  | 72%   | \$458 <sup>226</sup>  | 0.13%             |
| <b>Metals and Minerals</b>   | 1,386,299  | 3,305,196 <sup>227</sup>  | 42%   |                       |                   |
| <b>Livestock</b>   | 18,440   | 94,705 <sup>228*</sup>  | 21% <sup>229</sup>  | \$4764 <sup>230</sup> | 0.03%             |
| <b>Passengers</b>  | Inlander — between Townsville and Mount Isa (four one-way services per week) |   |   |                       |                   |

326 In 2016-17 the Mount Isa Line hauled approximately 72% of Queensland's exports of chemical products (fertiliser) and approximately 42% of Queensland's minerals and metals exports, by weight.

327 The system does not receive funding under the TSC.

<sup>224</sup> Queensland Rail haulage data and publicly sourced exports, GSP, and commodity price data.

<sup>225</sup> Department of Transport and Main Roads, *Trade Statistics for Queensland Ports - Throughput statistics for the five years ending 30 June 2017*, May 2018, p 36.

<sup>226</sup> Index Mundi website, DAP fertiliser monthly price: <https://www.indexmundi.com> (accessed 8 March 2019). The data point reflects the average price for the 2016–17 financial year.

<sup>227</sup> Department of Transport and Main Roads, *Trade Statistics for Queensland Ports - Throughput statistics for the five years ending 30 June 2017*, May 2018, p 50.

<sup>228</sup> Department of Transport and Main Roads, *Trade Statistics for Queensland Ports - Throughput statistics for the five years ending 30 June 2017*, May 2018, p 49.

<sup>229</sup> This makes the conservative assumption that all livestock on the Mount Isa Line is exported through the Port of Townsville. In practice, a percentage of livestock moved on the Mount Isa Line is transported south for processing.

<sup>230</sup> Department of Agriculture and Forestry, Price Index p 6.

## Queensland Rail's view

- 328 On balance, Queensland Rail agrees with the QCA<sup>231</sup> that the Mount Isa Line is likely to satisfy the threshold of economic significance required by criterion (c) due to its size and importance to the Queensland economy's transportation of bulk minerals and industrial products.

## West Moreton System

### Size

- 329 The West Moreton System runs from Rosewood to Miles and is 314 kilometres in length. The total rail distance from the furthest West Moreton System coal mine to the Port of Brisbane is approximately 380 kilometres.
- 330 While in its Draft Recommendation, the QCA concludes that the West Moreton System track lengths extend across a significant area of the state and are significant having regard to its size, Queensland Rail notes that the West Moreton System is significantly shorter than the Herbert River cane railway, which the NCC concluded did not satisfy the criterion (c) equivalent.
- 331 Physical size of itself is not determinative, and a consideration of the importance to the economy will relevantly affect its relevant 'size'.

### Importance to the Queensland economy

- 332 The predominant freight traffic on the West Moreton System is thermal coal which accounts for around 94% of annual train paths and 98% of tonnage transported on the West Moreton System.<sup>232</sup> Total throughput of coal on the West Moreton System was 7.17 mt in 2017-18.
- 333 Significant uncertainty exists as to the future level of throughput for coal carrying services on the West Moreton System. Recent events impacting on tonnages include:
- 333.1 the closure of Peabody's Macalister Mine in 2013; and
- 333.2 the uncertain future for the New Acland stage 3 development, which is yet to receive approvals to proceed with the mine's development.
- 334 If the New Acland development does not proceed, coal tonnages will reduce to 2mtpa, and they are likely to increase to 9mtpa if the development goes ahead.
- 335 Relevant haulage data for the West Moreton System in 2016-17 is summarised below, along with related economic data.<sup>233</sup>

| Commodity | Max. 2017-18 throughput on any individual section of line (tpa) | Queensland exports of commodity 2017-18 (tpa) | Relevant % of Qld exports of the commodity (volume) | Price per tonne (\$)    | Relevant % of GSP |
|-----------|---|---|---|-------------------------|-------------------|
| Coal      | 7,167,227<br>[Rosewood-Toowoomba]                               | 221,410,000 <sup>234</sup>                    | 3.2%  | \$105.15 <sup>235</sup> | 0.21%             |
| Freight   | 18,000<br>[Rosewood-Toowoomba]                                  | 3,725,421                                     | n.a.  | n.a.                    | n.a.              |

<sup>231</sup> QCA Draft Recommendation, Part B, p 82.

<sup>232</sup> Queensland Rail 2017-18 Annual Performance Report - December 2018 QCA Draft Recommendation, Part B, p 85.

<sup>233</sup> Queensland rail haulage data and publicly sourced exports, GSP, and commodity price data

<sup>234</sup> Queensland Department of Transport and Main Roads, Queensland Coal Transport Report – July 2018, p 1.

<sup>235</sup> Queensland Department of Transport and Main Roads, Queensland Coal Transport Report – July 2018, Derived from graphs on pp 3 and 5.

|                   |   |                          |      |                       |       |
|-------------------|---|--------------------------|------|-----------------------|-------|
| <b>Grain</b>      | 476,000<br>[Rosewood-<br>Toowoomba]                                   | 2,811,544 <sup>236</sup> | 17%  | 370 <sup>237</sup>    | <0.1% |
| <b>Livestock</b>  | 7,000<br>[Toowoomba-<br>Jondaryan]                                    | n.a.                     | n.a. | \$4764 <sup>238</sup> | <0.1% |
| <b>Passengers</b> | Westlander — Brisbane to Charleville (four one-way services per week) |                          |      |                       |       |

- 336 Queensland Rail submits that the above volumes are not significant when compared with Queensland coal commodity exports. For example, in 2016-17, Queensland exported 221.41 mt of coal and 2.8 mt of grain. The West Moreton System hauls only approximately 3.2% of Queensland's coal exports and 17% of grain exports (noting that grain on the West Moreton System originates on the South West and Western Systems, as well as the West Moreton System).
- 337 This freight task, is not of sufficient importance with regard to its contribution to Queensland's economy to be a facility that is of state significance. In particular, the predominant freight task, coal, amounts to 3.2% of the volume of Queensland's coal exports and less than 0.3% of Queensland's GSP.
- 338 Further, if the New Acland Stage 3 project proceeds, the relevant proportion of coal hauled on the West Moreton System increases to around 4% of the total volume of coal exported from Queensland ports in a normal export year (assuming around 220 mtpa coal exports, excluding force majeure events). If the New Acland Stage 3 project does not proceed, the relevant percentage will reduce to less than 1%.
- 339 Noting that criterion (c) is a legal and economic test, Queensland Rail considers that while these tonnages are significant to Queensland Rail and the South West Producers operating in the West Moreton coal freight corridor, these coal volumes are dwarfed by the scale of operations in the CQCN. For example:
- 339.1 The West Moreton System ships approximately 7mtpa, whereas the CQCN ships approximately 220mtpa;
- 339.2 The West Moreton System coal track access revenue was 42 million in 2017-18, whereas Aurizon's coal track access revenue was 1.17 billion in 2017-18.<sup>239</sup>
- 339.3 The West Moreton System services five mines operated by two miners, whereas Aurizon's CQCN services over 50 mines for many miners.<sup>240</sup>
- 340 In the context of its contribution to the Queensland economy, the West Moreton System is not relevantly of state significance with regard to its 'size' or 'importance to the Queensland economy'.
- 341 Queensland Rail notes that the QCA has compared the volumes of freight hauled on the West Moreton System to the Mount Isa System to justify that the West Moreton system is of similar significance to the Mount Isa System.<sup>241</sup> The principal difficulty with this comparison is that criterion (c) requires a consideration of the economic activity with respect to the Queensland economy. The Mount Isa System hauls approximately 72% of Queensland's minerals and

<sup>236</sup> Department of Transport and Main Roads, *Trade Statistics for Queensland Ports - Throughput statistics for the five years ending 30 June 2017*, May 2018, p 48.

<sup>237</sup> Ruralbank, *Australian Crops Annual Review 2017*, pp 8, <https://www.ruralbank.com.au/assets/responsive/pdf/publications/crop-report-17.pdf> [accessed 8 March 2019]. This data point reflects a weighted average of wheat, barley, sorghum, and chickpeas

<sup>238</sup> Department of Agriculture and Forestry, Price Index, p 6.

<sup>239</sup> Aurizon, *Annual Report 2017-18*, p 18; <https://www.aurizon.com.au/~media/aurizon/files/investors/documents%20and%20webcasts/2018/full%20year%20results/aurizon%20annual%20report%202018.pdf> [accessed 8 March 2019].

<sup>240</sup> Aurizon, *What we deliver - Network*, <https://www.aurizon.com.au/what-we-deliver/network> [accessed 8 March 2019].

<sup>241</sup> QCA Draft Recommendation, Part B, p 85.

metals exports whereas the West Moreton System hauls approximately 3% of Queensland's coal exports.

- 342 Further, it is not accurate to compare volume figures only across different export commodities. West Moreton coal is a high volume, low value commodity compared with the higher value metals (i.e. copper) and minerals transported from the Mount Isa region.
- 343 Queensland Rail notes that the West Moreton System, whilst subsidised under the TSC, is not dependent upon such funding, generating approximately \$44 million per year in access revenue which is sufficient to cover operating costs.<sup>242</sup>

#### *Queensland Rail's view*

- 344 Queensland Rail submits that, on balance, the West Moreton System is not infrastructure that is of state significance with regard to its size or its importance to the Queensland economy (measured by contribution to exports and GSP) to satisfy criterion (c). The system's predominant freight traffic, coal, comprises approximately 3% of Queensland's total coal exports.

### **General comments applying to the Western, South-Western, Central Western and Tablelands systems**

- 345 The QCA's Draft Recommendation concludes that each of the Western, South-Western, Central Western and Tablelands system are infrastructure facilities that are of state significance.<sup>243</sup>
- 346 The QCA recognises that each of these systems are not of sufficient 'importance' to the Queensland economy to satisfy criterion (c), however, the QCA determines that, notwithstanding this lack of economic importance, they are of sufficient size, to satisfy the 'state significance' test. The analysis is described as follows:<sup>244</sup>
- The QCA considers that each of the South Western, Western, Central Western and Tablelands systems are significant, having regard to the size of each. Although the QCA considers that each of the South Western, Western, Central Western and Tablelands systems is not significant having regard to their importance to the Queensland economy, the language of s. 76(2)(c) requires that only one consideration is satisfied, as indicated by the word or - 'having regard to its size or its importance to the Queensland economy'.
- 347 While the QCA sets out throughput volumes in the context of considering 'size', these volumes are either not relied on for the QCA's findings (the QCA referring only to length of railway track and geographic coverage in its conclusion) or do not support the QCA's findings,<sup>245</sup> as discussed further below.
- 348 This unduly narrow approach to the interpretation of 'size' in the QCA's assessment of criterion (c) is incorrect for several reasons.
- 348.1 Firstly, criterion (c) requires that 'size' considerations incorporate an assessment of physical dimensions and other factors. The length of the railway, of itself, is not determinative. In this circumstance, a consideration of use and scale of the economic operations of the facility is required for a proper assessment of the 'size' of each facility.
- 348.2 Secondly, an interpretation of the access criteria must have regard to the object of Part 5 of the QCA Act, which is to promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets. In this circumstance, criterion (c) requires the decision

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<sup>242</sup> QCA Draft Recommendation, Part B, p 87.

<sup>243</sup> QCA Draft Recommendation, Part B, p 91.

<sup>244</sup> QCA Draft Recommendation, Part B, p 91.

<sup>245</sup> QCA Draft Recommendation, Part B, pp 90-91.

maker to make a qualitative decision on whether a facility is 'significant' infrastructure with the purpose of the Part in mind.

- 348.3 Thirdly, this application of criterion (c) is inconsistent with all previous considerations of the equivalent criterion applied by the NCC in which 'size' and 'importance' are mutually supportive. In this circumstance the QCA has found that the 'importance to the Queensland economy' does not align with each facility's physical 'size'.
- 349 The Western, South-Western, Central Western and Tablelands systems are heavily underutilised and are substantially subsidised by TSC payments for regional development and other public policy purposes.<sup>246</sup>
- 350 Both above-rail and below-rail operators receive substantial TSC revenue to continue to operate these services. The immateriality of the volume of freight transported in terms on these systems is affirmed by the fact that they are aggregated for the purposes of preparing the Queensland Rail below-rail financial statements. In aggregate, these systems received approximately \$414m in TSC funding in 2017-18.<sup>247</sup> Further, the QCA is correct that a very small amount of external access revenue was received for the South Western, Western, Central Western, and Tablelands systems with only approximately \$1.1 million in access revenue earned from these systems in 2017-18 which is less than 1% of revenue for the year.<sup>248</sup>
- 351 On any view, and with a sensible application of 'discretion', 'broad judgment', and the object of Part 5 of the QCA Act, the QCA's Draft Recommendation that the Western, South-Western, Central Western and Tablelands system are infrastructure facilities that are of state significance cannot be sustained.

## Western System

### Size

- 352 The Western System runs over 1082 route km in length, comprising the corridors:
- Miles to Roma (140.5 km);
  - Roma West to Charleville (265.4 km);
  - Charleville to Cunnamulla (194.9 km) (non-operational);
  - Westgate to Quilpie (200.7 km);
  - Miles to Wandoan (69.4 km) (non-operational);
  - Tycanba to Jandowae (48.5 km) (non-operational); and
  - Dalby to Glenmorgan (165.4 km).
- 353 Queensland Rail notes that this system is longer than the Herbert River cane railway, but according to the application of criterion (c), size must be informed by a consideration of other indicators of size pertaining to economic importance.

### Importance to the Queensland economy

- 354 The QCA considers that the Western System is not significant with regard to the system's importance to the Queensland economy, whilst noting that this determination in no way

<sup>246</sup> QCA Draft Recommendation, Part B, p 89.

<sup>247</sup> Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2017, p 4; <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

<sup>248</sup> QCA Draft Recommendation, Part B, p 89.

undermines the societal or cultural significance of the railway.<sup>249</sup> Queensland Rail agrees with this analysis, and considers that this finding ought to provide context to the 'size' assessment above and the application of judgment in drawing a conclusion that the Western System is not of state significance and does not satisfy criterion (c).

355 Relevant haulage data for the Western System in 2016-17 is summarised below, along with related economic data:<sup>250</sup>

| Commodity         | Max. 2016-17 throughput on any individual section of line (tpa)                                    | Queensland exports of relevant commodity 2016-17 (tpa) | Relevant % of Qld exports of the commodity (volume) | Price per tonne (\$) | Relevant % of GSP |
|-------------------|--|--|---|----------------------|-------------------|
| <b>Grain</b>      | 44,000 [Miles-Roma] [Note joins the West Moreton system – tonnes also shown in West Moreton Grain] | 2,811,544  | <2%   | 370 <sup>251</sup>   | <0.1%             |
| <b>Livestock</b>  | 7,000 [Miles-Roma]   | n.a.   | n.a.  | n.a.                 | n.a.              |
| <b>Passengers</b> | <b>Westlander — Brisbane to Charleville (four one-way services per week)</b>                       |  |   |                      |                   |

356 The Western System (which joins the West Moreton System) hauls less than 2% of the total grain exported out of Queensland. In 2016-17, the most heavily used part of the network (Miles to Roma) operated at 3% of available capacity, with 42 return freight services in total for the year operated across this section of track. Roma to Charleville recorded a total of 18 return train services for the year.

357 The Western System has significant excess capacity, caused by the competitiveness of its freight task with road and the comparatively small overall freight demand from this origin.

358 Based on the volume of freight traffic, substantial underutilisation of the network, significant reliance on TSC funding, the Western System is not infrastructure of 'state significance' of sufficient 'size' or 'importance' to satisfy criterion (c).

#### *Queensland Rail's view*

359 Queensland Rail submits that the Western System is neither of sufficient size nor importance to the Queensland economy (measured by contribution to exports and GSP) to satisfy criterion (c).

## **South Western System**

### *Size*

360 The South Western System is approximately 617.5 km in length, comprising:

- 360.1 Southern Line, from Toowoomba to Warwick (95.3 km);
- 360.2 South Western Line, from Warwick to Thallon (350 km); and
- 360.3 Millmerran Branch, from Wyreema to Millmerran (69.2 km).

<sup>249</sup> QCA Draft Recommendation, Part B, p 88.

<sup>250</sup> Queensland rail haulage data and publicly sourced exports, GSP, and commodity price data.

<sup>251</sup> Ruralbank, *Australian Crops Annual Review 2017*, pp 8, 9,

<https://www.ruralbank.com.au/assets/responsive/pdf/publications/crop-report-17.pdf> [accessed 8 March 2019].

This data point reflects a weighted average of wheat, barley, sorghum, and chickpeas.

- 361 The South Western System is marginally longer than the Herbert River cane railway, and as above, track length and geographic coverage are not determinative, the below factors are highly relevant.
- 362 While the QCA highlights the System's capabilities and prior haulage volumes in the context of considering size, as these volumes have not been achieved for a number of years, they are not relevant to the QCA's assessment. Recent and thus more relevant volumes are set out below.
- 363 There has been significant change in the transport market from the South West, with all cotton movements switching from rail to road from 2014-15. As a result of increases to heavy vehicle mass limits, over 85% of grain is moved in containers by trucks from the South West to the Port of Brisbane.<sup>252</sup>

#### *Importance to the Queensland economy*

- 364 The QCA considers that the South Western System is not significant with regard to the system's importance to the Queensland economy, whilst noting that this determination in no way undermines the societal or cultural significance of the railway.<sup>253</sup> Queensland Rail agrees with this analysis, and considers that this finding ought to provide context to the 'size' assessment above and the application of judgment in drawing a conclusion that the South Western System is not of state significance and does not satisfy criterion (c).
- 365 Relevant haulage data for the South Western System in 2016-17 is summarised below, along with related economic data.<sup>254</sup>

| Commodity  | Max. 2016-17 throughput on any individual section of line (Tonnes)   | Queensland exports of commodity 2016-17 (Tonnes) | Relevant % of Qld exports of the commodity (volume) | Price per tonne (\$) | Relevant % of GSP |
|------------|--|--|---|----------------------|-------------------|
| Grain      | 329,000<br>[Toowoomba-Warwick] [Note joints the West Moreton system – tonnes also shown in West Moreton Grain] | 2,811,544  | 12%   | 370 <sup>255</sup>   | <0.1%             |
| Passengers | Ad hoc heritage steam train tourist services   |  |   |                      |                   |

- 366 In 2016-17, the South-Western System (which joins the West Moreton system) transported 12% of Queensland's volume of exported grain. As discussed above, grain volume exports equate to less than 1% of Queensland's total exports (volume). Therefore this line is of insufficient 'size' and 'importance to the Queensland economy' for the QCA to be satisfied that the South Western System is 'significant'.
- 367 The South Western System has limited freight and is substantially underutilised (90% excess capacity). For example, in 2016-17, train path utilisation on the South Western System was 8% on the Warwick to Goondiwindi section. On average, there were fewer than four return train services per week operated between Goondiwindi and Toowoomba.

<sup>252</sup> The Port of Brisbane advised a Queensland Parliamentary committee that over the past three years there had been a modal shift from 85 per cent of agriculture on rail down to 15 per cent today and declining, Transport, Housing and Local Government Committee, *Rail freight use by the agriculture and livestock industries*, June 2014, p 6, <https://www.parliament.qld.gov.au/Documents/TableOffice/TabledPapers/2014/5414T5368.pdf> [accessed 8 March 2019].

<sup>253</sup> QCA Draft Recommendation, Part B, p 88.

<sup>254</sup> Queensland rail haulage data and publicly sourced exports, GSP, and commodity price data.

<sup>255</sup> Ruralbank, *Australian Crops Annual Review 2017*, pp 8, 9, <https://www.ruralbank.com.au/assets/responsive/pdf/publications/crop-report-17.pdf> [accessed 8 March 2019]. This data point reflects a weighted average of wheat, barley, sorghum, and chickpeas.



368 The South Western System is also a highly subsidised system. In 2016-17, access revenue totalled \$1.55 million and Queensland Rail received TSC funding of \$14.7 million from the Queensland Government.

369 Accordingly, with regard to the freight volumes and relevant circumstances of the South Western System, it is not of sufficient 'size' and 'importance to the Queensland economy' to satisfy criterion (c).

#### *Queensland Rail's view*

370 Queensland Rail submits that the South Western System is neither of sufficient size nor importance to the Queensland economy (measured by contribution to exports and GSP) to satisfy criterion (c), and there is no justification to subject the below rail services provided on the South-Western facility to access regulation under Part 5 of the QCA Act.

## **Central Western System**

### *Size*

371 The Central Western System is approximately 704 route kilometres in length, comprising:

371.1 Central Line, from Nogoa to Winton (603.5km); and

371.2 Clermont Branch, from Emerald to Clermont (100.5km).

372 As above, track length and geographic coverage are not determinative, the below factors are highly relevant.

### *Importance to the Queensland economy*

373 The QCA considers that the Central Western System is not significant with regard to the system's importance to the Queensland economy, whilst noting that this determination in no way undermines the societal or cultural significance of the railway.<sup>256</sup> Queensland Rail agrees with this analysis, and considers that this finding ought to provide context to the 'size' assessment above and the application of judgment in drawing a conclusion that the Central Western System is not of state significance and does not satisfy criterion (c).

374 Relevant haulage data for the Central Western System in 2016-17 is summarised below, along with related economic data:<sup>257</sup>

| <b>Commodity</b> | <b>Max. 2016-17 throughput on any individual section of line (mtpa)</b>         | <b>Queensland exports of commodity 2016-17 (mtpa)</b> | <b>Relevant % of Qld exports of the commodity (volume)</b> | <b>Price per tonne (\$)</b> | <b>Relevant % of GSP</b> |
|------------------|---|---|--|-----------------------------|--------------------------|
| <b>Freight</b>   | 15,000 [Nogoa-Emerald]  | n.a.  | n.a.   | n.a.                        | n.a.                     |
| <b>Grain</b>     | 110,000 [Nogoa-Emerald]   | 2,811,544   | 4%   | 370 <sup>258</sup>          | <0.1%                    |
| <b>Livestock</b> | 38,000 [Nogoa-Emerald]  | 1,243,546   | 3%   |                             |                          |
| <b>Passenger</b> | Spirit of the Outback — Brisbane and Longreach (four-one way services per week) |   |  |                             |                          |

<sup>256</sup> QCA Draft Recommendation, Part B, p 88.

<sup>257</sup> Queensland rail haulage data and publicly sourced exports, GSP, and commodity price data.

<sup>258</sup> Ruralbank, *Australian Crops Annual Review 2017*, pp 8, 9,

<https://www.ruralbank.com.au/assets/responsive/pdf/publications/crop-report-17.pdf> [accessed 8 March 2019].

This data point reflects a weighted average of wheat, barley, sorghum, and chickpeas.

- 375 The Central Western System transports 4% of Queensland's grain exports and 3% of Queensland's livestock exports.
- 376 The Central Western System is substantially underutilised, with approximately 93% of available train paths on the Emerald to Longreach section unused and 97% unused on the Nogoia to Emerald section. Excluding passenger services, the Nogoia to Emerald section had fewer than five return train services per week.
- 377 The system also operates at a large accounting loss if TSC payments are excluded. In 2016-17, access revenue on the Central Western System was \$184,000 and Queensland Rail received TSC funding of \$19.7 million.
- 378 Queensland Rail submits that there is no reasonable basis to conclude that the Central Western System contributes relevantly to state exports to be considered of sufficient size or sufficient economic importance for criterion (c) to be met.

#### *Queensland Rail's view*

- 379 Queensland Rail submits that the Central Western System is neither of sufficient size nor importance to the Queensland economy (measured by contribution to exports and GSP) to satisfy criterion (c), and there is no justification to subject the below rail services provided on the Central Western facility to access regulation under Part 5 of the QCA.

## **Tablelands System**

### *Size*

- 380 The Tablelands System is 575 km in length, comprising the corridors:
- 380.1 Cairns to Forsyth (423 km); and
- 380.2 Normanton to Croydon (151.8 km).
- 381 The lack of throughput (other than tourism transport services) on the Tablelands System is highly material in demonstrating that the 'size' of the facility is not significant for the purposes of satisfying criterion (c).
- 382 Moreover, Queensland Rail submits that the broader economic significance of the Tablelands System must be taken into account when assessing whether the facility is of sufficiently significant 'size' to satisfy criterion (c).

### *Importance to the Queensland economy*

- 383 The QCA considers that the Tablelands System is not significant with regard to the system's importance to the Queensland economy, whilst noting that this determination in no way undermines the societal or cultural significance of the railway.<sup>259</sup> Queensland Rail agrees with this analysis, and considers that this finding ought to provide context to the 'size' assessment above and the application of judgment in drawing a conclusion that the Tablelands System is not of state significance and does not satisfy criterion (c).
- 384 The Tablelands System is utilised exclusively by tourist train services. The Kuranda Scenic Railway passenger service is the most significant tourist service, and contributes approximately \$3 million in tourist services revenue per year. With regard to the Queensland tourist service market contribution to GSP, Queensland Rail suggests that the economic contribution of this passenger service is not relevantly of importance in the sense required by criterion (c).
- 385 Queensland Rail emphasises that, as noted in paragraph 265, that it is critical that the QCA does not conflate economic significance with cultural, historical, regional or societal significance when applying criterion (c). Specifically, concluding that the Tablelands System

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<sup>259</sup> QCA Draft Recommendation, Part B, p 88.

does not satisfy criterion (c) in no way diminishes the undoubted cultural or historical significance of this heritage railway.

*Queensland Rail's view*

386 Queensland Rail submits that the Tablelands System is neither of sufficient size nor importance to the Queensland economy (measured by contribution to exports and GSP) to satisfy criterion (c), and there is no justification to subject the below rail services provided on the Tableland System to access regulation under Part 5 of the QCA Act.

**Conclusion on criterion (c)**

387 For the reasons outlined in this submission, Queensland Rail considers that while the Metropolitan System, Mount Isa Line and North Coast Line each satisfy criterion (c), Queensland Rail's remaining systems do not.

# Criterion (d)

## Summary

- 388 The QCA can only recommend that Queensland Rail's services be declared by the Minister if it is satisfied that access (or increased access) to the relevant service, on reasonable terms and conditions, as a result of a declaration of the service would promote the public interest.<sup>260</sup>
- 389 Queensland Rail agrees with the QCA's consideration that there are 'compelling reasons' requiring the assessment of criterion (d) to be undertaken on a system-by-system basis because each system has 'different characteristics, and particularly as there are differing investment effects in different dependent markets'.<sup>261</sup> In its Draft Recommendation, the QCA considered that:
- 389.1 the services provided on the North Coast Line, Mount Isa Line, West Moreton System, and the Metropolitan System satisfy criterion (d); and
  - 389.2 the services provided by Queensland Rail on the Other Systems do not satisfy criterion (d).
- 390 Queensland Rail agrees with the QCA's Draft Recommendation that the services provided on the Other Systems do not satisfy criterion (d). However, Queensland Rail submits that declaration of each below rail service on each of its systems does not promote the public interest.
- 391 Queensland Rail is proposing a more bespoke regulatory scheme than the current prescriptive and "non fit for purpose" system arising from declaration. The regulation under the Access Framework is less prescriptive, more cost effective, proportionate, and more appropriate form of regulation for Queensland Rail's circumstances of intense and real competition from road and the significant subsidies Queensland Rail receives to operate the relevant services. Accordingly declaration will not promote the public interest. Specifically criterion (d) is not satisfied because:
- 391.1 Declaration does not result in any economic benefits which would not otherwise be promoted without declaration, given the competitive constraints faced by Queensland Rail which apply irrespective of declaration.
  - 391.2 Declaration does not result in a materially different environment for investment in dependent markets given Queensland Rail's strong incentives to maximise demand for the use of its services and promote efficient investment in dependent markets which exist irrespective of declaration.
  - 391.3 Declaration is associated with significant compliance and administrative costs.
  - 391.4 The Access Framework reflects an appropriate and cost effective regulatory model for the North Coast Line, West Moreton System, Mount Isa Line and Metropolitan System which is in the public interest compared with the prescriptive, unnecessarily burdensome and costly aspects of regulation under the 2016 Access Undertaking.
- 392 Weighing up the costs and benefits of declaration of Queensland Rail's services compared with the benefits that would be otherwise promoted in the future without declaration, provides that there is no reasonable basis to conclude that re-declaration of any service promotes the public interest.

## Application and interpretation of criterion (d)

- 393 Criterion (d) requires that:<sup>262</sup>

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<sup>260</sup> Sections 76(2)(d) and 87C(2) of the QCA Act.

<sup>261</sup> QCA Draft Recommendation, Part B, p 94.

<sup>262</sup> Section 76(2)(d) of the QCA Act.

*access (or increased access) to the service, on reasonable terms and conditions, as a result of declaration of the service would promote the public interest.*

- 394 Further, section 76(5) of the QCA Act requires the QCA to have regard to the following matters when assessing whether criterion (d) is satisfied.<sup>263</sup>
- 394.1 the effect that declaring the service would have on investment in:
    - 394.1.1 facilities;
    - 394.1.2 markets that depend on access to the service;
  - 394.2 the administrative and compliance costs that would be incurred by the provider of the service if the service is declared; and
  - 394.3 any other matter the QCA considers relevant.
- 395 Criterion (d) requires an assessment that declaration 'generates overall gains to the community'<sup>264</sup> and makes the 'community as a whole better off'.<sup>265</sup>

### **The QCA must now be affirmatively satisfied of criterion (d)**

- 396 Criterion (d) focuses on whether declaration will *promote* the public interest. Prior to the March 2018 amendments to the access criteria, the test merely provided that declaration *would not be contrary to the public interest*. The QCA Issues Paper provides as follows:<sup>266</sup>

*[C]riterion (d) constitutes an additional positive criterion that the QCA must be satisfied of. In other words, it is not sufficient to demonstrate that access is not contrary to the public interest. Rather, the QCA must be satisfied that access in the relevant sense would promote the public interest.*

### **Matters to which the QCA must have regard**

- 397 The March 2018 amendments require the decision-maker to have specific regard to *investment effects* and *compliance costs* when considering the effect of declaration.<sup>267</sup> However, the decision-maker may have regard to a broad range of matters,<sup>268</sup> importing 'a discretionary value judgement to be made by reference to undefined factual matters', and thus the range of matters is 'very wide indeed'.<sup>269</sup>
- 398 Given the breadth of the relevant matters to be potentially considered, Queensland Rail considers that in assessing the public interest the following matters are relevant to take into account:
- 398.1 the appropriateness of alternative regulatory arrangements applying in the future without declaration;
  - 398.2 environmental and safety considerations of the promotion of freight on rail; and
  - 398.3 the extent to which private benefits resulting from declaration accrue to foreign owned entities.

### **Criterion (d) is a prospective test that relates to the effect of declaration**

- 399 Pursuant to the March 2018 amendments, criterion (d), like criterion (a), now focuses on the effect of *declaration*, not access. Courts have historically interpreted and applied a distinction

<sup>263</sup> Section 76(5)(b)-(d) of the QCA Act. The factor in paragraph (a) is relevant only where the facility for the service extends outside Queensland.

<sup>264</sup> QCA Draft Recommendation, p 28.

<sup>265</sup> Productivity Commission, *National Access Regime*, Report No. 66 (25 October 2013), p 176; see also *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2 at [1161].

<sup>266</sup> QCA Issues Paper, p 23; see also QCA Draft Recommendation, p 28.

<sup>267</sup> Section 76(5) of the QCA Act.

<sup>268</sup> QCA Issues Paper, p 23.

<sup>269</sup> *The Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* [2012] HCA 36 at [42]. See also NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [6.5].

in terminology between 'access' and 'declaration'.<sup>270</sup> Thus, to apply criterion (d) accurately, the claimed benefits and costs must be shown to flow from declaration. Consistent with this, the QCA Draft Recommendation provides that:<sup>271</sup>

*It would be appropriate to use a 'future with and without' approach in order to identify those costs and benefits that can be expected to result from access (or increased access) to the service, on reasonable terms and conditions, as a result of declaration (as opposed to costs and benefits that may be expected anyway).*

400 This is significant in the present context because, under the Access Framework, Queensland Rail will continue to provide open access to its services in the future without declaration on substantially similar terms in relation to the Metropolitan, North Coast Line, Mount Isa Line, and West Moreton System.

401 Claimed 'benefits' said to have resulted from the deemed declaration must be shown to have been promoted by access to Queensland Rail's services as a result of declaration, and must not be outcomes which would have occurred in any event or outcomes which would likely arise in the future without declaration.

## Draft Recommendation and overview of Queensland Rail's response

402 Queensland Rail submits that the QCA cannot be satisfied that access (or increased access), on reasonable terms and conditions, as a result of declaration of any of Queensland Rail's services will promote the public interest.

403 The reasoning underpinning QCA's preliminary view, together with Queensland Rail's response, is summarised in the table below.

| System                  | QCA preliminary position  | Queensland Rail's response   |
|-------------------------|---|--|
| <b>North Coast Line</b> | <p>Satisfies criterion (d).</p> <p>The stable market environment created by declaration promotes efficient investment in the above-rail haulage market and may promote investment in below-rail infrastructure.<sup>272</sup> Pacific National's entry and expansion in Queensland was critically dependent on this stable regulatory environment.</p> <p>Benefits of declaration include certainty and transparency of access terms and conditions, including the existence of a standard access agreement facilitating negotiated agreements and resulting in the promotion of competition in dependent markets.<sup>273</sup> As declaration promotes investment in the above-rail haulage market, the environmental and safety benefits of freight on rail are promoted by declaration.<sup>274</sup></p> <p>Compliance and administrative costs associated with declaration, including the QCA levy, is a relatively minor cost compared with the access revenues generated on the North Coast Line.<sup>275</sup></p> | <p>Disagree: Does not satisfy criterion (d).</p> <p>The economic benefits of declaration are limited as Queensland Rail has no ability or incentive to exercise market power irrespective of declaration and it has strong incentives to maximise utilisation, and promote efficient investment and entry irrespective of declaration. These incentives are substantial given the North Coast Line's dependence on TSC funding and significant spare capacity.</p> <p>Pacific National's entry into the above rail haulage market on the North Coast Line occurred at a time when Queensland Rail was vertically integrated. Queensland Rail is now a below rail provider only – with incentive to maximise the volume of freight on rail.</p> <p>Certainty and transparency of access terms, set out in standard access agreements are provided by the Access Framework in the future without declaration.</p> <p>The future without declaration is substantively similar to the current situation as terms and conditions of access are already determined in private negotiations between Queensland Rail and users. Pacific National's entry and expansion was substantially enabled by factors unrelated to declaration.</p> <p>On balance, declaration is not associated with any material benefits which would not otherwise arise in the future without declaration and imposes significant regulatory costs on Queensland Rail, the QCA and stakeholders demonstrating that</p> |

<sup>270</sup> See *Virgin Blue Airlines Pty Limited* [2005] ACompT 5 at [148]-[153]; c.f. *Sydney Airport Corporation Limited v Australian Competition Tribunal* [2006] FCAFC 146 at [81].

<sup>271</sup> QCA Draft Recommendation, p 29; see also Productivity Commission, *National Access Regime*, Report No. 66 (25 October 2013), p 21.

<sup>272</sup> QCA Draft Recommendation, Part B, p 97.

<sup>273</sup> QCA Draft Recommendation, Part B, p 100.

<sup>274</sup> QCA Draft Recommendation, Part B, p 101.

<sup>275</sup> QCA Draft Recommendation, Part B, p 99.

| System                     | QCA preliminary position  | Queensland Rail's response  |
|----------------------------|---|---|
|                            |   | declaration does not promote the public interest.   |
| <b>West Moreton System</b> | <p>Satisfies criterion (d).</p> <p>Declaration promotes investment in mining facilities, above-rail haulage markets, and mining tenements by providing long-term certainty of access, access on reasonable terms and conditions (including a transparent dispute mechanism administered by the QCA) and an access price that reflects efficient costs (including a reference tariff).<sup>276</sup> This investment:</p> <ul style="list-style-type: none"> <li>• supports additional contributions to regional employment and economic development of the West Moreton region,<sup>277</sup></li> <li>• reduces the level of TSC subsidy required to support the operation of the non-coal services.<sup>278</sup></li> <li>• has a small beneficial effect in terms of promoting environmental benefits of freight on rail weighed against countervailing noise and safety issues of coal freight trains using the passenger network.<sup>279</sup></li> </ul> <p>The QCA levy reflects less than 4% of the below-rail access charge, and this is a relatively minor compliance and administrative cost relative to the benefits of declaration.<sup>280</sup> To the extent that compliance costs are paid by the users, these costs are likely to have a minor effect in terms of the costs burden on Queensland Rail as a result of declaration.</p> | <p>Disagree: Does not satisfy criterion (d).</p> <p>The economic benefits of declaration are limited as Queensland Rail faces material competitive constraints with or without declaration and has strong incentives to maximise demand for its services including incentives to promote investment in dependent markets. These incentives are pronounced in the West Moreton 'low tonnage' scenario.</p> <p>Mining investment in the West Moreton Basin is not significantly affected by declaration, and is driven by regulatory uncertainty surrounding the New Acland Stage 3 development and the development of the Inland Rail Project.</p> <p>Compliance and administrative costs associated with declaration are significant including regulatory burdens associated with the reference tariff process and capital expenditure approval process.</p> <p>The Access Framework is an appropriate, cost effective regulatory model for the West Moreton System. It contains a transparent dispute resolution mechanism and provides best-practice pricing principles for West Moreton which promotes consistency with Queensland Rail's other systems.</p> <p>On balance, declaration is not associated with any material benefits which would not otherwise arise in the future without declaration under the Access Framework and imposes significant regulatory costs on Queensland Rail, the QCA and stakeholders demonstrating that declaration does not promote the public interest.</p> |
| <b>Mount Isa Line</b>      | <p>Satisfies criterion (d).</p> <p>Declaration would promote long-term certainty of access promoting investment by new and junior investors in the mining tenements market and investment in the North West Queensland mining industry. This investment supports an industry which contributes to regional employment and economic development.<sup>281</sup></p> <p>Compliance and administrative costs are not excessive relative to those that may be incurred in the absence of declaration.<sup>282</sup></p>  | <p>Disagree: Does not satisfy criterion (d).</p> <p>The economic benefits of declaration are limited as Queensland Rail has no ability or incentive to exercise market power irrespective of declaration and it has strong incentives to maximise utilisation, and promote efficient investment and entry irrespective of declaration.</p> <p>Regulatory certainty for both new and existing operators in the North West Queensland mining industry is preserved by the Access Framework which ensures that pricing and throughput volumes will be substantially similar on the Mount Isa Line without declaration.</p> <p>The future without is substantively similar to the current situation as terms and conditions of access are determined in private negotiations between Queensland Rail and users in circumstances where no dispute has arisen requiring QCA oversight.</p> <p>Compliance costs are material and would be avoided in the absence of declaration.</p> <p>On balance, declaration is not associated with any material benefits which would not otherwise arise in the future without</p>   |

<sup>276</sup> QCA Draft Recommendation, Part B, pp 108-109.

<sup>277</sup> QCA Draft Recommendation, Part B, p 112.

<sup>278</sup> QCA Draft Recommendation, Part B, p 113.

<sup>279</sup> QCA Draft Recommendation, Part B, pp 112-113.

<sup>280</sup> QCA Draft Recommendation, Part B, p 110.

<sup>281</sup> QCA Draft Recommendation, Part B, p 104.

<sup>282</sup> QCA Draft Recommendation, Part B, p 107.

| System                     | QCA preliminary position   | Queensland Rail's response  |
|----------------------------|--|---|
|                            |  | declaration and imposes significant regulatory costs on Queensland Rail, the QCA and stakeholders demonstrating that declaration does not promote the public interest.  |
| <b>Metropolitan System</b> | Does satisfy criterion (d).<br><br>Not separately addressed - see reasoning regarding the North Coast Line and West Moreton System.  | Disagree: Does not satisfy criterion (d).<br><br>Queensland Rail has no market power on this network, and end-customers are able to use alternative modes of transport.<br><br>These services are heavily regulated, heavily subsidised, and will be provided in exactly the same manner with or without declaration.<br><br>There is significant public benefit in removing access regulation where it is unwarranted and superfluous. |
| <b>Other Systems</b>       | Do not satisfy criterion (d).<br><br>Compliance costs are likely to be relatively minor with or without declaration as the QCA levy is not applicable to this system.<br><br>Below-rail services provided on this system is heavily subsidised and there are very few external users of the system. <sup>283</sup><br><br>The TSC payments are made for public policy considerations, such that the QCA considers these subsidies are likely to continue in a future without declaration. <sup>284</sup> | Agree: Do not satisfy criterion (d).<br><br>There is no economic basis to subject these systems to access regulation. Queensland Rail has no market power and the services provided on the Other Systems are supported by, and commercially viable only because, Queensland Rail receives substantial TSC payments.<br><br>There is significant public benefit in removing access regulation where it is unwarranted and superfluous.   |

- 404 The analysis is structured as follows to avoid duplication:
- 404.1 The economic benefits of declaration are considered including the effect of declaration on investment.
  - 404.2 The administrative and compliance costs of declaration are considered including the extent to which alternative regulatory models are in the public interest
  - 404.3 The policy reasons as to why declaration is contrary to the public interest are considered
  - 404.4 Finally, each service will be assessed to conclude that declaration of Queensland Rail's services do not promote the public interest.

## Criterion (d) not satisfied as no economic benefits flow from declaration

### Declaration does not promote competition in dependent markets

- 405 As discussed in detail above at paragraphs 104 to 226 declaration of Queensland Rail's services does not promote competition in any dependent market, because Queensland Rail has no ability or incentive to exercise market power due to the presence of binding competitive constraints which apply irrespective of declaration. Accordingly, there is no change to the nature and degree of competition in dependent markets as a result of declaration.
- 406 This conclusion is fundamental to assessing criterion (d), as the promotion of competition is the fundamental public policy rationale for the imposition of access regulation.<sup>285</sup> That is,

<sup>283</sup> QCA Draft Recommendation, Part B, p 118.

<sup>284</sup> QCA Draft Recommendation, Part B, p 118.

<sup>285</sup> Section 69E of the QCA Act; Section 44AA of the CCA; Productivity Commission, *National Access Regime*, Report No. 66 (25 October 2013), pp iv, 4,45-46; *National Competition Policy (Hilmer Report)*, August 1993, pp v, xvi, 26.



extremely limited, if any, economic benefits result from declaration and these benefits are clearly outweighed by the inevitable costs, frictions and burdens of regulation.

## Investment effects

### Declaration does not promote investment in Queensland Rail's facilities or related markets

- 407 Irrespective of declaration, Queensland Rail has strong incentives to maximise utilisation of its networks because it is non-vertically integrated and its networks have substantial spare capacity.<sup>286</sup> In the criterion (d) context, this demonstrates that Queensland Rail has incentives to promote efficient investment, and entry, into related markets as this will result in increased utilisation of its underutilised systems.
- 408 The ACCC has previously recognised that the private commercial incentives of rail infrastructure access holders align with the promotion of the public interest, as non-vertically integrated rail access holders have incentives to increase the efficient use and operation of the network, promote efficient investment in the network, and to increase rail volumes and asset utilisation.<sup>287</sup> In this respect, Queensland Rail's charter to improve performance and efficiency of rail infrastructure and its strong economic incentives to increase capacity utilisation and efficient investment in related markets promote the public interest irrespective of declaration.
- 409 Queensland Rail has strong incentives to encourage utilisation of:
- 409.1 the North Coast Line which has significant spare capacity with no portion of the system operating at over 50% utilisation and requires substantial TSC funding to continue to operate;<sup>288</sup>
  - 409.2 the Mount Isa Line which has significant spare capacity with no portion of the system operating at over 60% utilisation;<sup>289</sup> and
  - 409.3 the West Moreton System which has 42% spare capacity (based on contracted paths), and faces significant volume uncertainty regarding the development of the New Acland Stage 3 project and uncertainty relating to the construction of the Inland Rail project.<sup>290</sup> This uncertainty means that Queensland Rail bears significant volume risk and asset stranding risk strengthening its incentives to encourage efficient investment.
- 410 Given these incentives to promote efficient investment and entry with or without declaration, Queensland Rail considers that the concerns expressed by Pacific National, the South West Producers and Glencore with regard to the effect of declaration on incentives to invest in dependent markets of the North Coast Line, West Moreton System and Mount Isa Line respectively are:
- 410.1 overstated; and
  - 410.2 the investments are likely to have occurred in any event as the users have failed to apply a 'with/without' test to ascertain if claimed investments are relevantly the result of declaration.
- 411 In its Draft Recommendation, the QCA placed great emphasis on Pacific National's, Glencore's and the South West Producer's submissions that the stable market environment

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<sup>286</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, sections 3.1.2, 4.1.3, 4.2.3, 4.3.2, 4.3.3, 4.3.4.

<sup>287</sup> ACCC, *Final decision: Australian Rail Track Corporation Access Undertaking, Interstate Rail Network*, July 2008, p 20.

<sup>288</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.2.3.

<sup>289</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.1.3.

<sup>290</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.3.2.

created by declaration promotes efficient investment and that the benefits of declaration include certainty and transparency of access terms and conditions, including the existence of a standard access agreement facilitating negotiated agreements and resulting in the promotion of competition in dependent markets.<sup>291</sup> The submissions then contended, and the QCA considered, that the increased investment resulting from declaration relevantly promote a myriad of subsequent public benefits including:

- 411.1 Supporting the relevant domestic freight industry or mining industry;<sup>292</sup>
  - 411.2 Promoting regional economic development and employment;<sup>293</sup>
  - 411.3 Promoting environmental benefits due to increasing the amount of freight on rail.<sup>294</sup>
  - 411.4 Alleviating public funding issues by reducing the degree of TSC funding required for subsidised services.<sup>295</sup>
- 412 Queensland Rail does not agree with this approach. It reflects an unlimited 'but-for' analysis which attributes broad benefits of investment in infrastructure to declaration of Queensland Rail's below-rail network, in the absence of an application of the 'with/without' test or consideration of the complex and interrelated factors contributing to investment decisions in mining operations and significant infrastructure. That is, Pacific National, the South West Producers, Glencore and other users have not established the requisite nexus between declaration and the increased investments. Further, the concerns fail to have regard to the fact that Queensland Rail has strong incentives to promote efficient investment and entry into related markets, and does not have any ability or incentive, irrespective of declaration, to act in a way that deters such investment in the future.
- 413 To the extent that declaration has promoted a 'stable regulatory environment' conducive to investment, the Access Framework applying in the future without declaration, ensures that access will be provided on substantively similar terms and conditions on the North Coast Line, Mount Isa Line, West Moreton System and the Metropolitan System, demonstrating that the environment and opportunities for investment will not be materially different comparing the future with and without declaration. The future without declaration under the Access Framework preserves regulatory certainty, providing for:
- 413.1 Certainty of long term access through a Standard Access Agreement
  - 413.2 A process for seeking access that is clear, transparent and efficient
  - 413.3 Recourse to arbitration in the event of an access dispute; and
  - 413.4 Efficient market based pricing provisions
- Among other relevant protections.
- 414 The immateriality of any difference between the future with and without is established by the basic fact that users, including Pacific National, Glencore and other users currently acquire access to the North Coast Line and Mount Isa Line pursuant to prices contained in negotiated agreements with Queensland Rail. There is no evidence to suggest that such commercial agreements will not be struck on substantively similar terms in the future without declaration under the Access Framework. Further, the beneficial terms of access already extracted by users reflect non-regulatory constraints which ultimately discipline Queensland Rail, including

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<sup>291</sup> QCA Draft Recommendation, Part B, p 97.

<sup>292</sup> See QCA Draft Recommendation, Part B, p 112 in relation to investment supporting the growth of the West Moreton region mining industry; See also QCA Draft Recommendation, Part B, p 104, in relation to the North West mining industry providing that 'long term certainty would promote investment by new and junior investors in the minings tenements market and investment in the North West Queensland mining industry'.

<sup>293</sup> See QCA Draft Recommendation, Part B, p 112 in relation to investment supporting the growth of the West Moreton region mining industry; See also QCA Draft Recommendation, Part B, p 104 in relation to the North West Mining industry.

<sup>294</sup> See QCA Draft Recommendation, Part B, pp 112-113 in relation to the 'small beneficial impact' of increased freight on rail in relation to the West Moreton System.

<sup>295</sup> See QCA Draft Recommendation, Part B, p 113 in relation to the public funding benefit promoted by increased investment in the West Moreton coal services reducing dependence on TSC payments for non-coal services.

access prices well below the costs of providing the service, and long term agreements which often do not contain full take or pay requirements.<sup>296</sup>

### **Effect of declaration is overstated for investment in the North Coast Line**

415 Pacific National's submission that entry into the Queensland market was 'critically dependent' on declaration of the North Coast Line does not withstand scrutiny. This submission grossly overstates the effect of declaration compared with the fundamental importance of other market factors enabling Pacific National's entry and expansion, including:

415.1 Privatisation of government owned above-rail operations; and

415.2 Sponsorship into Queensland by Toll.

416 That is, Pacific National's entry cannot credibly be claimed to have been 'critically dependent' on declaration with regard to the unique circumstances giving rise to Pacific National's entry and expansion, including the fact that:

416.1 Pacific National was established as a joint venture between Toll and Patrick in 2002. Pacific National, via Toll, acquired customer volumes, above-rail assets and significant scale arising out of the privatisation of government owned above-rail operations including Toll's acquisition of FreightCorp, Freight Australia and National Rail Corporation.<sup>297</sup>

416.2 Following Pacific National's rapid increase in scale, Toll sponsored Pacific National's entry into the Queensland North Coast Freight corridor in March 2005, by shifting its customer volumes, said to account for 70% of Queensland Rail's above-rail freight volumes at the time,<sup>298</sup> from Queensland Rail to Pacific National.<sup>299</sup> At the time, Queensland Rail was vertically integrated, which is no longer the case today.

416.3 The significance of Toll's customer volumes and Pacific National's acquisition of formerly Government rail enterprises, which gave it a national operational capability from Brisbane to Perth directly enabled Pacific National's entry and expansion into the Queensland market.

This diminishes the relevance of 'declaration' in underpinning Pacific National's entry, and reveals the illogicality of assuming that any event during Queensland Rail's deemed declaration was relevantly 'promoted' by declaration without appropriately applying a 'with/without' test.

417 Given Queensland Rail's strong incentives to promote utilisation of the heavily subsidised, underutilised, North Coast Line, Queensland Rail will set terms and conditions of access to promote efficient investment and promote entry, notwithstanding the exceedingly high barriers to entry into narrow-gauge intermodal rail markets which render entry unlikely with or without declaration.

418 Queensland Rail submits that given that terms and conditions of access will be substantively similar with or without declaration on the North Coast Line, there is no material difference in the environment for attracting investment in rail infrastructure with or without declaration.

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<sup>297</sup> Pacific National, Our History, <https://pacificnational.com.au/p/history> [accessed 25 February 2019].

<sup>298</sup> Rail Page, Queensland Rail stoush heads to court, <https://www.railpage.com.au/news/s/qld-rail-stoush-heads-to-court> [accessed 22 February 2019].

<sup>299</sup> Rail Express, *Toll's Townsville terminal takes first train*, 3 June 2005, <https://www.railexpress.com.au/tolls-townsville-terminal-takes-first-train/> [accessed 22 February 2019].

## Effect of declaration on investment is overstated for investment in mining markets relating to West Moreton and Mount Isa

- 419 As discussed at paragraph 407 to 409 Queensland Rail has strong incentives to set terms and conditions of access to the West Moreton System and Mount Isa Line so as to promote efficient investment in the rail haulage markets and dependent mining markets supplied by these services.
- 419.1 In respect of West Moreton System, this incentive arises as the system has 42% spare capacity overall, with maximum utilisation of 70% for any section of the system, and considerable volume uncertainty strengthens Queensland Rail's incentives to promote utilisation of this railway by any means possible.<sup>300</sup>
- 419.2 In respect of the Mount Isa Line, this incentive arises due to the presence of significant spare capacity, with maximum utilisation of up to 73% on the Flynn to Phosphate Hill section and increasing competition with road operators.<sup>301</sup>
- 419.3 As noted above, each system recovers access revenues sufficient to recover operating costs only, providing Queensland Rail with strong incentives to promote higher utilisation for the recovery of substantial capital costs.
- 420 The South West Producers and Glencore's submission overstates the relative significance of below-rail freight costs in the holistic assessment of returns and risks associated with undertaking significant mining investment. Queensland Rail submits that incremental increases in the below rail tariff even if this was likely to occur in the future without declaration (which it is not), cannot have a relevant impact on incentives to invest in mines, because below-rail tariffs reflect a small proportion of the F.O.B. price of the final exported commodity. For example, in respect of the Mount Isa Line, below rail costs represent 0.3% of the copper price, 0.8% of the zinc price, 0.9% of the lead price and 5% of the fertiliser price.<sup>302</sup>
- 421 Other, far more material, factors influencing investment in dependent mining markets which are not related to declaration include:
- 421.1 Risks associated with operating in a global, highly volatile commodity market including market interventions by governments in destination countries (often to support domestic industry and further emission reduction initiatives), market interventions by domestic governments, fluctuations in the global minerals prices, currency movements, port costs, and changing mine operating costs.<sup>303</sup>
- 421.2 Regarding the West Moreton system regulatory uncertainty associated with the approval of the New Acland Stage 3 development is the critical factor currently affecting investment incentives in the West Moreton coal region;
- 421.3 Regarding the West Moreton system, the Inland Rail Project and/or Surat Rail Basin projects will promote investment in mining markets and significantly deter any investment in the West Moreton System;
- 421.4 Regarding the Mount Isa line, recent rail market consolidation arising from Aurizon's exit is likely to affect Pacific National's incentives to invest; and
- 421.5 Regarding the Mount Isa line, continuing and increasing competition with road operators will continue to necessitate investment in rail operational efficiency improvements in order to maintain market share.
- 422 Given Queensland Rail's incentives to promote efficient investment irrespective of declaration, the future with and without declaration involves access on substantially similar

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<sup>300</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.3.

<sup>301</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.1.3.

<sup>302</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 4.1.5.

<sup>303</sup> Port of Newcastle Operations, *Submission in response to Glencore's application to the National Competition Council*, June 2015, p 2.

terms including pricing and throughput, such that the environment for investment is not materially affected by declaration.

- 423 Therefore, as there is no material difference in the environment for investment with or without declaration, the benefits analysed by the QCA in paragraph 411 above are not relevantly the result of declaration, and to the limited extent that they were facilitated by declaration, there is no evidence that the future without declaration under the Access Framework would result in a materially different environment for such investment.

## Administrative and compliance costs

- 424 The QCA is required to consider the significant costs of access regulation including the direct costs of funding regulators and compliance costs.<sup>304</sup>

- 425 Declaration gives rise to significant direct costs to Queensland Rail, the QCA and other stakeholders including costs of developing access undertakings, costs arising from the reference tariff process, and costs arising from the capital expenditure approval process.<sup>305</sup>

### Costs of Access Undertakings

- 426 Queensland Rail's 2020 draft access undertaking commenced in September 2017 and is expected to be completed by June 2020.

- 427 Relevant regulatory costs include:

427.1 Costs borne by the QCA in regulating declared facilities including \$3.7 million in considering DAUs in 2014-15 and 2015-16,<sup>306</sup> and resourcing costs borne by the QCA which are not publicly available.

427.2 Costs incurred by regulated entities pursuant to the QCA Levy. In 2015-16, the QCA generated \$13.9 million<sup>307</sup> in fees received from regulated entities from the QCA levy, of which Queensland Rail spent \$760,452.<sup>308</sup>

427.3 Costs incurred by regulated entities in developing Access Undertakings.

427.4 Costs incurred by access seekers associated with the expense of the QCA process. For example, New Hope Corporation acknowledged the expense of the QCA process writing:<sup>309</sup>

*The development of a new undertaking for Queensland Rail (QR) has been costly and time consuming, and the resulting lack of regulatory certainty has caused a loss of confidence in the long term future of the Western System.*

- 428 The 2016 Access Undertaking contains excessive prescription and unnecessary regulatory burden which is not appropriate for Queensland Rail's systems. Examples of disproportionate regulatory burden include:

428.1 The West Moreton System Reference Tariffs process - discussed at Box 2 below.

428.2 The West Moreton capital expenditure approval process - discussed at Box 3 below.

428.3 Onerous reporting requirements disproportionate to any benefit derived from the dissemination of such reports.

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<sup>304</sup> Section 76(5)(c) of the QCA Act.

<sup>305</sup> NCC, *Declaration of Services - A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, April 2018 at [6.13].

<sup>306</sup> Queensland Rail, *2017-18 Queensland Competition Authority Levy - Access Undertaking 1*, January 2018, p 3.

<sup>307</sup> QCA, *Annual Report 2016-17*, p 27.

<sup>308</sup> Queensland Rail, *2017-18 Queensland Competition Authority Levy - Access Undertaking 1*, January 2018, p 3.

<sup>309</sup> New Hope Corporation, *Covering letter to submission on QCA's 2015 Draft Decision On Queensland Rail's 2015 Draft Access Undertaking ("2015 DAU")*, 22 December 2015, p 1.

- 428.4 Requirements to lodge various draft amending access undertakings for amendments with regard to 'workability' aspects such as ensuring compliance with national safety legislation.
- 428.5 Operational constraints prohibiting the provision of maintenance services to private railways due to the broad legal scope of the deemed declaration.
- 428.6 Operational constraints from committing to urgent infrastructure investment for operational and safety issues due to the requirement to seek approval for all capital expenditure.
- 428.7 The network management principles permit a dispute about changes to planned network possessions for maintenance purposes to be lodged up to the date of the possession, and prevent Queensland Rail from proceeding with a possession once a dispute is lodged. This may result in significant delays in necessary projects, and can result in the frustration or forced cancellation of contracts at significant cost and disruption.
- 429 Regardless of the incidence of these costs, it is critical to weigh these costs against the benefits of declaring each system (which would not otherwise arise without declaration) to assess whether on balance, declaration of any system promotes the public interest.

### *Compliance costs on the West Moreton System*

- 430 The West Moreton System is subject to the most intrusive form of regulation and incurs the largest regulatory costs of Queensland Rail's eight systems. In its Draft Decision on allocation of the QCA levy the QCA accepted Queensland Rail's allocation of 65% of the costs of development of 2016 Access Undertaking to West Moreton System coal services.<sup>310</sup>
- 431 These costs substantially outweigh any economic benefits associated with these regulatory processes and are substantially greater than the regulatory costs of the privately administered Access Framework.<sup>311</sup>
- 432 Queensland Rail respectfully disagrees with the QCA's view that the compliance costs are 'minor' relative to the total access revenue generated on the system as the QCA FY18 Levy collected was approximately 4% of the total access tariff revenue. Queensland Rail considers that given that access revenues are only sufficient to recover operating costs, let alone a return on the substantial fixed cost base of the system, 4% of access revenues devoted to the QCA levy is significant. In comparison, Aurizon coal network's expenditure on the QCA levy was less than 0.7% of its coal access revenue in 2017-18, demonstrating that regulatory costs are significant (by several orders of magnitude) in relation to the scale of operations of the West Moreton System.<sup>312</sup> Further, given that Aurizon coal is vertically integrated with significant foreseeable demand for capacity on the CQCN, the prima facie rationale for regulation is far stronger for Aurizon than for Queensland Rail's West Moreton System.
- 433 In any event, the QCA levy is only a small portion of the total regulatory costs, including resourcing costs, incurred in complying with the West Moreton reference tariff and capital expenditure approval processes. The regulatory costs of the West Moreton reference tariff process and associated capital expenditure process are discussed in Box 2 and Box 3 below.

<sup>310</sup> QCA, *Draft Decision - Queensland Rail: 2018-19 QCA Levy*, October 2018, p 6.

<sup>311</sup> For an in-depth discussion on the burdensome aspects of the 2016 AU1 and a clause by clause comparison with the Access Framework please refer to section 5 and section A1 of the HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019.

<sup>312</sup> Calculated from Aurizon, *Annual Report 2017-18*, p

18, <https://www.aurizon.com.au/~media/aurizon/files/investors/documents%20and%20webcasts/2018/full%20year%20results/aurizon%20annual%20report%202018.pdf> [accessed 8 March 2019] contains revenue of 1.19 billion, and Aurizon, *Submission to the QCA Declaration Review*, 30 May 2018, p 4.

### **Box 2: The West Moreton System reference tariff**

The West Moreton tariff process was first introduced in 2006, and prices were previously set by negotiation. At this time, Queensland Rail was the vertically integrated operator of the West Moreton system and the CQCN, and the West Moreton tariff was benchmarked against the Moura Line.

As described in the HoustonKemp Expert Report, the economic regulatory objective for the adoption of reference tariffs in the context of a rail access floor and ceiling pricing framework is:<sup>313</sup>

- to assist in limiting the infrastructure provider from recovering more than the total economic cost of providing the service, including a reasonable rate of return; and
- to minimise transaction/negotiation costs by defining a set of standard terms and conditions associated with the reference tariff.

Reference tariffs are therefore only justified if there is one of: a risk that revenue may exceed the total economic cost of providing the service (i.e. there is a risk the provider will exercise market power); or multiple access seekers with similar needs (with the result that there may be negotiation efficiency benefits arising from the determination of reference tariffs).

Accordingly, HoustonKemp concludes that the circumstances of the West Moreton System mean that the current reference tariff arrangements offer very limited benefits and may impose significant costs.

In addition, there are currently only two mines requiring access services, each of which operate under different commercial circumstances, demonstrating that to the extent any negotiation efficiency benefits exist, they are trivial. Accordingly, there is little or no benefit associated with the reference tariff.

On the other hand, there is significant regulatory burden associated with developing the reference tariff, particularly since the arrangements trigger QCA oversight of capital expenditure decisions on the West Moreton System.<sup>314</sup>

The reference tariff imposed under the 2016 Access Undertaking on the West Moreton System thus imposes significant administrative and regulatory costs without meeting the objectives or promoting any benefits for such tariffs in terms of facilitating negotiation between multiple users with similar needs.<sup>315</sup>

### **Box 3: Capital expenditure approval process**

The 2016 Access Undertaking requires Queensland Rail to submit an annual report to the QCA regarding the capital expenditure to be included in the approved regulated asset base (**RAB**) for the West Moreton System. Once submitted, the QCA may engage engineering and accounting consultants to assess the prudence and accounting treatment of the expenditure.

Under the 2016 Access Undertaking, Queensland Rail is required to seek approval from the QCA for capital to be included in the West Moreton coal RAB.

In December 2017, Queensland Rail submitted 19 projects relating to the West Moreton System, which were commissioned during the period 2013/14 to 2016/17, for review. The process is still ongoing and to date the QCA is yet to make a draft decision on the 2013/14 to 2016/17 Capital Expenditure report despite Queensland Rail being required to submit the next Capital Expenditure Report (i.e. the 2017/18) to the QCA on 28 February 2019.

The frequency and lack of a de minimis threshold for requiring capital expenditure approval means the approval process is more prescriptive and intrusive than the capex approval processes required by the Australian Energy Regulator for significant investments in electricity transmission and distribution infrastructure.

<sup>313</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)*, March 2019, section 5.2.2.

<sup>314</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)*, March 2019, section 5.2.2.

<sup>315</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)*, March 2019, section 5.2.2.

## Alternative regulatory arrangements are in the public interest

- 434 In considering the market without declaration, the QCA must consider whether the public interest and economic efficiency are enhanced by Queensland Rail providing access on reasonable terms and conditions pursuant to negotiated agreements struck under the Queensland Rail Access Framework. This is consistent with comments made by Queensland Parliament's Economic and Governance Committee:<sup>316</sup>

*Reviews of this kind are an important element of the Queensland Government's commitment to regulatory best practice by ensuring that the impacts of regulatory intervention, such as the declaration, are transparently assessed.*

## Pricing under the Access Framework for the West Moreton System is in the public interest

- 435 With regard to the prescriptive form of price regulation adopted under the 2016 AU for the West Moreton System, Queensland Rail submits that access on reasonable terms and conditions under the Access Framework is cost effective, appropriate and in the public interest.
- 436 The Access Framework modifies the 2016 Access Undertaking to simplify the setting of prices on the West Moreton System. The Access Framework incorporates a set of pricing principles for the West Moreton System that are consistent with those in place on other Queensland Rail Systems including:<sup>317</sup>
- 436.1 a floor for total revenue (including TSC payments) reflecting the incremental cost of providing the service;
  - 436.2 a ceiling revenue limit that reflects the total economic cost of providing the service, derived using a DORC methodology;
  - 436.3 an ability for Queensland Rail to make capital expenditure decisions independent of QCA oversight; and
  - 436.4 recourse to arbitration, should negotiations fail
- 437 The simplified process ensures that Queensland Rail has consistent pricing principles across its network, reduces regulatory burden by obviating the need for the calculation of a reference tariff and preserves coal and non-coal freight volumes, and the nature and degree of competition in dependent markets in the future without declaration.<sup>318</sup>
- 438 Strong mutual incentives between Queensland Rail and access seekers and holders on the West Moreton System demonstrate that commercial agreements are likely to be struck that promote the public interest at least regulatory cost.

## Access to the Mount Isa Line, North Coast Line, West Moreton System and Metropolitan System under the Access Framework is in the public interest

- 439 As parties currently agree price and non-price terms of access in negotiated outcomes without intervention by the QCA on the North Coast Line and Mount Isa Line, the Access Framework is the appropriate regulatory tool to replace the 2016 Access Undertaking in the future without declaration.
- 440 The Access Framework is a less prescriptive, more cost effective, proportionate, and appropriate form of regulation for Queensland Rail's circumstances. Fundamentally this is because the Access Framework places a primacy on commercial negotiations with robust privately administered enforcement mechanisms. The HoustonKemp Expert Report

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<sup>316</sup> Queensland Treasury, *Briefing note to Economic and Governance Committee on the Queensland Competition Authority Amendment Bill 2016*, 2018.

<sup>317</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 5.2.3.

<sup>318</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 5.2.3.



considers the Access Framework in detail and includes a clause by clause analysis of regulatory improvements and efficiencies facilitated by the Access Framework.<sup>319</sup>

- 441 The efficiency benefits of allowing commercially sophisticated parties to reach a negotiated agreement is well established.<sup>320</sup> These benefits are accentuated in circumstances where both parties have commercial and operational incentives to reach agreement.<sup>321</sup>
- 441.1 The Productivity Commission has recently stated that the imposition of an interventionist regulatory regime in circumstances where commercial negotiations would otherwise be successful, often have few benefits and many risks.<sup>322</sup>
- 441.2 The NCC has stated that where the likelihood of access disputes is low, other models less reliant on administration by competition authorities may provide more timely and cost effective outcomes.<sup>323</sup>
- 441.3 State rail regulators have consistently recommended that a transition towards 'lighter-handed' regulation is warranted for rail access regulation in circumstances in which there is significant competition with road transport and/or where the market power of the rail infrastructure provider is limited,<sup>324</sup> requiring the degree of prescription in the form of regulation to be related to the degree of market power.<sup>325</sup>
- 442 Queensland Rail considers that these principles apply forcefully in the provision of access to the North Coast Line, West Moreton System, Mount Isa Line and Metropolitan System. That is, commercial negotiations will lead to economically efficient agreements under the Access Framework for the following reasons:
- 442.1 Queensland Rail is not vertically integrated, has no market power, and has substantial spare capacity with strong incentives to maximise utilisation.
- 442.2 Queensland Rail currently negotiates the price of access with users on all systems other than the West Moreton System, and no disputes have arisen requiring QCA oversight.
- 442.3 Queensland Rail and its users have both made substantial, sunk, long-lived, capital investments in challenging market environments necessitating mutual cooperation to strike efficient agreement.

## Policy reasons

### Environmental benefits of investment in rail is not the result of declaration

- 443 Several submissions including Queensland Rail's considered that increased investment in rail infrastructure results in environmental and safety benefits associated with increased volumes of freight on rail opposed to volumes on road which is in the public interest. The key distinction in the competing perspectives is whether such increased investment in rail is the result of declaration.
- 444 As noted above, the extent to which declaration promotes investment in rail is limited when compared to the extent to which investment would occur in the future without declaration. Given Queensland Rail's incentives to promote investment in rail, and lower regulatory costs

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<sup>319</sup> HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?*, March 2019, section 5 and Annexure A.1.

<sup>320</sup> See ARTC, *Submission to the QCA Declaration review*, p 3; Council of Australian Governments, Competition Principles Agreement, Clause 4(a).

<sup>321</sup> Productivity Commission, *Economic Regulation of Airports Draft Report*, February 2019, p 12.

<sup>322</sup> Productivity Commission, *Economic Regulation of Airports Draft Report*, February 2019, p 25.

<sup>323</sup> NCC, *Draft recommendation - Declaration of four services comprising the Central Queensland Coal Network* [application withdrawn], 14 September 2010 at [10.21].

<sup>324</sup> Essential Services Commission (Victoria), *Review of the Victorian Rail Access Regime*, February 2010, p 13; Essential Services Commission of South Australia, *South Australian Rail Access Regime Review: Final Report*, August 2015, p 20; See also Harper et al, *Competition Policy Review (Final Report)*, March 2015, p 211 providing that competition with road has 'reduced the need for heavy-handed regulation in much of the rail sector'.

<sup>325</sup> Essential Services Commission (Victoria), *Review of the Victorian Rail Access Regime*, February 2010, p 18.

in the future without declaration, rail investment and increased modal share will be promoted in the future without declaration.

## **Benefits from declaration accruing to foreign owned companies must be discounted**

- 445 Queensland Rail notes that to the extent that mining entities and users, such as Yancoal, New Hope, and Glencore are foreign owned, private benefits flowing from declaration are to be given less weight by the QCA.
- 446 This principle has been extensively applied by the Federal Court and the Tribunal when applying the net public benefit test in the context of authorisation decisions made under the CCA. The judiciary has stated that it is benefits to the Australian public, not the overseas public, to which the decision-maker should have regard.<sup>326</sup>
- 447 Accordingly, the private benefits that accrue to foreign owned users must be discounted. Conversely, any cost savings and other commercial benefits that accrue to Queensland Rail in the future without declaration, as a statutory entity under Government direction, may be considered as 'public benefits' which accrue to the people of Queensland.

## **Service by service analysis**

### **North Coast Line**

- 448 Weighing up the costs and benefits of declaration of the services provided on the North Coast Line in the future with declaration compared to the future without declaration reveals that:
- 448.1 Declaration does not result in any economic benefits which would not otherwise be promoted without declaration given Queensland Rail's lack of market power on this heavily underutilised, subsidised railway system.
- 448.2 Declaration does not result in a materially different environment for investment given Queensland Rails strong incentives to maximise utilisation, and promote efficient investment in related markets, which will exist irrespective of declaration. The claims that declaration materially promotes investment in the North Coast rail haulage markets are overstated and do not apply a with and without analysis.
- 448.3 The Access Framework reflects an appropriate and cost effective regulatory model for the North Coast Line which is in the public interest, especially in circumstances where price and non-price terms of access are already governed in negotiated agreements.
- 448.4 Any efficiency benefits arising from declaration, that would not otherwise arise without declaration, are substantially outweighed by compliance and administrative costs.

### **West Moreton System**

- 449 Weighing up the costs and benefits of declaration in the future with declaration of the services provided on the West Moreton System compared to the future without declaration reveals that:
- 449.1 Declaration does not result in any economic benefits which would not otherwise be promoted without declaration given the significant competitive constraints faced by Queensland Rail on the West Moreton System.
- 449.2 Declaration does not result in a materially different environment for investment given Queensland Rail's incentives to maximise utilisation, and incentives to

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<sup>326</sup> *Qantas Airways Limited* [2004] ACompT 9 [196] in which the Tribunal, endorsing *Re Howard Smith Industries Pty Ltd* (1997) 28 FLR 385 provided that 'in applying the net public benefit test, it is benefits to the Australian public, not to the overseas public, to which the Tribunal should have regard'; See also *Telecom Corporation of New Zealand Ltd v Commerce Commission* (1991) 4 TCLR 473; *Godfrey Hirst NZ Limited v Commerce Commission* [2016] NZCA 560 at [7].

promote efficient investment. This is pronounced by the significant volume uncertainty relating to the New Acland Stage 3 development, and uncertainty surrounding future viability of the rail system once the Inland Rail project becomes operational. The claims that declaration promotes investment in dependent markets are overstated and do not apply a with and without analysis.

- 449.3 The Access Framework reflects an appropriate and cost effective regulatory model for the West Moreton System which is in the public interest, given the substantial degree of prescription and regulatory burden associated with the current price regulation of this system.
- 449.4 To the extent that users are foreign owned mining companies, private benefits resulting from declaration must be appropriately discounted. Conversely cost savings benefits accruing to Queensland Rail, as a statutory authority, are relevantly benefits accruing to the people of Queensland.
- 449.5 Any efficiency benefits arising from declaration, that would not otherwise arise without declaration, are substantially outweighed by significant compliance and administrative costs associated with the reference tariff approval process and the capital expenditure approval process.

### **Mount Isa Line**

- 450 Weighing up the costs and benefits of declaration in the future with declaration of the services provided on the Mount Isa Line compared to the future without declaration reveals that:
  - 450.1 Declaration does not result in any economic benefits which would not otherwise be promoted without declaration given Queensland Rail's competitive constraints, and spare capacity, on the Mount Isa Line.
  - 450.2 Declaration does not result in a materially different environment for investment given Queensland RAILS incentives to maximise utilisation, and incentives to promote efficient investment. This is pronounced by the Mount Isa Line's significant spare capacity and the drivers of investment in global export commodity mining markets irrespective of declaration. The claims that declaration promotes investment in dependent markets are overstated and do not apply a with and without analysis.
  - 450.3 The Access Framework reflects an appropriate and cost effective regulatory model for the Mount Isa Line, given that access agreements are currently struck in private negotiations.
  - 450.4 To the extent that users are foreign owned mining companies, private benefits resulting from declaration must be appropriately discounted. Conversely cost savings benefits accruing to Queensland Rail, as a statutory authority, are relevantly benefits accruing to the people of Queensland.
  - 450.5 Any efficiency benefits arising from declaration, that would not otherwise arise without declaration, are outweighed by significant compliance and administrative costs associated declaration.

### **Metropolitan System**

- 451 Declaration of the services provided by means of the use of Queensland Rail's Metropolitan System, to the extent they have not been addressed in the above West Moreton System and North Coast Line analysis, does not promote the public interest, as declaration is unlikely to result in economic benefits associated with a material increase in competition in dependent markets.
- 452 The Metropolitan System is used by Queensland Rail's above rail passenger operations to provide urban rail passenger services. Queensland Rail has no market power on this network, as the majority of the costs of operating the passenger network are subsidised by TSC

funding,<sup>327</sup> and end-customers are able to use alternative modes of transport. Investment in urban rail infrastructure is driven by Government policy and matters unrelated to the terms and conditions of below-rail access.

- 453 Queensland Rail submits that declaration of the Metropolitan Network in relation to urban passenger services does not promote the public interest, and that considerable public benefits are promoted by the removal of unnecessary access regulation.

## Other Systems

- 454 Queensland Rail agrees with the QCA's Draft Recommendation that declaration of each of the services provided on the Western, South-Western, Central-Western and Tablelands facilities would not promote the public interest.
- 455 It is evident that the services provided on these systems will be provided in the same manner, pursuant to TSC subsidies and for public policy reasons with or without declaration. Further, Queensland Rail clearly does not possess market power in the provision of these services, with no ability to increase prices or recover an economic return due primarily to lack of demand for these services due to fierce competition with road.
- 456 Queensland Rail submits that there is no economic, legal or policy basis to subject these systems to access regulation, and submits that there is considerable public benefits in removing superfluous and unnecessary access regulation.

## Conclusion on criterion (d)

- 457 For the reasons outlined in this submission, access (or increased access Queensland Rail's services, on reasonable terms and conditions, as a result of a declaration of the service would not promote the public interest.

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<sup>327</sup> Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, pp 4, 15, <https://www.queenslandrail.com.au/business/access/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf> [accessed 8 March 2019].

# Confidential Attachment A:

Queensland Rail's Network

# Queensland Rail's Network

- 1 Queensland Rail's rail network extends more than 6600 kilometres across Queensland and is used by freight and passenger trains. The network comprises seven regional systems and the Metropolitan System (being the system used to provide metropolitan passenger train services in Brisbane).<sup>1</sup> The condition, utilisation and performance of each of Queensland Rail's systems varies greatly due to differing supply chain dynamics, rail corridor characteristics, interactions with other rail traffics and the substitutability of rail freight for road freight, in addition to their discrete geographic locations.
- 2 A map of the systems making up Queensland Rail's network, which was included as Attachment 1 to Queensland Rail's submission of 30 May 2018, is included in Figure A1 below for the QCA's ease of reference. The systems and traffic on each system are described in Table A1.
- 3 The actual train paths used (by freight and passenger trains) and tonnage of commodities transported on each system for each of the five financial years to 2017-18 are set out below Table A1..
- 4 As noted in Queensland Rail's May submission, further details of each of Queensland Rail's systems are set out in the information packs for each system available on Queensland Rail's website.<sup>2</sup>

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<sup>1</sup> The Maryborough Area is treated part of the North Coast Line.

<sup>2</sup> Queensland Rail website: <https://www.queenslandrail.com.au/> (accessed on 29 May 2018).

**Figure A1: Queensland Rail's systems**



Queensland Rail ABN 68 598 268 528



**Table A1: Summary of Queensland Rail's systems**

| System                     | Description  | Freight carried   | Passenger services operating  | Capacity   |
|----------------------------|--|---|---|--|
| <b>Mount Isa Line</b>      | <p>Comprises a route of over 1,000 kilometres that runs south and west from Stuart (near Townsville) to Mount Isa and includes the Phosphate Hill branch.</p> <p>It is the critical link from the North West Minerals Province to the Port of Townsville.</p>  | <p>Lead and zinc concentrates (i.e. mineral concentrates), refined copper and lead, mining inputs, and industrial products such as fertiliser and sulphuric acid.</p> <p>The other minor freight traffic utilising the line includes livestock.</p> <p>Aurizon ceased its daily intermodal service between Townsville and Mount Isa in January 2017. This service carried mining and industrial products.</p> | <p>The Inlander operates four one-way services per week between Townsville and Mount Isa.</p>   | <p>There is currently spare capacity on the Mount Isa Line, with utilisation varying from 30% on the Flynn to Cloncurry segment to 56% on the Cloncurry to Hughenden segment in the winter months.</p>   |
| <b>North Coast Line</b>    | <p>The main regional freight and passenger line running over 1,400 mainline route kilometres along the Queensland coast from Nambour to Cairns, excluding sections of network operated by Aurizon between Parana and Rocklands in central Queensland and Kaili and Durroburra in north Queensland.</p> <p>It includes various branch lines, including those in the Maryborough area and Taragoola to Graham.</p> | <p>Intermodal freight and sugar account for 98% of freight tonnage along most sections of the line.</p> <p>Other freight carried includes livestock and grain. The North Coast Line also provides the connection for freight from the Mount Isa System between Stuart and the Port of Townsville.</p>   | <p>Six regional passenger services operate along different paths of the line, totalling around 65 paths per week.</p> <p>Infrequent or ad hoc heritage tourist services also operate on the North Coast Line.</p> | <p>There is currently spare capacity of through paths (end to end paths rather than paths available on individual sections) for intermodal freight services between Nambour and central and north Queensland. The availability of additional paths is currently constrained by the Metropolitan System, where freight services interact with passenger services, particularly the single line section south of Nambour, and single line sections in north Queensland which carry large numbers of sugar trains during the crushing season.</p> |
| <b>West Moreton System</b> | <p>Runs from Rosewood to Miles, over approximately 314 mainline route kilometres, and includes various branch lines.</p>   | <p>Thermal coal from two mines (New Acland and Cameby Downs) accounts for 86% of annual train paths and 92% of tonnage on the system.</p> <p>The system also carries grain, which accounts for 8% of freight volume.</p> <p>Livestock is occasionally transported on</p>  | <p>The Westlander long distance passenger service travels across the West Moreton System.</p>   | <p>The capacity limitation for the West Moreton System is the available capacity on the Toowoomba Range, where West Moreton, South Western and Western Systems traffic converges. There is currently spare capacity on the Toowoomba Range and through the Metropolitan System</p>   |



| System                      | Description  | Freight carried  | Passenger services operating   | Capacity  |
|-----------------------------|--|--|--|---|
|                             |  | the system.  |  | <p>to the Port of Brisbane.</p> <p>Coal services used 68% of available paths in 2016-17.<sup>3</sup> The New Acland mine is nearing exhaustion and there is uncertainty as to whether it will continue operations beyond 2020.</p> <p>There is capacity for additional freight services on the West Moreton System.</p> <p>Overall 70% of available paths on the Toowoomba Range were used (coal and non-coal) in 2016-17, however, this was due to a record grain season. The four year average utilisation is for non-coal freight was 46% of the weekly 16 return preserved paths.</p> |
| <b>Western System</b>       | Consists of approximately 840 kilometres from Miles to Quilpie (including non-operational sections) with a number of branch lines. | Agricultural products, primarily grain and livestock, however, the level of freight traffic is low.  | The Westlander long distance passenger service operates four one-way services per week between Brisbane and Charleville. | <p>The Western System was three per cent utilised in 2016-17.</p> <p>The capacity limitation for Western System traffic is the available capacity on the Toowoomba Range, where South Western, West Moreton and Western Systems traffic converges. There is currently spare capacity on the Toowoomba Range and through south east Queensland for agricultural products from the Western System to the Port of Brisbane.</p>  |
| <b>South Western System</b> | Runs south and west from Toowoomba, over approximately 617 kilometres.   | <p>Serves the agricultural industry in south west Queensland, with grain being the primary product hauled on the system.</p> <p>No freight is carried on the Wallangarra Branch.</p> | Ad hoc heritage train services operate on the system.  | <p>The South Western System was eight per cent utilised in the most constrained section in 2016-17.</p> <p>The capacity limitation for the South Western System is the capacity on the Toowoomba Range, where South West, West Moreton and Western Systems traffic converges. There is currently spare capacity on the</p>  |

<sup>3</sup> The paths available for coal services on the West Moreton System are limited to 97 return paths per week by reason of section 266A of the TI Act. The available paths used by coal services on the West Moreton System is calculated as a proportion of those 97 return paths per week.

| System                        | Description   | Freight carried  | Passenger services operating  | Capacity   |
|-------------------------------|---|--|---|--|
|                               |   |  |   | Toowoomba Range and through south east Queensland for agricultural products from the South Western System to the Port of Brisbane.                             |
| <b>Central Western System</b> | Runs from Emerald to Winton over approximately 700 kilometres, as a continuation of Aurizon's Blackwater Network.   | Primarily carries grain from the Clermont Branch and cattle from Winton, Longreach and Clermont, as well as minimal volumes of intermodal freight.   | The Spirit of the Outback passenger service operates four one-way services per week on the Central Western System.  | The Central Western System does not have any capacity constraints due to its current low levels of traffic.  |
| <b>Tablelands System</b>      | Comprises two separate single track lines (Cairns to Forsyth on the east Peninsula and Normanton to Croydon on the Gulf Peninsula) over a total of 575 kilometres.  | No freight is transported on the system as a consequence of severe limitations of the rail infrastructure and the lack of a freight market scale to warrant upgrade of the system operate regular freight services.  | The Kuranda Scenic Railway operates four one-way services per day, 28 per week between Cairns to Kuranda and the Savannahlander (operated by Cairns Kuranda Steam) runs a four day return service weekly between March and December between Cairns and Forsyth. The Gulflander operates between Normanton and Croydon (generally two one-way seasonal scheduled services per week from mid-February to mid-December, plus charter services between April and May).              | The two lines of the Tablelands System are tourist railways only. There are no capacity constraints for tourist services due to the low frequency of services. |
| <b>Metropolitan System</b>    | Radiates from the Brisbane central business district over a route length of approximately 380 kilometres (narrow gauge) and 39.8 kilometres (dual and standard gauge), with significantly longer track length due to multiple tracks across the system. | The system is an important rail freight connection with the following traversing the System: coal and agricultural products from the west to the Port of Brisbane; intermodal freight between Brisbane and central and north Queensland; containerised meat from the north to the Port of Brisbane; and livestock from the west and central west to processing facilities in Brisbane. | Citytrain services the commuter passenger market over on the Metropolitan System, with more than 51 million passenger trips undertaken in the 2016-17 financial year.<br><br>Long distance passenger services between Brisbane and central and north Queensland, the west and central west and TrainLink's XPT service between Sydney and Brisbane via a dual gauge line traverse the system.<br><br>Infrequent or ad hoc heritage tourist services also operate on the system. | Freight services on the Metropolitan System are largely limited to operation outside of the passenger peak periods.  |

# Train paths and net tonnes by system 2013–14 to 2017–18:

## West Moreton System

### Annual train paths - actual

|                               | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      | Annual capacity | Path Utilisation 2017-18 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|--------------------------|
| <b>Rosewood to Toowoomba</b>  |              |              |              |              |              |                 |                          |
| Coal                          | 7,448        | 6,905        | 6,361        | 6,604        | 7,095        | 9,700           |                          |
| Freight                       | 166          | 77           | 1            | 3            | 1            |                 |                          |
| Grain                         | 191          | 461          | 661          | 916          | 124          | 1,400           |                          |
| Livestock                     | 1            | 20           | 13           | 54           | 26           |                 |                          |
| Passenger                     | 198          | 191          | 196          | 198          | 198          | 200             |                          |
| <b>Total</b>                  | <b>8,004</b> | <b>7,654</b> | <b>7,232</b> | <b>7,775</b> | <b>7,444</b> | <b>11,300</b>   | <b>66%</b>               |
| <b>Toowoomba to Jondaryan</b> |              |              |              |              |              |                 |                          |
| Coal                          | 7,448        | 6,905        | 6,361        | 6,604        | 7,095        |                 |                          |
| Freight                       | 77           | 44           | 1            | 3            | 1            |                 |                          |
| Grain                         | 161          | 435          | 578          | 793          | 171          |                 |                          |
| Livestock                     | 1            | 20           | 13           | 54           | 3            |                 |                          |
| Passenger                     | 203          | 197          | 199          | 198          | 198          |                 |                          |
| <b>Total</b>                  | <b>7,890</b> | <b>7,601</b> | <b>7,152</b> | <b>7,652</b> | <b>7,468</b> | <b>13,500</b>   | <b>57%</b>               |

### Commodity (Tonnes, '000)

|                               | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Rosewood to Toowoomba</b>  |              |              |              |              |              |
| Coal                          | 6,864        | 6,107        | 5,658        | 5,771        | 6,439        |
| Freight                       | 82           | 40           | 1            | 1            | 1            |
| Grain                         | 114          | 255          | 386          | 476          | 102          |
| Livestock                     | -            | 2            | 1            | 6            | 3            |
| <b>Total</b>                  | <b>7,060</b> | <b>6,404</b> | <b>6,046</b> | <b>6,254</b> | <b>6,545</b> |
| <b>Toowoomba to Jondaryan</b> |              |              |              |              |              |
| Coal                          | 6,864        | 6,107        | 5,658        | 5,771        | 6,439        |
| Freight                       | 14           | 8            | -            | -            | -            |
| Grain                         | 66           | 218          | 266          | 346          | 72           |
| Livestock                     | -            | 2            | 1            | 7            | 5            |
| <b>Total</b>                  | <b>6,944</b> | <b>6,335</b> | <b>5,925</b> | <b>6,124</b> | <b>6,516</b> |

### Notes:

1. Annual capacity assumes that the network is available 50 weeks per year.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.
3. Rosewood to Toowoomba annual capacity limited to 113 return train paths per week on the Toowoomba Range.

## South Western System

### Annual train paths - actual

|                              | 2013-14    | 2014-15    | 2015-16    | 2016-17    | 2017-18    | Annual capacity | Path Utilisation 2017-18 |
|------------------------------|------------|------------|------------|------------|------------|-----------------|--------------------------|
| <b>Toowoomba - Warwick</b>   |            |            |            |            |            |                 |                          |
| Grain                        | 78         | 155        | 311        | 386        | 102        |                 |                          |
| Freight                      | 155        | 67         | -          | 1          | -          |                 |                          |
| <b>Total</b>                 | <b>233</b> | <b>222</b> | <b>311</b> | <b>387</b> | <b>102</b> | <b>7,750</b>    | <b>1%</b>                |
| <b>Warwick - Goondiwindi</b> |            |            |            |            |            |                 |                          |
| Grain                        | 70         | 75         | 231        | 370        | 82         |                 |                          |
| Freight                      | 155        | 65         | -          | 1          | -          |                 |                          |
| <b>Total</b>                 | <b>225</b> | <b>140</b> | <b>231</b> | <b>371</b> | <b>82</b>  | <b>4,700</b>    | <b>2%</b>                |
| <b>Goondiwindi - Thallon</b> |            |            |            |            |            |                 |                          |
| Grain                        | 33         | 30         | 90         | 161        | 51         |                 |                          |
| Freight                      | -          | -          | -          | -          | -          |                 |                          |
| <b>Total</b>                 | <b>33</b>  | <b>30</b>  | <b>90</b>  | <b>161</b> | <b>51</b>  | <b>4,150</b>    | <b>1%</b>                |

### Commodity (Tonnes, '000)

|                              | 2013-14    | 2014-15    | 2015-16    | 2016-17    | 2017-18   |
|------------------------------|------------|------------|------------|------------|-----------|
| <b>Toowoomba - Warwick</b>   |            |            |            |            |           |
| Grain                        | 71         | 141        | 277        | 329        | 82        |
| Freight                      | 82         | 39         | -          | -          | -         |
| <b>Total</b>                 | <b>153</b> | <b>180</b> | <b>277</b> | <b>329</b> | <b>82</b> |
| <b>Warwick - Goondiwindi</b> |            |            |            |            |           |
| Grain                        | 64         | 66         | 206        | 322        | 66        |
| Freight                      | 82         | 39         | -          | -          | -         |
| <b>Total</b>                 | <b>146</b> | <b>105</b> | <b>206</b> | <b>322</b> | <b>66</b> |
| <b>Goondiwindi - Thallon</b> |            |            |            |            |           |
| Grain                        | 29         | 27         | 65         | 140        | 41        |
| Freight                      | -          | -          | -          | -          | -         |
| <b>Total</b>                 | <b>29</b>  | <b>27</b>  | <b>65</b>  | <b>140</b> | <b>41</b> |

### Notes:

1. Annual capacity assumes that the network is available 50 weeks per year.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.

## Western System

### Annual train paths - actual

|                          | 2013-14    | 2014-15    | 2015-16    | 2016-17    | 2017-18    | Annual capacity | Path Utilisation 2017-18 |
|--------------------------|------------|------------|------------|------------|------------|-----------------|--------------------------|
| <b>Miles - Roma</b>      |            |            |            |            |            |                 |                          |
| Freight                  | 1          | -          | -          | -          | -          |                 |                          |
| Grain                    | 2          | -          | 18         | 48         | -          |                 |                          |
| Livestock                | -          | 8          | 5          | 36         | 23         |                 |                          |
| Passenger                | 203        | 196        | 199        | 197        | 198        |                 |                          |
| <b>Total</b>             | <b>206</b> | <b>204</b> | <b>222</b> | <b>281</b> | <b>221</b> | <b>10,300</b>   | <b>2%</b>                |
| <b>Roma- Charleville</b> |            |            |            |            |            |                 |                          |
| Freight                  | -          | -          | -          | -          | -          |                 |                          |
| Grain                    | -          | -          | -          | -          | -          |                 |                          |
| Livestock                | -          | 8          | 5          | 36         | 22         |                 |                          |
| Passenger                | 203        | 196        | 199        | 196        | 198        |                 |                          |
| <b>Total</b>             | <b>203</b> | <b>204</b> | <b>204</b> | <b>232</b> | <b>220</b> | <b>9,800</b>    | <b>2%</b>                |

42

### Commodity (Tonnes, '000)

|                          | 2013-14  | 2014-15  | 2015-16   | 2016-17   | 2017-18  |
|--------------------------|----------|----------|-----------|-----------|----------|
| <b>Miles - Roma</b>      |          |          |           |           |          |
| Freight                  | -        | -        | -         | -         | -        |
| Grain                    | 2        | -        | 17        | 44        | -        |
| Livestock                | -        | 2        | 1         | 7         | 4        |
| <b>Total</b>             | <b>2</b> | <b>2</b> | <b>18</b> | <b>51</b> | <b>4</b> |
| <b>Roma- Charleville</b> |          |          |           |           |          |
| Freight                  | -        | -        | -         | -         | -        |
| Grain                    | -        | -        | -         | -         | -        |
| Livestock                | -        | 2        | 1         | 7         | 4        |
| <b>Total</b>             | <b>-</b> | <b>2</b> | <b>1</b>  | <b>7</b>  | <b>4</b> |

### Notes:

1. Annual capacity assumes that the network is available 50 weeks per year.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.

## North Coast Line (South)

### Annual train paths - actual

|                                      | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      | Annual capacity | Path Utilisation 2017-18 |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|--------------------------|
| <b>Nambour to Parana (Gladstone)</b> |              |              |              |              |              |                 |                          |
| Freight                              | 4,196        | 4,012        | 4,177        | 3,955        | 3,999        |                 |                          |
| Grain                                | 29           | 36           | 3            | 3            | -            |                 |                          |
| Livestock                            | 254          | 218          | 171          | 286          | 140          |                 |                          |
| Passenger                            | 1,943        | 1,952        | 1,942        | 1,917        | 1,426        |                 |                          |
| <b>Total</b>                         | <b>6,422</b> | <b>6,218</b> | <b>6,293</b> | <b>6,161</b> | <b>5,565</b> | <b>13,500</b>   | <b>41%</b>               |

Measured - Bundaberg to Parana

### Commodity (Tonnes)

|                                      | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Nambour to Parana (Gladstone)</b> |              |              |              |              |              |
| Freight                              | 3,080        | 3,110        | 3,152        | 2,951        | 2,978        |
| Grain                                | 22           | 28           | 1            | -            | -            |
| Livestock                            | 51           | 44           | 28           | 43           | 28           |
| <b>Total</b>                         | <b>3,153</b> | <b>3,182</b> | <b>3,180</b> | <b>2,994</b> | <b>3,006</b> |

Measured - Bundaberg to Parana

### Notes:

1. Annual capacity assumes that the network is available 50 weeks per year.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.

## North Coast Line (North)

### Annual train paths - actual

|                              | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      | Annual Capacity | Path Utilisation Winter | Path Utilisation Summer |
|------------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|-------------------------|-------------------------|
| <b>Rockhampton to Mackay</b> |              |              |              |              |              |                 |                         |                         |
| Sugar                        | -            | -            | -            | -            | -            |                 |                         |                         |
| Freight                      | 4,035        | 3,891        | 3,891        | 3,665        | 3,725        |                 |                         |                         |
| Grain                        | 95           | 140          | 44           | 169          | 11           |                 |                         |                         |
| Livestock                    | 266          | 232          | 185          | 309          | 128          |                 |                         |                         |
| Mineral & containerised coal | -            | -            | -            | -            | -            |                 |                         |                         |
| Long distance passenger      | 1,431        | 1,430        | 1,353        | 1,314        | 502          |                 |                         |                         |
| <b>Total</b>                 | <b>5,827</b> | <b>5,693</b> | <b>5,473</b> | <b>5,457</b> | <b>4,366</b> | <b>11,500</b>   | <b>38%</b>              | <b>38%</b>              |
| <b>Mackay to Durroburra</b>  |              |              |              |              |              |                 |                         |                         |
| Sugar                        | 406          | 434          | 414          | 467          | 449          |                 |                         |                         |
| Freight                      | 3,306        | 3,102        | 3,203        | 3,095        | 3,055        |                 |                         |                         |
| Grain                        | 193          | 230          | 95           | 201          | 143          |                 |                         |                         |
| Livestock                    | 129          | 151          | 92           | 185          | 86           |                 |                         |                         |
| Mineral & containerised coal | -            | 405          | 353          | 42           | -            |                 |                         |                         |
| Long distance passenger      | 488          | 522          | 517          | 487          | 500          |                 |                         |                         |
| <b>Total</b>                 | <b>4,522</b> | <b>4,844</b> | <b>4,674</b> | <b>4,477</b> | <b>4,233</b> | <b>12,450</b>   | <b>34%</b>              | <b>30%</b>              |
| <b>Kali - Townsville</b>     |              |              |              |              |              |                 |                         |                         |
| Sugar & Molasses             | 2,243        | 2,735        | 2,588        | 2,730        | 2,686        |                 |                         |                         |
| Freight                      | 3,307        | 3,098        | 3,202        | 3,110        | 3,060        |                 |                         |                         |
| Grain                        | -            | -            | -            | -            | -            |                 |                         |                         |
| Livestock                    | 129          | 151          | 92           | 185          | 84           |                 |                         |                         |
| Mineral & containerised coal | 226          | 308          | 353          | 66           | -            |                 |                         |                         |
| Long distance passenger      | 488          | 522          | 517          | 487          | 498          |                 |                         |                         |
| <b>Total</b>                 | <b>6,393</b> | <b>6,814</b> | <b>6,752</b> | <b>6,578</b> | <b>6,328</b> | <b>14,150</b>   | <b>45%</b>              | <b>26%</b>              |
| <b>Townsville - Cairns</b>   |              |              |              |              |              |                 |                         |                         |
| Sugar                        | -            | -            | -            | -            | -            |                 |                         |                         |
| Freight                      | 1,449        | 1,377        | 1,240        | 1,213        | 1,220        |                 |                         |                         |
| Grain                        | -            | -            | -            | -            | -            |                 |                         |                         |
| Livestock                    | -            | -            | -            | -            | -            |                 |                         |                         |
| Mineral & containerised coal | 3,675        | 3,375        | 1,836        | -            | -            |                 |                         |                         |
| Long distance passenger      | 469          | 532          | 515          | 481          | 472          |                 |                         |                         |
| <b>Total</b>                 | <b>5,593</b> | <b>5,284</b> | <b>3,591</b> | <b>1,694</b> | <b>1,692</b> | <b>14,800</b>   | <b>11%</b>              | <b>11%</b>              |

### Notes:

1. Annual capacity assumes that the network is available 50 weeks per year.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.
3. North Coast Line train paths excludes the movement of commodities with a Mount Isa Line origin/destination that use the North Coast Line around Stuart and to access the Port of Townsville.
4. Winter path utilisation to reflect the sugar season. Assumes all sugar moved over a six month period, rather than 12 month period.
5. Summer path utilisation excludes the movement of sugar.

Declaration Review – 11 March 2018

## North Coast Line (North) (cont)

| <b>Commodity (Tonnes)</b>    | <b>2013-14</b> | <b>2014-15</b> | <b>2015-16</b> | <b>2016-17</b> | <b>2017-18</b> |
|------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Rockhampton to Mackay</b> |                |                |                |                |                |
| Sugar                        | -              | -              | -              | -              | -              |
| Freight                      | 2,669          | 2,550          | 2,515          | 2,417          | 2,588          |
| Grain                        | 43             | 38             | 10             | 37             | 6              |
| Livestock                    | 27             | 33             | 17             | 21             | 10             |
| Mineral & containerised coal | -              | -              | -              | -              | -              |
| <b>Total</b>                 | <b>2,739</b>   | <b>2,621</b>   | <b>2,542</b>   | <b>2,475</b>   | <b>2,604</b>   |
| <b>Mackay to Durroburra</b>  |                |                |                |                |                |
| Sugar                        | 321            | 337            | 316            | 348            | 261            |
| Freight                      | 2,008          | 1,972          | 2,025          | 1,940          | 2,115          |
| Grain                        | 147            | 190            | 82             | 173            | 112            |
| Livestock                    | 26             | 31             | 15             | 20             | 10             |
| Mineral & containerised coal | -              | 364            | 154            | 34             | -              |
| <b>Total</b>                 | <b>2,502</b>   | <b>2,893</b>   | <b>2,592</b>   | <b>2,515</b>   | <b>2,498</b>   |
| <b>Kali - Townsville</b>     |                |                |                |                |                |
| Sugar                        | 1,088          | 1,968          | 1,232          | 1,345          | 1,248          |
| Freight                      | 1,940          | 1,909          | 1,956          | 1,882          | 2,095          |
| Grain                        | -              | -              | -              | -              | -              |
| Livestock                    | 26             | 31             | 15             | 20             | 10             |
| Mineral & containerised coal | 265            | 590            | 351            | 51             | -              |
| <b>Total</b>                 | <b>3,319</b>   | <b>4,497</b>   | <b>3,554</b>   | <b>3,298</b>   | <b>3,353</b>   |
| <b>Townsville - Cairns</b>   |                |                |                |                |                |
| Sugar                        | -              | -              | -              | -              | -              |
| Freight                      | 848            | 864            | 875            | 891            | 914            |
| Grain                        | -              | -              | -              | -              | -              |
| Livestock                    | -              | -              | -              | -              | -              |
| Mineral & containerised co   | 3,946          | 3,864          | 2,099          | -              | -              |
| <b>Total</b>                 | <b>4,794</b>   | <b>4,728</b>   | <b>2,973</b>   | <b>891</b>     | <b>914</b>     |



## Mount Isa Line

### Annual freight paths - actual

|                                 | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      | Annual capacity | Path Utilisation 2017-18 |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|--------------------------|
| <b>Stuart - Hughenden</b>       |              |              |              |              |              |                 |                          |
| Industrial products & chemicals | 1,344        | 1,630        | 1,560        | 1,421        | 981          |                 |                          |
| Minerals & metals               | 961          | 769          | 585          | 399          | 509          |                 |                          |
| Livestock                       | 125          | 147          | 101          | 157          | 81           |                 |                          |
| Passenger                       | 203          | 196          | 195          | 194          | 192          |                 |                          |
| <b>Total</b>                    | <b>2,633</b> | <b>2,742</b> | <b>2,441</b> | <b>2,171</b> | <b>1,763</b> | <b>4,400</b>    | <b>40%</b>               |
| <b>Flynn - Mount Isa</b>        |              |              |              |              |              |                 |                          |
| Industrial products & chemicals | 1,602        | 2,045        | 2,073        | 1,874        | 1,276        |                 |                          |
| Minerals & metals               | 597          | 465          | 299          | 165          | 223          |                 |                          |
| Livestock                       | -            | -            | -            | -            | -            |                 |                          |
| Passenger                       | 200          | 195          | 190          | 193          | 191          |                 |                          |
| <b>Total</b>                    | <b>2,399</b> | <b>2,705</b> | <b>2,562</b> | <b>2,232</b> | <b>1,690</b> | <b>5,562</b>    | <b>30%</b>               |
| <b>Flynn-Phosphate Hill</b>     |              |              |              |              |              |                 |                          |
| Industrial products & chemicals | 1,664        | 2,256        | 2,304        | 2,261        | 1,961        |                 |                          |
| Minerals & metals               | -            | -            | -            | -            | -            |                 |                          |
| Livestock                       | -            | -            | -            | -            | -            |                 |                          |
| Passenger                       | -            | -            | -            | -            | -            |                 |                          |
| <b>Total</b>                    | <b>1,664</b> | <b>2,256</b> | <b>2,304</b> | <b>2,261</b> | <b>1,961</b> | <b>8,130</b>    | <b>24%</b>               |

### Notes:

1. The capacity assumptions are based on 88 paths/week on the Hughenden to Cloncurry section during the regular dry season (winter), and 128 paths/week in the wet season (summer). The lower dry season allowance allows for major maintenance and track upgrade possessions being undertaken during this period.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.

### Commodity (Tonnes, '000)

|                                  | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Stuart - Hughenden</b>        |              |              |              |              |              |
| Industrial products & chemicals* | 1,799        | 2,332        | 2,262        | 2,090        | 1,502        |
| Minerals & metals                | 1,837        | 1,669        | 1,323        | 877          | 917          |
| Livestock                        | 24           | 29           | 16           | 19           | 10           |
| <b>Total</b>                     | <b>3,660</b> | <b>4,030</b> | <b>3,600</b> | <b>2,986</b> | <b>2,429</b> |
| <b>Flynn - Mount Isa</b>         |              |              |              |              |              |
| Industrial products & chemicals* | 1,316        | 1,782        | 1,807        | 1,469        | 1,136        |
| Minerals & metals                | 1,157        | 1,148        | 806          | 461          | 607          |
| Livestock                        | -            | -            | -            | -            | -            |
| <b>Total</b>                     | <b>2,473</b> | <b>2,930</b> | <b>2,613</b> | <b>1,930</b> | <b>1,743</b> |
| <b>Flynn-Phosphate Hill</b>      |              |              |              |              |              |
| Industrial products & chemicals* | 1,682        | 2,304        | 2,339        | 2,279        | 2,001        |
| Minerals & metals                | -            | -            | -            | -            | -            |
| Livestock                        | -            | -            | -            | -            | -            |
| <b>Total</b>                     | <b>1,682</b> | <b>2,304</b> | <b>2,339</b> | <b>2,279</b> | <b>2,001</b> |

\* Industrial products & chemicals by segment includes some metals products

## Central Western System

### Annual freight paths - actual

|                          | 2013-14    | 2014-15    | 2015-16    | 2016-17    | 2017-18    | Annual capacity | Path Utilisation 2017-18 |
|--------------------------|------------|------------|------------|------------|------------|-----------------|--------------------------|
| <b>Nogoa-Emerald</b>     |            |            |            |            |            |                 |                          |
| Freight                  | 95         | 87         | 94         | 93         | 148        |                 |                          |
| Grain                    | 63         | 131        | 40         | 121        | 85         |                 |                          |
| Livestock                | 207        | 174        | 147        | 231        | 122        |                 |                          |
| Passenger                | 183        | 181        | 189        | 193        | 196        |                 |                          |
| <b>Total</b>             | <b>548</b> | <b>573</b> | <b>470</b> | <b>638</b> | <b>551</b> | <b>23,900</b>   | <b>2%</b>                |
| <b>Emerald-Longreach</b> |            |            |            |            |            |                 |                          |
| Freight                  | 88         | 61         | 81         | 87         | 149        |                 |                          |
| Grain                    | -          | -          | -          | -          | -          |                 |                          |
| Livestock                | 72         | 70         | 57         | 117        | 64         |                 |                          |
| Passenger                | 181        | 176        | 172        | 176        | 188        |                 |                          |
| <b>Total</b>             | <b>341</b> | <b>307</b> | <b>310</b> | <b>380</b> | <b>401</b> | <b>5,650</b>    | <b>7%</b>                |
| <b>Longreach-Winton</b>  |            |            |            |            |            |                 |                          |
| Freight                  | 71         | 46         | 40         | 16         | 16         |                 |                          |
| Grain                    | -          | -          | -          | -          | -          |                 |                          |
| Livestock                | 66         | 67         | 39         | 93         | 63         |                 |                          |
| Passenger                | -          | -          | -          | -          | -          |                 |                          |
| <b>Total</b>             | <b>137</b> | <b>113</b> | <b>79</b>  | <b>109</b> | <b>79</b>  | <b>5,850</b>    | <b>1%</b>                |

### Commodity (Tonnes '000)

|                          | 2013-14    | 2014-15    | 2015-16   | 2016-17    | 2017-18    |
|--------------------------|------------|------------|-----------|------------|------------|
| <b>Nogoa-Emerald</b>     |            |            |           |            |            |
| Freight                  | 28         | 25         | 18        | 15         | 30         |
| Grain                    | 49         | 110        | 34        | 110        | 65         |
| Livestock                | 41         | 35         | 24        | 38         | 20         |
| Passenger                |            |            |           |            |            |
| <b>Total</b>             | <b>118</b> | <b>169</b> | <b>76</b> | <b>164</b> | <b>115</b> |
| <b>Emerald-Longreach</b> |            |            |           |            |            |
| Freight                  | 16         | 9          | 8         | 5          | 15         |
| Grain                    | -          | -          | -         | -          | 0          |
| Livestock                | 13         | 13         | 8         | 18         | 9          |
| Passenger                |            |            |           |            |            |
| <b>Total</b>             | <b>30</b>  | <b>22</b>  | <b>15</b> | <b>23</b>  | <b>24</b>  |
| <b>Longreach-Winton</b>  |            |            |           |            |            |
| Freight                  | 7          | 4          | 4         | 1          | 5          |
| Grain                    | -          | -          | -         | -          | -          |
| Livestock                | 12         | 12         | 6         | 14         | 9          |
| Passenger                |            |            |           |            |            |
| <b>Total</b>             | <b>18</b>  | <b>16</b>  | <b>10</b> | <b>15</b>  | <b>14</b>  |

### Notes:

1. Annual capacity assumes that the network is available 50 weeks per year.
2. Path utilisation based on actual use 2017-18, rather than contracted paths.

## Tablelands System

### Annual freight paths - actual

|  | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|--|---------|---------|---------|---------|
|--|---------|---------|---------|---------|

No freight services. Tourist services only - Kuranda Scenic Rail and Gulflander

### Commodity (net tonnes)

|  | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|--|---------|---------|---------|---------|
|--|---------|---------|---------|---------|

No freight services. Tourist services only - Kuranda Scenic Rail and Gulflander

# Confidential Attachment B:

HoustonKemp Economists, *Does Queensland Rail's rail network satisfy criterion (a)?*, March 2019



**HOUSTONKEMP**  
Economists

# Does Queensland Rail's network satisfy criterion (a)?

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A report for Queensland Rail

10 March 2019

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# Contents

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|   |    |
|---|----|
| 1. Introduction   | 1  |
| 2. Economic analysis of criterion (a)   | 2  |
| 2.1 Overview of criterion (a)   | 2  |
| 2.2 Declaration length  | 2  |
| 2.3 Dependent markets   | 4  |
| 2.4 Future state with and without declaration   | 5  |
| 2.5 Material increase in competition in another market                                | 5  |
| 3. Concepts integral to QCA's reasoning   | 7  |
| 3.1 Queensland Rail's incentive and ability to exercise market power                  | 7  |
| 3.2 The hold-up problem   | 11 |
| 3.3 The reverse cellophane fallacy  | 15 |
| 4. System by system analysis  | 17 |
| 4.1 Mount Isa system  | 17 |
| 4.2 North Coast line  | 20 |
| 4.3 West Moreton  | 24 |
| 4.4 Conclusion  | 26 |
| 5. Queensland Rail Access Framework   | 28 |
| 5.1 'Without declaration' – Queensland Rail's Access Framework                        | 28 |
| 5.2 Pricing principles  | 29 |
| 5.3 Comparison between the Access Framework and declaration                           | 32 |
| 5.4 Conclusion  | 35 |
| A1. Differences between Queensland Rail Access Undertaking 1 and the Access Framework | 37 |

## Executive Summary

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The Queensland Competition Authority's (QCA) draft recommendations in its review of the declaration of Queensland Rail's network services recommended that three services on Queensland Rail's network be declared for a period of 15 years – namely, the North Coast line and Metropolitan system services, the Mount Isa line service, and the West Moreton and Metropolitan systems services.

We have been asked by Queensland Rail:

- to review the QCA's criterion (a) assessment of the rail services it has recommended should be declared; and
- to reassess whether these rail services satisfy criterion (a).

The QCA Act defines criterion (a) as:<sup>1</sup>

access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the service

An assessment of criterion (a) requires a comparison of two states of the world, being those with and without declaration.

In order to assess the QCA conclusions on criterion (a) it is useful to explore three economic concepts that are integral to the QCA's conclusions on whether the individual systems meet criterion (a).

### Queensland Rail and market power

Queensland Rail is not vertically integrated and has spare capacity. An important consequence of this spare capacity, in combination with competitive constraints imposed by road haulage charges, is that Queensland Rail has strong economic incentives (irrespective of its declaration status) to maximise utilisation on its network. This is because any user that can be charged a positive margin over the incremental cost of using the network represents a contribution to Queensland Rail's substantial fixed cost base, even if it remains untenable to charge the long run economic cost of use to any access seekers.

Queensland Rail lacks market power. This is evident because:

- its revenue is far below its total cost for all of its systems, other than the West Moreton system;
- it requires significant government funding to remain financially viable; and
- it has been losing market share to competition from road transport.

Queensland Rail does not gain market power by virtue of becoming undeclared. In other words, Queensland Rail would not earn a level of revenue that is anywhere close to its cost of providing the service with or without declaration. The access prices Queensland Rail charge will remain essentially the same with or without declaration because its charges are not constrained by regulation. It follows that it is market factors – such as competition from road, countervailing power and customers' ability to pay – that constrain Queensland Rail's ability to charge for services and these factors do not change, with or without declaration.

The same market factors that restrict Queensland Rail's ability to increase prices would also restrict its ability to impose unreasonable terms and conditions. Put another way, Queensland Rail has an incentive to provide reasonable terms and conditions to its customers because to do so would help retain existing customers and

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<sup>1</sup> Queensland Competition Authority Act 1997, Part 5, Section 76(2)(a)



attract new customers, thereby reducing the economic loss it would make, regardless of Queensland Rail's declaration status.

### Hold-up problem

The so called hold-up problem is a key reason cited by the QCA for some of Queensland Rail's systems being said to satisfy criterion (a). The QCA notes that Queensland Rail has an incentive to encourage use of its network, given that there is significant spare capacity. However, it contends that once Queensland Rail has attracted access seekers to use its network, it then has an incentive and ability (absent declaration) to raise its access prices significantly.

The QCA's assessment of the hold-up problem implicitly assumes that there are only ever two rounds of engagement between Queensland Rail and its customers, ie, a 'first round' where an access seeker decides whether to invest and a 'second round' where Queensland Rail would then increase access prices. In practice, rail networks very have long asset lives and, over life of any of its assets, there will be multiple rounds of negotiations with multiple different customers. Queensland Rail is involved in multiple round interactions with its customers, and has no incentive to engage in hold-up activity.

If Queensland Rail did hold up its customers, existing and future customers would rightly expect this to be repeated in any subsequent negotiations and, as the QCA notes, would likely reduce entry of new users and undermine investment incentives of existing users. This would then put the long run sustainability of the network at significant risk as access seekers are discouraged from using Queensland Rail's network. It is in Queensland Rail interests, particularly in the situation where Queensland Rail has significant spare capacity, to maximise network usage and avoid the hold-up problem.

It is also important to note that the existing regulatory framework does not prevent Queensland Rail from increasing prices in the 'second round' of interaction with its customers. Since the revenue Queensland Rail collects is not at the ceiling, the existing pricing principles do not stop it from increasing access prices when contracts are renegotiated.

### Reverse cellophane fallacy

The process of market definition is vulnerable to incorrect conclusions whenever a small but significant non-transitory increase in price (SSNIP) analysis is at risk of the reverse cellophane fallacy (or, alternatively, the cellophane fallacy in its usual form). The reverse cellophane fallacy arises whenever a SSNIP test is applied to subsidised or regulated prices, rather than prices that would occur in a workably competitive market. The reverse cellophane fallacy causes a market definition in such circumstances to be too narrow, ie, it underestimates the competitive constraint imposed by road.

### Our assessment of criterion (a) – without considering Queensland Rail's Access Framework

We set out below our assessment of whether Queensland Rail's network satisfies criterion (a) without considering Queensland Rail's Access Framework. In other words, we assess Queensland Rail's incentive and ability to exercise market power without declaration, and whether this would have a material effect on competition in a related market.

#### Mount Isa Service

There are a number of problems with the QCA's analysis that concludes criterion (a) is satisfied, namely:

- the QCA underestimates the constraints placed on the Mount Isa system by road transport;
- the QCA relies on a flawed interpretation of the hold-up problem; and
- the QCA claims that freight costs are a material component of the overall decision-making process for a firm seeking to enter into a dependent mineral market – below rail access prices are less than one per cent of commodity prices for many bulk products such as copper, zinc and lead.

Our analysis shows that the volumes and access prices on the Mount Isa system will be the same with or without declaration. This is because Queensland Rail has the incentive to maximise volume due to spare capacity and that access prices are not constrained by regulation. There is no basis on which to expect access prices to change without declaration.

Given no change in access prices or change in the volumes transported on the Mount Isa system, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not affected by declaration. We conclude that criterion (a) is not satisfied, even without considering the impact of Queensland Rail's Access Framework.

#### North Coast line Service

There are a number of problems with the QCA's analysis that determining criterion (a) is satisfied, namely:

- the QCA underestimates the constraints placed on rail by road on the North Coast line, and
- the QCA relies on a flawed interpretation of the hold-up problem.

Our analysis shows that the volumes and access prices on the North Coast line will be the same with or without declaration. This is because Queensland Rail has the incentive to maximise volume due to spare capacity and that the access prices are not constrained by regulation. Again, there is not basis on which to expect access prices to change without regulation.

Given no change in access prices or in the volumes transported on the North Coast line, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not affected by declaration. We conclude that criterion (a) is not satisfied, even without considering the impact of Queensland Rail's Access Framework.

#### West Moreton and Metropolitan Line Service

There is significant uncertainty in relation to the tonnage of coal haulage that will use the West Moreton system over the next five years, ranging from 2 million tonnes per annum (mtpa) if New Acland stage 3 does not proceed to 9 mtpa if it does.

In the low tonnage scenario, there will be significant spare capacity on the West Moreton line and so Queensland Rail will have strong incentives:

- to negotiate a price that results in maximum usage of its network;
- to recover the largest possible proportion of its total economic costs, given the circumstances; and
- to promote competition in dependent markets by any means possible.

In this circumstance, we conclude that the volumes and access prices on the West Moreton system will be the same in the low tonnage scenario with or without declaration. Given no change in access prices or change in the volumes transported, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not affected by declaration. It follows that criterion (a) is not satisfied, even without taking account the impact of Queensland Rail's Access Framework.

In the high tonnage scenario, Queensland Rail would most likely be able to earn a level of revenue that is above the regulated ceiling, if it was to become undeclared. Whether this means the West Moreton system would satisfy criterion (a) is unclear – for example would any price increase be enough to affect the volume of coal output in the region? However, any such uncertainty is resolved by the application of the price controls in the Access Framework so that, as discussed below, criterion (a) is not satisfied.

### Our assessment of criterion (a) – with Queensland Rail's Access Framework

In its draft decision the QCA considered that the Access Framework was not an appropriate alternative scenario, ie, the QCA did not consider it relevant when considering the world without declaration. The QCA stated that the Access Framework had not been executed and there was no evidence that it would come into force on the expiry of declaration. We have been asked to assume that the deed poll that gives effect to the Access Framework will be executed in March 2019. The Access Framework will therefore apply from 9 September 2020 and continue to apply to access for the purpose of operating a train service on one or more of the North Coast line, Mount Isa system, West Moreton system and/or Metropolitan system, where that train service is not a declared service.

It follows that, absent declaration Queensland Rail will put in place a legally binding, enforceable Access Framework that is substantially similar to the current access undertaking, AU1. We conclude that, given the similarities between the Access Framework and current regulation, there will be no difference in market outcomes with and without declaration. As such, criterion (a) will not be satisfied for any of the Queensland Rail services.

### Conclusions

Even without the Access Framework, Queensland Rail does not have the ability or incentive to increase access prices or impose unreasonable terms and conditions on all of its rail systems, except perhaps for West Moreton under the high tonnage scenario. It follows that access charges and access terms and conditions will not change if Queensland Rail becomes undeclared, and so criterion (a) is not satisfied.

The similarities between the Access Framework and the current regulatory arrangements mean that there will be no difference in market outcomes between the world with and without declaration. Criterion (a) will therefore not be satisfied for any of the Queensland Rail services, including the West Moreton system.

# 1. Introduction

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The QCA released its draft recommendations in relation to declaration of the Aurizon Network service, the Queensland Rail service and the DBCT service on 18 December 2018.

When deciding whether to recommend declaration of a service, the QCA is required to consider whether four criteria are met, ie:

- criterion (a) – that declaration would promote a material increase in competition in at least one dependent market;
- criterion (b) – that the facility for the service would meet total foreseeable demand at least cost;
- criterion (c) – that the facility for the service is of state significance; and
- criterion (d) – that declaration would promote the public interest.

Queensland Rail's network is comprised of eight individual systems. The QCA has concluded that only parts of the Queensland Rail network meet the declaration criteria, and recommended that four services be declared for a period of 15 years, namely:

- the North Coast Line service;
- the Mount Isa Line service;
- the West Moreton system service; and
- Metropolitan systems service.<sup>2</sup>

The QCA's draft recommendation for Queensland Rail's other systems (the South Western, Western, Central Western System and Tablelands system) is that these services not to be declared on the basis that they do not meet criterion (a) or criterion (d).

We have been asked by Queensland Rail:

- to review the QCA's criterion (a) assessment of the rail services it has recommended should be declared; and
- to reassess whether these rail services satisfy criterion (a).

Our report is structured as follows:

- section 2 describes the QCA's economic analysis of criterion (a);
- section 3 discusses three key economic concepts relevant to the assessment of criterion (a);
- section 4 assesses whether Queensland Rail's rail systems satisfy criterion (a) without assessing the relevance of Queensland Rail's Access Framework; and
- section 5 discusses the impact of Queensland Rail's Access Framework.

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<sup>2</sup> The QCA has declared the Metropolitan system because it provides a link to the Port of Brisbane and Intermodal terminals, and so is an important part of the freight service on the West Moreton system and North Coast line. We note that there is a lack of clarity regarding whether the QCA intends to declare: the entire Metropolitan system; or only the portion of the Metropolitan system that is required by above rail operators in the West Moreton System and the North Coast Line.

## 2. Economic analysis of criterion (a)

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In this section we describe the QCA's economic analysis of criterion (a).

### 2.1 Overview of criterion (a)

The QCA Acts defines criterion (a) as:<sup>3</sup>

access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the service

Criterion (a) compares two states of the world, ie:

- a state where access to the service is declared; and
- a state with access to the services on terms that would apply if the service was not declared.

Criterion (a) is satisfied if the declared state of the world, relative to the undeclared state of the world, results in a material increase in competition in at least one dependent market.

According to the National Competition Council, the term material increase involves:

an improvement in the opportunities and environment for competition such that competitive outcomes are materially more likely to occur.

The meaning of this being that there is a material increase if the declaration materially promotes competition.

Assessment of criterion (a) requires the QCA's to assess the following key factors:

- the length of the declaration;
- the definition of the market and identification of the relevant dependent markets;
- an assessment of the situation with and without declaration; and
- whether declaration would promote a material increase in competition in another market.

We discuss these factors, the QCA's position, and our assessment in further detail below.

### 2.2 Declaration length

#### 2.2.1 QCA approach

The QCA considers that a declaration period of 15 years is appropriate since it:<sup>4</sup>

provides an opportunity for review and adequately balances the legitimate business interests of Queensland Rail (to have future developments taken into account against the access criteria), while providing certainty for access seekers and holders in the context of industries which require large sunk investments.

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<sup>3</sup> Queensland Competition Authority Act 1997, Part 5, Section 76(2)(a)

<sup>4</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 22.

Glencore and The South West Producers advocated for a declaration period of 15 years.<sup>5</sup> To support its argument that a 15 year period of declaration is appropriate, the QCA states that:<sup>6</sup>

it is not evident that there would be substantial changes in the market in which the service is provided over the next 10 to 15 years, which would affect whether the service provided by Queensland Rail would continue to satisfy the declaration criteria.

In other words, the QCA appears to believe that market circumstances, eg, competition between road and rail or the below rail network, will not change materially, and so Queensland Rail would continue to meet the declaration criteria over the 15 year period. The QCA notes that the Inland Rail project as a possible exception to this view but does not consider this a relevant factor because of uncertainties regarding final route, its operational characteristics (eg, operating in conjunction with, or in competition with, Queensland Rail systems), and the expected date of completion.

In addition, the QCA supports its contention that a declaration period of 15 years is appropriate through reference to the long life nature of sunk investments made by access seekers (eg, investments in rollingstock typically have a useable life of between 20 and 30 years) and that at the time of declaration, assets across the industry will on average have around half their remaining life left.

### 2.2.2 Our assessment

Queensland Rail's market circumstances have changed significantly in the past five years and will likely change even more in the next five years. For example:

- the West Moreton system is subject to significant uncertainty going forward:
  - forecast coal volume may be as low as two million or as high as nine million tonnes per annum;<sup>7</sup> and
  - Inland Rail is expected to be operational in 2024-25<sup>8</sup> and is expected to carry significant rail freight, including up to 19.5 million tonnes of coal;<sup>9</sup>
- the Mount Isa system has lost significant freight to road: <sup>10</sup>
  - Aurizon, which carried around ██████████ of freight in 2016, ceased its intermodal services in February 2017 – around 40 per cent of this freight shifted to road and has not moved back since;
  - Queensland Rail lost around 0.4 million tonnes of west bound fuel task to road in 2013-14; and
  - Some mineral concentrate previously moved by rail are now being moved in half-height containers as a 'back load' via road. eg, Cudeco is moving 170,000 tonnes per year of mineral concentrate by road, traditionally viewed as a rail task; and
- rail freight volumes on the North Coast line have been stagnant or in slight decline in the past eight or nine years, eg, rail freight has gone from around seven billion gross tonne kilometres of intermodal freight in 2011-12 to around 6.5 billion in 2017-18.<sup>11</sup>

<sup>5</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 8.

<sup>6</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 21.

<sup>7</sup> This is based on Queensland Rail's internal forecasts.

<sup>8</sup> The ARTC website suggests that the first train is expected to operate in 2024-25. See <https://inlandrail.artc.com.au/faqs/faqs#question25997> for more information.

<sup>9</sup> ARTC, *Inland Rail Programme Business Case*, 2015, p 119.

<sup>10</sup> This information has been provided by Queensland Rail.

<sup>11</sup> This information has been provided by Queensland Rail.

Similarly, a Queensland parliament committee report noted that there is a trend of moving away from using rail by the agriculture sector in Queensland.<sup>12</sup> The report also quotes a submission from Port of Brisbane, which noted that:<sup>13</sup>

In the past ten years the Port of Brisbane has seen the movement of agricultural commodities [using rail] through the port shift from 15% and declining while container mode shift has declined from 15% to less than 5%.

We also note that heavy vehicle productivity has been growing as operators are increasingly able to use more productive heavy vehicles, such as A-doubles and A-triples. This further reinforces that competition from the road sector will likely intensify in the future.

Given the dynamic nature of the competitive environment faced by Queensland Rail, if any of Queensland Rail's services were to be declared, in our view, the appropriate declaration period should be much shorter than the 15 years proposed by the QCA.

A shorter declaration period – say, of five or at most ten years – would also be consistent with the approach taken in most other rail access regimes in Australia. For example:

- both the South Australian and Western Australian rail access regimes require their respective state economic regulators to review the applicable access regimes every five years, with this review having the ability to consider:
  - in the case of South Australia, whether the regime should continue to apply;<sup>14</sup> and
  - for Western Australia, the lines that should be covered by the access code, as specified at schedule 1;<sup>15</sup> and
- the Tasmania Rail Network was declared for a period of ten years upon recommendation by the National Competition Council in August 2007<sup>16</sup> – a declaration period that has now expired.

The only rail line in Australia that has been subject to a declaration decision for a period equal or greater than the 15 years proposed in the QCA's draft recommendation is the Goldsworthy rail line, which was declared for a period of 20 years following a decision by the Australia Competition Tribunal in June 2010. However, given its status as part of the vertically integrated iron ore mining and export operations of BHP, the circumstances of the Goldsworthy rail line are sufficiently different from that of Queensland Rail that no guidance as to an appropriate declaration period can be taken from this example.

## 2.3 Dependent markets

The QCA focused on a single dependent market for each of the systems. The QCA's analysis for the Mount Isa system and West Moreton system was on the geographically relevant mining tenement market. For the North Coast line, the QCA focused on the above rail haulage market.

We do not comment on the appropriateness of the QCA's identified dependent markets since our analysis is not contingent on any specific dependent markets. Instead, our analysis focuses on whether Queensland Rail has the incentive or ability to change its 'conduct', (ie, whether Queensland Rail has the incentive or ability to increase prices or impose unreasonable terms and conditions) if it became undeclared. If Queensland Rail does not have an incentive or ability to change its conduct, then declaration cannot promote a material increase in another market irrespective of the specific dependent market focussed upon.

<sup>12</sup> Transport, Housing and Local Government Committee, *Rail Freight use by the Agriculture and Livestock Industries*, June 2014, p 6.

<sup>13</sup> *Ibid.*

<sup>14</sup> South Australia, Railways (Operations and Access) Act 1997, section 7A.

<sup>15</sup> Western Australia, Railways (Access) Act 1998, section 12.

<sup>16</sup> See: [http://ncc.gov.au/application/tasmanian\\_railway\\_network\\_closed](http://ncc.gov.au/application/tasmanian_railway_network_closed), accessed 10 March 2019

## 2.4 Future state with and without declaration

The QCA considers that the current terms of access provide guidance as to the regime that access seekers and users are likely to face in a future with declaration.

We have been instructed to assume that in March 2019, Queensland Rail will execute a deed poll that gives effect to an access framework ("Access Framework") that will apply to access for the purpose of operating a train service on one or more of the relevant systems where that train service does not constitute a declared service. The Access Framework is similar to the current regulatory framework under AU1. A further discussion of the Access Framework is provided in section 4.

The QCA does not consider the Access Framework to be representative of the state of the market in a future without declaration. The QCA pointed out two main concerns with the Access Framework:<sup>17</sup>

- it has not been executed and so it is unclear when it would come into effect or if it would be subject to change; and
- uncertainty in its application in the future, as Queensland Rail could amend the Access Framework at any time after the execution,<sup>18</sup> and that access seekers and users will have limited recourse to challenge such amendments.

Our assessment of criterion (a) considers:

- the effects of existing regulatory arrangements to inform the situation with declaration; and
- for the world without declaration, both:
  - Queensland Rail's incentive and ability to exercise market power absent the Queensland Rail Access Framework in Section 4 (equivalent to the QCA's approach); and
  - Queensland Rail's incentive and ability to exercise market power with the Queensland Rail Access Framework in place in Section 5.

We have separated the world without declaration into two scenarios so that our conclusions are clear even if the Access Framework is deemed not relevant for the world without declaration. Given that we are to assume that the deed poll will be executed in March 2019, it follows that, absent declaration, the Access Framework will come into effect on 9 September 2020. In our opinion, it is therefore appropriate that the world without declaration includes an assessment of the impact of the Access Framework.

## 2.5 Material increase in competition in another market

### 2.5.1 QCA's approach to 'material increase in competition'

In the QCA's determination of whether a material increase in competition occurs it describes a material increase as:<sup>19</sup>

...the possibility that more efficient firms would be discouraged from entering a dependent market in a future without declaration. That is, if efficient entry is likely to be promoted in a future with declaration, the QCA considers that this would indicate that access as a result of declaration would promote an increase in competition that is material.

<sup>17</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, pp 29 – 30.

<sup>18</sup> For example, QCA points out that "under the current terms, Queensland Rail can amend the access framework at any time, even after it has been executed, on the grounds that the amendments are 'not inconsistent with' the framework's objective, as long as the amendments are made 'having regard to' a number of factors under the deed poll."

<sup>19</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 28.



The QCA describes a material increase as one whereby a future with declaration would promote efficient entry, ie, more efficient firms would be discouraged from entering a dependent market in a future without declaration.

### 2.5.2 Our assessment

In our opinion, declaration of a service promotes a material increase in competition in a dependent market if it is likely to result in a material increase in competition outcomes, as compared to without declaration.

In contrast, the QCA's definition is too narrow since it does not consider the state of competition in the dependent market. For example, if a dependent market is highly competitive, and so delivering competitive outcomes without declaration, then it is very unlikely that an increase in entry will have a material impact on prices, output or quality. Thus, it is unlikely that declaration would result in a material increase in competition.

However, although we disagree with the QCA's approach on materiality, we do not discuss this further since this difference does not affect conclusions.

## 3. Concepts integral to QCA's reasoning

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In order to assess the QCA conclusions on criterion (a) it is useful to explore three economic concepts that are integral to the QCA's conclusions on whether the individual systems meet criterion (a). These concepts are:

- incentive and ability for Queensland Rail to exercise market power;
- the hold-up problem; and
- the reverse cellophane fallacy.

We discuss these concepts within the Queensland Rail context below.

### 3.1 Queensland Rail's incentive and ability to exercise market power

#### 3.1.1 Arrangements if Queensland Rail remains declared

The QCA regulates third party access to certain infrastructure in Queensland, including Queensland Rail's network. Potential access seekers have the right to seek access to Queensland Rail's network under the terms and conditions approved by the QCA.

The access regime for Queensland Rail's network reflects a negotiate-arbitrate framework, under which Queensland Rail and access seekers are encouraged to negotiate on price and non-price terms, with a third-party arbitrator being used to settle disputes when those terms cannot be agreed.

To facilitate the negotiations, Queensland Rail is required to prepare an access undertaking, which covers:

- the process for seeking access;
- the pricing rules for determining access charges;
- reporting obligations and dispute resolution; and
- a standard access agreement.

The QCA is responsible for approving the access undertaking. The current access undertaking, Access Undertaking 1(AU1), expires on 30 June 2020. In light of its scheduled expiry, Queensland Rail has submitted its Draft Access Undertaking 2 (DAU2). DAU2 will become AU2 once approved by the QCA and be effective from 1 July 2020.

#### Reference tariffs on West Moreton and Metropolitan systems for Coal Traffic

The West Moreton system and the Metropolitan system are the only two rail systems on Queensland Rail's network that have a reference tariff under AU1. The reference tariff applies to coal haulage services and acts as price cap for a reference service. It is a two-part tariff, comprising:

- a per train path charge; and
- a GTK-based charge.

The reference tariff is calculated so that Queensland Rail can recover the ceiling revenue limit and is the price that is currently paid by coal services.

For West Moreton there is uncertainty regarding coal tonnage going forward. Based on information from Queensland Rail, we understand there are two likely future scenarios, the first being that the volumes may increase to a high tonne scenario of around nine mtpa (across two mines) and the second being that the

volumes may decrease to a low tonne scenario of two mtpa (from one mine) within the next five years. In particular:

- Yancoal has one active mine, Cameby Downs, which is expected to continue to be active throughout the period; and
- New Hope's existing production is nearing exhaustion and is expected to be closed in 2020, although it is seeking approval to extend its production at New Acland. The necessary approvals for this extension have not yet been granted and so there is no certainty that this extension will proceed.

Queensland Rail has proposed to continue existing arrangements under the high tonne scenario. In the low tonne scenario Queensland Rail believes the remaining mine will not be able to pay the ceiling revenue, and so intends to negotiate an access charge with the remaining mine. It follows that in a low tonne scenario, the West Moreton system would have a pricing arrangement similar to those that apply to other systems.

Pricing rules that apply to non-coal traffic

Queensland Rail does not have a reference tariff for non-coal services (and coal services on systems other than West Moreton and Metropolitan). Under AU1 and the proposed DAU2, Queensland Rail is required to comply with a set of pricing principles, which we set out below in their order of precedence:

- limits on price differentiation – to prevent Queensland Rail from giving an access seeker or access holder an unfair competitive advantage over its competitors in the same market;
- price limits - access revenue needs to fall within:
  - a ceiling limit, which reflects the efficient cost of providing the service; and
  - a floor limit, which reflects the incremental cost of providing access;
- network utilisation - where Queensland Rail may charge different rates for train services serving different markets to maximise commercial viability; and
- revenue adequacy - access charges and transport service payments should generate revenue that is at least enough to meet efficient cost of providing access, including a return on investment.

### 3.1.2 Our assessment of Queensland Rail's incentive and ability to increase price

We assess Queensland Rail's market power below. Our assessment focuses on, whether Queensland Rail would, if undeclared, have the ability or incentive:

- to increase prices when compared to existing arrangements; and/or
- to set unreasonable terms and conditions.

Queensland Rail has significant spare capacity and so an incentive to increase use of its network

The incentives of a monopoly do not always dictate a movement away from competition in the dependent market(s). In the case of a service provider that is facing excess capacity and is not vertically integrated, it may face incentives to encourage competition in dependent markets. This notion has been confirmed by the National Competition Council (NCC) which states that:<sup>20</sup>

...[if] a service provider has no vertical interests in a dependent market(s), and its facility has excess capacity, then it may be profit maximising for the service provider to promote competition in the dependent market(s), reduce margins and prices in the dependent market(s), and increase incremental demand for the services provided by the facility.

<sup>20</sup> NCC, *Declaration of Services - A guide to Declaration under Part IIIA of the Competition and Consumer Act 2010*, December 2017, para 3.31, p 35.

Queensland Rail is not vertically integrated and has spare capacity. An important consequence of this spare capacity, in combination with competitive constraints imposed by road haulage charges, is that Queensland Rail has strong economic incentives (irrespective of declaration status) to maximise utilisation on its network. This is because any user that can be charged any positive margin over incremental cost of using the network represents a contribution to Queensland Rail's substantial fixed cost base, even if it remains untenable to charge the long run economic cost of use to any access seekers.

Consistent with this incentive, and with the circumstances of any vertically separate provider of infrastructure services, Queensland Rail has a strong incentive to promote competition in upstream and downstream markets, irrespective of its declaration status.

Queensland Rail has not ability to increase prices without declaration on most of its systems

Economic regulation of infrastructure-based services is generally established under a framework that allows third party access seekers to access infrastructure services owned and operated by others. The need for regulation of the terms and conditions of access arises when the relevant services tend towards natural monopoly, ie, it is more efficient for there to be just one service provider, principally arising from the scale economies associated with provision of the service.

The rationale for economic regulation is that absent this, the sole service provider would have the incentive and ability to exercise monopoly power, so that prices exceed the long run economic cost of providing the service. This leads to higher prices and lower levels of output, thereby giving rise to allocative inefficiency. The objectives of access regulation are to mitigate the negative efficiency consequences of enduring market power, ie, to promote more efficient outcomes in markets, as compared with the circumstances that are likely to prevail absent an industry-specific form of regulatory intervention.

As stated in Productivity Commission's 2013 review of the national access regime:<sup>21</sup>

The only economic problem that access regulation should address is an enduring lack of effective competition, due to natural monopoly, in markets for infrastructure services where access is required for third parties to compete effectively in dependent markets.

The main regulatory constraint is the revenue ceiling. The revenue ceiling represents the estimated efficient cost of providing the service, including a reasonable return, and so is the long run economic cost of providing the service. Put another way, market power is not a concern if a service provider has no prospect of earning a revenue that is above the ceiling.

We note that Queensland Rail's ability to collect access revenue is constrained by two key factors:

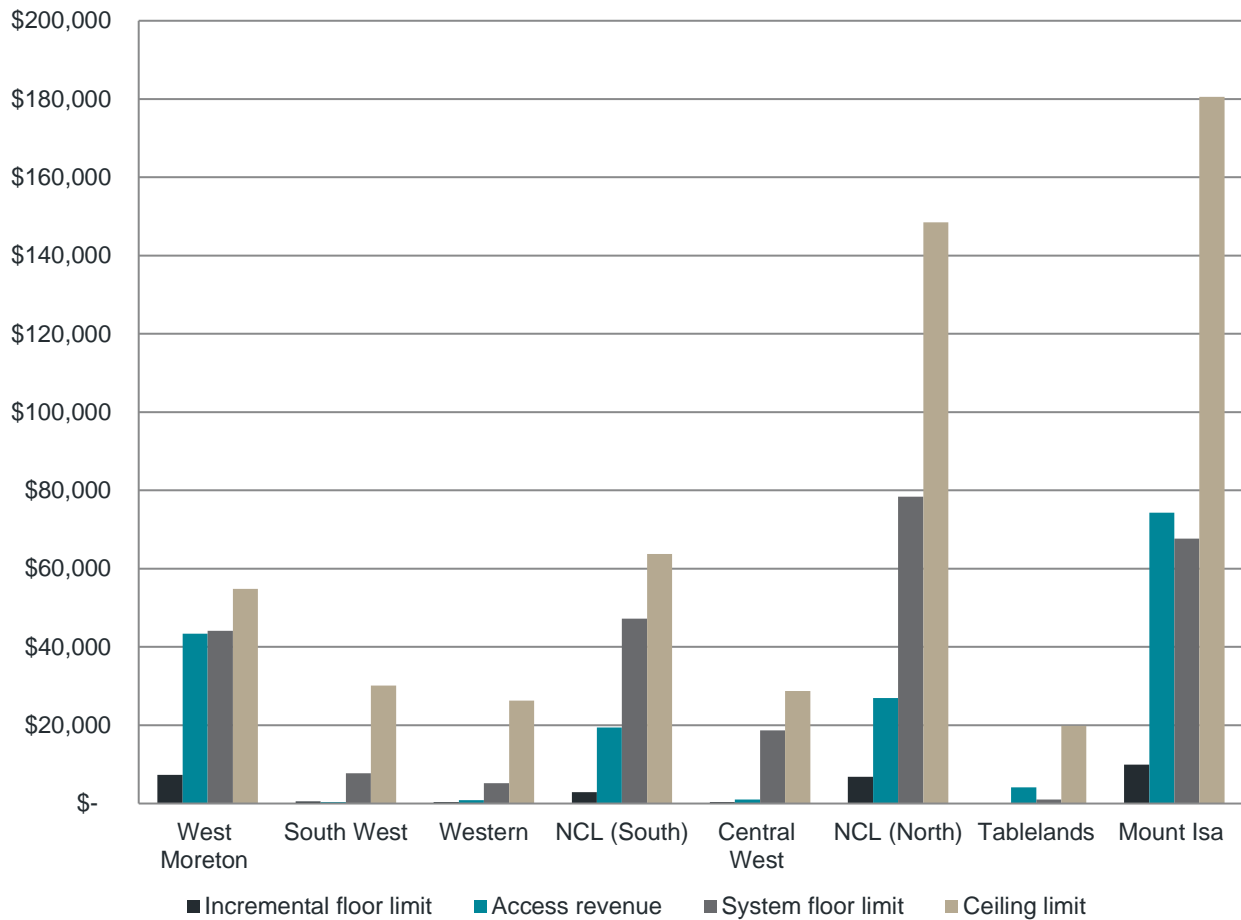
- regulatory constraints on pricing, ie, access revenue cannot exceed the price ceiling; and
- market factors, such as competition from road, users' countervailing power and willingness to pay.

For all systems, Queensland Rail's revenue is below the ceiling – Figure 3.1. It follows that regulatory constraints are not binding since they do not limit Queensland Rail's ability to increase its access price and it is market factors that restrict what Queensland Rail can charge. This suggests that removing the price ceiling would not change Queensland Rail's ability to set access prices, since it is not currently binding.

Figure 3.1: 2017-18 access revenue, floor and ceiling limits by system (\$'000)<sup>22</sup>

<sup>21</sup> Productivity Commission, *National Access Regime Inquiry Report*, 25 October 2013, p 7.

<sup>22</sup> This information has been provided by Queensland Rail



In Figure 3.1:<sup>23</sup>

- the incremental floor limit refers to the estimate of the incremental cost of providing an individual train service;
- the system floor limit refers to the estimate of the incremental cost of providing all train services on the system;
- access revenue excludes government Transport Service Contract (TSC) payments and other revenue;<sup>24</sup>
- the revenue ceiling limit is calculated for the West Moreton system and Mount Isa system, and is an indicative ceiling revenue limited based upon the written down value of assets for the remaining systems;<sup>25</sup> and
- the service floor limit and system floor limit are as estimated at January 2017.

<sup>23</sup> This information has been provided by Queensland Rail

<sup>24</sup> For all systems excluding West Moreton, system revenue is access revenue for 2016-17 (excluding Queensland Government TSC payments for all systems and Kuranda Scenic Rail revenue for Tablelands). For the West Moreton system, forecast revenue for 2018-19 is used, and expense forecasts are obtained from the *2017-18 Below Rail Product Report*.

<sup>25</sup> A DORC methodology is applied to determine the asset value for all systems excluding the West Moreton system and Mount Isa system, whilst ceiling limits for all systems excluding the West Moreton system and Mount Isa system are based on book values as at 30 June 2017. The Mount Isa system asset valuation is based on a 'modified' DORC as at 30 October 2016, and the West Moreton system asset valuation reflects QCA approved regulatory asset base (pre coal adjustments). A pre-tax WACC (6.34 per cent) has been applied to calculate the ceiling price, in the absence of a separate estimate for a tax allowance.

The diagram above highlights the challenge faced by Queensland Rail in cost recovery. Access revenue is below the system floor limit for all systems except for the Mount Isa system. It follows that Queensland Rail's cost saving from closing these systems is greater than the access revenue collected.

In summary, Queensland Rail's lack of market power is evident through the fact that:

- its revenue is far below its total cost for all of its systems, except for West Moreton;
- it requires significant government funding to remain financially viable; and
- it has been losing market share to road on the Mount Isa system and rail task on the North Coast line has experienced stagnant growth.

Queensland Rail does not gain market power by virtue of becoming undeclared. In other words, Queensland Rail would not earn a revenue that is close to its cost of providing the service with or without declaration. By way of summary, the access prices Queensland Rail charge will remain materially the same with or without declaration because:

- the main pricing constraint Queensland Rail faces under existing arrangements is the price ceiling – the access revenue it collects cannot exceed the price ceiling;
- as access revenue is far below the price ceiling for all lines except West Moreton, the current regulatory arrangements do not prevent Queensland rail from increasing access prices;
- it follows that the main reason why Queensland Rail does not charge higher access prices is because of market factors, such as competition from road, or end consumer's ability to pay/countervailing power; and
- removing regulatory pricing constraints would not lead to access price changes, as Queensland Rail's ability to charge higher prices is constrained by market factors, not regulatory arrangements.

Queensland Rail has an incentive to provide reasonable terms and conditions with or without declaration

Service providers can exercise their market power by imposing unreasonable terms and conditions on access holders. For example, it could provide an access holder with an unreasonably low level of service, so that it could, say, save costs or affect downstream market competition.

Our discussion above suggests that Queensland Rail's ability to increase prices is constrained by market factors (eg, competition with road, users' countervailing power and willingness to pay) rather than regulatory factors. It follows that becoming undeclared would not result in a material change in prices.

In our opinion, the same factors that restrict Queensland Rail's ability to increase prices would also restrict its ability to impose unreasonable terms and conditions. Put another way, Queensland Rail has an incentive to provide reasonable terms and conditions to its customers because it would help retain existing customers and attract new customers, thereby reducing the economic loss it would make, regardless of Queensland Rail's declaration status.

Further, Queensland Rail is not vertically integrated, so it has no incentive to discriminate between users in a manner that would harm competition in downstream markets. Rather, its incentive is to strengthen competition between access holders and potential access seekers, since it has spare capacity on its network.

## 3.2 The hold-up problem

### 3.2.1 The QCA's assessment of the hold-up problem

The hold-up problem is a key reason why the QCA believes that some of Queensland Rail's systems satisfy criterion (a).

The QCA notes that Queensland Rail has an incentive to encourage use of its network, given that there is significant spare capacity. However, it contends that once Queensland Rail has attracted access seekers to use its network, it then has an incentive and ability (absent declaration) to raise its access prices significantly. In summary, the QCA's assessment of the hold-up problem is as follows:

1. Queensland Rail would have an incentive to provide access to an access seeker in the first round, in order to promote utilisation of its assets and increase its revenues.
2. In the second period, when the below-rail access agreement is due for renewal, the access seeker would be in a less favourable bargaining position than Queensland Rail, as it has made significant sunk investments so that it can use Queensland Rail's network.
3. Realising this, Queensland Rail would have the ability and incentive to increase access charges and that the access seeker would have no choice but to pay the increase in charges.
4. Access seekers can foresee the risk of Queensland Rail increasing prices in the second round, thereby deterring them from entering the market in the first place.

### 3.2.2 The economic theory of hold-up - a problem of imperfect contracts

The hold-up problem, as originally described by Klein, Crawford and Alchian (1978),<sup>26</sup> Goldberg (1976)<sup>27</sup> and Williamson (1979),<sup>28</sup> is recognised as a fundamental contract problem. As described in Rogerson (1992),<sup>29</sup> the hold-up problem occurs when two factors are present:

1. Parties to a future transaction must make non-contractible specific investments prior to the transaction in order to prepare for it.
2. The exact form of the optimal transaction (eg, how many units, if any, what quality level, the time of delivery) cannot be specified with certainty in advance.

Put simply, the hold-up problem arises because a 'perfect' contract cannot be developed ex-ante in the first round, leaving the party with a weaker bargaining position exposed when the contract needs to be amended or renegotiated in the second round.

One example mentioned in literature is the alleged hold-up of General Motors (GM) by Fisher Body, a car body parts supplier in the 1920s. The alleged hold-up in this case was as follows:

- in the first round, Fisher Body entered a contract with GM to become its only supplier of car body parts; and
- in the second round;
  - there was an unforeseen increase in demand for automobiles, which was not covered in the contract;
  - Fisher Body was in a strong bargaining position, as GM did not have alternative suppliers; and
  - Fisher Body increased the price it charged for the additional parts.

We note that the hold-up problem could also occur in other non-infrastructure sectors. For example, businesses, such as restaurants, can also be subject to the investment hold-up problem when signing a commercial lease with a landlord. Businesses are likely to face a significant cost of moving locations, eg, need to renovate a new location and loss of customers by moving locations, putting landowners in a favourable bargaining position.

<sup>26</sup> Klein, Benjamin, Crawford, Robert, and Alchian, Armen. *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, *The Journal of Law and Economics*, v 21(2), 1978, pp.297-326.

<sup>27</sup> Goldberg, Victor, *Regulation and Administered Contracts* *The Bell Journal of Economics*, v 7(2), 1976.

<sup>28</sup> Williamson, Oliver, *Transaction Cost Economics: The Governance of Contractual Relations*, *Journal of Law and Economics*, v 22, 1979, pp 233-261.

<sup>29</sup> Rogerson, William, *Contractual Solutions to the Hold-Up Problem*, *The Review of Economic Studies*, v 59(4), 1992.

### 3.2.3 Our assessment of the hold-up problem

There is a mutual incentive for Queensland Rail and access seeker to agree to a contract

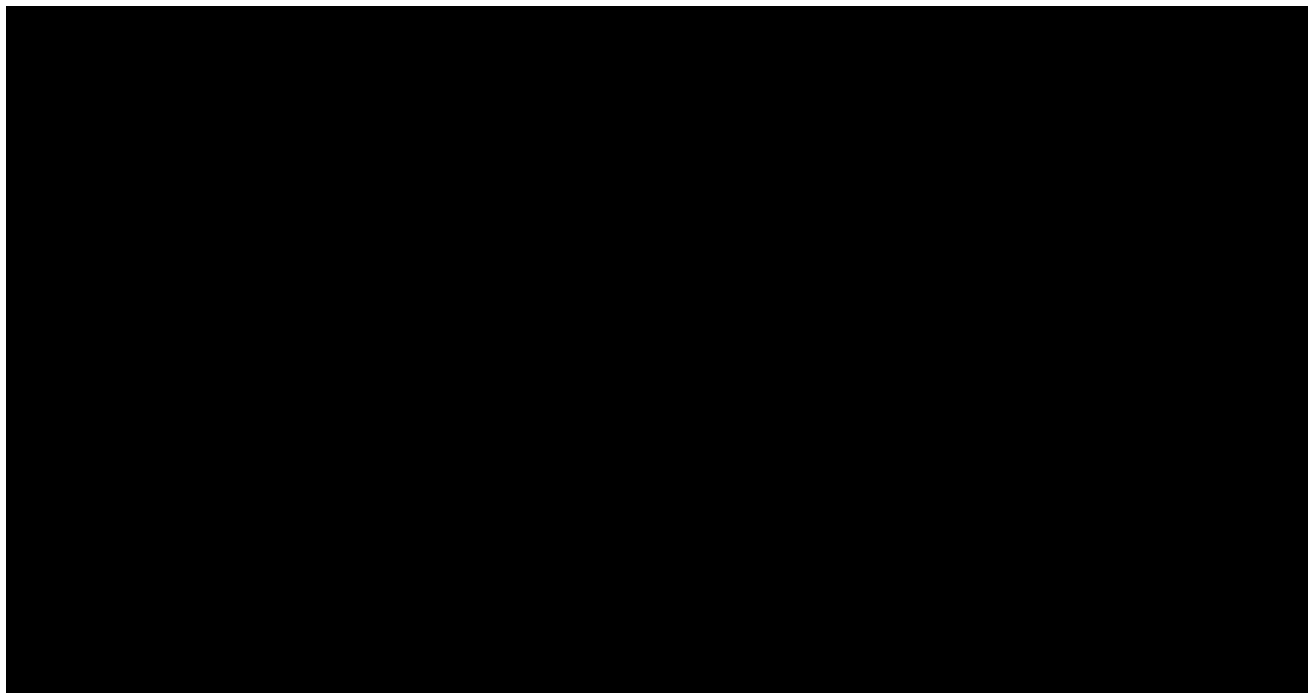
One obvious solution to the hold-up problem would be to sign contracts with terms and conditions that meet the needs of the access seeker, eg, duration of the contract and options for renewal.

As discussed above, Queensland Rail has a strong incentive to maximise throughput, and so increase the volume on its network, given that it has spare capacity. Put another way, Queensland Rail has an incentive to avoid the hold-up problem. Similarly, access seekers that believe there could be a hold-up problem also have an incentive to mitigate the hold-up problem.

It follows that there is a mutual incentive for Queensland Rail and the access holder to negotiate an access agreement that is acceptable to both parties, regardless of Queensland Rail's declaration status. [REDACTED]

[REDACTED]

[REDACTED]



Queensland Rail does not have the incentive take advantage of market power in the second round

The QCA assessment of the hold-up problem implicitly assumes that there are only two rounds, ie, the 'first round' where an access seeker decides whether to invest and a 'second round' where Queensland Rail would then increase access prices.

In practice, rail networks have long asset lives and over its life there will be multiple rounds of negotiations with multiple different customers. Given that this is an issue with multiple rounds not just two, Queensland Rail does not have the incentive to hold-up its customers. If it did hold up its customers, existing and future customers would expect that they would be held up in any subsequent negotiations and as the QCA notes, this would likely reduce entry of new users and undermine investment incentives of existing users.

<sup>30</sup> This information has been provided by Queensland Rail

<sup>31</sup> This information has been provided by Queensland Rail



This would then put the long run sustainability of the network at risk as access seekers are discouraged from using Queensland Rail's network. It is in Queensland Rail's interests, particularly in the situation where Queensland Rail has significant spare capacity, to maximise network usage.

The notion that expropriating sunk costs can damage an access provider financially is supported by the Productivity Commission (PC) in its inquiry report into the Electricity Network Regulatory Framework.<sup>32</sup> The PC states that:<sup>33</sup>

It is in the interest of a network business not to expropriate the sunk costs of early purchasers because this would signal that it would expropriate the sunk costs of later purchasers, with forgone revenue from transporting less power. The hold-up problem would vanish.

In other words, by developing a 'bad brand image' through expropriating the sunk costs of small users, a network business risks losing future revenue. As a result, it is in the best interest of a network business to maintain a 'positive image' and not seek to expropriate sunk costs.

This logic can be applied to the situation faced by Queensland Rail. If Queensland Rail chose to expropriate the sunk costs of access seekers or access holders, its reputation would be damaged and thus future access seekers or users would be less willing to sign a contract with Queensland Rail. Given the long-lived nature of Queensland Rail's network, this could result in stranded assets where access revenue no longer covers the incremental cost of keeping the system open.

Existing regulatory arrangements provide limited protection against the hold-up problem

We also note that existing regulatory arrangements provide limited protection against the hold-up problem, since Queensland Rail is currently allowed to increase prices in the 'second round' because its revenue is below the regulatory ceiling limit. Put another way, Queensland Rail can already impose significant increases in access charges under current arrangements, since the revenue it currently collects is far below the cost of providing rail services.

The PC inquiry points out that economic regulation is not a definitively effective means to prevent the hold-up problem:<sup>34</sup>

It is also not clear that even were a dominant business to ex post exploit a customer making sunk investments that the solution would be price regulation.

Put another way, even if there is a hold-up problem, it is not clear that price regulation would be an efficient or effective means of resolving it.

Conclusion

In summary:

- contracting is a solution to the hold-up problem – Queensland Rail has a strong financial incentive to negotiate contracts that are acceptable to access seekers;
- Queensland Rail is in a 'multi-round' negotiation – extorting access seekers/holders would likely damage Queensland Rail's reputation, thereby reducing its long run financial viability; and
- even if the hold-up problem does exist, existing regulation provides limited protection to consumers and it is not clear if price regulation is an effective or efficient solution.

<sup>32</sup> PC, *Electricity Network Regulatory Framework Inquiry report*, Appendix B: The hold-up problem, June 2013, p 3.

<sup>33</sup> PC, *Electricity Network Regulatory Framework Inquiry report*, Appendix B: The hold-up problem, June 2013, p 3.

<sup>34</sup> PC, *Electricity Network Regulatory Framework Inquiry report*, Appendix B: The hold-up problem, June 2013, p 6.

### 3.3 The reverse cellophane fallacy

#### 3.3.1 QCA's assessment of whether road and rail are in the same market

To undertake the criterion (a) assessment, the market in which Queensland Rail operates must be defined. The key question is what, if any, competitive constraint does road represent to Queensland Rail's service.

The approach employed by the QCA is to consider the following question:<sup>35</sup>

...if the cost of rail infrastructure increased relative to road (for example, if Queensland Rail imposed a SSNIP for the use of its rail infrastructure), would above-rail operators switch from using rail infrastructure to using road infrastructure instead?

That is, if the cost of transporting via rail increased relative to the cost of transporting via road, ie, if a small but significant non-transitory increase in price (SSNIP) test was applied to Queensland Rail's services, would customers switch to road?

#### 3.3.2 The cellophane fallacy

The cellophane fallacy refers to a situation in which, due to the market power of the incumbents, the prevailing market prices are above what they *would have been* in a workably competitive market, leading to an erroneously wide market definition when the SSNIP is applied to the prevailing (above competitive levels) prices.

Prominent competition economist Massimo Motta notes:<sup>36</sup>

... the appropriate market definition test should not ask whether the hypothetical monopolist can increase prices in a small but significant way relative to *current* prices, but rather relative to *competitive* prices.

#### 3.3.3 The reverse cellophane fallacy

Froeb and Werden extend the concept of the cellophane fallacy in the context of competition analysis to what they coin the reverse cellophane fallacy, for which the relevant market is defined too narrowly on the basis of prevailing market conditions as prevailing prices are less than the competitive price:<sup>37</sup>

... markets delineated on the basis of prevailing demand elasticities are likely to be too small and the potential for the exercise of market power is likely to be overstated. This is precisely the opposite of the error in the Cellophane case, so we term it the reverse Cellophane fallacy.

The risk of defining a market that is narrower than appropriate is particularly relevant in the case of regulated businesses. In their 2010 paper *Regulatory Policy and the Reverse Cellophane Fallacy*, Debra Aron and David Burnstein explore this very possibility. They find that the reverse cellophane fallacy leads to an incorrectly narrow market definition, with the potential exclusion of what might have been substitutes in a competitive market; and that this leads to the self-perpetuation of regulatory oversight:

... applying the "small but significant non-transitory increase in price" (SSNIP) test for market power that is defined in the Horizontal Merger Guidelines to firms in regulated industries can lead to the reverse of what is referred to in the antitrust literature as the "cellophane fallacy".<sup>38</sup> ...

<sup>35</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 16. Although not key to our analysis, the appropriate test is not whether above rail operators switch to road rather whether end customers (ie owners of the freight) switch to road.

<sup>36</sup> Massimo Motta, *Competition Policy: Theory and Practice*, Cambridge University Press, Cambridge, 2004, p 105.

<sup>37</sup> Froeb, Luke and Werden, Gregory, "The Reverse Cellophane Fallacy in Market Delineation", *Review of Industrial Organization*, v 7, 1992, p 241.

<sup>38</sup> Aron, Debra and Burnstein, David, "Regulatory Policy and the Reverse Cellophane Fallacy", *Journal of Competition Law and Economics*, v 6(4), 2010, p 975.

The uneconomically low prices cause other services to appear to be weaker substitutes than they would be at compensatory prices and therefore lead to improperly narrow market definitions and erroneous inferences of market power. This in turn leads to the self-perpetuation of regulation, in which regulators insist on finding that the incumbent lacks market power before deregulating prices, whereas the artificially restricted prices lead to an erroneous inference of market power.<sup>39</sup>

The implication of this is that much caution should be exercised when defining markets, ie, it is erroneous to apply a SSNIP test without being aware of the fact that subsidised prices will be significantly lower than those dictated by a competitive market, and the competitive impact of road-based substitution will be underestimated.

### 3.3.4 Our assessment whether road and rail are in the same market

The cellophane fallacy and the reverse cellophane fallacy indicate the importance of applying the SSNIP framework using prices that would apply under a workably competitive market, rather than other pricing points.

We note that under workably competitive outcomes, price outcomes should at least reflect the long run cost of providing services, which would be the revenue ceiling. In the case of Queensland Rail, the revenue from access charges are significantly lower than the revenue ceiling. It follows that current prices are significantly below those that would be observed under workably competitive outcomes, and so applying the SSNIP test using realised prices is highly likely to cause error.

The consequence of applying the SSNIP framework to prevailing prices thus has the potential to be significant. This is especially the case if the disparity between prevailing prices and the ceiling is large, as is the case for Queensland Rail's systems. Prevailing prices are approximately 60 per cent lower than the price ceiling on the Mount Isa system, and approximately 78 per cent lower on the North Coast line. Put another way, applying a SSNIP test with reference to current prices would lead to a definition of market that is narrower than it should be.

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<sup>39</sup> Aron, Debra and Burnstein, David, "Regulatory Policy and the Reverse Cellophane Fallacy", *Journal of Competition Law and Economics*, v 6(4), 2010, p 973.

## 4. System by system analysis

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In this section we analyse whether criterion (a) is met for the Mount Isa, North Coast and West Moreton and Metropolitan system services. Our analysis does not take account of the Access Framework in assessing whether criterion (a) is met – rather, we discuss the Access Framework and its effect in section 5.

We discuss the potential competition consequences of Queensland Rail's services no longer being declared and conclude that there would be no material effect on competition. We find that the current declared status of Queensland Rail's network does not result in a promotion of competition in any market. Our findings are based on:

- the service provider has no market power – Queensland Rail has neither the ability nor the incentive to cause any adverse effect on competition in either its own or dependent markets, irrespective of its declaration status; and
- Queensland Rail has strong incentives to maximise demand for its services, and so to promote competition in dependent markets.

Accordingly, declaration would not promote a material increase in competition, and so criterion (a) is not satisfied. The remainder of this section explains the reasoning underpinning each of these conclusions on a system by system basis.

### 4.1 Mount Isa system

#### 4.1.1 QCA Approach and conclusions<sup>40</sup>

In its analysis, the QCA focuses on the dependent market of North West Queensland minerals tenement market.

QCA argues that the products carried on the Mount Isa system are bulk, and so are not suitable for carrying by road (ie, the freight is heavy and is a long distance away from port). Thus, the QCA concludes that Queensland Rail has the ability to exercise market power on the Mount Isa system service as there is no competition from road.

The QCA considers that this would affect competition in another market via what it terms as the hold-up problem. The QCA accepts that Queensland Rail is likely to have an incentive to offer access to a potential entrant miner in order to promote utilisation of its below rail infrastructure and increase its revenues. However, it claims that in the second period (ie, at the time of contract renewal), Queensland Rail will raise its prices or impose less favourable non-price access terms.

The QCA claims that freight costs are likely to be a material component of the overall decision-making process for a firm seeking to enter the North West Queensland minerals tenement market. As a result, the QCA concludes that declaration of the Mount Isa service will deliver a material increase in competition in the North West Queensland minerals tenement market when compared with the counterfactual of no declaration.

#### 4.1.2 Increasing competition from road

Products carried on the Mount Isa system services are more diverse than just bulk products. The products transported includes mineral and metal concentrates, mining inputs, industrial products and fertiliser, fuel and livestock, as well as passengers.

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<sup>40</sup>Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, pp 57-58.

Road freight provides an increasing constraint on rail freight along the Mount Isa system. Although the constraint from road haulage is less likely to bite for heavier, bulky items for which rail is most suited, road freight is becoming a viable option for some bulk items. In particular:<sup>41</sup>

- several new, smaller scale mines along the Mount Isa system are opting for intermodal solutions such as half-height containers, reducing the up-front capital costs necessary for new mine sites to put in place transport and logistics arrangements – this is often a preferred solution, even where the total cost is lower under traditional, bulk rail wagons, and makes road a closer constraint for bulk items;
- there are multiple recent examples of bulk and general freight items that have shifted to road, including:
  - lead ingots;
  - fuel, which is increasingly utilising road freight to Mount Isa;
  - sulphur, due to a lack of intermodal rail capacity in early 2017, with the consequence that these volumes have not switched back to rail; and
  - copper concentrates; and
- backhaul options on road improve the value proposition relative to rail freight:
  - for example, cement volumes going west to serve Glencore mines from Townsville to Mount Isa, has made road freight contestable with rail.

The recent examples of substitutions from rail freight to road highlight the increasing constraint that Queensland Rail faces from road.

#### 4.1.3 Significant spare capacity on Mount Isa

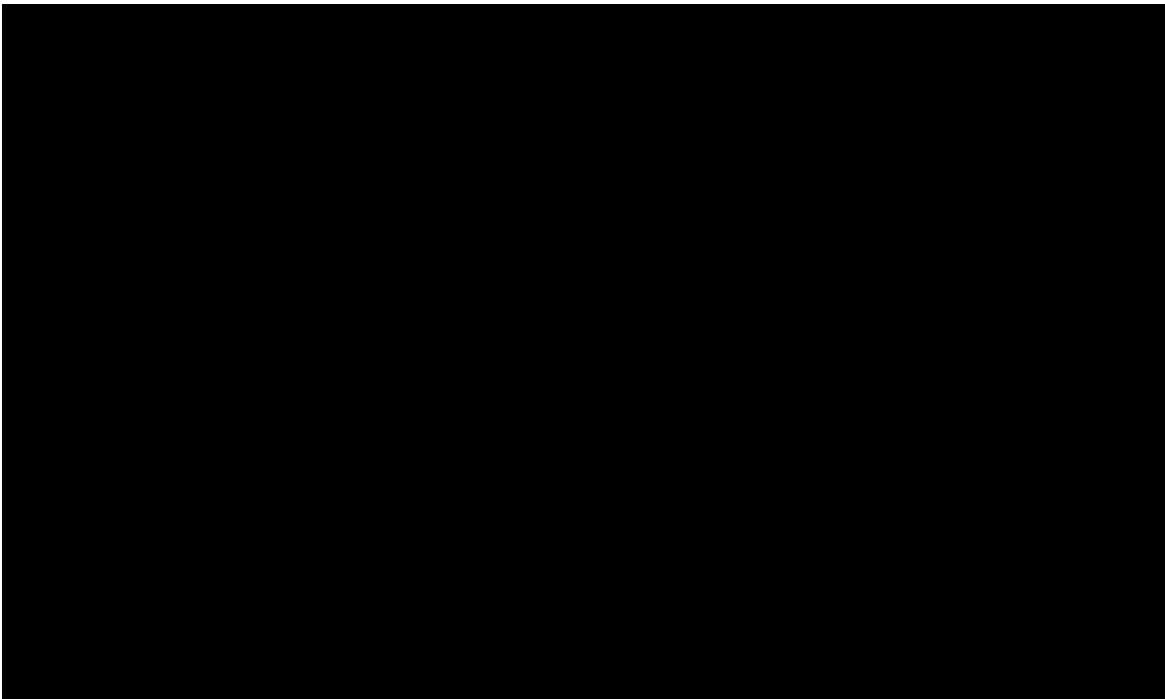
As described in section 3.1.2, where there is excess capacity and no vertical integration, Queensland Rail has an incentive to maximise utilisation on its network and maximise competition in dependent markets. This is because any user that can be charged any positive margin over incremental cost of using the network represents a contribution to Queensland Rail's substantial fixed cost base.

The QCA recognised that there is existing spare capacity on the Mount Isa system but did not discuss the extent of the spare capacity.<sup>42</sup> Figure 4.1 illustrates the significant available capacity on the Mount Isa system. The available spare capacity ranges from 45 per cent on the Surat to Hughenden and Hughenden to Cloncurry sections, up to 73 per cent on the Flynn to Phosphate Hill section.

The QCA also recognises that Queensland Rail is likely to have an incentive to offer access to a potential entrant miner in order to promote utilisation of its below-rail infrastructure. However, it does not consider this as a relevant consideration in its two-period, static view of the hold-up problem. We set out in section 3 why the QCA's conclusions based on hold-up problem are erroneous.

<sup>41</sup> This information has been provided by Queensland Rail

<sup>42</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 57.



#### 4.1.4 Charges are below the regulated ceiling

Revenue collected from access prices on the Mount Isa system (\$74 million in 2017-18) is significantly below the revenue ceiling limit (\$181 million in the same year), and prices will not change materially if Queensland Rail became undeclared.<sup>43</sup> This is because the current regulatory arrangements do not prevent Queensland Rail from increasing access prices.

It follows that the binding constraints on Queensland Rail's price setting are non-regulatory factors such as competition from road, end consumer's ability to pay and countervailing power. These factors will not change with removal of declaration and thus removing declaration, and its associated regulatory pricing constraint, would not lead to access price changes.

#### 4.1.5 Impact on dependent markets

There are a number of issues with the QCA's analysis that result in its determining that criterion (a) is satisfied, namely:

- the QCA underestimates the constraints placed on rail by road on the Mount Isa system;
- the QCA relies on a flawed interpretation of the hold-up problem; and
- the QCA claims that freight costs are a material component of the overall decision making process for a firm seeking to enter the market.

On the last point, we note that the analysis of materiality of cost should focus on below rail costs only. Estimates provided by Queensland Rail suggest that the importance of below rail costs varies depending on commodity. For example, Queensland Rail's analysis suggests that in 2017-18, below rail costs represent around:

<sup>43</sup> This is estimated access revenue and excludes TSC and other revenue. The ceiling limit value is estimated through the application of a modified DORC valuation and is calculated using revenue and expense forecasts from Queensland Rail Below Rail Product forecasts, which reflect 2017-18 Corporate Plan estimates. These values are generated by Queensland Rail.

- 0.3 per cent of estimated commodity price for copper;
- 0.8 per cent of estimated commodity price for zinc;
- 0.9 per cent of estimated commodity price for lead; and
- 5 per cent of estimated commodity price for fertiliser.

In summary, below rail costs are an immaterial input costs for many of the bulk products on the Mount Isa system.

Our conclusion is that with or without declaration, the volumes and access prices on the Mount Isa system will be the same. This is because Queensland Rail has the incentive to maximise volume due to spare capacity, and that the access prices are not constrained by regulation, and as such would not be expected to change without regulation.

Given no change in access prices or change in the volumes transported on the Mount Isa system, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not affected by declaration.

We conclude that declaration could not promote a material increase in competition in any dependent market on the Mount Isa system, given that declaration will not affect:

- the structure of the markets, or conduct of firms in any dependent market, in a way that enhances the competitive process; or
- the volume or quality of output in any dependent market.

We conclude that criterion (a) is not satisfied, even without taking account the impact of the Queensland Rail Access Framework which is discussed in section 5.

## 4.2 North Coast line

### 4.2.1 QCA Approach and conclusions<sup>44</sup>

The QCA considers the services provided by the North Coast line and Metropolitan system together. In its analysis, the QCA focuses on the dependent above rail haulage market on the North Coast (and Metropolitan) system.

The QCA argues that there are subsets in the rail haulage market namely:

- bulk products, where rail is the preferred transport mode;
- non bulk travelling less than 600km, where road is the preferred transport mode;
- non bulk freight for a medium distance (between 600-1000km), in which rail competes with road; and
- non bulk freight travelling greater than 1000km, where rail is preferred.

The QCA concludes that road and rail compete only for certain segments on the North Coast transport corridors. The QCA's conclusions are based on the current operation of the market and current road and rail prices.

The QCA accepts that Queensland Rail is not vertically integrated into freight services and considers it unlikely that Queensland Rail would enter the above-rail freight market in the foreseeable future.

The QCA places significant weight on what it describes as the hold-up problem. The QCA concludes that in a future without declaration, market participants will face material uncertainties relating to price and non-price

<sup>44</sup> Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, Section 3.7.

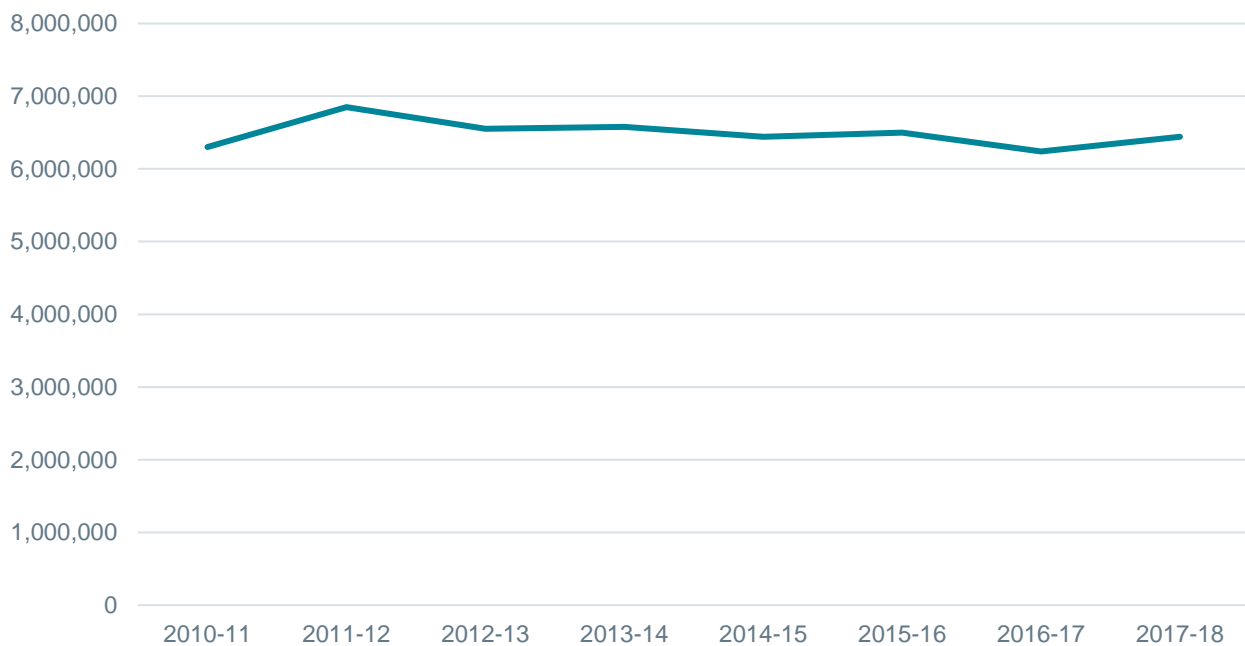
terms, particularly at the time of contract renewal. Thus, it concludes that declaration will create a material increase in competition in dependent markets.

#### 4.2.2 Competition between rail and road

Unlike other systems, Queensland Rail does not have a direct relationship with end customers on the North Coast line. In consequence, Queensland Rail also has less visibility on whether it is losing market share on this system.

From 2010-11 to 2017-18, the rail freight task on the North Coast line has been largely stable with limited growth. Queensland Rail has advised that the rail freight tasks in 2010-11 was usually low due to flood events. Excluding this year would suggest that rail freight volumes on the North Coast line have steadily declined, going from around seven billion gross tonne kilometres of intermodal freight in 2011-12 to around 6.5 billion in 2017-18.

Figure 4.2: Total intermodal gross tonne kilometres, North Coast line 2010-11 to 2017-19 ('000)<sup>45</sup>



The QCA uses existing prices to conclude that only non-bulk goods travelling between 600 and 1000km are contestable by rail and road. Thus, the QCA's analysis suffers from the reverse cellophane fallacy discussed in section 3.2. That is, the QCA has applied the SNNIP test using existing below rail access prices, which do not cover costs, and so are below prices that would occur in a workably competitive environment. Using this lower than competitive rail price to define the market results in an underestimation of the constraint that road would impose on rail in a competitive market. That is, if non-subsidised prices were used, then road and rail freight costs for longer hauls would be much closer.

The QCA also references a Bureau of Infrastructure, Transport and Regional Economics (BITRE) information sheet to suggest that rail becomes cheaper for door to door freight hauls above 1,000 km.<sup>46</sup> Further review of

<sup>45</sup> This information has been provided by Queensland Rail

<sup>46</sup> BITRE, *Road and Rail Freight: Competitors or Complements?* Information sheet 34, July 2009, p.8.

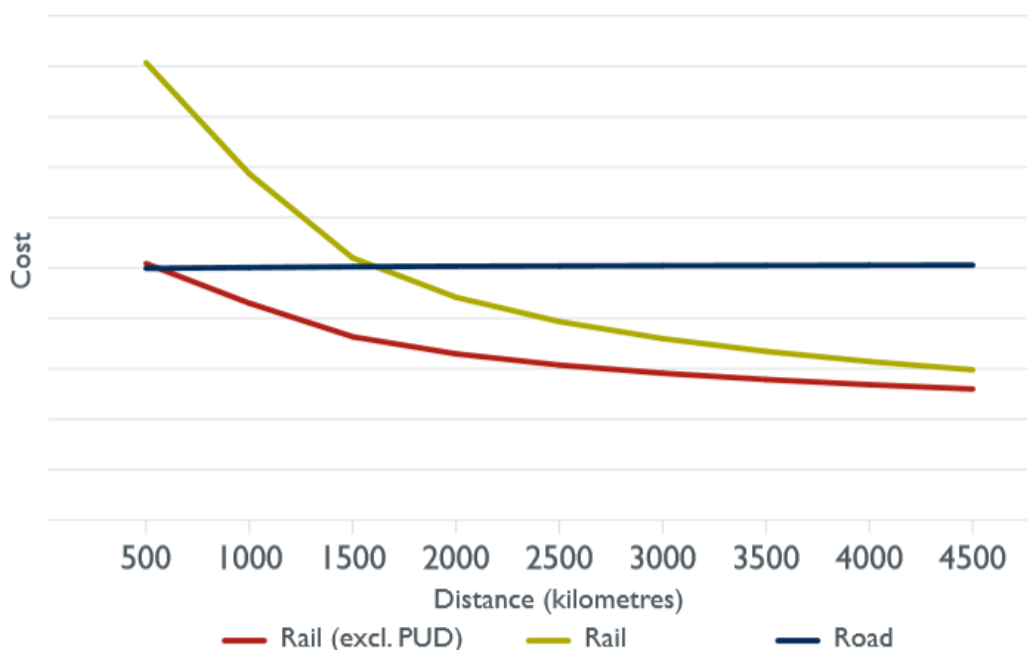


the BITRE information sheet, as shown in Figure 4.3, suggests that the distance at which rail has a cost advantage over road is:

- approximately 600km if the costs of pickup and delivery are excluded; and
- approximately 1500km if pickup and delivery costs are included.

The North Coast line freight is mostly containerised and hence pickup and delivery costs should be accounted for when determining a tipping point. This BITRE data thus suggests that road could be cheaper even for freight tasks involving distances from 1000 to 1500 kilometres.

Figure 4.3: Average freight costs for Australian intercapital road and rail freight

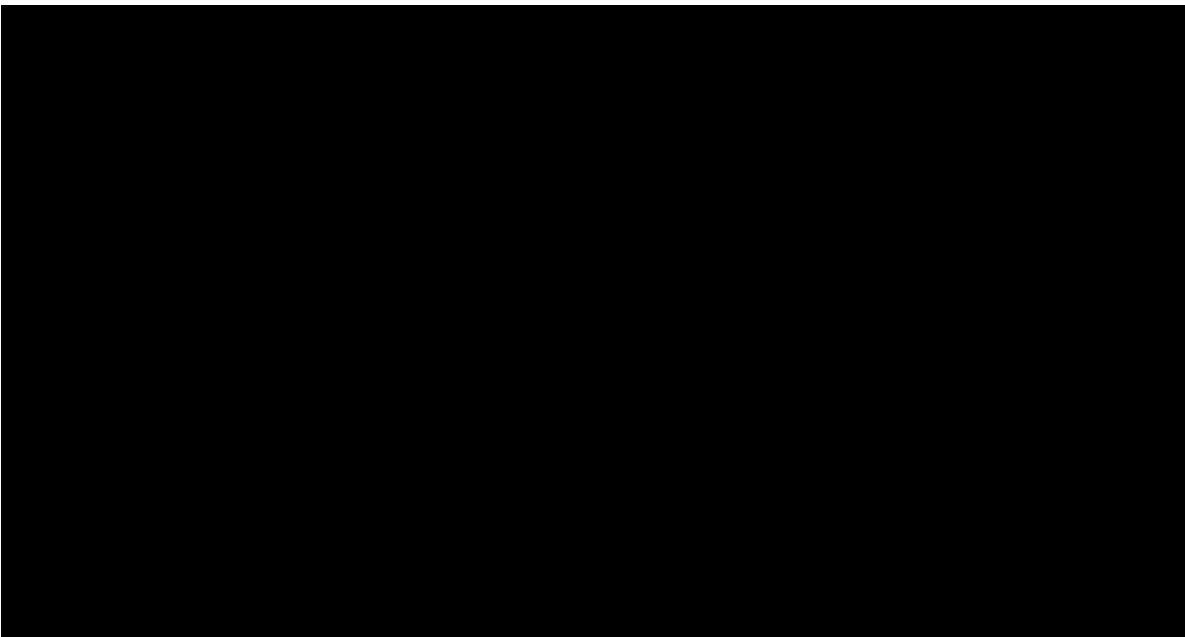


Note: Average freight costs for oil prices at approximately US\$30-50 per barrel. BITRE, Road and rail freight: competitors or complements? Information sheet 34, July 2009, p 8.

#### 4.2.3 Significant spare capacity on NCL

Although the QCA accepts that the North Coast line is not operating at capacity,<sup>47</sup> it does not provide any quantification of the extent of available capacity. Figure 4.4 illustrates that none of the sections on the North Coast line are more than 50 per cent utilised. The most utilised section is Mackay to Durroburra at 44 per cent of train path capacity and the least used section Erkala to Mackay Harbour at 4 per cent. Thus, there is significant available capacity.

<sup>47</sup> Queensland Competition Authority, *Part B Queensland Rail declaration review*, December 2018, p.45.



Sources and notes: PWC (August 2016), *Regional Rail Network Review, Network Infrastructure & Utilisation*, p 45.

As described in section 3, where there is excess capacity the provider has an incentive to maximise utilisation on its network. This is because any user that can be charged any positive margin over incremental cost of using the network represents a contribution to Queensland Rail's substantial fixed cost base.

#### 4.2.4 Charges are below regulated ceiling

As with the Mount Isa system, estimated access revenue (\$19 million for NCL South and \$27 million for NCL North, in 2017-18) is significantly below the revenue ceiling limit (\$64 million for NCL South and \$148 million for NCL North).<sup>48</sup> The access prices will remain materially the same with or without declaration as the binding constraints on Queensland Rail's prices are non-regulatory factors such as competition from road, end consumer's ability to pay and countervailing power. These factors will not change with removal of declaration and thus removing regulatory pricing constraints would not lead to access price changes.

#### 4.2.5 Impact of removing declaration on dependent markets

There are a number of problems with the QCA's analysis that cause it to determine that criterion (a) is satisfied, namely:

- the QCA underestimates the constraints placed on rail by road on the North coast line; and
- the QCA relies on a flawed interpretation of the hold-up problem.

Our conclusion is that with or without declaration the volumes and access prices on the North Coast line will be the same. This is because Queensland Rail has the incentive to maximise volume due to spare capacity, and that the access prices are not constrained by regulation and as such would not be expected to change without regulation.

<sup>48</sup> This excludes TSC and other revenue. The ceiling limit value is estimated based on book values and is calculated using revenue and expense forecasts from Queensland Rail Below Rail Product forecasts, which reflect 2017-18 Corporate Plan estimates. These values are generated by Queensland Rail.

Given no change in access prices or change in the volumes transported on the North Coast line, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not impacted by declaration.

We conclude that declaration could not promote a material increase in competition in any dependent market on the North Coast line, given that declaration will not affect:

- the structure of the markets, or conduct of firms in any dependent market, in a way that enhances the competitive process; or
- the volume or quality of output in any dependent market.

We conclude that criterion (a) is not satisfied, even without taking account the impact of the Queensland Rail Access Framework which is discussed in section 5.

## 4.3 West Moreton

### 4.3.1 QCA Approach and conclusions

The QCA considers the services provided by the West Moreton and Metropolitan system together. The QCA's analysis focuses on the dependent West Moreton region coal tenements market.

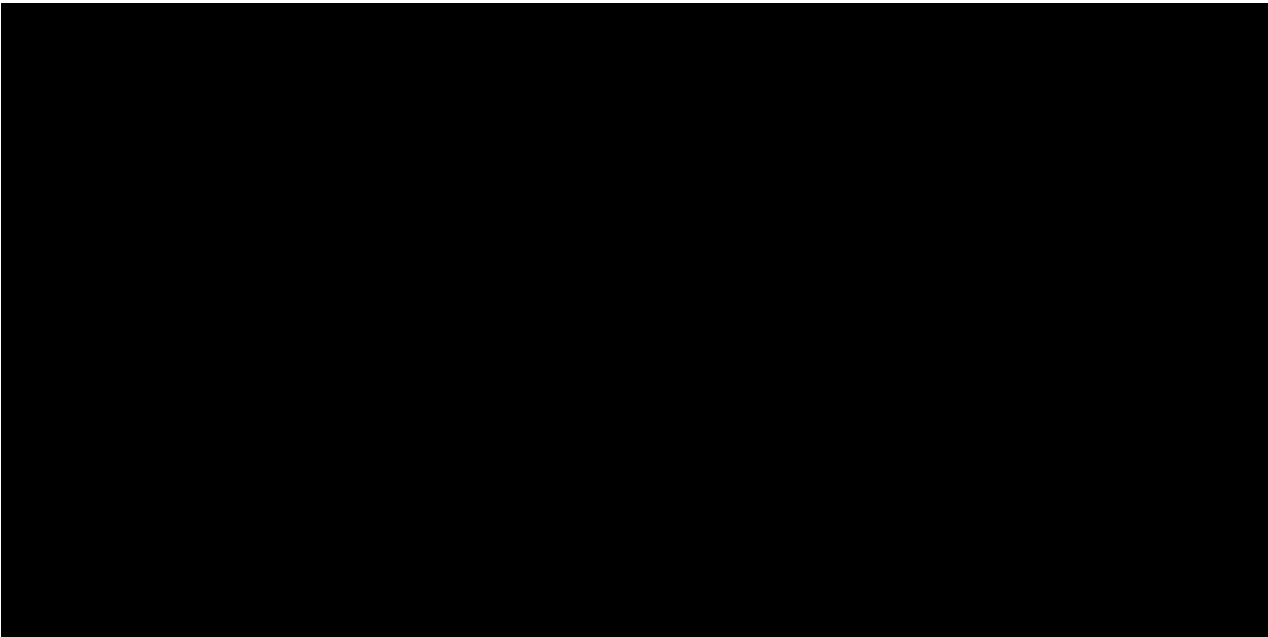
The QCA concludes that coal producers are dependent on rail to deliver their coal to port and that road does not provide a competitive constraint.

As with the other systems, the QCA places significant weight on what it describes as the hold-up problem. It accepts that in a world without declaration, Queensland Rail would have an incentive to provide access to a potential market entrant in the first period due to the spare capacity on the West Moreton and Metropolitan systems. However, the QCA also contends that Queensland Rail will have the ability and incentive to exert market power in the second period (eg, when contract needs to be renewed), leading to a hold-up problem.

The QCA concludes that access to the West Moreton and Metropolitan systems services, on reasonable terms and conditions as a result of declaration, would resolve the hold-up problem, thereby promote a material increase in competition in the West Moreton region coal tenements market.

### 4.3.2 Uncertainty of freight volumes on West Moreton system

Currently there is significant spare capacity on the West Moreton system with utilisation being at a maximum 70 per cent at Toowoomba Range (in 2017-18), with utilisation dropping to 13 per cent on the Dalby to Miles section. Figure 4.5 illustrates that there is significant availability for each freight type, with coal having 24 per cent of paths currently available.



Sources and notes: PWC (August 2016), *Regional Rail Network Review, Network Infrastructure & Utilisation*, p 45.

There is significant uncertainty on the tonnage of coal haulage that will use the West Moreton system over the next five years.

The West Moreton system currently serves two mines producing thermal coal, with current volumes around six mtpa. There is uncertainty about future volumes. Based on information from Queensland Rail, we understand the most likely scenarios are that volumes may either increase to around nine mtpa (across two mines) or decrease to two mtpa (from one mine) within the next five years. In particular:

- Yancoal has one active mine, Cameby Downs, which is expected to continue to be active throughout the period; and
- New Hope's existing production is nearing exhaustion and is expected to be closed in 2020, although it is seeking approval to extend its production at New Acland. The necessary approvals for this extension have not yet been granted, and so there is no certainty that this extension will proceed.

On the assumption that the New Acland mine does not become operational during the next 10-15 years, Queensland Rail estimate that the average annual volume of thermal coal is likely to be around two mtpa. Should the New Acland mine extension be developed, annual volume of thermal coal is instead likely to be around nine mtpa. We understand that the current capacity of the West Moreton System is around 9.5 mtpa.<sup>49</sup>

Queensland Rail's market power will depend critically on whether coal haulage is nine mtpa (the high tonnage scenario) or 2 mtpa (the low tonnage scenario). Given this, we have considered Queensland Rail's market power under the two different demand scenarios.

### 4.3.3 The low tonnage scenario

In the event that the realised annual volume of thermal coal falls to around two mtpa, the level of access charge necessary to cover the cost of providing Queensland Rail's services would most likely exceed Yancoal's ability to pay. Further, the forecast volume of Yancoal's production to be carried on Queensland

<sup>49</sup> Queensland Rail, *West Moreton System – Regional Network Management Planning*, April 2017, p 4.

Rail's network amounts to a very low rate of utilisation of the West Moreton System, ie, it has the capacity to carry around 9.5 mtpa of coal. Put simply, the revenue Queensland Rail will be able to collect will be significantly lower than the revenue ceiling and there would be significant spare capacity on the system.

In that context, Queensland Rail has strong incentives:

- to negotiate a price with Yancoal (and any other user) that results in maximum usage of its network;
- to recover the largest possible proportion of its total economic costs, given the circumstances; and
- to promote competition in dependent markets by any means possible, so as to maximise demand for services on the West Moreton System – the most obvious means available to Queensland Rail to maximise demand is to efficiently facilitate access to its network.

Given this, we conclude that with or without declaration, the volumes and access prices on the West Moreton system will be the same. Given no change in access prices or change in the volumes transported, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not impacted by declaration. It follows that criterion (a) is not satisfied, even without taking account the impact of the Queensland Rail Access Framework which is discussed in section 5.

#### 4.3.4 The high tonnage scenario

In the event where the high tonnage scenario occurs, Queensland Rail has proposed to continue existing pricing arrangements for coal traffic in DAU2, ie, there will be a reference tariff that allows Queensland Rail to recover the total costs allocated to coal users.

If New Acland's extension does become operational, there could still be some limited capacity on the system, given the West Moreton System capacity of 9.5 mtpa. However, any remaining spare capacity will unlikely be sufficient to accommodate outputs from a new mine.

The above discussions suggest that Queensland Rail would be able to earn revenue that is above the revenue ceiling if it becomes undeclared. Whether this means the West Moreton system would satisfy criterion (a) is unclear, ie, would the price increase be enough to impact on the volume of coal output in the region?

Although Queensland Rail has an incentive and ability to charge higher prices, it also has a strong incentive to encourage increases in mining output so that it can earn additional profit through a network expansion. In other words, it does not have an incentive to 'price out' mining developments. If no new mining developments are 'priced out', then the increase in price would be a transfer of profit from miners to Queensland Rail but not have a material effect on competition.

## 4.4 Conclusion

We conclude that criterion (a) is not satisfied, without taking into account of the Access Framework, for the Mount Isa system, North Coast line and, if the low tonnage scenario eventuates, the West Moreton system. This is because declaration would not promote a material increase in competition in any dependent market. To reiterate, this conclusion is founded on the following important observations:

- Queensland Rail's ability to charge higher prices is constrained by market factors, ie, it does not have market power – it follows that access charges will not change if it were undeclared;
- the volume of freight hauled by rail is flat or declining on most systems, and Queensland Rail has large amounts of spare capacity – these circumstances create a strong incentive to maximise demand for its service, ie, to promote competition in markets that may utilise its infrastructure; and

- Queensland Rail's existing circumstances are compelling evidence of its lack of enduring market power, since it is unable to recover its costs, is reliant on government subsidies and is not constrained by the existing revenue ceiling.

## 5. Queensland Rail Access Framework

In its draft decision, the QCA considered that the Access Framework was not an appropriate alternative scenario, ie, the QCA did not consider it to be a relevant consideration in the world without declaration. The QCA stated that the Access Framework had not been executed and there was no evidence that it would come into force on the expiry of declaration.<sup>50</sup>

We have been asked to assume that the deed poll that gives effect to the Access Framework will be executed in March 2019. The Access Framework will therefore apply from 9 September 2020 and continue to apply to access for the purpose of operating a train service on one or more of the North Coast line, Mount Isa system, West Moreton system and/or Metropolitan system, where that train service is not a declared service.

Thus, absent declaration Queensland Rail will have in place a legally binding, enforceable Access Framework that is substantially similar to the current access undertaking, AU1. In this section we describe that Access Framework, including the pricing principles it contains, and summarise the key differences between AU1 and the Access Framework.

We conclude that given the similarity between the Access Framework and current regulation, even if the analysis of the previous sections is rejected, that there will be no difference in market outcomes between the world with and without declaration. Thus, criterion (a) will not be satisfied for any of the Queensland Rail systems.

### 5.1 'Without declaration' – Queensland Rail's Access Framework

As noted above, the Access Framework that Queensland Rail will apply is substantially the same as AU1. The key features of the Access Framework are described in the table below.

Table 5-1: Key features of Queensland Rail's proposed access framework

| Clause | Feature                              | Comment  |
|--------|--------------------------------------|--|
| 1.3    | Differentiation and Hindering Access | <p>Despite Queensland Rail being vertically separated and so the conditions of access not being relevant, the Access Framework includes the obligations in Clauses 100,104,125, and 168C of QCA Act. These are:</p> <ul style="list-style-type: none"> <li>not to differentiate unfairly between access seekers in a way that has a material adverse effect on the ability of Access Seekers to compete when negotiating and providing access; and</li> <li>not to engage in conduct for the purpose of preventing or hindering access.</li> </ul> |
| 1.4    | Extension Investment Requirements    | Substantially the same form as AU1.  |
| 1.5    | Master Planning                      | Obligation to develop and consult on network master plan.  |
| 2      | Negotiation                          | Detailed obligations and deadlines to ensure a good faith and timely negotiation process that is transparent due in part to information sharing requirements. Contains rules around mutually exclusive access applications.  |
| 3      | Pricing                              | Queensland Rail will be subject to the following pricing principles:   |

<sup>50</sup> QCA, Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, Draft recommendation, December 2018, p 29.

|            |                               |   |
|------------|-------------------------------|---|
|            |                               | <ul style="list-style-type: none"> <li>• price limits, ie, access revenue needs to fall within the following boundaries of:               <ol style="list-style-type: none"> <li>a) ceiling limit, which reflects the efficient cost of providing the service using DORC valuation; and</li> <li>b) floor limit, which reflects the incremental cost of providing access;</li> </ol> </li> <li>• the ability to negotiate access terms within these limits, that best reflect the circumstances of access seekers; and</li> <li>• recourse to arbitration, should negotiations fail.</li> </ul> |
| 4.3        | Operating Requirements Manual | Requirement to maintain and publish an up to date Operational Requirements Manual which provides, amongst other things, detailed requirements on interfaces, safe working procedures, emergency management and network control and planning.  |
| 5          | Reporting                     | <p>Obligation to provide monthly reports for access holders by system covering train performance, differences between trains run and planned, major incidents and network quality.</p> <p>Obligation to provide an annual financial report covering revenue, expenses and return on assets.</p> <p>Establishment of Rail User Groups to discuss and coordinate system improvements.</p>   |
| 6.1        | Dispute resolution            | Dispute resolution procedures including binding arbitration.  |
| Schedule F | Network Management Principles | Sets out the network management principles including passenger priority that Queensland Rail must comply with in running its network.   |
| Schedule H | Standard Access Agreement     | A standard set of terms that is substantially consistent with the standard access agreement in AU1.   |

## 5.2 Pricing principles

In the material below, we describe the pricing principles to apply under the Access Framework and compare these with the existing arrangements.

### 5.2.1 Existing pricing arrangements

Overview of existing reference tariffs on the West Moreton System

Coal haulage users on the West Moreton system are the only users that pay reference tariffs.<sup>51</sup> The West Moreton System reference tariff applies to coal haulage services and acts as price cap for a reference service. It is a two-part tariff, comprising

- a per train path charge; and
- a gross tonne kilometres (GTK)-based charge.

<sup>51</sup> Coal haulage users on the West Moreton System that pass through the Metropolitan System pay a separate reference tariff for access to the Metropolitan System. Up until AU1's approval in 2016, coal users paid the West Moreton tariff for both systems, where the West Moreton calculation was used as a proxy for the Metropolitan System calculation, given the complex nature of the latter. In 2016, the QCA approved a separate Metropolitan reference tariff. The separate tariff uses the 2013 value of the West Moreton System tariff as a starting point and rolls this forward annually, adjusting for changes in the Consumer Price Index as well as the addition of incremental capital expenditure to its asset base.



The reference tariff is calculated so that Queensland Rail can recover the ceiling revenue limit allocated to coal services. The reference tariff is intended to be the price that is typically paid by coal services although, on occasion, the reference tariff has been varied, for example, on account of cost and risk differences. The take or pay component can represent as much as 100 per cent of access charges collected from coal services.

Coal users may purchase additional 'ad hoc services' from Queensland Rail outside of the take and pay arrangements. Revenue from 'ad hoc services' is not counted towards the 'revenue ceiling' but these services also pay the reference tariff.

Currently, only two coal mines use the Western Moreton system/Metropolitan system, being those owned by Yancoal and New Hope. Aurizon is the above rail operator for both coal mines.

For non-coal users on the West Moreton system, access prices are negotiated under the same negotiate/arbitrate framework that applies to other systems, as described below.

Pricing principles that apply to other systems

For other rail systems, Queensland Rail does not have a reference tariff. Rather, Queensland Rail is required to comply with the following pricing principles, described in their order of precedence:

- limits on price differentiation, ie, not to discriminate in favour of downstream operators, except to reflect differences in costs or risk of providing access;
- price limits, ie, access revenue needs to fall within a:
  - ceiling revenue limit, which reflects the efficient cost of providing the service; and
  - floor revenue limit, which reflects the incremental cost of providing access;
- network utilisation, where Queensland Rail may charge different rates for train service serving different markets to maximise commercial viability; and
- revenue adequacy, which states that access charges and transport service payments should generate revenue that is at least enough to meet efficient cost of providing access, including a return on investment.

In practical terms, this means that Queensland Rail is required to negotiate with rail operators to achieve an access price that does not discriminate between the same freight type and, when combined with revenue from other access seekers, falls within the prescribed revenue limits.

Queensland Rail and third-party operators run long distance passenger trains and heritage passenger train services throughout Queensland. The same negotiate/arbitrate pricing principles also apply to third party operators.

### 5.2.2 West Moreton System's circumstances do not justify a role for reference tariffs

The usual economic regulatory objective for the adoption of reference tariffs in the context of a rail access floor and ceiling pricing framework is:

- to assist in limiting the infrastructure provider from recovering more than the total economic cost of providing the service, including a reasonable rate of return; and
- to minimise transaction/negotiation costs by defining a set of standard terms and conditions associated with the reference tariff.

Such arrangements facilitate negotiation between access seekers and the access provider, where very similar services (aligned with those standard terms and conditions) are provided across multiple users with similar needs.

It follows that reference tariffs are only helpful when there is at least one of: (i) a risk that revenue will exceed the total economic cost of providing the service (ie, market power); and (ii) the presence of multiple, similar users.

However, the circumstances of the West Moreton System mean that the current reference tariff arrangements offer very limited benefits and may impose significant costs, because these circumstances do not apply, ie:

- the only two mines requiring access services on the West Moreton System have very different circumstances, and so the negotiation efficiency benefits offered by reference tariffs are small;
- there is significant uncertainty as to the demand for access; and
- as a consequence, there is substantial uncertainty as to what the outcome of a reference tariff calculation will be – principally because:
  - the price for any one user is heavily contingent (by several orders of magnitude) upon the circumstances of the other; and
  - there is a significant regulatory burden associated with developing the reference tariff, particularly since the arrangements trigger QCA oversight of capital expenditure decisions on the West Moreton System, whereas the QCA is not involved in such decisions in relation to other systems.

### 5.2.3 Negotiate and arbitrate framework within a floor and ceiling revenue limit

To address the issues raised above and to simplify the process, the Access Framework adopts a set of pricing principles for application to the West Moreton System that will be consistent with those in place on other Queensland Rail Systems. This will involve:

- a floor for total revenue (where total revenue includes any government contributions via the TSC payments), which reflects the incremental cost of providing the service;
- a ceiling revenue limit that reflects the total economic cost of providing the service, derived using depreciated optimised replacement cost (DORC) asset values – as for the revenue floor, any government contributions via the TSC are included in the value of total revenue, such that Queensland Rail cannot derive more revenue than the total economic cost of providing the service, taking into account the subsidies it receives;
- the ability for Queensland Rail to make capital expenditure decisions independent of QCA oversight; and
- recourse to arbitration, should negotiations fail.

The economic implications of adopting this approach would be that:

- Queensland Rail would not be able to earn more than the benchmark/efficient cost of a hypothetical new entrant supplier, which would:
  - be consistent with pricing principles in the QCA Act, since that explicitly provides that Queensland Rail can earn a level of revenue that covers its efficient costs; and
  - constrain Queensland Rail's ability to exercise market power (if any), since it cannot earn more than its total economic/efficient cost;
- Queensland Rail would have consistent pricing principles across its network;
- Queensland Rail would face a reduced regulatory burden, since there would not be any capital expenditure approval process; and
- importantly, no freight volumes would be lost, as compared with the situation under declaration.

For all users other than coal haulage users on the West Moreton System, the regimes are nearly identical, with pricing being negotiated between Queensland Rail and the Access Seeker, subject to Queensland Rail's revenue floor and ceiling limits, the latter of which prevents Queensland Rail from deriving excess

returns. The difference between the two approaches is that the value of the asset base used to derive the ceiling revenue limit uses a DORC methodology, whereas previously the methodology was not defined.

For West Moreton System coal users, the difference between AU1 and the Access Framework is that no reference tariff is to be calculated. Instead, access prices are negotiated between Queensland Rail and the Access Seeker, subject to Queensland Rail's revenue floor and ceiling limits, the latter of which prevents Queensland Rail from deriving excess returns. As for the other systems, the value of the asset base used to derive the ceiling revenue limit adopts a DORC valuation methodology.

#### Calculating the ceiling revenue limit

The primary purpose of the ceiling limit is to ensure that Queensland Rail is unable to set access charges that exceed the long run economic cost of providing the service, ie, to prevent Queensland Rail from exercising any potential market power.

Depreciated optimised replacement cost (DORC) is a common approach to valuing existing assets and therefore the economic cost of the service. The method has previously been used to determine asset values in other rail networks, eg, in the NSW Hunter Valley network, and in respect of the Aurizon network.

The Access Framework sets out that the value of the ceiling will be calculated by Queensland Rail using the DORC methodology for each system, as follows:

- optimisation – determination of the optimal configuration and sizing of the asset;
- replacement cost – a modern engineering equivalent (MEE) is established for the asset in the optimised assets and a replacement cost established; and
- depreciation – those MEE assets are depreciated (traditionally using straight-line depreciation) using the standard economic life of each existing asset together with an estimate of the remaining life of each existing asset.

### 5.3 Comparison between the Access Framework and declaration

We showed in section 5.1 above that the fundamental features of Queensland Rail's AU1 are retained in the Access Framework.

Although there are important differences in relation to the revised approach to pricing described in section 5.2.3 above, many differences are administrative or process improvements that will improve efficiency for access seekers, users and Queensland Rail.

A comprehensive list of the differences between the Access Framework and the Undertaking are described along with commentary on their impact in Appendix A1. The more significant non-price changes are discussed in this section below.

#### 5.3.1 Enforcement

The Access Framework and AU1 are both enforceable, albeit through different mechanisms.

The deed poll that gives effect to the Access Framework will be binding on Queensland Rail and legally enforceable in the courts of Queensland by covenantees (being access seekers who have signed an access application or renewal access application, access holders and the Treasurer of the State of Queensland). Damages, specific performance and declaratory relief are available for breaches of the deed poll, except in the case of a breach of the provisions relating to amendment of the Access Framework, in respect of which declaratory relief and/or damages are the only available remedies (not specific performance).

AU1 is also enforceable via the courts, either through application by the QCA or an affected party. Compliance with the undertaking is required by section 150A the QCA Act. The QCA or an affected party can apply to a court for orders requiring Queensland Rail to comply with the undertaking and for

compensation to be payable if a party has suffered loss or damage because of a breach (section 158A). In the period since Queensland Rail was declared, no action has been undertaken under this clause.

Given both AU1 and the Access Framework are ultimately enforceable by the Queensland courts with comparable remedies available under each, Queensland Rail has a strong incentive for material compliance under both regimes. It follows that there is no material change in market outcomes as a result of the different way in which the regimes can be enforced.

### 5.3.2 Dispute resolution process

AU1 and the Access Framework both contain at Section 6 a detailed dispute resolution process. AU1 utilises the QCA to determine disputes while the Access Framework make use of arbitrator agreed by the parties or appointed by the Institute of Arbitrators and Mediators. The Access Framework has a detailed set of criteria that the arbitrator must have regard to when making a decision. These criteria include the public interest and the legitimate business interests of both Queensland Rail and the access seeker.

The dispute resolution mechanism in the Access Framework conforms with the Competition Principles Agreement principles relating to effective access regimes and reflects standard commercial practice.

Given both AU1 and the Access Framework have effective dispute resolution mechanisms, there is unlikely to be a material impact on access seekers or outputs from the changes proposed in the Access Framework.

### 5.3.3 Mutually exclusive access applications

A revised approach to mutually exclusive access applications is included in the Access Framework based on the approach used in Australian Rail Track Corporation's (ARTC's) access undertakings, which have been accepted by the Australian Competition and Consumer Commission (ACCC) under Part IIIA of the *Competition and Consumer Act 2010* (Cth).<sup>52</sup> This approach allows Queensland Rail to allocate the access capacity to the access seeker which is most favourable to Queensland Rail in present value terms.<sup>53</sup> By adoption of this approach, the prescriptive queuing arrangements contained in AU1 are no longer required.

The revised approach may have an impact on competitors but will not alter the competitive process. In other words, the Access Framework and AU1 may result in different access seekers being allocated train paths. Importantly, the Access Framework approach is more efficient since it is more likely to allocate the capacity to the access seeker with the highest willingness to pay,<sup>54</sup> particularly since Queensland Rail is not vertically integrated and has no incentive other than to maximise its own position. The Access Framework will not affect rail output, since the rail capacity is utilised to the same extent under both regulatory approaches.

### 5.3.4 Price discrimination

The Access Framework has amended the appropriate conditions under which Queensland Rail can charge different prices to its customers. The approach mimics the approach used by ARTC in its access undertakings, which have been approved by the ACCC. ARTC and Queensland Rail are similar in that they are both non-vertically integrated track providers and thus have no incentive to differentiate between access seekers for anti-competitive purposes.

In the Access Framework, when setting prices Queensland Rail can take account of a range of factors including the characteristics of the train service, the commercial impact on Queensland Rail's business (such

<sup>52</sup> Australian Rail Track Corporation Limited (ARTC) Interstate Rail Network Undertaking dated 15 July 2008 (clause 3.10(d)) and the ARTC Hunter Valley Coal Network Access Undertaking dated 23 June 2011 (clause 3.13).

<sup>53</sup> Access Framework, clause 2.9.2.b.f, p 24.

<sup>54</sup> The ACCC agrees with this proposition. See for example ACCC, *Position Paper in relation to the Australian Rail Track Corporation's proposed Hunter Valley Rail Network Access Undertaking*, December 2010, p 187; ACCC, *Australian Rail Track Corporation Limited Hunter Valley Coal Network Access Undertaking - Draft Decision*, March 2010, p 658.

as credit risk and growth prospects) and logistical impacts on Queensland Rail's business (such as network performance).

Under AU1, the impact on Queensland Rail's cost and risks are allowable reasons for price discrimination. Although there is overlap with the Access Framework, the AU1 formulation does not allow some important differentiation. For example, allowing a lower access price for a start-up which had uncertain volume but was trying to prove rail as a viable alternative to road for a particular freight haul.

The revised approach may have an impact of competitors since it could result in increased price differentiation than under AU1. However, the reasons for this discrimination are defined and reasonable, given they are factors that affect Queensland Rail's risk, growth prospects, performance or costs. Queensland Rail is not vertically integrated and has no incentive other than to maximise its own position, which includes achieving the strongest possible growth in network usage. Thus, Queensland Rail has no incentive to price differentiate in a way that will reduce rail output.

### 5.3.5 Operating Requirements Manual

The Operating Requirements Manual (ORM) covers matters such as safety and environmental requirements, authorisation of rolling stock and other interface considerations. In AU1 the ORM is a schedule to the undertaking and thus amendments to the ORM require QCA approval. The ORM is not included in the Access Framework but Queensland Rail has retained the obligation to publish the ORM and consult on changes.

The reason that operational issues, such as those included in the ORM, were covered by the undertaking was due to concerns that a vertically integrated operator may use these requirements to hinder its above rail competitor's access or raise its competitor's costs.<sup>55</sup>

Given that following the creation of Aurizon, Queensland Rail is not vertically integrated, these concerns are no longer valid. In addition, access seekers and holders will continue to be able to access and make submissions in respect of the ORM under the Access Framework. The only change is that the QCA no longer has to approve changes to the ORM. There will be no material impact on access seekers rights and no change in market outcomes.

### 5.3.6 Reporting

Clause 5 of the AU1 and the Access Framework both have significant reporting requirements on Queensland Rail.

The Access Framework reporting introduces information more tailored to access seekers and includes:

- monthly operational reports (in place of current quarterly reports) by system to be provided on key operational issues relevant to rolling stock operators and access holders – these reports will cover:
  - on time train performance;
  - actual and scheduled transit times;
  - train cancellations;
  - major operational safety or environmental incidents; and
  - a summary of speed restrictions in place.
- a forum for Rail User Groups for the West Moreton, North Coast and Mount Isa Systems, to review, discuss and improve rail operational issues; and

<sup>55</sup> For example, the QCA's Final Decision in 2001 stated that Queensland Rail's vertical integration gives rise to a conflict of interest because of its ability to use rolling stock, safety and environmental requirements in the Undertaking to hinder access to its below-rail services, thereby protecting its above-rail business groups' QCA, *Final Decision on Queensland Rail's Draft Undertaking*, July 2001, p 212.

- an annual financial report which shows:
  - revenue and expenses; and
  - return on assets by system for the West Moreton, North Coast and Mount Isa systems.

In both the AU1 and the Access Framework, access seekers have access to performance and financial information. Queensland Rail's expectation is that the changes in the Access Framework will provide more relevant information to access seekers. In any event, these reporting changes will not materially impact on access seekers since they will still have access to relevant operational and financial information.

### 5.3.7 Operating Plan Template

AU1 contained an Operating Plan Template in Schedule 3. This is a blank template, which sets out the operating plan (once completed by each access seeker/holder) for the access seekers/holders service and includes information on service schedules and train information (eg, the locomotive and wagons used, mass, speed and length).

The Operating Plan Template is not included in the Access Framework. However, there are no material changes proposed to the template and Queensland Rail will instead publish the template on its website. The inclusion or exclusion of the template in the regulatory regime will have no material impact on access seekers and holders or on competitive outcomes.

The only difference will be that the QCA no longer has to approve amendments to the Template. The information is still available to access seekers and holders and Queensland Rail's incentive (as it is not vertically integrated) is to have an operating plan that is an effective operating document useful in the running of the network.

### 5.3.8 Network Management Principles

The Access Framework simplifies the Network Management Principles contained in AU1 Schedule F. AU1 includes prescriptive train planning principles, which were introduced when Queensland Rail was vertically integrated. The concern at that time was that vertically integrated rail provider could potentially hinder access or increase its rival's costs through the decisions it made in a live run environment which are governed by the Network Planning Principles. The principles included in the Access Framework are consistent with ARTC's approach in its Interstate and Hunter Valley Undertakings, which have both been accepted by the ACCC under Part IIIA of the *Competition and Consumer Act 2010* (Cth).<sup>56</sup>

Queensland Rail is not vertically integrated and has the incentive to operate the network efficiently subject to the passenger priority constraints that are present in both AU1 and the Access Framework. The simplification of the Network Management Principles will have no material impact on the way Queensland Rail operates its network and thus no material impact on access seekers or competition.

## 5.4 Conclusion

In specifying the Access Framework, Queensland Rail has retained all the features of AU1 under declaration, that aid access and that are pro-competitive. The proposed future state in the absence of declaration has sought to make administrative or process improvements which will further improve efficiency for access seekers, users and for Queensland Rail, while minimising the regulatory burden for the QCA.

In addition, the pricing framework under the Access Framework has been designed using economic principles to provide sufficient protection to access seekers, ie, to ensure that Queensland Rail cannot

<sup>56</sup> See ARTC Interstate Rail Network Undertaking (clause 9.3) and the ARTC Hunter Valley Coal Network Access Undertaking (clause 11.2).

exercise market power, and provides a fit-for-purpose regime to replace the reference tariff arrangements at West Moreton, which were generating substantial costs without providing ongoing certainty to users (given how sensitive the reference tariff is to coal volumes).

Nothing in the without declaration world (ie, in the Access Framework) suggests that access would be more restricted or that volumes or quality of service would decline, compared to a state of the world where declaration continues.

- the regimes with and without declaration are nearly identical:
  - for all systems bar West Moreton, the regimes with and without declaration are close to identical, with the exception that the asset base is set using a DORC valuation methodology rather than as a result of a negotiation between Queensland Rail and the access seeker; and
  - for the West Moreton System, the process is the same under AU1 and the Access Framework in that there is a floor and ceiling between which Queensland Rail must price which prevents excess returns – the principal difference is that the asset value used is a pure DORC valuation methodology rather than a hybrid, and that reference prices are not calculated;
- the Access Framework sets a revenue ceiling that ensures Queensland Rail cannot earn revenues that exceed its economic cost of providing the infrastructure service, and so is prevented from exercising its market power by charging excessively for access, even if it had the ability and incentive to do so (which it does not); and
- there are no material changes in non-price terms and conditions between AU1 and the Access Framework.

Accordingly, declaration would not promote competition in any dependent market, either materially or otherwise, and criterion (a) is not satisfied. Even if the QCA's position on the dynamics of the relevant markets and market power was accepted (which we do not, as we discuss in Sections 2 and 3 above), this conclusion is robust. In the with and without declaration comparison you are comparing a world with regulation against a world with the Access Framework, which is materially the same as the existing regulation.

## A1. Differences between Queensland Rail Access Undertaking 1 and the Access Framework

| AF Clause                     | Changes   | Comment  |
|-------------------------------|---|--|
| <b>Preamble</b>               | Updated to reflect new situation and remove unnecessary history.  | No impact on market outcomes – preamble does not contain operative provisions.   |
| <b>1.2.1(a)</b>               | Updated to refer to subparagraph (d).   | Reflects the application of the Framework as set out in amended subparagraph (d).  |
| <b>1.2.1(d)</b>               | Amend (d) to remove reference to QCA Act and specify application of Framework.  | Clarifies that provisions of the QCA Act relating to declared services are no longer relevant and specifies application of the Framework.  |
| <b>1.2.2 (new)</b>            | Inclusion of Framework Objective.   | The objective reflects section 69E of the QCA Act and therefore there will be no impact on access seekers' rights or market outcomes.  |
| <b>1.2.4 (formerly 1.2.3)</b> | Simplify by deleting paragraphs (b) to (g).   | Removes prescriptive requirements relating to line diagram amendments. These are important for Aurizon as they define the declared Network but not Queensland Rail. Queensland Rail retains an obligation to publish and maintain up-to-date line diagrams. No impact on access seekers rights or market outcomes.   |
| <b>1.3</b>                    | Incorporate requirements that apply under the QCA Act to declared services that are referred to in clause 1.3 of AU1. | References to sections 100, 104, 125 and 168C of the QCA Act will not apply to Queensland Rail if the service provided by the Queensland Rail network is not declared. These sections are directed at addressing issues relating to vertically integrated operators that are not applicable to Queensland Rail. Despite this, the requirements of these sections have been incorporated into the Access Framework. No impact on access seekers' rights or market outcomes. |
| <b>1.4.2</b>                  | Remove references to the QCA Act sections that apply only to declared services.                                       | The references to sections 101(1) and (2) of the QCA Act have been deleted because those sections only apply to declared services so will not apply to Queensland Rail. Queensland Rail's obligation to provide relevant information has been retained so there will be no material difference in the level of information provided with and without declaration. No impact on access seekers' rights or market outcomes.  |
| <b>1.4.3</b>                  | Removed reference in (b)(v)(B) to the prudency  | Schedule E related to the maintenance of a Regulatory Asset Base (RAB) does not form part of the Access Framework. An obligation has been inserted instead for Queensland Rail to construct an   |



|                          |   |   |
|--------------------------|---|---|
|                          | assessment provisions under schedule E.   | Extension Stage efficiently in accordance with Prudent Practices (as defined). No impact on access seekers' rights or market outcomes.  |
| <b>1.4.5</b>             | Delete clause.  | The obligation to maintain a register of Funding Agreements and provide the register to the QCA on request is unnecessary in the context of a non-declared network as QCA no longer has oversight. Any perceived issues with Funding Agreements not resolved between the parties can be resolved under dispute resolution under clause 6. Administrative change - no impact on access seekers' rights or market outcomes. |
| <b>1.4.6</b>             | Delete clause.  | Subsequent amendment to revised pricing proposal that does not incorporate a RAB. Section 5 discusses the impact of the Access Framework pricing regime.  |
| <b>1.4.7 (now 1.4.5)</b> | Update to refer to new dispute resolution provisions.   | Clause 1.4.7 has been updated to reflect that the QCA's powers to resolve access disputes under Part 5 of the QCA Act apply only to declared services. Queensland Rail's Access Framework provides for an alternative independent and binding dispute resolution. No adverse impact on access seekers' rights and no change in market outcomes.   |
| <b>1.5</b>               | Amended to simplify to the general principle of Queensland Rail being required to consult on master planning for Extension projects and clarify that the clause only applies to those parts of the Mount Isa System, North Coast System and West Moreton System where declared services do not operate. | Clause 1.5 has been simplified to remove unnecessary prescription and a process that has not been used, while retaining the general principle that Queensland Rail must consult on master planning for expansion projects. Process improvement – no impact on access seekers' rights or market outcomes.  |
| <b>2.1.1</b>             | Amend paragraph (a) to enable Queensland Rail to agree that a request for Access Rights does not need to be in the form of an Access Application and provide that access applications must be sent to the address nominated by Queensland Rail.   | The amendments to clause 2.1.1 provide more flexibility for access seekers and Queensland Rail in terms of the form of an Access Application. Process improvement – no impact on access seekers' rights or market outcomes.   |

|          |   |  |
|----------|---|--|
| 2.1.2    | Delete paragraph (b).   | Due to Queensland Rail not always having enough access information to assess capacity, the obligation has been removed and capacity analysis will be provided later in the access negotiation process. Process improvement – no impact on access seekers' rights or market outcomes.   |
| 2.2.2    | Update to refer to new dispute resolution provisions and make clear that confidentiality agreements must permit the disclosure of information as required by law, and to responsible Ministers, DTMR, the Rail Safety Regulator and the Rail Authority. | <p>Clause 2.2.2(c) has been updated to reflect that Queensland Rail's Access Framework provides for an alternative independent and binding dispute resolution. No adverse impact on access seekers' rights.</p> <p>A new clause 2.2.2(d) has been added to provide that confidentiality agreements must permit the disclosure of information as required by law, to responsible Ministers, DTMR, the Rail Safety Regulator and the Rail Authority, to enable the provision of information to relevant authorities where necessary or required. Process improvement – no impact on access seekers' rights or market outcomes.</p> |
| 2.2.3    | Amend to require consideration by Queensland Rail of the need for ring-fencing arrangements in the event that Queensland Rail may acquire interests in upstream or downstream markets.  | Queensland Rail does not have interests in markets upstream or downstream from its below rail services that are in competition with third parties in those markets. In the unlikely event that circumstances change, and Queensland Rail may acquire interests in upstream or downstream markets, Queensland Rail must consider the need for ring fencing arrangements. Process improvement - no impact on access seekers' rights or market outcomes.  |
| 2.4.2    | Removed references to QCA Act sections that apply only to declared services, and simplification of drafting regarding information to be supplied in connection with Access Charges.   | Although the specific section references have been deleted, Queensland Rail's obligation to provide relevant information has been retained (subject to it being requested by an access seeker, as the information may not always be relevant to an access seeker) so there will be no relevant difference in the level of information provided with and without declaration – no impact on access seekers' rights or market outcomes.  |
| 2.5.1    | Include requirement for an access seeker to notify Queensland Rail if it does not intend to proceed with an Access Application.   | Process improvement – no impact on access seekers' rights or market outcomes.  |
| 2.7.2(a) | Remove references to QCA Act sections in that apply only to declared services.  | Although the specific section references have been deleted, Queensland Rail's obligation to provide relevant information has been retained so there will be no relevant difference in the level of information provided with and without declaration - no impact on access seekers' rights or market outcomes.   |

|                 |  |  |
|-----------------|--|--|
| <b>2.7.2(b)</b> | Simplify by removing subparagraphs (i) and (ii) (with consequential amendment in paragraph (c)).                                 | Capacity Analysis and information reasonably required by an access seeker is already covered in other provisions of the Access Framework (such as under clause 2.4.2 and 2.7.2(a)(i), (ii) and (vii)). The change will therefore not result in any difference in the level of information provided with and without declaration. Process improvement - no impact on access seekers' rights or market outcomes.   |
| <b>2.7.2(e)</b> | Update to reflect changes made to Part 3 of the Framework.   | Consequential changes have been made to this paragraph based on changes made to other clauses in the Framework, which are discussed below.   |
| <b>2.7.2(f)</b> | Delete paragraph.  | Clause 2.7.2(f) has been deleted because it is unnecessary, as an Operating Plan is required to be developed as part of negotiations under clause 2.7.2(a)(iii). The change will therefore not result in any difference in the preparation of an Operating Plan. Process improvement – no impact on access seekers' rights or market outcomes.   |
| <b>2.8.2</b>    | Amend to make clear that an access dispute cannot be raised in respect of safety issues.   | Clause 2.8.2 has been amended to make it clear that an access dispute cannot be raised in respect of safety issues because Queensland Rail is the railway manager and required to comply with rail safety legislation and the conditions attaching to its accreditation as railway manager. A dispute determination under Part 6 of the Access Framework could not override such conditions and obligations. Queensland Rail is not vertically integrated and has no incentive to use safety considerations to discriminate against access seekers. No material changes in access seekers' rights and no change in market outcomes.  |
| <b>2.8.3</b>    | Amend paragraph (a)(ii)(A) to refer to Access Framework not previous undertaking.  | Clause 2.8.3(a)(ii)(A) has been updated so that it refers to the Framework. Administrative change with no impact in market outcomes.   |
| <b>2.9.2</b>    | Amend to be consistent with the ARTC Interstate Rail Network Undertaking and ARTC Hunter Valley Coal Network Access Undertaking. | No material impact on access seekers' rights – moved to industry standard approach previously approved by ACCC. Further discussion contained in section 5.   |
| <b>2.9.3</b>    | Amend to reflect changes to clause 2.9.2.  | <p>Clause 2.9.3 has been amended to be consistent with the changes to clause 2.9.2 (the rationale for which is discussed in the row above), so that renewal access applications are considered on the same basis as mutually exclusive access applications.</p> <p>The Queensland Rail Access Framework retains, however, obligations on Queensland Rail to notify the relevant renewal access seeker where it receives an Access Application for access rights concerning available capacity that will arise when an existing Access Agreement expires and provide an opportunity for the renewal access seeker to submit a renewal application for negotiation.</p> <p>Access seekers who wish to guarantee long term security of capacity can negotiate long-term contracts with Queensland Rail.</p> |

|              |   |   |
|--------------|---|---|
|              |   | Process improvement – puts mutually exclusive access applications on a more equal footing and aids efficiency as it allows Queensland Rail to choose the access seeker with the highest willingness to pay for the capacity.  |
| <b>2.9.4</b> | Amend paragraph (b) to make it clear that rejections of proposed variations to the Standard Access Agreement is not a matter subject to the dispute resolution process. | The purpose of the Standard Access Agreement is to provide standard, 'backstop' terms. The Standard Access Agreement attached to the Access Framework is substantially the same as that approved by the QCA under AU1. It is therefore not appropriate for decisions that do not depart from the Standard Access Agreement to be subject to the dispute resolution process. Proposed variations to the Standard Access Agreement can be dealt with through a normal commercial negotiation process. Process improvement – no impact on access seekers' rights or market outcomes.   |
| <b>2.9.5</b> | Deleted former paragraphs (a) and (c).  | Consequential amendment to the removal of the queuing provisions discussed above in 2.9.2. Process improvement – no impact on access seekers' rights or market outcomes.  |
| <b>3.0</b>   | Deleted   | Redundant as there is no longer a reference tariff. See discussion in section 5.  |
| <b>3.1.1</b> | Reference to regulatory risk deleted in paragraph (b).<br><br>[Deletion of the final paragraph dealing with Transport Service Payments.]                                | Reference to regulatory risk in paragraph (b) is redundant if the service provided by the Queensland Rail network is not declared and so the paragraph has been simplified to refer just to "risks".<br><br>The final paragraph is effectively redundant as Queensland Rail has this discretion in any event and is not required to reduce Access Charges on account of TSC payments. Administrative change – no change in market outcomes.   |
| <b>3.1.2</b> | Delete paragraph (b)(iii).  | Clause 3.1.2(b)(iii) has been deleted as the right is covered in the pricing discrimination clauses. See discussion in section 5.   |
| <b>3.2</b>   | Deleted reference in the heading to non-coal carrying Train Services  | Consequential amendment – no impact on access seekers' rights or market outcomes.   |
| <b>3.2.2</b> | Amend to provide that Transport Services Payments are considered in the calculation of the floor revenue limit.   | The change to clause 3.2.2 is consistent with the 2008 Undertaking, which explicitly stated that when determining the floor pricing limit for train services, TSC payments are to be considered.<br><br>The government provides TSC payments to encourage use of the rail network. Not taking account of TSC revenue in calculating the floor price or in comparing revenue with the floor would require Queensland Rail to charge access seekers more than if the TSC is taken into account. The approach of not taking account TSC revenue would mean that the TSC would not be reflected in lower access prices, which would undermine the government's objective. This logic also applies at the ceiling. TSC revenue should be taken into account when calculating the ceiling or assessing compliance with the ceiling. If it isn't, access prices will be higher than they should be, and Queensland Rail will receive return greater than the ceiling once TSC revenues are taken into account. |

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|                    |   | Process change to improve the efficacy of the floor and ceiling methodology, which reflects Government policy and will result in lower access charges than if the TSC were not taken into account. |
| <b>3.2.3</b>       | Deleted reference to QCA in the formula variable "T" and simplified so that it is effectively as determined by Queensland Rail.<br><br>Adoption of DORC methodology in paragraph (c).<br><br>Inclusion in paragraph (d) of requirement to publish on Queensland Rail's website the estimated asset value for the West Moreton System and Mount Isa System as determined using the DORC methodology] | Pricing changes – see section 5.   |
| <b>3.3</b>         | Amend to be consistent with the ARTC Interstate Rail Network Undertaking and ARTC Hunter Valley Coal Network Access Undertaking.  | No material impact on access seekers' rights – moved to industry standard approach previously approved by ACCC. Further discussion contained section 5.  |
| <b>3.4</b>         | Deleted reference to clause 3.1.2 (Network utilisation).  | This has been deleted as a consequential amendment for the changes discussed above in relation to clause 3.1.2. See discussion in section 5.   |
| <b>3.5</b>         | Deleted   | This clause has been deleted as redundant, given there will be no reference tariff. See discussion in section 5.   |
| <b>3.5.1 (new)</b> | Added new 3.5 heading - 'General'<br><br>Clause 3.5.1 - amended the rate review provision by the deletion of clauses 3.5.1(a)(i) and ii).   | As there are no reference tariffs in the Access Framework these clauses are no longer relevant. Consequential change – section 5 includes discussion of the Access Framework pricing framework.    |

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| <b>3.5.2 (new)</b> | Added clause 3.5.2 Take or Pay Charges.   | Clause 3.5.2 states that unless otherwise agreed during negotiations, Take or pay charges will be payable and will be calculated on a 100 per cent take or pay basis. In effect the clause states that Queensland Rail will negotiate take or pay amounts with the access seeker. Queensland Rail has no incentive to apply take or pay charges that cause access seekers to reduce freight volumes. Thus, this change will not have an impact on market outcomes. |
| <b>3.6</b>         | Amend dispute resolution process so that disputes about pricing contraventions are referred to an arbitrator.                   | Clause 3.9 (now clause 3.8) has been amended to change the dispute resolution role currently held by the QCA to an arbitrator. Process improvement – no change in access seekers' rights or market outcomes.   |
| <b>3.7</b>         | Delete clause.  | Clause 3.7 (relating to the QCA Levy) will no longer be relevant if the service provided by the Queensland Rail Network is no longer declared. Administrative change. See discussion in section 5.   |
| <b>3.8</b>         | Delete clause.  | Deleted due to changes in pricing methodology. See section 5.  |
| <b>4.1</b>         | Amended reference to Capacity-related information to refer just to information.   | Amended in line with amendments discussed below regarding the Network Management Principles and schedule. Administrative change.   |
| <b>4.3</b>         | Amend to remove provision for Operation Requirements Manual being included in a schedule to the Framework and clarify drafting. | The ORM has been removed from the undertaking. Queensland Rail has, however, retained the obligation to publish the ORM and consult on changes to the Manual, so access seekers will continue to be able to access and make submissions in respect of the ORM under the Access Framework. Process improvement – no material changes in access seekers rights or outcomes. Discussed further in section 5.  |
| <b>5.1-5.4</b>     | Replace with more appropriate and tailored reporting requirements.  | More tailored reporting has been introduced. It is both more useful for access holders and less onerous on Queensland Rail. Process improvement – no material changes in access seekers' rights or outcomes. Discussed further in section 5.   |
| <b>6.1</b>         | Amend dispute resolution provisions to provide for commercial arbitration of disputes under the Access Framework.               | The dispute resolution mechanism has been amended to reflect that the QCA's powers to resolve access disputes under Part 5 of the QCA Act apply only to declared services. Discussed further in section 5.   |
| <b>6.2</b>         | Included a limitation provision.  | New clause 6.2 has been included to clarify that, subject to the terms of access agreements, funding agreements or any other agreements entered into by Queensland Rail as contemplated by the Access  |

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|                                 |  | <p>Framework, Queensland Rail is not liable to any person for consequential loss arising under or in connection with the Access Framework.</p> <p>Queensland Rail is obliged to comply with the Access Framework which can be enforced through the Queensland courts. No change in market outcomes.</p>   |
| <b>6.4</b>                      | Update transitional provisions to apply when Access Framework takes effect and AU1 terminates.         | Clause 6.4 has been amended to provide appropriate transitional provisions to apply when the Access Framework takes effect and AU1 terminates. Process improvement – no material changes in access seekers' rights or market outcomes.  |
| <b>6.5</b>                      | Updated severability clause  | The updates allow provisions of the Framework to be severed if a provision is illegal/unenforceable in any relevant jurisdiction. This is consistent with good drafting practice. Administrative change with no change in market outcomes.  |
| <b>7.1</b>                      | Amend clause to reflect changes in Framework.  | Consequential administrative changes – no material change in access seekers rights' or market outcomes.   |
| <b>Schedule A</b>               | Delete reference to reference tariff in clause 1(m) and delete clause 2(c).                            | <p>Clause 1(m) has been deleted to reflect the new pricing framework discussed above.</p> <p>Clause 2(c) (requiring the provisions of Network Control diagrams) has been deleted as it is unnecessary information for what access seekers need in relation to seeking access to a system on the Queensland Rail network. If such information was relevant in a particular case, an access seeker could seek the information through the negotiation process set out in Part 2 of the Access Framework. Process improvement – no material changes in access seeker rights' or market outcomes.</p> |
| <b>Schedule B</b>               | Add requirement for access applications to be sent to a nominated address.                             | The change to require access applications to be sent to an address nominated by Queensland Rail is intended to ensure that Access Applications are sent to (and received by) the appropriate person at Queensland Rail. Process improvement – no material changes in access seekers' rights or market outcomes.   |
| <b>Former Schedule C</b>        | Delete Schedule.   | Schedule C has been deleted because it is unnecessary for the template to be prescribed in the Access Framework. Process improvement – no material changes in access seekers' rights or market outcomes. Discussed further in section 5.  |
| <b>Former Schedules D and E</b> | Delete Schedules   | Deleted due to changes in pricing methodology. See section 5.   |
| <b>Schedule C</b>               | Simplify Network Management Principles and align Principles more with the ARTC Interstate Rail Network | No material impact on access seekers' rights – moved to industry standard approach previously approved by ACCC. Further discussion contained in section 5.  |

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|   | Undertaking and ARTC Hunter Valley Coal Network Access Undertaking.                       |  |
| <b>Schedule G</b>                             | Delete (but retain obligation to publish and consult on changes in clause 4.3).           | The rationale for deleting this schedule is set out in the row on clause 4.3 above and section 5.  |
| <b>Schedule E</b>                             | Delete 1(b) and 2(a).   | Administrative changes. No material impact on access seekers' rights or change in market outcomes.   |
|   | Delete 2(c).  |  |
|   | Amend clause 3(c) to reflect deletion of clause 1.4.6.                                    |  |
|   | Amend 6(e) to include reference to other necessary capital expenditure.                   |  |
|   | Amended paragraph 5(d)(ii)(B) to delete reference to prudency tests in former Schedule E. |  |
|   | Amended paragraph 6(c) (ii). To correct drafting error                                    |  |
|   | Delete clause 8.11.   |  |
| <b>Schedule H - Standard Access Agreement</b> |   |  |
| <b>Note at start</b>                          | Delete reference to Reference Tariff.   | The reference to the Reference Tariff has been deleted to reflect changes to the pricing provisions discussed above. Administrative change.  |
| <b>1.2</b>                                    | Delete reference to QCA Act and good faith in paragraph (b)(i).                           | <p>The reference to negotiations occurring subject to the QCA Act has been deleted, as the QCA Act requirements relating to negotiations apply to declared services.</p> <p>The reference to "Good Faith" - that the Access Framework in clause 1.3(b) requires Queensland Rail to conduct negotiations with access seekers (which includes renewal access seekers) in "Good Faith" (as defined).</p> <p>No material changes to access seekers' rights or market outcomes.</p> |



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| <b>1.3, 8.8(b), 18.1 (c)</b> | Delete reference to good faith.<br>Amended clause 1.3(a) by including criteria for Queensland Rail to consider in relation to an amendment proposed by the Access Holder. | No material changes to access seekers' rights or market outcomes.  |
| <b>2.1 (c)</b>               | Added clause 2.1(c)   | Cause 2.1(c) has been added so that the Access Holder must comply with the requirements, obligations and processes in the Access Framework and the Deed Poll.<br><br>The enforcement of the Access Framework is discussed in section 5. AU1 and the Access Framework are both enforceable by the Queensland Courts with comparable remedies under each and as such there is no material change in access seekers' rights or market outcomes. |
| <b>3</b>                     | Restructured for clarity  | No material changes to access seekers rights or market outcomes.   |
| <b>4.1(c)(i)</b>             | Deleted reference to Subsequent Agreements.<br><br>Amended Nominee Operator to Subsequent Operator  | Consequential amendments – no material change to access seekers' rights or market outcomes.  |
| <b>4.6</b>                   | Amend so that it is clear that Operator who is a party to the agreement also provides the representations and warranties.   | No material changes to access seekers' rights or market outcomes.  |
| <b>5</b>                     | Amend to reflect rail safety legislation changes and clarify that only relevant information is required to be provided.   | Administrative – no material changes to access seekers' rights or market outcomes.   |
| <b>6.6</b>                   | Delete paragraph (e).   | Consequential amendment to pricing framework changes which are discussed in section 5.   |
| <b>6.7</b>                   | Amend clause to enable more tailored performance levels and reporting.  | Clause 6.7 has been amended to enable more tailored and fit-for-purpose performance levels and reporting obligations to be agreed by the parties. Process improvement – no material changes in access seekers' rights or market outcomes.  |

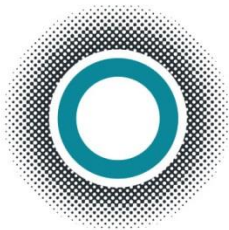
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| <b>7.1</b>         | Amend to make clear that Maintenance Works may be undertaken as provided for in the Network Management Principles.                     | Clause 7.1(a) has been amended to make it clear that Maintenance Works may be undertaken as provided for in the Network Management Principles in the Access Framework. Process improvement – no material changes in access seekers' rights or market outcomes.  |
| <b>7.3 and 8.4</b> | Delete clause 7.3(f) and 8.4(d).   | Clauses 7.3(f) and 8.4(d) (requiring parties to notify each other of failures or likely failures to comply with the agreement) have been deleted they do not reflect normal commercial practice. No material changes in access seekers rights or market outcomes.   |
| <b>8.12</b>        | Fix typo in clause 8.12(b).<br>Amended clause 8.12(a) to include a notification requirement in relation to adverse weather conditions. | Clause 8.12(a) has been amended to include a requirement for the operator to notify Queensland Rail in relation to adverse weather events, in order to promote the improvement of the efficiency of the network and safety. Process improvement – no material changes in access seekers' rights or market outcomes.   |
| <b>8.13</b>        | Amend to remove reference to draft access undertaking and DAAU process.  | Administrative change – no material changes in access seekers' rights or market outcomes.   |
| <b>9.2</b>         | Amend to clarify that changes to the IRMP can be made through the exchange of written notices.   | Clause 9.2 has been amended to clarify that changes to the IRMP can be made through the exchange of written notices by the parties and do not require formal variations to the access agreement. Administrative change – no material changes in access seekers' rights or market outcomes.  |
| <b>9.3</b>         | Amend to reflect new rail safety legislation.  | Administrative change – no material changes in access seekers' rights or market outcomes.   |
| <b>9.10</b>        | Amend to require parties to cooperate in a safety investigation by Queensland Rail.  | Clause 9.10 has been amended to reflect the commencement of the <i>Rail Safety National Law and</i> require the other parties to the agreement to cooperate in safety investigations by Queensland Rail. Process improvement – no material changes in access seekers' rights or market outcomes.  |
| <b>13.4</b>        | Amended clause 13.4(a) to include Performance Levels in the liability limitation.  | The limitation of liability under clause 13.4(a) has been amended to include Performance Levels. Under the amended clause, Queensland Rail's liability in connection with failure to meet the Performance Levels is limited in the same way as other matters specified in the clause (such as Network standard or defects). No material changes in market outcomes. |

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| <b>15 &amp; 17.2</b>   | Amended to address incoming ipso facto legislative amendments.                              | Clause 15.1 has been included to make clear that clauses 15.2(c), 15.3(c), 15.4(a) and 15.5(a) are subject to relevant legislation and regulations regarding the enforcement of contractual provisions relating to insolvency events. Consequential amendments have been made elsewhere in clause 15 and 17.2. Administrative change – no material changes in access seekers' rights or market outcomes.  |
| <b>18</b>              | Deleted former clause 18.1 and amended 18.1(a) and (b).                                     | Clause 18.1 has been deleted to reflect changes to pricing framework discussed above. See discussion section 5.   |
| <b>19.1</b>            | Deleted reference in clauses 19.2(d) and 19.3(a) to previous clause 19.4 (see below).       | Clause 19.1(b) clarifies that disputes between Queensland Rail and an access seeker in relation to the Access Framework are to be resolved in accordance with the dispute regime under the Access Framework and not the Access Agreement.<br><br>Clause 19.1(c) has been included to make clear that the courts of Queensland have exclusive jurisdiction to determine disputes arising under the Deed Poll. No material changes to market outcomes, enforcement is discussed further in section 5. |
| <b>19.2 &amp; 19.3</b> | Deleted reference in clauses 19.2(d) and 19.3(a) to previous clause 19.4.                   | Consequential amendment for deletion of clause 19.4 (see below).  |
| <b>19.4 (new)</b>      | Added to provide for arbitration if disputes are not resolved in accordance with clause 19. | Clause 19.4 has been added to provide arbitration as a mechanism for resolving disputes under an access agreement that are otherwise not resolved in accordance with clause 19. Process improvement – no material changes in market outcomes.   |
| <b>Former 19.4</b>     | Deleted to remove determination of safety matters by the Rail Safety Regulator.             | Consistent with 2.8.2. No material changes in market outcomes.  |
| <b>19.5</b>            | Amended clause 19.5 to specify courts with jurisdiction.                                    | Administrative change – no material changes in market outcomes.   |
| <b>27.8</b>            | Minor drafting change in clause 27.8(a).<br><br>Amended to delete clause 27.8(b).           | The clause has been amended to align with the dispute regime discussed above under clauses 19.1 and 19.4. No material changes to market outcomes. Discussed further in section 5.   |
| <b>27.21</b>           | Added clause 27.21 regarding transitional arrangements.                                     | In the event that the Framework were to expire during the term of the access agreement, the parties will need to consider necessary changes to the agreement. The clause requires the parties to promptly   |

Does Queensland Rail's network satisfy criterion (a)?

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|                   |   | consult and endeavour to negotiate and agree necessary changes. Administrative change – no material impact on market outcomes.   |
| <b>28</b>         | Amend definitions to reflect changes in SAA.  | Certain definitions in clause 28 have been amended based on other changes made to the Standard Access Agreement. Administrative change – no material changes in market outcomes.   |
| <b>Schedule 1</b> | Amended in item 11 (Security Amount) to require at least six months' Access Charges.                              | No material changes in market outcomes.  |
| <b>Schedule 2</b> | Amended for consequential changes relating to Reference Train Services.   | The item relating to Reference Train Services has been deleted. Pricing framework discussed in section 5.  |
| <b>Schedule 3</b> | Changes to reflect revised pricing methodology.   | Pricing framework discussed in section 5.  |
| <b>Schedule 5</b> | Amend Schedule 5 to enable more tailored performance levels and reporting, consistent with changes to clause 6.7. | Schedule 5 has been amended to enable more tailored and fit-for-purpose performance levels to be agreed by the parties, consistent with the changes to clause 6.7 discussed above. Process improvement – no material changes in access seekers' rights or market outcomes. |





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# Confidential Attachment C:

*Ranbury Management Group, North Coast Line Capacity Improvement Study - Final Report for the Department of Main Roads and Transport, February 2015*

TRANSLINK – DEPARTMENT OF TRANSPORT AND MAIN ROADS

# North Coast Line Capacity Improvement Study – Final Report

FEBRUARY 2015



## DOCUMENT INFORMATION

Client: Department of Transport and Main Roads  
 Title: North Coast Line Capacity Improvement Study  
 Subtitle: Final Report  
 Date: 16 March 2015

| VERSION | DATE    | OUR REFERENCE  |
|---------|---------|--|
| 1.0     | 15.1.15 | Initial draft Version for Steering Group review                  |
| 2.0     | 23.2.15 | Final - Incorporating Steering Group feedback from Initial Draft |
| 2.1     | 16.3.15 | FINAL  |
|         |         |  |

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# Contents

|  |           |
|--|-----------|
| EXECUTIVE SUMMARY .....                                      | 10        |
| RECOMMENDED FUTURE ACTIONS .....                             | 12        |
| NEXT STEPS .....   | 15        |
| <b>1. INTRODUCTION AND STUDY METHODOLOGY .....</b>           | <b>17</b> |
| 1.1 STUDY OBJECTIVES .....                                   | 17        |
| 1.2 STUDY METHODOLOGY .....                                  | 17        |
| 1.3 GLOSSARY OF TERMS AND ABBREVIATIONS .....                | 18        |
| <b>2. ROUTE DESCRIPTION .....</b>                            | <b>20</b> |
| <b>3. HISTORY AND RECENT INFRASTRUCTURE UPGRADES .....</b>   | <b>25</b> |
| <b>4. NCL INFRASTRUCTURE DESCRIPTION .....</b>               | <b>28</b> |
| 4.1 TRACK STANDARDS .....                                    | 28        |
| 4.2 RULING GRADES .....                                      | 29        |
| 4.3 HORIZONTAL ALIGNMENT .....                               | 30        |
| 4.4 TRANSIT TIMES .....                                      | 31        |
| 4.5 BRIDGES .....  | 31        |
| 4.6 AXLE LOAD CONSTRAINTS .....                              | 32        |
| 4.7 CROSSING LOOPS .....                                     | 33        |
| 4.8 REFUGE SIDINGS .....                                     | 33        |
| 4.9 SIGNALLING AND TRAIN CONTROL .....                       | 33        |
| 4.10 TELECOMMUNICATIONS .....                                | 34        |
| 4.11 LEVEL CROSSINGS .....                                   | 35        |
| 4.12 ELECTRIC TRACTION SYSTEM .....                          | 35        |
| <b>5. RAIL TERMINALS .....</b>                               | <b>36</b> |
| 5.1 INTERMODAL FREIGHT TERMINALS .....                       | 36        |
| 5.1.1 Acacia Ridge .....                                     | 36        |
| 5.1.2 Moolabin .....   | 37        |
| 5.1.3 Brisbane Multimodal Terminal (Fisherman Islands) ..... | 38        |
| 5.1.4 Mackay (Aurizon) – Paget .....                         | 39        |
| 5.1.5 Mackay (Asciano) – Paget .....                         | 39        |
| 5.1.6 Townsville (Aurizon) – South Yard .....                | 40        |
| 5.1.7 Townsville (Asciano) – Stuart .....                    | 41        |
| 5.1.8 Cairns (Aurizon) – Portsmouth .....                    | 41        |

|            |   |           |
|------------|---|-----------|
| 5.1.9      | Cairns (Asciano) - Woree .....                  | 41        |
| 5.2        | BULK FREIGHT TERMINALS .....                    | 42        |
| 5.3        | PASSENGER STATIONS .....                        | 42        |
| 5.3.1      | Citytrain.....                                  | 42        |
| 5.3.2      | Traveltrain.....                                | 43        |
| <b>6.</b>  | <b>CURRENT RAIL TRAFFICS .....</b>              | <b>44</b> |
| 6.1        | TRAFFIC MIX .....                               | 44        |
| 6.2        | MARKET SHARE .....                              | 47        |
| <b>7.</b>  | <b>CURRENT RAIL OPERATIONS .....</b>            | <b>49</b> |
| 7.1        | MASTER TRAIN PLAN (MTP).....                    | 49        |
| 7.1.1      | Planning considerations.....                    | 49        |
| 7.1.2      | Service priorities .....                        | 50        |
| 7.1.3      | Transit times .....                             | 51        |
| 7.1.4      | Path capacity utilisation .....                 | 52        |
| 7.2        | DAILY TRAIN PLAN .....                          | 55        |
| <b>8.</b>  | <b>NCL NETWORK PERFORMANCE .....</b>            | <b>56</b> |
| 8.1        | CORRIDOR AVAILABILITY.....                      | 56        |
| 8.1.1      | Maintenance requirements .....                  | 56        |
| 8.1.2      | Unplanned incidents .....                       | 57        |
| 8.1.3      | Flooding impacts.....                           | 58        |
| 8.1.4      | Flooding incidents locations.....               | 59        |
| 8.2        | ON-TIME PERFORMANCE.....                        | 59        |
| 8.3        | AURIZON TERRITORY ENTRY/EXIT PERFORMANCE.....   | 63        |
| 8.4        | TRANSIT TIMES .....                             | 64        |
| 8.5        | REASONS FOR DELAYS .....                        | 65        |
| <b>9.</b>  | <b>THE QUEENSLAND FREIGHT TASK .....</b>        | <b>67</b> |
| <b>10.</b> | <b>ROAD – RAIL MODE SHARE COMPETITION .....</b> | <b>72</b> |
| 10.1       | CONTEXT.....                                    | 72        |
| 10.2       | MODE CHOICE .....                               | 73        |
| <b>11.</b> | <b>BRUCE HIGHWAY .....</b>                      | <b>74</b> |
| 11.1       | CURRENT PERFORMANCE PARAMETERS .....            | 74        |
| 11.1.1     | Capacity.....                                   | 74        |
| 11.1.2     | Transit Time.....                               | 77        |
| 11.1.3     | Safety.....                                     | 78        |
| 11.1.4     | Flood immunity / reliability .....              | 80        |

|        |   |            |
|--------|---|------------|
| 11.1.5 | Truck configurations .....                                    | 80         |
| 11.2   | THE BRUCE HIGHWAY UPGRADE .....                               | 81         |
| 11.2.1 | Scope.....  | 81         |
| 11.2.2 | Program.....  | 81         |
| 11.2.3 | Impacts on Road Freight Transport.....                        | 82         |
| 12.    | <b>NORTH COAST LINE – INTERMODAL FREIGHT MARKET .....</b>     | <b>86</b>  |
| 12.1   | KEY CONSIDERATIONS .....                                      | 86         |
| 12.2   | NCL RAIL LINE-HAUL TRENDS .....                               | 87         |
| 13.    | <b>ROAD-RAIL COMPETITION – INTERSTATE .....</b>               | <b>91</b>  |
| 13.1   | EAST COAST RAIL CORRIDOR: MELBOURNE / SYDNEY / BRISBANE.....  | 91         |
| 13.2   | COMPETING EAST COAST ROAD CORRIDORS.....                      | 93         |
| 13.2.1 | Hume Highway .....  | 93         |
| 13.2.2 | Pacific Highway .....   | 94         |
| 13.2.3 | Other Major South - North Road Routes .....                   | 96         |
| 13.3   | FREIGHT MODE SHARE.....                                       | 96         |
| 14.    | <b>IMPLICATIONS FOR NCL RAIL FREIGHT .....</b>                | <b>99</b>  |
| 14.1   | NORTH COAST LINE SUPPLY CHAIN ISSUES.....                     | 99         |
| 14.2   | SEQ RAIL FREIGHT TERMINALS STUDY - STAKEHOLDER FEEDBACK ..... | 99         |
| 14.3   | CONTESTABLE FREIGHT MARKET DEMAND FORECASTS .....             | 102        |
| 15.    | <b>FREIGHT MARKET CONCLUSIONS .....</b>                       | <b>104</b> |
| 16.    | <b>RAIL FREIGHT PERFORMANCE CRITERIA – OVERVIEW.....</b>      | <b>106</b> |
| 17.    | <b>INFRASTRUCTURE UPGRADE OPTIONS – OVERVIEW .....</b>        | <b>108</b> |
| 18.    | <b>AXLE LOAD UPGRADES.....</b>                                | <b>109</b> |
| 18.1   | OVERVIEW .....  | 109        |
| 18.2   | TRACK STRUCTURE .....   | 109        |
| 18.3   | BRIDGES AND CULVERTS.....                                     | 110        |
| 18.4   | CAPPING LAYER.....  | 110        |
| 18.5   | AXLE LOAD UPGRADE OPTIONS.....                                | 111        |
| 18.5.1 | Infrastructure.....   | 111        |
| 18.5.2 | Rollingstock .....  | 111        |
| 18.6   | CONCLUSIONS – AXLE LOAD UPGRADES .....                        | 112        |
| 19.    | <b>INCREASING TRAIN LENGTHS .....</b>                         | <b>113</b> |
| 19.1   | MULTIPLE TRACK SECTIONS – BRISBANE METRO .....                | 113        |

|            |   |            |
|------------|---|------------|
| 19.2       | AURIZON NETWORK .....   | 114        |
| 19.3       | SINGLE LINE SECTIONS .....  | 114        |
| 19.4       | CONCLUSIONS – LONGER TRAINS .....                                 | 117        |
| <b>20.</b> | <b>GRADE EASINGS .....</b>  | <b>118</b> |
| 20.1       | GRADE EASING OPTIONS .....  | 119        |
| 20.1.1     | Aldoga Bank .....   | 119        |
| 20.1.2     | Yandaran Bank .....   | 119        |
| 20.1.3     | Corinda Bank .....  | 119        |
| 20.1.4     | Other grades .....  | 119        |
| 20.2       | GRADE EASINGS – CONCLUSIONS .....                                 | 120        |
| <b>21.</b> | <b>HORIZONTAL ALIGNMENT IMPROVEMENTS – MAJOR DEVIATIONS .....</b> | <b>121</b> |
| 21.1       | MAJOR PLANNED DEVIATIONS .....                                    | 121        |
| 21.2       | POTENTIAL MAJOR DEVIATIONS .....                                  | 122        |
| <b>22.</b> | <b>HORIZONTAL ALIGNMENT IMPROVEMENTS – CURVE EASINGS .....</b>    | <b>124</b> |
| 22.1       | OVERVIEW OF HORIZONTAL ALIGNMENT ISSUES .....                     | 124        |
| 22.2       | POTENTIAL DEVIATION LOCATIONS .....                               | 125        |
| <b>23.</b> | <b>LINE SPEED UPGRADES .....</b>                                  | <b>128</b> |
| 23.1       | LOCAL SPEED RESTRICTED SECTIONS .....                             | 128        |
| 23.2       | TOWNSVILLE – CAIRNS: MAXIMUM LINE SPEED .....                     | 129        |
| 23.3       | MAXIMUM LINE SPEED UPGRADES - CONCLUSIONS .....                   | 129        |
| <b>24.</b> | <b>FLOODING IMMUNITY .....</b>                                    | <b>130</b> |
| 24.1       | OVERVIEW AND HISTORY .....  | 130        |
| 24.2       | RECENT FLOODING EVENTS .....                                      | 131        |
| 24.3       | IMPROVING FLOOD IMMUNITY .....                                    | 132        |
| 24.4       | FLOOD IMMUNITY – CONCLUSIONS .....                                | 133        |
| <b>25.</b> | <b>TRAIN CONTROL UPGRADES .....</b>                               | <b>134</b> |
| 25.1       | OVERVIEW .....  | 134        |
| 25.2       | TRAIN CONTROL UPGRADES - CONCLUSIONS .....                        | 134        |
| <b>26.</b> | <b>TRACTION OPTIONS .....</b>                                     | <b>135</b> |
| <b>27.</b> | <b>ROLLINGSTOCK OPTIONS .....</b>                                 | <b>136</b> |
| <b>28.</b> | <b>SOUTH EAST QUEENSLAND CAPACITY IMPROVEMENT STUDY .....</b>     | <b>137</b> |
| 28.1       | SEQCI PROJECT GOALS AND SCOPE .....                               | 137        |

|        |   |            |
|--------|---|------------|
| 28.2   | SEQCI PROJECT FINDINGS.....   | 137        |
| 28.3   | SEQCI CONCLUSIONS AND COMMENTS.....                                   | 139        |
| 28.3.1 | Northern Corridor.....  | 139        |
| 28.3.2 | Salisbury – Lytton Junction.....                                      | 139        |
| 28.3.3 | SCAS and freight priority .....                                       | 140        |
| 29.    | <b>NORTHSIDE FREIGHT TERMINAL .....</b>                               | <b>141</b> |
| 30.    | <b>SUMMARY AND CONCLUSIONS OF INFRASTRUCTURE UPGRADE OPTIONS.....</b> | <b>142</b> |
| 31.    | <b>SERVICE PARAMETERS - OVERVIEW .....</b>                            | <b>145</b> |
| 31.1   | PRICE COMPETITION.....  | 145        |
| 31.2   | TRANSIT TIME COMPETITION.....   | 147        |
| 31.3   | RELIABILITY .....   | 148        |
| 31.4   | CONCLUSIONS – SERVICE PARAMETERS.....                                 | 150        |
| 32.    | <b>DEMAND SCENARIOS .....</b>   | <b>151</b> |
| 32.1   | CONTESTABLE INTERMODAL FREIGHT .....                                  | 151        |
| 32.1.1 | Intermodal Volumes.....   | 151        |
| 32.1.2 | Intermodal Train Numbers.....   | 153        |
| 32.2   | OTHER FREIGHT TRAFFICS.....   | 154        |
| 32.3   | PASSENGER TRAINS .....  | 155        |
| 32.4   | RECENT NCL FREIGHT TRAIN PATHS UTILISATION .....                      | 155        |
| 33.    | <b>CORRIDOR INFRASTRUCTURE UPGRADE OPTIONS OVERVIEW.....</b>          | <b>156</b> |
| 34.    | <b>NON-CORRIDOR INFRASTRUCTURE OPTIONS OVERVIEW .....</b>             | <b>158</b> |
| 34.1   | EXISTING INTERMODAL TERMINALS.....                                    | 158        |
| 34.2   | NORTH BRISBANE REGION INTERMODAL TERMINAL.....                        | 158        |
| 35.    | <b>NON-INFRASTRUCTURE OPTIONS.....</b>                                | <b>160</b> |
| 35.1   | OVERVIEW .....  | 160        |
| 35.2   | TRAIN PRIORITY .....  | 160        |
| 35.2.1 | Passenger Priority .....  | 160        |
| 35.2.2 | Freight Train Priorities .....  | 160        |
| 35.2.3 | Alteration of Services Priority.....                                  | 161        |
| 35.3   | MASTER TRAIN PLAN REFINEMENT .....                                    | 161        |
| 35.4   | TRACK ACCESS CHARGES.....   | 162        |
| 35.5   | CONCLUSIONS .....   | 162        |
| 36.    | <b>STAY-IN – BUSINESS UPGRADES.....</b>                               | <b>163</b> |

|            |  |            |
|------------|--|------------|
| 36.1       | OVERVIEW .....   | 163        |
| 36.2       | RAIL BRIDGES.....  | 163        |
| 36.3       | TRACK STRUCTURE .....  | 164        |
| 36.4       | RAIL SYSTEMS (SIGNALLING, COMMUNICATIONS) ASSET RENEWALS ..... | 164        |
| 36.5       | OPEN LEVEL CROSSINGS.....                                      | 164        |
| <b>37.</b> | <b>CAPACITY UPGRADE OPTIONS .....</b>                          | <b>165</b> |
| 37.1       | ADDITIONAL CAPACITY OPTIONS.....                               | 165        |
| 37.2       | ALIGNING CAPACITY TO DEMAND.....                               | 166        |
| 37.3       | CAPACITY UPGRADE STAGING STRATEGY .....                        | 166        |
| <b>38.</b> | <b>SERVICE PARAMETER UPGRADE OPTIONS – TRANSIT TIME .....</b>  | <b>168</b> |
| 38.1       | TRANSIT TIME REDUCTION OPTIONS.....                            | 168        |
| 38.2       | OPTION BENEFIT METHODOLOGY .....                               | 169        |
| 38.3       | TRANSIT TIME SCENARIOS.....                                    | 170        |
| 38.4       | CONCLUSIONS – TRANSIT TIMES.....                               | 173        |
| <b>39.</b> | <b>SERVICE PARAMETER UPGRADE OPTIONS – RELIABILITY .....</b>   | <b>174</b> |
| 39.1       | OVERVIEW .....   | 174        |
| 39.2       | FLOOD IMMUNITY.....  | 174        |
| 39.2.1     | Flood prone sections and impacts.....                          | 174        |
| 39.2.2     | Improving flood immunity.....                                  | 176        |
| 39.2.3     | Recommended flood-resilience strategy .....                    | 176        |
| 39.3       | CORRIDOR AVAILABILITY – PLANNED TRACK CLOSURES.....            | 177        |
| 39.4       | RAIL OPERATOR PERFORMANCE RELIABILITY .....                    | 178        |
| 39.5       | CONCLUSIONS – RELIABILITY.....                                 | 178        |
| <b>40.</b> | <b>CORRIDOR CAPACITY ASSESSMENT .....</b>                      | <b>179</b> |
| 40.1       | CURRENT CORRIDOR CAPACITY AND UTILISATION.....                 | 179        |
| 40.2       | INTERMODAL TRAIN NUMBERS .....                                 | 180        |
| 40.3       | BELOW RAIL EXPANSION SCENARIOS.....                            | 181        |
| 40.3.1     | Current length intermodal trains (90 TEU).....                 | 182        |
| 40.3.2     | Longer 180 TEU Intermodal Trains .....                         | 184        |
| 40.4       | CONCLUSIONS – CAPACITY .....                                   | 185        |
| <b>41.</b> | <b>CONCLUSIONS AND RECOMMENDATIONS .....</b>                   | <b>186</b> |
| 41.1       | “STAY IN BUSINESS” INVESTMENT .....                            | 186        |
| 41.1.1     | Capital investments .....                                      | 187        |
| 41.1.2     | Non-capital initiatives.....                                   | 187        |

|      |  |     |
|------|--|-----|
| 41.2 | CORRIDOR CAPACITY .....  | 187 |
| 41.3 | NORTH BRISBANE REGION FREIGHT TERMINAL (NFT) .....   | 188 |
| 41.4 | RECOMMENDED ACTIONS .....  | 188 |
| 41.5 | CAPITAL INVESTMENT PROGRAM .....   | 190 |
| 41.6 | NEXT STEPS .....   | 190 |
|      | APPENDIX A: FLOOD PRONE AREAS.....   | 193 |
|      | APPENDIX B: EVALUATION OF LONGER TRAINS .....  | 195 |
|      | APPENDIX C: FUTURE INFRASTRUCTURE UPGRADES – CURVE / GRADE EASINGS AND BRIDGE<br>REPLACEMENTS..... | 196 |

## Executive Summary

The North Coast Line provides a range of rail service functions, including the Citytrain commuter services in South East Queensland, a limited number of long-distance passenger trains along its length, major coal volumes on the shared sections with the Aurizon network in Central Queensland, some short-haul bulk services (mineral and agricultural products), livestock, industrial products and intermodal containerised freight services.

The North Coast Line Capacity Improvement (NCLCI) project objectives are:

- ▶ *Investigate rail freight capacity scenarios and develop infrastructure options that facilitate increased freight on rail, and support both the freight and passenger growth over the next 20 years.*
- ▶ *Develop infrastructure and non-infrastructure solutions for a number of different scenarios to produce capacity improvement options and help inform a future investment program for the NCL.*

The primary objectives of the NCLCI include:

- ▶ *Identify the current issues that limit the competitiveness of rail freight on the NCL.*
- ▶ *Demonstrate that rail freight growth can be accommodated on the NCL.*
- ▶ *Support future freight and passenger services.*
- ▶ *Improve passenger and freight efficiency.*
- ▶ *Improve performance on the NCL over the next 10 and 20 year planning horizon.*
- ▶ *Propose the staged delivery of capacity improvement in a cost effective, value for money investment.*

Key findings and conclusions from this Study include:

1. Contestable intermodal rail freight demand has declined in recent years, with a 20% fall in volumes over the past 8 years, in spite of continuing regional population growth and economic activity within the Central Queensland and North Queensland regions, and a recent major capital investment program in LNG, coal and associated infrastructure. Rail has been losing market share to road freight on this corridor, a situation mirroring that happening along the east coast South–North corridor. Rail is struggling to compete with road freight transport, in an environment of a significant uplift in road vehicle productivity, and massive investment in the highway network between Melbourne and Brisbane, and now planned for Brisbane – Cairns. A major (\$3 billion) investment in the Melbourne – Sydney – Brisbane rail link has failed to attract any extra freight volumes, contrary to expectations in undertaking this upgrade.

2. Rail suffers from a range of disadvantages compared to road freight, including:

**Transit Time:** Even if rail could match road on the line-haul transit time (which it does not), rail cannot match door to door transit time, due to the Pick Up and Delivery (PUD) legs at each end, and the extra rail terminal times (including waiting for loading/unloading, waiting for the train departure time slot, and the activities post-train arrival). This is exacerbated by the limitations on train scheduling imposed by sharing track with passenger services (in Sydney and Brisbane), and the constraints of single track corridors.

**Greater complexity and lack of responsiveness:** The complexity of the rail transport chain, with its numerous participants, the rigidity of the network and its operation, and the impact each participant has on the overall transport outcome. There is no single point of accountability, compared to the “single truck and driver” road option.



**Greater unreliability and less availability:** This arises due to a combination of infrastructure performance and reliability outcomes, complexity of the infrastructure, rail operator equipment and terminal operations, and the work practices and culture of the participants in the rail logistics chain.

**Price:** Rail's major point of differentiation is price, with rail generally having to significantly undercut road pricing to gain business.

3. Specific rail competitiveness issues associated with NCL intermodal freight include:
  - Unreliability, manifested in service disruptions due to extreme weather events (flooding) and the extended duration of track maintenance closures within the Brisbane metro region (Scheduled Corridor Access Scheme [SCAS] closures).
  - Lack of discipline in train operations, evidenced by the poor record of on-time departures and flow-on disruptions to the Daily Train Plan (DTP), and the excessive level of make-up time in the Master Train Plan (MTP) and the DTP.
  - Rigidities around South East Queensland Citytrain network train scheduling, with the impact of passenger peak curfews on departing trains in the PM peak, and arriving trains in the AM peak.
  - Perceived issues with train priorities through the Aurizon network (Parana – Rocklands); but in reality more an issue for the lack of discipline on NCL schedules, and not arriving on time at the Aurizon network entry points.
  - Rail competes strongly on price to the long haul destinations from Brisbane to Mackay and north.
4. There is substantial current “spare” train path capacity on the corridor, with at least 50% spare capacity on the peak day for the preferred evening departures out of Brisbane. There is even more spare capacity, if the demand profile and customer preference was modified to take advantage of the non-peak times for freight paths.
5. The demand forecasts undertaken as part of the South East Queensland Rail Freight Terminal Study (SEQRFTS) indicate that the rail intermodal volumes on the NCL could increase significantly, assuming rail can address its relative competitive position with road. If these rail freight volumes can be realised, a move to run longer intermodal trains on the corridor is considered the best option to increase capacity moving forward, requiring a staged extension of the current crossing loop lengths, as the number of longer trains being deployed increased. This would also require complementary investment in intermodal terminals required to handle the increased volumes and longer trains. Staging for this would depend on the rate of demand growth.
6. The SEQRFTS also identified that the current land-locked narrow gauge intermodal terminals at Acacia Ridge and Moolabin have limited expansion capacity for intrastate NCL freight, cannot readily be upgraded to directly handle longer trains, and could run out of capacity within 10 years if the forecast demand was realised. A new intermodal terminal located on the northside of Brisbane, remote from most of the constraints of Citytrain scheduling and infrastructure maintenance closures (impacting availability within the Brisbane metro network), would be highly desirable, and outweigh the extra road-haul leg from the currently located customer base. A purpose designed Northern Freight Terminal would have significant advantages for operation of the NCL and on the future competitiveness of rail, from a reliability and total transit time perspective. It could also provide a catalyst for the development of a logistics precinct with co-location of customer Distribution Centres, adding further to the competitiveness of rail on the NCL.
7. The current NCL corridor suffers from its legacy beginnings, even with the very significant upgrade projects undertaken during the 1980s and 1990s. There remain significant sections of poor alignment, with sharp curves limiting speeds down to 40 and 50 kph, coupled with poor vertical alignment sections, a large number of old, almost life-expired timber and steel deck bridges, which also impose speed

restrictions in most instances. The corridor also suffers from the impacts of flooding, with outages due to track being overtopped, and sections that incur damage requiring repairs, with the extended outages that this may entail.

8. **There is no DO NOTHING option in respect of contestable intermodal freight on the NCL, if rail is to have a future on this corridor.** There remains very significant legacy infrastructure, including 61 old timber bridges (with a total length of 2.6 km), and a similar number of steel deck bridges, some of which are nearing the end of their useful lives. These will incur increasing maintenance cost and similarly increasing risk of failure, and some currently impose severe operating constraints (speed restrictions) due to their condition and sub-standard alignments. Likewise the rail systems (signalling and telecommunications systems) on the corridor are predominantly of 1980s and 1990s vintage, with increasing risk of obsolescence, hard-to-source spare parts, and higher likelihood of service failures. An on-going investment in asset renewals will be essential to maintain the safety integrity and operational reliability of the corridor.

## RECOMMENDED FUTURE ACTIONS









































To address stay-in-business requirements (operational safety) and the business and policy imperatives of retaining and growing rail freight volumes, a range of Action Initiatives have been identified and recommended. These address asset renewals and operational reliability, transit time, corridor availability, and future capacity requirements (if growth in demand can be realised).

The major elements of this integrated package include:

- ▶ A comprehensive program of improving flooding immunity to address known problem areas. This would align with current separate investigations into the resilience of the State's freight land transport links, preparatory to identifying potential strategies or improvements. This would primarily include armouring of track and embankment in areas subject to regular or occasional overtopping to limit any damage, in combination with raising track (where cost effective) under a bridge replacement and track re-alignment program.
- ▶ A longer term program of asset renewals, particularly covering old bridge structures, very low standard alignment, flood prone sections, and rail systems (signalling and telecommunications equipment).
- ▶ Planning to address the more extensive sections of sub-standard alignment, including the long sub-standard sections between Nambour and Maryborough, and the Rockhampton Western Bypass. This would include route finalisation and corridor protection, preparatory to any funding commitment to proceed to construction.
- ▶ Re-engineering the Master Train Plan to realise significant transit time savings and to release more corridor capacity. This requires gaining the agreement between rail operators, network owners and key customers to effect any changes, ensuring realisation of the benefits possible from shorter transit times for premium intermodal freight are achievable, and that tightening the MTP for these services does not compromise required timetable reliability.
- ▶ A planned move to introduce longer freight trains to increase capacity for the "market desired" paths and to reduce train operating costs.
- ▶ A North Brisbane region freight terminal, to eliminate most of the adverse scheduling, capacity and availability impacts imposed on freight trains within the Brisbane metro system.

The recommended actions, how they align to primary objectives of the NCLCI study, as distilled into the three major corridor business outcomes of "stay-in-business", "improving service attributes to grow rail volumes", and "providing adequate corridor capacity" are summarised in Table ES 1.

**Table ES1 Recommended actions and benefits**

| ACTIONS                   | ATTRIBUTES – CONTESTABLE INTERMODAL FREIGHT                                       |   |   |   |   |
|---------------------------|---|---|---|---|---|
|                           | Stay in business (safety)   | Transit time  | Reliability   | Price   | Capacity  |
| Bridge replacements       |  |  |  |  |  |
| Minor curve easings       |  |  |  |  |  |
| Major deviations          |  |  |  |  |  |
| Track upgrade             |  |  |  |  |  |
| Flood Resilience          |  |  |  |  |  |
| Longer trains             |  |  |  |  |  |
| Northern freight terminal |  |  |  |  |  |
| MTP engineering           |  |  |  |  |  |

 **High impact**                       **Minimal impact**

Each action has a primary customer service justification, but also contributes to other desirable service attributes. The package, by necessity, contains a number of separate elements, but also includes correlation and interdependencies between these elements to deliver on the desired policy outcomes. Key issues from a current and potential freight customer perspective, include a demonstration that a long term rail corridor strategy is in place to address the moving goal-posts for road/rail intermodal freight contestability, that early wins are possible and further incremental benefits are delivered.

Table ES.2 provides an overview of the Action Items, their relative capital cost, ease of implementation, likely time to implement and immediacy of their benefits.

An initial 10 year Action Plan is recommended, providing a strategic direction, an appropriate level of funding availability, and some flexibility to modify the program implantation on the basis of changing priorities. An indicative budget has been developed with an amount of \$2.5 billion over the initial 10 year plan. This level of funding is considered as being required to achieve the desired outcomes, and compares with the “approved” \$8.5 billion upgrade of the Bruce Highway over this timeframe.

An implementation program has been suggested, with consideration of the lead-times needed to progress the program, likely funding and other resource constraints, and timing to meet capacity requirements. Table ES.2 provides a summary overview of this assessment, inclusive of comparative ease of implementation and realisation of the benefits. Table ES.3 and Figure ES.1 provides an initial summary of likely capital costs, assuming availability of funding and expected resource constraints.

**Table ES2 Overview of implementation issues**

| ACTIONS                   | ATTRIBUTES – CONTESTABLE INTERMODAL FREIGHT |                |                        |                   |                  |
|---------------------------|---|----------------|------------------------|-------------------|------------------|
|                           | Capital Cost                                | Implementation | Ease of Implementation | Time to Implement |                  |
| Bridge replacements       | High  | Staged         | Moderate               | 1-10yrs plus      | Slow-progressive |
| Minor curve easings       | High  | Staged         | Moderate/Hard          | 2-10yrs plus      | Slow-progressive |
| Major deviations          | High  | Staged         | Moderate/Hard          | 3-10yrs plus      | Slow-progressive |
| Track upgrade             | Medium                                      | Staged         | Easy                   | 2-5yrs            | Med-progressive  |
| Flood resilience          | Medium                                      | Staged         | Easy/Moderate          | 1-3yrs            | Early wins       |
| Longer trains             | Medium                                      | Staged         | Moderate               | 3-10yrs           | Early wins       |
| Northern freight terminal | Medium                                      | Part staged    | Moderate               | 5yrs              | Early wins       |
| MTP engineering           | Nil   | One-off        | Easy                   | Short             | Immediate        |

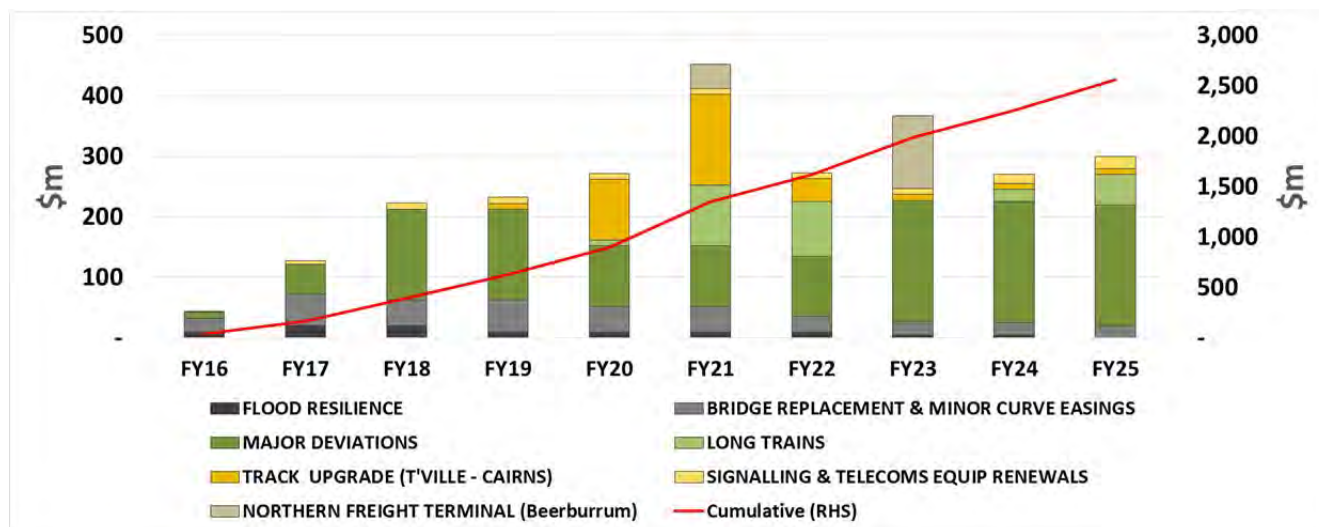
The indicative split-up of the “budget” and suggested program and expenditure program is shown in Table ES.3 and Figure ES.1. The budget numbers indicated below are an educated assessment of the quantum likely to be required to make a difference with the road-rail competition. Detailed evaluation of the Action Plan initiatives would likely result in revised relative and absolute “budget” composition to reflect key policy priorities, and the program may be constrained by funding considerations.

**Table ES3 Indicative 10 year Action Program budget**

| ITEM                                     | AMOUNT<br>\$M |
|--|---------------|
| FLOOD RESILIENCE                         | 100           |
| BRIDGE REPLACEMENT & MINOR CURVE EASINGS | 340           |
| MAJOR DEVIATIONS                         | 1,260         |
| LONG TRAINS                              | 270           |
| TRACK UPGRADE (T'VILLE - CAIRNS)         | 328           |
| SIGNALING & TELECOMS EQUIP RENEWALS      | 100           |
| NORTHERN FREIGHT TERMINAL (Beerburrum)   | 160           |
| <b>TOTAL \$M</b>                         | <b>2,558</b>  |

**Note:** The estimates above constitute a very preliminary ball-park assessment, and subject to more detailed scoping, adoption of the appropriate desirable and minimum engineering standards, particularly for horizontal alignment and flooding immunity. Re-allocation of budget between the broad line items would be expected following detailed assessment and prioritisation.

**Figure ES1 Indicative Program and Cash-flow**



It should be noted that this NCLCI study was limited to strategic considerations only. Detailed scoping and engineering for particular upgrade proposals, including the setting of appropriate corridor strategic alignment standards and degree of flood immunity standards for each of the major corridor sections was not considered within the scope of this strategic study. These would be expected to be developed during a more detailed options evaluation investigation as outlined in the following recommended Next Steps.

Whilst these NCLCI study recommendations have not tried to impose a fixed minimum alignment standard, a preferred minimum standard where practically achievable is suggested as 100 kph; however there will likely be circumstances where this is not practical, particularly where new corridor acquisition or severe topography would impose cost not commensurate with the long term benefits.

## NEXT STEPS

As noted above, the indicative budget is based on very broad scope parameters as to the major sub-components. More detailed engineering and scoping needs to be undertaken to firm-up on the extent of works required, individual upgrade schemes, capital cost estimates and priorities, both within each of the Action Initiative areas and between these areas, to deliver the best “bang for the buck” and the outcomes most likely to deliver on intermodal freight growth. Key stakeholder involvement in agreeing on scope and the ability to achieve the desired outcomes is essential.

The next stages of this assessment are recommended to include:

- ▶ Key stakeholder engagement on the conclusions of this NCLCI study and suggested way forward.
- ▶ Progressing the re-engineering of the Master Train Plan, including consultation with major customers, Rail Operators and rail Network Owners.
- ▶ Detailed investigation of flooding issues and scoping to assess the best areas for flood mitigation and increased flood resilience of the railway, including prioritising works, capital cost estimates, expected benefits and work packaging options. (This includes linkage with the bridge replacement and minor curve easing program investigation.)

- ▶ Detailed investigation of the elimination of the remaining timber bridges, including associated minor curve easings, flood-mitigation approaches at these locations, cost estimates, and prioritising works based on current asset condition and other relevant criteria.
- ▶ Finalising of the desired strategic infrastructure standards to be adopted where feasible along the various route sections (e.g. horizontal alignment).
- ▶ Progress concept alignment designs for major deviations, including new alignment design, identification of land requirements, cost estimates and benefits assessment.
- ▶ Planning for siting and concept design and land footprint requirements for a new Northern Brisbane Freight Terminal.
- ▶ Development of an implementation strategy for the introduction of longer intermodal trains, including finalising an optimal reference train length, assessment of terminal implications for both the Brisbane region terminals and northern terminals, and assessment of which crossing loops require extension as the number of long trains is progressively increased.

# 1. Introduction and study methodology

## 1.1 STUDY OBJECTIVES

The North Coast Line Capacity Improvement (NCLCI) project objectives are:

- ▶ Investigate rail freight capacity scenarios and develop infrastructure options that facilitates increased freight on rail and supports both the freight and passenger growth over the next 20 years.
- ▶ Develop infrastructure and non-infrastructure solutions for a number of different scenarios to produce capacity improvement options and help inform a future investment program for the NCL.

The primary objectives of the NCLCI include:

- ▶ Identify the current issues that limit the competitiveness of rail freight on the NCL.
- ▶ Demonstrate that rail freight growth can be accommodated on the NCL.
- ▶ Support future freight and passenger services.
- ▶ Improve passenger and freight efficiency.
- ▶ Improve performance on the NCL over the next 10 and 20 year planning horizon.
- ▶ Propose the staged delivery of capacity improvement in a cost effective, value for money investment.

## 1.2 STUDY METHODOLOGY

The study was split into 5 core staged tasks, with Working Papers detailing the assessment and conclusions prepared for each. These were provided for internal review by the Study Team Steering Group comprising representatives of the Department of Transport and Main Roads and Queensland Rail.

Task 1 of the Project included an assessment of the current corridor infrastructure, the current traffic tasks on the corridor, and the performance of the corridor, and formed the basis of Working Paper 1.

Tasks 2 and 3 investigated the road/rail mode competition for contestable freight, and the current and desired rail freight service parameters. Both these activities and findings were incorporated into a single Working Paper 2/3. This paper also included an overview of the road-rail competition experience elsewhere, specifically on the east coast north-south corridor, with the early outcomes of mode share following major highway investments (Hume and Pacific Highways), and provides an overview of the current 10 year \$8.5 billion Bruce Highway Action Plan.

Task 4 investigated various rail infrastructure upgrade options to improve the performance and competitiveness of the North Coast Line rail corridor. This included an initial assessment of likely viable upgrade options to address the key considerations of "stay-in-business" asset condition, rail corridor competitiveness (with other modes), and capacity, particularly in respect of the contestable freight market. The "competitiveness" focus was around cost reduction, transit time reduction, and reliability. A number of infrastructure upgrade options were discounted due to their high implementation costs, and limited benefits for the likely scale of the NCL intermodal freight traffic task. Others were identified as contributing to improving the competitiveness and capacity of the NCL, and these are considered further in this assessment. Working Paper 4 detailed these options and conclusions.

Task 5 Working Paper incorporated the findings of the previous tasks, and provided an analysis of the range of infrastructure and non-infrastructure options needed to reverse the recent loss in contestable freight market share. Whilst the analysis and recommendations was heavily focussed on the contestable intermodal

freight market, this was in the context of a continuation of the long distance passenger services, the operation of the Brisbane Citytrain commuter network, bulk freight and other miscellaneous freight services along the corridor.

Working Paper 5 included recommendations in respect of a forward program of initiatives and capital investments needed to achieve the Queensland Government's freight transport objectives, and the role rail should play in these. It also aligned with a stated Australian Government support for investment in regional freight rail.

This Final Report covers the 5 tasks and aggregates the content of the 4 Working Papers into a single document in line with the Study methodology.

### 1.3 GLOSSARY OF TERMS AND ABBREVIATIONS

Railways and the transport industry are rich in acronyms and abbreviations. Whilst this report is a high level strategic assessment, various acronyms have been utilised for readability. These include the following:

|               |   |
|---------------|---|
| NCL           | North Coast Line (Roma Street – Cairns)   |
| TMR           | Department of Transport and Main Roads (Queensland)   |
| ARTC          | Australian Rail Track Corporation   |
| QTLC          | Queensland Transport Logistics Council  |
| MTP           | Master Train Plan – detailed train schedule showing route, planned times along the route, and planned train crossings   |
| DTP           | Daily Train Plan – Modification to the MTP for actual trains to be run on the day   |
| PUD           | Pick-up and Delivery trips from customer premises to the intermodal terminals   |
| TEU           | Twenty Foot Equivalent ((6.1 metres) international standard measure for containers. Shipping containers are predominantly 40 foot long (2 TEU), but with other length variants also in use (e.g. 45 foot and 48 foot)   |
| OD            | Origin – Destination Pairs (e.g. Brisbane – Townsville as an OD)  |
| IMEX          | Import – Export intermodal freight (direct to an export terminal e.g. Port of Brisbane)   |
| BMT           | Brisbane Multimodal Terminal at Port of Brisbane – major terminal utilised for NCL IMEX containers  |
| SCAS Closures | Scheduled Corridor Access Scheme - Extended weekend track closures within the SEQ metro network for infrastructure maintenance and asset renewals work. Normally extend from Friday evening to Monday morning, with no/limited ability for any trains to transit through the SCAS closure section |
| UP - DOWN     | Direction of travel. For the NCL UP is in the direction from Cairns to Brisbane (and to Acacia Ridge and Port of Brisbane, and DOWN is from Brisbane to Cairns.   |
| TAL           | Tonnes axle load – track rating limiting locomotives and wagon loads. The NCL is rated  |



at 20 TAL, but with some associated Branch Lines and sidings rated at 15.75 TAL.

|               |  |
|---------------|--|
| Mtpa          | Million tonnes per annum   |
| NFT           | A proposed new intermodal freight terminal located to the north of Brisbane. For NCLCI planning purposes this is assumed to be located in the Beerburrum area.   |
| SRT           | Section Run Time for a train to traverse the nominated track sections (e.g. the single line sections between crossing loops). It varies for train type, and is affected by section length, maximum permitted line speed, curvature, grades and train performance characteristics, plus whether from stop-start or run through. |
| Train Path    | Routing a train through the network, allowing for section occupation as it tracks through the network, dwell times and train crossings.  |
| SEQCI         | South East Queensland Capacity Improvement Study, undertaken for the Department of Transport and Main Roads by Parsons Brinckerhoff, and covering both passenger and freight rail operations within the SEQ region bounded by Nambour to the north and Rosewood to the west.   |
| SEQRFTS       | South East Queensland Rail Freight Terminals Study, being undertaken concurrently with this study for the Department of Transport and Main Roads (by Parsons Brinckerhoff, Deloitte, Ranbury and Jacobs)   |
| FCL           | Full container load  |
| Track grading | Expressed as 1 vertical to X horizontal (e.g. 1 in 100)  |
| PSC           | Prestressed concrete (reference to sleeper type and bridge deck systems).  |
| RCS           | Remote controlled signalling, comprising remote controlled route setting, remote activation of turnouts, and colour light signals. Both Aurizon and Queensland Rail use the QR developed Universal Train Control (UTC) software to oversee train operations and set routes.  |
| DTC           | Direct Train Control – a radio based “train order” system of issuing and controlling travel authorities to trains in non RCS territory (Operates on the NCL between Purono and Woree).   |

## 2. Route description

The North Coast Line comprises the route between Brisbane (Roma Street) and Cairns (at Cairns Station), a nominal route length of 1680.9 km. The route is predominantly owned and controlled by Queensland Rail (as Rail Infrastructure Manager), with the exception of the majority-use coal sections in Central Queensland. These Aurizon owned and controlled sections includes the 99 km long Parana (south of Gladstone) – Rocklands (south of Rockhampton) section, and the 7 km long Durroburra – Kaili section (between Merinda and Abbot Point). These duplicated sections are shared by the North Coast traffics with the predominant bulk coal traffics to Gladstone and Abbot Point respectively. The entire corridor is State owned, and leased to the Department of Transport and Main Roads (TMR). Both Queensland Rail and Aurizon have a sub-lease of their respective sections of the corridor from TMR.

Connectivity of the North Coast Line includes to freight terminals in the Brisbane area (mainly Acacia Ridge, Moolabin and Fisherman Islands), short branch lines connecting to the Ports of Mackay and Townsville, and branch lines to Maryborough, Nerimbera (North Rockhampton), Sun Metals zinc refinery and Yabulu Nickel Refinery in the Townsville area.

The Mount Isa Line traffics operate on the North Coast Line between Stuart and Port of Townsville.

The North Coast route is as shown in Figures 2.1 and 2.2. The Brisbane region rail schematic, with the location of the 3 intermodal terminals at Acacia Ridge, Moolabin and Port of Brisbane is as per Figure 2.3. The Townsville region rail network, showing the connectivity with the Mount Isa Line and Port of Townsville is shown in Figure 2.4.

**Figure 2.1 North Coast Line South: Brisbane to Rockhampton**



**Figure 2.2 North Coast Line North: Rockhampton to Cairns**



Figure 2.3 Brisbane region network and freight terminal locations

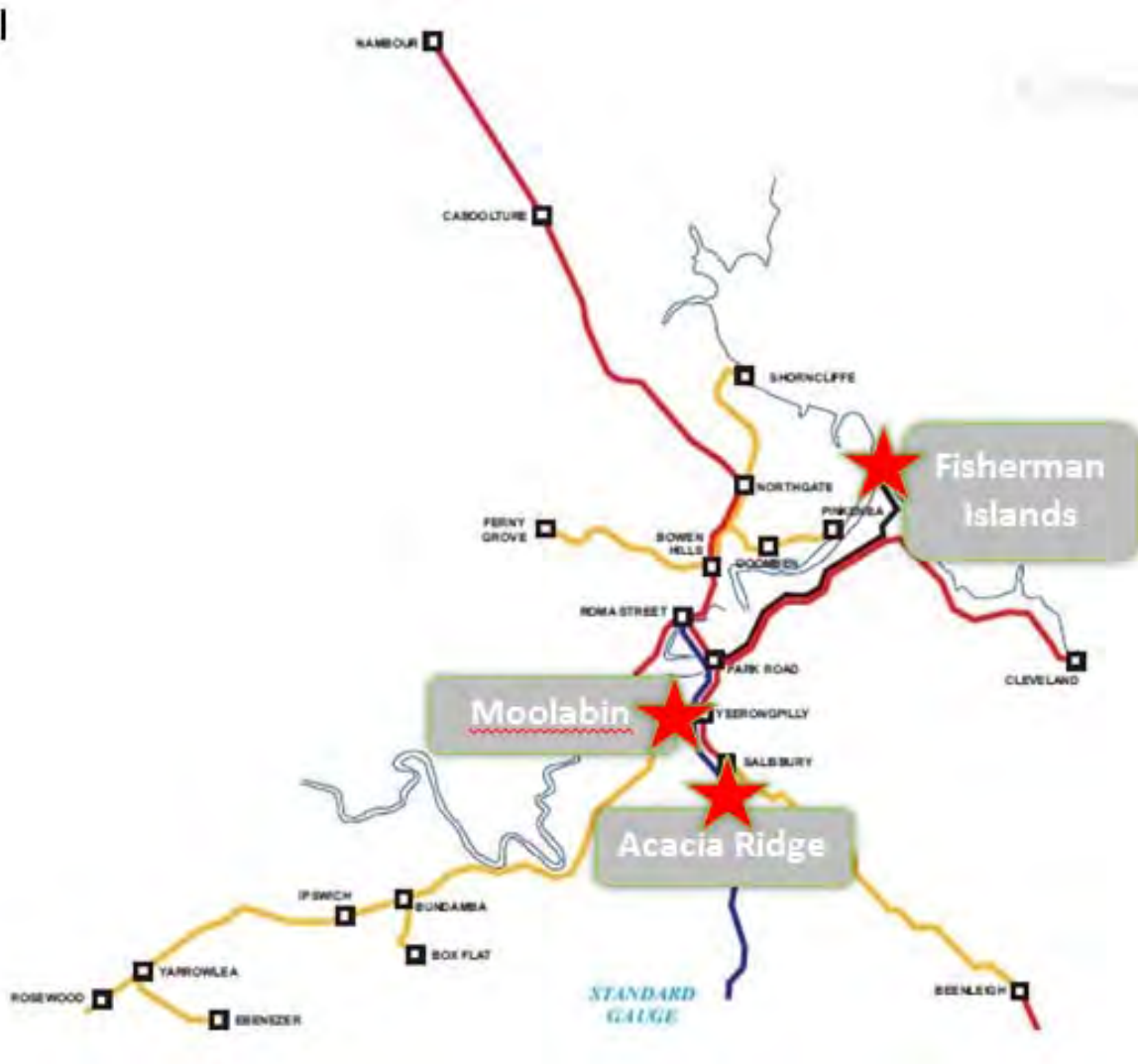
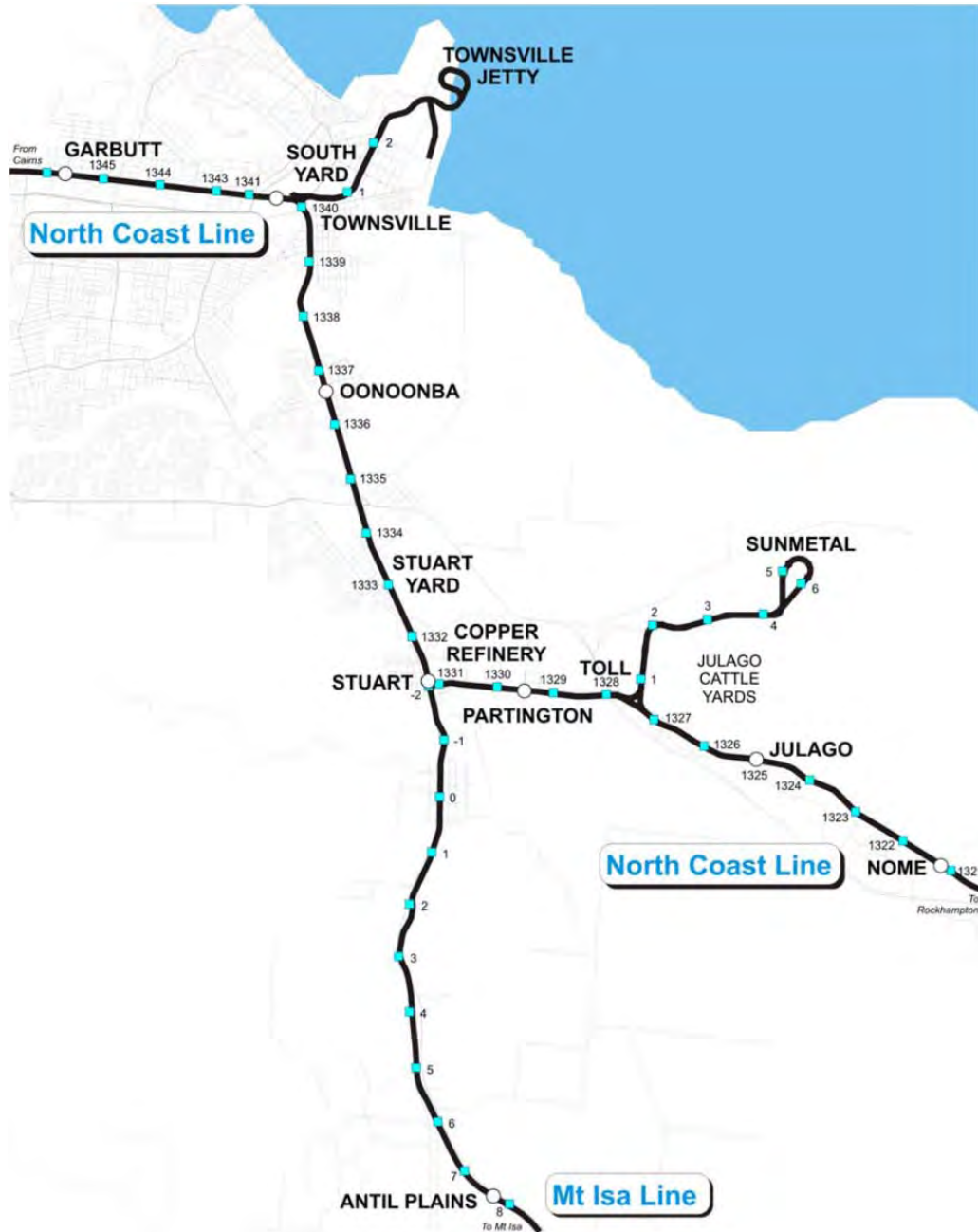


Figure 2.4 – Townsville region rail network



### 3. History and recent infrastructure upgrades

The North Coast Line was developed in a piecemeal fashion, extending out from the major ports at Brisbane, Maryborough, Bundaberg, Rockhampton, Mackay, Bowen, Townsville and Cairns. It was finally connected as a single route at Daradgee (near Innisfail) in 1924. Some sections in North Queensland were converted from their original 2'0" gauge cane tramway operation to the current 3'6" (1067mm) Queensland narrow gauge system. The original construction and alignment standards were relatively low, with the major south - north freight and passenger task at the time performed by coastal shipping. Construction was originally to facilitate development of the hinterland around the coastal ports, driven by the agriculture, pastoral and timber industries, and by the mining industry. Land transport competition at the time was by horse or bullock hauled drays over rudimentary tracks.

The North Coast Line has undergone extensive upgrades over the past four decades, including track upgrades, alignment improvements, bridge upgrades, signalling/train control and telecommunication upgrades, and new freight terminals and passenger stations. Axle load upgrades have permitted deployment of bigger, more powerful locomotives, and bigger payload wagons. The installation of remote controlled signalling, alignment improvements and rail bypasses, together with higher track standards has permitted a significant increase in average train speeds and reduced transit times. Changing operating practices and the introduction of an Automatic Train Protection system has significantly reduced the number of train crew needed to operate a through train on the corridor, with previous 3 man train crews for freight trains operating only between closely spaced train crew depots as a relic of the steam locomotive era, replaced by a single driver operating for an extended shift.

New track infrastructure maintenance practices and high capacity track maintenance machinery, coupled with the installation of concrete and steel sleepers and heavier continuously-welded rail, and the reduction in the length of timber bridging, have reduced the maintenance costs (in real terms), and permitted the maintaining of an effective track condition.

A snapshot of the major projects undertaken on the corridor over the past three decades is as follows:

#### 1980s

- ▶ Remote controlled signalling: Caboolture – Gladstone
- ▶ Third track Mayne – Northgate
- ▶ Curve improvements and electrification: Petrie – Caboolture
- ▶ Mainline Electrification Stage 4: Caboolture – Gladstone
  - ▶ Four major deviations at Eumundi Range, Baddow Bypass, Gympie Bypass, Benaraby – Parana
  - ▶ Electrification
  - ▶ Optic Fibre communications link (Brisbane – Mackay)
  - ▶ Installation of prestressed concrete sleepers Caboolture – Bundaberg
  - ▶ Acquisition of electric locomotives for operating freight trains between Brisbane and Rockhampton (subsequently re-allocated to Central Queensland coal haulage)
- ▶ Mackay Deviation (Paget – Erakala) including new Pioneer River bridge and new Mackay station and freight depot at Paget, and the elimination of 19 open level crossings within Mackay
- ▶ Partial Duplication: Gladstone – Rockhampton
- ▶ Installation of prestressed concrete sleepers: Gladstone – Rocklands
- ▶ New rail access across the Yeppen floodplain: Rocklands – Rockhampton

- ▶ Remote controlled signalling: Rockhampton – Townsville – Purono
- ▶ Telecommunication upgrades (optic fibre trunk links, microwave radio back-up system, and UHF radio coverage)
- ▶ Bowen rail bypass
- ▶ New rail access into Cairns: Woree - Portsmith (including new freight terminal and rollingstock servicing depot)
- ▶ Introduction of the electric EMU passenger services to Caboolture, Nambour and Gympie.

### 1990s

- ▶ Installation of Automatic Train Protection system for Driver Only Operation: Caboolture – Townsville
- ▶ Installation of prestressed concrete sleepers: Bundaberg – Gladstone (102 km)
- ▶ Complete duplication: Gladstone – Rocklands (for coal traffics)
- ▶ Upgrade of Townsville – Purono with steel sleepers and 53kg rail for nickel ore traffic
- ▶ Mainline Upgrade Project: Brisbane – Cairns
  - ▶ 118 km of deviations (to nominal 160/120kph alignment standard)
  - ▶ Upgrade all bridges to minimum 20 TAL standard (elimination of 793 timber bridges on higher speed alignment, strengthening 157 steel and timber bridges (most not on higher speed alignment)
  - ▶ Track strengthening with interspersed steel sleepers (Rockhampton – Townsville 1 in 3, Purono – Cairns 1 in 4 spacing)
  - ▶ Acquisition of new generation diesel locomotives (2800 class) and container wagons to 20 TAL standard for use on NCL
- ▶ Upgrade of signalling to suit higher speed (160kph) tilt train operation: Caboolture – Rockhampton, including level crossing protection upgrades, and introduction of the electric traction tilt train between Brisbane, Bundaberg and Rockhampton.
- ▶ Additional trackage in Brisbane area: Mayne – Northgate (4th track) and Northgate – Lawnton (3rd track)
- ▶ Upgrade signalling: Petrie – Caboolture.
- ▶ New Townsville station and Causeway Connection direct route across Ross Creek.
- ▶ New rollingstock maintenance depots at Stuart.

### 2000s

- ▶ Installation of prestressed concrete sleepers: Rockhampton – Townsville (replacing interspersed steel sleepers)
- ▶ Realignment and duplication: Caboolture – Beerburum
- ▶ St Lawrence River bridge replacement
- ▶ Introduction of the diesel hauled tilt train between Brisbane and Cairns
- ▶ Level crossing protection upgrades
- ▶ Duplication: Durroburra - Kaili

The various upgrade works have contributed to a significant improvement in the corridor and its performance, as well as catering for a major growth in coal traffic on the shared track sections in Central Queensland, and Citytrain passenger services in the Brisbane metro network.



However there remains a considerable legacy of low standard alignment, poorly graded sections, a combination of sharp curves and poor grades, old timber and steel bridges reaching the end of their economic life, significant flood prone areas, and over 1000 level crossings. A significant section of the corridor is located in the tropical north, with very heavy rainfall events from tropical cyclones and monsoon influences, and traverses across a number of major river systems. It remains a single track railway for approximately 88% of its length, with 129 crossing loops permitting crossing of trains. It performs a variety of functions along its length and over various sections, including commuter and long distance passenger services, heavy-haul bulk and general freight.

Details of the current infrastructure standards, traffic tasks and an overview of the corridor performance are provided in the following sections.

## 4. NCL infrastructure description

### 4.1 TRACK STANDARDS

The track standards along the route vary, being a function of the relevant upgrade program and era involved.

The route from Brisbane to Townsville predominantly comprises prestressed concrete (PSC) sleepers, with rail sizes generally 47/50/53/60 kg/m size. This includes a mix of new rail installed with various upgrade programs, and part-worn rail cascaded from the Goonyella and Blackwater coal systems, following major re-railing programs on these systems. Some short sections of steel sleepers remain.

Between Townsville and Purono (Yabulu), the track is predominantly 53 kg/m rail on steel sleepers to accommodate the nickel ore traffic; whilst the track between Purono and Cairns generally comprises 41kg/m rail on steel sleepers.

The track is rated for 20 tonne axle load (TAL). The part-worn 41kg/m rail on the Purono – Cairns section is marginal for 20 tonne axle load, but is adequate for the volume of freight operating at this maximum axle load on this lower trafficked section.

The track sections on the Aurizon sections are rated at 26.5 tonne axle load, comprising 53/60 kg/m rail on PSC sleepers.

Track standards in the Brisbane area vary, and include both PSC sleepers and timber sleepers. More recently re-sleepered track includes use of low profile PSC sleepers to 20 TAL. Rail sizes vary with the mix including 47/50/60 kg/m rail. Rail along the route is either continuously welded, or long-welded rail.

Maximum line speeds for various trains on the various track sections and track standards are as per Table 4.1.

**Table 4.1 Maximum line speeds (kph)**

| Train type            | Brisbane Metro | Brisbane - Rockhampton | Rockhampton - Townsville | Townsville - Cairns |
|-----------------------|----------------|------------------------|--------------------------|---------------------|
| General freight       | 60             | 100                    | 100                      | 80                  |
| Bulk freight          | 60             | 80                     | 80                       | 80                  |
| Loco hauled passenger | 100            | 100                    | 100                      | 100                 |
| Inter City Express    | 100            | 120                    | n/a                      | n/a                 |
| Tilt Trains           | 100            | 160                    | 160                      | 100                 |

**Note:** The Brisbane Metro freight speed limit (60kph) is dictated by the complexity of the signalling in a multi-track environment and freight train braking distances and no ATP system, with freight train speeds limited to reduce potential of Signals Passed at Danger (SPADS).

Turnout standards vary depending on age and application. Newer turnouts are to 60kg/m standard on PSC bearers. Train speeds through a turnout are dictated by the turnout angle. Most crossing loop turnouts on the NCL are either 1 in 12 or 1 in 16.

Maximum permitted speeds through the curved leg of the turnout are:

- ▶ 1 in 12                      25 kph
- ▶ 1 in 12 (tangential) 40 kph
- ▶ 1 in 16                      50 kph
- ▶ 1 in 25                      80 kph

## 4.2 RULING GRADES

Ruling grade will dictate the maximum trailing load behind a given motive power source. It will depend on steepness and length of the grade and associated track curvature, train length and load distribution, and the ability to utilise train momentum to negotiate a grade. Whilst the legacy alignment standards includes a significant number of shorter steep graded sections, with the steepest down to 1 in 44 for both north-bound and south-bound trains between Brisbane and Townsville, and 1 in 33 between Townsville and Cairns, the predominant ruling (longer) grades (not adjusted for curvature impacts) are as indicated in Table 4.2. Sharp curves impact on the rolling resistance to a train traversing a curve, and increase the effective ruling grade. This curve impact will vary depending on the train characteristics, train speed, wheel and rail profile and extent of gauge widening.

**Table 4.2 Ruling grades**

| Direction         | Section              | Average grade | Length |
|-------------------|----------------------|---------------|--------|
| <b>Northbound</b> | Corinda area         | 1 in 59       | 1.1 km |
|                   | Nambour area         | 1 in 80       | 2 km   |
|                   | South of Colton      | 1 in 75       | 1 km   |
|                   | Yandaran             | 1 in 50       | 1 km   |
|                   | Aldoga Bank          | 1 in 60       | 2 km   |
|                   | North of The Caves   | 1 in 75       | 1.4 km |
|                   | Glen Gleddes         | 1 in 80       | 2 km   |
|                   | The Leap             | 1 in 75       | 1.3 km |
|                   | North of Tully       | 1 in 75       | 1.7 km |
| <b>Southbound</b> | South of Partington  | 1 in 75       | 1.6 km |
|                   | The Leap             | 1 in 75       | 2 km   |
|                   | North of Kooltandra  | 1 in 75       | 1.3 km |
|                   | South of Kooltandra  | 1 in 75       | 4 km   |
|                   | South of Princhester | 1 in 75       | 1.8 km |
|                   | North of The Caves   | 1 in 75       | 1.8 km |
| <b>Southbound</b> | North of Nambour     | 1 in 75       | 2 km   |
|                   | Dutton Park Flyover  | 1 in 75       | 1.3 km |
|                   | Morningside Bank     | 1 in 75       | 1.2km  |

Vertical grading profile directly impacts on train speeds, particularly where rail operators attempt to maximise trailing load for a given locomotive configuration, locomotive tractive effort and power rating. The balanced speed for a diesel locomotive hauled, loaded freight train on a long ruling grade can be down to 15 – 20kph. This is the sustainable speed the locomotive will haul a train on the ruling grade when the prior momentum effects on the approach to the grade have been dissipated.

### 4.3 HORIZONTAL ALIGNMENT

Horizontal alignment dictates maximum permitted speed for a given curve radius and applied rail cant. The original corridor was to “developmental” standards, designed in an era where earthworks construction was highly labour intensive, and the rail route selected sought to minimise the extent of cuts and fill. The route comprises a large number of curves, with the nominal prescriptor for severity of curvature being the permitted (non-tilting) train speed as indicated in Table 4.3.

**Table 4.3 Extent of track curvature**

| Section                      | Section Length (km) | <60kph km      | <80kph km      | % length <80kph | < 100kph km | % length <100kph |
|------------------------------|---------------------|----------------|----------------|-----------------|-------------|------------------|
| Caboolture - Nambour         | 54                  | 3.8            | 14.7           | 27%             | 25          | 46%              |
| Nambour – Bundaberg          | 246                 | 6.4            | 21.2           | 8.6%            | 79          | 32%              |
| Bundaberg - Gladstone        | 178                 | 1.8            | 7.1            | 4.0%            | 20          | 11%              |
| Gladstone – Rockhampton      | 110                 | 0              | 13.2           | 12.0%           | 30          | 27%              |
| Rockhampton - Mackay         | 320                 | 0.6            | 5.4            | 1.7%            | 99          | 31%              |
| Mackay - Townsville          | 382                 | 2.9            | 10.4           | 2.7%            | 138         | 36%              |
| <b>Caboolture-Townsville</b> |                     | <b>15.5 km</b> | <b>72.1 km</b> | <b>5.6%</b>     | <b>391</b>  | <b>30%</b>       |
| Townsville - Cairns          | 339                 | 10.9           | 26.9           | 7.9%            | 159         | 47%              |
| <b>Caboolture - Cairns</b>   |                     | <b>26.4 km</b> | <b>98.9 km</b> | <b>6.1%</b>     | <b>550</b>  | <b>34%</b>       |

The most severe curvature impacts are in the more difficult terrain sections, where this was dictated on construction cost constraints for both horizontal and vertical alignments. This is most evident in the Sunshine Coast region and between Ingham and Cairns.

The tilt trains provide compensation for the effect of curvature, with the trains actively tilting into the curve, permitting a higher curve speed for these trains where no other constraints apply (e.g. through platforms). The permitted tilt train curving speeds are nominally 20% higher than a non-tilting train.

As noted in Section 3, major curve easings were undertaken in the various upgrade projects in the 1980/1990s [Petrie – Caboolture electrification, Main Line Electrification (MLE), and Main Line Upgrade (MLU) projects], duplications between Gladstone and Rockhampton, and the Mackay Bypass). The alignment standards adopted for the MLU project were to a strategic design standard of 160 kph south of Gladstone and a 120 kph minimum standard between Rockhampton and Townsville. More recently the Caboolture – Beerburrum duplication has included re-aligning to the 160 kph standard.

Whilst the total length of curves under the 80 kph speed classification (particularly south of Townsville) is relatively low, the impact of each curve is magnified by the impacts of grading (normally associated with the more difficult terrain in the sharp curved sections), and by the braking/acceleration distances for a train, particularly fully laden freight trains. The rear of the train needs to clear the curve before the train can

accelerate back to line speed. The quantum of these impacts vary for each particular situation. Multiple curve sections located close together, coupled with steep graded sections, increase the effective overall length and impact of the slower speed curves.

As an example a 300 metre long 60 kph curve has a 4 km long distance impact and an extra 1 minute section run time compared to maintaining a 100 kph line speed over this 4 km length, assuming no adverse grade impacts and based on an assumed train braking and acceleration performance. A similar length 50 kph curve has a 4.7 km length of speed impact and an extra 1.5 minute section run time impact. Long sections of multiple curves located close together, coupled with steep graded sections, significantly increase the effective overall length and impact of the slower speed curves.

#### 4.4 TRANSIT TIMES

Transit times are a function of train speeds and dwell time. Scheduled and unscheduled dwell time is subject to the particular train priority for crossing of other trains, the intensity of utilisation of the corridor and number of train crosses on the single line sections, and the performance of other trains on the network. It also includes waiting times for entry to the separate Queensland Rail and Aurizon networks, and any intermediate stops to re-fuel, change train crews and to detach / attach wagons.

Actual train speeds are influenced by:

- ▶ Maximum permitted line speed (mandated for a given track standard and location).
- ▶ Maximum permitted speeds for a given curve radius and applied track cant, and other local permanent speed restrictions such as entry/exits to crossing loops.
- ▶ Grading impacts on train performance.
- ▶ Temporary speed restrictions due to maintenance work areas and track condition, excessive hot weather or flooding impacts.
- ▶ Individual train characteristic (power/weight, train length).
- ▶ Driver performance and response to train handling performance, track condition and localised safety hotspots with level crossings and trespass.

Current maximum design speeds for the major line sections are summarised in Table 4.1.

The combination of curves and grades, and the standard of transitions provided to cater for both change in grade or curves for a given train speed, will impact on the quality of train handling, and the buff (compressive) and drawbar (tensile) forces throughout the train. A combination of horizontal alignment and grade changes within a train length will result in greater in-train forces, and an increased potential for derailment and damage to freight, as well as increased infrastructure and rollingstock maintenance costs. Train drivers will generally operate to a lower than maximum posted speed if they perceive train handling issues or other safety concerns.

#### 4.5 BRIDGES

The coastal route crosses a large number of major rivers and creek systems. The current rail bridges include a mix of bridge types. Steel deck bridges range from the combined road/rail steel truss bridge across the Burdekin River, large old steel truss bridges across major rivers (the most notable being the Fitzroy, Burnett and Mary Rivers, in addition to the Brisbane River at Indooroopilly), numerous steel girder bridges (including the North and South Pine Rivers), and a large number of legacy timber bridges. Most bridges re-constructed since the 1960s have been low-maintenance, prestressed concrete beam, ballasted deck bridges on reinforced concrete piers.

Older bridges are predominantly timber girder bridges on their original timber piers and timber piles. Over time numerous timber piers have been replaced with concrete piers, with some more recent replacement with steel piers. There are numerous hybrid bridge types, including steel and timber girder spans, and various pier types within an individual bridge. The mix and length of bridging on the corridor is summarised in Table 4.4.

Timber bridges are high maintenance due to their age, their dynamic behaviour under repetitive loadings, and their being at the limit of their design strength for the maximum corridor 20 tonne axle load rating. The shortage of quality timbers and skilled maintainers contributes to their high maintenance costs. Whilst timber beams, corbels and headstock timbers are relatively easy to replace, timber piers and piles are not, and replacements general require a more significant replacement of the pier and its support.

**Table 4.4 Bridging**

| Section               | Timber    |                | Steel deck |                | Concrete deck |                 |
|-----------------------|-----------|----------------|------------|----------------|---------------|-----------------|
|                       | Number    | Length         | Number     | Length         | Number        | Length          |
| Mayne – Nambour       | 0         | 0 m            | 18         | 1,242 m        | 18            | 747 m           |
| Nambour – Rockhampton | 16        | 1,337 m        | 15         | 2,254 m        | 196           | 7,309 m         |
| Rockhampton – Mackay  | 0         | 0 m            | 5          | 811 m          | 86            | 4,272 m         |
| Mackay – Townsville   | 3         | 83 m           | 22         | 3,655 m        | 108           | 6,321 m         |
| Townsville – Cairns   | 42        | 1,190 m        | 19         | 1,216 m        | 95            | 4,673 m         |
| <b>Totals</b>         | <b>61</b> | <b>2,610 m</b> | <b>79</b>  | <b>9,178 m</b> | <b>503</b>    | <b>23,322 m</b> |

The above data is based on published information in the current Aurizon and Queensland Rail Information Packs (circa 2007), and more recent information on remaining timber and steel bridges for the Nambour – Cairns section from QR’s Enterprise Asset Data Base (Nov 2014).

The Main Line Upgrade (MLU) Project during the mid-1990s was the last major focus on eliminating timber bridges to achieve the 20 TAL rating along the entire corridor. Bridges not able to be replaced with prestressed concrete deck bridges or pre-cast concrete culverts on a high alignment standard (due to MLU project budget limitations), were strengthened in timber or steel as an interim measure under the MLU project.

#### 4.6 AXLE LOAD CONSTRAINTS

Maximum permitted axle loads are dictated by track standard (sleepers, rail size and wear) and the strength of under-track structures (bridges/culverts). The ballast profile and sub-ballast will also be constraints, particularly when saturated.

The route is currently rated for a maximum 20 tonne axle load. The Mackay Harbour Branch is rated at 15.75 TAL; however the restraint on this Branch is the quality of track infrastructure within the port precinct, rather than the track and bridge structures on the Branch Line. The route through the Aurizon network is rated at 26.5 tonne axle load.

More recent bridge replacements (since the mid-1990s and particularly the extensive bridge replacement under the MLU project) have been built to a 30 TAL standard; however concrete bridge structures built prior to that are generally to a nominal 20TAL, as were the extensive strengthening of the remaining timber and steel deck bridges undertaken under the MLU project.

The original construction standards for earthworks and capping layers were low, and some sections suffer from poor subgrade, impacting on an ability to maintain track top & line with the MLU axle load up-rating to 20 TAL. This is exacerbated during extended wet conditions.

#### 4.7 CROSSING LOOPS

The corridor is primarily single track with crossing loops. The exceptions are the multiple track sections in the Brisbane area south of Beerburrum, and the duplicated sections between Callemondah - Rocklands, Durroburra - Kaili, and Nome – Townsville.

The number of crossing loops is summarised in Table 4.5. Crossing loops are nominally 700 metre long (between clearance points); however a number of slightly shorter loops restrict train lengths to approximately 655 metres, providing sufficient drift length to accommodate variability in train stopping. Actual crossing loop lengths vary due to track alignment constraints (curvature) and other features, such as bridges and level crossings. Some crossing loops have constraints on their utilisation due to the location of level crossings, and these are addressed in Section 5.

The most significant crossing loops which are constrained include the adjacent Landsborough and Mooloolah loops within the Citytrain network, where open level crossings for significant local roads prevent normal scheduling of freight trains crossings that would block these roads. There are a number of other crossing loop locations further north where similar restrictions may be applied. The crossing loops at Tiaro (471 metres), Yengarie (596 metres) and Tully (506 metres) are too short to hold normal length freight trains, but can accommodate passenger train crosses.

**Table 4.5 Crossing loops**

| Section              | No. of loops | Longest section run time (minutes) | No. of Loops with constrained use |
|----------------------|--------------|------------------------------------|-----------------------------------|
| Beerburrum – Nambour | 8            | 8                                  | 3                                 |
| Nambour – Parana     | 45           | 15                                 | 7                                 |
| Rocklands – Mackay   | 24           | 19                                 | 3                                 |
| Mackay - Townsville  | 27           | 17                                 | 7                                 |
| Townsville – Cairns  | 25           | 20                                 | 2                                 |

#### 4.8 REFUGE SIDINGS

In addition to the crossing loop function, there are a number of locations where refuge sidings are available for holding trains clear of the main line and crossing loops for more extended periods. These are limited in number and are mainly located in major centres.

#### 4.9 SIGNALLING AND TRAIN CONTROL

Train control along the corridor is operated from four separate control centres, utilising two different technologies. Rockhampton Control Centre is owned and operated by Aurizon to control its Central Queensland network, with a back-up system in Mackay if required. Queensland Rail own and operate the two Control Centres in Brisbane and the Townsville Control Centre. In addition to train control functions, varying driver supervisory systems are in use.

Train safe working systems along the route are summarised in Table 4.6 below.

**Table 4.6 Train safe working systems**

| Control centre | Coverage               | Signalling /Points operation | Train control | Driver supervisory systems |
|----------------|------------------------|------------------------------|---------------|----------------------------|
| Mayne          | South of Nambour       | RCS                          | UTC           | AWS                        |
| Rail Centre 1  | Nambour- Parana        | RCS                          | UTC           | ATP, SPM                   |
| Rockhampton    | Parana - Rocklands     | RCS                          | UTC           | ATP, SPM                   |
| Rockhampton    | Durroburra - Kaili     | RCS                          | UTC           | ATP, SPM                   |
| Townsville     | Rocklands - Durroburra | RCS                          | UTC           | ATP, SPM                   |
| Townsville     | Durroburra - Purono    | RCS                          | UTC           | ATP, SPM                   |
| Townsville     | Purono - Woree         | Trailable points             | DTC           | SPM                        |
| Townsville     | Woree - Cairns         | RCS                          | UTC           | SPM                        |

#### Terminology Notes:

- ▶ **RCS** – Remote controlled signalling utilising coloured light signals (3 or 4 colour aspects) to provide authority to train drivers to enter a section, with remote activated power operated points. Includes track circuits or axle counter technology to identify track section occupation and signal aspect setting. In-field signalling interlocking technology comprises older relay-based systems, or more recent computer based systems, both safety critical and designed for fail-safe operation. Points are electric motor operated from the Train Control Centre route setting
- ▶ **UTC** – QR’s proprietary computer based control system, built around train controller work stations in the Control Centres to remotely set routes, and oversee train operations.
- ▶ **DTC** – QR’s proprietary train order system suitable for relatively low-traffic density systems. Relies on radio based issuing of travel authorities from the Train Controller to the driver, with a computer based system in the control centre and drivers cab, to ensure integrity of authorities issued. Crossing loops are fitted with trailable points operation, with the normal points setting being for direct entry into the crossing loop. On exiting the loop, the locomotive mechanically activates the points to set for exit of the train, with restoration of the points following clearance of the train.
- ▶ **ATP** – Automatic Train Protection system (Westect System) providing supervision of driver’s response to maximum permitted line speeds and approaching signal indications. ATP relies on accurate indication of train location, which is assisted by on-track magnets, and radio links from the upcoming signals to advise on signal aspect, coupled with an on-board computer to determine train speed and required braking for the particular train configuration (length and trailing load) to override the driver if required. ATP operates from Caboolture to Purono, but only on ATP equipped rollingstock.
- ▶ **AWS and SPM** – Automatic Warning System and Station Protection Magnets are in-track magnet based vigilance systems providing an alert to the driver of the next restrictive signal or station approach. If the driver does not respond within a set time to acknowledge the warning, train brakes are applied.

In addition to the normal safe working systems, a manual paper-based train order system can be applied in the event of failure of the primary systems.

#### 4.10 TELECOMMUNICATIONS

Central to effective rail operations and train control systems are reliable telecommunication systems. The North Coast system comprises:



- ▶ Backbone fibre optic cable link from the control centres to the signalling interlockings and the major centres.
- ▶ Microwave radio back-up system to provide main trunk route redundancy.
- ▶ UHF Train control radio linking Control Centres to trains and on-track machines.
- ▶ UHF Maintenance Supervisory Radio System.
- ▶ Mobile phone coverage where available.

#### 4.11 LEVEL CROSSINGS

There are approximately 1,100 level crossings along the North Coast Line, comprising Open Level Crossings (OLCs), Occupation Crossings, Pedestrian Crossings, and cane tramway crossings. The number of crossings and their level of protection standards, are summarised in Table 4.7.

**Table 4.7 Level crossings**

| Section                  | Open level crossings |                 |              | Occupation crossings | Tram crossings |
|--------------------------|----------------------|-----------------|--------------|----------------------|----------------|
|                          | Booms                | Flashing lights | Signage only |                      |                |
| Mayne – Nambour          | 17                   | 1               | 23           | 27                   |                |
| Nambour – Rockhampton    | 55                   | 15              | 70           | 86                   | 1              |
| Rockhampton – Townsville | 33                   | 72              | 195          | 98                   | 12             |
| Townsville – Cairns      | 15                   | 42              | 177          | 137                  | 27             |
| <b>Totals</b>            | <b>120</b>           | <b>130</b>      | <b>465</b>   | <b>348</b>           | <b>40</b>      |

#### 4.12 ELECTRIC TRACTION SYSTEM

Brisbane to Rockhampton is currently electrified with a 25 kV AC (50 hertz) overhead system. This includes the Brisbane Suburban system, based on use of booster transformers to regulate power supply, and an autotransformer system applying from Caboolture to Rockhampton, permitting a greater spacing of major feeder substation sites. This system utilises more significant autotransformers and a separate 25 kV feeder wire to provide additional voltage support between the autotransformer sites.

The Blackwater coal system heavily utilises electric traction (between Parana and Rocklands). This is planned to increase with current extension of the overhead system within the Blackwater network, and a recent major upgrade of the power supply system with extra feeder substations. However, electric locomotive hauled general freight trains ceased operating between Brisbane and Rockhampton in the late 1990s. The overhead wiring is provided to both Acacia Ridge and Moolabin terminals in the Brisbane area, but not to Fisherman Islands.

South of Parana, the electric traction system is used solely by Citytrain services between Brisbane and Gympie, and by the electric tilt trains operating to Rockhampton and Bundaberg.

## 5. Rail terminals

### 5.1 INTERMODAL FREIGHT TERMINALS

The major intermodal freight terminals are:

▶ **Aurizon:**

Acacia Ridge, Rockhampton, Mackay (Paget), Townsville, Cairns (Portsmith)

▶ **Asciano (Pacific National):**

Moolabin, Rockhampton (Port Curtis), Mackay (Paget), Townsville (Stuart), Cairns (Woree)

▶ **Third party:** Brisbane Multimodal Terminal (BMT at Fisherman Islands)

Other freight terminals that are currently utilised are located at Mt Miller, Merinda, Ayr, Hewitt and Innisfail.

The functionality of the major terminals is described in the following sections. The key functionality for any terminal includes:

- ▶ Ability to receipt and despatch trains. (Length of arrival/departure roads and number, and shunting moves required).
- ▶ Length of hardstand roads with lifting equipment access.
- ▶ Lifting equipment to achieve required train turn-around time
- ▶ Ease of road access.
- ▶ Hardstand storage capability.

A description of the more significant terminals is included in the following sections.

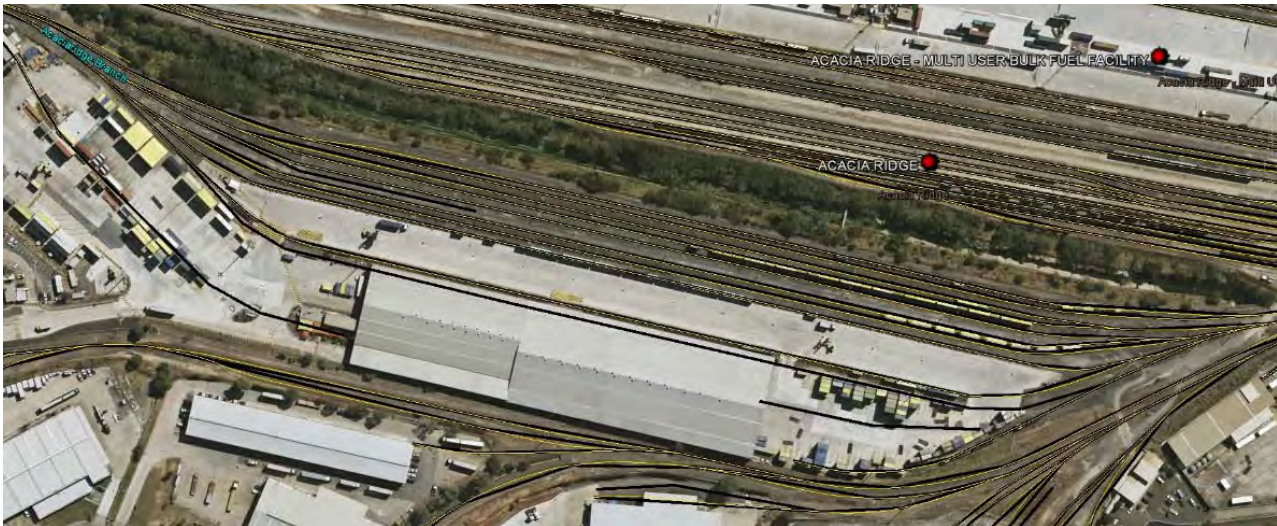
#### 5.1.1 Acacia Ridge

The Acacia Ridge complex includes the narrow gauge terminal off Lysaght Street, the Interstate Terminal accessed via Kerry Road, and a number of other sidings and private sidings with various functions for storage and freight handling. Whilst the Kerry Road terminal has some dual gauge roads, this terminal is currently dedicated to the interstate standard gauge business. The Lysaght Street narrow gauge terminal is currently the major interface with the North Coast Line intermodal freight task for Aurizon.

The layout of the narrow gauge terminal is as indicated in Figure 5.1. Key constraints are:

- ▶ Train lengths within the hardstand area are limited to two sidings of 450 m and 500 m. The shorter siding also is further restricted with the requirement to provide road access across it to the hardstand area.
- ▶ The adjoining marshalling yard is limited to wagon rakes of 460 metres and cannot accommodate a full NCL length train.
- ▶ Despatching and receipting NCL trains up to the 650 metre length is undertaken on the shunt neck approach tracks.
- ▶ Container lifts are by forklifts, with 5 currently deployed, accessing only the two sidings.

**Figure 5.1 Acacia Ridge narrow gauge terminal layout**



The terminal comfortably meets current demand, with generous turn-around time for the current northern centre trains. Throughput is approximately 140,000 TEU per year

### 5.1.2 Moolabin

The Asciano terminal at Moolabin is its major terminal for North Coast Line freight. This terminal caters for narrow gauge only. Any gauge transfer to/from the interstate standard gauge system is currently via road between Moolabin and Acacia Ridge. The layout of Moolabin is as shown in Figure 5.2. The terminal comprises 5 active dead-end loading sidings, of maximum length of 380 metres. Trains are made-up in the adjoining marshalling yard for despatch via Sherwood. Arriving trains currently are routed via either South Brisbane or via Sherwood.

The terminal has undergone significant recent upgrade of tracks, hardstand and buildings; but not affecting its basic functionality.

Key site constraints are:

- ▶ The short dead-end sidings, with shunting moves adding to the train turn-around time.
- ▶ Road access into the site and proximity to residential areas.
- ▶ Flood prone site during major Brisbane River flood events.

Figure 5.2 Moolabin layout



### 5.1.3 Brisbane Multimodal Terminal (Fisherman Islands)

The BMT is owned and operated by the Port of Brisbane Corporation. It comprises two 900 metre long, dual-gauge loading sidings, with a separate dual-gauge run-around siding for locomotive release. Container handling is via 50 tonne capacity forklift trucks, with 3 currently deployed. An aerial view is as shown in Figure 5.3.

Whilst the BMT is connected to the interstate standard gauge network, its current use is limited to narrow gauge import/export traffic from the North Coast Line and from the south west. Current throughput is significantly less than the terminal capacity.

**Figure 5.3 Aerial view of BMT (Fisherman Islands)**



#### 5.1.4 Mackay (Aurizon) – Paget

Aurizon’s Mackay terminal is immediately adjacent to the main line and Mackay Station and marshalling yard. It comprises three loading sidings, varying from 440 metres down to 200 metres. The layout is as indicated in Figure 5.4 below. Making and breaking trains is undertaken in the adjoining marshalling yard.

**Figure 5.4 Mackay (Aurizon) terminal layout**



#### 5.1.5 Mackay (Asciano) – Paget

The Asciano terminal at Paget is located within the industrial estate, and comprises 3 x 270 metre long dead-end sidings at the end of a short south facing spur line. Refer layout in Figure 5.5. Wagon rakes require a number of shunt moves from Paget marshalling yard to access into the Asciano terminal.

**Figure 5.5 Mackay (Asciano) terminal layout**



Key site constraints are:

- ▶ Short loading sidings and shunting moves needed to make/break trains.
- ▶ Not feasible to extend sidings or increase terminal footprint.

#### 5.1.6 Townsville (Aurizon) – South Yard

The Aurizon intermodal terminal in Townsville is located in the South Yard adjacent to the Aurizon workshops. It comprises four short roads, with useful lengths ranging from 200 metres to 400 metres, partly limited by the road access arrangements within the terminal. Trains are broken-up in the adjoining South Yard trackage to fit wagon rakes into the various sidings for unloading/loading. The layout is as shown in Figure 5.6.

**Figure 5.6 Townsville (Aurizon) terminal layout**



Key site constraints are:

- ▶ Short loading sidings and shunting moves needed to make/break trains.
- ▶ Not feasible to extend sidings or increase terminal footprint.
- ▶ Environmental impacts (noise, traffic) within the South Townsville area.

### 5.1.7 Townsville (Asciano) – Stuart

The Asciano terminal at Stuart is the most recent new major terminal development, purpose designed to suit current NCL operations. It has 3 x 630 loading sidings, with locomotive release siding, each capable of direct receipting and despatching a current full length NCL train. The layout is as shown in Figure 5.7.

**Figure 5.7 Townsville (Asciano) terminal layout**



### 5.1.8 Cairns (Aurizon) – Portsmith

Portsmith Intermodal Terminal comprises 2 x 290 metre loading sidings. Wagon rakes are shunted from the adjoining marshalling yard. The layout is as shown in Figure 5.8.

**Figure 5.8 Cairns (Aurizon) terminal layout**



Extension of the terminal is possible but would involve across significant environmental areas to the south. The existing capacity is likely to be more than adequate to accommodate the future Cairns region demand.

### 5.1.9 Cairns (Asciano) - Woree

The Asciano terminal at Woree has 2 x 260 metre loading sidings with forklift operation. Making or breaking longer trains is either done directly off the mainline (with thru-rail access), or can be undertaken at Portsmith and shunted back to Woree. Mainline track utilisation in this section is low. The layout is as shown in Figure 5.9.

**Figure 5.9 Cairns (Asciano) terminal layout**



## 5.2 BULK FREIGHT TERMINALS

Bulk freight currently hauled on the North Coast Line includes:

- ▶ Coal (Merinda to Bowen and to Cobarra –Yabulu Nickel refinery)
- ▶ Coke (Bowen to Mount Isa)
- ▶ Sugar (Proserpine to Mackay Harbour and the four Burdekin area mills to Port of Townsville)
- ▶ Nickel ore (Port of Townsville to Cobarra)
- ▶ Zinc ore (Port of Townsville to Sun Metals refinery at Julago)
- ▶ Copper/ lead/ zinc concentrate and anodes – Mount Isa/Cloncurry to Stuart, Sun Metals and Port of Townsville)
- ▶ Fuel (Port of Townsville to Cloncurry and Mount Isa)
- ▶ Crushed rock /ballast– Nerimbera and Nightjar to various destinations
- ▶ Cement – from Mt Miller and Port of Townsville to various destinations

Rail infrastructure supporting this includes various Queensland Rail and privately owned sidings, of specific configuration to suit the current operations. This includes siding length constraints, and some lower axle load limits down to 15.75 TAL from the general NCL standard of 20 TAL.

## 5.3 PASSENGER STATIONS

### 5.3.1 Citytrain

Scheduled Citytrain services operate to all stations between Bowen Hills and Nambour, with a daily service extended from Nambour to Gympie North. Train stabling is provided at Caboolture, with limited stabling for only two trains at Nambour and one train at Petrie. The current lack of stabling requires considerable dead-running of passenger trains from Mayne prior to the AM peak and returning to Mayne following the PM peak, with adverse impact on corridor capacity for freight. This is most significant on the single line section between Beerburrum and Nambour.

New stabling depots under construction (or planned) at Kippa Ring, Elimbah and Woombye will cover the current stabling shortfall at the respective terminals, and significantly reduce dead-running pre- and post-the passenger peaks.



The four intermediate stations between Landsborough and Nambour have only a single platform, restricting the ability to cross two stopping Citytrain services at these locations. The crossing loops at Landsborough and Mooloolah also are restricted by major road level crossings, and Woombye is restricted by a pedestrian crossing, limiting their usefulness for crossing a full length freight train.

### 5.3.2 Traveltrain

Scheduled Traveltrain services are as outlined in Section 6. Timetabled stops are limited to the major centres and regional towns. Major centres have full length platforms on a loop. The smaller centres generally have shorter platforms, requiring selective direct access to a section of the train.

## 6. Current rail traffics

### 6.1 TRAFFIC MIX

The traffic task utilising the North Coast Line corridor is an extensive mix of varying train services that span heavy haul, intermodal, passenger and infrastructure maintenance tasks. These include the following:

- ▶ Citytrain suburban passenger trains operate between Brisbane and Gympie North. The weekday AM and PM peaks impose an effective curfew on scheduling freight trains through the metro system, and place some pathing restrictions during the off-peak periods.
- ▶ Traveltrain long distance passenger tilt trains operate from Roma Street and have destinations of Bundaberg, Rockhampton and Cairns, and Longreach.
- ▶ Intermodal general freight trains operate from the Brisbane region with major service destinations of Rockhampton, Mackay, Townsville, and Cairns. Some of these services will stop en-route to drop and pick up freight. Intermodal general freight trains carry containerised freight servicing the domestic market. The Intermodal freight services operate throughout the year with peak periods occurring prior to Easter and Christmas.
- ▶ Intermodal shipping freight trains operate to and from Fisherman Islands in Brisbane and have service destinations of Rockhampton and Mackay. Shipping freight trains carry containerised freight servicing the import / export market for the Port of Brisbane. The shipping freight services operate throughout the year.
- ▶ Bulk sugar freight services operate from Proserpine and Burdekin area mills to either Mackay or Townsville sugar terminals. The sugar services are seasonal and generally operate 24/7 between May and November.
- ▶ Nickel Ore freight services operate between the Port of Townsville and Cobarra (Yabulu Nickel Refinery). The nickel ore services operate throughout the year with the exception of January (due to weather and maintenance). The trains operate in a cyclic fashion with peak railings to suit shipping schedules. At current import levels, nickel ore trains operate 24/7 for approximately 50% of the year.
- ▶ Bulk freight services operate from various locations on the Mount Isa corridor and have an origin/destination of the Port of Townsville or the Sun Metals zinc refinery. The bulk freight services operate throughout the year.
- ▶ Coal freight services operate from various mines in the Blackwater and Newlands coal systems to export terminals at Gladstone and Abbot Point, and to domestic customers in Gladstone and Townsville.

Table 6.1 provides an overview of the major products and Origin-destination pairs, and Table 6.2 is an overlay of these on the major line sections.

**Table 6.1 Origin and destination combinations**

| Product     | Origin       | Destinations                        |
|-------------|--------------|-------------------------------------|
| CityTrain   | Brisbane     | Petrie, Caboolture, Nambour, Gympie |
| TravelTrain | Brisbane     | Bundaberg, Rockhampton, Cairns      |
|             | Townsville   | Mount Isa                           |
| Livestock   | North West   | Townsville, Rockhampton, Brisbane   |
|             | Central West | Rockhampton, Brisbane               |

| Product                  | Origin                             | Destinations                               |
|--------------------------|------------------------------------|--|
| Intermodal (major ODs)   | Brisbane                           | Rockhampton, Mackay, Townsville, Cairns    |
|                          | Townsville                         | Mount Isa                                  |
| Intermodal (minor ODs)   | Brisbane, Gladstone, Townsville    | Gladstone, Merinda, Ayr, Innisfail, Hewitt |
| Intermodal – south-bound | Various Central & Northern centres | Brisbane, Port of Brisbane                 |
| Sugar, molasses          | Burdekin mills                     | Port of Townsville                         |
|                          | Proserpine                         | Mackay Harbour                             |
| Bulk grain               | Goonyella system                   | Mackay Harbour                             |
|                          | Blackwater, Moura systems          | Gladstone Harbour                          |
| Nickel ore               | Port of Townsville                 | Yabulu                                     |
| Mineral concentrates     | Mount Isa, Cloncurry, Yurbi        | Stuart, Sun Metals and Port of Townsville  |
| Zinc concentrate         | Port of Townsville                 | Sun Metals                                 |
| Bulk acid                | Townsville, Sun Metals             | Phosphate Hill                             |
| Bulk fertiliser          | Phosphate Hill                     | Port of Townsville                         |
| Industrial products      | Gladstone                          | Various                                    |
|                          | Townsville                         | Mount Isa, Cloncurry, Cairns, various      |
|                          | Bowen                              | Townsville, Mount Isa                      |
| Coal                     | Blackwater & Moura systems         | Gladstone                                  |
|                          | Newlands system                    | Abbot Point, Yabulu, Bowen                 |
| Crushed rock             | Mount Larcom                       | Gladstone                                  |
|                          | Taragoola, Nerimbera, Nightjar     | Various                                    |
| Steel rail               | Brisbane                           | Various                                    |
| PSC sleepers             | Rockhampton                        | Various                                    |

**Table 6.2 Traffic mix on sections**

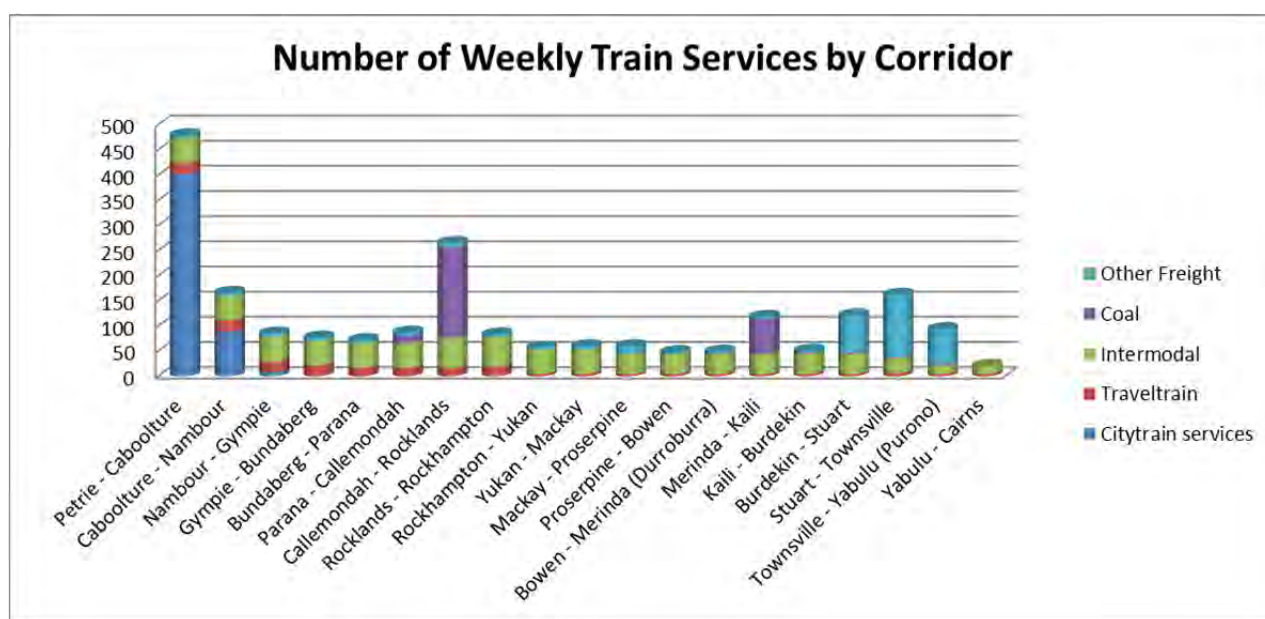
| Section<br>(in both directions) | Citytrain | Traveltrain | Freight | Livestock | Sugar | Nickel | Bulk | Coal |
|---------------------------------|-----------|-------------|---------|-----------|-------|--------|------|------|
| Brisbane to Gympie North        | ✓         | ✓           | ✓       | ✓         |       |        |      |      |
| Gympie North to Gladstone       |           | ✓           | ✓       | ✓         |       |        |      |      |
| Gladstone to Rockhampton        |           | ✓           | ✓       | ✓         |       |        |      | ✓    |
| Rockhampton to Mackay           |           | ✓           | ✓       | ✓         | ✓     |        |      |      |
| Mackay to Townsville            |           | ✓           | ✓       | ✓         | ✓     |        |      |      |
| Townsville Region               |           | ✓           | ✓       | ✓         |       | ✓      | ✓    |      |
| Townsville to Cairns            |           | ✓           | ✓       |           |       |        |      |      |

Notes:

- ▶ All services with a service commencement or termination location within the Brisbane region will be listed with Brisbane as an origin or destination.
- ▶ Coal services operating on the Central Queensland network and operating between Rocklands and Gladstone and between Durroburra and Kaili are excluded.

Figure 6.1 indicates the nominal number of train services per week over the nominated sections of track. This includes the peak seasonal major traffics (e.g. livestock, sugar, nickel and zinc ores) and excludes the minor miscellaneous non-regular freight services, and non-revenue trains, shunt moves and light engine running.

**Figure 6.1 Typical number of trains per week**



The major peak sections in the train service levels are:

- 1) **Petrie – Caboolture – Nambour.** The predominant traffic task on this section are the Citytrain passenger services.
- 2) **Callemondah – Rocklands and Durroburra – Kaili.** The predominant traffic task on this section are the coal traffics from the Blackwater and Moura system to the Gladstone area for either export or to local customers.
- 3) **Stuart – Townsville – Purono.** The traffics in this area include the Mount Isa Line services, the peak train numbers associated with the short rail haul mineral concentrate imports (nickel and zinc ores), and the seasonal sugar/molasses traffics (Burdekin Mills to Port of Townsville).

## 6.2 MARKET SHARE

The freight on the North Coast Line can be categorised as either contestable freight or non-contestable freight. Contestable freight is defined as the current freight task being transported by rail that is more than likely able to be converted to road transport. Non-contestable freight is defined as the current freight task being transported by rail that cannot easily be subject to a mode shift to road.

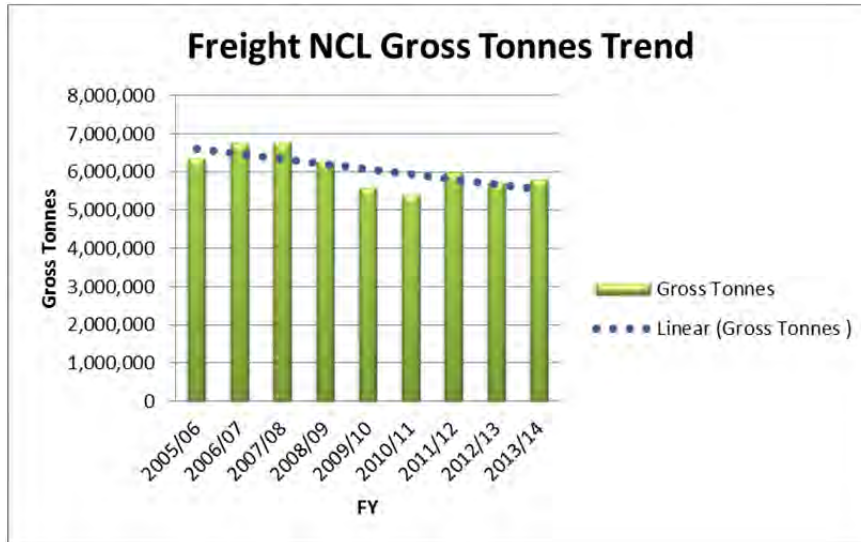
Table 6.3 shows the major long-haul Intermodal and Shipping freight tonnages over the nominated corridors in both northbound and southbound directions for FY 2012/13. This freight task is generally able to be easily switched between rail and road transport. This excludes short haul intermodal trains operating out of Gladstone and Townsville.

**Table 6.3 Intermodal rail tonnages in 2012/13 (million tonnes)**

| Origin / destination category             | Northbound      | Southbound      |
|---|-----------------|-----------------|
| Brisbane - Gladstone                      | 0.037           | 0.100           |
| Brisbane - Rockhampton                    | 0.185           | 0.331           |
| Brisbane - Mackay                         | 0.293           | 0.209           |
| Brisbane - Townsville (including Merinda) | 0.755           | 0.370           |
| Brisbane - Cairns (including Innisfail)   | 0.459           | 0.230           |
| <b>Totals</b>                             | <b>1.730 Mt</b> | <b>1.242 Mt</b> |

An analysis of the NCL intermodal gross tonnage for the last nine years was undertaken to further demonstrate the contestability of this market segment. Figure 6.2 indicates that during the FY period 2008/09, 2009/10, and 2010/11, there was a substantial decline in the gross tonnes hauled across the network. Whilst there has been some recovery in annual tonnages in recent years, the growth has been relatively small and is still approximately 1 million tonnes (15%) less than the recent 2007/08 peak period.

**Figure 6.2 Recent gross NCL intermodal freight trends**



The sugar and molasses volumes from the Burdekin area mills (to Port of Townsville) and from Proserpine Mill (to Mackay Harbour) totals around 2.1 Mt during the 6 month season. However, the relatively short cycle distances of circa 100 km between the Mills and the Ports make the sugar task vulnerable to a switch to road.

The non-contestable freight includes nickel ore and bulk products from the Mount Isa line.

## 7. Current rail operations

The North Coast Line network below-rail function is currently operated by Queensland Rail between Brisbane and Cairns, with the exception of the Aurizon owned and controlled sections between Parana and Rocklands, and Durroburra and Kaili. The train control systems, location of Train Control Centres and ownership is as detailed in Section 4.9.

Currently rail operations have three Rail Operators conveying various types of traffic tasks over the North Coast Line. Table 7.1 outlines the product types transported by each rail operator.

**Table 7.1 Rail operator / product types**

| Rail operator    | Product type   |
|------------------|--|
| Queensland Rail  | Passengers   |
| Pacific National | Domestic Freight (intermodal), Mineral Concentrates  |
| Aurizon          | Domestic Freight (intermodal), Import/Export Intermodal<br>Industrial products, Coal, Mineral Concentrates<br>Sugar/Molasses, Grain, Livestock |

### 7.1 MASTER TRAIN PLAN (MTP)

The MTP is a train plan that is used to manage the train paths on the network. Train paths are allocated to Rail Operators to enable the operation of train services on the network required for the Rail Operator's customers. In addition to the Rail Operator's requirements, the Rail Infrastructure Manager also plans periods of capacity on the network for track infrastructure maintenance activities, including running work trains. All new paths are developed based on accommodating the existing allocated paths and identifying alternative slots across the network that provide an efficient continuous train transit pathway between the nominated origin and destination for each service.

All of the Rail Operators submit applications for access onto the Queensland Rail network. Once approved the access agreement/s provide the train paths for the movement of the nominated train services. The train services are scheduled and the MTP developed.

#### 7.1.1 Planning considerations

When developing the MTP, there are a number of considerations that need to be addressed during the process. These considerations include, but not limited to:

- ▶ Network maintenance requirements
- ▶ Above-rail operator requirements
  - ▶ Terminal windows
  - ▶ Asset utilisation
  - ▶ Train crew requirements
  - ▶ Customer delivery windows
  - ▶ Terminal capacity to turnaround train consists

- ▶ Transit times
- ▶ Network infrastructure constraints (line speed, grades, curves, speed restrictions)
- ▶ Network safe working requirements
- ▶ Consultation with Citytrain network
- ▶ Consultation with Aurizon network
- ▶ Individual train performance characteristics (e.g. section run times)
- ▶ Service priorities – this is discussed further below.

### 7.1.2 Service priorities

The MTP is developed by plotting on the train service pathing along the route in a structured manner by prioritising train services. The prioritising of train services is undertaken using the following train service priority guidelines. These guidelines are used as a framework to structure the relative priority of train services on the network, but are open to changes that can be demonstrated to improve overall utilisation of the network capacity. The current train service priority is as follows.

- A. Network maintenance windows
- B. Citytrain passenger services
- C. Long distance passenger services
  - ▶ Cairns tilt train (Spirit of Queensland)
  - ▶ Rockhampton tilt train
  - ▶ Bundaberg tilt train
  - ▶ Spirit of the Outback
  - ▶ Sunlander (now replaced by the Spirit of Queensland)
- D. Burdekin sugar
- E. QNI Nickel
- F. Livestock
  - ▶ Loaded livestock Winton to Brisbane
  - ▶ Loaded livestock Julia Creek to Lakes Creek
  - ▶ Loaded livestock Stuart to Brisbane
  - ▶ Loaded livestock Clermont to Brisbane
- G. Import / export container services
  - ▶ Southbound and northbound
- H. Intermodal services
  - ▶ Northbound
  - ▶ Southbound

The plotting of the train service pathing is undertaken by using the sectional run times provided by the rail operator. This is discussed further below in Section 7.1.3.



Due to the high variability in the transit times and section run times of the different train services, a saturated MTP is not developed. The saturated MTP would be developed by using a standardised section runtime and then planning a full pathing schedule onto the network. Whilst this in theory would be the most optimal manner to allocate paths, the differences in train service section run times makes this a risky and sub optimal planning process that cannot accommodate unforeseen short term events. As a result, the MTP generally allows a buffer of capacity (discussed in Section 7.1.4).

A key issue relates to the relative priority of the main contestable freight category - intermodal and import / export traffic tasks. From a network planning perspective, these freight tasks may be given a sub-optimal path depending on available slots due to these services being allocated last.

### 7.1.3 Transit times

The plotting of train paths is dependent on the section run times (SRTs) of services. The combination of SRTs will make up the train path and hence the transit times. The SRTs vary between train type and operator. The Rail Operator provides the nominal SRTs for its particular service.

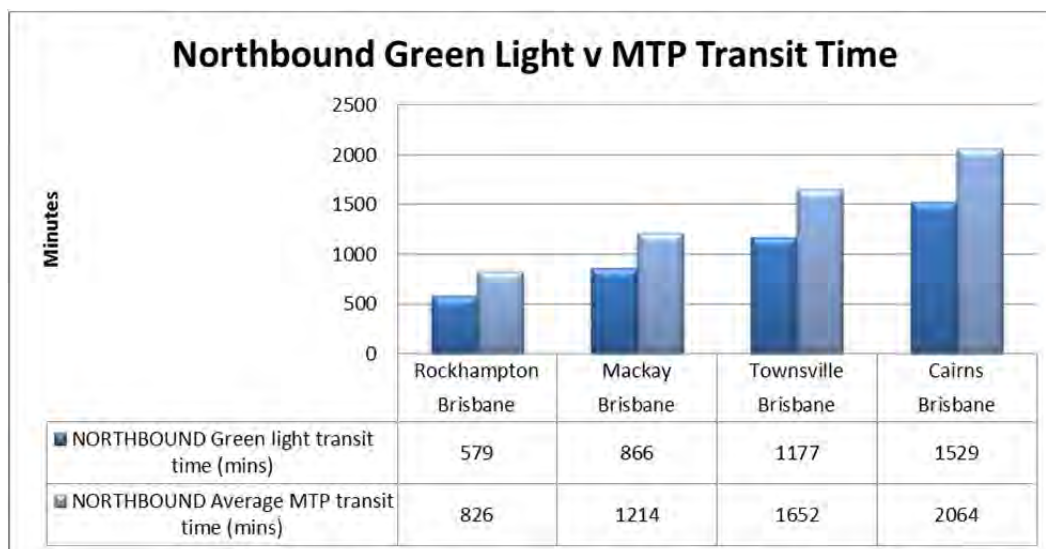
The transit times will be considered in two different perspectives. The first perspective is the best transit time available assuming that a green light situation occurs. A green light situation is that the train will not stop for any reason between origin and destination.

The second is the actual section run times as per the MTP. These SRTs will be longer and the variation caused by a multitude of factors, including allowance for train crossings, temporary speed restrictions, network constraints, and Rail Operator requirements. Other delay factors needing to be built into the MTP include planned crew changes, locomotive provisioning, en-route shunting to attach/detach wagons, and station dwell times for passenger services.

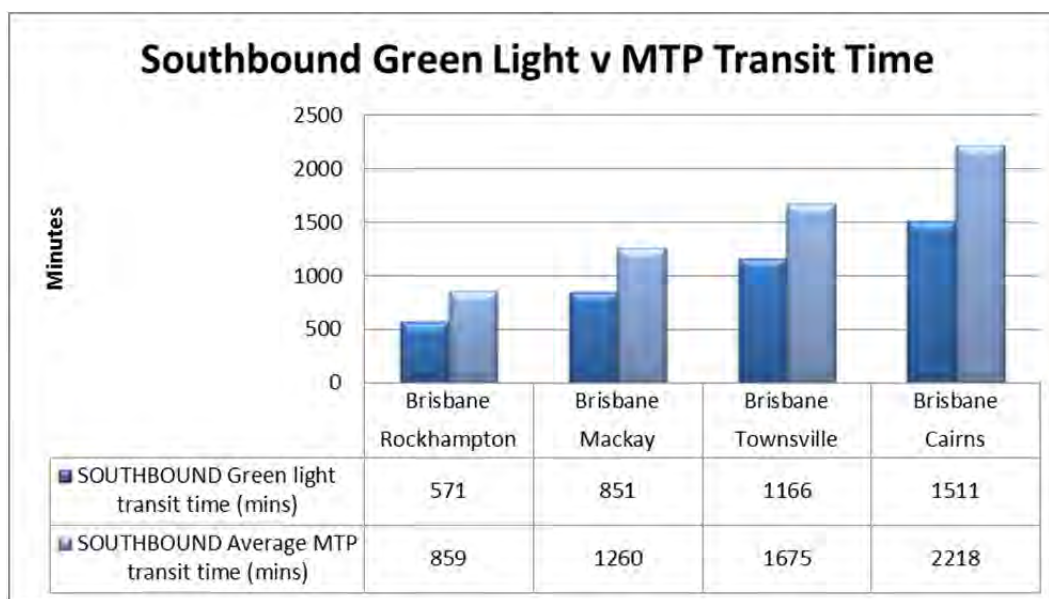
Figures 7.1 and 7.2 demonstrate the variance between green light SRTs and average MTP section run time for FY 2013/14 for both northbound and southbound freight services. The corridors are divided into four origin-destination combinations for freight services. Due to the priority provided to passenger services during the MTP process, there would be minimal variation so these have been excluded.

Both graphs highlight that the level of additional time included in the MTP transit time is in the range of 25% to 35%. This includes an allowance for the day-of-operations requirements including the dwell times for train crossings.

**Figure 7.1 Run-time comparison for northbound intermodal services**



**Figure 7.2 Run-time comparison for southbound intermodal services**



#### 7.1.4 Path capacity utilisation

Based on the current planning methodology in place, train path capacity utilisation is measured in different stages. Table 7.2 provides detailed assessment for the major route sections along the corridor. An explanation of the different stages is following.

- Theoretical maximum train path capacity (Column A of Table 7.2)

The theoretical maximum train path capacity is the number of train paths that can be allocated using a standard sectional run time over the defined section.

- Track maintenance windows (Column B of Table 7.2)

Track maintenance windows are required to allow maintenance of the track infrastructure. These maintenance windows are allocated as part of the MTP planning process. In column B this is the mins that are allocated for the maintenance windows.

- Theoretical train paths post maintenance windows (Column C of Table 7.2)

The theoretical train paths capacity is determined as the maximum amount of train paths available after the track maintenance windows have been included onto the MTP. This in turn reduces the available capacity for train paths to be allocated.

- Operational train paths (Column D of Table 7.2)

The workable operational capacity is a calculation of 70% of the theoretical train paths post maintenance windows capacity. This percentage has been determined based on historical experience. This 30% allowance is a buffer to allow for day of operation issues that regularly occur including track failures, change of crossings, speed restrictions, waiting for traincrew, etc. This allowance means that the system can handle a level of operational variation while attempting to ensure the system maintains a level of reliability.

- Utilised train paths (Column E of Table 7.2)

The utilised train paths are the paths that have been contracted to the above rail operator from the operational train paths.

- Available train paths (Column F of Table 7.2)

The available train paths are the remaining train paths available after the utilised train paths are subtracted from the operational train paths. This then highlights the available capacity that could be utilised in the MTP or DTP environment. It does need to be noted that whilst available capacity may exist on the MTP, this capacity may not be customer friendly or match the requirements for the relevant customer supply chains.

- Operational capacity utilised Column G of Table 7.2)

The operational capacity utilised is a percentage of the number of train paths utilised against the operational train paths.

Table 7.2 indicates the approximate current level of operational capacity utilised as outlined in column G of the table.

**Table 7.2 NCL track capacity and utilisation**

|  | A   | B                               | C   | D                       | E                    | F                     | G                      |
|--|---|---------------------------------|---|-------------------------|----------------------|-----------------------|------------------------|
| TRACK CORRIDOR                               | THEORETICAL MAXIMUM TRAIN PATH CAPACITY                       | TRACK MAINTENANCE WINDOW (MINS) | THEORETICAL TRAIN PATHS excluding MAINTENANCE WINDOWS | OPERATIONAL TRAIN PATHS | UTILISED TRAIN PATHS | AVAILABLE TRAIN PATHS | PERCENTAGE UTILISATION |
| <b>BRISBANE SUBURBAN AREA STH OF NAMBOUR</b> | <b>CITY NETWORK BRISBANE METROPOLITAN AREA RESPONSIBILITY</b> |                                 |   |                         |                      |                       |                        |
| Nambour To Gympie Nth                        | 720   | 810                             | 662   | 464                     | 175                  | 289                   | 38%                    |
| Gympie Nth To Bundaberg                      | 630   | 855                             | 577   | 404                     | 149                  | 255                   | 37%                    |
| Bundaberg To Meadowvale                      | 531   | 660                             | 496   | 347                     | 150                  | 197                   | 43%                    |
| Meadowvale To Parana                         | 480   | 1020                            | 431   | 302                     | 141                  | 161                   | 47%                    |
| <b>PARANA TO ROCKLANDS</b>                   | <b>AURIZON NETWORK RESPONSIBILITY</b>                         |                                 |   |                         |                      |                       |                        |
| Rocklands To Rockhampton                     | 630   | 0                               | 630   | 441                     | 218                  | 223                   | 49%                    |
| Rockhampton To Sarina                        | 403   | 1020                            | 362   | 254                     | 121                  | 133                   | 48%                    |
| Sarina To Mackay                             | 630   | 750                             | 583   | 408                     | 116                  | 292                   | 28%                    |
| Mackay To Erakala                            | 840   | 600                             | 790   | 553                     | 98                   | 455                   | 18%                    |
| Erakala To Proserpine                        | 480   | 870                             | 439   | 307                     | 122                  | 185                   | 40%                    |
| Proserpine To Bowen Jctn                     | 373   | 360                             | 360   | 252                     | 98                   | 154                   | 39%                    |
| Bowen Jctn To Merinda                        | 916   | 360                             | 884   | 619                     | 123                  | 496                   | 20%                    |
| Merinda To Durroburra                        | 5040  | 390                             | 4845  | 3392                    | 98                   | 3294                  | 3%                     |
| <b>DURROBURRA TO KAILI</b>                   | <b>AURIZON NETWORK RESPONSIBILITY</b>                         |                                 |   |                         |                      |                       |                        |
| Kaili To Home Hill                           | 531   | 390                             | 510   | 357                     | 104                  | 253                   | 29%                    |
| Home Hill To Ayr                             | 672   | 0                               | 672   | 470                     | 140                  | 330                   | 30%                    |
| Ayr To Pioneer                               | 672   | 0                               | 672   | 470                     | 172                  | 298                   | 37%                    |
| Pioneer To Giru                              | 672   | 0                               | 672   | 470                     | 200                  | 270                   | 43%                    |
| Giru To Nome                                 | 560   | 0                               | 560   | 392                     | 243                  | 149                   | 62%                    |
| <b>TOWNSVILLE SUBURBAN AREA</b>              | <b>DUPLICATION SHARED WITH THE MOUNT ISA LINE</b>             |                                 |   |                         |                      |                       |                        |
| Townsville Fork To Yabulu                    | 420   | 0                               | 420   | 294                     | 211                  | 83                    | 72%                    |
| Yabulu To Woree                              | 325   | 720                             | 302   | 211                     | 42                   | 169                   | 20%                    |
| Woree To Portsmith                           | 775   | 600                             | 729   | 510                     | 42                   | 468                   | 8%                     |
| Portsmith To Cairns                          | 630   | 0                               | 630   | 441                     | 47                   | 394                   | 11%                    |

In summary the utilisation percentages as calculated in Table 7.2 indicate that there is available spare capacity; however whilst spare capacity may be available, these train paths may not represent a viable service offering for customers.

Whilst not directly within scope of the NCLCI study, another consideration is the Citytrain network which has significant capacity constraints that need to be addressed. Further information on these constraints can be sourced from the SEQ Capacity Improvement Project Report.

## 7.2 DAILY TRAIN PLAN

The daily Train Plan (DTP) is developed to convert the MTP to a shorter timeframe plan, which allocates train paths on the network in order to service the Rail Operators' requirements. This allows a Rail Operator to cancel MTP services or request additional ad hoc services above or varied from the MTP services. The reasons for the variation can include seasonal requirements, short term ad hoc business, customer variations etc.

As an example currently Rail Operators are typically cancelling the following contracted intermodal services on a weekly basis.

- ▶ 1 x Brisbane to Mackay and return
- ▶ 6 x Brisbane to Townsville and return
- ▶ 1 x Brisbane to Cairns and return

Once the DTP is developed it is handed over to the day-of-operations for implementation. The result of the day-of-operations is further discussed in Section 8.

## 8. NCL network performance

Once the planning has been undertaken and the Daily Train Plan (DTP) is established, then day-of-operations management occurs to deliver the planned services. The intent of this Section is to detail the current operational performance of the network.

### 8.1 CORRIDOR AVAILABILITY

#### 8.1.1 Maintenance requirements

There are three major components that cause a reduction in the corridor availability. The impact on availability is either planned or unplanned.

##### **Planned maintenance**

The maintenance of the rail infrastructure is predominately undertaken in a planned fashion within a preventative maintenance regime, to better manage the resultant rail operational impacts and resource mobilisation requirements. This involves a long-term track possession planning timeframe..

Long term maintenance planning is undertaken by two different methodologies between the Citytrain network and North Coast corridor. The current Citytrain maintenance regime relies on less frequent long duration (week-end) closures along each separate corridor, during which buses are operated in lieu of rail services to provide transport options for potential rail passengers. The North Coast corridor currently utilises more frequent closures of less duration. Whilst there is an alignment planning process to ensure that the closures align, the different methodologies can create a mismatch, thus reducing network capacity.

##### **Citytrain network maintenance**

The Citytrain network has four major maintenance windows for each of the corridors each year. These maintenance windows are known as Scheduled Corridor Access Scheme (SCAS) closures. The weekend SCAS closures are planned for a period up to 50 hours in duration (normally Friday evening – Monday morning). The impacts to the freight train services fall into two categories. The impact can be severe and cause all train services during the period of the track closure to be cancelled. Alternatively, the impact is classified as major, which result in train services being required to take an alternative route and suffer delays or are subject to an amended timetable.

For the North Coast Line freight there are four major planned closures that will have a severe impact and another eight closures on the Ipswich and South Coast corridors that will have a major impact.

In addition to the major SCAS shutdowns, a number of works are also scheduled for shorter, late week-night closures, with minimal impact on rail passengers, but potentially preventing freight trains being able to travel through the network during these periods, requiring re-scheduling of freight trains, impacting on either departure times or arrival times. In addition to the major and minor SCAS closures there will be project related closures that will need to occur during the periods determined by the specific project requirements. The planning for the project closures generally attempts to align these with the major SCAS closures.

##### **North Coast Line maintenance**

The North Coast corridor outside the metro area has a maintenance planning regime of dedicated weekly maintenance windows being allocated in the MTP. Whilst information on the recent actual utilisation of these maintenance windows was not available, the two key weekly maintenance windows in the MTP are reported as being regularly used within the various districts. The setting of these two windows attempts to minimise

the impact on the intermodal freight train services along the route, built around customer/rail operator preference and the varying daily demand for departures and arrivals. These two windows are:

- ▶ Caboolture to Iveragh - 2220hrs Saturday to 1000hrs Sunday.

The maintenance windows are tapered between these two locations in a diamond fashion. This allows trains to traverse over this corridor on the edges of the maintenance closure.

- ▶ Bundaberg to Parana - 0900hrs Monday and 1700hrs Monday.

The maintenance windows are tapered between these two locations in a v fashion. This allows trains to traverse over this corridor on the edges of the maintenance closure.

In total there are 12 maintenance windows planned between Caboolture and Cairns excluding the Aurizon network. Special consideration is given to the maintenance windows to ensure that the optimal train paths are available for the rail operators. Table 8.1 outlines the number of windows allocated across the week. Some of the maintenance windows overlap to allow the movement of trains in between the windows.

**Table 8.1 NCL maintenance windows**

| Section                | Day                  | Time Allowance |
|------------------------|----------------------|----------------|
| Caboolture – Gladstone | Monday               | 7hrs           |
| Caboolture – Gladstone | Monday               | 7hrs           |
| Caboolture – Gladstone | Saturday into Sunday | 12hrs          |
| Caboolture – Gladstone | Sunday into Monday   | 10hrs          |
| Rockhampton – Mackay   | Monday               | 17hrs          |
| Mackay – Townsville    | Monday               | 8hrs           |
| Mackay – Townsville    | Monday               | 8hrs           |
| Mackay – Townsville    | Monday               | 9hrs           |
| Townsville – Cairns    | Monday               | 10hrs          |
| Townsville – Cairns    | Monday into Tuesday  | 17hrs          |
| Townsville – Cairns    | Thursday             | 10hrs          |
| Townsville – Cairns    | Saturday             | 10hrs          |

### 8.1.2 Unplanned incidents

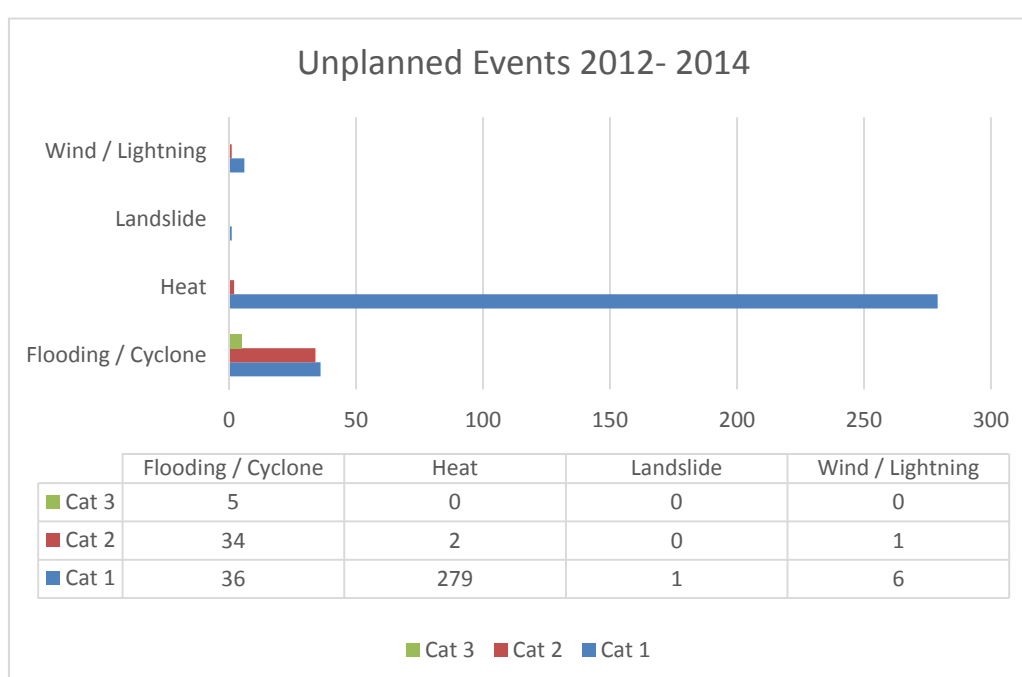
In addition to the planned maintenance windows impacting on the corridor availability, there are also unplanned events which impact on corridor availability and reliability. An analysis of the unplanned events recorded by Queensland Rail between 2012 and 2014 as summarised in Figure 8.1 highlights the main factors ranked in accordance with the Queensland Rail risk assessment standard for the Network. The events are categorised based on severity of consequence, with a Category 1 being low impact and Category 3 being a medium impact. The highest category is 7 and would include multiple deaths.

The analysis concluded that whilst the impact of heat had a high number of reported instances, the actual consequence was very low. The majority of excessive heat impacts were the application of a local speed

restriction that only causes minimal delays, and there is an allowance in the planned transit time for some speed restrictions. The excessive heat issues were also mostly confined to the lightly trafficked section north of Townsville, where the light track standard (41kg/m rail on steel sleepers) is more susceptible to track buckling in very hot weather, compared to the heavier track structure on concrete sleepers south of Townsville.

Flooding and cyclone had the greatest impact causing disruptions on the network, both during flood overtopping events and in high wind events, and in the consequential damage and time to re-instate the track and supporting infrastructure, and these were mostly ranked as Category 2 consequence, with some Category 3.

**Figure 8.1 Unplanned climatic events NCL 2012 to 2014**



Other unplanned events relate to derailments and level crossing incidents. There have been limited recent mainline derailment occurrences on the corridor. The impact of each on corridor availability and rail services would depend on its severity, the extent of infrastructure damage, location, and the resultant requirements of the incident investigating team. A major coal train derailment or passenger train derailment can result in track outages of a number of days. Derailments in the electrified territory (Brisbane – Rockhampton) add an additional potential delay with the need to re-instate electrical overhead equipment where this may be damaged.

More frequent level crossing accidents or other police incidents can result in delays measured in hours.

### 8.1.3 Flooding impacts

As flooding has had the major impact on the network in terms of the major unplanned events, an assessment has been undertaken of the events and commonly flooded locations. Flooding data was historically recorded by Queensland Rail in extensive detail; however the recording of these events has not been completed to



the same degree in recent times. Hence, the data analysis has been supplemented by discussions with experienced Queensland Rail representatives to increase the depth of data analysis and accuracy.

A key factor is customer impact. Once a flood event has occurred, the recovery time to reopen the track is the critical service parameter for customers. Unfortunately, no precise data is available detailing recovery time at each location, and the cumulative time the track is not available along the route. However, based on event experience it is expected the recovery time to reopen a track is usually approximately three days. This would include waiting for the flood water to reside, perform damage inspections, mobilisation, repair work, and track certification. It should be noted that this will vary based on the event and damage caused.

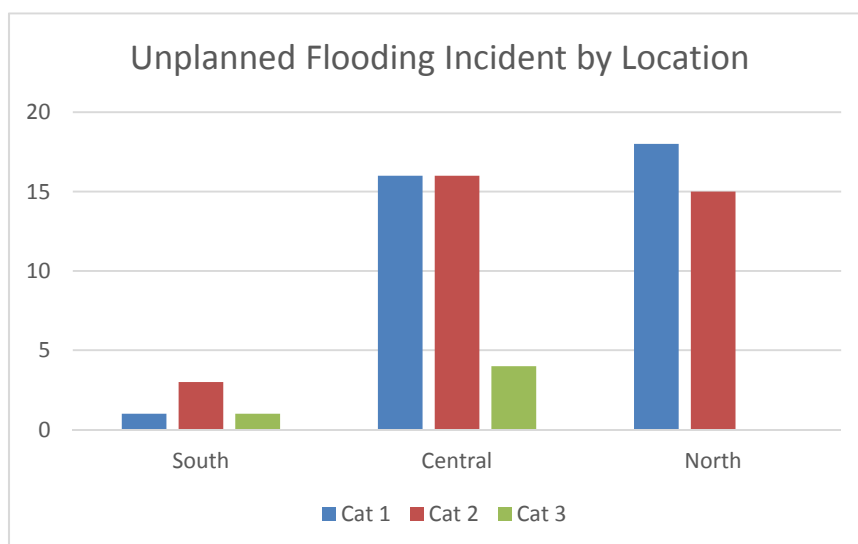
### 8.1.4 Flooding incidents locations

An assessment was also undertaken to determine the regions that are consistently impacted by the unplanned flooding events. Three regions have been identified as follows:

- ▶ South – Caboolture to Rockhampton (including Rockhampton)
- ▶ Central – Rockhampton to Townsville (including Townsville)
- ▶ North – Townsville to Cairns

Figure 8.2 indicates that the majority of the flooding impacts occurred between Rockhampton and Cairns between 2012 and 2014, and were associated with major cyclones crossing the coast and subsequent rain depressions moving further inland, or tracking along the coast. While this indicative information shows a clear picture that the area north of Rockhampton experiences major flooding issues, a detailed study of the frequency and severity of flooding events is required to outline the extent of the impacts on specific locations that are regularly impacted by flooding.

**Figure 8.2 Flooding disruption locations 2012-2014**



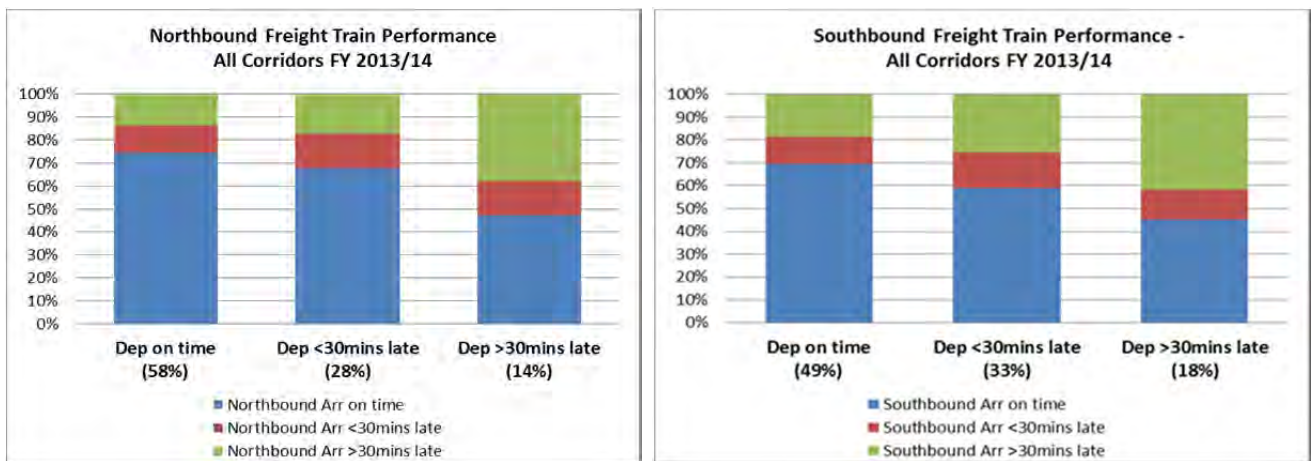
## 8.2 ON-TIME PERFORMANCE

The reliability of train services is a critical requirement for customers in terms of on time delivery of freight to end customers. The on-time performance of train running is a critical factor in the rail freight supply chain. Analysis was undertaken to determine the on time performance of the train services for the four major OD routes on the NCL corridor using data from FY 2013/14. The analysis consisted of three criteria for departures and arrivals. The criteria were:

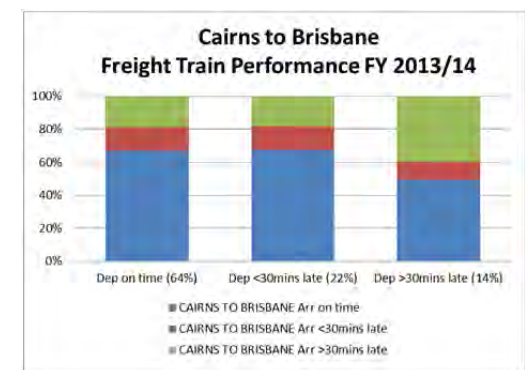
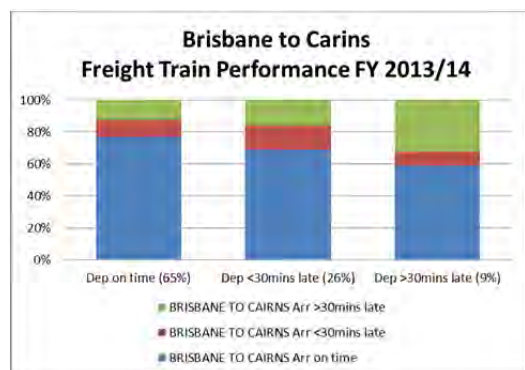
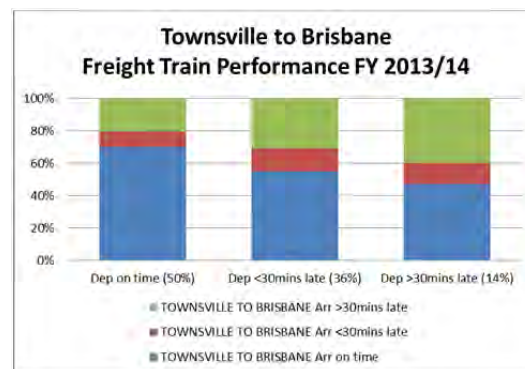
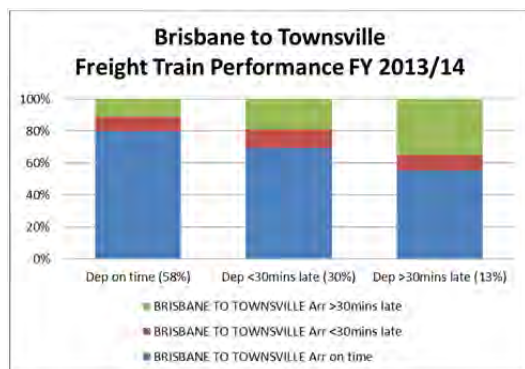
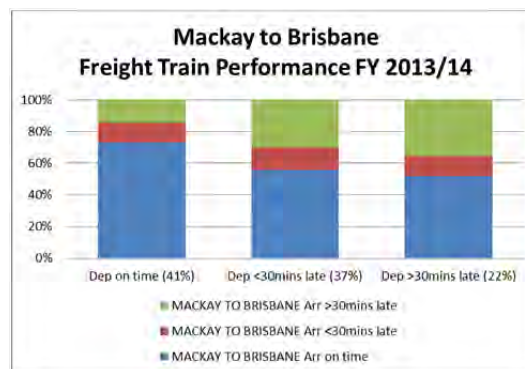
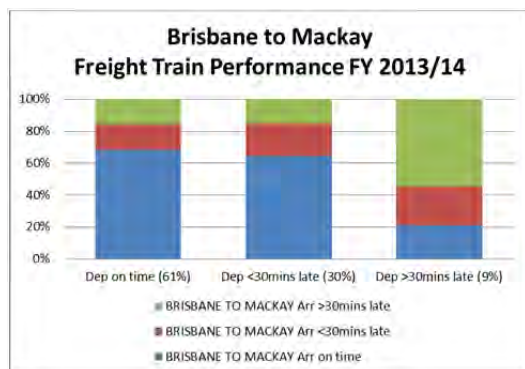
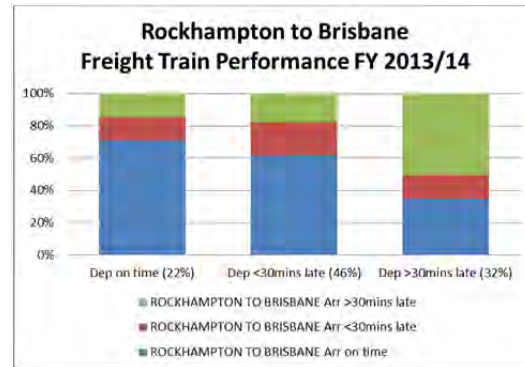
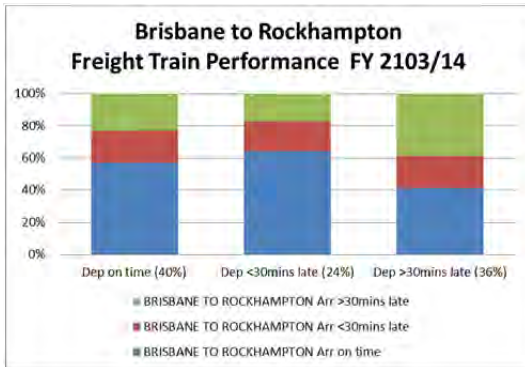
- ▶ On-time
- ▶ <30mins
- ▶ >30mins

The analysis was undertaken for each of the four major intermodal OD routes on the NCL corridor and in both directions of northbound and southbound for each quarter of FY13/14. Figure 8.3 summarises the combined on-time performance for all freight services traveling in the northbound and southbound directions. Graphs showing the on-time performance for each of the four major intermodal routes are included in Figure 8.4.

**Figure 8.3 Northbound and southbound intermodal on-time performance at origin and destination**

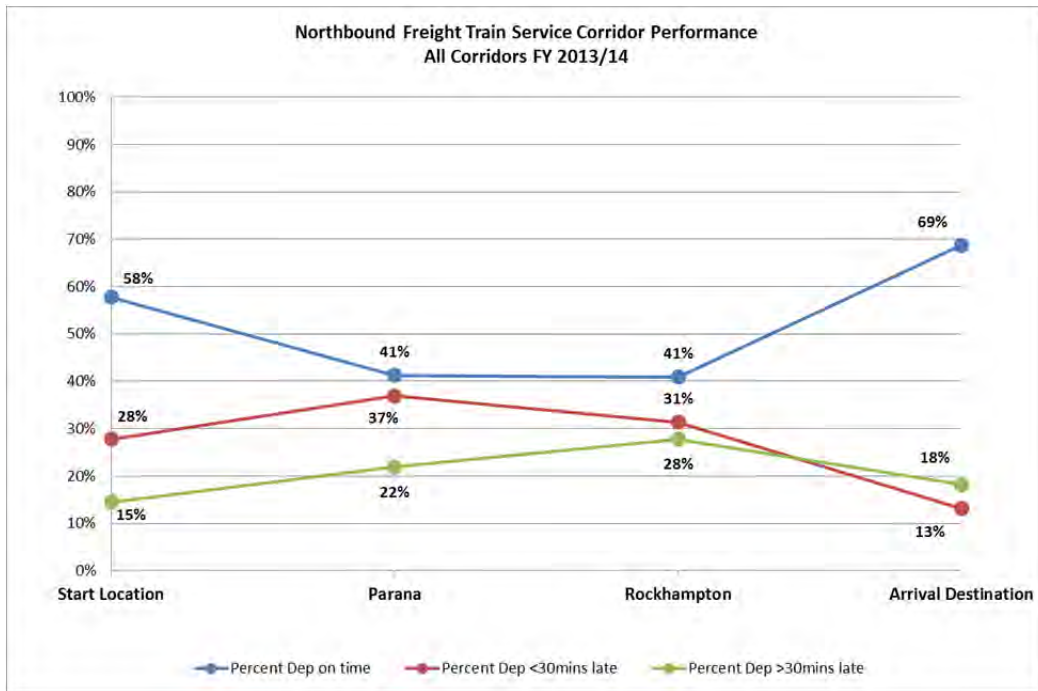


**Figure 8.4 Individual Intermodal OD pairs on-time performance (FY2013/14)**

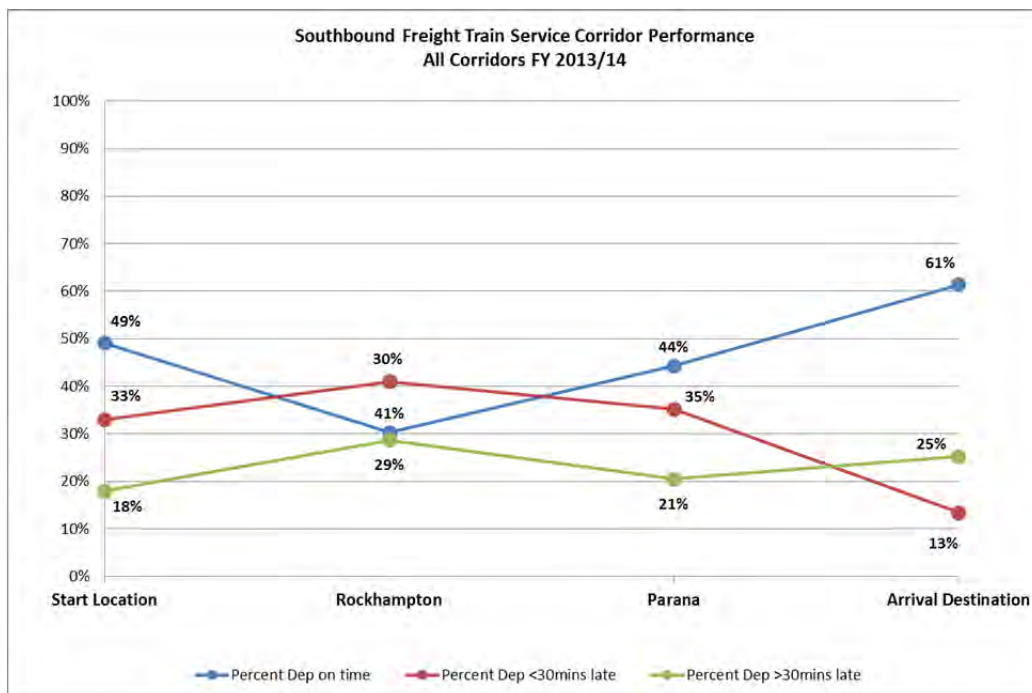


The next analysis undertaken was the performance of the train services when on track and understanding the impact of the corridor on the performance of the train services, as indicated in Figure 8.5 for north-bound intermodal services and Figure 8.6 for south-bound services.

**Figure 8.5 On-time performance along route for northbound intermodal**



**Figure 8.6 On-time performance along route for southbound intermodal**



This assessment highlights the following critical performance issues for the NCL corridor:

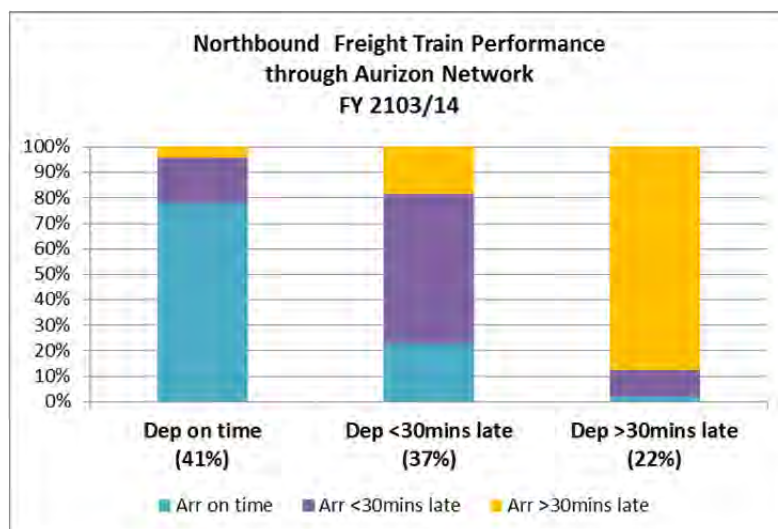
1. The best opportunity to achieve on-time reliable services for customers is to ensure train services depart their origins on-time.
2. The assessment highlights that over the 2013/14 period, the train services were generally able to improve their on-time train performance over the course of their journey. This is indicated by the fact the arrival % is greater than the departure % for services that depart on time.
3. The ability of the train services to “make up” time is due to two main contributors being:
  - ▶ the network’s capability to recover late services due to not being capacity constrained
  - ▶ the additional time allowed in the train service schedules to accommodate day of operations unplanned impacts and events
4. There is no data which suggests that the delays are mainly caused by a specific section of the North Coast corridor.

### 8.3 AURIZON TERRITORY ENTRY/EXIT PERFORMANCE

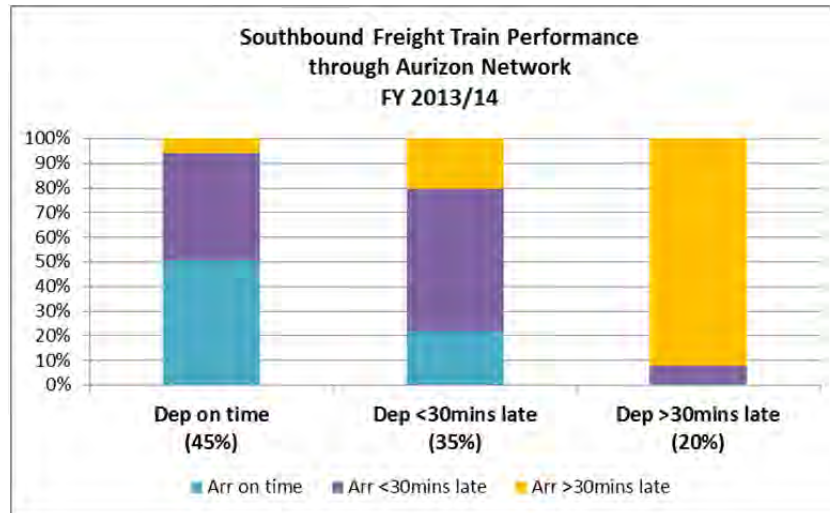
One of the possible variables that can occur for train services on the North Coast corridor is the interaction with the Aurizon network. The major section is the duplicated track between Parana and Rocklands, where NCL trains share track capacity with the Blackwater and Moura system coal trains. The current Blackwater system coal trains operate around a 30 minute window in each direction, with the NCL trains slotting between these. The data analysis undertaken was to determine if the through freight trains are delayed within the Aurizon territory. Information on the performance of the train services was sourced for the FY 2013/14.

Typical on-time performance through the Parana – Rocklands Aurizon network is summarised in Figures 8.7 and 8.8 below.

**Figure 8.7 On-time performance for northbound intermodal through the Aurizon network (Parana – Rocklands)**



**Figure 8.8 On-time performance for southbound intermodal through the Aurizon network (Parana – Rocklands)**



The analysis indicated that the freight services will again perform more reliably if the northbound train services arrive on time at the entry point of the Aurizon network (Figure 8.7). The extent of delays that occur within the Aurizon territory increase the later the service arrives at the entry to the Aurizon network section. Part of this rationale is based on the requirement that once a train enters the section, it is in the best interests of all parties to exit the train off the Aurizon territory as quickly as possible. The use of duplicated track provides Aurizon with this operational capability. It should be noted that the southbound intermodal journey that mixes with the loaded coal services is less reliable through the Aurizon network section than the northbound train services (Figure 8.8). The rationale for this was not explored, but may be the result of congestion for coal services queued to exit the network at the Gladstone end.

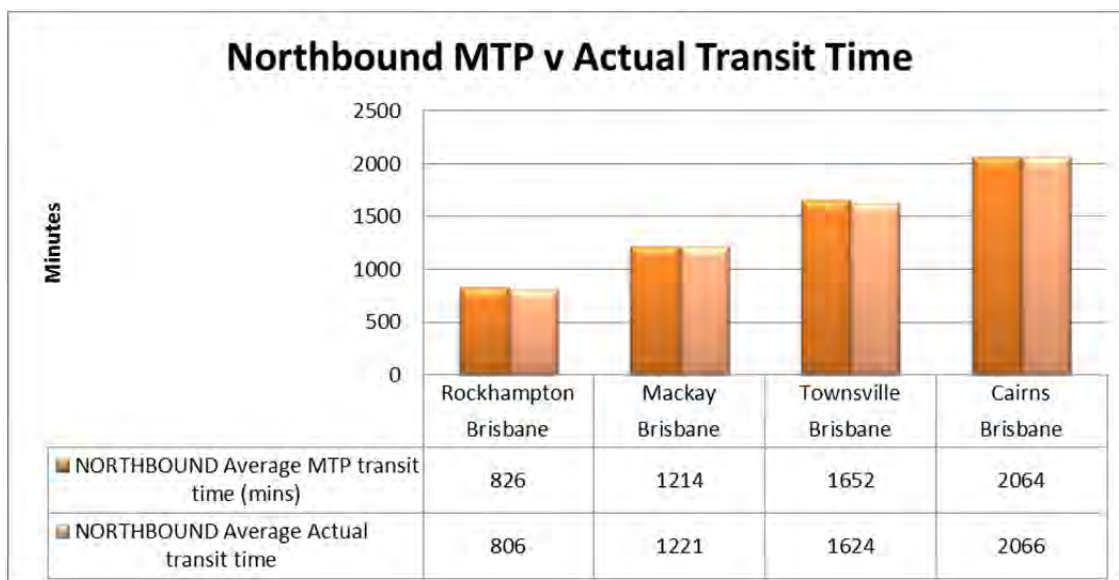
#### 8.4 TRANSIT TIMES

As indicated in Section 7, transit times are an important input into the development of the MTP and DTP. The next step is to understand the variance between the planned transit times and actual transit times for the day-of-operations.

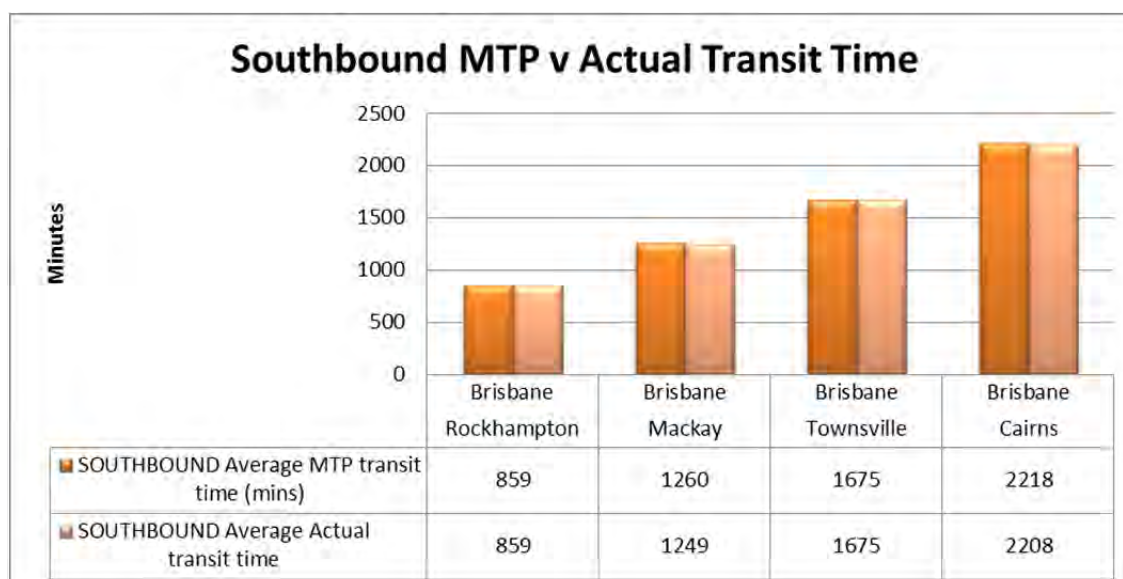
Figures 8.9 and 8.10 show the average MTP transit time and the average actual transit by origin and destination for northbound and southbound intermodal services for FY 2013/14. The data set was for a total of 2042 train services. The analysis highlights that the variation between average MTP transit and average actual transit time is negligible. This indicates that:

1. There is substantial buffer time in the MTP transit time allowing on-time running to be achieved or
2. Train operations can deliver the transit time as planned (i.e. there are few constraints).

**Figure 8.9 Variation between Actual v Planned transit times – northbound intermodal**



**Figure 8.10 Variation between Actual v Planned transit times – southbound intermodal**



## 8.5 REASONS FOR DELAYS

Train delays are determined as unplanned events or planned events taking longer than expected. Delays can be caused by a number of factors. Table 8.2 summarises the allowances contained in the MTP and the major reported reasons for delays to intermodal freight services during 4Q 2013/14. Reported delays for the quarter in total were 317,603 minutes. The aggregate planned events in the MTP were 300,430 minutes. In aggregate, the times and impacts tend to offset each other.

The reasons for delays vary as do the amount of time allowed for events in the schedule. Crossing events had the greatest time recorded; however this period in aggregate was less than the overall times planned for crossing events in the MTP. Of the crossing activities impacting train running, 79% were crosses with other

freight services which have an allowance in the MTP resulting in overall transit time gains against the MTP and 21% were crosses with passenger services that do not have a scheduled time allowance. Cyclone and speed restriction categories were primarily driven by the associated weather events during the data sample period. In addition to the 15 categories outlined below, there were another 76 minor reasons for delay recorded in the data sample. All these factors impact the scheduled service running time and overall transit time reliability. To understand the full impact of these events on transit time reliability, further analysis of individual service performance across various key track sections would be required.

**Table 8.2 Scheduled event allowances and reasons for train delays**

| Event                               | Scheduled Time<br>(Sum of Minutes) | %   | Actual Time<br>(Sum of Minutes) | %   |
|-------------------------------------|------------------------------------|-----|---------------------------------|-----|
| Crossing Activities                 | 164,099                            | 55% | 96,229                          | 30% |
| Attach/Detach                       | 42,764                             | 14% | 41,833                          | 13% |
| Meal                                | 36,832                             | 12% | 4,037                           | 1%  |
| Network Stowing Activity            | 21,186                             | 7%  | 12,618                          | 4%  |
| Train Crew Change                   | 16,852                             | 6%  | 23,692                          | 7%  |
| Fuel Locomotive                     | 9,981                              | 3%  | 9,603                           | 3%  |
| Safe Working Authority              | 3,020                              | 1%  | 2,640                           | 1%  |
| Wait Train Crew Availability        | 0                                  | 0%  | 25,472                          | 8%  |
| Speed Restriction                   | 568                                | 0%  | 15,792                          | 5%  |
| Cyclone                             | 0                                  | 0%  | 12,102                          | 4%  |
| Late Exit Aurizon Control Territory | 0                                  | 0%  | 10,769                          | 3%  |
| Unable to Maintain Schedule         | 0                                  | 0%  | 9,726                           | 3%  |
| Locomotives – Operator              | 0                                  | 0%  | 5,932                           | 2%  |
| Late Facility Departure - Operator  | 0                                  | 0%  | 3,554                           | 1%  |
| Train Control System Fault          | 0                                  | 0%  | 3,506                           | 1%  |



## 9. The Queensland freight task

The Queensland freight transport market is underpinned by an extensive network of transport infrastructure covering all transport modes. Figure 9.1 identifies the freight network in Queensland, which includes the following major components.

1. A 13,600 km State controlled road network. The Bruce Highway extends between Brisbane and Cairns approximately 1,700 km along the Queensland Coastline.
2. A 9,550 km rail network. The North Coast Line rail corridor essentially runs parallel to the Bruce Highway between Brisbane and Cairns with approximately 1,680 km of track along the Queensland coastline.
3. Three major intermodal rail freight terminals within the Brisbane area (located at Acacia Ridge, Moolabin and the Port of Brisbane) and regional terminals at major coastal locations between Gladstone and Cairns plus western locations such as Mt Isa and Cloncurry.
4. Multiple trading ports (15) up the coast covering bulk, break-bulk and intermodal freight.
5. Three international and multiple domestic airports.
6. An extensive network of Local Government controlled roads.

The estimated intrastate freight task during 2010/2011 outlined in the Department of Transport and Main Roads (TMR) “Moving Freight – A strategy for more efficient freight movement”<sup>1</sup> policy document was 871 million tonnes, with the estimated mode shares as indicated in Table 9.1.

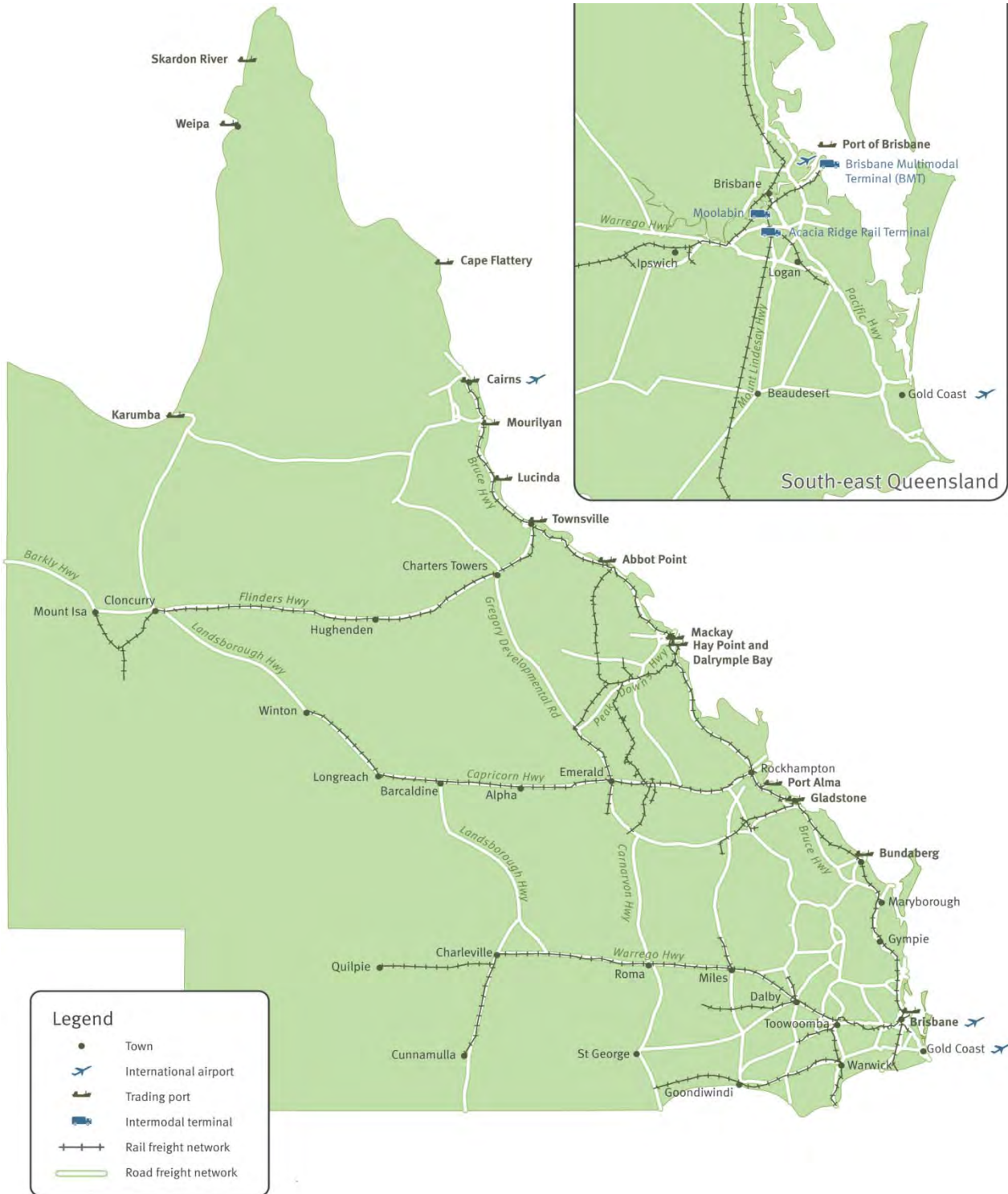
**Table 9.1 Queensland mode share of intrastate freight task (2010/11)<sup>2</sup>**

| Transport Mode                   | Volume (Million Tonnes) | Mode Share % |
|----------------------------------|-------------------------|--------------|
| Air                              | 0.05                    | 0%           |
| Sea                              | 20                      | 2%           |
| Rail                             | 251                     | 29%          |
| Road – Light Commercial Vehicles | 53                      | 6%           |
| Road – Rigid Vehicles            | 294                     | 34%          |
| Road – Articulated Vehicles      | 251                     | 29%          |
| <b>Total</b>                     | <b>871</b>              | <b>100%</b>  |

<sup>1</sup> TMR - Moving Freight – A strategy for more efficient freight movement (2013) p 16.

<sup>2</sup> TMR - Moving Freight – A strategy for more efficient freight movement (2013) p16.

**Figure 9.2 Queensland freight network<sup>3</sup>**



<sup>3</sup>TMR - Moving Freight – A strategy for more efficient freight movement (2013) p11.

The “Moving Freight” strategy (based on CTEE Queensland Transport Facts 2013 forecasts)<sup>4</sup> estimates that freight volumes in Queensland will increase by 88% from 871 million tonnes in 2010/11 to 1,643 million tonnes in 2026 due to increased economic activity, population growth and international trade. The types of freight are categorised as either:

1. General freight, which consists of over 70% of the freight task. This consists of commodities moved individually and/or in containerised, palletised and/or parcel sized configurations (e.g. wholesale and retail products, manufactured goods, food, beverages, personal items, plant and machinery parts, building products, construction materials, consumer goods, paper and wood, pulp, transport equipment, fuel distribution, motor vehicles and business services).
2. Commodities moved in bulk, which consists of approximately 30% of the freight task, of which two thirds is export coal. This consists of single commodity movements in high volume or bulk configuration (e.g. coal, minerals, bauxite, cement, grain, and sugar).

The quantity and types are summarised in Table 9.2.

**Table 9.2 Estimated freight volumes for key commodity groups<sup>5</sup>**

| Commodity          | 2016 Share | 2016 Mt      | 2026 Share (low) | 2026 Mt      |
|--------------------|------------|--------------|------------------|--------------|
| Export coal        | 20%        | 216          | 23%              | 378          |
| Export minerals    | 4%         | 40           | 4%               | 68           |
| Export agriculture | 1%         | 9            | 1%               | 13           |
| General freight    | 76%        | 830          | 72%              | 1,185        |
| <b>Total (Mt)</b>  |            | <b>1,095</b> |                  | <b>1,643</b> |

The challenge for the NCLCI Study is to distinguish between the various freight market segments and identify the truly contestable components of the freight market. It is these segments that are able to potentially switch between road and rail transport modes impacting on future NCL rail capacity demand (Figure 9.2). Critical as well is the need to understand recent trends in rail volumes and services utilising the NCL, which provides the platform for understanding the extent to which existing NCL rail capacity is under pressure now or in the future. Once the nature of the existing capacity and demand are better understood, future volume forecasts can be applied to determine network limitations and constraints.

The diversity of the transport task (and limited contemporary and relevant supply chain data) limits the ability of Governments to provide meaningful estimates of the entire transport task. Therefore, in the *Moving Freight* strategy the general freight projections are based on the average growth rate shown from 2001 to 2010 using a compound growth formula. As a result, analysis of the transport task and the ability of the task to be contestable with rail and potentially subject to mode shift between road and rail, are uncertain at best.

<sup>4</sup> CTEE – Queensland Transport Facts 2013.

<sup>5</sup> TMR & Pekol Transport and Traffic - Moving Freight 2013 p18.

Figure 9.2 Queensland General Freight Flows<sup>6</sup>



<sup>6</sup> TMR - Moving Freight – A strategy for more efficient freight movement (2013)

The majority of the general freight road transport task is not contestable by rail whereby freight flows maybe local or regional and hence not contestable by rail (as outlined in more detail below).

1. It is unclear if the general freight task is travelling between specific origin/destination (OD) pairs that relate to a rail corridor or are local urban or regional freight movements. Such general freight tasks are local freight movements or PUD (pick-up and delivery) tasks related to a road or rail line haul task. A general or intermodal freight movement that does not have an OD pair on the major regional centres on the NCL corridor are purely local freight movements. Key OD pairs on the North Coast corridor are:
  - ▶ Brisbane – Rockhampton/Gladstone
  - ▶ Brisbane – Mackay
  - ▶ Brisbane – Townsville
  - ▶ Brisbane – Cairns
2. The road tasks that are categorised as LCV (Light Commercial Vehicle) or Rigid Vehicle general freight, are generally likely to be local movements or intra-regional freight movements that are not line-haul tasks and have no potential of transitioning to the rail mode.
3. While the articulated vehicle category has more probability of being a line-haul task subject to potential mode shift, a large number of articulated road vehicle movements are also local or regional road tasks.

The intra-regional road task (SEQ to SEQ OD movements) is by far the largest general freight market segment, given the major regional concentration of consumers and industry within the SEQ region. None of this task is on rail due to the short distances involved, and the disadvantages rail has with the transit time and cost. The SEQ Rail Freight Terminals Study (SEQRFTS) assessed the total SEQ freight task that occurred to/from SEQ and within the regional SEQ Local Government Area (LGA) zones at almost 150 million tonnes per annum 2013<sup>7</sup>. The SEQ intra-regional component of the general freight task was 52% of the total SEQ task.

The major contestable components of the general/intermodal freight tasks that are relevant to the future potential rail task on the NCL are those that can be intrastate movements between the SEQ intermodal terminals at Acacia Ridge and Moolabin, or IMEX (Import/Export) movements to/from the Port of Brisbane. This general (non-bulk) freight task along the NCL route is driven by consumption and commercial, industrial and construction activities within the major population centres along the coast and within their regional catchment areas. The southbound component of the NCL freight task includes primary products (fruit, vegetables, processed meat, cotton, grains) for the SEQ domestic market and the southern markets, or for export via the Port of Brisbane. There is also a limited movement of processed minerals freight (e.g. aluminium ingots) from the Gladstone area to southern markets.

The total intermodal freight task with an OD pair in SEQ is estimated as 45 million tonnes per annum in 2013<sup>8</sup>. This component of the general freight task which is potentially contestable by rail is only 30% of the total SEQ based freight task.

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<sup>7</sup> TMR/Deloitte – SEQRFTS Freight Logistics and Demand Assessment (2014).

<sup>8</sup> TMR/Deloitte – SEQRFTS Freight Logistics and Demand Assessment (2014).

## 10. Road – Rail mode share competition

### 10.1 CONTEXT

The North Coast Line performs a number of rail tasks, including short haul and longer haul bulk tasks over various sections, commuter and long distance passenger services, and various miscellaneous tasks such as livestock and work trains. This study is focussed on the contestable freight tasks along the route, including consumer freight and industrial freight tasks. This predominantly includes containerised freight, with major origin–destinations being South East Queensland and the major coastal cities along the route. It also includes the less significant task in serving the hinterlands of the major coastal regional centres.

The Bruce Highway performs a similar freight transport function, with a wider geographic influence, with its greater accessibility to the communities along the route, and its natural advantages for short-haul freight, as well as the longer line-haul function. The advantages of road freight include:

- ▶ Generally provides the direct Pick-Up-Delivery (PUD) functionality that rail cannot directly provide (no cost/time penalty).
- ▶ Deals with truck size loads, not train size loads, with less requirement to aggregate loads with the time penalties this entails.
- ▶ Has scheduling flexibility related to departure times not possible with rail (truck load versus train load), and is not commuter peak constrained as applies within the SEQ Citytrain rail network).
- ▶ Has loading flexibility and greater geographic spread not possible with rail, including the ability to more effectively compete for back-loadings from multiple origin/destinations.
- ▶ Has fewer interfaces within the supply chain that add to the complexity of dealing with rail.
- ▶ Operates on a road network that has more operational flexibility, and alternate route options in the event of service disruptions, compared to rail.
- ▶ Operates under an access model that does not reflect the cost of providing a road network built to truck design standards, nor prices the externalities associated with road use (accidents, environmental).
- ▶ Has low barriers to entry, with the ability for a more rapid take-up of technology improvements at the truck and enterprise level, rather than rail where upgrades generally entail the broader rail network level, with the different below-rail and above-rail entities involved and potential non-alignment of objectives and decision making.

In effect, the road transport market segment is a competitive, multi-service provider mode that is adaptive, flexible and relatively unconstrained. In comparison, the rail transport market segment has an oligopoly market structure where various geographic market segments tend to be dominated by 2 or 3 competitors. In addition, the below-rail infrastructure is structured as a regulated monopoly where the Rail Infrastructure Manager seeks a ROA (return on asset) from Rail Operators in track access charges. Such a return is not sought from road transport operators and as a result, intermodal/general freight rail networks invariably cannot achieve a commercial market rate of return on assets, and consequently have to be subsidised by Government.

The Bruce Highway has been undergoing significant upgrades over recent years, particularly within South East Queensland, and has benefitted from the approval of more competitive higher vehicle load combinations. Even more substantial major highway upgrades are committed by both the Commonwealth and State Governments over the next decade, with an \$8.5 billion Action Plan approved for implementation by 2022/23.

This major road upgrade program follows on from similar interstate road upgrade programs including the now completed Hume Highway upgrade, and the well advanced Pacific Highway upgrade, which significantly improves road competitiveness on the main south-north route between Melbourne and Brisbane, with flow on to Central and North Queensland.

## 10.2 MODE CHOICE

The mode selected for any one transport task tends to be determined by:

- ▶ The type, size and volume of product to be transported.
- ▶ The suitability/capability of the mode to transport and handle the product
- ▶ Total door-to-door cost
- ▶ Reliability of the transport mode
- ▶ The origin / destination pairing of the task.
- ▶ The required transit time.
- ▶ Service frequencies offered
- ▶ Flexibility of service offerings.
- ▶ Level of customer service provided.

Research has identified the following factors as key drivers for freight mode choice: time and capacity (40% influence), price (35% influence), reliability (15%), availability (10%)<sup>9</sup>. The relative importance of the various factors will differ from customer to customer, heavily influenced by the features of the supply chain (ease of substitution) and most recent experiences. ARTC market research on freight forwarder and end customer users of rail concluded that price was the major driver of mode choice<sup>10</sup>. Even though other factors such as reliability, frequency and consistency are considered, price or cost to the customer remains the critical factor.

While reliability is often cited as a major determinant of mode choice, reliability is really a pre-qualification factor. Woolworths who consider rail is not as customer focused as road and less flexible, consider that reliability is the offset for lack of flexibility, given the need to achieve the right balance between service, cost and risk is essential for a business that has a supply chain that is forecast-driven from store sales and minimal inventory in the supply chain<sup>11</sup>. In-transit service failures directly impact store stock levels. As a result, customers tend to continue to split the transport task between road and rail as a risk mitigation strategy<sup>12</sup>. The consequences for poor rail performance, particularly reliability, are magnified by the impact of “full train” load delays, compared to the “single truck” consequences for road reliability.

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<sup>9</sup> LEK – DTMR Freight Market Overview and Assessment - Report 2009.

<sup>10</sup> Deloitte – ARTC Freight Forwarder and End Users Market Segmentation Study 2011.

<sup>11</sup> Woolworths 2011 Ausrail Presentation - Ben Newton - What the Rail Customers Want.

<sup>12</sup> Deloitte – SEQRFST Study Stakeholder Consultation Report 2014.

## 11. Bruce Highway

The Bruce Highway is a state controlled road that forms part of the national highway network. It spans approximately 1,700 kilometres and is Queensland's primary coastal route which links Brisbane to Cairns. Queensland's growing population is concentrated along its coastline<sup>13</sup>. Urban centres like Brisbane, the Sunshine Coast, Gladstone, Rockhampton, Mackay, Townsville and Cairns are experiencing a higher population growth than surrounding areas and are a driver for increases in general freight movements. In addition to population growth, a reduction in manufacturing in Australia means that imports for general freight will continue to increase. It is expected that this will drive the Port of Brisbane's container trade and maintain the increasing importance of the Bruce Highway in facilitating these movements. The growth and success of the mining industry, and future agricultural production will also drive the growth of freight along the Bruce Highway<sup>14</sup>.

### 11.1 CURRENT PERFORMANCE PARAMETERS

#### 11.1.1 Capacity

Figure 11.1 provides a schematic overview of vehicle volumes along the Bruce Highway. Table 11.1 provides an assessment of the vehicle types, and an estimate of the annual freight volumes by section, derived from the 2013 AADT traffic counts. Traffic along the Bruce Highway exceeds 90,000 AADT between Brisbane (Pine River) and Caboolture, reducing to in excess of 50,000 AADT between Caboolture and the Sunshine Coast (Sippy Downs). The AADT drops rapidly to between 5,000-7,000 AADT along the remainder of the Bruce Highway other than around the major population centres at Rockhampton, Mackay, Townsville and Cairns. In urban areas, capacity on the Bruce Highway is constrained due to high traffic demand, a mix of trips types (i.e. local and through traffic) and a mix of vehicle types (i.e. light and heavy vehicles).

The Bruce Highway has an average 16.0% heavy vehicle composition as outlined in Table 11.1 of which 7.6% are trucks and buses, 5.0% are articulated vehicles and 3.4% of vehicles exhibit a multi-trailer configuration (categorised as road trains in AADT data). Between Gympie and Mackay the average heavy vehicle composition is 22.5% and exceeds 30.0% in some areas. The higher than average heavy vehicle proportion south of Mackay is indicative of the preference to use road instead of rail for freight between Brisbane to centres through to Mackay. This is due to the maximum working shift of a driver which will be detailed in Section 11.1.2.

The freight tonnage on the Bruce Highway drops rapidly as distance increases from Brisbane. Freight along the Bruce Highway is most prominent between Brisbane and Maryborough and drops to an estimated maximum of 15 Mtpa up to Rockhampton, up to 10 Mtpa between Rockhampton and Ingham, and less than 5 Mtpa between Ingham and Cairns.

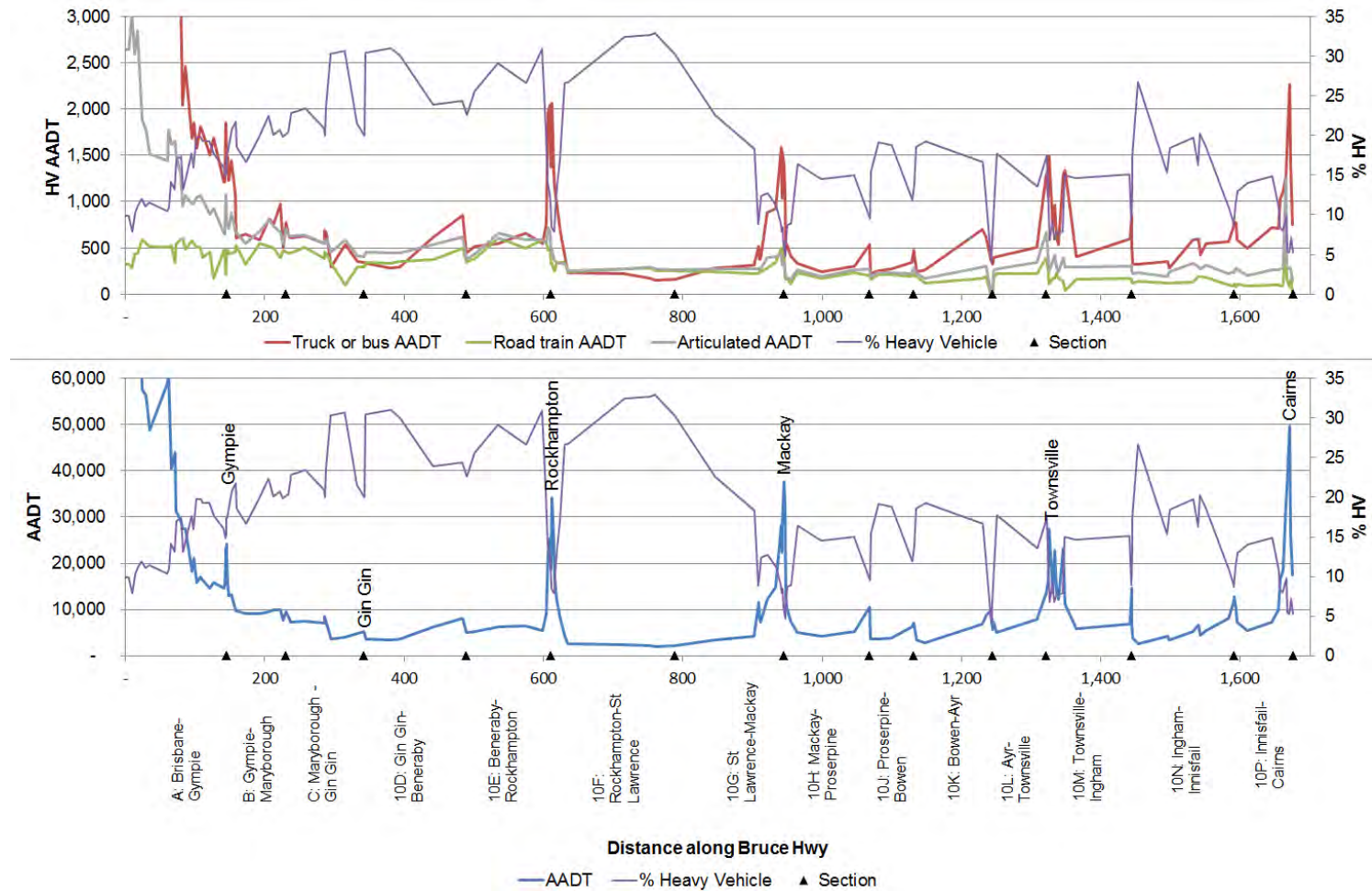
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<sup>13</sup> Department of Infrastructure and Regional Development – Bruce Highway Overview (2014).

<sup>14</sup> TMR - Moving Freight – A strategy for more efficient freight movement (2013)



Figure 11.1 2013 AADT and HV% on Bruce Highway<sup>15</sup>



<sup>15</sup> TMR (2014) Coastal Freight Corridor: Brisbane to Cairns. Data supplied by TMR

**Table 11.1 2013 Average annual daily traffic data including heavy vehicle share on Bruce Highway<sup>16</sup>**

| Road ID | Name                    | Ave. AADT | 2010 Mtpa per annum | AADT Light Vehicle | % Light vehicle | AADT Rigid Truck or bus | % Rigid Truck or Bus | AADT Articulated | % Articulated | AADT Road Train | % Road Train |
|---------|-------------------------|-----------|---------------------|--------------------|-----------------|-------------------------|----------------------|------------------|---------------|-----------------|--------------|
| 10A     | Brisbane-Gympie         | 46,027    | Up to 96            | 36,909             | 85.6            | 3,258                   | 8.5                  | 1,475            | 4.2           | 462             | 1.7          |
| 10B     | Gympie-Maryborough      | 12,449    | 10-25               | 8,555              | 80.3            | 921                     | 8.4                  | 698              | 6.7           | 461             | 4.5          |
| 10C     | Maryborough-Gin Gin     | 6,803     | 5-15                | 5,272              | 76.6            | 570                     | 8.6                  | 576              | 9.0           | 384             | 5.7          |
| 10D     | Gin Gin-Benaraby        | 5,070     | 5-15                | 3,767              | 73.4            | 454                     | 8.7                  | 483              | 10.2          | 366             | 7.7          |
| 10E     | Benaraby-Rockhampton    | 10,700    | 10-15               | 8,697              | 77.2            | 936                     | 9.1                  | 573              | 7.2           | 493             | 6.5          |
| 10F     | Rockhampton-St Lawrence | 11,590    | 5-10                | 10,166             | 80.0            | 790                     | 7.7                  | 340              | 6.3           | 293             | 6.0          |
| 10G     | St Lawrence-Mackay      | 12,947    | 5-10                | 11,591             | 86.1            | 727                     | 6.0                  | 319              | 4.1           | 310             | 3.8          |
| 10H     | Mackay-Proserpine       | 14,401    | 5-10                | 13,352             | 89.9            | 599                     | 4.9                  | 228              | 2.7           | 221             | 2.4          |
| 10J     | Proserpine-Bowen        | 5,582     | 5-10                | 4,840              | 85.1            | 322                     | 6.1                  | 228              | 4.8           | 192             | 4.1          |
| 10K     | Bowen-Ayr               | 6,476     | 1-5                 | 5,669              | 85.8            | 446                     | 7.3                  | 214              | 4.0           | 147             | 2.9          |
| 10L     | Ayr-Townsville          | 6,497     | 5-10                | 5,703              | 87.7            | 409                     | 6.4                  | 229              | 3.5           | 156             | 2.4          |
| 10M     | Townsville-Ingham       | 15,166    | 5-10                | 13,696             | 89.2            | 934                     | 6.6                  | 355              | 2.8           | 180             | 1.4          |
| 10N     | Ingham-Innisfail        | 6,402     | 1-5                 | 5,499              | 83.7            | 506                     | 8.6                  | 259              | 4.9           | 138             | 2.7          |
| 10P     | Innisfail-Cairns        | 19,234    | 1-5                 | 17,730             | 90.6            | 1,034                   | 6.3                  | 330              | 2.2           | 140             | 0.9          |

<sup>16</sup> TMR (2014) Coastal Freight Corridor: Brisbane to Cairns. Data supplied by TMR

### 11.1.2 Transit Time

Table 11.2 is a comparison of current road and rail northbound travel times and distances between Brisbane and major freight destinations using the National Heavy Vehicle Regulator (NVHR) journey planner<sup>17</sup> for road freight and the green light transit time and average (MTP) transit time for rail freight. The road travel times for NVHR are in uncongested conditions and do not include mandatory rest periods unless otherwise stated. For comparison purposes trips are assumed to originate from Acacia Ridge and terminate at the intermodal freight facility of the major city. Heavy vehicles access the Bruce Highway via Beaudesert Road, Compton Road and the Gateway Motorway. A sensitivity test was undertaken for the south-bound direction for both road and rail. The variations in travel time are within 2% for road and 6% for rail.

**Table 11.2 Regional NCL travel distance and transit time from Brisbane**

| Brisbane to: | Road          |                               |  | Rail                     |                          |
|--------------|---------------|-------------------------------|--|--------------------------|--------------------------|
|              | Distance (km) | Travel time (no rest periods) | Travel time + 7hrs stationary rest + 1hr general | Green light transit time | Average MTP transit time |
| Bundaberg    | 391           | 5 hrs 2 mins                  | –  | –                        | –                        |
| Rockhampton  | 660           | 8 hrs 44 mins                 | –  | 9 hrs 39 mins            | 13 hrs 46 mins           |
| Mackay       | 990           | 13 hrs 1 mins                 | –  | 14 hrs 26 mins           | 20 hrs 14 mins           |
| Townsville   | 1,379         | 18 hrs 24 mins                | 26 hrs 24 mins                                   | 19 hrs 37 mins           | 27 hrs 32 mins           |
| Cairns       | 1,721         | 23 hrs 10 mins                | 31 hrs 10 mins                                   | 25 hrs 29 mins           | 34 hrs 24 mins           |

The maximum work time for heavy vehicle operators is dependent on accreditation levels from the National Heavy Vehicles Accreditation (NHVA) Scheme. Table 11.3 provides a summary of rest periods required under the NHVA basic fatigue management accreditation. Note that advanced fatigue management accreditation allows the operator to propose maximum work times and rest periods, but the National outer limit of 16 hours per 24 hour period cannot be exceeded<sup>18</sup>. This would limit single day heavy vehicle trips to major cities north of Mackay without relay driver shift change operations or two-up driving.

The challenge for the NCLCI Project is to understand the extent to which each of the road and rail transit times impact, and can be successfully integrated into the replenishment cycles of customers. Many end customers are ordering product and allowing specific defined periods for the transport and delivery of the product to their premises or stores. A mode that cannot align its transit times with customer ordering processes and replenishment cycles to facilitate a competitive door-to-door delivery service will struggle to compete in the market.

<sup>17</sup> National Heavy Vehicle Regulator – NHVR Website – NHVR Journey Planner

<sup>18</sup> TMR web site – publications – Smart Service Website – Fatigue Limitations.

**Table 11.3 Maximum work times (Fatigue Management Accreditation)**

| TIME                | WORK   | REST  |
|---------------------|--|---|
| In any period of... | A driver must not work for more than a maximum of... | And must have the rest of that period off work with at least a minimum rest break of...   |
| 6 ¼ hours           | 6 hours work time                                    | 15 continuous minutes rest time   |
| 9 hours             | 8½ hours work time                                   | 30 minutes rest time in blocks of 15 continuous minutes   |
| 12 hours            | 11 hours work time                                   | 60 minutes rest time in blocks of 15 continuous minutes   |
| 24 hours            | 14 hours work time                                   | 7 continuous hours stationary rest time*(A)   |
| 7 days              | 72 hours long/night work time*(C)                    | 24 continuous hours stationary rest time  |
| 14 days             | 144 hours work time                                  | 24 continuous hours stationary rest time taken after no more than 84 hours work time and 24 continuous hours stationary rest time and 2 x night rest breaks*(B) and 2 x night rest breaks taken on consecutive days |

- A. Stationary rest time is the time a driver spends out of a regulated heavy vehicle or in an approved sleeper berth of a stationary regulated heavy vehicle.
- B. Night rest breaks are 7 continuous hours stationary rest time taken between the hours of 10 pm on a day and 8 am on the next day (using the time zone of the base of the driver) or 24 continuous hours of stationary rest break.
- C. Long/night work time is any work time in excess of 12 hours in a 24 hour period or any work time between midnight and 6 am (or the equivalent hours in the time zone of the base of a driver).

### 11.1.3 Safety

The Bruce Highway comprises only 7.5% of the National Highway network, but makes up 17% of fatalities<sup>19</sup>. A safety assessment by the Australian Roads Assessment Program (AusRAP) identified it as one of the most dangerous roads in Australia. AusRAP undertakes a star-rating system to assess the safety of roads based on traffic speeds and the existing road infrastructure to accommodate those speeds. These include median treatment, road geometry, intersection design, lane widths, shoulders, verges, pedestrian and cyclists provisions<sup>20</sup>. Table 11.4 summarises the rating of the major sections along the Bruce Highway.

<sup>19</sup> TMR (2012) Bruce Highway Action Plan 'Out of the Crisis' - BruceHighwayActionPlan.pdf

<sup>20</sup> iRAP Website – iRAP Methodology Fact Sheet.

**Table 11.4 Summary of Bruce Highway AusRAP Safety Assessment 2013<sup>21</sup>**

| Name                      | Length (km)     | % 1-Star | % 2-Star  | % 3-Star  | % 4-Star | % 5-Star |
|---------------------------|-----------------|----------|-----------|-----------|----------|----------|
| Bald Hills - Caloundra    | 61              | 0        | 5         | 65        | 30       | 0        |
| Caloundra - Cooroy        | 41.1            | 0        | 0         | 94        | 6        | 0        |
| Cooroy - Gympie           | 38.3            | 0        | 92        | 7         | 1        | 0        |
| Gympie - Childers         | 131.1           | 9        | 70        | 21        | 0        | 0        |
| Childers - Miriam Vale    | 149.5           | 6        | 39        | 54        | 1        | 0        |
| Miriam Vale - Rockhampton | 162.7           | 0        | 44        | 55        | 1        | 0        |
| Rockhampton - St Lawrence | 164.6           | 5        | 76        | 19        | 0        | 0        |
| St Lawrence - Sarina      | 122.5           | 2        | 48        | 50        | 0        | 0        |
| Sarina - Mackay           | 23              | 27       | 63        | 10        | 0        | 0        |
| Mackay - Proserpine       | 118.5           | 0        | 40        | 60        | 0        | 0        |
| Proserpine - Ayr          | 163.2           | 0        | 7         | 93        | 0        | 0        |
| Ayr - Townsville          | 75.1            | 0        | 73        | 27        | 0        | 0        |
| Townsville - Ingham       | 100.7           | 0        | 34        | 63        | 3        | 0        |
| Ingham - Innisfail        | 136.5           | 2        | 46        | 51        | 1        | 0        |
| Innisfail - Cairns        | 67.4            | 5        | 52        | 43        | 1        | 0        |
| <b>Average</b>            | <b>1,555.20</b> | <b>3</b> | <b>45</b> | <b>50</b> | <b>2</b> | <b>0</b> |

A map of ratings undertaken by AusRAP for the Bruce Highway that displays the concentration of the poorer rated areas on the highway is shown in Figure 11.2.

<sup>21</sup> AusRAP (2013) Star Rating – Australia's National Network of Highways.

Figure 11.2 AusRAP Queensland star rating map for Queensland<sup>22</sup>



#### 11.1.4 Flood immunity / reliability

On average, there are nine locations which close annually for greater than 48 hours and six locations which close for greater than five days. The Bruce Highway is routinely cut-off due to flooding at up to 33 sites.

#### 11.1.5 Truck configurations

The Bruce Highway is capable of carrying PBS 2a vehicles, with a desired access level for PBS 2b<sup>23</sup>. Performance Based Standards (PBS) is a nationally agreed process under the aegis of the National Heavy Vehicle Regulator (NHVR) for assessing heavy vehicles as an alternative to the previous prescriptive system<sup>24</sup>. PBS 2a routes can accommodate B-doubles of up to 26 metres long, while PBS 2b routes can accommodate B-doubles of up to 30 metres long. According to PBS, the maximum gross mass for one and two driving axles for B-Doubles is 45 and 82 tonnes respectively<sup>25</sup>.

<sup>22</sup>AusRAP (2013) Star Rating – Australia’s National Network of Highways.

<sup>23</sup>TMR (2014) Coastal Freight Corridor – Brisbane to Cairns.

<sup>24</sup>TMR Website - Information Bulletin: Performance Based Standards (PBS) Scheme in Queensland

<sup>25</sup>National Heavy Vehicle Regulator (2007) Performance-Based Standards Scheme – Network Classification Guidelines

**Figure 11.3 Common 9 axle B-Double Vehicle**



Currently the only section of the Bruce Highway that exceeds PBS 2a rating is a 37 km section near Townsville. There is a PBS 2b route that spans from Yabulu to Cluden via the Townsville Ring Road. There is also a short section of PBS 3a route (Double Road Train Type I) between Cluden to the Sun Metals zinc refinery<sup>26</sup>.

The mining industry is dependent on the Bruce Highway for the provision of Over Size Over Mass (OSOM) movements and the connection from inland areas to local ports. OSOM movements are concentrated in the South East, Darling Downs, Mackay and Fitzroy regions. Increases in OSOM movements are expected to continue as mining areas expand and develop. Current sections of the highway facilitate three or more OSOM movements per day.

## 11.2 THE BRUCE HIGHWAY UPGRADE

### 11.2.1 Scope

The Bruce Highway Action Plan is an \$8.5 billion package of works that aims to address capacity, safety and flood immunity along the route. This includes a selected program of additional lanes (4 laning and 6 laning on key sections), bypasses around major centres, upgraded interchanges, passing lanes and pavement widening, bridge replacements, and a major program to improve flood immunity. The latter element will minimise the widespread closures and reconstruction works that have previously caused economic challenges for Queensland.

The upgrade is being jointly funded by the Commonwealth Government (\$6.7 billion) and Queensland State Government (\$1.8 billion). It has been structured as a ten year program beginning in 2013/14 for completion by 2022/23.

### 11.2.2 Program

Figure 11.4 provides an overview of the potential Bruce Highway Road construction projects valued at over \$5 million each, which were considered relevant to the upgrading the Bruce Highway (as at 2011), and were included within the Queensland Transport and Roads Investment Program (QTRIP) at that time. The map provides a total end-to-end perspective on the number of projects proposed and the comparative delivery timeframes over the length of the Bruce Highway. It demonstrates that the number of projects are:

- ▶ Numerous across the whole Bruce Highway Corridor
- ▶ Rely upon a range of justification rationales including safety, capacity, flood immunity and freight efficiency
- ▶ Have a range of planning and delivery timeframes covering:
  - ▶ Short Term Funded - 1 to 4 years (included in forward estimates)
  - ▶ Medium Term Strategy – 5 to 10 years
  - ▶ Long Term Strategy – 11 to 20 years.

<sup>26</sup> Queensland Government (2013) Approved PBS routes key map - North Queensland

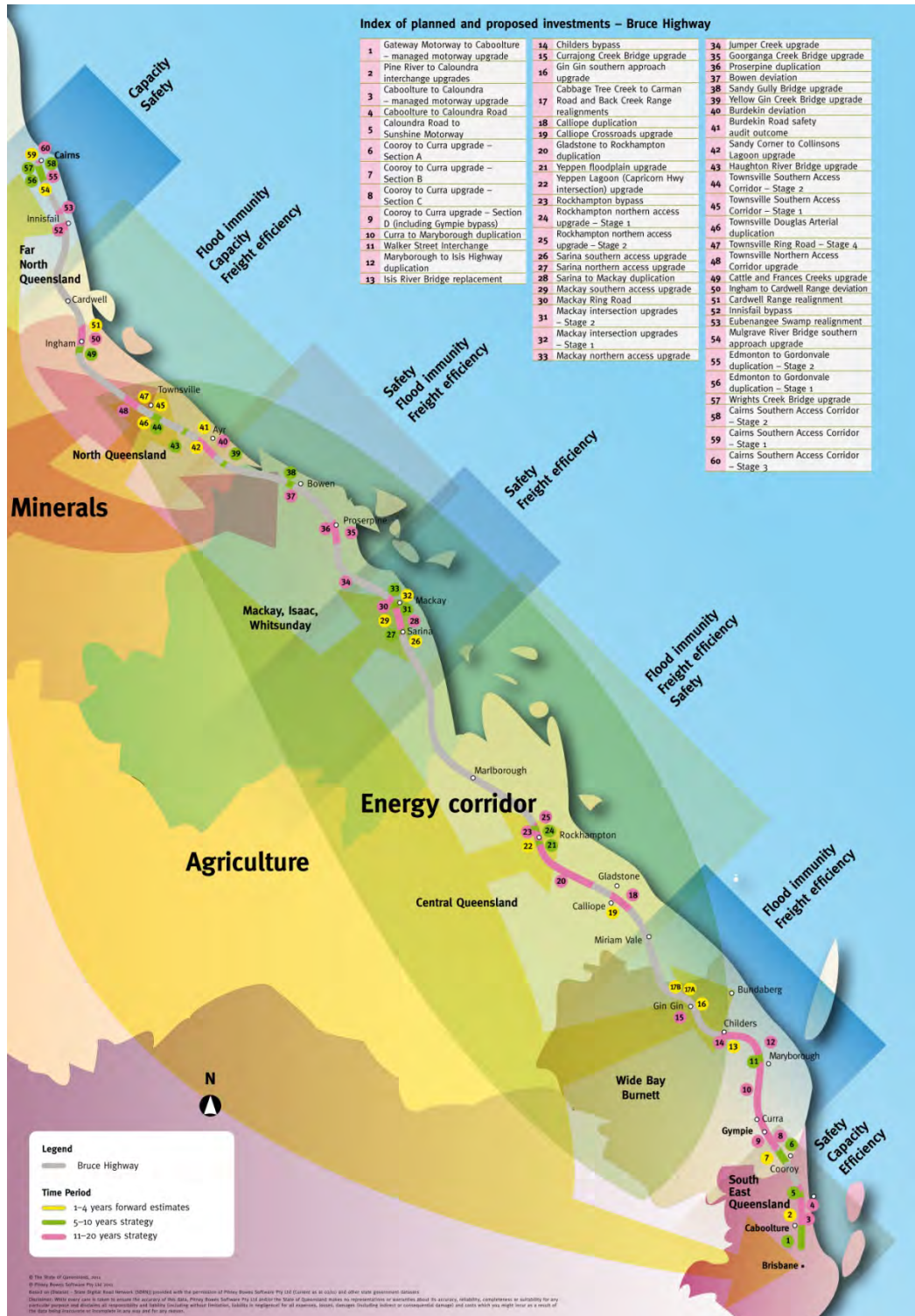
### 11.2.3 Impacts on Road Freight Transport

The impacts of the progressive Bruce Highway upgrades on road freight transport along the route include:

|                                     |  |
|-------------------------------------|--|
| Reduced transit time                | <ul style="list-style-type: none"> <li>▶ Higher speed bypasses (e.g. Gympie, Mackay)</li> <li>▶ Extended higher speed road sections (110 kph)</li> <li>▶ Reduced congestion delays (SEQ and around major cities)</li> <li>▶ Reduced delays due to safety incidents</li> <li>▶ Reduced delays due to construction works (post-upgrade completions)</li> </ul> |
| Improved transit time reliability   | <ul style="list-style-type: none"> <li>▶ Reduced delays due to road blockages around safety incidents</li> <li>▶ Reduced outages due to flooding</li> </ul>  |
| Reduced operating costs             | <ul style="list-style-type: none"> <li>▶ Reduced transit time</li> <li>▶ Better fuel economy (with less congestion, improved alignment, less braking)</li> <li>▶ Lower accident costs</li> </ul>   |
| Improved safety of truck operations | <ul style="list-style-type: none"> <li>▶ Additional lanes</li> <li>▶ Passing lanes</li> <li>▶ Wider pavements</li> </ul>   |



Figure 11.4 Bruce Highway upgrade projects <sup>27</sup>



<sup>27</sup> TMR (2014) Coastal Freight Corridor: Brisbane to Cairns. Data supplied by TMR

Figure 11.5 provides an alternative graphical view of the current upgrade program. This includes all current QTRIP projects along the Bruce Highway that are over \$5M in total value. Each point on this graph represents one project. The distance along the Bruce Highway is represented by the x-axis and total budget is represented by the y-axis.

As indicated, a major component of the capital program along the Bruce Highway is dedicated to the 6-lane upgrade between Caloundra Road and the Sunshine Motorway and the four Cooroy to Curra packages.

Quantification of the freight benefits from the Bruce Highway upgrades has not been evaluated on a corridor wide basis. Individual projects demonstrate various quantifiable benefits, with the major benefits between Brisbane and the Sunshine Coast being road user travel time savings in peak periods, dominated by private passenger vehicle users, and the related vehicle operating cost savings. The safety benefits represent only 5% of the quantified benefits.

Trip time savings attributed to the \$788 million (P50) out-turn costs for the 13.5km long Cooroy – Sankeys Road Section A of the Cooroy – Curra upgrade are estimated at only 1 – 2 minutes for heavy vehicles. Heavy vehicle trip time savings would be more significant with the full bypass to Curra, bypassing the slow section with signalised intersections through Gympie.

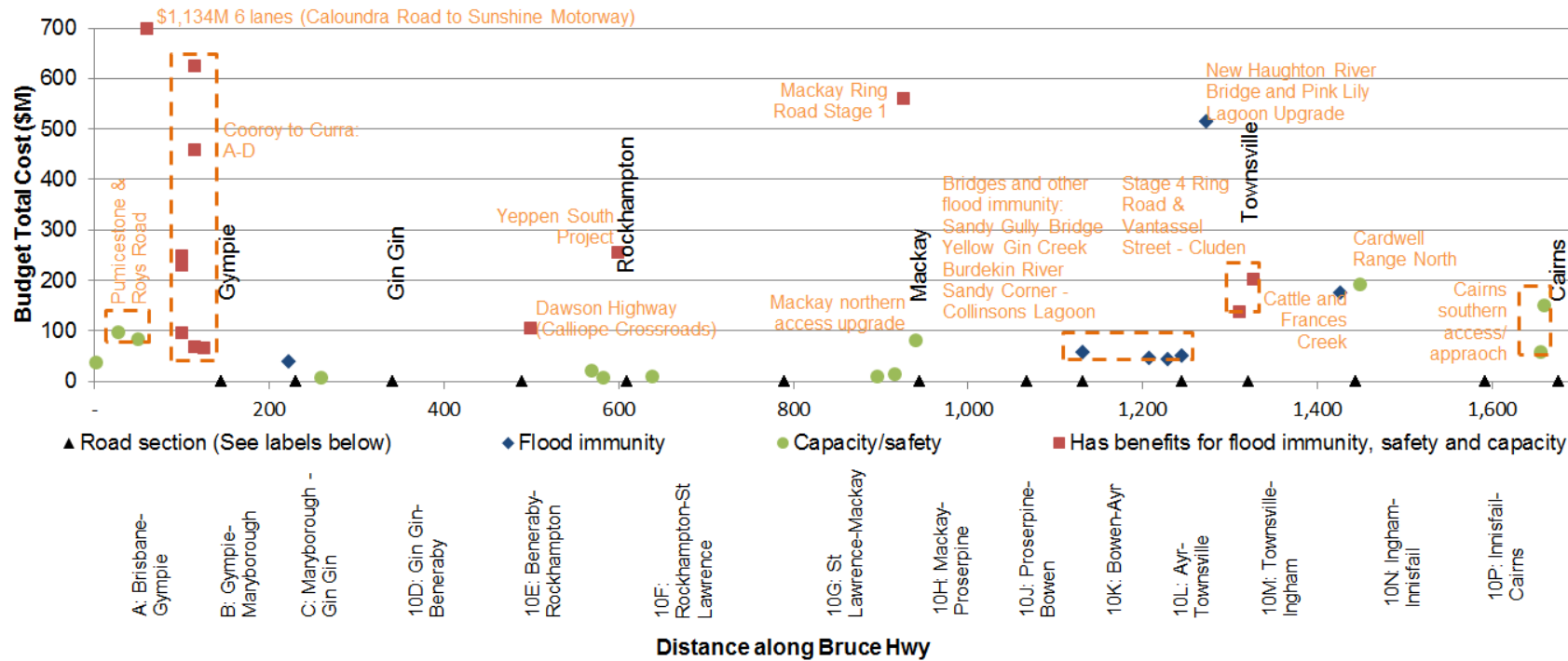
The 11.3 km long Mackay Ring Road would provide a trip time saving for through-trucks of a minimum 6 minutes, assuming no intersection delays at the 10 signalised intersections along the current route. This transit time saving is dependent on the time of day, increasing significantly during the local commuter peak periods for private vehicle utilisation.

The combination of these upgrades could potentially extend the one-day operating zone of road freight beyond Mackay. It provides safety benefits, some reduction in travel times and flood immunity improvements to the Bruce Highway between Brisbane and Mackay. This section represents over 70% of QTRIPS funding, but only spans 57% of the Bruce Highway.

North of Mackay, there are 5 major flood immunity projects between Bowen and Townsville, with the largest being the New Haughton River Bridge and Pink Lily Lagoon Upgrade valued at \$500M. This, in combination with the Townsville ring road, will substantially increase vehicle capacity and flood immunity near Townsville. Although road freight volumes drop to between 1-5 Mtpa between Ingham and Cairns, the Cairns Southern Access/approach projects and the Cardwell Range North and Cattle and Frances Creek upgrades will benefit freight with improved alignment, safety and flood immunity.

The Bruce Highway upgrade will certainly improve the performance of the route for freight across all significant service parameters of reliability, cost and transit. Of equal significance, it will also significantly improve the perception of the road freight performance in comparison with the existing railway and its performance.

Figure 11.5 Value and benefit summary of Bruce Highway upgrade projects (over \$5 million in value)<sup>28</sup>



<sup>28</sup> TMR (2014) Coastal Freight Corridor: Brisbane to Cairns. Data supplied by TMR

## 12. North Coast Line – intermodal freight market

### 12.1 KEY CONSIDERATIONS

A description of the North Coast Line and its performance are more fully described in previous Sections of this report (Sections 4, 7 and 8). From a freight perspective key considerations are:

- ▶ Corridor limitations on train configuration (length, axle load, payload, rollingstock loading gauge, locomotive requirements)
- ▶ Corridor limitations impacting on train speeds (horizontal alignment, grading, level crossings)
- ▶ Capacity limitations in aligning with market requirements (predominantly single track with passing loops requiring numerous train crosses, and Brisbane metro freight curfews)
- ▶ Relative train priorities (passengers, livestock, coal) and impacts through the Brisbane metro network and the Central Queensland coal network
- ▶ Older legacy network infrastructure assets (timber and steel bridges)
- ▶ Extensive sections of poor flood immunity with overtopping and flood washouts
- ▶ Freight terminal limitations (configuration, length constraints, train turn-around times)
- ▶ Maintenance shut-down periods with minimal work-around flexibility.

Contestable intermodal rail freight cannot currently compete with road on line-haul transit time along the route. In addition, there are the additional imposts of the rigidities of rail time-tabling, and the PUD (pick-up and delivery) legs at each end of the rail trip that impact the rail value proposition and add to the total transit time achievable for customers. Table 12.1 below outlines the transit time challenge for rail and the impacts that the Master Train Plan (MTP) rail schedule and loading/unloading times at terminals can have on the door to door task that is a key determinant of customer transport options evaluation.

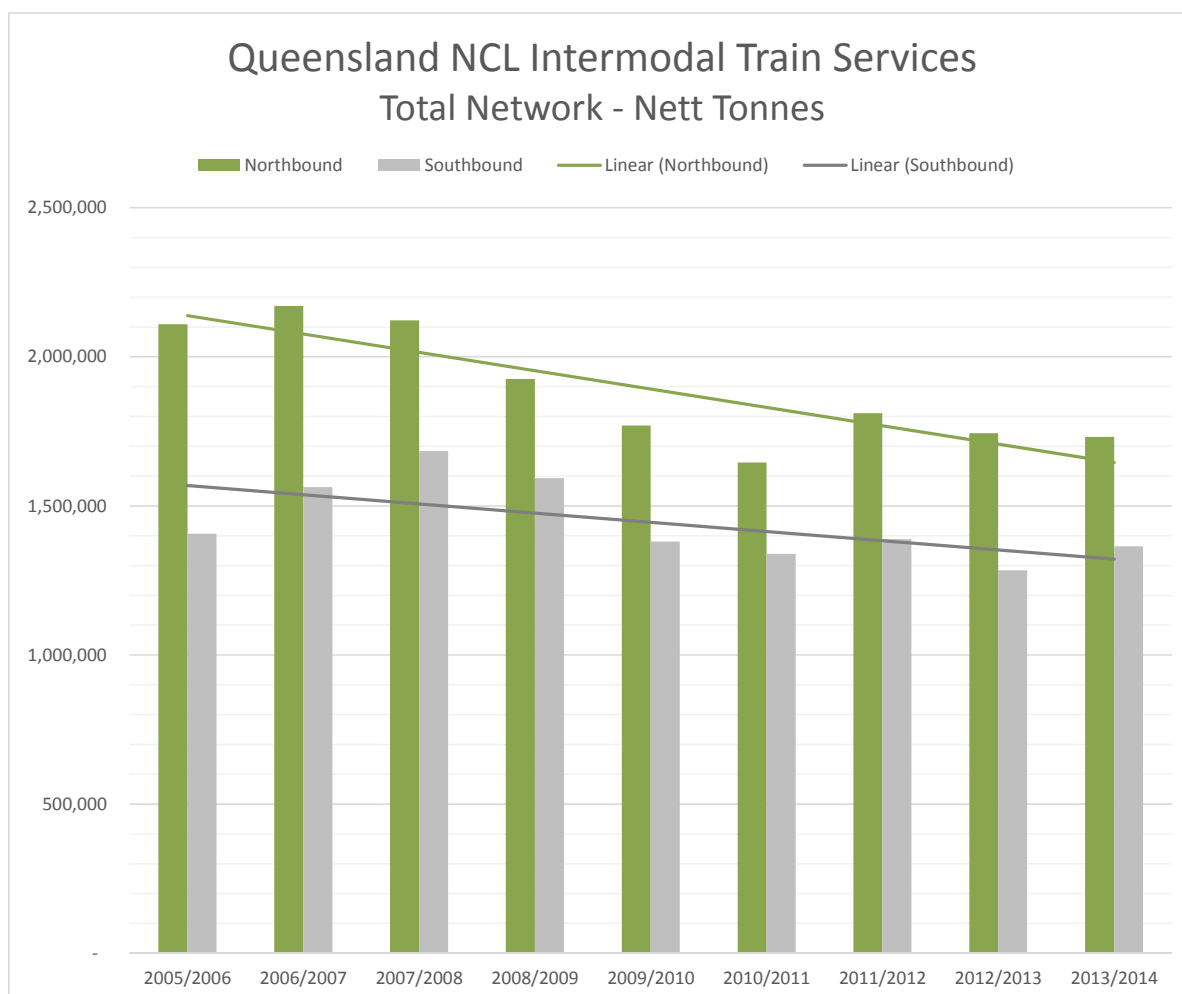
**Table 12.1 Comparative travel and transit times to major NCL destinations**

| Brisbane to: | Distance (km) | Road                          |                              | Rail                     |                          |                                   |
|--------------|---------------|-------------------------------|------------------------------|--------------------------|--------------------------|-----------------------------------|
|              |               | Travel time (no rest periods) | Travel time + mandatory rest | Green light transit time | Average MTP transit time | Line-haul cut-off to Availability |
| Rockhampton  | 660           | 8 h 44 m                      | 9 h 14 m                     | 9 h 39 m                 | 13 h 46 m                | 34.5 h                            |
| Mackay       | 990           | 13 h 01 m                     | 14 h 01 m                    | 14 h 26m                 | 20 h 14 m                | 35.5 h                            |
| Townsville   | 1,379         | 18 h 24 m                     | 26 h 24 m                    | 19 h 37 m                | 27 h 32 m                | 35 h                              |
| Cairns       | 1,721         | 23 h 10 m                     | 31 h 10 m                    | 25 h 29 m                | 34 h 24 m                | 40 h                              |

## 12.2 NCL RAIL LINE-HAUL TRENDS

The performance of the line-haul task by rail that underpins the intermodal rail service offering to the transport market, struggles to compete with road in the contestable intermodal market segment. Various performance factors inhibit optimal rail performance and these factors will be dealt with in more detail in Section 15. The reality is that intermodal rail services on the NCL have been in decline since 2007/8 as indicated in Figure 12.1.

**Figure 12.1 Queensland NCL Intermodal Volumes<sup>29</sup>**



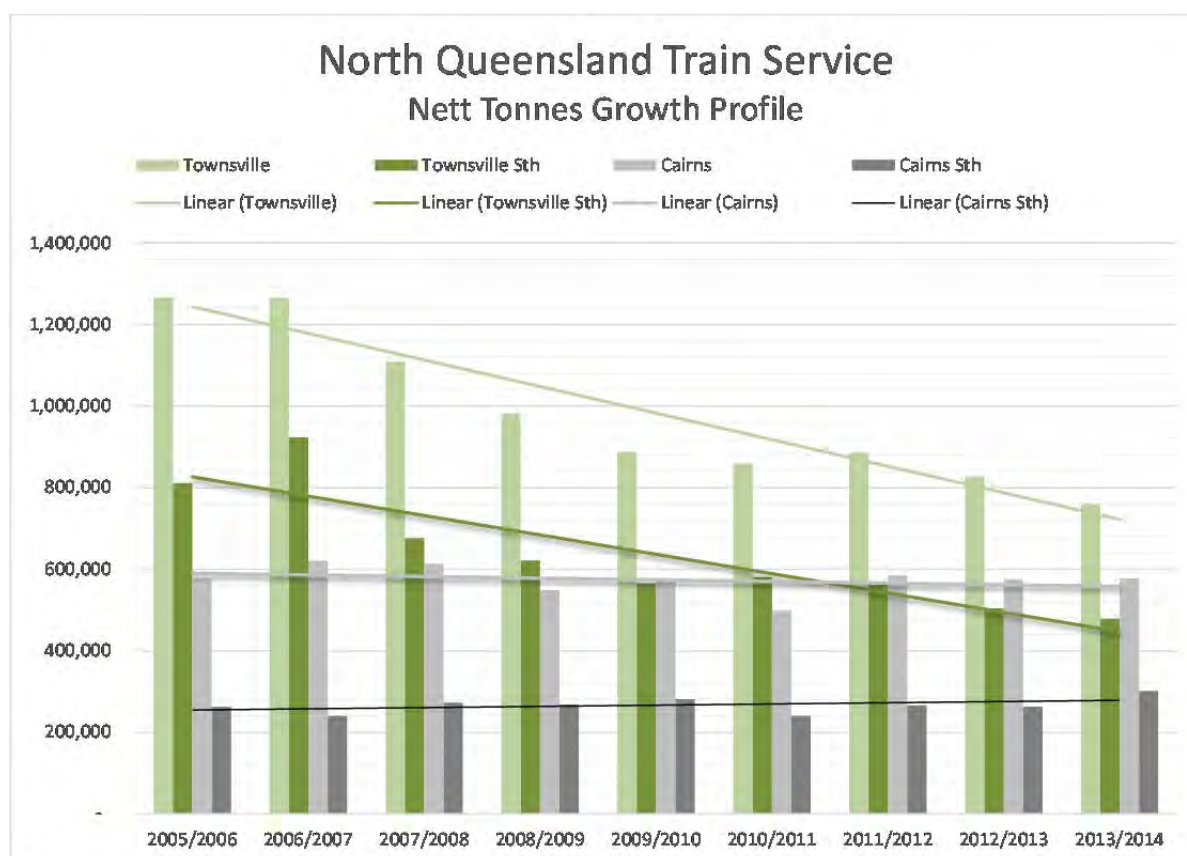
Notes: Excludes inter-port freight flows outside SEQ. Nett Tonnes includes the tare of the container

The peak annual intermodal transport task on the NCL was achieved in 2007/8, with a total of 3.8 million tonnes of freight was hauled in both directions on the corridor. This task has shrunk significantly since that time, with a 20% reduction in the task from the peak in 2007/8 to trough in 2012/13. Volumes have stabilised in recent times with almost 3.1 million tonnes of product being hauled across the corridor in 2013/14. The split-up between the major OD pairs over this period is as shown in Figure 12.2.

<sup>29</sup> Queensland Rail Train Service Data.

Interestingly, despite rail being more competitive against road over the longer haul distances, when further analysis is undertaken of the major origin-destination (OD) pairs on the NCL, it is evident that Townsville has suffered a significant erosion of volume since the peak in 2006/7. Both the northbound and southbound haulage tasks have suffered large reductions in tonnage. The northbound forward leg has decreased by 40% since the peak in 2006/7 and the trend has not yet bottomed out. On the southbound backhaul leg where road is ultra-competitive given the imperative to defray return trip operating costs, the tonnages have reduced by over 48% between 2006/7 and 2013/14. This trend has been exacerbated by the trend to move product through the Port of Townsville rather than the Port of Brisbane. Products such as meat that were railed direct to the Port of Brisbane for export and copper railed to Brisbane for tranship to Port Kembla have been lost by rail or volumes have reduced significantly.

**Figure 12.2 North Queensland NCL Tonnage Profiles<sup>30</sup>**



Note: Excludes inter-port freight flows outside SEQ. Nett Tonnes includes the tare of the container

In addition, intermodal traffic to and from Cairns has also struggled over recent years. Again, the northbound forward leg has lost ground with tonnages reducing from the peak year of 2006/7 by almost 7% to 2013/14. In contrast to these trends, the Cairns southbound backload leg to Brisbane has managed to grow by 25% over the same period. Despite this trend, in 2013/4 the backload leg tonnage from Cairns was only 52% of the forward leg which remains low compared to the 63% ratio of Townsville back loading (compared to forward tonnage).

<sup>30</sup> Queensland Rail Train Service Data.

Similar to the long haul North Queensland destinations, the Central Queensland (CQ) intermodal market has exhibited differential outcomes for various destinations. The patronage to and from the major CQ rail destinations are highlighted in Figure 12.3. Mackay has been more robust and displaying positive volume growth trends, albeit off lower base volumes, unlike Rockhampton.

Of the four major OD pairs contained in the graph, Rockhampton northbound volumes on the forward leg have deteriorated and dropped by almost 70% from above 250,000 tonnes p.a. to under 100,000 tonnes p.a. Road contestability in this market is intense. The disparity with the Mackay services are clear. The Mackay northbound volumes were stable through the resources boom at around the 200,000 tonnes p.a. until 2012/13 and have strengthened further in 2013/14 to grow by 81% to above 300,000 tonnes p.a. The Mackay backhaul rail volumes have also grown by 100%. In contrast, the Rockhampton southbound task, part of which was under-pinned by a forward leg export meat task to the Port of Brisbane and some metal and industrial products from the Gladstone area to Brisbane and interstate, has contracted by 30%. It should be noted that services to and from Mackay have historically been part of combination train services to other destination Ports (e.g. Rockhampton, Townsville and Cairns) resulting in an apparent lack of volume information (2005/6 and 2006/7) in the QR data.

**Figure 12.3 Central Queensland major rail destination tonnage profiles<sup>31</sup>**



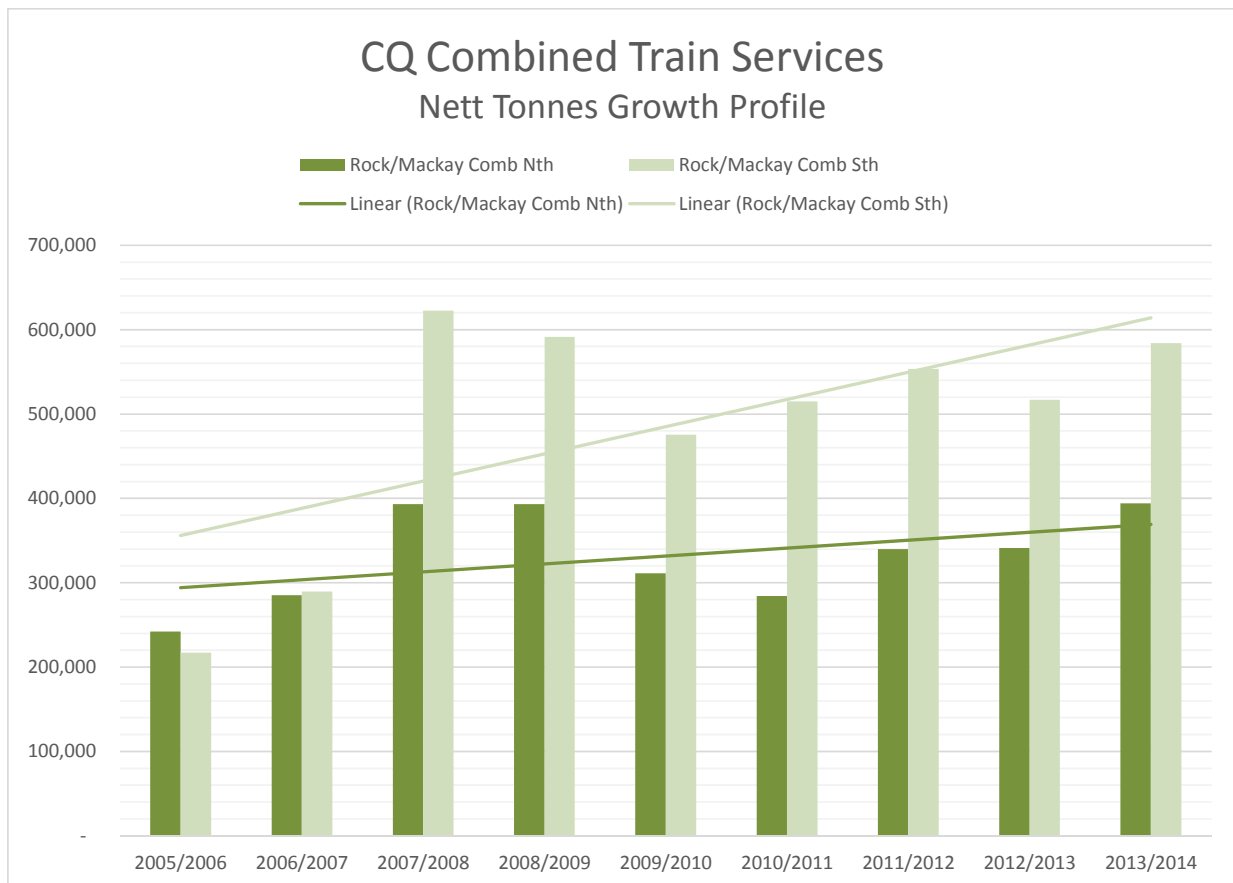
Note: Excludes inter-port freight flows outside SEQ. Nett Tonnes includes the tare of the container

If all the CQ rail destination volume data is combined (excluding Biloela services that ceased in 2009/10), there is a stable and increasing trend of intermodal freight tonnages being hauled to and from Central Queensland on rail. Excluding the volume spike that occurred prior to the GFC in 2008,

<sup>31</sup> Queensland Rail Train Service Data.

northbound volumes have expanded 38% to just under 395,000 tonnes p.a. and southbound volumes have increased by around 23% to almost 585,000 tonnes p.a. These trends are outlined below in Figure 12.4.

**Figure 12.4 Combined CQ Rail Tonnage Profiles<sup>32</sup>**



Note: Excludes inter-port freight flows outside SEQ / Nett Tonnes includes the tare of the container

<sup>32</sup> Queensland Rail Train Service Data.



## 13. Road-Rail competition – Interstate

### 13.1 EAST COAST RAIL CORRIDOR: MELBOURNE / SYDNEY / BRISBANE

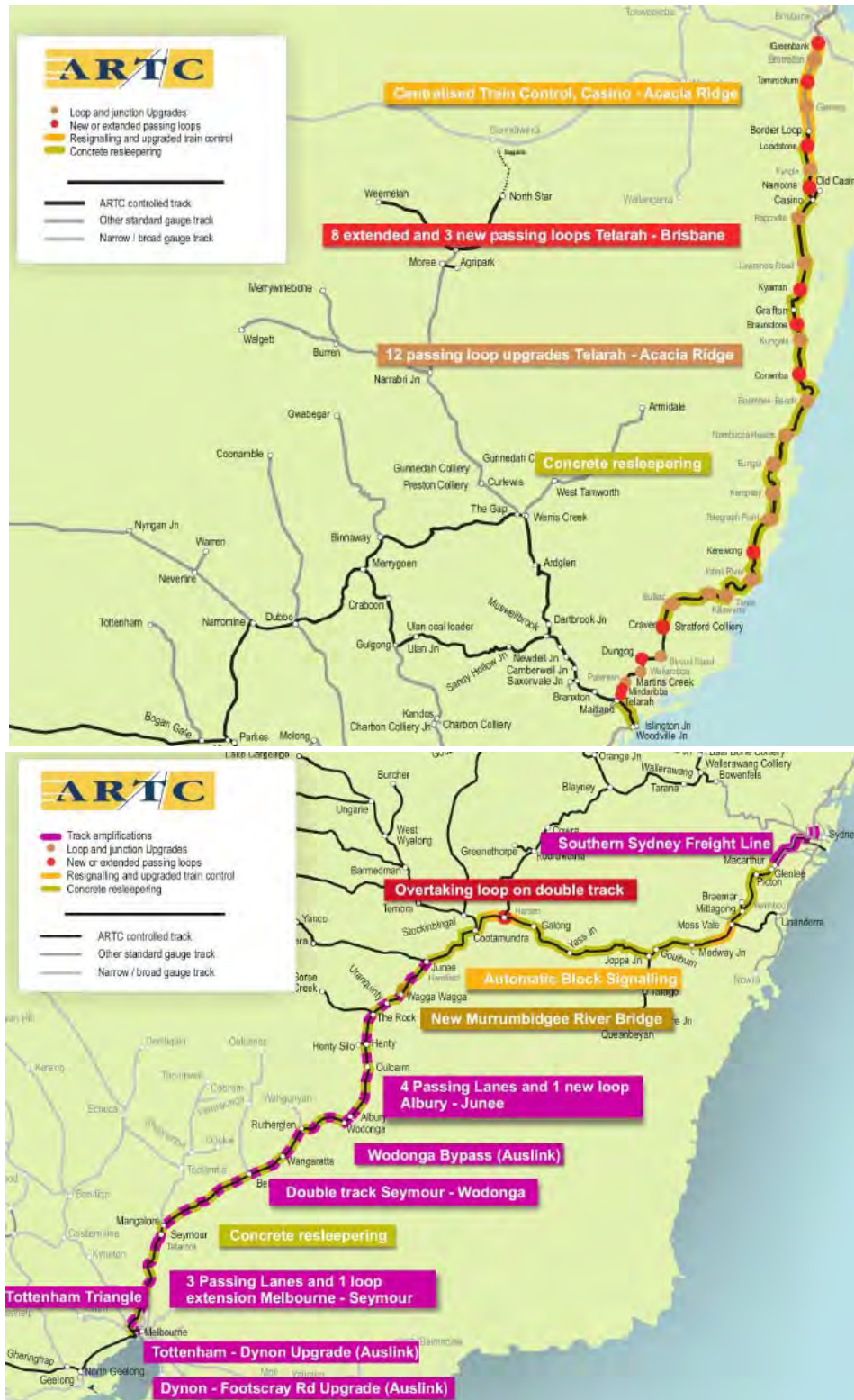
The East Coast interstate mainline rail corridor between Melbourne - Sydney and Sydney – Brisbane is approximately 1,900 km long, linking from the major Melbourne intermodal terminal at South Dynon, to Chullora in Sydney and to Acacia Ridge in Brisbane. The route is part of the standard gauge Defined Interstate Rail Network, linking all the mainland state capitals. The corridor permits the operation of 1,500 metre long trains, with intermodal freight operating up to 23 tonne axle load at 80 kph (or 21 TAL at 110 kph).

The two east coast corridor sections suffered significantly from a lack of infrastructure investment prior to the recent major upgrade undertaken by Australian Rail Track Corporation (ARTC). This \$3 billion investment was commenced in 2008 and essentially completed in 2013. A map showing the corridor upgrades is attached in Figure 13.1. The network upgrades included the following major elements:

- ▶ Track upgrade with installation of concrete sleepers and heavier rail along the full ARTC route
- ▶ Partial duplications and the provision of long passing sections between Melbourne and Junee.
- ▶ Crossing loop extensions between Hexham (Newcastle) and Acacia Ridge.
- ▶ Dedicated Southern Sydney Freight Line (36km) between Macarthur and Chullora.
- ▶ Limited deviations and curve easings to improve track alignment
- ▶ Completion of Centralised Train Control (CTC) on the ARTC network through remote controlled signalling upgrades for the Casino – Greenbank track section and other signalling upgrades.

The upgrades were targeted at increasing capacity, reducing transit times, and improving reliability. The Southern Sydney Freight Line was targeted at eliminating the impact of the Sydney passenger network operations and freight curfew on freight operations into Chullora from the south. Targeted benefits were quantified as per Table 13.1.

Figure 13.1 ARTC East Coast rail corridor upgrades – Melbourne to Brisbane<sup>33</sup>



<sup>33</sup> ARTC – 2008-2024 Interstate and Hunter Valley Rail Infrastructure Strategy – 30 June 2008

**Table 13.1 East Coast rail upgrade - targeted upgrade service parameters<sup>34</sup>**

|                             | Melbourne - Sydney | Sydney - Brisbane | Melbourne - Brisbane |
|-----------------------------|--------------------|-------------------|----------------------|
| <b>Transit Time (hours)</b> |                    |                   |                      |
| 2005                        | 13.5               | 19.4              | 32.9                 |
| Target at completion        | 10.5               | 15.1              | 25.6                 |
| <b>Reliability</b>          |                    |                   |                      |
| 2005                        | 55%                | 55%               | 45%                  |
| Target at completion        | 75%                | 75%               | 75%                  |
| <b>Availability</b>         |                    |                   |                      |
| 2005                        | 50%                | 35%               | 60%                  |
| Target at completion        | 75%                | 60%               | 85%                  |

The Sydney metro network north of Chullora remains the single major capacity constraint on freight traffic to Brisbane, with the impacts of the commuter peak periods having a significant impact on freight train schedules and reliability. Current funding commitments of \$1.1 billion to address this include 6 km of 3<sup>rd</sup> tracking between Epping and Thornleigh, passing loops at Gosford and Hexham, and grade separation at North Strathfield. Completion of this phase of the upgrade is scheduled for 2016.

## 13.2 COMPETING EAST COAST ROAD CORRIDORS

### 13.2.1 Hume Highway

The Hume Highway traverses approximately 800 km between Sydney and Melbourne, with approximately 500 km located in New South Wales and 300 km in Victoria. Duplication of the Hume Highway began in the mid-1970s focusing initially on the heavily trafficked areas south-west of Sydney<sup>35</sup>.

Since 1974, the upgrade of the Hume Highway has been funded by the Commonwealth Government<sup>36</sup>. The major upgrades in 1980's and 1990's were concentrated in the Goulburn, Yass and Gundagai areas on the NSW section. During the later years of the duplication, most work occurred between Coolac and Albury, with the final duplication project comprising the Holbrook bypass being opened on 7 August 2013<sup>37</sup>.

The duplication of the Hume Highway, combined with the addition of 26 major bypasses<sup>38</sup>, has resulted in the reduction of travel time between Sydney and Melbourne by approximately three hours<sup>39</sup>.

<sup>34</sup> ARTC - Interstate and Hunter Valley Rail Infrastructure Strategy 2008 – 2024

<sup>35</sup> RMS (2013) Hume Highway Duplication

<sup>36</sup> RMS (2014) Story of Hume Highway Duplication

<sup>37</sup> RMS (2013) Hume Highway Duplication

<sup>38</sup> RMS (2014) Story of Hume Highway Duplication

<sup>39</sup> RMS (2013) Hume Highway Duplication

The Hume Highway is Australia's number one freight corridor. The provision of a minimum of two lanes in each direction and reducing climbing and descending grades has resulted in significant savings for heavy vehicle operators using the original single carriageway route<sup>40</sup>.

### 13.2.2 Pacific Highway

The Federal and New South Wales State Governments are well advanced with the upgrade of the Pacific Highway to a four-lane divided-road standard from Hexham, near Newcastle to the Queensland border, for a targeted completion by 2020. The Commonwealth Government has committed \$5.64 billion from 2013-14 towards the upgrade<sup>41</sup>. Currently, 381 kilometres, or 58 per cent, of the final highway length is at least a four-lane divided road. A further 80 kilometres is under construction and another 57 kilometres of construction between Port Macquarie and Coffs Harbour will commence by the end of 2014. The final 155 kilometre section between Woolgoolga and Ballina is currently in the planning and preconstruction phase<sup>42</sup>. This is identified in Figure 13.2.

The following are expected benefits for road freight operators as a result of the upgrade:

1. Reduced transit time. The currently completed upgrades have achieved an average 1.6 hours of travel time saving for heavy vehicles. This is expected to extend to 2.5 hours when the upgrade is complete<sup>43</sup>.
2. Increased freight efficiency through reduced costs for transport operators, attributable to reduced transit times and lower vehicle operating costs (fuel, crewing, and maintenance).
3. Improved transit time reliability and crash related costs to road freight operators from improved road safety. Fatal crashes have halved from the mid-40s to the 20s annually, along the entire length of the highway. It is anticipated that future upgrades will further improve these statistics<sup>44</sup>.

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<sup>40</sup> Gomez (2007) Duplicating the Hume Highway

<sup>41</sup> Department of Infrastructure and Regional Development (2014) - Bruce Highway – Factsheet Pacific Highway NSW

<sup>42</sup> Department of Infrastructure and Regional Development (2014) - Bruce Highway – Factsheet Pacific Highway NSW

<sup>43</sup> Department of Infrastructure and Regional Development (2014) - Bruce Highway – Factsheet Pacific Highway NSW

<sup>44</sup> Department of Infrastructure and Regional Development (2014) - Bruce Highway – Factsheet Pacific Highway NSW

**Figure 13.2 Pacific Motorway duplication progress**



### 13.2.3 Other Major South - North Road Routes

The major road route for freight between Melbourne and Brisbane is via the inland route, via Shepparton, Dubbo, Moree, and Goondiwindi. This 1,535 km long route traverses a number of highways, including sections of the Hume, Goulburn Valley, Newell and Cunningham Highways. The New England Highway was the pre-eminent freight route between Sydney and Brisbane, but this has been surpassed in recent years following the major upgrades to the Pacific Highway.

### 13.3 FREIGHT MODE SHARE

Road transport has dominated market share on the east coast transport corridor in recent decades, following deregulation of freight modes. Critical factors relating to the rail infrastructure on the east coast were eroding the ability of rail to compete with road in the intermodal freight market. The extension of passing loops and introduction of remote controlled signalling (RCS) on the network between Newcastle and Brisbane were essential pre-requisites to enable rail to provide a competitive alternative to road transport. In 2008 when outlining the North-South Corridor Investment Strategy, ARTC undertook an assessment of rail market share on the east coast rail as summarised in Table 13.2. It was considered that the planned network upgrades could facilitate a significant increase in rail traffic.

While rail market share appeared to be strengthening throughout 2007, the Global Financial Crisis (GFC) in 2008 softened the freight market generally and weakened the competitive position of rail, as additional road freight capacity was available in the market (Tables 13.2 and 13.2).

**Table 13.2 Intermodal rail market share**<sup>45 46</sup>

|                      | Melbourne - Sydney | Sydney - Brisbane | Melbourne - Brisbane |
|----------------------|--------------------|-------------------|----------------------|
| <b>ARTC 2005</b>     |                    |                   |                      |
| Rail Mode Share      | 6.8%               | 5.3%              | 28.4%                |
| Target Mode Share    | 10%                | 8.4%              | 44.4%                |
| <b>BITRE 2009/10</b> |                    |                   |                      |
| Road Mode Share      | 95%                | 95%               | 72%                  |
| Rail Mode Share      | 4.5%               | 3.5%              | 23%                  |
| Shipping Mode Share  | 0.5%               | 1.5%              | 5%                   |

<sup>45</sup> ARTC - Interstate and Hunter Valley Rail Infrastructure Strategy 2008 – 2024

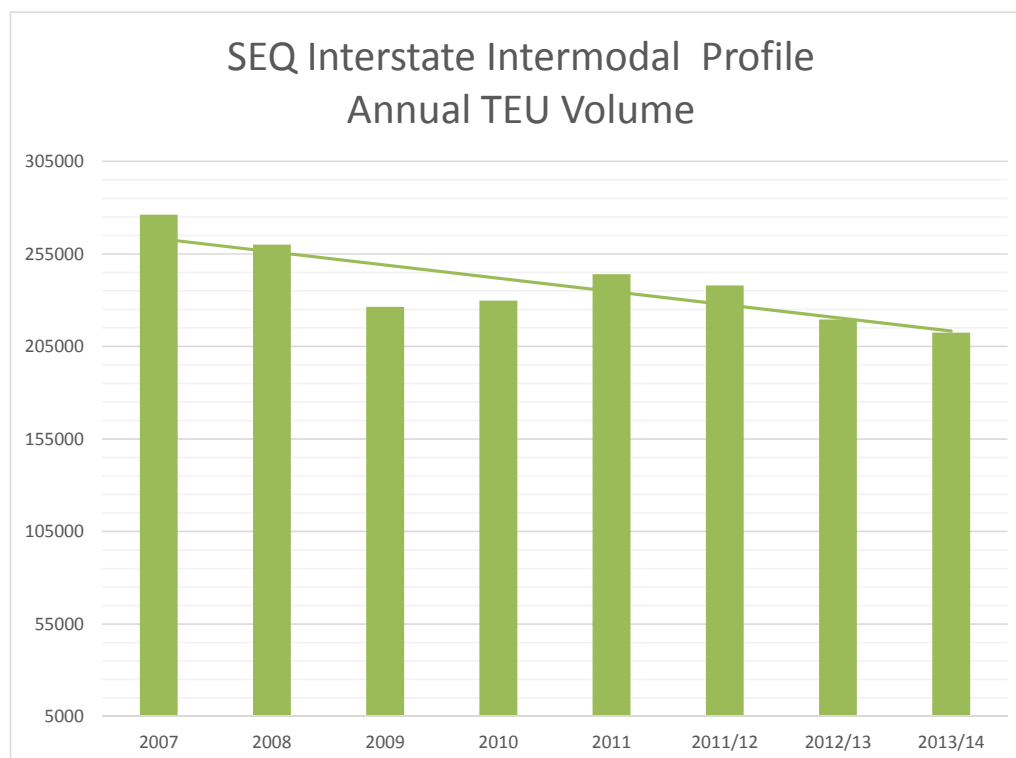
<sup>46</sup> BITRE – Train-Line 1 Statistical Report June 2012

**Table 13.3 Intermodal rail volumes by corridor 2007 to 2010 (Net Tonnes)**<sup>47</sup>

| Year        | Melbourne - Sydney | Sydney - Brisbane | Melbourne - Brisbane |
|-------------|--------------------|-------------------|----------------------|
| 2007 - 2008 | 1,202,000          | 536,000           | 1,358,000            |
| 2008 - 2009 | 1,092,000          | 460,000           | 1,190,000            |
| 2009 - 2010 | 1,502,000          | 443,000           | 1,256,000            |

The recent trend of interstate rail intermodal volumes into SEQ is as shown in Figure 13.3, showing an overall decrease over the past 8 years, despite the rail infrastructure investment by ARTC on the Melbourne – Sydney - Brisbane rail corridor.

**Figure 13.3 Interstate rail intermodal throughput in SEQ**<sup>48</sup>



The SEQ Rail Freight Terminals Study (SEQRFTS) also included a future freight demand forecast, which was undertaken by Deloitte Touche Tohmatsu. Base data was gathered from a range of sources for the Study. This 2013 data included an assessment of the interstate road and rail freight task that had an origin or destination of SEQ (i.e. the Acacia Ridge Interstate Intermodal Rail Terminal). Given the SEQRFTS was examining the rail freight task and market share, Deloitte analysis converted the freight task to equivalent TEUs and examined a range of OD pairs to and from SEQ. Deloitte estimated that 12.9 million TEU's moved through SEQ in 2013. Interstate freight flows consisted of 26% per cent of the freight task or 3.2 million TEUs. Freight flows between SEQ and

<sup>47</sup> BITRE – Train-Line 1 Statistical Report June 2012

<sup>48</sup> TMR – SEQ Rail Freight Terminals Study - 2014

NSW and Victoria were estimated to be 2.8 million equivalent TEUs. The total interstate freight task undertaken by rail was identified as 232,000 TEU's, effectively resulting in an interstate mode share of 7%. The rail mode share for the other east coast corridors are outlined in Table 13.4.

**Table 13.4 Interstate rail volumes and mode share estimates (2013).**<sup>49</sup>

| Freight Corridor             | Rail Freight Volumes (TEUs) | Rail Mode Share |
|------------------------------|-----------------------------|-----------------|
| Total Interstate to/from SEQ | 232,000                     | 7%              |
| New South Wales to/from SEQ  | 27,000                      | 4%              |
| Victoria to/from SEQ         | 128,000                     | 29%             |

This estimate of the contestable freight task on the east coast and the intermodal rail mode share of the task would tend to reinforce the intermodal freight volume trend and indicates that no substantial increase in rail mode share has occurred subsequent to the ARTC east coast infrastructure upgrade program.

<sup>49</sup> Deloitte Touche Tohmatsu – SEQ Freight Logistics and Demand Assessment 2014.



## 14. Implications for NCL rail freight

### 14.1 NORTH COAST LINE SUPPLY CHAIN ISSUES

There has been extensive canvassing across industry of the issues associated with the NCL rail corridor. Queensland Rail and the Queensland Transport Logistics Council (QTLTC) have over the last couple of years, undertaken specific engagement activities with key industry stakeholders to determine the critical issues impacting on the NCL reliability with a view to developing initiatives to improve performance. A NCL Supply Chain Forum was held in March 2013. This forum identified a number of key issues and initiatives. Some of these initiatives were subsequently included in the QLTTC Report presented to the Queensland Government in 2013 – “Strengthening Queensland’s Supply Chains 2013-2015”. Key NCL issues arising from the NCL Supply Chain Forum<sup>50</sup> and subsequent QLTTC Report initiatives are as follows<sup>51</sup>.

- ▶ The NCL Supply Chain Forum highlighted that the legislated passenger priority obligations were impacting the reliability of NCL freight services. The QLTTC recommended that TMR and QR review passenger priority and develop a Rail Network Operational (Efficiency) Policy to increase NCL supply chain efficiency through establishing relative train hierarchies for operational decision making. This would include understanding the implications for rail freight train paths through SEQ caused by restrictions during peak passenger periods.
- ▶ The Forum also identified the impact of track maintenance closures across the network and whether changes were possible to make the track possessions for these maintenance activities more aligned given the NCL freight services transitioned multiple networks (SEQ, NCL and CQ Coal Network).
- ▶ Rail infrastructure on the NCL was highlighted as a concern and potential impediment to the reliability and efficiency on the NCL. This issue had two main dimensions. Flood immunity and recovery was considered critical to enable rail to effectively compete with road on the NCL. Secondly, to facilitate the potential deployment of longer trains to increase efficiency on the NCL, identification of track curves and grades that potentially would constrain train performance (using a longer configuration) may be required.
- ▶ The NCL Forum also identified the critical nature of train transit time performance that ensured on time running, the maintenance of train path priority and the potential to examine path flexibility in the Master Train Plan (MTP) that improve train service reliability and recovery.

A number of these issues will be investigated as part of this North Coast Line Capacity Improvement Study.

### 14.2 SEQ RAIL FREIGHT TERMINALS STUDY - STAKEHOLDER FEEDBACK

Additional stakeholder consultation of the broad freight stakeholder group was undertaken recently as part of the SEQ Rail Freight Terminals Study<sup>52</sup>. The extensive consultation process was carried out as part of Stage 1 of this study where a market demand assessment and consultation process was led by Deloitte. The stakeholder group included major freight customers, road and rail freight operators, port operators, shipping lines, rail and port infrastructure owners, and Commonwealth, State and Local Government representatives.

<sup>50</sup> QLTTC - North Coast Line Supply Chain Forum – 22 March 2013.

<sup>51</sup> QLTTC – Strengthening Queensland’s Supply Chains 2013-2015.

<sup>52</sup> SEQRFSTS undertaken for TMR by Parsons Brinkerhoff, Deloitte, Ranbury and Jacobs – 2014

The stakeholder consultation covered a broad spectrum of views, experiences and perceptions, and concluded with the following observations in respect of the Intermodal Freight market and the North Coast Line rail issues:

- ▶ The recent, current and foreseeable market for growth for domestic and IMEX rail freight is weak and is expected to be at significantly compressed levels compared to pre-2008 levels.
- ▶ The overall SEQ intermodal market has contracted over the last 12 months by up to 15% for some freight forwarders and up to 10% for manufacturers. This slowdown was due to both softening of the manufacturing sector and lower growth rates for import-export containerised freight relative to historical levels.
- ▶ Shorter duration commercial contracts and depressed market volumes are not conducive to Private Sector investment in long term rail infrastructure.
- ▶ The North Coast Line rail corridor is considered to be severely under-capitalised and coupled with a fragmented multi-party supply chain ownership and governance structure delivers poor reliability.
- ▶ Interstate Sydney – Brisbane and Intrastate SEQ – North Coast to Mackay are road captive corridors.
- ▶ SEQ rail terminal infrastructure is generally seen as currently over-capitalised (Acacia Ridge Terminal (ART), Moolabin and the Brisbane Multi-modal Terminal (BMT) at Fisherman Islands), over-capacity and sub-optimally functioning. This is due to ART – Moolabin physical separation, owner-operator separation at ART, inferior North Coast Line, and double handling of containers in the supply chain for IMEX (as well as Domestic intrastate and interstate freight).
- ▶ Intermodal containerised freight is predominantly northbound from Brisbane to Far North Queensland.
- ▶ Agriculture products dominated rail back loading from North Queensland but did not balance the forward leg Fast Moving Consumer Goods (FMCG) freight task.
- ▶ South - North volumes are dominated by large end-customers such as Woolworths and Coles and manufacturers such as Coca Cola Amatil; however manufacturer volumes are in significant decline.
- ▶ The large customers typically use rail for long haul interstate corridors such a Melbourne – Brisbane and long haul intrastate corridors such as Brisbane – Far North Queensland, while using road for all other medium and short haul corridors (e.g. Sydney – Brisbane and Brisbane – Mid North Coast).
- ▶ Where rail is utilised on long haul corridors, road is also used in parallel with a quoted 60/40 rough split of volumes between rail and road, largely as a hedging strategy against rail reliability issues and high cost of single point failure.
- ▶ Some import freight through the Port of Brisbane destined for Far North Queensland is typically sent to either ART or Moolabin for transfer to rail or direct to customer DCs (Distribution Centres) where it is cross docked for road delivery to the North Coast. Volumes sent for transport on rail to North Coast Line destinations are typically from Mackay upwards when rail becomes contestable on price.
- ▶ The major opportunity for containerised rail freight gaining a greater mode share in Queensland is on the Brisbane – Far North Queensland freight corridor. However, success would be dependent on undertaking significant changes to the North Coast Line. The changes would need to focus on:

- ▶ Simplifying the multi-party supply chain structure;
  - ▶ Increasing capacity and reliability on the NCL; and
  - ▶ Formalising and enforcing operating protocols for general freight train prioritisation and handling.
- ▶ Better integration with the currently under-utilised Townsville – Mount Isa line may yield some incremental rail mode share benefits by creating a new freight corridor by attracting Brisbane – Mount Isa freight on rail via Townsville.
  - ▶ Capturing greater rail mode share for Queensland intrastate on the Brisbane – Mid and Far North Coast freight corridors requires being able to gain economies of scale through two-way loading, and realise efficiencies through enhanced infrastructure (i.e. longer passing loops to run fewer longer trains, double tracking, higher prioritisation of intermodal trains against passenger and coal trains, efficient intermodal terminals and greater track access window flexibility out of Brisbane) that can deliver competitive transit times, higher reliability, high service frequency, and much lower cost than currently capable.
  - ▶ The Mid North Coast region, up to Mackay, is acknowledged as being a road captive corridor. Rail becomes competitive on cost above Mackay and has a reasonable differential once you reach Townsville. However reliability remains an ongoing issue. Only major customers with scale and substantial freight volumes can realise the benefits of the cost differential even with reliability issues, leaving other smaller mid-market customers road-centric.
  - ▶ A rail-based supply chain is seen as a higher risk option with a far greater impact of single point failure. As such reliability is seen by customers as a “ticket to the game” and in fact rail reliability needs to exceed that of road before becoming contestable.
  - ▶ Factors noted as favouring road over rail included:
    - ▶ Flexibility of road operators to be able to backfill for all ODs compared to rail having only a scarce set of ODs fitting this criteria;
    - ▶ Rail suffering poor reliability for North Coast Line movements thereby pushing freight onto road even for long hauls;
    - ▶ Road infrastructure investment relative to rail;
    - ▶ Road user pricing;
    - ▶ Competition against higher productivity road vehicles; and
    - ▶ Wet weather impacts on rail access issues in Far North Queensland.
  - ▶ The customer trend to shorter duration contracts (maximum 3 years for freight forwarders and transport companies, and mid-market customers preference down to 1 year or spot market) favour road and are not conducive to underpinning investment in rail equipment and facilities.

Separate consultation with the two current rail operators was undertaken as part of this NCLCI Study, with the following observations:

- ▶ The intermodal rail market is expected to have minimal growth over the next three years and has contracted over the past three years with the major rail operators going head to head to capture/retain customers and market share.
- ▶ Two-way loading is critical. Logistics providers / freight forwarders that control the backhaul market control the freight market. Capturing more backhaul freight is critical to increasing the competitiveness of rail.

- ▶ The market structure has changed with more opportunities for import export containers. However, more transport to/from the Port of Brisbane is road based or require transfers to rail, with rail volumes through the BMT declining.
- ▶ Rail cannot compete on short-haul legs (e.g. Gladstone/Rockhampton), other than in the industrial market where the heavier weight of product is more of a consideration.
- ▶ Rail is not perceived by customers as being as robust as compared to road especially with respect to the impact of extreme weather events and recovery time periods.
- ▶ The road lobby continues to be much stronger than the rail lobby and the rail policy framework from Governments are unclear. Accordingly, investment in intermodal rail infrastructure and facilities would be difficult in the current competitive environment unless funded by Government.
- ▶ It is recognised that the handling and ability to build longer Queensland intermodal train services from the existing terminals would be difficult and require upgrades, even though some latent capacity currently exists.
- ▶ Acacia Ridge has the potential to expand and accommodate significant additional capacity subject to investment in lifting equipment, track capacity and road access. The current service levels are good although demand is soft and a third party terminal operator is not the preferred model.
- ▶ Alternative locations to Acacia Ridge would work if combined freight hub solutions were possible. This would be dependent on suitable locations being available.

### 14.3 CONTESTABLE FREIGHT MARKET DEMAND FORECASTS

The SEQRFTS included modelling by Deloitte<sup>53</sup> of the likely intermodal freight demand on the NCL from a South East Queensland to North Coast demand perspective, with the quantification of likely mode share for the rail and road freight market under various scenarios. These scenarios included a range of infrastructure investment strategies as well as contemplating the relative rail-road competitive dynamics likely to emerge in the future.

The demand scenarios modelled within the SEQRFTS reflected a range of growth profiles including different aggregated market and policy positions that were derived from economic conditions generally and the impact of specific rail and road policy variables. The specific variables contemplated included:

- ▶ Inland Rail Project (Melbourne – Brisbane)
- ▶ North Coast Line operating efficiency
- ▶ SEQ Intermodal Terminal consolidation
- ▶ Domestic market growth
- ▶ IMEX market growth
- ▶ Operation of a port shuttle (to Port of Brisbane)
- ▶ Road network capacity reflecting congestion impacts
- ▶ Road network performance.

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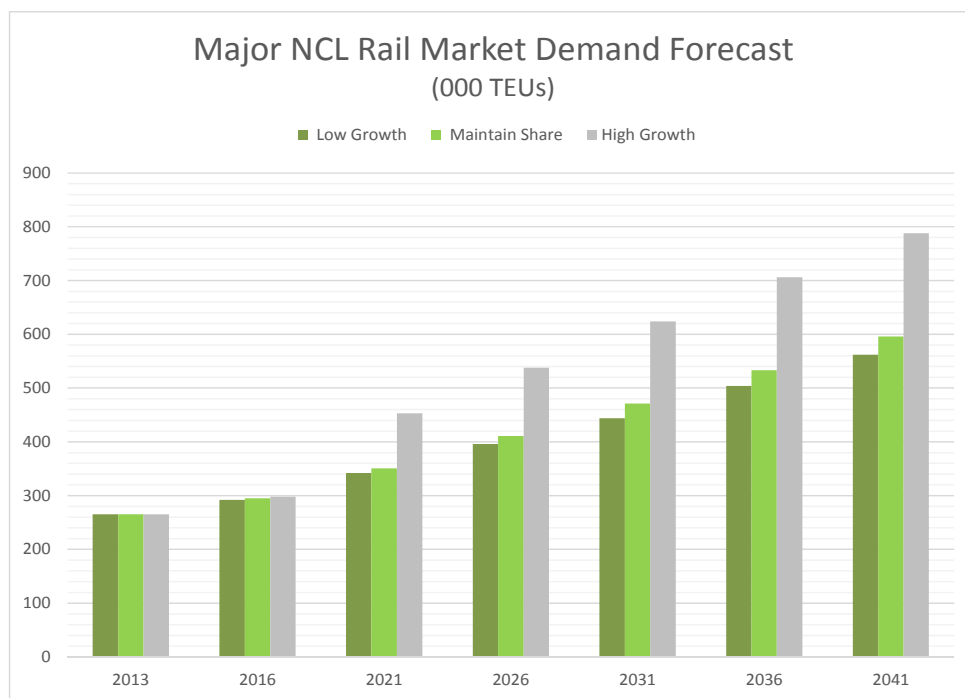
<sup>53</sup> TMR – SEQ Rail Freight Terminal Study – Deloitte - Freight Logistics and Demand Assessment - 2014

The application of the above variables resulted in the development by Deloitte of the three integrated demand forecast scenarios. These were:

1. Low Growth
2. Maintain Mode Share
3. High Growth.

From a base of 265,000 TEUs on the NCL in 2013, the demand forecast modelling resulted in a range of potential future demand scenarios for 2041 that ranged from 562,000 TEU to 788,000 TEU. These forecasts are highlighted in Figure 14.1 below.

**Figure 14.1 NCL intermodal freight scenario forecasts (SEQFTS -2014)<sup>54</sup>**



<sup>54</sup> TMR – SEQ Rail Freight Terminals Study – Deloitte - Freight Logistics and Demand Assessment - 2014

## 15. Freight market conclusions

A significant freight task is undertaken on the Queensland north coast corridor. This corridor is serviced by all the transport modes with the majority of the freight on road and a minor share on rail. However not all of the freight task on the north coast corridor is contestable between road and rail. Bulk freight is predominantly on rail and intra-regional general freight is 100% on road. The contestable component of the NCL freight market is the general freight intermodal line-haul market segment that travels principally between the origin-destination pairs of SEQ and major North Queensland and Central Queensland regional cities including Cairns, Townsville, Mackay, Rockhampton and Gladstone. This total general freight task is estimated at approximately 45 Mtpa.

Rail has struggled to compete with road partly because it is considered less flexible. As a result, customers are conscious of the high levels of risk and consequential impacts of service delivery failures for stock replenishment to the Central and North Queensland markets. Consequently, high levels of service reliability are considered a pre-requisite for consideration of intermodal rail line-haul as a supply chain solution. If rail as a mode can pre-qualify on these service dimensions, the rail line-haul service offer or bundled rail/road door-to-door transport solution must still provide equivalent or greater value for money compared to an independent road based supply chain service offer.

The Bruce Highway continues to provide a highly competitive road corridor alternative to the NCL rail network. However, the highway is considered a relatively dangerous route with most of the length only achieving a 2 or 3 star safety rating out of 5 under the Australian Roads Assessment Program. Transit times on road are superior to those of rail by a significant margin, even when the impacts of mandatory truck driver rest requirements are factored into transit times for the longer line-haul routes.

The north coast corridor road line-haul task is invariably undertaken by B-double configuration vehicles that can in most circumstances travel depot-to-depot or door-to-door for large customers. In addition, road vehicles have an inherent flexibility to travel away from defined route depots to pursue and capture back loading that underpins the operating costs associated with the return journey. This significantly increases the efficiency and competitiveness of road as a mode compared to rail. In addition, an \$8.5 billion upgrade of the Bruce Highway is being undertaken to address a range of issues including improved safety, reduced flooding impacts and reduced transit time on the road network. The Bruce Highway upgrade will improve the performance of road freight on the corridor across the major service parameters of reliability, transit time and cost, but not result in any incremental road user charges for the road freight operators.

These factors have resulted in a reduction of the amount of freight transport on the NCL rail system. Over the past six years, the rail intermodal haulage task on the NCL has contracted by 20% to 3.1 Mtpa. Different OD pairs have suffered differential impacts. Townsville volumes have been the most impacted through intense competition from road and more direct import/export task occurring through the Port of Townsville, in lieu of railing product to/from the Port of Brisbane. In contrast, shorter haul routes to CQ have fared better, albeit on the back of the doubling of Mackay volumes in recent years.

Similar to Queensland, the interstate rail corridor between Brisbane, Sydney and Melbourne has struggled to compete with road as the Hume and Pacific Highways have benefitted from major upgrades in recent years. The Pacific Highway is progressing toward the completion of a four lane dual carriageway all the way between Newcastle and Brisbane.

In parallel with the major Hume and Pacific Highway upgrades, ARTC has completed a \$3 billion upgrade of the Melbourne – Sydney – Brisbane rail corridor. This investment in the rail network was essential to bring the network infrastructure up to the contemporary standards, and included upgrading of signalling and train control systems, replacing old timber sleepers track with PSC

sleepers and heavier rail, long passing lanes and crossing loops to accommodate 1500 metre long trains). The forecast of substantial increases in rail mode share and rail line-haul tonnages arising from this investment have yet to be realised, with rail volumes contracting by approximately 10% over the past 4 years (albeit in a soft market), and with some loss of market share.

A range of feedback from key industry participants has confirmed the challenge that rail will have competing with road on the NCL in the current environment and into the future. Generally, intermodal rail transport in Queensland is still perceived as an inflexible and complex multi-party supply chain, that is also under capitalised and subject to flood impacts exacerbating reliability doubts from customers. Conflicts were perceived in SEQ with passenger services and SEQ network maintenance tasks as well as conflicts with coal services in central Queensland on the Aurizon network section between Gladstone and Rockhampton. Road in contrast is considered more flexible and responsive, deploying more modern higher productivity road vehicles. As a result, it was clear that the customers want rail services to be able to deliver consistent and efficient transport services that are cost effective, accountable and able to reliably meet the essential timeframes associated with various supply chain replenishment cycles.

It was acknowledged that freight volumes over recent years had been relatively flat and as a result competition had intensified across the market. This in turn has resulted in shorter duration contracts that can be limited to a period of 1 to 3 years, or even spot schedule of rates agreements subject to ongoing minimum performance levels. These contracts are not considered a conducive framework for ongoing investment in long life rail assets.

Ongoing softness in the freight market with minimal growth is expected to continue in the short term. Short haul market routes are expected to be the most difficult to win and retain from road carriers. This will also make the competition for back load freight very intense as well.

In the medium to long term, the overall freight market is expected to stabilise. Future market growth is expected to be consistent with the overall GDP growth in the economy. Distribution patterns are expected to continue to change and evolve. Key drivers will be the ongoing expansion of IMEX freight flows to and from port locations at the expense of traditional transnational freight flows. However in spite of these influences, the scenario options developed by Deloitte's for the SEQRFT Study suggest that the NCL rail market demand will expand from the current level of 256,000 TEUs in 2013 to a minimum of 562,000 TEUs in 2041<sup>55</sup>.

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<sup>55</sup> TMR – SEQ Rail Freight Terminal Study – Deloitte - Freight Logistics and Demand Assessment - 2014

## 16. Rail freight performance criteria – overview

Key rail performance criteria from a customer and corridor perspective include cost, transit time and reliability. Other important criteria from a customer perspective include ease of doing business, responsiveness and flexibility. The rigidities of rail operations (network timetabling) and rail industry structure are negative impacts on these attributes compared to road freight transport, and rail must compete more heavily on the primary service parameters if it is to remain a viable freight mode choice for contestable freight. For non-contestable bulk freight, rail must also perform on cost and reliability criteria for those industries reliant on it to remain competitive.

The three performance criteria considered in this Working Paper, and the infrastructure contributors to these from a freight perspective are summarised as:

### **Cost**

- ▶ Train efficiency (train payloads, axle loads, wagon loading outline, train length, locomotive performance, fuel consumption).
- ▶ Transit times (asset utilisation, train cycle times, operating cost).

### **Transit times**

- ▶ Track standard (maximum line speed).
- ▶ Track alignment speed constraints (curves, grades).
- ▶ Permanent and temporary speed restrictions.
- ▶ Number of train crossings.
- ▶ Train control system performance.

### **Reliability / Availability**

- ▶ Planned maintenance shutdowns.
- ▶ Unplanned shutdowns (flooding, excessive heat, infrastructure failures, accidents/incidents delays).
- ▶ Impact of other rail operators (late running, train failures) on network performance.

(Note: Whilst “reliability” and “availability” have different constructs, the feedback from customers is that both are incorporated into perceptions of “reliability”.)

The various infrastructure options may contribute to a number of the key performance criteria; however local upgrades may have limited impact on influencing the overall corridor outcomes.

As a backdrop to considering infrastructure upgrade options, one must also address the underlying condition of the existing infrastructure, and the minimum “stay-in-business” investment needed to maintain its current functionality. This applies particularly to the more vulnerable old bridge structures, the rail systems infrastructure (signalling), quality of underlying sub-ballast capping layers, the retention of the older steel rail sections (particular between Townsville and Cairns), and the regular flood-prone areas requiring repair and re-instatement following flood damage events.



The North Coast Line rail corridor extends over a distance of 1,680km, and performs a variety of rail transport tasks over portions of the route and along its total length. Some more local sub-corridor upgrades may be warranted to achieve the required efficiencies and performance to meet current and new traffics, and these should be assessed in terms of the local corridor sections.

From a capacity perspective, key considerations are:

- ▶ Train payload (length, axle load, wagon efficiency [tare, loading density, rollingstock loading gauge]).
- ▶ Available and “usable” train paths.

Within the SEQ metro area, corridor capacity is driven primarily by the week-day AM and PM passenger peak operations, with freight taking a back-seat and constrained to operating in the off-peak periods, and running through the off-peak passenger services. The North Coast Line freight services also must share part of the SEQ metro network with the higher frequency freight services from the West Moreton system (primarily export coal). These issues are addressed in more detail in the separate South East Queensland Capacity Improvement Study (SEQCI), which covered the SEQ rail network bounded by Rosewood and Nambour. For completeness the implications and conclusions from the SEQCI study in respect of the North Coast Line are summarised in Section 28.

## 17. Infrastructure upgrade options – overview

As noted in the previous section, various infrastructure upgrade options may contribute to achieving a number of service performance attributes. This section and the following sections assess the individual elements and their contribution to local and overall performance outcomes.

|                                    |   |
|------------------------------------|---|
| Train payloads                     | <ul style="list-style-type: none"> <li>▶ Increased axle loads</li> <li>▶ Increased train lengths – crossing loop extensions</li> <li>▶ Alternate wagon design to increase train loading linear density</li> <li>▶ Rollingstock gauge (loading profile)</li> </ul> |
| Line speed upgrades                | <ul style="list-style-type: none"> <li>▶ Upgraded track (and turnouts)</li> <li>▶ Upgraded level crossing protection</li> </ul>   |
| Alignment upgrades – higher speeds | <ul style="list-style-type: none"> <li>▶ Curve improvements</li> <li>▶ Grade Improvements</li> <li>▶ By-passes</li> </ul>   |
| Flooding resilience upgrade        | <ul style="list-style-type: none"> <li>▶ Raising track in flood prone areas</li> <li>▶ Deviations to increase flood immunity</li> <li>▶ Flood-resilience protection</li> </ul>  |
| Asset renewals                     | <ul style="list-style-type: none"> <li>▶ Bridges</li> </ul>   |
| Traction options                   | <ul style="list-style-type: none"> <li>▶ Rail systems (signalling)</li> <li>▶ Electrification</li> </ul>  |
| Increasing number of train paths   | <ul style="list-style-type: none"> <li>▶ Additional crossing loops (and upgraded crossing loops)</li> <li>▶ Passing Lanes / Duplication</li> <li>▶ Reduce longest section run times (deviations)</li> </ul>   |
| Freight terminal upgrades          | <ul style="list-style-type: none"> <li>▶ Train arrival/departure capacity issues</li> </ul>   |

## 18. Axle load upgrades

### 18.1 OVERVIEW

Maximum permitted axle loads are dictated by track standard (sleeper type and strength, rail size and condition, ballast depth) and the strength of under-track structures (bridges/culverts). The capping layer quality and sub-ballast will also be constraints, particularly when in a weakened saturated condition.

The North Coast Line route, including the connections to the major Brisbane area freight terminals (Acacia Ridge, Moolabin and Port of Brisbane) and the Townsville Jetty Branch, is currently rated for a maximum 20 tonne axle load. The Mackay Harbour Branch is rated at 15.75 TAL; however the restraint on this branch is the quality of track infrastructure within the port precinct, rather than the track and bridge structures on the Branch Line. Various private sidings feeding freight traffic onto the North Coast Line (e.g. sugar mill sidings) may also be limited to 15.75 TAL; but these are due to legacy track standards, with limited upgrade required to re-rate to 20 TAL if required.

There are routing restrictions for freight services through the Brisbane metro, with the NCL Up and Down Suburban tracks between Mayne and Northgate, and the Main Line Up and Down Suburban tracks between Milton and Graceville restricted to a maximum 15.75 TA (due to the current major old steel truss bridge structures over Breakfast Creek and the Albert Bridge over the Brisbane River at Indooroopilly).

The route through the Aurizon Central Queensland coal network (Parana – Rocklands and Durroburra – Kaili) is rated at 26.5 tonne axle load.

### 18.2 TRACK STRUCTURE

The route from Brisbane to Townsville predominantly comprises prestressed concrete (PSC) sleepers, with rail sizes generally 47/50/53/60 kg/m size. This includes a mix of new rail installed with various upgrade programs, and part-worn rail cascaded from the Goonyella and Blackwater coal systems, following major re-railing programs on these systems. Some short sections of steel sleepers remain.

Between Townsville and Purono (Yabulu), the track is predominantly 53 kg/m rail on steel sleepers to accommodate the nickel ore traffic; whilst the track between Purono and Cairns generally comprises older 41kg/m rail on steel sleepers.

The part-worn 41kg/m rail on the Purono – Cairns section is marginal for 20 tonne axle load, but is currently adequate for the volume of freight operating at this maximum axle load on this lower trafficked section.

The track sections on the Aurizon sections are rated at 26.5 tonne axle load, and comprise 53/60 kg/m rail on PSC sleepers.

Within the Brisbane metro region the track comprises a mix of 47/50/60 kg/m rail on timber and concrete sleepers. There are extensive sections of the tracks utilised by freight trains which have more recently been upgraded with insertion of low-profile PSC sleepers to a 20 TAL specification replacing timber sleepers. Upgrades to a 26.5 TAL would require utilisation of deeper PSC sleepers, and require greater ballast depth, together with higher profile rail size on the older sections of track. This has implications for the depth of the track structure (rail, sleepers, ballast), at various locations. These include the sections through platforms and level crossings, and under overbridges and the

approaches to transom top steel deck bridges, which would require raising of structures or the lowering of the formation. The height of the overhead catenary system is also an issue throughout the SEQ network, where maintaining adequate clearances would require formation lowering or raising of the overhead traction system.

### 18.3 BRIDGES AND CULVERTS

More recent bridge replacements (since the mid-1990s and particularly the extensive bridge replacement under the Main Line Upgrade [MLU] project) have been built to a 30 TAL standard; however concrete bridge structures built prior to that are generally to a nominal 20 TAL. The extensive strengthening of the remaining timber and steel deck bridges undertaken under the MLU project was only to a 20 TAL standard.

The extent of old timber and steel bridges on the corridor is as summarised in Table 18.1.

**Table 18.1 Bridging**

| Section              | Timber    |                | Steel deck |                |
|----------------------|-----------|----------------|------------|----------------|
|                      | Number    | Length         | Number     | Length         |
| Mayne – Nambour      | 0         | 0 m            | 18         | 1,242 m        |
| Nambour–Rockhampton  | 16        | 1,337 m        | 15         | 2,254 m        |
| Rockhampton – Mackay | 0         | 0 m            | 5          | 811 m          |
| Mackay – Townsville  | 3         | 83 m           | 22         | 3,655 m        |
| Townsville – Cairns  | 42        | 1,190m         | 19         | 1,216 m        |
| <b>Totals</b>        | <b>61</b> | <b>2,610 m</b> | <b>79</b>  | <b>9,178 m</b> |

**Note:** The quantities above are sourced from QRs Enterprise Asset Data base (Nov 2014 for Nambour-Cairns, plus the 2007 Information Pack for Brisbane – Nambour.

The timber bridging and bulk of the steel bridging is rated for a maximum 20 TAL. Concrete bridges built prior to the early 1990s were also built to this 20 TAL standard. Not identified in this assessment are the thousands of culvert structures (reinforced concrete pipes, boxes and steel corrugated metal pipe structures) similarly potentially restricted to a 20 TAL standard.

### 18.4 CAPPING LAYER

The original construction standards for earthworks and capping layers were low, and some sections suffer from poor subgrade, impacting on an ability to maintain track top & line with the MLU axle load up-rating to 20 TAL. This is exacerbated during extended wet conditions. Current limited freight traffic volumes mitigate the impact of this. Higher axle loads would further exacerbate the impacts of inadequate capping layer, particularly during wet conditions. No specific information on the extent of this has been undertaken; however it would be expected that the deficiency would be located along extended sections along the length of the corridor. This would eventually result in loss of ability to retain the track alignment over time, requiring more maintenance intervention (tamping and re-ballasting) to maintain the track alignment within acceptable tolerances.

## 18.5 AXLE LOAD UPGRADE OPTIONS

### 18.5.1 Infrastructure

Choice of axle load upgrade options are limited, and any choice would be dependent on the likely traffics that would benefit from any upgrade. For the purposes of this assessment, the only option considered is to upgrade the route to a similar 26.5 TAL as applicable for the Central Queensland coal network. The ball-park estimate to upgrade the full route between Acacia Ridge and Cairns to 26.6 TAL is \$3.6 billion. This cost estimate ignores the disruption impacts of undertaking the major upgrades required.

The full upgrade is unlikely to be viable for the current and likely traffic tasks along the route; however shorter sections may warrant upgrade where significant bulk haul traffics were of a scale and duration to warrant the operational benefits of bigger payload trains. This could include development of coal mines in the Maryborough or Pentland regions, or various mineral deposits along the route, requiring access to ports or processing facilities. Efficient rail transport options would include consideration of both axle load, train length and corridor capacity along the sections involved.

Minor infrastructure upgrades are feasible to convert bulk sugar and grain to 20 TAL operation, with the bulk of the investment being in rollingstock to replace the current legacy fleet of 63 tonne and 72 gross tonne wagons. These would require relatively minor track upgrades at sugar mills and terminals (likely siding turnout upgrades and selective re-railing and re-sleepering).

### 18.5.2 Rollingstock

Current freight rollingstock deployed varies, depending on rail operator and the specific traffic task. Excluding the bulk haul coal operations on the Aurizon Central Queensland network, the locomotives and wagons deployed on the North Coast Line are summarised as:

|                                 |   |
|---------------------------------|---|
| <p><b>Aurizon:</b></p>          | <p>A mix of 94, 97, 116 tonne locomotives of varying ages and capability. Aurizon also has a large fleet of newer generation 120 tonne AC traction diesel electric locomotives (Downer supplied GT42CU ACe locomotives that are currently deployed in the Central Queensland coal business) that could be deployed on the NCL freight traffics if warranted for Aurizon commercial outcomes. Container wagons and the Mount Isa Line and nickel ore bulk mineral wagons are to 20 TAL. Older bulk sugar wagons are 63 tonne gross (15.75 TAL).</p> <p>Aurizon currently operate a fleet of triple slot (3 TEU) and double slot (2 TEU) wagons on the North Coast Line, to a 20 TAL limit. These are adequate for the current range of container sizes and loadings.</p> |
| <p><b>Pacific National:</b></p> | <p>A relatively new fleet comprising only 120 tonne Downer GT42CU ACe locomotives). PN's intermodal and bulk mineral wagon fleet is to 20 TAL.</p> <p>Pacific National operate a purpose designed three-pack articulated container wagon, which provides approximately a 5% advantage in train TEU payload, and can more efficiently cater for the longer container lengths up to 48 feet.</p>  |

## 18.6 CONCLUSIONS – AXLE LOAD UPGRADES

An axle load upgrade for intermodal freight is not warranted, given the normal type of loadings (weight of containers), the flexibility to alter load distribution on the train for very heavy containers, and the very high capital cost and disruptions associated with any infrastructure axle load upgrade program. The scale of the current and likely NCL freight task does not warrant operation of heavier, more powerful locomotives than the current generation of 120 tonne AC traction diesel electric locomotives (or future equivalents) within the locomotive fleets deployed or able to be deployed by both current Rail Operators. Similarly it does not warrant a re-equipping of the current container wagon fleets to take advantage of any axle load increase.

Double stacking of containers on this route is not feasible (due to narrow gauge stability issues with higher load centre of gravity, clearance issues with overhead structures and wiring within the Brisbane metro region and along the route between Nambour and Rockhampton, and platform clearance issues for “well” wagons through the Brisbane metro network). The likely intermodal volumes on the corridor are unlikely to warrant this option, compared to increasing capacity via more trains and/or longer trains.

Selective axle load upgrades along shorter sections of the corridor to suit specific bulk product railings may be feasible, subject to the route length involved (capital upgrade costs), and the scale of operation planned (annual tonnages and project life). This could include upgrading the bulk sugar hauls in the Burdekin area mills to Townsville and Proserpine to Mackay Harbour (associated with a re-equipping of the sugar wagon fleet), and some potential short-haul bulk coal and mineral hauls.

## 19. Increasing train lengths

Train length is a basic rail system design parameter. Key considerations from an infrastructure perspective are:

- ▶ Crossing loop lengths on single track sections.
- ▶ Terminal lengths and the ability to make and break trains to place into terminal sidings (balloon loops solve this for bulk unit train operation).
- ▶ Track and signalling configuration on multi-track sections.
- ▶ Train performance (section run times, train braking performance).
- ▶ Number of longer trains deployed, planned crossing locations, and relative train priorities.

From a Rail Operator perspective, train payload, transit time and efficient utilisation of locomotives are key considerations, as are market requirements for the various origin-destination pairs, including loading volumes and the desired windows for the pick-up-delivery (PUD) legs at each end. Intermodal terminal considerations include terminal configuration, length of loading hardstand, the ability to make/break trains, lifting equipment, and the required train turn-around times.

Current crossing loops on the NCL are a nominal 700 metres long, but with some shorter loops and other loops with some practical limitations on their use. The normal NCL intermodal train is restricted to 655 metres to fit within this nominal loop length, with an allowance for drift length in stopping a train.

Locomotives deployed by the two current Rail Operators varies, with only one of the newer generation AC traction locomotives needed to haul a normal intermodal train payload within this train length constraint; whereas two of the older generation DC traction locomotives are currently deployed by the other Rail Operator for a similar trailing load. As noted above, the choice of train length is a basic rail system design parameter. From an Rail Operator's perspective, the target is to maximise the full potential of each locomotive, maximising the trailing load behind the locomotives. This can have an adverse impact on train performance, particularly on grades and on train acceleration, increasing section run times and adversely impacting on corridor performance and capacity. It also can result in poor recovery performance, where a locomotive traction motor is cut-out due to a fault.

For the purposes of quantifying the costs and operational benefits of this study, only one increased train length option for intermodal trains was considered, allowing for an effective doubling the length of the current train to 1,300 metres. Alternate train lengths are feasible. A shorter train would result in a lower infrastructure capital cost; but a significant cost of extending loops is the new turnout and re-signalling involved, rather than the cost /metre of extra crossing loop length. Longer design trains are possible, but with increasing difficulties in extending crossing loops and terminals, and adverse impact on train handling with the extensive sharp curves and roller-coaster grading along extensive sections of the corridor. Longer trains also result in slower average train speeds, due to the longer braking and acceleration times, and the section run time impact of speed constrained sections.

Extension of crossing loops requiring bridging or across level crossings would generally be avoided where possible. (It is noted some existing crossing loops are constrained by these features at one or both ends.)

### 19.1 MULTIPLE TRACK SECTIONS – BRISBANE METRO

The Brisbane Metro system from Beerburrum to Yeerongpilly comprises at least 2 tracks for uni-directional running of freight trains, providing “crossing” capability through-out the network. A freight

curfew effectively applies during the week-day commuter peaks, and passenger trains currently have priority for paths and day-of-operations scheduling. Freight trains currently are restricted to a maximum 60 kph operation through most of the metro network, in recognition of freight train braking performance, signalling and routing complexity and track standards and maintenance tolerances.

The major impacts on longer North Coast Line intermodal trains were investigated within SEQCI, including modelling through the shared sections and through the key junctions. The key impacts for the longer freight trains include:

- ▶ Junction crossing conflicts at Countess Street, Sherwood and Mayne, with the extra time for the longer freight train to traverse through these junctions between the off-peak passenger services. The crossing time impact on passenger trains for current length intermodal trains at Countess Street (southbound via Milton crossing all in-bound passenger trains) and north-bound at Sherwood (crossing both inbound and out-bound passenger trains) is modelled at approximately 5 minutes. This increases to approximately 7 minutes with the modelled 1,450 metre intermodal train (in the SEQCI study), and would be slightly less for the nominal 1,350 metre train assumed in this study.
- ▶ The impact of higher frequency off-peak services (e.g. 15 minute on each of the major corridors) with the cumulative impact of these corridors between Petrie and Salisbury/Lytton Junction. The performance of these junctions requires an offset clock-face timetable for Springfield and Ipswich services (8 trains/hour each way), with either the current length or longer intermodal train option to allow freight trains to transit through these junctions.
- ▶ Routing south-bound freight trains from Exhibition Branch (Countess Street junctions) via South Brisbane is not feasible with the cumulative impact of day-time higher off-peak service frequencies on both Citytrain sectors through this junction.
- ▶ Section run times for intermodal freight trains generally matches or can better an all-stop passenger train, with constraints mainly confined to the junction locations.
- ▶ The inability of the current freight terminals to receive and make up a longer train within the terminal footprint.

## 19.2 AURIZON NETWORK

The sections of the Aurizon network shared with the North Coast Line freight traffic is duplicated track, with signalling configured to suit the much longer coal trains operating in the Blackwater or Newlands systems. A 1,350 metre long NCL freight train is readily accommodated through the Aurizon network.

## 19.3 SINGLE LINE SECTIONS

The single line section is essentially Beerburrum – Cairns, excluding the Aurizon network and the short section between Townsville and Nome. Crossing loops along the route are summarised in Table 19.2 summarises the crossing loops on the major route sections, including the longest Section Run Time (SRT) on each, and the number of crossing loops with some operational constraint (due to length to sort for the reference intermodal train, or use constrained by a level crossing). The current clear crossing loop lengths on the more heavily trafficked Brisbane – Townsville section are as detailed in Table 19.1. The 3 yellow highlighted loops are too short for crossing a current 650 metre long intermodal freight train



**Table 19.1 Crossing loops Beerburrum – Townsville**

| CROSSING LOOP           | Clear Length | Av. Section Run Time | Constraints     | CROSSING LOOP           | Clear Length     | Av. Section Run Time | Constraints | CROSSING LOOP    | Clear Length | Av. Section Run Time | Constraints | CROSSING LOOP  | Clear Length | Av. Section Run Time | Constraints |
|-------------------------|--------------|----------------------|-----------------|-------------------------|------------------|----------------------|-------------|------------------|--------------|----------------------|-------------|----------------|--------------|----------------------|-------------|
|                         | metres       | mins                 |                 |                         | metres           | mins                 |             |                  | metres       | mins                 |             |                | metres       | mins                 |             |
| <b>Beerburrum</b>       |              |                      |                 | <b>Maryborough West</b> |                  |                      |             | <b>Rocklands</b> | 1590         |                      |             | <b>Mackay</b>  |              |                      |             |
| Glasshouse Mountains    | 690          | 10                   |                 | Colton                  | 723              | 10                   |             | Rockhampton      |              | 10                   |             | Farleigh       | 702          | 10                   |             |
| Beerwah                 | 717          | 7                    |                 | Torbanlea               | 699              | 10                   |             | Glenmore         | 710          | 10                   |             | Aminungo       | 750          | 12                   |             |
| Landsborough            | 716          | 8                    | Level Xing      | Howard                  | 712              | 7                    |             | Parkhurst        | 923          | 7                    |             | Kuttabul       | 752          | 10                   | Level Xing  |
| Mooloolah               | 717          | 9                    | Level Xing      | Wokka                   | 694              | 11                   |             | The Caves        | 712          | 13                   | Level Xing  | Mount Ossa     | 703          | 9                    | Level Xing  |
| Eudlo                   | 952          | 9                    |                 | Isis Junction           | 711              | 8                    |             | Yaamba           | 812          | 9                    |             | Calen          | 705          | 9                    |             |
| Palmwoods               | 676          | 8                    |                 | Goodwood                | 704              | 11                   |             | Glen Geddes      | 707          | 15                   |             | Yalbaroo       | 863          | 13                   | Level Xing  |
| Woombye                 | 713          | 7                    | Ped. Maze x'ing | Kinkuna                 | 754              | 10                   |             | Kunwarara        | 698          | 16                   |             | Bloomsbury     | 708          | 15                   |             |
| <b>Nambour</b>          | 779          | 8                    |                 | Elliott                 | 723              | 9                    |             | Princhester      | 717          | 19                   |             | Thoopara       | 716          | 14                   |             |
| Yandina                 | 723          | 11                   |                 | Bundaberg               | 1305             | 14                   |             | Marlborough      | 724          | 13                   |             | Proserpine     | 697          | 14                   | Level Xing  |
| North Arm               | 710          | 6                    |                 | North Bundaberg         | <b>512</b>       | 9                    | Too short   | Kooltandra       | 700          | 15                   |             | Bubialo        | 700          | 17                   |             |
| Sunrise                 | 857          | 11                   |                 | Meadowvale              | 708              | 10                   |             | Ogmore           | 701          | 13                   |             | Longford Creek | 805          | 12                   |             |
| Cooroy                  | 905          | 10                   |                 | Avondale                | 701              | 14                   |             | Wumalgi          | 715          | 15                   |             | Mookarra       | 845          | 13                   |             |
| Pomona                  | 682          | 12                   | Level Xing      | Littabella              | 698              | 12                   |             | St Lawrence      | 697          | 15                   |             | Bowen Junction |              | 9                    |             |
| Cooran                  | 921          | 10                   |                 | Flinders                | 823              | 16                   |             | Karlarka         | 738          | 16                   |             | Merinda        | 702          | 5                    |             |
| Traveston               | 804          | 10                   |                 | Berajondo               | 744              | 13                   |             | Elalie           | 703          | 13                   |             | Durroburra     | Dupl.        | 2                    |             |
| Woondum                 | 734          | 10                   |                 | Baffle                  | 824              | 14                   |             | Carmila          | 700          | 14                   |             | Kaili          | 1414         | 7                    |             |
| Glanmire                | 700          | 11                   |                 | Irkanda                 | 734              | 10                   |             | Orkobie          | 711          | 10                   |             | Wathana        | 701          | 3                    |             |
| <b>Gympie North</b>     | 681          | 7                    |                 | Netley                  | 716              | 11                   |             | Ilbilbie         | 706          | 13                   |             | Wilmington     | 692          | 9                    |             |
| Tamaree                 | 756          | 6                    | Level Xing      | Miriam Vale             | 695              | 12                   |             | Koumala          | 709          | 13                   |             | Guthlungra     | 701          | 13                   |             |
| Harveys Siding          | 862          | 9                    |                 | Bororen                 | 724              | 11                   |             | Yukan            | 700          | 8                    |             | Gumlu          | 698          | 12                   |             |
| Curra                   | 733          | 8                    |                 | Iveragh                 | 903              | 16                   |             | Sarina           | 718          | 10                   | Level Xing  | Bobawaba       | 720          | 10                   |             |
| Theebine                | 697          | 12                   |                 | Benaraby                | 698              | 18                   |             | Dawlish          | 705          | 10                   | Level Xing  | Inkerman       | 703          | 9                    |             |
| Paterson                | 694          | 9                    |                 | <b>Parana</b>           | 908              | 13                   |             | Balberra         | 708          | 5                    |             | Home Hill      | 700          | 9                    |             |
| Gundiah                 | 878          | 10                   |                 | Callemondah             | Duplicated track |                      |             | Rosella          | 724          | 5                    |             | Ayr            | 900          | 9                    | Level Xing  |
| Netherby                | 706          | 8                    |                 | Mt Miller               | Duplicated track |                      |             | <b>Mackay</b>    | 681          | 10                   |             | Pioneer        | 698          | 9                    |             |
| Tiaro                   | <b>471</b>   | 10                   | Too short       | Mt Larcom               | Duplicated track |                      |             |                  |              |                      |             | Baratta        | 700          | 8                    |             |
| Owanyilla               | 715          | 10                   |                 | Bajool                  | Duplicated track |                      |             |                  |              |                      |             | Giru           | 832          | 7                    |             |
| Mungar                  | 726          | 12                   |                 | <b>Rocklands</b>        |                  |                      |             |                  |              |                      |             | Cromarty       | 700          | 6                    |             |
| Yengarie                | <b>596</b>   | 9                    | Too short       |                         |                  |                      |             |                  |              |                      |             | Storth         | 698          | 6                    | Level Xing  |
| <b>Maryborough West</b> | 700          | 10                   |                 |                         |                  |                      |             |                  |              |                      |             | <b>None</b>    | Dupl.        | 10                   |             |

Table 19.2 summarises the crossing loops on the major route sections, including the longest Section Run Time (SRT) on each, and the number of crossing loops with some operational constraint (due to length to sort for the reference intermodal train, or use constrained by a level crossing)..

**Table 19.2 Crossing loops summary**

| Section              | No. of loops | Longest section run time (minutes) | No. of Loops with constrained use |
|----------------------|--------------|------------------------------------|-----------------------------------|
| Beerburrum – Nambour | 8            | 8                                  | 3                                 |
| Nambour – Parana     | 45           | 15                                 | 7                                 |
| Rocklands – Mackay   | 24           | 19                                 | 3                                 |
| Mackay - Townsville  | 27           | 17                                 | 7                                 |
| Townsville – Cairns  | 25           | 20                                 | 2                                 |

As a minimum, crossing loop extensions are required where an over-length train is required to cross a similar over-length train, or where an over-length train is required to cross a passenger train which has priority running. For other train crossings the longer train can operate as long as it has priority running (all other train crossings must utilise the loop and be delayed pending arrival and clearance of the over-length train, or the over-length train waits in the loop and blocks the exit from the other loop for the opposing short train, pending the long train’s departure. The signalling system needs to be configured to permit entry of a train into the loop, when the next single line section is occupied.

The number of crossing loop extensions required and their locations are dependent on the number of long trains operating in either direction, the location where crossings are planned to occur, and the priority of other train services involved in the crossing. Key considerations are the flexibility built into the route to accommodate day-of-operations timetable variability, and transit time reliability.

Appendix B includes an assessment of the operational requirements for a start-up operation for longer intermodal trains, and concept designs and budget capital cost estimates for representative loop extensions.

An indicative crossing loop extension (assuming no bridge or level crossing constraints) is \$10 - 12 M per crossing loop for the electrified route south of Parana, and \$8 - \$10 M per crossing to the north. This assumes the loop extension is feasible at one end only, with no major drainage structures (bridges) or road crossing relocations required.

Longer crossing loops are unlikely to be warranted north of Townsville, due to the limited intermodal freight volumes on this section.

A minimum start-up operation running only two long intermodal trains per day in each direction to Townsville, is assessed as requiring the extension of 20 crossing loops, with a capital cost of approximately \$200M (excluding rollingstock and any terminal upgrade costs). This provides an additional intermodal capacity of 33% on the current preferred evening departure time slot for north-bound intermodal services out of Brisbane on the peak days. This assessment assumes passenger trains have priority, with no waiting of a passenger train in any loop to clear a long train, and that the long trains have priority over all other freight trains. It also assumes the returning train runs as a long train and is not broken into 2 short trains.

A change in passenger priority to provide for a nominal 5 minute delay for each waiting long train (assuming a long train is held at a crossing loop awaiting the arrival of the passenger train, would reduce the number of loop extensions to only 4 – 6, but with limited operational robustness. Each additional long train added to the system would require extra crossing loops.

The location of which loops need to be extended is subject to master train planning, and where train crossings are scheduled. The success of a minimalist crossing loop extension strategy requires running a disciplined on-time timetable for the long trains (assuming the passenger trains run to a disciplined timetable). Deviation from schedule will create significant adverse operational impacts.

#### 19.4 CONCLUSIONS – LONGER TRAINS

Longer trains definitely will increase corridor capacity, and contribute to a reduction in operating costs. To operate effectively, the crossing loops on the single line sections need to be long enough to accommodate the longer trains where certain train crossings need to occur. The running of longer trains also requires the terminal capability to receive and despatch the longer trains.

The choice of optimal train length includes consideration of the desired train consist, including type/performance of locomotives, linear efficiency of the loading on the wagons deployed, trailing loads, terminal configuration, and the market requirements.

The number and location of crossing loops needing to be extended will depend on the number of long trains running, the Master Train Plan and where trains are scheduled to cross, and the relative priority of train services (e.g. Citytrain and Traveltrain services, livestock, and other freight trains).

Longer trains also provide the ability to provide additional capacity in the desired freight peaks, to suit desired arrival times at destinations, despatch times, and reducing the capacity impact of the Brisbane metro passenger week-day peak curfew periods on freight services

The capacity improvement will depend on the length and number of long trains operated, as will the required infrastructure upgrade costs.

The operating cost benefits are less significant, and are primarily related to the relative reduction in train crew costs and some lesser impact on track access charges, where a train path cost is applied. Fixed rollingstock capital costs, fuel costs, rollingstock maintenance costs and terminal operating costs are not directly influenced by train length; however choice of locomotive deployed to optimise train efficiency within the extended loop constraints should have some beneficial impact on operating and capital related costs.

## 20. Grade easings

Ruling grade will dictate the maximum trailing load behind a given motive power source. It will depend on steepness and length of the grade, track curvature, train length and load distribution, and the ability to utilise prior train momentum to negotiate a grade. Whilst the legacy alignment standards includes a significant number of shorter, steep graded sections, with the steepest down to 1 in 44 for both north-bound and south-bound trains between Brisbane and Townsville, and 1 in 33 between Townsville and Cairns, the predominant longer steep grade sections (not adjusted for curvature impacts) are as indicated in Table 20.1. Sharp curves impact on the rolling resistance to a train traversing a curve, and increase the effective grade. This curve impact will also vary depending on the train characteristics, train speed, wheel and rail profile and extent of track gauge widening provided.

**Table 20.1 Ruling grades**

| Direction            | Section            | Average grade       | Length  |
|----------------------|--------------------|---------------------|---------|
| <b>Northbound</b>    | Corinda area       | 1 in 59             | 1.1 km  |
|                      | Nambour area       | 1 in 80             | 2.0 km  |
|                      | South of Colton    | 1 in 75             | 1.0 km  |
|                      | Yandaran           | 1 in 50             | 1.0 km  |
|                      | Aldoga Bank        | 1 in 60             | 2.0 km  |
|                      | North of The Caves | 1 in 75             | 1.4 km  |
|                      | Glen Gleddes       | 1 in 80             | 2.0 km  |
|                      | The Leap           | 1 in 75             | 1.3 km  |
|                      | North of Tully     | 1 in 75             | 1.7 km  |
|                      | <b>Southbound</b>  | South of Partington | 1 in 75 |
| The Leap             |                    | 1 in 75             | 2.0 km  |
| North of Kooltandra  |                    | 1 in 75             | 1.3 km  |
| South of Kooltandra  |                    | 1 in 75             | 4.0 km  |
| South of Princhester |                    | 1 in 75             | 1.8 km  |
| North of The Caves   |                    | 1 in 75             | 1.8 km  |
| North of Nambour     |                    | 1 in 75             | 2.0 km  |
| Dutton Park Flyover  |                    | 1 in 75             | 1.3 km  |
| Morningside Bank     |                    | 1 in 75             | 1.2 km  |

The track grade profile will directly impact on train speeds, particularly where Rail Operators attempt to maximise trailing load for a given locomotive configuration, locomotive tractive effort and power rating. The balanced speed for a diesel locomotive hauled, loaded freight train on a long ruling grade can be down to 15–20kph. This is the sustainable speed the locomotive will haul a train on the ruling grade when the prior momentum effects on the approach to the grade have been dissipated.

The last major upgrades to improve the ruling grade were undertaken under the Mainline Electrification Project – Stage 4 in the mid-1980s (the Eumundi Bank between Sunrise and Cooroy)

and the Mainline Upgrade Project in the mid-1990s) (the Rosewood – Watalgan Bank). More recent investigation of the major ruling grade for loaded north-bound intermodal trains (the Yarwun – Aldoga Bank) was not progressed due to the high costs of re-aligning and flattening this grade in the now Aurizon owned network.

Other deviations undertaken within the Main Line Electrification and Main Line Upgrade projects (in the 1980s and 1990s) were targeted primarily at curve easings, but with the side benefit of improving the roller-coasting short, steep grading impacts of the previous alignment.

The remaining steep ruling grade sections are typically in difficult terrain, requiring a major re-alignment and major earthworks to flatten the grading. There are a number of steep grade sections along the route, as indicated in Table 20.1 above.

## 20.1 GRADE EASING OPTIONS

### 20.1.1 Aldoga Bank

The major constraint for loaded north-bound intermodal trains is the Aldoga bank, located between Yarwun and Aldoga in the Aurizon network. Curve easings and flattening of the grade was evaluated by Aurizon in 2009, in association with rail upgrades associated with the Wiggins Island Coal Terminal project. An option evaluated was a 3.1 km long deviation to ease the current 60 and 70 kph curves to 80kph and flatten the current 1 in 60 grade to 1 in 100, reducing the current route length by 0.6 km.

Realigning of this section is more expensive due to the terrain, extensive rock cuttings and high embankments, the requirement to re-align sections of the Gladstone – Mt Larcom Road, and the existing double electrified track.

The deviation option was not progressed by the then QR National at that time on cost/benefit grounds.

### 20.1.2 Yandaran Bank

This grade is one of the steepest sections but at 1.0km long, is relatively short and not an issue for a north-bound train with some momentum entering the grade.

### 20.1.3 Corinda Bank

The Corinda bank is a relatively short 1.1km long, 1 in 59 grade for loaded trains heading north, followed by a sharp curve and crossovers to cross the UP and Down Suburban tracks at Sherwood. This section includes a slow speed exit from Moolabin, and potentially a standing start on the grade to await signal clearance to proceed through Sherwood. Flattening this grade is problematic given the restricted corridor width, the need to cross over Oxley Road with its already sub-standard road vertical clearance, and Oxley Creek bridge at the start of the grade. Any regrade would be highly disruptive and high cost, and best aligned with a grade separation of the flat junction at Sherwood; not warranted for the current and likely anticipated freight volumes on the North Coast Line.

### 20.1.4 Other grades

A number of other grades are located along the route, with the worst of these generally being 1 in 75 (non-compensated for curvature). Selective upgrade provides no benefit for train trailing load; however any grade easing should improve train handling and some reduction in section run time at that location, and particularly in conjunction with curve easings.

## 20.2 GRADE EASINGS – CONCLUSIONS

The worst section for ruling grade for loaded north-bound freight trains is the Aldoga Bank, which is located within the Aurizon network. A 3.1 km long re-alignment and re-grading has previously been rejected by the then QR National (now Aurizon) as not-viable, and a grade/curve easing is unlikely to be warranted solely for non-coal NCL freight traffic. A grade easing of this individual section provides limited benefit, with the ruling grade section shifting to the next longest/steepest section.

Other grade easings are not viable in their own right, as these do not dictate train locomotive configuration.

Any reduction in the ruling grade is of limited benefit in any event with the current intermodal trains deployed, and any increase in trailing load will also likely require an increase in train length to gain any advantage of hauling a bigger trailing load.

However grade easings, in conjunction with associated curve easings do provide transit time benefits and reduced fuel consumption, and provide benefits in train handling, improved safety, and reduced infrastructure maintenance costs.

## 21. Horizontal alignment improvements – major deviations

Horizontal alignment improvements include major deviations, by-passes, and minor curve easings.

Current major planned deviations and by-passes are as identified in Section 21.1 below. The rationale for these current major planned deviations are linked to improving the commuter passenger services to the Sunshine Coast (Beerburrum – Nambour), or rail by-passes associated with major transport – land use issues in Rockhampton and Townsville, partially driven by existing level crossings issues.

An extended sampling of the potential deviations, based on the sub-standard alignment sections is identified in Section 22, together with the indicative freight train transit time savings likely for each, with a sample of new concept alignment designs and capital cost estimates summarised in Section 21.1 and more fully in Appendix C. Arising from this are a number of major deviation options (assumed as being deviations longer than 5 km), and these are also identified in Section 21.2.

Deviations built to contemporary design standards, provide a number of benefits, including:

- ▶ Transit time savings
- ▶ Improved safety (reducing derailment potential, improved train handling, replacing old life expired bridge structures, eliminating level crossings or improving sight lines and visibility)
- ▶ Improved infrastructure reliability (flood immunity, reduced maintenance requirements and track possessions)
- ▶ Reduced infrastructure maintenance costs and flood damage restoration costs
- ▶ Reduced train operating costs (fuel consumption, wear & tear on equipment)

Replacement of old infrastructure assets (particularly old timber and/or steel bridges reaching the end of their economic lives) is a “stay in business” imperative.

### 21.1 MAJOR PLANNED DEVIATIONS

Major deviations previously planned or proposed include:

**Beerburrum – Landsborough:** A 17.6 km long re-alignment and duplication of this section of the SEQ metro system, primarily focussed on providing track capacity and transit time savings for increased Citytrain passenger services servicing the Sunshine Coast region. Freight services would gain an advantage in capacity, transit time and improved train scheduling reliability. The previous proposal for the new alignment standard provided for an extension of the 160 kph alignment adopted for the Caboolture – Beerburrum upgrade, completed in April 2009.

**Landsborough – Nambour:** A 21.3 km long re-alignment and duplication of this section of the SEQ metro system, primarily focussed on providing track capacity and transit time savings for increased Citytrain passenger services to the Sunshine Coast hinterland region. Freight services would gain an advantage in capacity, reduced transit time and improved train scheduling reliability. The alignment design standard adopted for the Environmental Impact Assessment Study provided for an extension of the 160 kph alignment adopted for the Caboolture – Beerburrum upgrade, a steepest grade of 1 in 100, and the elimination of most level crossings. The re-alignment removes the current freight operational constraints imposed by level crossings at Nambour, Mooloolah and Woombye. Duplication, in conjunction with re-alignment, eliminates the need for crossing loops south of Nambour.

**Rockhampton Bypass – Western Rail Corridor:** A 23 km long deviation linking from the Central Line near Gracemere to Glenlee, north of Parkhurst. The design proposed is to a 100kph alignment standard with a Q100 flood immunity level. The corridor would be utilised for through traffic, with no level crossings, and replace the existing main line track down Denison Street and across the old Fitzroy River rail bridge. Whilst the route length is approximately 6 km longer, the higher speed alignment (and elimination of the 25 kph speed down Denison Street and across the existing Fitzroy River rail bridge), would provide a transit time saving for freight trains estimated at up to 15 minutes. This excludes the time for crew changes and any locomotive re-fuelling normally undertaken at Rockhampton.

**Townsville Eastern Rail Bypass:** The proposed Eastern Rail Bypass corridor provides an alternate route into the Port of Townsville for Mt Isa line traffics and sugar traffics from the Burdekin area mills. An option includes a new connection to the Causeway and Townsville Station and for through freight trains to Cairns. It does not provide direct access into Aurizon's South Yard freight terminal. It has only minimal beneficial advantage to through North Coast Line traffic, eliminating the speed restriction along Railway Parade on the southern approach to the Causeway. The likely time savings for NCL freight trains into Townsville is assessed as only 3 minutes; however this is not applicable for accessing Stuart or the Partington marshalling yard.

A number of other major deviations are possible, associated with any program to improve the poor alignment sections along the route. These are covered in the following Section 22.

## 21.2 POTENTIAL MAJOR DEVIATIONS

The assessment undertaken for curve easings along the route as detailed in Section 22, has identified a number of longer deviations which provide a combination of the benefits as noted above. The deviation proposals longer than 5 km are as indicated in Table 21.1 below. This includes an initial assessment of transit time savings for freight trains. The five pink shaded deviation sections are those for which concept designs were undertaken as part of this Study and as included in Appendix C.



**Table 21.1 Major deviation proposals**

| Location                               | Start km | Finish km | Length       | Worst curve | Effective section speed | Upgraded Line speed | Indicative time saving |
|--|----------|-----------|--------------|-------------|-------------------------|---------------------|------------------------|
|  | km       | km        | km           | kph         | kph                     | kph                 | mins                   |
| Beerburrum - Landsborough              | 64.7     | 82.3      | 17.6         | 60          | 70                      | 100                 | 4.5                    |
| Landsborough - Nambour                 | 83.1     | 104.4     | 21.3         | 50          | 55                      | 100                 | 10.5                   |
| <b>Beerburrum - Nambour Sub total</b>  |          |           | <b>38.9</b>  | <b>km</b>   |                         |                     | <b>15.0</b> minutes    |
| Cooroy - Pomona                        | 130      | 138.4     | 8.4          | 50          | 60                      | 100                 | 4.1                    |
| Pomona - Traveston                     | 139      | 152.5     | 13.5         | 40          | 50                      | 100                 | 9.7                    |
| Woondum - Glanmire                     | 160      | 167.8     | 7.8          | 40          | 50                      | 100                 | 6                      |
| Tamaree - Curra                        | 176.5    | 193.2     | 16.7         | 60          | 80                      | 100                 | 3                      |
| Paterson                               | 211      | 218.7     | 7.7          | 40          | 60                      | 100                 | 4                      |
| Netherby - Mary River                  | 231.7    | 244       | 12.3         | 50          | 60                      | 100                 | 5.7                    |
| Mary River -Yengarie                   | 245      | 257       | 12           | 40          | 50                      | 100                 | 8.5                    |
| Stockyard Ck - Goodwood                | 314.7    | 320.2     | 5.5          | 60          | 70                      | 100                 | 2                      |
| Spring Creek                           | 412      | 417.8     | 5.8          | 50          | 60                      | 100                 | 3.2                    |
| <b>Nambour - Rockhampton Sub total</b> |          |           | <b>89.7</b>  | <b>km</b>   |                         |                     | <b>46.2</b> minutes    |
| Kunawarara -Princhester                | 717.4    | 724.5     | 7.1          | 60          | 60                      | 100                 | 3.7                    |
| Wulmagi                                | 790.2    | 800.5     | 10.3         | 60          | 65                      | 100                 | 6                      |
| <b>Rockhampton - Mackay Sub total</b>  |          |           | <b>17.4</b>  | <b>km</b>   |                         |                     | <b>9.7</b> minutes     |
| <i>(Excl. Rockhampton options)</i>     |          |           |              |             |                         |                     |                        |
| Yalbaroo -Bloomsbury                   | 1040.3   | 1045.7    | 5.4          | 60          | 60                      | 100                 | 3                      |
| Andromache River                       | 1062.5   | 1068.8    | 6.3          | 70          | 75                      | 100                 | 2                      |
| <b>Mackay - Townsville Sub total</b>   |          |           | <b>11.7</b>  | <b>km</b>   |                         |                     | <b>5</b> minutes       |
| Garradunga Deviation                   | 1599.8   | 1607.5    | 7.7          | 40          | 55                      | 100                 | 5                      |
| Frenchmans Ck -Cucania                 | 1624.8   | 1634.7    | 9.9          | 40          | 40                      | 100                 | 6                      |
| <b>Townsville - Cairns Sub total</b>   |          |           | <b>17.6</b>  | <b>km</b>   |                         |                     | <b>11</b> minutes      |
| <b>TOTALS</b>                          |          |           | <b>175.3</b> | <b>km</b>   |                         |                     | <b>86.9</b> minutes    |

## 22. Horizontal alignment improvements – curve easings

### 22.1 OVERVIEW OF HORIZONTAL ALIGNMENT ISSUES

Horizontal alignment will dictate maximum permitted speed for a given curve radius and applied rail cant. The permitted maximum (non-tilting) train speeds for various curve radii are defined in Queensland Rail’s Civil Engineering Track Standards (CETS 8). These are summarised in Table 22.1 as:

**Table 22.1 Maximum speed – curve radii**

| Curve radius (metres) | Maximum speed (kph) |
|-----------------------|---------------------|
| 136 – 212             | 40                  |
| 212 – 300             | 50                  |
| 300 – 415             | 60                  |
| 415 – 542             | 70                  |
| 542 – 687             | 80                  |
| 687 – 848             | 90                  |
| 848 – 1026            | 100                 |
| >2170                 | 160                 |

The original NCL corridor was to “developmental” standards, designed in the horse & buggy era where earthworks construction was highly labour intensive, and the rail route selected sought to minimise the extent of cuts and fill. The route comprises a large number of curves with the overall length of curves within the various speed categories being as per Table 22.2.

The most severe curvature impacts are in the more difficult terrain sections, where this has previously dictated an “affordable” horizontal and vertical alignment. This is most evident in the Sunshine Coast region and between Ingham and Cairns.

The strategic horizontal alignment standards adopted for the Main Line Upgrade Project in the mid-1990s was to a strategic design standard of 160 kph south of Gladstone and a 120 kph minimum standard between Rockhampton and Townsville. The recently completed duplication of the Caboolture – Beerburrum section included re-aligning to the 160 kph standard, and the Landsborough – Nambour corridor re-alignment study adopted a preferred 160 kph design standard.

**Table 22.2 Extent of track curvature**

| Section              | Section length (km) | <60kph km | <80kph km | % length <80kph | < 100kph km | % length <100kph |
|----------------------|---------------------|-----------|-----------|-----------------|-------------|------------------|
| Caboolture - Nambour | 54                  | 3.8       | 14.7      | 27%             | 25          | 46%              |
| Nambour – Bundaberg  | 246                 | 6.4       | 21.2      | 8.6%            | 79          | 32%              |

| Section                      | Section length (km) | <60kph km      | <80kph km      | % length <80kph | < 100kph km | % length <100kph |
|------------------------------|---------------------|----------------|----------------|-----------------|-------------|------------------|
| Bundaberg - Gladstone        | 178                 | 1.8            | 7.1            | 4.0%            | 20          | 11%              |
| Gladstone–Rockhampton        | 110                 | 0              | 13.2           | 12.0%           | 30          | 27%              |
| Rockhampton - Mackay         | 320                 | 0.6            | 5.4            | 1.7%            | 99          | 31%              |
| Mackay - Townsville          | 382                 | 2.9            | 10.4           | 2.7%            | 138         | 36%              |
| <b>Caboolture-Townsville</b> | <b>1290 km</b>      | <b>15.5 km</b> | <b>72.1 km</b> | <b>5.6%</b>     | <b>391</b>  | <b>30%</b>       |
| Townsville - Cairns          | 339                 | 10.9           | 26.9           | 7.9%            | 159         | 47%              |
| <b>Caboolture - Cairns</b>   | <b>1629 km</b>      | <b>26.4 km</b> | <b>98.9 km</b> | <b>6.1%</b>     | <b>550</b>  | <b>34%</b>       |

Table 22.2 above summarises the actual curve lengths within the various speed categories. However it does not quantify the impacts of these curves on train performance and transit time. The impact of each curve includes the time/distance required to slow the train down from the line speed to the restricted speed before the front of the train enters the restricted section, the time/distance through the restriction until the rear of the train exits the restricted section, and the time/distance to accelerate the train back up to line speed.

As an example a 300 metre long 60kph curve has a 4 km long distance impact and an extra 1 minute section run time compared to maintaining a 100kph line speed, assuming no adverse grade impacts and based on an assumed train braking and acceleration performance. A similar length 50kph curve has a 4.7km length of speed impact and an extra 1.5 minute section run time impact. Long sections of multiple curves located close together, coupled with steep graded sections, significantly increase the effective overall length and impact of the slower speed curves.

A longer train is even more adversely impacted. With the same assumptions on train braking and acceleration, and with no grade effects, a 1,350 metre long train is affected over a 5.4 km length, and loses approximately 1.9 minutes for the 300 metre long 50kph speed curve, compared to maintaining a 100kph line speed over this length.

Curve easings and deviations will also generally reduce the section length, offering additional section run time savings.

## 22.2 POTENTIAL DEVIATION LOCATIONS

The current route north of Nambour, represented by Queensland Rail’s Curve – Speed Diagrams ((Drawings S24480 Sheets 1 – 19), has been assessed for the worst alignment section, and a list of potential deviations to improve these sections has been developed as indicated in Table 22.3. These sections are characterised by track alignment with curves less than 80kph permitted speeds. The pink highlighted locations are those where concept designs and costings have been undertaken as part of this study.

**Table 22.3 Poor curve sections**

| Location   | Start km | Finish km | Length          | Worst curve | Effective section speed | Upgraded Line speed | Indicative time saving | Features  |
|--|----------|-----------|-----------------|-------------|-------------------------|---------------------|------------------------|---|
|  | km       | km        | km              | kph         | kph                     | kph                 | mins                   |   |
| Beerburrum - Landsborough                        | 64.7     | 82.3      | 17.6            | 60          | 70                      | 100                 | 4.5                    |   |
| Landsborough - Nambour                           | 83.1     | 104.4     | 21.3            | 50          | 55                      | 100                 | 10.5                   |   |
| <b>Beerburrum - Nambour Sub total</b>            |          |           | <b>38.9 km</b>  |             |                         |                     | <b>15.0 minutes</b>    |   |
| Nambour - Yandina                                | 105      | 109.4     | 4.4             | 40          | 50                      | 100                 | 4                      |   |
| Cooroy - Pomona                                  | 130      | 138.4     | 8.4             | 50          | 60                      | 100                 | 4.1                    | Includes Xing loop  |
| <b>Pomona - Traveston</b>                        | 139      | 152.5     | 13.5            | 40          | 50                      | 100                 | 9.7                    | Includes Pomona, Cooran & Traveston loops   |
| Woodum - Glanmire                                | 160      | 167.8     | 7.8             | 40          | 50                      | 100                 | 6                      | Includes Xing loop  |
| Tamaree - Curra                                  | 176.5    | 193.2     | 16.7            | 60          | 80                      | 100                 | 3                      | Includes Tamaree, Harveys Siding & Curra loops                                      |
| Paterson   | 211      | 218.7     | 7.7             | 40          | 60                      | 100                 | 4                      | Includes Xing loop  |
| <b>Netherby - Mary River</b>                     | 231.7    | 244       | 12.3            | 50          | 60                      | 100                 | 5.7                    | Includes Tiaro & Owanyilla loops  |
| <b>Mary River - Yengarie</b>                     | 245      | 257       | 12              | 40          | 50                      | 100                 | 8.5                    | Includes Mungar & Yengarie loops  |
| Yengarie - Maryborough West                      | 257.7    | 262       | 4.3             | 60          | 60                      | 100                 | 2.5                    | Includes Xing loop  |
| Stockyard Ck - Goodwood                          | 314.7    | 320.2     | 5.5             | 60          | 70                      | 100                 | 2                      | Includes Goodwood loop  |
| Elliot River                                     | 337.5    | 338.6     | 1.1             | 60          | 60                      | 100                 | 1.2                    |   |
| Bundaberg - North Bundaberg                      | 350.6    | 353.5     | 2.9             | 15          | 15                      | 60                  | 8                      | Bridge speed restriction. Assume raise to 60kph                                     |
| Avondale   | 374.3    | 375.9     | 1.6             | 50          | 50                      | 100                 | 2.2                    | Includes Avondale loop  |
| <b>Yandaran</b>                                  | 379.5    | 383       | 3.5             | 60          | 60                      | 100                 | 2.2                    |   |
| Mullet Creek                                     | 388.9    | 391.3     | 2.4             | 60          | 60                      | 100                 | 1.8                    |   |
| Spring Creek                                     | 412      | 417.8     | 5.8             | 50          | 60                      | 100                 | 3.2                    | Includes Berajonda loop   |
| <b>Cabbage Tree Creek</b>                        | 419.2    | 421       | 1.8             | 50          | 50                      | 100                 | 2.4                    |   |
| <b>Twelve Mile Creek</b>                         | 476.4    | 480.7     | 4.3             | 50          | 50                      | 100                 | 3.9                    |   |
| Iveragh  | 484.7    | 487.3     | 2.6             | 60          | 60                      | 100                 | 1.9                    | Includes Iveragh loop   |
| <b>Nambour - Rockhampton Sub total</b>           |          |           | <b>118.6 km</b> |             |                         |                     | <b>76.3 minutes</b>    |   |
| Rockhampton Denison Street                       | 638.2    | 640.3     | 2.1             | 25          | 25                      | 50                  | 4                      | Raise speed limit   |
| Rockhampton western bypass (Gracemere - Glenlee) | 632      | 651       | 19.4            |             |                         | 100                 |                        | Extra route length of Approx 6km. Potential transit time saving of up to 20 minutes |
| 11 Mile Creek                                    | 658.3    | 659       | 0.7             | 60          | 60                      | 100                 | 1.1                    |   |
| The Caves  | 662.7    | 665.1     | 2.4             | 60          | 60                      | 100                 | 1.8                    | Includes The Caves loop   |
| The Caves - Yaamba                               | 665.8    | 667.8     | 2               | 70          | 70                      | 100                 | 1                      | Includes Yaamba loop  |
| Glen Geddes                                      | 691.5    | 695.8     | 4.3             | 60          | 70                      | 100                 | 1.6                    | Includes Glen Geddes loop   |
|  | 701.6    | 702.9     | 1.3             | 60          | 60                      | 100                 | 1.3                    |   |
| <b>Kunawarara - Princhester</b>                  | 717.4    | 724.5     | 7.1             | 60          | 60                      | 100                 | 3.7                    |   |
| Malborough                                       | 745.6    | 748       | 2.4             | 60          | 60                      | 100                 | 1.8                    |   |
| Wulmagi  | 790.2    | 800.5     | 10.3            | 60          | 65                      | 100                 | 6                      | Includes Wulmagi loop   |
| Kalarka  | 834.8    | 837.7     | 2.9             | 60          | 60                      | 100                 | 2                      | To adjoining 80kph section  |
| Orkobie  | 876.5    | 877.8     | 1.3             | 60          | 60                      | 100                 | 1.3                    | To adjoining 80kph section  |
|  | 884.5    | 886.8     | 2.3             | 60          | 60                      | 100                 | 1.7                    | To adjoining 80kph section  |
| Ilbilbie   | 891.4    | 892.5     | 1.1             | 50          | 50                      | 100                 | 2                      | To adjoining 80kph section  |
| Koumala  | 905      | 906.3     | 1.3             | 50          | 50                      | 100                 | 2.1                    | Includes Koumala loop   |
| <b>Rockhampton - Mackay Sub total</b>            |          |           | <b>39.4 km</b>  |             |                         |                     | <b>27.4 minutes</b>    |   |
| <i>(Excl. Rockhampton options)</i>               |          |           |                 |             |                         |                     |                        |   |
| Mount Ossa                                       | 1011.2   | 1012.6    | 1.4             | 60          | 60                      | 100                 | 1.4                    | To adjoining 80kph section  |
| Yalbaroo - Bloomsbury                            | 1040.3   | 1045.7    | 5.4             | 60          | 60                      | 100                 | 3                      |   |
| Andromache River                                 | 1062.5   | 1068.8    | 6.3             | 70          | 75                      | 100                 | 2                      | Includes Thoopara loop  |
| Burdekin River Bridge                            | 1252.1   | 1253.6    | 1.5             | 60          | 60                      | 100                 | 2                      | Bridge speed limit  |
| Ayr Bypass                                       | TBA      |           |                 | 60          | 65                      | 100                 |                        | Possibly to road bypass alignment   |
| Pioneer  | 1266.2   | 1268.3    | 2.1             | 50          | 50                      | 100                 | 2.5                    | To adjoining 80kph section  |
| Storth   | 1309.8   | 1311      | 1.2             | 60          | 60                      | 100                 | 1.3                    |   |
| Townsville southern entry                        | 1338     | 1346      | 8               | 40          | 80                      | 80                  | 3                      | Restricted to 40kph due to level xings  |
| <b>Mackay - Townsville Sub total</b>             |          |           | <b>17.9 km</b>  |             |                         |                     | <b>12.2 minutes</b>    |   |
| Pombel   | 1433.8   | 1437.3    | 3.5             | 40          | 50                      | 80                  | 2                      | Includes Pombel loop  |
| Herbert River                                    | 1457.5   | 1457.8    | 0.3             | 40          | 40                      | 80                  | 1.5                    | To adjoining 80kph section  |
| Seymour River                                    | 1460.3   | 1462.4    | 2.1             | 50          | 50                      | 80                  | 1.6                    | To adjoining 80kph section  |
| Meunga Ck  | 1507.3   | 1508.8    | 1.5             | 60          | 60                      | 80                  | 0.7                    | To adjoining 80kph section  |
| Kennedy  | 1512     | 1515.3    | 3.3             | 70          | 70                      | 80                  | 0.5                    | To adjoining 80kph section  |
| Bilyana  | 1523.7   | 1525.3    | 1.6             | 70          | 70                      | 80                  | 0.3                    | Includes Bilyana loop   |
| Tully River                                      | 1538.7   | 1539.4    | 0.7             | 40          | 40                      | 80                  | 1.8                    |   |
| Hewitt   | 1542     | 1542.8    | 0.8             | 25          | 25                      | 80                  | 3                      | Includes Hewitt loop  |
|  | 1555     | 1558.8    | 3.8             | 50          | 50                      | 80                  | 2.3                    |   |
| Silkwood   | 1567.8   | 1569      | 1.2             | 33          | 30                      | 80                  | 3                      | Includes loop and connects to adjoining 80kph section                               |
|  | 1575.4   | 1578.7    | 3.3             | 50          | 50                      | 80                  | 2.2                    | To adjoining 80kph section  |
| Garradunga Deviation                             | 1599.8   | 1607.5    | 7.7             | 40          | 55                      | 100                 | 5                      |   |
| <b>Frenchmans Ck - Cucania</b>                   | 1624.8   | 1634.7    | 9.9             | 40          | 40                      | 100                 | 6                      | To adjoining 80kph section  |
| Rusty Creek south approach                       | 1642.7   | 1643.7    | 1               | 60          | 60                      | 80                  | 0.6                    | To adjoining 80kph section  |
|  | 1645.6   | 1646.4    | 0.8             | 60          | 60                      | 100                 | 9                      | To adjoining 80kph section  |
| Aloomba  | 1651.5   | 1653.7    | 2.2             | 25          | 40                      | 80                  | 3                      | Includes Aloomba loop, to adjoining 80kph section                                   |
| South of Gordonvale                              | 1654.8   | 1655.7    | 0.9             | 50          | 50                      | 80                  | 1.1                    | To adjoining 70kph over Mulgrave River  |
| South of Woree                                   | 1670     | 1674.9    | 4.9             | 40          | 50                      | 80                  | 3                      | To adjoining 80kph section  |
| <b>Townsville - Cairns Sub total</b>             |          |           | <b>49.5 km</b>  |             |                         |                     | <b>46.6 minutes</b>    |   |
| <b>TOTALS</b>                                    |          |           | <b>264.3 km</b> |             |                         |                     | <b>177.5 minutes</b>   |   |

From a freight perspective, a design standard of 100kph between Nambour and Townsville has been assumed for costing and time saving benefit assessment. North of Townsville 80 or 100kph design standards were applied, dependent on the approach speeds on the approach sections. It is noted any new deviation would likely be constructed with new 50/60 kg/m rail on concrete sleepers, providing the ability to increase the line speed over the new section to 100kph. There would be some transit time savings from this higher speed on the longer deviations, but limited benefit on short deviations north of Townsville, where the approach speeds remain limited to 80kph due to track standard.

As noted above, a representative sample of these deviations have been assessed in more detail; with the capital costs and likely transit time savings quantified. These have been extrapolated to provide an assessment and ranking of various horizontal alignment upgrade options. Refer Appendix E for the more detailed assessment of representative deviations for which concept designs were undertaken, as highlighted in pink in Table 22.3, and summarised in Table 22.4.

Capital costs have been estimated on the basis of unit rates applicable to deviation length (track, civil, overhead wiring, signalling and communication cabling), property resumptions, new bridging length, terrain difficulty, and other special features (e.g. crossing loops modifications, road crossings).

Transit time savings have been calculated based on a 655 metre long intermodal train, with assumed braking and acceleration characteristics on level grades. No dynamic modelling of train performance has been undertaken at this conceptual stage in ranking upgrade options.

**Table 22.4 Representative deviation designs**

| Location   | Existing Alignment |              |              | Deviation Length<br>km | Capital Cost<br>\$M | Time Savings<br>mins | Capex/minute saved<br>\$/min | Comments                                       |
|--|--------------------|--------------|--------------|------------------------|---------------------|----------------------|------------------------------|--|
|  | Start<br>km        | Finish<br>km | Length<br>km |                        |                     |                      |                              |  |
| <b><i>Nambour - Gladstone (electrified territory)</i></b>      |                    |              |              |                        |                     |                      |                              |  |
| Pomona - Traveston   | 138.9              | 153.2        | 14.3         | 13.4                   | 218                 | 10                   | 21.8                         | 50kph curves, 4 timber bridges                 |
| Netherby - Mary River  | 231                | 246.3        | 15.3         | 12.1                   | 186                 | 5.6                  | 33.2                         | 60kph curves, loop extension, 2 timber bridges |
| Mary River - Yengarie  | 244.7              | 257.9        | 13.2         | 12.4                   | 163                 | 8.7                  | 18.7                         | 50kph curves, 2 timber bridges                 |
| Yandaran   | 378.2              | 383          | 4.8          | 4.7                    | 52                  | 2.7                  | 19.3                         | 60kph curves, steep grade                      |
| Cabbage Tree Creek   | 418.75             | 421.7        | 2.9          | 2.8                    | 34                  | 3                    | 11.3                         | 50kph curves, steep grade, 1 timber bridge     |
| Twelve Mile Creek  | 476                | 481.3        | 5.3          | 4.95                   | 62                  | 4.2                  | 14.8                         | 50kph curve, steep grade, 2 timber bridges     |
|  |                    |              | <b>55.8</b>  | <b>50.35</b>           | <b>715</b>          | <b>34.2</b>          | <b>20.9</b>                  |  |
| <b><i>Rockhampton - Cairns (Non-electrified territory)</i></b> |                    |              |              |                        |                     |                      |                              |  |
| Kunawarra - Princhester  | 717.2              | 724.5        | 7.3          | 7.5                    | 88                  | 5.8                  | 15.2                         | 50kph curves, 2 timber bridges                 |
| Frenchmans Ck - Cucania  | 1624.8             | 1635         | 9.8          | 9.5                    | 130                 | 5                    | 26.0                         | 40/50kph curves, 3 timber bridges              |
|  |                    |              | <b>17.1</b>  | <b>17</b>              | <b>218</b>          | <b>10.8</b>          | <b>20.2</b>                  |  |

The indicative capital costs/minute of transit time saved ranges from \$11 million to \$33 million per minute, with an average around \$20 million per minute. The capital costs for individual deviation schemes will depend on severity of terrain, length of bridging, presence of road crossings and crossing loops, whether in electrified territory and RCS territory, and the extent of property acquisition required and its acquisition cost. The expected transit time savings are subject to the severity of the current alignment and achievable line speed with the deviation.

Pro rating the deviation options identified in Table 22.3 would require an investment of over \$3.2 billion to achieve a transit time saving of 2.7 hours.

## 23. Line speed upgrades

Track standards, maintenance and safety considerations dictate maximum permitted line speed for any train on a particular track section, in the absence of more restrictive constraints such as curves and turnouts. Maximum permitted speeds are influenced by:

- ▶ Train dynamic loads (axle loads, train length, train mass, vehicle suspension system) and their cumulative impact on track and supporting structures.
- ▶ Quality of the track and its support and the desired/achievable maintenance tolerances on track alignment (top and line) and the resultant ride quality.
- ▶ Corridor integrity and safety considerations around level crossings and un-authorised access (fencing etc.).
- ▶ Drivers' perceptions of safety and speed related safety risks in select sections.
- ▶ Weather conditions (rain, wind, heat).

Maximum line speeds for various trains on the various track sections and track standards are as per Table 23.1.

**Table 23.1 Maximum line speeds (kph)**

| Train type            | Brisbane Metro | Brisbane – Rockhampton | Rockhampton – Townsville | Townsville – Cairns |
|-----------------------|----------------|------------------------|--------------------------|---------------------|
| General freight       | 60             | 100                    | 100                      | 80                  |
| Bulk freight          | 60             | 80                     | 80                       | 80                  |
| Loco hauled passenger | 100            | 100                    | 100                      | 100                 |
| Inter City Express    | 100            | 120                    | n/a                      | n/a                 |
| Tilt Trains           | 100            | 160                    | 160                      | 100                 |

**Note:** The SEQ metro freight speed limit (60kph) is dictated by the complexity of the signalling in a multi-track environment and freight train braking distances, with freight train speeds limited to reduce potential of Signals Passed at Danger (SPADS), impacts on maintaining track alignment and clearance tolerances.

For freight trains on narrow gauge, a maximum speed greater than 100kph is unlikely to be sustainable; due to the adverse impacts this would have on maintaining track alignment, and on the more restrictive alignment tolerances and more frequent maintenance effort needed to be applied to maintaining a safe track condition. Whilst train stopping distances are directly related to velocity, heat needing to be dissipated by braking systems (brake pads, dynamic locomotive braking heat grids and cooling systems) and potential energy to be absorbed in a derailment are proportional to the velocity squared, significantly raising the risk and consequences of higher speeds.

### 23.1 LOCAL SPEED RESTRICTED SECTIONS

There are a number of short sections where speed limits are imposed by public safety concerns, or bridge condition. These include the bridges over the Burnett, Fitzroy and Burdekin Rivers, and the route down Denison Street in Rockhampton, and along both the southern and northern approaches into Townsville. Freight train speeds through the more complex rail network within the Brisbane metro system are also limited to a maximum 60kph. The Denison Street and Fitzroy River bridge constraints

would be addressed with the proposed western bypass of Rockhampton, including a new bridge over the Fitzroy River. The eastern southern access into Townsville would reduce the impact between Stuart and Townsville, but not the northern approach into Townsville. The constraints in the SEQ metro system are unlikely to be removed; however electronically controlled pneumatic (ECP) braking on freight trains could lead to some relaxation of this speed limit along parts of the route.

## 23.2 TOWNSVILLE – CAIRNS: MAXIMUM LINE SPEED

The only extended section where a track structure upgrade would permit higher line speeds is the section between Townsville and Cairns. It should be noted that a considerable proportion (approximately 41%) of this route is directly restrained to speeds less than 100 kph due to curvature or other constraints. This includes timber bridges on curved track sections where the combination of curve speed and bridge standard also limit permitted line speeds for freight trains.

The upgrade required to raise this line speed from the current 80kph for freight to 100kph, would be a re-sleepering and re-railing to 50/60 kg/m rail on concrete sleepers. The tangent track length involved is approximately 225 km. Other works essential to lifting the maximum line speed include addressing safety concerns (level crossing protection and fencing standards), and civil works to accommodate the higher track standard and higher ballast profile (widening embankments and cuttings to fit the increased ballast profile, and removing mud holes). It is assumed current crossing loop turnouts would remain, linked to the maximum trailable points design speed feasible with the current DTC train control system between Purono and Woree.

The estimated capital cost to complete upgrading the tangent track (and curves rated at 100kph or flatter) and where the line speed could be achieved (without curve easings), is estimated at \$350 million. This includes an allowance for level crossing protection and fencing upgrades to satisfy safety requirements associated with higher speed operation.

The estimated transit time savings for a freight train with this upgrade is estimated at 25 minutes.

## 23.3 MAXIMUM LINE SPEED UPGRADES - CONCLUSIONS

Rail by-passes (e.g. Rockhampton and south of Townsville) will reduce the transit time impacts of some current local track sections. There are transit time savings with a major track upgrade between Townsville and Cairns, and this would be enhanced with selective curve easings. However freight train volumes north of Townsville are limited, thus limiting the corridor benefits. The major benefit of a track relay is in terms of asset renewal, with the current track standard being marginal for current 20 TAL operations, and ultimately requiring replacement, along with the older timber and steel bridge structures on the Townsville- Cairns section.

## 24. Flooding immunity

### 24.1 OVERVIEW AND HISTORY

The North Coast Line is frequently subject to sections being over-topped by floodwaters, with potential for damage due to flood washouts, and loss of availability of the line for traffic while over-topping occurs and until track damage is sufficiently rectified. These washouts include minor track damage (ballast washed away), and more serious damage to structures and embankments. Repairs generally need to be undertaken in the aftermath of cyclone and flooding events, with severe constraints on site access and availability of resources.

The more regularly affected sections are located north of Mackay, due to the greater frequency of tropical cyclones crossing the coast between Mackay and Cairns, and the impact of summer monsoon rains. These flooding events are associated with high intensity rainfall, with rapid water level increases and fast runoffs in the short creek and river systems in North Queensland, resulting in flash flooding. Higher duration flood events can be associated with flooding in the major river systems, including the Fitzroy and Burdekin/Haughton Rivers flood plains, and the Mary and Burnett River systems further south. Low lying sections may also be impacted with over-topping from rising sea levels from low pressure storm surges, in conjunction with very high tides.

Flood prone areas range from extensive lengths of low lying track sections, to short isolated sections with track levels too low or bridges and culverts with inadequate capacity to contain peak flood flows.

The major historical flood prone sections are shown in the records of previous major flooding events, and are identified in Appendix A. Flood prone sections are summarised in Table 24.1.

**Table 24.1 Flood Prone Sections**

| Section                  | Section length (km) | Length Potentially Affected (km) | Pre 2010 Specific Locations - NCL North |
|--------------------------|---------------------|----------------------------------|---|
| Nambour – Bundaberg      | 246                 | 27                               |   |
| Bundaberg - Gladstone    | 178                 | 5                                |   |
| Gladstone–Rockhampton    | 110                 | 7                                |   |
| Rockhampton - Mackay     | 320                 | 16                               | 16                                      |
| Mackay - Townsville      | 382                 | 121                              | 32                                      |
| Townsville - Cairns      | 339                 | 89                               | 97                                      |
| <b>Brisbane - Cairns</b> | <b>1680 km</b>      | <b>265 km</b>                    |   |

Source: QR's Curve Speed Straight Line Diagram Drawings S24480

The data above is not complete, with more recent flood events not included. Nor does it include the beneficial outcomes of subsequent rectification works or flood resilience works in limiting subsequent over-topping and track damage, which data is either not recorded or is not readily available. A more recent (pre 2010 flooding history) assessment of flood overtopping and potential wash-out areas for the Rockhampton – Cairns section has been undertaken by Queensland Rail and the locations and overall lengths is included in Appendix A, and compared with the previous data in Table 24.1 above. There is close alignment in the flood prone section lengths in the Rockhampton – Mackay and



Townsville – Cairns sections. The variance in the Mackay – Townsville section needs further investigation as to the current susceptibility of the flood prone sections to over-topping and damage.

## 24.2 RECENT FLOODING EVENTS

Data bases supplied by Queensland Rail for recent flood impact events have been reviewed to gain an understanding of the current susceptibility of the North Coast Line to delays from major weather events, specifically tropical cyclones and flooding. This has included an assessment of the location of problem areas, frequency of events and quantification of consequent delays (non-availability) of the sections for the last three calendar years, 2011, 2012 and 2013.

Figures 24.1 and 24.2 summarise the locations (line sections) recorded with incidents and the track closure delays attributable to each location. The locations and severity of impacts varies, depending primarily on the tracking of the relevant Tropical Cyclone, its severity and its aftermath as it degenerates into a rain depression. Major river system flooding imposes the longest duration impacts, as represented by the single 2011 event at Yamba, associated with major Fitzroy River flooding.

Figure 24.1 Recent location and number of flooding events

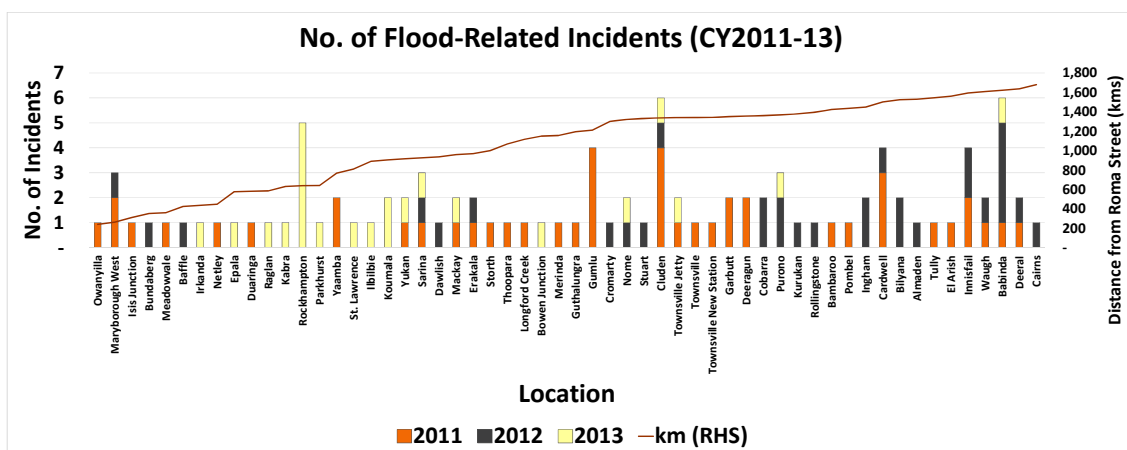
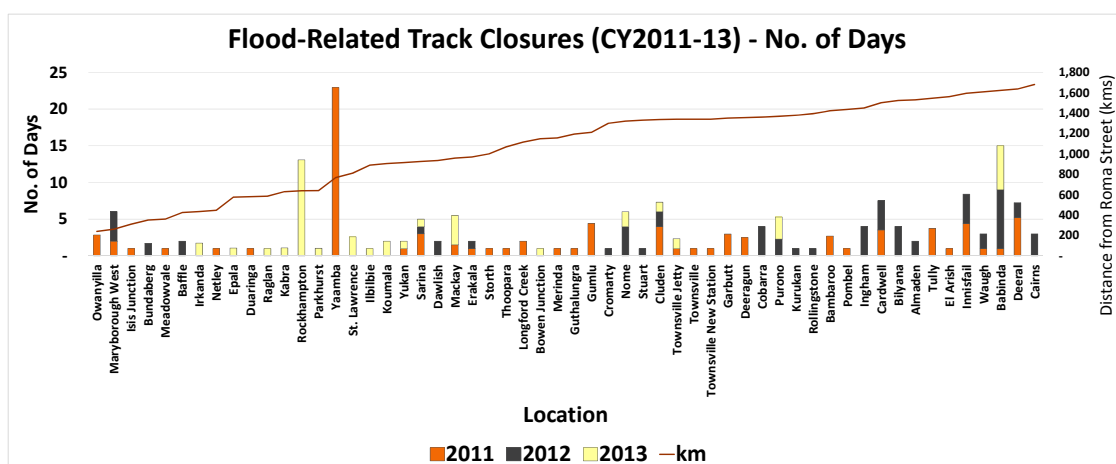
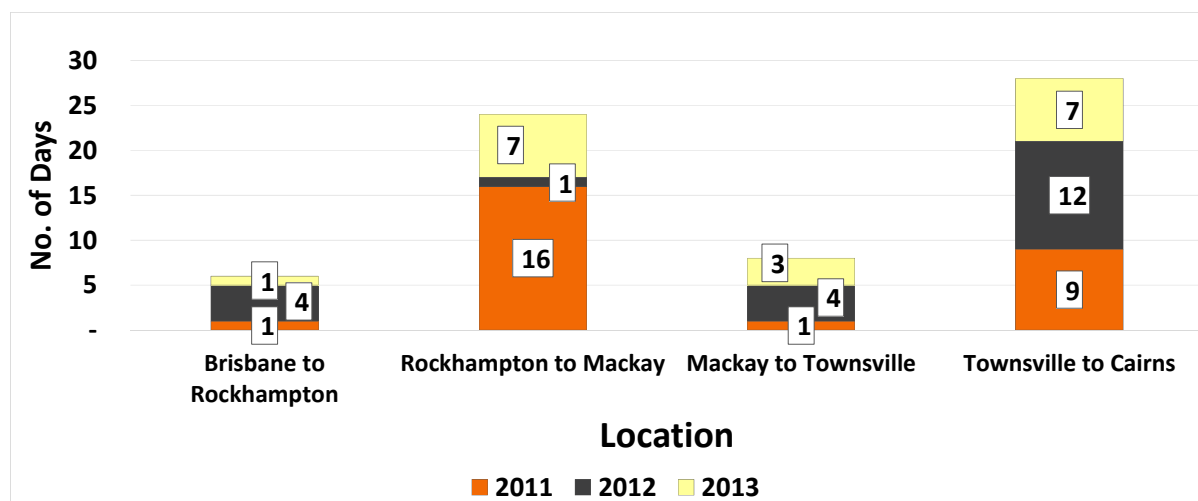


Figure 24.2 Recent extent of flood related delays



The cumulative impact of delays across the major sections over the last three calendar years is as summarised in Figure 24.3.

**Figure 24.3 Major section delays (days)**



The Townsville – Cairns section exhibited the most consistent delay events along its length each year, and the greatest average annual delays, averaging around the nine days per year.

The Rockhampton – Mackay section is skewed by the major delays around Yamba, from the major Fitzroy River flood event in 2011, with a lesser impact in 2013. The Yeppen – Rockhampton section immediately to the south of Rockhampton is similarly impacted by major Fitzroy River flooding, but with less duration and damage impacts.

### 24.3 IMPROVING FLOOD IMMUNITY

Improving flood immunity can include:

- ▶ Reconstruction to a higher level to limit potential overtopping (with appropriate waterway area provision).
- ▶ Installing additional under-track waterway capacity to safely pass peak design floods.
- ▶ Improving existing waterways by clearing debris and blockages, stream training, diversion drains, and levee banks, to improve/control flood flows.
- ▶ Improving flood resilience of existing track, embankments and structures (e.g. with gabion/flood-rock protection) to limit damage with flood overflow events.

Consideration in choice of upgrade include the local physical conditions, adjoining landowner issues, environmental considerations and licence approvals associated with any changes to existing waterways, in addition to the obvious capital costs and likely benefits achieved.

Flood immunity upgrades may be associated with other upgrades including bridge replacements, grade and horizontal alignment upgrades, and track upgrades.

The cost of providing improved flood immunity vary considerably, depending on level of immunity sought, remoteness, local features, and the extent of any prior repair and rectification works. The cost of gaining construction access and proximity of suitable flood-rock are also significant inputs into any

increased flood-immunity/flood-resilience option over extended sections of low lying, poor ground areas which are typical of the longer flood-prone sections north of Mackay.

Ideally having a track that is not subject to over-topping should be the target for this important coastal trunk route. The Q50 flood event (a 2% change of occurring in any year) has been the more recent civil design standard for culverts and overtopping, with a Q100 standard for bridges. This generally entails new construction, re-alignment and raising the railway to get out of flood prone areas. However retro-fitting legacy infrastructure to achieve this generally requires re-construction on a new alignment, with the higher costs involved.

The most cost effective flood-resilience system involves installation of a gabion alongside the track structure to retain the ballast in over-topping situations, with the downstream side supported by renomattresses (thinner wire cage filled rock basket) or larger dumped floodrock, depending on overtopping conditions and embankment height. Typical cost to install a wire rock-filled gabion (1.0 x 1.0 metre cross section) would be of the order of \$500/metre, with maximum utilisation of previously dumped flood-rock in those sections regularly subject to over-topping.

The beneficial experience of the outcomes of the extensive flood-resilience program undertaken on the Townsville – Mt Isa line in the 1980s, following years of major damage and long track outages, has demonstrated the cost effectiveness of a total corridor approach. The benefits include a significant reduction in repair costs, and reduced track outages.

#### 24.4 FLOOD IMMUNITY – CONCLUSIONS

Improving flood immunity, either by reducing the likelihood of flood over-topping, or by armour protection of the track and supporting embankments to prevent damage during over-topping events, should be pursued. A comprehensive study to assess the extent of flood-damage prone sections, and designing appropriate flood-free or flood-resilience measures should be undertaken, to inform on funding requirements and an implementation program.

A push to reduce access to Commonwealth Government national disaster relief funding for repairing track sections that regularly get damaged, should encourage investment in preventative flood immunity and flood resilience measures.

A separate assessment of current flood immunity of the State's road and rail freight networks is underway, and would form a valuable resource into detailed assessment and prioritisation in undertaking "flood immunity" works for the North Coast Line.

## 25. Train control upgrades

### 25.1 OVERVIEW

The current train control technology is summarised as:

**Brisbane – Purono and Woree – Cairns:** Remote controlled signalling, (RCS) with wayside colour light signalling and route setting, and remote controlled electric motor points activation from various control centres (Mayne Control Centre, Rail Centre 1, Rockhampton and Townsville) controlling specific geographic sections. This relies on the proprietary UTC train control system, with computer based route setting by train controllers, responsible for various geographic sections dependent on traffic density. Movement of trains between the various controllers and control centres is relatively seamless. The RCS is supported by wayside communications (fibre optic cable links and back-up radio links), providing main trunk route redundancy.

**Purono to Woree:** Queensland Rail's proprietary Direct Train Control system, which is a radio based train order system, providing Authority for a train to occupy a track section or number of line sections. This is a cost effective train control system for a low traffic density single line section, as relevant for the sections north of Purono. It relies on utilisation of mechanically assisted trailable facing points which are wheel activated for the exit of a train from each crossing loop, and require low speed operation (max 25 kph) through the turnout to safely operate.

The DTC system imposes a transit time delay comprising two components as follows:

- ▶ A train speed limit of 25 kph for all trains through each crossing loop exit turnout, even when not required to cross another train. This equates to a time loss of up to 2 minutes through each loop for a line speed of 80 kph if the loops were re-configured for mainline running (ignoring any other local speed restrictions).
- ▶ The time involved in releasing and granting of train Authorities for each train crossing. This imposes a time penalty of up to 5 minutes for each train in a train crossing.

The speed limitation through the 23 crossings loops on the section due to the trailable points would result in a transit time penalty of approximately 30 - 40 minutes, with potentially another 5 – 10 minutes delay for the 1 or 2 train crossings currently likely on the section.

Replacement of the DTC system with a RCS system would eliminate the DTC imposed train delays. A ball-park estimate to install RCS between Purono and Woree is \$400 million, assuming the need to upgrade the communications link along the route to support RCS. This could be significantly reduced with a simultaneous rationalising of the crossing loops on this section, more commensurate with its current low utilisation

### 25.2 TRAIN CONTROL UPGRADES - CONCLUSIONS

The DTC train control system north of Purono imposes a transit time delay to all trains, due to the speed limit through the turnouts. However the traffic volumes are low, and train numbers, even in a major growth outcome, are likely to remain low. This would provide limited justification for upgrading the current train control system, re-configuring the crossing loop ends, and replacing all loop turnouts with new, higher speed power operated points.

The current RCS system south of Purono comprises various equipment types and technologies a range of remaining asset lives and variable inherent reliability, depending on when originally installed and subsequent upgrades or asset renewals. An ongoing maintenance and asset renewal program is required to ensure operational reliability is achieved and maintained.

## 26. Traction options

The major practical tractive power options for freight trains are:

- ▶ **Diesel:** Actually diesel-electric (utilising electric traction motors powered by an on-board diesel engine); or
- ▶ **Electric:** Utilising a remote electric power source fed by an overhead catenary wire system.

The corridor from the freight terminals at Acacia Ridge and Moolabin to Rockhampton is electrified. North of Rockhampton and the link to Port of Brisbane are not electrified. The Blackwater coal system is predominantly operated by electric locomotives, and current extension of the overhead traction system to the Bauhinia Line will permit an increase in the proportion of electric hauled coal trains between Rocklands and Gladstone.

Electric locomotive hauled freight trains operated on the North Coast Line between Brisbane and Rockhampton between 1988 and 1998 (utilising Aurizon's 3900 Class general freight locomotives), requiring a change of locomotives at Rockhampton, for trains to Moolabin and Acacia Ridge, plus an additional locomotive change at Mayne for trains operating through to Port of Brisbane. The growth in the coal volumes at that time resulted in a progressive diversion of the 3900 Class locomotives to CQ coal traffic, with the 2800 Class general freight diesel locomotives providing through services along the corridor. The 3900 class electric locomotives were re-configured for heavy haul use in the Central Queensland coal networks.

The change of locomotives was inefficient in terms of locomotive deployment, requiring a small pool of locomotives (diesel and electric) in Rockhampton to effect the change of locomotives in each direction, and similarly in Brisbane to cater for Sea-Freighter trains to Fisherman Islands.

The operational advantages of electric traction over diesel include faster acceleration, and higher operating speeds on steep grade sections, both good attributes on the poorly aligned sections of the North Coast Line. Electric locomotives also offer higher utilisation (useful in a cyclic bulk haul operation), do not require re-fuelling, and have lower maintenance costs.

However a mixed diesel and electric system is sub-optimal, with the speed of the system (and capacity) generally dictated by the slower performing trains. Electric traction is not suitable within intermodal terminals, with the requirement to top-lift the loading/unloading of containers preventing overhead wiring in the loading roads, and separate shunting locomotives are generally required to place wagons under lifting equipment.

Electric traction also imposes another constraint with system reliability, with broader network impacts with power outages, and involving extra recovery time and costs with derailments. Failure of the traction system imposes a wider system impact on operations, and longer recovery time, compared to the more localised impact of an individual diesel locomotive failure.

The ability to adequately maintain a long thin electric traction overhead system, as inherent in the NCL route, is also likely to incur higher unit costs and slower rectification times due to time to access faults, compared to a more condensed, high-utilisation network as represented by the SEQ metro network and the Goonyella and Blackwater coal systems.

Extension of electrification north of Rockhampton would entail very high initial capital costs. The indicative cost to electrify Rockhampton to Townsville would be of the order of \$2.2 - \$2.5 billion, excluding acquisition of electric locomotives. Generally electrification would not be viable for nett gross tonnages of less than 30 Mtpa.

## 27. Rollingstock options

Upgrade options canvassed in previous Sections and considered not viable for extended operation on the corridor, include an axle load upgrade (above 20 TAL), electrification (extended north of Rockhampton) and double stack containers.

For intermodal freight, the options to improve productivity and capacity include the wider adoption of articulated wagons (refer comment in Section 18.5.2). The current three-pack articulated wagon utilised by Pacific National permits a nominal 5% increase in TEUs within the current train length constraint, and its design limits the adverse impact on train capacity with the transport of those containers longer than 12.2 metres (40 feet).

Current container heights are constrained by wagon floor height and overhead structures, including overhead wiring, over-structures (road and pedestrian overpasses, air-air-space structures and the tunnels north of Landsborough), and the bracing on some truss bridges. Current maximum height containers able to be railed are 10.0 feet (3.048 metres). There is currently limited demand for higher containers.

Short bulk haul freight tasks (sugar, molasses, grain) would benefit from the ability to use the current 20 TAL corridor capacity (with modest investment in upgrading the sidings at the mills and ports), when the current wagon fleets deployed on these traffics require renewal.

Locomotives heavier than 120 tonnes (20 TAL) are unlikely to be warranted for deployment on NCL general traffics, nor short haul seasonal operations (sugar), or short haul intermittent traffics (e.g. nickel and zinc ore), when the current generation of locomotives require replacement.

A wider deployment of the more powerful AC traction locomotives (as deployed by Pacific National on its NCL traffic and by Aurizon in its CQ coal traffic), would improve the efficiency and productivity of the NCL locomotive fleet, but be of limited benefit to enhancing capacity. However the deployment of new locomotives would be expected to enhance the reliability of freight train services, with fewer locomotive in-service failures, or operating under locomotive-caused load or speed restrictions.

## 28. South East Queensland Capacity Improvement Study

The NCLCI study was specifically aimed at the corridor between Nambour and Cairns, with the network south of Nambour being covered under the SEQCI study, and the privately owned freight terminals being out of scope. However any assessment of the performance of the corridor, including infrastructure upgrades and non-infrastructure initiatives needs to include consideration of both the SEQ network infrastructure and its operation, and the practical considerations associated with the location, configuration and operation of the current freight terminals, particularly within South East Queensland.

The issues addressed in the SEQCI Project and its conclusions of relevance to this NCLCI study are summarised below.

### 28.1 SEQCI PROJECT GOALS AND SCOPE

The objectives of the SEQCI Project included:

- *Identify infrastructure and operational options that align with and will realise passenger and freight benefits and support efficient operations over the next 10 and 20 year timeframes*
- *Undertake a holistic, integrated assessment of identified operational and infrastructure options to identify the most cost-effective, value-for-money investments to support passenger and freight requirements.*
- *Develop 10 and 20 year investment options for the SEQ rail system to support passenger and freight requirements*
- *Provide the basis for the development and implementation of a 10 year rail investment strategy for the SEQ rail network, a priority initiative for TMR, having regard to the development of the SEQ rail network.*

The Project included consideration of future passenger peak periods demand and the infrastructure required to support these demands. From a freight perspective it included consideration of the effects of peak spreading, Citytrain stabling requirements and their impacts on the network around the peaks, and a higher off-peak service frequency on the ability to provide freight paths through the network.

Future freight demand was not assessed, rather future freight scenarios were considered to inform on infrastructure and operational options. The performance of longer freight trains on the North Coast Line and western coal system were dynamically modelled to assess their impact and the ability to operate these through the network. The feasibility of a “freight priority” policy in the off-peak was investigated.

### 28.2 SEQCI PROJECT FINDINGS

The issues of relevance to the North Coast Line are summarised as:

**Additional Peak Passenger Demand:** Additional services are required to satisfy Sunshine Coast commuting demand to Brisbane, with proposed additional services commencing at Landsborough and requiring extra infrastructure capacity to accommodate.

**NCL Freight Capacity Limitations:** The current single line sections between Beerburrum and Nambour impose the current major constraint with the interaction with the passenger services

(Citytrain and Traveltrain) and freight trains. This is exacerbated by the crossing loops at Landsborough, Mooloolah and Woombye having restricted use due to any waiting freight train blocking the road open level crossings (Landsborough and Mooloolah), and a pedestrian level crossing (Woombye), and stations at Mooloolah, Eudlo, Palmwoods and Woombye having only one platform. The section is also characterised by slow speed alignment, with numerous sharp curves and undulating grades.

**Dead-Running of Citytrain Services:** The lack of sufficient near-terminus overnight stabling for Nambour services imposes greater freight train pathing limitations on the single line sections between Beerburum and Nambour.

**Key junction constraints:** The flat junctions at Sherwood, Countess Street, and Mayne impose crossing conflict constraints with Citytrain services. NCL freight trains also compete with western system freight services (coal, grain) accessing to Fisherman Islands on the Tennyson Branch and the Yeerongpilly and Sherwood – Corinda junctions. The junction geometry (turnout angles) generally impose low speed operation for freight trains

**Salisbury – Yeerongpilly – Lytton Junction Freight Capacity Limitations:** This section includes the interaction of western freight services (predominantly via Corinda and Yeerongpilly to Fisherman Islands), with NCL Intermodal services (to Acacia Ridge, Moolabin and Fisherman Islands via either Sherwood or South Brisbane). Issues include shared use of the dual gauge track between Salisbury and Dutton Park with Citytrain services, the limited functionality of the crossing loop at Murarrie, and the need to utilise the narrow gauge tracks (usually for west-bound empty freight trains, due to capacity limitations on the dual gauge track.

**The Scheduled Corridor Access System (SCAS) closures** for infrastructure maintenance on the separate Citytrain corridors imposes significant adverse direct and flow-on impacts on freight services, with no practical rail freight work-arounds, compared to the bussing strategy for rail passengers. NCL freight services are impacted by scheduled closures on each of a number of the corridors.

**Off-Peak Citytrain Service Frequencies:** The current NCL freight demand is readily accommodated between the current off-peak service frequencies, with freight train running generally keeping pace with all-stopping Citytrain services on the route south of Caboolture, and the gaps in the timetable at key junction conflict points adequate for transiting a freight train through. An increase in off-peak service frequencies will reduce the time available to transit a slow moving freight train through the critical junctions, particularly at Countess Street and Sherwood.

**Longer NCL Freight trains:** A 1,450 metre long intermodal train was modelled through the network, to confirm running times and time required to clear signals through the key junctions. The transit times on the shared sections south of Caboolture were similar to the current length freight trains, and generally keep pace with an all-stopping Citytrain service. The time to clear signals at Countess Street (southbound freight via Milton) and Sherwood (northbound freight) increases from a current 3 minutes (standing start at each approach signal) to approximately 6 minutes for the longer train. A higher frequency day-time, regular clockface timetable for Citytrain services under a *passenger priority* regime would not permit freight services through either of these junctions.

**Passenger Priority** provisions and their application into master train planning and day-of-operations scheduling. An off-peak *“freight first”* priority regime, providing green-light running for freight trains would counter-intuitively consume more train pathing time than the current scheduling arrangements; however a priority system that permitted freight paths to be allocated, with the imposition of relatively minor delays to some Citytrain services to transit freight trains through the key junctions during the day-time, week-day off-peak was viable. Introduction of longer NCL trains would require Citytrain timetabling to provide suitable gaps to schedule freight trains through the key junctions at Sherwood,



Countess Street and Mayne. This scheduling is not an issue for the preferred freight train pathing in the evenings and early mornings, nor for weekend operation.

**Bus and Train (BaT) Project;** The issues arising from the BaT project planning and proposed scope are limited to the freight impact between Salisbury and Lytton Junction, and impacts on the Exhibition Branch for BaT trains accessing into Mayne for stabling. The former mostly impact on western system freight trains accessing to Fisherman Island, with only limited impact on freight trains to and from Acacia Ridge.

## 28.3 SEQCI CONCLUSIONS AND COMMENTS

### 28.3.1 Northern Corridor

Additional peak passenger services are required to meet demand, with the suggested introduction of Landsborough peak period starting services to cater for the predominant demand from the southern Sunshine Coast region and the Maleny region. This would require the extension of the duplication north of Beerburrum to at least Glasshouse Mountains, and desirably to Beerwah or Landsborough. It would also require an extra turn-back platform at Landsborough, or a separate freight passing loop provided to the north of the Gympie Street level crossing (eliminating the restriction of this level crossing on freight train crosses). Any duplication would likely include re-alignment to at least a 100kph standard, if not to a previously designed 160kph standard. A thru-running freight train time saving of approximately 5 minutes is estimated with this re-alignment, plus time savings associated with not having to use a loop for any train crossings.

Second platforms are desirable at Eudlo and Palmwoods to provide operational and timetabling flexibility. A stabling depot in the vicinity of Nambour is required to reduce impacts of dead-running on corridor capacity on the single line sections. This is currently planned to be located just to the south of Woombye, due to constraints in the Nambour area.

A new stabling depot is also planned at Elimbah to provide additional stabling capacity for growth in Caboolture services and proposed new Landsborough services. The provision of stabling at Kippa Ring as part of the Moreton Bay Rail Link project will also reduce current dead-running pre- and post the weekday peaks, which currently occurs between Mayne and Petrie for the current Petrie services.

These upgrades will help with freight path scheduling and day-of-operations robustness for freight trains on this section, and contribute to the provision of additional usable freight paths on the North Coast Line.

### 28.3.2 Salisbury – Lytton Junction

Potential upgrades for the Salisbury – Lytton Junction section include upgrade of the Murarrie crossing loop to permit use for coal trains, establishment of an additional crossing loop on the dual gauge line near Buranda, signalling headway upgrades between Cannon Hill and Park Road, and upgrading the crossover at Lytton Junction (to a 50 kph speed).

Temporary stabling of out-bound passenger trains during and post their AM peak runs is proposed at Murarrie to maximise through-put through Park Road junction, prior to their routing back to day-time stabling (e.g. at Clapham). This would have some impact on freight train scheduling on this corridor, following the AM peak.

### 28.3.3 SCAS and freight priority

Alternative options to provide some windows for diesel hauled freight trains to safely access through a week-end SCAS closure should be investigated. This would be on a case-by-case basis, subject to the specific work being undertaken during the SCAS event.

An absolute “freight priority” during the off-peak was not considered appropriate given the impact on overall network capacity. Rather a less restrictive application of the current *passenger priority* to permit master planning to fit a freight path through the network during the off-peak, with day-of-operations scheduling to minimise delays to freight trains through the critical junctions, was seen as optimising capacity of the network and optimising overall performance.

## 29. Northside freight terminal

A Northside Freight Terminal (NFT) has been suggested in recent times as possibly being warranted to address the north Brisbane and Sunshine Coast markets, and as a facility for assembling longer freight trains. This could be the catalyst for a major logistics hub, with adjacent Distribution Centres.

A location on current State owned land at Beerburrum has been identified as being suitable.

From a NCL intermodal freight perspective, the advantages of a northern terminal include:

- ▶ Reduction in the transit time to northern centres (reduces current rail line-haul transit time by approximately 1.5 hours).
- ▶ Green-fields site capable of being designed to directly accommodate long trains (up to the notional 1500 metres)
- ▶ Eliminates most of the impact of the commuter passenger curfew periods from freight train pathing north of Beerburrum, increasing freight train scheduling flexibility and ability to more fully utilise the capacity of the North Coast Line.
- ▶ Significant reduction in the impacts of the Metro network maintenance closures (SCAS closures and other night-time closures) on freight network reliability and availability.

The negatives include:

- ▶ New terminal capital costs and potential stranding risks in competition with road transport.
- ▶ Terminal ownership issues (with at least the 2 current operators).
- ▶ Timing issues and location issues for the next generation of major Distribution Centres.
- ▶ Road distance from the current SEQ transport hubs and Distribution Centres.
- ▶ No direct rail access to the Interstate Standard Gauge rail network. (Potential requirement for rail shuttles, with cost/time penalties inherent with short shuttles).

## 30. Summary and conclusions of infrastructure upgrade options

The North Coast Line comprises a mix of original alignment design constraints, typical of a low cost developmental railway, old bridge structures nearing the end of their economic lives, together with more recent upgrades. The corridor imposes axle load, train length and rollingstock outline limitations along its length. Corridor performance and reliability are compromised by the mix of traffic types and priorities, the separate ownership structures and train control functions along the route, differing maintenance closure arrangements, and flood immunity issues.

A range of infrastructure upgrade options possible were considered to address perceived deficiencies. These are primarily focussed around rail freight operations and include:

- ▶ Reducing the impact of corridor alignment constraints (grades, curves) – primarily impacting on transit times, operating costs, reliability and availability
- ▶ Train payload constraints (axle load, train length, wagon loading gauge)
- ▶ Aged infrastructure assets (bridges, track)
- ▶ Improving flood immunity
- ▶ Alternate train control and traction options

The indicative scopes and capital costs for the various upgrade options have been assessed, together with an assessment of anticipated benefits.

Whilst the corridor infrastructure imposes constraints on the competitiveness of the corridor for freight, the ability to take advantage of a number of the upgrade options will require complementary investment by Rail Operators in rollingstock and freight terminals.

The basic fabric of the existing railway dictates that there is no “do nothing” option with regard to the corridor infrastructure, with a number of old steel and timber bridge structures, and signalling equipment and telemetry systems nearing the end of their economic lives. Most of the track structure north of Townsville is marginal for current 20 tonne axle load application, and the high wear turnouts require an on-going replacement/upgrade program.

The length of the corridor and scale of any upgrade along the length of the corridor to effect a fundamental quantum change to freight operations are substantial, both from a total cost and staging perspectives. A program of staged upgrades, providing incremental benefits to parameters such as transit time and flood immunity is more practical, with priorities driven around existing asset condition (e.g. old bridges), and traffic volumes deriving the benefit.

From an assessment of the various upgrade options the following options that are desirable and will improve corridor performance include:

**Deviations – curve easings** to improve train speeds and train performance. There are extensive, long slow-speed sections incorporating poor vertical alignment between Beerburrum and Maryborough West. Further north the slow speed sections are also typically associated with remaining old timber or steel bridges. Re-alignment will provide the dual benefits of renewal of life expired assets and transit time savings, together with lower train operating and infrastructure maintenance costs. Individual deviations provide limited transit time savings, whereas a program of upgrades can provide a material improvement in transit times. The greater benefits will accrue in the more highly utilised sections, generally south of Gladstone.

**Bridge replacements:** The progressive replacement of the remaining timber and steel bridges is needed in any event to maintain a safe railway. The majority of these bridges are on poorly aligned sections, whose replacement was not able to be funded under the Main Line Upgrade Project in the mid-1990s. The replacement of these bridges on improved alignments will provide transit time benefits on these sections, with a cumulative benefit along the corridor.

**Loop extensions:** Longer trains provide operating cost savings and increased corridor capacity. Selective extension of crossing loops to permit longer train operation, with the priority crossings dictated by the take-up of running longer trains, planned crossing locations, and level of robustness required with the operating plan. It should be noted that longer trains will require consideration of how these trains are managed at terminals, with no intermodal terminal currently capable of directly accepting or dispatching a longer train.

**Flood immunity upgrades:** This can include a range of solutions, including deviations away from the flood prone areas, raising the track, increasing waterway openings, and physical protection (armouring) of the track structure from damage from flood-water over-topping events.

**Track upgrades:** This applies particular to the marginal standard track between Townsville (Yabulu) and Cairns, where the predominant 41 kg/m rail on steel sleepers limits the freight train line speed to a maximum 80 kph. Relaying with heavier rail on concrete sleepers would permit an upgrade of the line speed.

The following options that are **considered NOT VIABLE** due to excessive cost and or limited benefit are:

**Axle load upgrades** above the current 20 TAL rating, other than where viable for short haul bulk freight traffics with volumes and project lives that warrant the greater efficiencies of higher axle loads. Re-equipping of the bulk sugar, molasses and grain wagon fleets to utilise the current 20 TAL corridor capacity will require minor investment in siding upgrades, and should be contemplated at that time.

**Utilising of electric traction** provides improved performance and lower operating costs, but the initial capital costs in extending the overhead electric traction system north of Rockhampton are very high and North Coast Line freight volumes would be unlikely to warrant any serious consideration of this. Re-introducing electric locomotives on the currently wired Brisbane – Rockhampton section, is also unlikely, given the inefficiencies in changing locomotives and constraints at the Brisbane end freight terminals.

**Increasing loading gauge:** “Well” wagons which would permit container double stacking is not feasible within the Brisbane metro region without a major re-building of platforms on the freight routes, and height restrictions with overhead structures and the overhead wiring make raising the height of loadings unlikely to be viable. Track centres limit the ability to permit wider loads.

**Ruling grade:** The current ruling grade for loaded north-bound freight trains is located between Yarwun and Aldoga on the Aurizon network. Flattening this grade was previously investigated in conjunction with the upgrades and additional tracks associated with the Wiggins Island Coal Terminal; but was rejected by the then QR National as not financially viable. Improvements to other steep grade sections associated with curve re-alignments will provide operational benefits with improved train handling, lower fuel consumption and reduced section run times; but not fundamentally change the locomotive – trailing load constraint imposed by the Aldoga bank ruling grade section.

**Train control systems:** The current Remote Controlled Signalling (RCS) operates from Brisbane to Purono (just north of Townsville) and between Woree and Cairns. The Train Order DTC system operates between Purono and Woree. This is a slower system, relying on radio

transfer of section possession authority between the Control Centre and train driver, with a longer delay when crossing a train, and requiring slower operation through the trailable turnouts at each loop. However the number of train crosses current and likely north of Purono is very limited, with an upgrade of this section to RCS unlikely to be warranted.

**“Capacity”** is not an issue with the current infrastructure and freight task; however increased total market growth should increase total rail volumes, assuming there is a commitment to maintain the relevance of the North Coast Line for contestable intermodal freight. There is current “spare” capacity along the route, with a loss of rail market share in recent years, a rationalising of freight trains being operated on the corridor, and a consolidation of loadings on remaining trains. The current “initial capacity constraints” are within the Brisbane metro region, and these are being addressed elsewhere. These capacity constraints include the single line sections between Beerburrum and Nambour, junction issues south of Caboolture, and the limitations around the week-day passenger peak operations. Corridor capacity upgrades on the section north of Nambour will be primarily addressed with running more trains, including addressing some current crossing loop operational constraints, longer train options, and improved section run times on the longer single track sections.

Improved reliability and availability will likely involve replacement of life expired assets (old bridge structures, signalling equipment, turn-outs), reducing the impact of the higher maintenance sharp curve sections, and improving flood immunity.

## 31. Service parameters - overview

Key primary freight rail performance criteria from a customer and corridor perspective include cost, transit time and reliability. Other important criteria from a freight customer perspective include ease of doing business, responsiveness and flexibility. The rigidities of rail operations (network timetabling) and rail industry structure are negative impacts on these attributes compared to road freight transport. Rail must compete more heavily on the primary service parameters if it is to remain a viable freight mode choice for contestable freight. For non-contestable bulk freight, rail must also perform on cost and reliability criteria for those industries reliant on it to remain competitive.

Rail currently competes predominantly on cost, and cannot compete on door-to-door transit time. "Reliability" is partly a perception issue, and rail does not perform well on this measure, even if it physically matches road reliability. For rail, negative reliability perceptions are magnified by the scale of the outcome, being "train" size rather than individual "truck" size consequences.

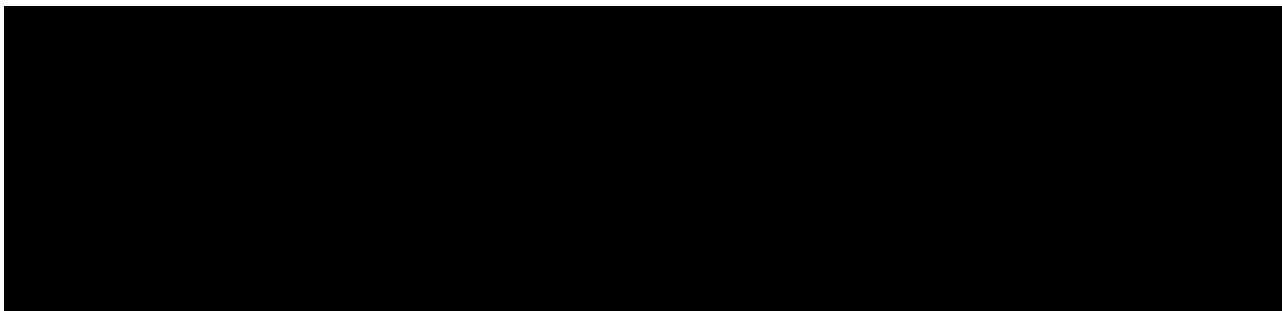
Rail suffers from the fragmentation of the industry (two rail network owners, two current rail operators), the need for a Pick-up-Delivery leg at each end, with the remoteness of the various participants in the transport chain from the end-customer, and with no single point of accountability for the final performance outcome. Rail also suffers from its operational rigidities (e.g. train timetabling, limited line-haul services plans), and cannot match the flexibility of road transport in this aspect.

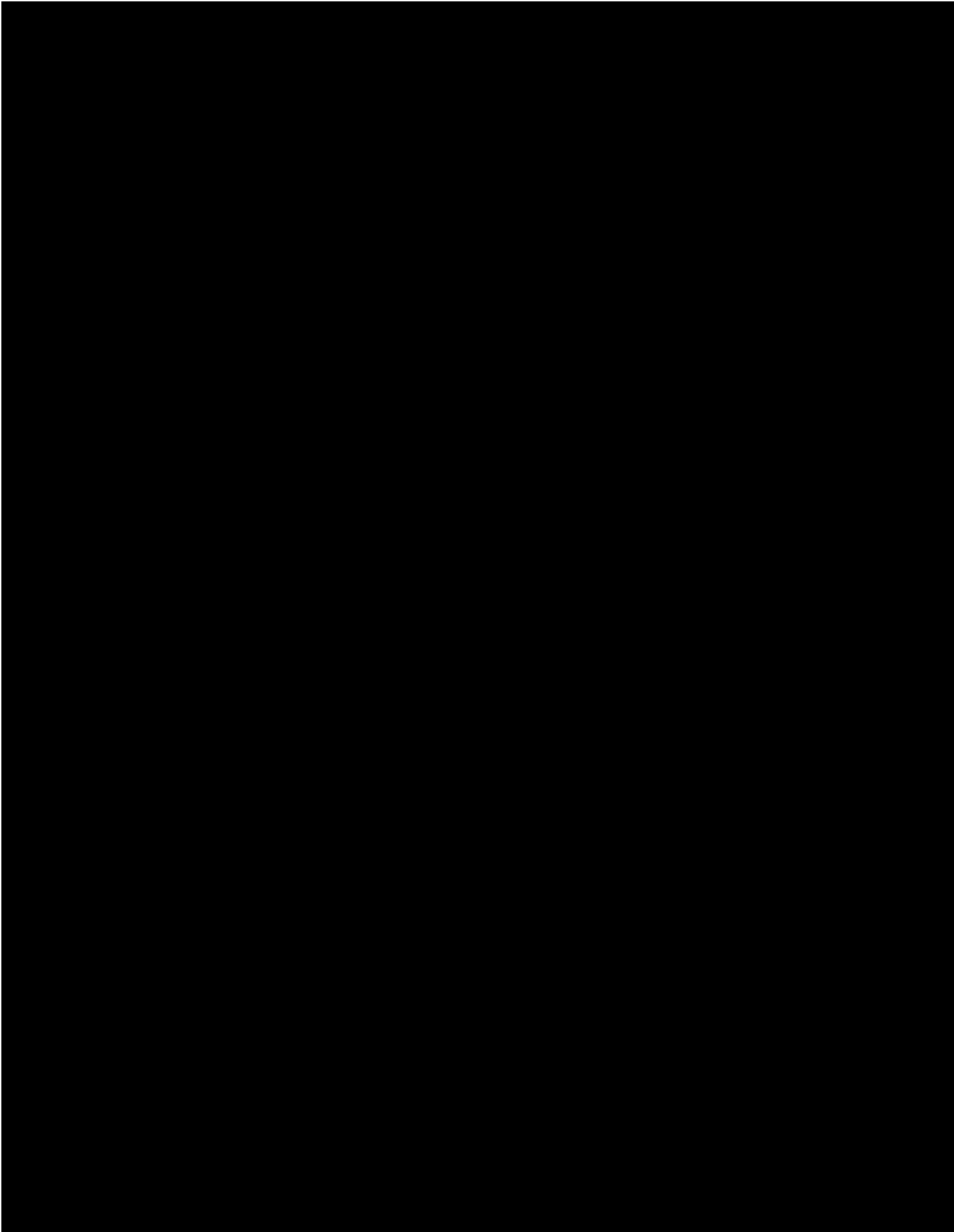
Previous Sections 17 to 30 evaluated relevant infrastructure related parameters impacting on cost, transit time and reliability.

There are a number of non-infrastructure issues that similarly influence service parameters from a Rail Infrastructure Manager and Rail Operator perspective. These include:

- ▶ Track access charges.
- ▶ Master Train Plan derivation, and its reliability of achievement.
- ▶ Train scheduling priorities.
- ▶ Rail Operator performance (equipment capability and reliability, train operating discipline [on time departures]).
- ▶ Train crewing requirements (crew availability).
- ▶ Terminal performance.

A number of these corridor performance related issues are addressed in the following sections.







## 31.2 TRANSIT TIME COMPETITION

Previous Section 12.1 identified current rail transit times for the major OD pairs, and compared these with road freight line-haul legs. This is summarised in Table 31.1 and graphically in Figure 31.3.

**Table 31.1 Regional NCL travel distance and line-haul transit time from Brisbane<sup>56</sup>**

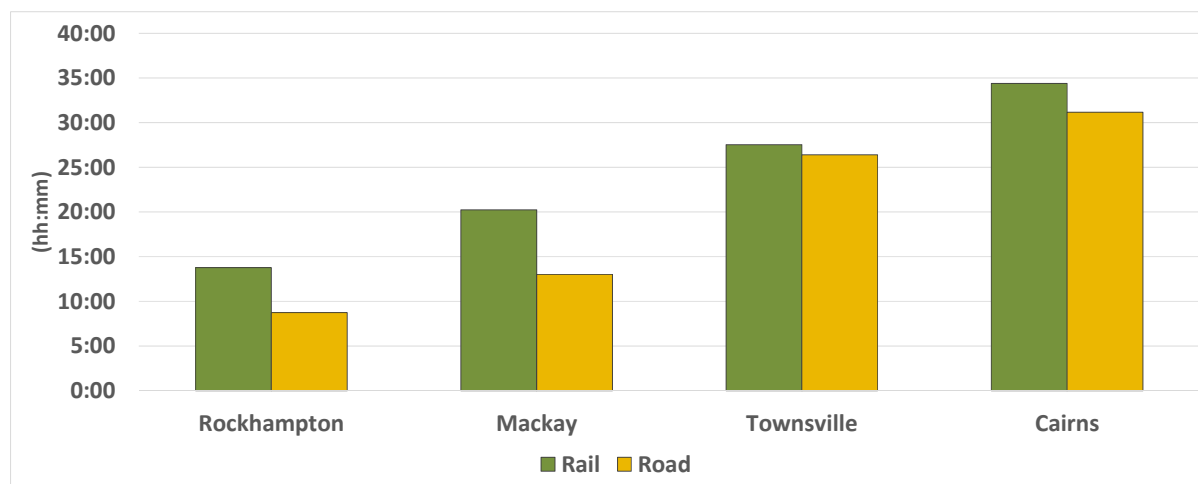
| Brisbane to:       | Road          |                               |  | Rail                     |                          |
|--------------------|---------------|-------------------------------|--|--------------------------|--------------------------|
|                    | Distance (km) | Travel time (no rest periods) | Travel time + 7hrs stationary rest + 1hr general | Green light transit time | Average MTP transit time |
| <b>Bundaberg</b>   | 391           | 5 hrs 2 mins                  | –  | –                        | –                        |
| <b>Rockhampton</b> | 660           | 8 hrs 44 mins                 | –  | 9 hrs 39 mins            | 13 hrs 46 mins           |
| <b>Mackay</b>      | 990           | 13 hrs 1 mins                 | –  | 14 hrs 26 mins           | 20 hrs 14 mins           |
| <b>Townsville</b>  | 1,379         | 18 hrs 24 mins                | 26 hrs 24 mins                                   | 19 hrs 37 mins           | 27 hrs 32 mins           |
| <b>Cairns</b>      | 1,721         | 23 hrs 10 mins                | 31 hrs 10 mins                                   | 25 hrs 29 mins           | 34 hrs 24 mins           |

The road travel times include the direct door-door journey, assuming full container load (FCL) or full truck load for each mode. The rail transit times cover only the line-haul terminal – terminal times, excluding the Pick-up-Delivery (PUD) legs and the waiting times and handling times within the terminals (includes allowances for road delivery Cut-Off Time, Freight Pick-Up Availability time, and the train loading and waiting times pre-despatch and post-arrival).

Even if rail could compete on transit time for the line-haul leg by straightening track, running faster trains and co-locating a Brisbane origin Distribution Centre with the rail terminal, it cannot compete on a customer door-door transit time for the major centres on the NCL.

<sup>56</sup> National Heavy Vehicle Regulator – NHVR Website – NHVR Journey Planner

**Figure 31.3 Road–rail line haul indicative transit times**



It is clear that rail cannot compete with road on transit time, particularly given the rigidities of rail freight train scheduling, with limited options for train despatch times, compared to the flexibility of individual truck scheduling and despatch times from customer premises. The planned upgrades to the Bruce Highway will provide some improvement to road freight transit times, but importantly provide increased transit time reliability.

Whilst transit time is important (and has some influence on transport costs), the key requirement for a customer is reliably arriving at the destination on-time and to meet its pick-up requirement, together with having a despatch cut-off time that also meets its business requirements. Arriving too early has limited value to the customer, other than being a measure of contingency for potential transit time delays.

Transit time has a secondary impact on costs, with notionally lower crew costs, and potentially lower energy and other running costs. Asset utilisation for intermodal freight is not greatly impacted, with the current rail operating paradigm based on scheduled service times, and scheduling and extended terminal occupation at both origin and destination terminals (unlike cyclic bulk rail haulage).

### 31.3 RELIABILITY

Reliability in this context has two elements. These are:

- ▶ Day-to-day operational reliability – “Did the train arrive on-time?”
- ▶ Availability of the network – “Did the train run at all?”

These elements include the impacts of:

- ▶ Individual Rail Operator performance on its own operation (scheduling discipline, crew availability, equipment performance, terminal performance)
- ▶ The performance of other Rail Operators and the Network Infrastructure Managers on the network.
- ▶ Corridor infrastructure performance (infrastructure failures, derailment caused delays).
- ▶ External caused events ( e.g. level crossing incidents)
- ▶ Weather caused delays (e.g. flooding and flood damage impacts, extreme hot weather speed restrictions).

- ▶ Planned major network closures for infrastructure maintenance (e.g. the Scheduled Corridor Access Scheme (SCAS) extended weekend corridor closures within the SEQ Citytrain network).

Stakeholder feedback (from SEQRFTS) in respect of the NCL reliability included:

- ▶ The North Coast Line rail corridor is considered to be severely under-capitalised and coupled with a fragmented multi-party supply chain ownership and governance structure delivers poor reliability.
- ▶ Where rail is utilised on long haul corridors, road is also used in parallel with a quoted 60/40 rough split of volumes between rail and road, largely as a hedging strategy against rail reliability issues and high cost of single point failure.
- ▶ The Mid North Coast region, up to Mackay, is acknowledged as being a road captive corridor. Rail becomes competitive on cost above Mackay and has a reasonable differential once you reach Townsville. However reliability remains an ongoing issue. Only major customers with scale and substantial freight volumes can realise the benefits of the cost differential even with reliability issues leaving other smaller mid-market customers road centric.
- ▶ A rail-based supply chain is seen as a higher risk option with a far greater impact of single point failure. As such reliability is seen by customers as a “ticket to the game” and in fact needs to exceed that of road before becoming contestable.
- ▶ Factors noted as favouring road over rail included:
  - ▶ Rail suffering poor reliability for North Coast Line movements thereby pushing freight onto road even for long hauls.
  - ▶ Wet weather impacts on rail access issues in Far North Queensland
- ▶ Rail is not perceived by customers as being as robust when compared to road especially with respect to the impact of extreme weather events and recovery time durations.

Feedback from the NCL Supply Chain Forum (March 2013) included:

- ▶ The Forum identified the impact of track maintenance closures across the network and whether changes were possible to make the track possessions for these maintenance activities more aligned given the NCL freight services transitioned multiple networks (SEQ, NCL and CQ Coal Network).
- ▶ Rail infrastructure on the NCL was highlighted as a concern and potential impediment to the reliability and efficiency on the NCL. This issue had two main dimensions. Flood immunity and recovery was considered critical to enable rail to effectively compete with road on the NCL.
- ▶ The NCL Forum also identified the critical nature of train transit time performance that ensured on time running, the maintenance of train path priority and the potential to examine path flexibility in the Master Train Plan (MTP) that improve train service reliability and recovery.

The road network (Bruce Highway) historically has suffered from more numerous flooding impacts; but it generally can resume operations for freight vehicles sooner than is possible with the rail network, particularly where damage has occurred to the rail infrastructure. Road may also have the advantage of multiple options for detours in certain locations, not possible with a single track rail corridor.

The consequential impacts on road freight operations are much less following disruptions, than with rail, due to a combination of the size and diversity (including geographic diversity) of the road freight industry, compared to the rigidities of rail and the impacts disruptions have to a limited train fleet, train cycle durations, single track corridor limitations, and the rail terminal capabilities.

The road network also does not suffer from the equivalent of major planned shutdowns as does the rail network, with travel disruptions to road users for maintenance or construction works being of short duration (minutes) or temporary deviations constructed, rather than the days or hours disruption time required for rail infrastructure activities.

### 31.4 CONCLUSIONS – SERVICE PARAMETERS

The main mode competitor to rail for contestable intermodal freight is road transport. Currently rail competes only on price, which is an attraction to the big customers for part of their business, but less so for the smaller or occasional customers.

Rail cannot compete on customer door-to-door journey time. Even if the rail corridor infrastructure standard and rail service could match road on a line-haul transit time basis, the extra rail mode journey time components covering door-to-door cannot be overcome. These include the length/duration of the extra PUD legs, waiting time for trucks at the intermodal terminals, the rail pre-departure and post-arrival activities covering shunting and train examinations, and waiting for the specific train path through the network.

However, whilst transit time is important, both in practical terms and in customer perceptions, reliability of the journey time (departure and arrival time) is a far more significant service parameter for rail. Arriving late is unacceptable for most customers' *just-in-time* supply chains, whilst arriving earlier than planned has limited benefits that generally cannot be realised by the customer.

For rail, reliability is the most significant measure that can be addressed. This includes:

- ▶ Reliability of day-of-operations performance (on-time performance) for the total door-door journey.
- ▶ Reliability that the services will be run (akin to corridor availability) with the likelihood of outages for a range of planned and unplanned events.
- ▶ Reliability in respect of integrity of the freight (e.g. damage to freight)

There is a perception that rail is more unreliable than road from flooding events (even if this is not the case). However the investment under the Bruce Highway Action Plan over the next decade will certainly make the Bruce Highway far more immune to flooding outages, and increase this perception if this flood-resilience upgrade is not at least matched by a similar upgrade of the NCL rail link.

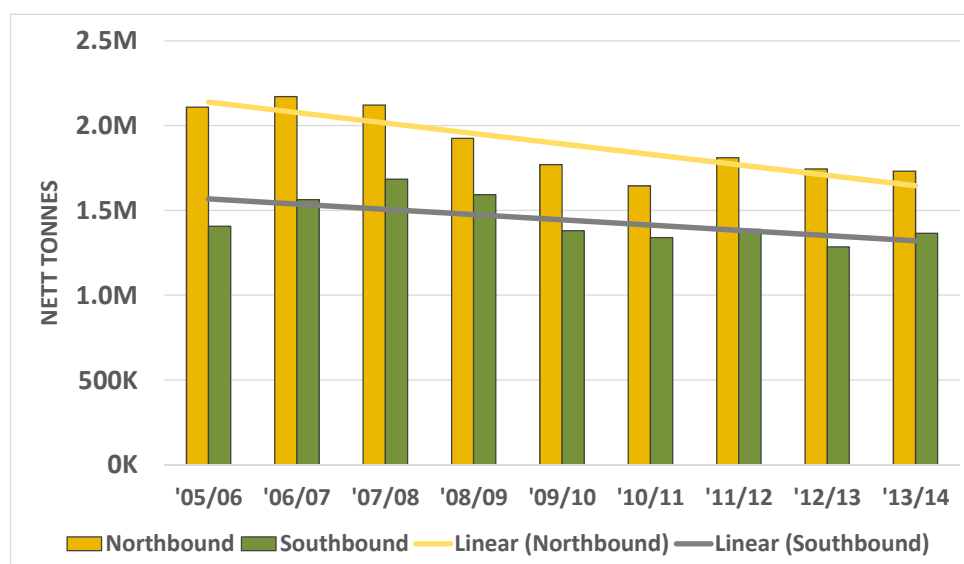
## 32. Demand scenarios

### 32.1 CONTESTABLE INTERMODAL FREIGHT

#### 32.1.1 Intermodal Volumes

Previous Section 12 identified current demand and recent historical trends for intermodal freight, and these are summarised in Figure 32.1. There was a 20% decline from the peak in 2007/08 to 2012/13, with a marginal improvement in 2013/14. This was during a period of robust investment in the resources sector in Central Queensland (driven primarily by LNG and coal) and growing regional populations, but with the variable impact of the Global Financial Crisis on industry and consumer demand.

**Figure 32.1 Recent Queensland NCL intermodal volumes (Mtpa)<sup>57</sup>**



Note: Nett Tonnes includes the tare of the container

Current intermodal train services operated by both Aurizon and Pacific National are only 6 – 7 per day each way out of Brisbane, primarily servicing Rockhampton, Mackay, Townsville and Cairns. The Aurizon operated services have been significantly rationalised in recent years, reflective of the demand for its services and its internal cost reduction measures.

The reduction in utilisation of NCL freight train paths out of Brisbane in recent years has been dramatic, falling from 94 each way paths/week in 2007, to 73 in 2010, and 53 in 2013. This includes all general freight trains, with the reduction primarily in sweeper trains servicing the minor centres, and consolidation of remaining loadings into the now OD specific intermodal trains.

The current (2013/14) intermodal traffic task translates to a total 315,000 TEUs pa (combined domestic and IMEX northbound and southbound).

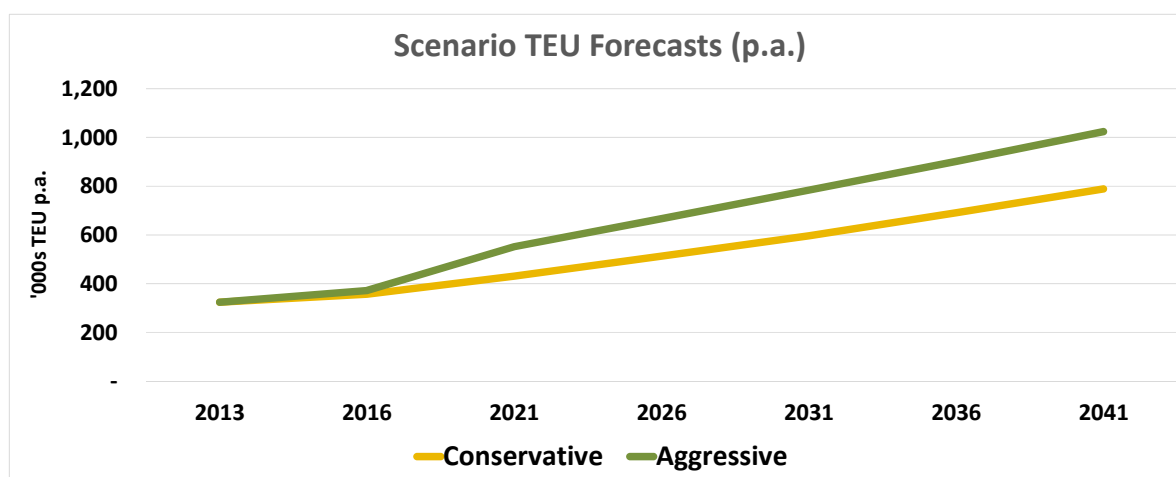
The demand forecasts undertaken by Deloitte's for the SEQRFTS are as summarised in Figure 32.2. The demand modelling scenarios considered include:

<sup>57</sup> Queensland Rail Train Service Data.

- ▶ Scenario 1 - Assumes a relative decline in rail mode share due to a lessening of rail competitiveness (minimal rail stay-in-business investment only compared to continuous investment in upgrading the road network and increasing road freight efficiencies).
- ▶ Scenario 2 – Assumes maintaining rail mode share, assuming continuing rail investment to preserve the relative road/rail competitiveness.
- ▶ Scenario 3 – Assumes a growth in rail mode share (based on an effective increase in cost competitiveness for the purposed modelling methodology )

All scenarios assume adequate capacity is available (both corridor capacity and above-rail capacity) to cater for the absolute growth in rail volumes (similarly for accommodating the road market share). Figure 32.2 below shows the book-ends of the demand modelling, to establish indicative boundaries around potential rail intermodal volumes between Brisbane and the major Central and North Queensland centres.

**Figure 32.2 Future NCL intermodal growth scenarios (SEQRFTS – Deloitte -2014)**



The SEQRFTS demand modelling only covered SEQ as an origin/destination for NCL intermodal freight. It did not address the intermediate shorter haul industrial intermodal freight tasks emanating from the Gladstone region and Townsville Port (e.g. cement), nor the potential for intermodal freight (fuel tank containers) out of Mackay Harbour or Gladstone to service the Bowen and Galilee Basins (both utilising short sections of the NCL). The modelling for the intrastate domestic intermodal freight is heavily influenced by population and economic growth in the major coastal centres, assuming the SEQ region retains the primary “distribution centre” role for Central and North Queensland.

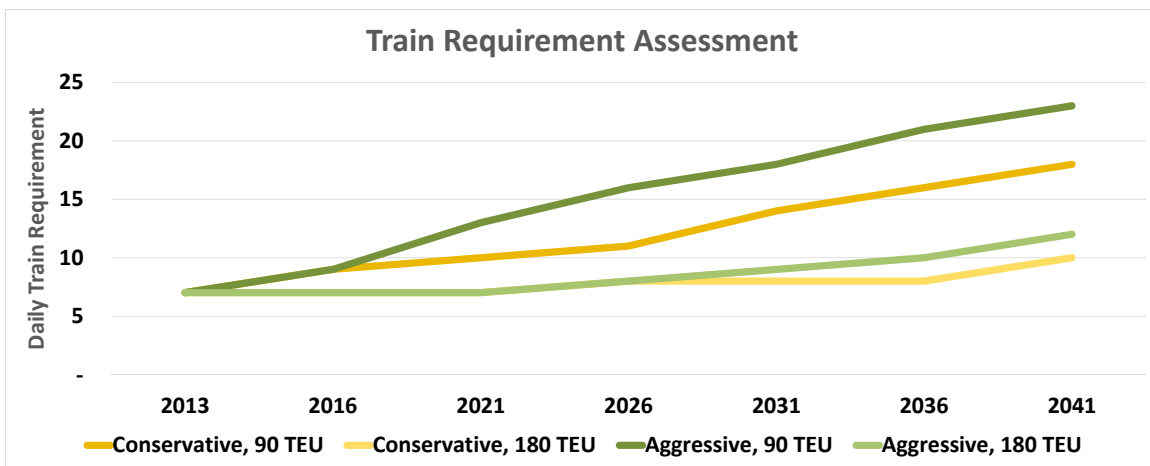
The Import-Export (IMEX) rail task has a different modelling basis, and may not adequately reflect the impact of future direct shipping container line utilisation of Townsville Port, and potentially through Mackay and Gladstone ports, as volumes may increase from within these regions. This has been evidenced with the recent reduction in NCL rail SeaFreighter services from North Queensland to Port of Brisbane, following the diversion of export containers through Townsville Port.

The rail volume forecasts for even the more pessimistic future scenarios, indicate a significant volume growth, which has not been matched by recent years’ experience with regional growth outcomes (Figures 32.1 and 32.2 above). This highlights the uncertainties of demand modelling in the dynamic Australian freight market and in forecasting mode share. It also highlights the difficulty in arresting further decline in total rail intermodal volumes and in market share, even without any potential to grow market share. Working Paper 2/3 highlighted these issues and mode share experiences on the similar Melbourne-Sydney-Brisbane corridor.

### 32.1.2 Intermodal Train Numbers

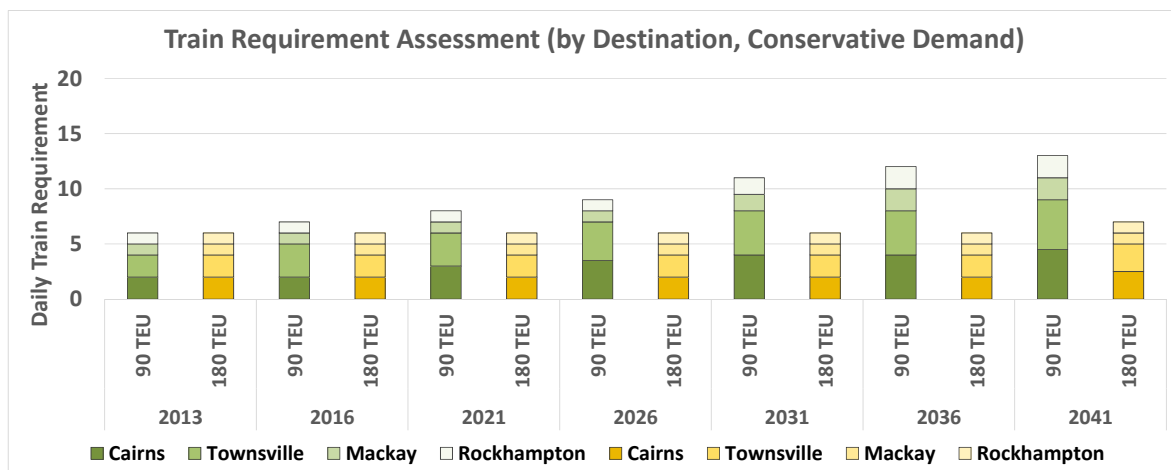
Rail intermodal demand exhibits some seasonality (heavy pre-Xmas), and has week-day peaks (generally Monday, Thursday and Friday). Assuming this demand pattern continues, the demand forecasts translate to maximum each way intermodal train numbers to/from Brisbane for current length and double the current length trains as per Figure 32.3.

**Figure 32.3 Train numbers to meet growth scenarios (current length and longer trains)**

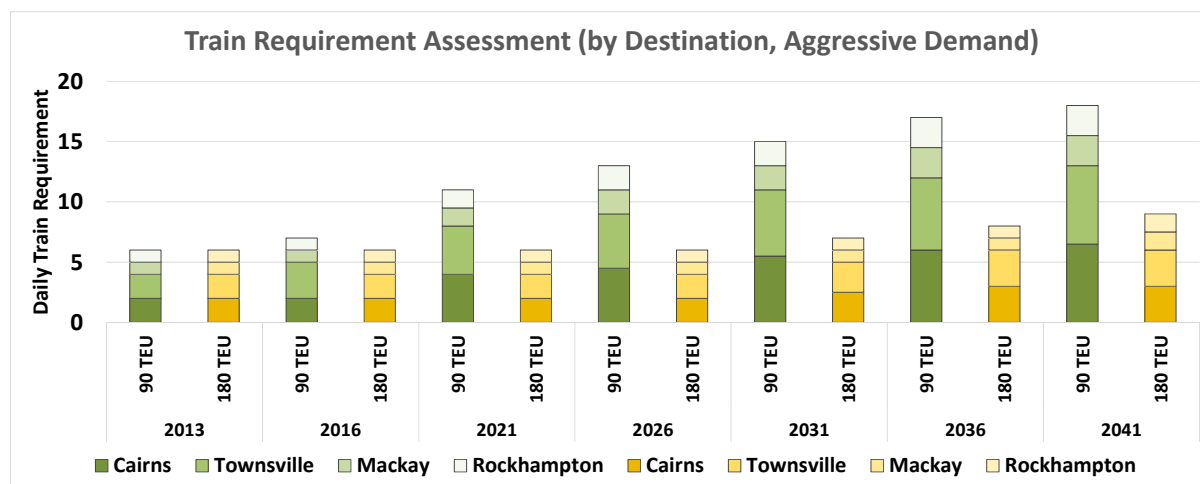


The distribution of these trains and train length options by Brisbane – destination pairs is as indicated in Figures 32.4 and 32.5 for the two demand scenarios.

**Figure 32.4 Conservative demand growth – required train numbers (peak day)**



**Figure 32.5 High demand growth – required train numbers (peak day)**



The high growth scenario (growing rail market share) would result in a significant increase in total intermodal trains, if limited to the current length constraint on the single line sections. This highlights the desirability of transitioning to longer intermodal trains for corridor capacity considerations.

## 32.2 OTHER FREIGHT TRAFFICS

There are other freight traffics on the NCL. Key issues relating to future demand are as follows:

**Livestock:** Traffic is seasonal with current maximum 6 trains per week (2 on a Saturday) from the Central West (Rockhampton to Brisbane) or from the North West (Townsville – Brisbane). It is unlikely for there to be any growth in this traffic, but in any event it would likely this would not exceed a maximum 2 trains per day.

**Short haul bulk (sugar, molasses):** Traffic is seasonal (May – November) from the Burdekin area mills to Townsville and from Proserpine to Mackay Harbour. It is unlikely for there to be any requirement for an increase in train numbers, with any growth likely to be accommodated by bigger payload trains (longer trains and/or 20 TAL wagons).

**Short haul bulk nickel ore (Townsville Port to Yabulu):** Traffic is intermittent (operates 50 – 60% of the year subject to ship arrivals). Any volume growth is likely by operating for extended periods (additional ship arrivals), or operating longer trains.

**Bulk Coal and coke (non-Aurizon network):** Existing traffics are limited to 1 train per day each way between Bowen/Kaili and Townsville/Yabulu, and planned Howard to Gladstone. There is unlikely to be much growth potential for this traffic.

**Other Future Bulk Hauls (e.g. nickel ore, coal) –** Future growth options would require separate capacity upgrade studies. Current potential opportunities include Glen Geddes – Yabulu (nickel ore), Tiaro – Gladstone (coal), and Pentland area – Abbot Point via Stuart (coal). These opportunities may result in upgrades to run heavier axle load and/or longer trains, or more passing loops, subject to the scale of each project and its economic feasibility.

**Industrial Products:** There is potential to increase industrial products (e.g. cement, fuel) from centres such as Gladstone, Mackay and Townsville to service regional centres and resources



industries. However resultant train numbers are likely to be limited relative to major intermodal tasks, and with capacity impacts limited to the less congested sections of the network.

### 32.3 PASSENGER TRAINS

#### **Long Distance Services:**

There is unlikely to be any increase in peak day train numbers over the planning horizon.

#### **SEQ Commuter Services:**

Planning scenarios include an increase in number of weekday peak period services, spreading duration of the peaks, and increased off-peak service frequencies. Current SEQ rail network planning assumes the scheduling of additional services on the northern corridor, with greatest impact on freight operations and capacity on the single line sections between Beerburrum and Nambour. Greater off-peak service frequencies will have significant impact on junction crossing moves, with Sherwood, and Milton-Countess Street the most problematic, in the absence of a priority pathing scheduling for freight services.

The planned Sunshine Coast Railway (CAMCOS) will add another layer of train services (peak and off-peak) on the Mayne – Beerwah section of the NCL, and the planned Bus and Train (BaT) cross-river crossing will impact on freight train scheduling between Salisbury-Yeerongpilly-Dutton Park. New stabling depots at Woombye, Elimbah and Kippa Ring will provide some scheduling benefit for freight operations with reduced dead running of starting and finishing Citytrain services on the NCL.

### 32.4 RECENT NCL FREIGHT TRAIN PATHS UTILISATION

There has been a very significant reduction in utilisation of NCL freight train paths out of Brisbane in recent years, falling from 94 each way paths/week in 2007, to 73 in 2010, and 53 in 2013. This includes all general freight trains, with the reduction primarily in sweeper trains servicing the minor centres, and consolidation of remaining loadings into the now major centres, Origin-Destination specific, intermodal trains.

**(Note:** “Sweeper trains” were deployed by the old Queensland Rail to provide delivery and pick-up of small wagon numbers at the various customer sidings and minor loading facilities located along the route, with associated shunting at the various centres. With the advent of above-rail competition, and virtual full containerisation of general rail freight, these regular scheduled sweeper train services have been discontinued.)

### 33. Corridor infrastructure upgrade options overview

Previous Sections 17–30 identified the range of infrastructure and rollingstock options possible in seeking to address the key rail competitiveness parameters and corridor capacity limitations. This included a ball-park capital cost to implement, and an assessment of the likely benefits. Conclusions were drawn on the likely viability of the options in addressing the limitations of the North Coast Line, from the major intermodal freight task perspective.

**Options assessed and not considered viable** in taking forward for more detailed consideration included:

|  |  |
|--|--|
| <b>Increasing axle loads (to greater than the current 20 TAL)</b>    | Very high capital costs across total corridor length. Low cost reduction or capacity benefits for intermodal freight. Potentially viable for some short-haul bulk traffics. High capital costs for new rollingstock fleet to take any advantage of >20TAL.   |
| <b>Flattening the ruling grade</b>                                   | High capital cost. Limited capacity and cost reduction benefits for relatively low NCL intermodal freight volumes. Need to increase train lengths to also gain any capacity/opex improvement. Some grade improvements associated with curve easings will provide marginal benefits to train handling and fuel consumption. |
| <b>Extension of electric traction north of Rockhampton</b>           | Very high capital costs for fixed infrastructure (OHW and power supply), but also require new electric locomotives. Benefits include lower operating costs, faster transit times and marginal capacity increase; but potential NCL freight volumes fall well short of justifying electrification.                          |
| <b>Double stacking for containers</b>                                | Very high capital costs to provide adequate vertical clearances (OHW and under bridge and air-space structures; but also technical issues with clearances to platforms and requirement to maintain track to higher tolerance standards. Not warranted for any conceivable intermodal freight volumes on the NCL.           |
| <b>Extension of the Remote Controlled Signalling north of Purono</b> | Offers some limited transit time saving, but is high capital cost and higher infrastructure maintenance cost. Provides limited benefit due to the low train numbers current or likely on this section.   |

**Options assessed and considered for more detailed evaluation and possible inclusion** in a future investment strategy for the corridor included:

|  |   |
|--|---|
| <b>Replacement of old timber/steel bridges</b> | Essential for stay-in-business for corridor on safety grounds. Old bridges are increasingly reaching the end of their economic lives.   |
| <b>Alignment improvements (curves/grades)</b>  | Provides multiple benefits of reduced transit time, lower operating costs, and improved safety from better train handling. Generally coupled with stay-in-business bridge asset renewals. |

|   |   |
|---|---|
| <b>Major deviations and bypasses</b>  | Similar to comment above on alignment improvements, but also may have higher strategic benefits to regional communities (e.g. the proposed Rockhampton western bypass).   |
| <b>Longer trains</b>  | Provide lower operating costs and increased corridor capacity, within the preferred freight pathing windows. Needs consideration of complementary terminal investments to receive and despatch longer trains.   |
| <b>Improving flood immunity</b>   | High priority to improve corridor reliability/availability, and lower repair costs.   |
| <b>Track upgrades</b>   | Applies particularly to the Townsville – Cairns section where track structure (steel sleepers and old 41kg/m rail) is marginal for 20 TAL. Progressive track upgrade will provide “stay-in-business” safety asset renewals, and permit raising of the maximum line speed on upgraded sections, with some improvement in transit time. |
| <b>Fixing current crossing loop constraints (those that are too short or with level crossing operating constraints)</b> | Desired to remove operational constraints and provide some capacity improvement. Particularly relevant to the 3 constrained- use crossing loops south of Nambour.   |
| <b>Duplications in highly congested sections (e.g. within the SEQ Citytrain network)</b>                                | Currently most relevant to SEQ and the single line track sections from Beerburrum to Nambour. Part duplication is required to provide adequate capacity for extra peak-period commuter services, with benefits and greater flexibility for freight scheduling on this section.  |

## 34. Non-corridor infrastructure options overview

### 34.1 EXISTING INTERMODAL TERMINALS

The performance of the corridor is impacted by current intermodal terminals, due primarily to siding and hardstand length constraints and rail siding access arrangements. Few existing terminals permit direct entry and unloading/loading of current full length NCL trains, and this requires additional shunting with its time and cost impacts. Terminals are also not set up to permit fast turn-around of trains (strip and re-load), a feature which has not been required under the current operating regime and demand levels.

Any increase in intermodal volumes, catered for by running more trains and/or longer trains, will require consideration by Rail Operators into their terminals' capacity to receive, unload/load and despatch these trains.

### 34.2 NORTH BRISBANE REGION INTERMODAL TERMINAL

A new North Brisbane region intermodal terminal (NFT) has been identified as a potentially viable option. This would provide the extra terminal capacity to cater for intrastate NCL demand not able to be accommodated within the expansion limitations of the current Brisbane region terminals (Acacia Ridge, Moolabin and Fisherman Islands).

The advantages of an NFT from a narrow gauge NCL intermodal rail freight perspective include:

- ▶ Significantly increases scheduling flexibility, with a major reduction in the impact of the Citytrain services and passenger peak period curfews on freight train operations, with the ability to utilise more NCL train paths.
- ▶ Increase in the availability of paths, and the reliability of train schedules. This is due to eliminating most of the impacts of the Citytrain network SCAS closures and other late-night infrastructure maintenance track closures.
- ▶ Reduces the rail line-haul transit time by up to 1.9 hours, compared to a current Acacia Ridge terminal origin/destination (time saving assessed for a likely Beerburum NFT location).
- ▶ Can be purpose designed to readily accommodate a longer NCL intermodal train, not feasible with the current length-constrained terminals.
- ▶ Can be integrated as a rail-centric freight hub, incorporating major Distribution Centres and warehousing, to service the North Brisbane and Sunshine Coast regions, in addition to its role for Central and North Queensland markets.
- ▶ Can be a single multi-user terminal, or provide separate side-side terminals (to accommodate the current 2 Rail Operators)

Offsetting these rail line-haul benefits is the longer road-haul PUD leg from most SEQ region customers to/from the NFT, and the synergies of any direct narrow – standard gauge transshipping at Acacia Ridge.

Section 38 provides further evaluation and quantification of the timetabling and capacity benefits of an NFT, from a NCL corridor perspective.

Specific issues for stakeholders (Government, Queensland Rail, Rail Operators, and customers) in progressing an NFT include:

- ▶ The capacity triggers needed to initiate the investment by the various stakeholders.
- ▶ Stranding risks for terminal owners (new and existing terminals).
- ▶ Ability to participate in a single multi-user terminal, or requiring separate Rail operator controlled and operated terminals.
- ▶ Likely take-up by industry of the warehousing and distribution centre co-location.

An acceptable ownership and operating model for an NFT could be replicated at the major northern centres, where current terminals are not well located nor have the requisite layout and capacity to handle a significant increase in rail intermodal freight, nor a move to longer trains.

## 35. Non-infrastructure options

### 35.1 OVERVIEW

A number of non-infrastructure options have been identified to improve the competitiveness of contestable rail intermodal freight, and increase capacity. These include:

- ▶ Reducing make-up time in the current Master Train Plan to improve transit times and provide additional capacity. This would require a far more disciplined operation with a focus on on-time performance by both Rail Operators and the Rail Infrastructure Manager than currently applies.
- ▶ An investment in more efficient and reliable rollingstock (to achieve better on-time running performance and greater reliability).
- ▶ Modification to the train operating priorities, with premium intermodal trains have a higher pathing priority than currently with other freight train service types, and potentially at the expense of some minor delay to some Traveltrain services.
- ▶ Reducing track access charges.

### 35.2 TRAIN PRIORITY

#### 35.2.1 Passenger Priority

The current legislative requirements provide for "passenger priority", covering both Citytrain services (highest priority) and the long distance Traveltrain services (tilt trains have next highest priority). This has been interpreted to provide the allocation of train paths in the MTP, but also to decision making on day-of-operations train control, where "healthy" freight trains are delayed to provide priority running for a late passenger train. Equally freight trains may be prematurely held to ensure no possible delay to an opposing or overtaking passenger train.

The differential performance (maximum speed, acceleration and braking) between a fast passenger train (e.g. the tilt trains) and a slow freight train also imposes capacity constraints in clearing the route ahead of the passenger train, to the potential detriment of a healthy freight train. As a consequence, a tilt train consumes an effective 3 freight paths. This is not a particular issue at current train frequencies; but will be more significant with growth in the freight task, and with more freight trains or longer, slower freight trains.

#### 35.2.2 Freight Train Priorities

The current priority order for train scheduling during the MTP process, provides for decreasing priority as follows:

- ▶ Short haul bulk services around Townsville (sugar, nickel ore)
- ▶ Livestock
- ▶ SeaFreighter (IMEX) trains
- ▶ North bound (loaded) intermodal trains
- ▶ South-bound (mostly lightly loaded) intermodal trains.

Through the Aurizon network, Aurizon will normally attempt to have the non-coal services enter and exit its network as quickly as possible, so as to not impact on the coal services, irrespective of a train’s health status.

### 35.2.3 Alteration of Services Priority

An assessment of transit time savings due to a change in the train priority in MTP development and Day of Operations running is more difficult to determine, being dependent on the actual MTP, the individual service affected and the relative priority of crossing trains, including routing through the Aurizon and metro networks.

A ball-park assumption that a 10% reduction in transit time delays could be achieved for premium intermodal services (between the current MTP transit time and the current “green light” running time) would provide a 60 minute transit time saving between Brisbane and Townsville. The ability to achieve this would be dependent on the factors mentioned above; however there are real non-cost benefits possible in pursuing this aspect for specific premium intermodal services.

## 35.3 MASTER TRAIN PLAN REFINEMENT

The current MTP has evolved from the basis of scheduling the passenger trains, with freight train paths built around this by scheduling to fit the next train in. The development of the MTP has not considered optimising corridor performance, nor maximising for capacity. The MTP includes substantial make-up time within the schedule, which could be reduced with the enforcement of a disciplined operation by Rail Operators. This is evidenced by current corridor performance, with significantly late departing trains able to reach their destinations on time. (Refer Sections 7 and 8)

An indicative assessment of the current MTP and potential reduction in transit time from a more rigorous MTP review, and tightening of the MTP for the premium “loaded” north-bound intermodal services, is as summarised in Table 35.1 below.

**Table 35.1 MTP tightening transit time savings**

| Section                      | Current Transit Time       | Potential reduction |
|------------------------------|----------------------------|---------------------|
| Brisbane - Rockhampton       | 9 hours 39 minutes         | 81 minutes          |
| Rockhampton - Mackay         | 6 hours 38 minutes         | 30 minutes          |
| Mackay – Townsville          | 7 hours 18 minutes         | 41 minutes          |
| <b>Brisbane - Townsville</b> | <b>27 hours 32 minutes</b> | <b>152 minutes</b>  |
| Townsville - Cairns          | 6 hours 52 minutes         | 13 minutes          |
| <b>Brisbane - Cairns</b>     | <b>34 hours 24 minutes</b> | <b>165 minutes</b>  |

The potential reduction in transit time primarily includes the removal of “excess” make-up time in the train schedules. Additional transit time savings are also likely to be achieved by the application of more realistic SRTs for current freight train operations, rather than reliance on the conservatively nominated SRT’s by the Rail Operators.

As noted above, the ability to reliably achieve this reduced transit time would be contingent on running a far more disciplined intermodal freight operation than currently applies, particularly in respect of enforcement of “on-time” departures.

A very modest 60 minute tightening in the MTP on a Brisbane – Townsville train path would be equivalent to a \$1.2 billion capital investment in straightening the alignment. This transit time saving is considered readily achievable (and sustainable) at current traffic levels. There is considerable benefit to all stakeholders (customers, rail operators, network owner) in changing to this paradigm.

#### 35.4 TRACK ACCESS CHARGES

Rail Operators pay an access fee for the right to run a train on the network. The access fees currently applicable on the NCL do not collectively cover the operating or maintenance cost of the corridor, and certainly do not provide for any Return on Asset on the Written Down Value of the corridor.

The track access fees applicable to Intermodal freight in 2012/13 totalled approximately \$32.5 million.

From Section 31.1, the component of the track access charge for intermodal trains is assessed as only 8% - 10% of the total rail door-door cost. Rail is more price competitive for intermodal destinations to Mackay and further north. Hence while the option of a discount in the access charge would provide some limited incentive to Rail Operators and customers, it would have a limited material impact on the total rail mode door-door price, and hence on the ability to attract additional rail mode share. However the application of a lower access charge for non-preferred train paths, may help in encouraging a spreading of the freight peak as the market grows, and extra trains are required to cater for growth.

#### 35.5 CONCLUSIONS

Tightening up the MTP to provide for a reduced transit time for Intermodal freight services is a “no capex cost” option, compared to other capital intensive infrastructure solutions. A one hour reduction in the MTP transit time for intermodal trains by disciplined operations and removing excess make-up time would require an investment of approximately \$1.2 billion to achieve this same outcome by straightening track.

It will require much more operational discipline than currently applies, particularly around train departure times, and other en-route activities by Rail Operators, as well as cooperation of freight customers. However the benefits should be readily apparent to key stakeholders, in terms of providing a more competitive transit time and enhanced on-time performance reliability.

Implementation requires the cooperation of both current Rail Operators and Queensland Rail, plus Aurizon in respect of its network. A focus on providing priority within the MTP to the premium north-bound intermodal trains over other freight trains, will also allow transit time benefits to be realised.

The rail access charges for intermodal trains (on a cost/TEU basis) is only a small share of the total door-door cost. Rail currently competes strongly on price for markets north of Rockhampton. Reducing the track access charges would likely have limited impact on attracting additional market share; however some discounting may influence future spreading of demand to the less attractive train slots, when extra capacity is required.



## 36. Stay-in – business upgrades

### 36.1 OVERVIEW

The North Coast Line comprises sections of corridor and infrastructure components of varying age, standards and functionality. These range from the original “developmental” railway construction standards, to more recent contemporary railway standards. Key considerations from a minimalist stay-in-business consideration are:

- ▶ Ensuring on-going safety of rail operations, including demonstrably satisfying duty-of-care in respect of contemporary safety related standards.
- ▶ Ensuring the corridor performance characteristics are not degraded due to excessive wear and tear or from climatic conditions.
- ▶ Ensuring the rail systems can be serviced and maintained and do not become technically obsolete.
- ▶ Ensuring that any build-up in maintenance deficit can be effectively managed.
- ▶ Spreading the task of asset renewals to ensure that future resource constraints do not lead to adverse safety outcomes.

Old infrastructure that may have exceeded or is about to reach their useful/practical lives includes:

- ▶ Old steel deck bridges and timber bridges.
- ▶ Old concrete culverts or steel pipe drainage structures exhibiting fatigue failure or other structural or corrosion damage.
- ▶ Poor subgrade and ballast capping layers, where the construction standards of the time are now inadequate to neither meet current axle loads and train speeds, nor survive the repeated applied loads and climatic impacts since their construction.
- ▶ Old part-worn rail, where rail wear limits are marginal for the current 20 TAL application (mostly applicable to track north of Purono).
- ▶ Rail systems (signalling and telecommunication equipment) that have reached the end of their economic lives, with spare parts and/or vendor support no longer available.

### 36.2 RAIL BRIDGES

There are 61 timber bridges remaining between Nambour and Cairns, with a total bridge length of 2.61 km. These date back to the original railway construction, with various components (girders, corbels, headstocks and piers) renewed over this period due to rot and insect attack. There are also 62 steel deck bridges on this section, with a total length of 7.94 km. These steel structures have varying ages, but with some significant structures dating back 100 years. The timber bridges and the older steel bridges generally represent medium to high risk (with a high consequences of failure), and they cannot be adequately maintained indefinitely. An on-going program to replace these structures is required.

These remaining bridge structures are also likely linked to poor horizontal alignment sections, where curve easings will also provide improved safety, reduced transit time and lower operating costs.

Whilst there is currently a modest program to replace old bridges, the extent of these bridges remaining and their increasing age, would indicate that a greater urgency is required to address this risk, and growing maintenance debt.

An accelerated program to replace these old bridge structures is recommended, with the individual priority of replacement based on current condition of individual bridges, other risk factors, and the additional benefits accruing from associated corridor upgrades (e.g. alignment and flood immunity improvements)

### 36.3 TRACK STRUCTURE

The track structure south of Townsville predominantly comprises 47, 50, 53 or 60 kg/m rail on prestressed concrete (PSC) sleepers.

North of Purono the track is predominantly 41 kg/m rail on steel sleepers, which is marginal for 20 TAL operation and permits a maximum operating speed for intermodal trains of 80 kph (where not further constrained by curves). New deviations and curve easings would normally be constructed with heavier rail and PSC sleepers.

A program to progressively upgrade this track structure north of Purono (including re-railing and installation of concrete sleepers) is recommended as “stay-in-business” investment, with the safety benefits and some limited transit time benefits progressively achieved.

### 36.4 RAIL SYSTEMS (SIGNALLING, COMMUNICATIONS) ASSET RENEWALS

Whilst this NCLCI Study is predominantly about corridor performance and capacity, any corridor investment strategy needs to recognise that the various rail systems and technologies employed have a finite asset life, whether from wear and tear, or technology obsolescence, and with the old technology no longer having vendor support, or having spare parts available. The majority of the signalling and telecommunications systems on the NCL are of 1980s or 1990s vintage, utilising the technologies available at the time of their installation.

From a Stay-in-Business perspective, the corridor investment strategy needs to include provision for maintaining the functionality of signalling and telecommunication systems, which are fundamental to the operation of the corridor, and its performance reliability.

This NCLCI study does not address the requirements (costs and timings) associated with these rail systems.

### 36.5 OPEN LEVEL CROSSINGS

Open level crossings represent a safety risk to both road users and rail operations, and traffic incidents contribute to unreliability of corridor performance. As identified in Working Paper 1, there are approximately 250 open level crossings with active protection (boom gates and/or flashing lights, and 465 with warning signage only. There are also approximately 350 occupation crossings, utilised for stock movements, agricultural equipment crossings and other uses, and 40 cane tramway at-grade crossings.

A number of OLCs are located across crossing loops, limiting the ability to hold full length freight trains in these crossing loops without blocking road traffic, and hence full use of these crossing loops.

Crossing loops limit the ability in many circumstances to allow full utilisation of the section line speed, both where formally speed restricted, or from individual train driver behaviour in these locations.

The equipment failure of active level crossing protection contributes to service disruptions and delays.

An on-going program to upgrade the safety of level crossings, and the reliability of active level crossing protection equipment is required in any corridor investment program. Any new deviation alignments should desirably provide for road-rail grade separation where feasible.

## 37. Capacity upgrade options

### 37.1 ADDITIONAL CAPACITY OPTIONS

From a freight perspective, corridor capacity is a function of train payload and number of trains operated. Additional corridor capacity can be provided by:

- ▶ Running longer trains (bigger payloads)
- ▶ Taking the slack (make-up time) out of the current Master Train Plan (MTP) to free-up additional paths, including tightening of the nominated Section Run Times (SRTs) for the premium intermodal trains.
- ▶ Modifying train priority to reduce the capacity impacts of different performing trains and “guarantees” of on-time performance.
- ▶ Reducing the longer single line SRTs by selective curve/grade easings.
- ▶ Increasing maximum line speed to reduce the critical SRTs.
- ▶ Constructing additional intermediate crossing loops on the longer sections to reduce these capacity limiting SRTs.
- ▶ Extending crossing loops to reduce the length of the longer SRTs or the provision of longer “passing lanes”.
- ▶ Selective duplication of key constraint sections (primarily within the Citytrain network).
- ▶ Providing remote terminal train stabling for Citytrain services on the northern corridor (e.g. Kippa Ring, Elimbah and Woombye) to reduce pre- and post-peak dead running for starting and finishing Citytrain services.
- ▶ Upgrading current non-effective crossing loops which are not suitable for freight train crosses (e.g. loops too short to hold a full length intermodal train or where there is restricted use due to level crossings within the loop being blocked by a waiting train).
- ▶ Extending Remote Controlled Signalling (Purono – Woree) to reduce the SRTs and transit time penalty for slow speed exit from all crossing loops, and the train crossing time penalty for issuing Travel Authorities where train crosses occur.
- ▶ Upgrading current short haul bulk sugar and grain trains in the Gladstone and Mackay regions to take advantage of the trunk corridor 20 TAL capability.
- ▶ Providing additional train holding capacity or refuging to permit some queuing and maximising corridor utilisation through the bottleneck sections.
- ▶ Upgrading terminals and arrival/despatch capability to match capacity requirements and train lengths.
- ▶ Spreading intermodal freight peak demands (during the day and across the week).

There is substantial “spare capacity” on the current corridor, with at least 4 usable freight paths departing Brisbane in the 7.00 PM – 5.00 AM window on the current peak days, whilst an extra 1 – 2 paths are potentially available with a tightening of the MTP. This represents approximately 50% spare corridor capacity, with even more paths available on the non-peak days. The ability to utilise all these paths has not been tested, given customer requirements and the likely future demand profile, and given current terminal capacity constraints and operating practices.

The extent of capacity upgrades required and optimal solution/s will depend on the combination of traffic tasks to be accommodated and corridor section involved, and the short-medium-long term strategies adopted.

### 37.2 ALIGNING CAPACITY TO DEMAND

Implementing any capacity upgrades should desirably be matched to demand. Other than with the introduction of a new short-haul bulk product demand (e.g. a new coal mine in the Maryborough region railing to Gladstone), demand growth is likely to be gradual, with a measured capacity upgrade program implemented to keep ahead of this demand.

The current corridor clearly has capacity to handle current intermodal volumes, with a reduction of these railed volumes and number of trains operated over the past 8 years. The priority for the corridor and key stakeholders should be to arrest this market share decline, and to position the system to capture a greater share of the total market that is clearly there and growing.

Section 32.1 identified peak day intermodal train numbers required to meet the demand scenarios, and these grow slowly over the planning horizon, requiring the addition of an extra train/s to cater for growth as it occurs. There is sufficient lead time with the immediate availability of spare capacity, to undertake appropriate planning to best position the corridor to cater for this growth.

A notional capacity upgrade strategy is outlined in the following Section 37.3.

Critical to this strategy is the undertaking of appropriate analysis and planning to inform stakeholders on the opportunities of addressing the current MTP to realise latent capacity, the benefits of a much more disciplined train operating regime, and the detailed planning to then address the capacity bottlenecks, and the more obvious imperative to introduce longer trains. This work includes both the corridor and the terminals, with the latter critical to the ability to realise any benefit from corridor investment and introducing a significant discipline in corridor operations.

An early collaborative re-configuration of the MTP would be recommended to identify and quantify the transit time benefits, and the latent capacity benefits of the existing corridor. This would also identify those infrastructure works next needed to be addressed to deliver extra capacity (e.g. to accommodate the longer intermodal train and the prioritised SRTs needing to be reduced).

Equally the Rail Operators need to address their respective terminal requirements to handle increased volumes and streamline operations to deliver the required operating discipline on train departures.

### 37.3 CAPACITY UPGRADE STAGING STRATEGY

A viable staged strategy for matching demand on the corridor would likely comprise the following elements in order:

|   |  |  |
|---|--|--|
| 1 | Utilise current spare train paths (where acceptable from a customer perspective)   | No cost  |
| 2 | Re-engineer the current Master Train Plan to provide additional train paths (by reducing contingencies on SRTs and excessive make-up time), coupled with the enforcement of a more disciplined on-time performance regime with Rail Operators and their customers. | No capital cost but requiring agreement of both Rail Operators and the networks owners |

|   |  |   |
|---|--|---|
| 3 | Selective running of longer premium intermodal trains (Brisbane – Townsville) with minimal upgrade of crossing loops. More extensive roll-out of longer trains and loop extensions as demand increases. Requires limited number of loops to be extended plus consideration by Rail Operators of their terminal configurations to receive/despatch longer trains. | Need to extend some crossing loops. Also provides an operating cost benefit to Rail Operators.  |
| 4 | Address capacity constraints on the Beerburrum – Nambour section (partial duplication Beerburrum – Landsborough and improve crossing loop functionality at Landsborough and/or Mooloolah)  | Required to accommodate additional Citytrain services   |
| 5 | Alternate train priority train scheduling within the MTP and DTP to provide more premium freight path capacity, and operating robustness.  | Require at best a change in the interpretation of “Passenger Priority” if not a Legislative change. Likely limited impact on Traveltrain services   |
| 6 | Construct a northern Brisbane region freight terminal (NFT)  | Required for terminal capacity within SEQ. Significant benefits in ability to more fully utilise NCL train paths and reduce disruptions due to SEQ network track closures.  |
| 7 | Reduce SRTs on the longest sections to increase number of train paths (via curve/grade easings to increase average train speeds and reduce section length , add new crossing loops, and/or extending existing loop lengths to reduce single line section lengths)  | Capital cost is dependent on sections requiring upgrades, and the identification of preferred solution. May be associated with fixing poor alignment and life expired bridges. Should provide transit time and lower opex benefits. |

Capacity upgrades are unlikely to be required north of Townsville due to limited demand and current and likely low daily train numbers.

Upgrading capacity on the Aurizon network (Parana to Rocklands) will be driven by coal volumes from the Moura/Blackwater systems. This coal capacity upgrade would be via longer trains and/or selective 3rd tracking northwards from Wiggins Island Coal Export Terminal, with a possible need to grade separate the NCL junction/s at each interface point. It is assumed NCL trains will continue to be able to be scheduled in between the coal trains, which would nominally be separated at 20 – 30 minute headways required to suit coal terminal operations, and the limitations of the overhead traction power system (for electric locomotive hauled coal trains on the Blackwater system).

Upgrading of the bulk sugar and grain fleets (wagons and locomotives) to maximise NCL 20 TAL capability for these traffics should be undertaken when the current wagon and locomotive fleets require replacement.

## 38. Service parameter upgrade options – transit time

### 38.1 TRANSIT TIME REDUCTION OPTIONS

Many of the upgrade options already discussed will have a positive impact on transit time; additionally many of these options would have an impact on more than one service parameter. An estimation of the key transit time improvements provided in Table 38.1 below.

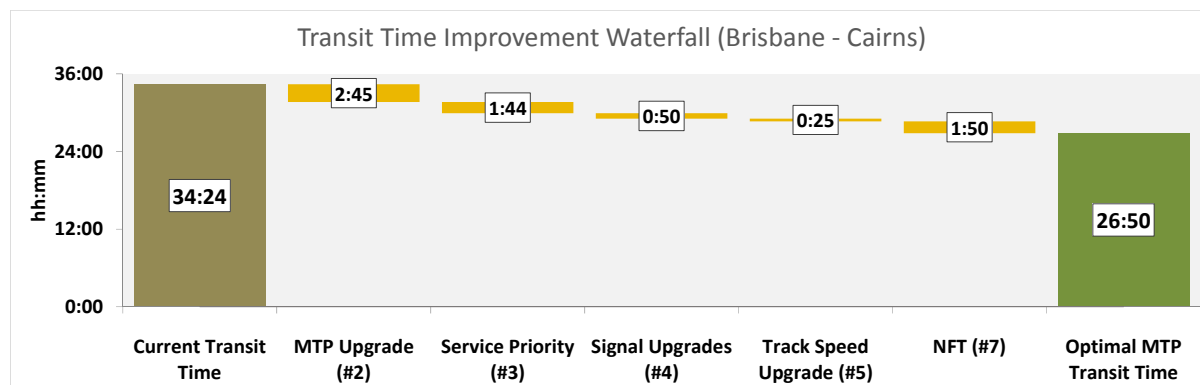
**Table 38.1 Transit time reduction options**

| # | Option   | Benefit   |
|---|--|---|
| 1 | <b>Alignment Improvements (grade and curve, including deviations)</b>  | Spanning from 5 to 180 minutes depending on selection of upgrades implemented (see table 4, Working Paper 4). |
| 2 | <b>Upgrade of the Master Train Plan (MTP) to remove make up time and tighten nominated critical Section Run times (SRTs)</b> | <b>165 minutes</b>  |
|   | • Brisbane – Rockhampton   | 81 minutes  |
|   | • Rockhampton – Mackay   | 30 minutes  |
|   | • Mackay – Townsville  | 41 minutes  |
|   | • Townsville – Cairns  | 13 minutes  |
| 3 | <b>Alteration of Service Priority for premium north-bound intermodal trains</b>  | <b>104 minutes</b>  |
|   | • Brisbane – Rockhampton   | 41 minutes  |
|   | • Rockhampton – Mackay   | 20 minutes  |
|   | • Mackay – Townsville  | 22 minutes  |
|   | • Townsville – Cairns  | 21 minutes  |
| 4 | <b>Train Control Upgrade (Purono - Woree)</b>  | <b>50 minutes</b>   |
| 5 | <b>Track Upgrades (increase maximum line speed north of Townsville)</b>  | <b>25 minutes</b>   |
| 6 | <b>Track Duplication &amp; re-alignment (Beerburum – Landsborough)</b>   | <b>5 minutes</b>  |
| 7 | <b>A Brisbane northern freight terminal</b>  | <b>110 minutes</b>  |

Figure 38.1 below shows a graphical breakdown of Options 2 through 7 for the full Brisbane – Cairns transit time if all were to be implemented, excluding any curve easings, and the cumulative benefit for

the Brisbane – Cairns OD pair. Lesser benefits apply for the other intermediate destinations. Options 4 and 5 relate only to the Townsville – Cairns section.

**Figure 38.1 Transit time improvement waterfall: Brisbane – Cairns**



## 38.2 OPTION BENEFIT METHODOLOGY

The quantification of the various options to improve transit times are summarised below.

### Option 1 - Alignment Improvements

The calculation of transit time benefits and methodology are described in Section 22. Representative new alignment concepts were designed and then new speeds and run time savings evaluated based on static calculation. These were pro-rated to provide a broader view of a corridor alignment improvement program along the route. Dynamic modelling to refine the expected time saving should be undertaken at the more detailed feasibility stage for any horizontal and vertical alignment improvement program. From a MTP perspective, the transit time benefits from any specific re-alignment will depend on its location, with those sections south of Gladstone offering transit time benefits to all OD pairs; but not necessarily aligned to other priorities for bridge asset renewals or flood resilience. The extent and location of any curve easing impacts (other than the more likely Beerburum – Landsborough re-alignment) have not been quantified in this assessment.

### Option 2 - Upgrade of MTP to remove make up time

The assumptions and quantification of potential transit time savings inherent in a tightened and more disciplined MTP are as described in Section 35.3, and be applicable to the premium north-bound intermodal services.

### Option 3 - Alteration of Service Priority

The assumptions and quantification of potential transit time savings inherent in a change in the priority for operation of the premium north-bound intermodal services is as described in Section 35.2.

### Option 4 – Train Control Upgrades (north of Townsville)

From Purono to Woree (near Cairns) there are 23 crossing loops; however the number of trains per day is low, and at most only 2 – 3 train crossings would occur. Whilst there is a time penalty associated with the Direct Train Control (DTC) radio based train order control system, of approximately 5 minutes applicable for each train crossing (to complete relinquishing and re-issue of Travel Authorities for each crossing train), the greatest delay to all trains is the 25 kph speed restriction applied through the turnout, which equates to a transit time loss of up to 2 minutes at each loop exit where the adjacent line speed is 80 kph (less delay where adjacent curves impose a lower

line speed limit). The total transit time penalty for the DTC system compared to a Remote Controlled Signalling (RCS) system for a through running train is thus of the order of 50 – 60 minutes. (A conservative 50 minutes is assumed.)

#### **Option 5 – Track upgrades (increase maximum line speed north of Townsville)**

This option refers to increasing the maximum line speed from 80 to 100km from Purono to Cairns, which would be applicable for tangent track and large radius curve sections. The expected transit time saving (in the absence of any associated curve easings) is estimated at 25 minutes. The benefits in conjunction with selective curve easings would be more significant, given the current alignment constraints along the majority of this section, particularly north of Ingham.

#### **Option 6 – Track Duplications, Loop improvements – Beerburrum to Landsborough and Nambour**

A conservative section run time saving with realignment of the Beerburrum – Landsborough section to at least a 100kph alignment (maximum benefit for freight) is 5 minutes, with a further 11 minute saving for the Landsborough – Nambour section re-alignment. The more significant saving is the elimination of any waiting time for any passenger crosses on the duplicated track, which will be more an issue for south-bound freight services, than the premium evening premium north-bound services. The planned stabling depot at Woombye will significantly reduce the impact on freight scheduling of Citytrain services in the shoulders of the peak. The elimination of the crossing loop operational constraints at Landsborough, Mooloolah and Woombye will also improve capacity, timetabling flexibility and transit time reliability.

#### **Option 7 – A north Brisbane region freight terminal (NFT)**

The green light transit time from Acacia Ridge to Beerburrum is 99 minutes. Given that an Intermodal service would rarely have an uninterrupted run through the network, and is accelerating from a standing start at Acacia Ridge, a conservative assumption is that a Beerburrum located NFT would reduce the rail line haul transit time by at least 110 minutes.

**A more detailed dynamic rail operations analysis would be required to provide further definition of the transit time savings.**

### **38.3 TRANSIT TIME SCENARIOS**

The separate transit time benefit options are identified and quantified in the previous Sections 38.1 and 38.2. This includes the “no cost” options in tightening the MTP, plus investment generated time savings on the corridor, or in the provision of a new north Brisbane terminal.

Table 38.2 provides an overview of the impacts of all of the potential reductions in the transit time, and the impact these have on the preferred terminal despatch and arrival times for the 4 major origin-destination pairs. The current Brisbane terminals are taken as Acacia Ridge, and an alternate Beerburrum located new northern Brisbane intermodal terminal. The assumed transit times include an Optimal MTP (assuming all the assessed time savings can be realised), and a more conservative New MTP, assuming only 50% of the assessed tightening of the existing MTP can be realised.

The methodology inherent in Table 38.2 is to derive the required despatch times for the premium north-bound trains from the Brisbane area terminals to achieved a notional 4.00 AM preferred arrival time at the destination. This “arrival” time allows for train post-arrival activities and shunting to position wagon rakes for unloading. There is some obvious flexibility on this preferred arrival time, subject to local customer requirements, terminal operating hours, and extent of shunting activities required to



set-up the train for unloading. Purpose designed intermodal terminals that allow direct receipt and despatch of a full train length offer significant time savings compared to most of the current legacy terminals. For south-bound trains the assumption is a 12.00 AM (noon) departure time from the northern terminal, assuming, turn-around of the train within the notional 8 hour window.

**Table 38.2 Transit time scenario comparison**

| Origin                   | Destination | Transit Time (h:m) |             |         | Preferred Latest Arrival | Required Latest Departure BNE |                  |
|--------------------------|-------------|--------------------|-------------|---------|--------------------------|-------------------------------|------------------|
|                          |             | Current MTP        | Optimal MTP | New MTP |                          | Current MTP                   | New MTP          |
| Acacia Ridge<br>Moolabin | Rockhampton | 13:46              | 11:39       | 12:42   | <b>Wed 04:00</b>         | Tue 14:14                     | <b>Tue 15:17</b> |
|                          | Mackay      | 20:14              | 17:17       | 18:45   | <b>Wed 04:00</b>         | <b>Tue 07:46</b>              | <b>Tue 09:14</b> |
|                          | Townsville  | 27:32              | 23:32       | 25:32   | <b>Wed 04:00</b>         | Tue 00:28                     | Tue 02:28        |
|                          | Cairns      | 34:24              | 28:35       | 31:29   | <b>Wed 04:00</b>         | <b>Mon 17:36</b>              | Mon 20:30        |

|                   |             |       |       |       |                  |           |           |
|-------------------|-------------|-------|-------|-------|------------------|-----------|-----------|
| NFT<br>Beerburrum | Rockhampton | 11:56 | 9:49  | 10:52 | <b>Wed 04:00</b> | Tue 16:04 | Tue 17:07 |
|                   | Mackay      | 18:24 | 15:12 | 16:55 | <b>Wed 04:00</b> | Tue 09:36 | Tue 11:04 |
|                   | Townsville  | 25:42 | 21:42 | 23:42 | <b>Wed 04:00</b> | Tue 02:18 | Tue 04:18 |
|                   | Cairns      | 32:34 | 26:45 | 29:39 | <b>Wed 04:00</b> | Mon 19:26 | Mon 22:20 |

| Origin      | Destination              | Transit Time (h:m) |             |         | Preferred Latest Departure | Anticipated Arrival BNE |                  |
|-------------|--------------------------|--------------------|-------------|---------|----------------------------|-------------------------|------------------|
|             |                          | Current MTP        | Optimal MTP | New MTP |                            | Current MTP             | New MTP          |
| Cairns      | Acacia Ridge<br>Moolabin | 34:24              | 28:38       | 31:29   | <b>Wed 12:00</b>           | Thu 22:24               | Thu 19:29        |
| Townsville  |                          | 27:32              | 23:17       | 25:32   | <b>Wed 12:00</b>           | <b>Thu 15:32</b>        | Thu 13:32        |
| Mackay      |                          | 20:14              | 17:02       | 18:45   | <b>Wed 12:00</b>           | <b>Thu 08:14</b>        | <b>Thu 06:45</b> |
| Rockhampton |                          | 13:46              | 11:24       | 12:42   | <b>Wed 12:00</b>           | Thu 01:46               | Thu 00:42        |

|             |                   |       |       |       |                  |           |           |
|-------------|-------------------|-------|-------|-------|------------------|-----------|-----------|
| Cairns      | NFT<br>Beerburrum | 32:34 | 26:45 | 29:39 | <b>Wed 12:00</b> | Thu 20:34 | Thu 17:39 |
| Townsville  |                   | 25:42 | 21:42 | 23:42 | <b>Wed 12:00</b> | Thu 13:42 | Thu 11:42 |
| Mackay      |                   | 18:24 | 15:27 | 16:55 | <b>Wed 12:00</b> | Thu 06:24 | Thu 04:55 |
| Rockhampton |                   | 11:56 | 9:49  | 10:52 | <b>Wed 12:00</b> | Wed 23:56 | Wed 22:52 |

From the above Table 38.2, the desired departure times or arrival times that are impacted by the passenger peak curfews are highlighted in red, requiring these to be delayed departing or despatched earlier (for north-bound trains), and similar for south-bound trains.

Clearly the NFT provides a significant benefit in path options to best meet the desirable freight paths, significantly avoiding the Citytrain peaks, and can provide a genuine overnight service to Rockhampton. Likewise the Brisbane – Cairns transit time provides an effective early evening departure with arrival around 4.00 AM on the 2<sup>nd</sup> day. Brisbane – Townsville also provides a comfortable very late evening departure for arrival around 4.00 AM on the 2<sup>nd</sup> day,

A wider 4 hour window of arrivals at northern destinations, and the spread of required departures from the current Brisbane terminals are as indicated in Table 38.3.

**Table 38.3 Preferred departure windows ex Brisbane**

| Origin                | Destination | Arrival Window |           | New MTP Transit Time (h:m) | Departure Window |           |
|-----------------------|-------------|----------------|-----------|----------------------------|------------------|-----------|
|                       |             | Earliest       | Latest    |                            | Earliest         | Latest    |
| Acacia Ridge Moolabin | Rockhampton | Wed 02:00      | Wed 06:00 | 12:35                      | Tue 13:17        | Tue 17:17 |
|                       | Mackay      | Wed 02:00      | Wed 06:00 | 18:38                      | Tue 07:14        | Tue 11:14 |
|                       | Townsville  | Wed 02:00      | Wed 06:00 | 25:24                      | Tue 00:28        | Tue 04:28 |
|                       | Cairns      | Wed 02:00      | Wed 06:00 | 31:31                      | Mon 18:30        | Mon 22:30 |

The departure windows for a Beerburrum located NFT would be similarly widened by 2 hours either side of those indicated in Table 9.2, with limited scheduling issues encountered north of Beerburrum.

Figure 38.2 highlights the preferred departure windows out of Brisbane for the various destinations

**Figure 38.2 Preferred departure windows ex Brisbane**



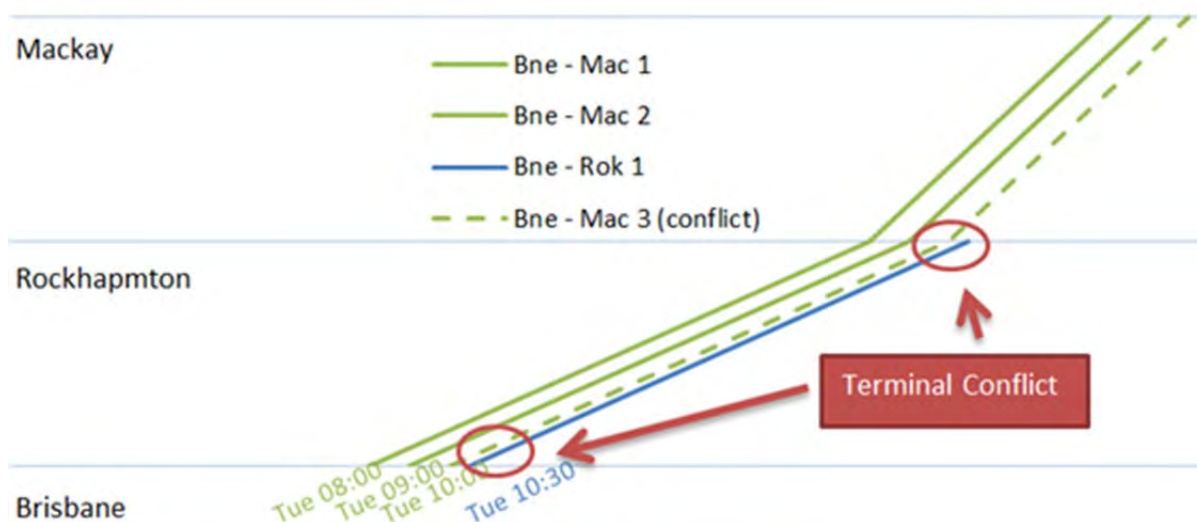
As the Citytrain traffic constraint is introduced it starts to create a conflict of departures from Brisbane. Figure 38.3 below shows the adjusted departure windows given suburban traffic constraints.

**Figure 38.3 Adjusted departure windows ex Brisbane**



Generally, where more than one service is required per day for a specific OD, trains would be fleeted in order to meet customer specific arrival and departure times. This would require critical or constrained sections to be heavily utilised during certain parts of the day. Given the high traffic levels between Brisbane and Rockhampton, this would likely cause a bottleneck somewhere on this part of the corridor. Currently the longest sectional run time in this area is 21 minutes (Benaraby to Iveragh). Assuming that trains would be required to cross opposing traffic either side of this section and allowance of 8 minutes for accelerating and breaking is added to the section run time. This would provide for a minimum headway of 58 minutes, meaning one service per hour could be sent in either direction. However when trying to align preferred departure windows from Brisbane, terminal conflicts may arise. This is illustrated above and Figure 38.4 below shows this constraint in more detail. Operationally, it may be possible to send one train 30 minutes behind the other; however it would likely incur a crossing delay further into its transit.

**Figure 38.4 Terminal conflicts**



In this situation a third Brisbane – Mackay service cannot be scheduled at 11.00 AM as this slot is taken by the Brisbane – Rockhampton service.

### 38.4 CONCLUSIONS – TRANSIT TIMES

There are significant early and easy wins from a major review and re-configuration of the MTP, to reduce excess make-up time, adjust for over-conservative intermodal train SRTs, and prioritise train paths and train crossings, more reflective of improving the performance of the premium north-bound intermodal trains.

A Northern Freight Terminal offers very significant advantages in delivering transit time improvements, but also in providing far greater flexibility for scheduling departing and arriving trains, and the ability to utilise more premium freight paths, with minimal constraints from the Citytrain network week-day peak period freight curfews.

The benefits to all stakeholders are significant; but any change will require their close involvement and agreement to the fundamental changes involved. Critical to achieving these transit time benefits are the operating disciplines needing to be applied by Rail Operators (and their customers), and the performance of their terminals.

## 39. Service parameter upgrade options – reliability

### 39.1 OVERVIEW

Issues considered in respect of “reliability” include:

- ▶ Day-of-operations reliability – do the trains run to schedule and arrive on time?
- ▶ Corridor availability - do the trains run at all?

Reliability is an outcome of an individual Rail Operator's performance, the impact of other Rail Operators on the network, and the performance of Rail Infrastructure Managers (from a Train Control function and infrastructure maintenance function). It also is impacted by the quality/performance of the infrastructure, including the impact of severe weather events, and by external events such as level crossing incidents.

Availability is driven by planned and unplanned outages. Planned outages include the current scheduled maintenance windows during which most planned maintenance activities are undertaken, the major Citytrain network extended weekend SCAS closures and subsequent late night maintenance closures, the planned extended shutdowns in the Aurizon network aligned to major port and mine shutdowns, and any special closures. These planned shutdowns are rarely aligned, with different business drivers and key stakeholders involved.

Unplanned outages include closures due to extreme weather events and any consequential infrastructure damage, derailments and the consequential delays in clean-up, repairing damaged infrastructure and restoring traffic. The long linear nature of the NCL rail corridor exacerbates the time to bring back to steady state operation, with limited queuing ability in the near vicinity of any incident, and the physical limitations of a single track corridor, the cycling of limited train numbers, and the non-ability to catch up on lost throughput.

A corridor investment strategy can only address infrastructure standards and equipment reliability. The infrastructure maintenance strategy will impact the likelihood of in-service failures (e.g. preventative maintenance or fix-on-failure), and the responsiveness to rectify. Rail Operators have similar considerations with respect to the quality and condition of their equipment, both rollingstock and terminals.

### 39.2 FLOOD IMMUNITY

#### 39.2.1 Flood prone sections and impacts

Section 24 included a preliminary evaluation of the historical flood prone sections and recent impacts. Table 39.1 below summarises the track lengths in each of the major sections which have previously been subject to flooding, with variable damage incurred and delays experienced. The likelihood of damage and extent of damage in any particular location will depend on the particular flooding event, and the effectiveness of any previous repairs and mitigation works. Any two flood events and their consequences are unlikely to be the same, even on the same track section.

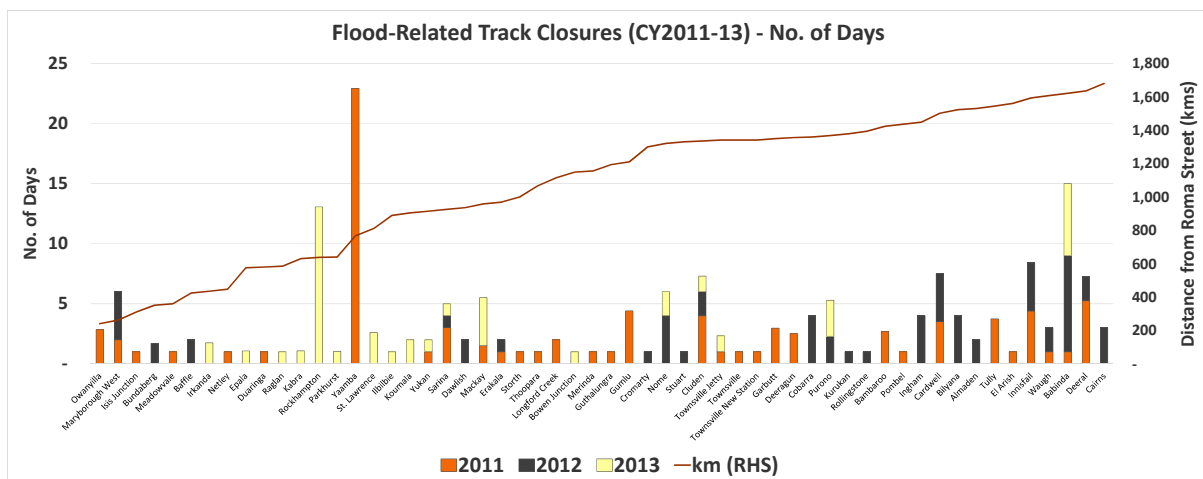
**Table 39.1 Flood prone sections**

| Section                  | Section length (km) | Length Potentially Affected (km) | Pre- 2010 Specific Locations NCL North |
|--------------------------|---------------------|----------------------------------|--|
| Nambour – Bundaberg      | 246                 | 27                               |  |
| Bundaberg - Gladstone    | 178                 | 5                                |  |
| Gladstone–Rockhampton    | 110                 | 7                                |  |
| Rockhampton - Mackay     | 320                 | 16                               | 16                                     |
| Mackay - Townsville      | 382                 | 121                              | 32                                     |
| Townsville - Cairns      | 339                 | 89                               | 97                                     |
| <b>Brisbane - Cairns</b> | <b>1680 km</b>      | <b>265 km</b>                    |  |

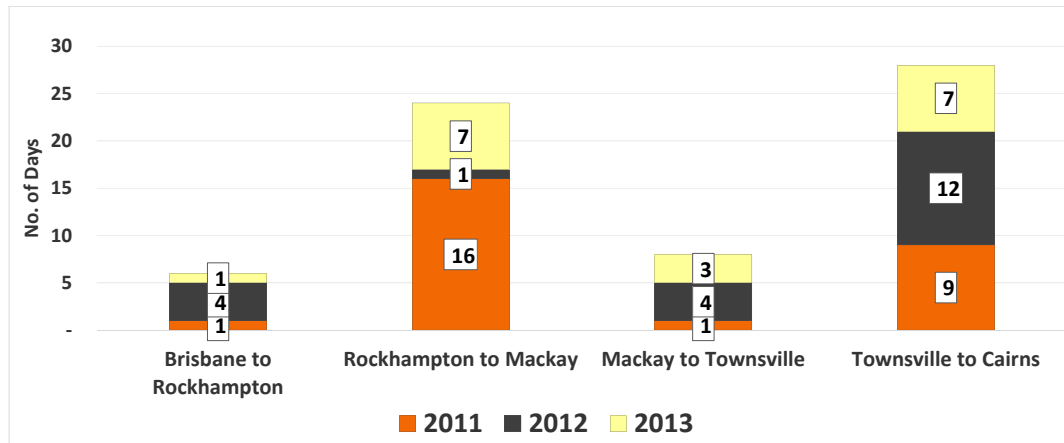
Source: QR's Curve Speed Straight Line Diagram Drawings S24480

Figure 39.1 shows the various locations (line sections) where track closures were experienced over the past 3 wet seasons (CY 2011 – 13), and Figure 39.2 is an assessment of the outage periods for the major line sections over this period.

**Figure 39.1 Flooding locations and frequency (Calendar years 2011 – 2013)**



**Figure 39.2 Cumulative outages (days) due to flooding over calendar years 2011-2013**



The Townsville – Cairns section exhibited the most consistent delay events along its length each year, and the greatest average annual delays, averaging around the nine days per year.

The Rockhampton – Mackay section is skewed by the major delays around Yamba, from the major Fitzroy River flood event in 2011, with a lesser impact in 2013. The Rocklands – Rockhampton section is similarly impacted by major Fitzroy River flooding, but with less duration and damage impacts.

### 39.2.2 Improving flood immunity

The stakeholder feedback clearly indicated that flooding and the consequential damage and track outages are a major concern, and this ranks as high contributor in the perceived “unreliability “ of the NCL, even if the road outages are worse. Addressing flood immunity is thus high priority in any measure to retain and increase rail intermodal volumes.

Improving flood immunity can include:

- ▶ Reconstruction to a higher level to prevent/limit potential overtopping (with appropriate waterway area provision).
- ▶ Installing additional under-track waterway capacity to safely pass peak design floods.
- ▶ Improving existing waterways by clearing debris and blockages, stream training, diversion drains, and levee banks, to improve/control flood flows.
- ▶ Flood-resilience for existing track by armouring with gabion/flood-rock protection, to limit damage with flood over-topping events.

Consideration in choice of upgrade includes the local physical conditions, adjoining landowner issues, environmental considerations and licence approvals associated with any changes to existing waterways, in addition to the obvious capital costs and likely benefits achieved.

Flood immunity upgrades may be associated with other upgrades, including bridge replacements, alignment upgrades, and track upgrades.

### 39.2.3 Recommended flood-resilience strategy

Upgrading the full corridor to full “flood free” status (i.e. no reasonable likelihood of overtopping and/or flood damage) is unlikely to be practical or affordable. A “flood resilience” strategy that provides an effective armouring of the track and embankment and at-risk structures is recommended as a general

rule; but with raising track to a flood-free level where bridge replacements and curve easings are proposed. However the Rockhampton area is particularly susceptible to major Fitzroy River flooding with extended outages, and a more permanent flood-free option such as the western bypass is desirable.

Actions recommended include:

- ▶ A detailed evaluation of the flood proneness of the corridor, in terms of previous overtopping and flood damage events, and effectiveness of previous mitigation measures.
- ▶ Undertake scoping/designs for specific flood resilience measures for each “at risk” location, which would include a selection from the mix of measures identified in the previous section. (This includes evaluation of complementary works such as timber bridge replacements and curve easings at the “at risk” locations).
- ▶ Prioritise the flood-resilience solutions, based on level of risk, costs to implement, and expected benefits (traffic volumes, previous outages and durations).
- ▶ Implement the prioritised works within the limits of an allocated budget.

### 39.3 CORRIDOR AVAILABILITY – PLANNED TRACK CLOSURES

For safety and productivity reasons, planned infrastructure maintenance and asset renewals affecting the track and rail systems are normally undertaken during pre-defined Maintenance Windows, in which a full track possession is provided. Section 8.1 described in detail the maintenance windows applicable to the NCL. For NCL intermodal freight, train schedules are built around 3 separate maintenance regimes, covering the SEQ Network south of Nambour, the two sections controlled by Aurizon (Parana – Rocklands and Durroburra – Kaili), and the balance of the Queensland Rail controlled regional network link.

The extended weekend Scheduled Corridor Access Scheme (SCAS) closures (normally Friday evening – Monday morning) within the Citytrain network have the most impact on the intermodal freight operations. Each Citytrain corridor has four major weekend SCAS maintenance closures each year. For the NCL freight there are four major planned closures each year that will have a severe impact, and another eight weekend closures on the Ipswich and South Coast corridors that will have a major impact.

In addition to the major SCAS shutdowns, a number of works are also scheduled for shorter, late week-night closures, with minimal impact on rail passengers, but potentially preventing freight trains being able to access through the network during these periods, requiring re-scheduling of freight trains, impacting on either departure times or arrival times. In addition to the major and minor SCAS closures, there will be project related closures that will need to occur during the periods determined by the specific project requirements. The planning for the project closures generally attempts to align these with the major SCAS closures.

The maintenance windows on the regional network have less impact, with shorter weekly periods ranging from 7 hours to 17 hours. These are scheduled for the non-peak freight periods, and partly staggered along the route length to reflect the traffic flows.

Maintenance windows exist as a function of network reliability and so a review of the MTP maintenance allowances should also be undertaken as part of a reliability improvement upgrade.

The Northern Freight Terminal would allow for an improvement in reliability (and availability) as it removes the requirement to traverse the Citytrain portion of the NCL, which is historically the most variable part of the corridor, and subject to the extended SCAS closures.

As previously mentioned the quantification of reliability is often a subjective assessment and prone to unpredictable influences such as weather events. However the impact of an NFT to improving availability can be quantified to some degree by calculating the number of closure hours per year that could be avoided in the Citytrain network. Based on information in Section 7 in Working Paper, up to 200 hours of closure hours can be avoided between Nambour and Brisbane and an additional 200 hours between Brisbane and Acacia Ridge. A total of 400 hours equates to 4.6% of yearly availability which could total as much as 16 - 17 services per year avoiding cancellation due to SCAS closures.

A more detailed assessment of the NCL track closure program could provide additional quantification of benefits associated with improving reliability. However at this stage with a NFT in place, the current Citytrain network restrictions are significantly eliminated and the departure times of services can be adjusted. This would require a change to the current planned maintenance windows.

During the assessment phase it was highlighted that the current NCL track closure program is significant, yet the utilisation of the windows is low in some areas. Whilst unquantified, a change to the maintenance planning process should deliver increased train paths when demand warrants.

#### 39.4 RAIL OPERATOR PERFORMANCE RELIABILITY

Rail Operator performance contributes significantly to overall system reliability. This includes;

- ▶ Terminal operations (equipment performance and operating practices), including receiving and despatching train
- ▶ Locomotive and wagon reliability
- ▶ Crew availability, driver performance and en-route events (provisioning)

As documented in Section 8, the majority of smaller, in time duration, delays impacts on reliability. The current framework for access is the same regardless of the rail operator's performance. It is recommended that the access protocols be modified to align with the requirement of running a more disciplined operation, particularly in respect of on-time departures, and activities en-route that impact on network performance and other Rail Operators.

#### 39.5 CONCLUSIONS – RELIABILITY

Reliability, or perceived lack of reliability, is a key negative attribute of the current rail intermodal experience, and one that must be addressed if rail is to compete.

This must include a program to reduce the impact of flooding and likelihood of flood damage.

An on-going program of asset renewals is also essential to maintain the safety integrity of the railway, and its reliability.

Planned maintenance closures are essential to ensure the performance and reliability of the infrastructure. The rationale for the extended SCAS closures in the Citytrain network is accepted; however the opportunity to permit limited diesel operated premium freight services to traverse through a SCAS closure should be explored, where this is physically possible (e.g. track is intact).

A Northern Freight Terminal provides a medium – long term solution to the major impact of SCAS closures, and the impact of unplanned events (equipment failures and external caused events) within the more complex Brisbane metro network.

Rail Operator performance also contributes significantly to the reality and perceptions of “reliability”, and need to be similarly addressed. This includes equipment reliability, terminal operations, and operating disciplines around on-time performance.

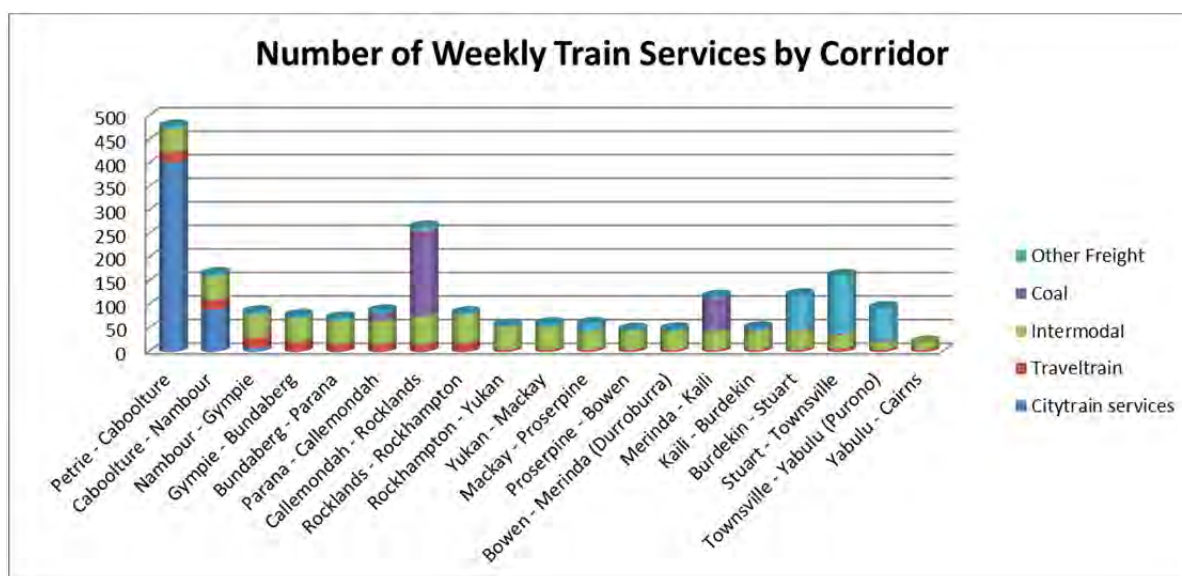


## 40. Corridor capacity assessment

### 40.1 CURRENT CORRIDOR CAPACITY AND UTILISATION

Sections 6 and 7 identified current rail traffics and assessed current corridor capacity and utilisation. Figure 40.1 below provides an overview of the weekly services and train type within the discrete sections along the route.

**Figure 40.1 Typical number of trains per week**



The corridor capacity (trains/day) is a function of a number of variables, including number of tracks (in multi-track sections), junction constraints, train control functionality, signal headways, mix of train types and their relative performance, infrastructure standards (line speed, alignment), and Section Run Times for single line sections,

The key constraint areas are:

- ▶ Brisbane – Nambour: Interaction with Citytrain services
- ▶ Gladstone – Rockhampton: Interface with coal trains and Aurizon related activities in Rockhampton.
- ▶ Townsville area: Impact of local short-haul bulk traffic (sugar, nickel and zinc ore) and the Mount Isa Line traffic.

The assessed capacity and capacity utilisation for the current NCL routes are as indicated in Table 40.1.

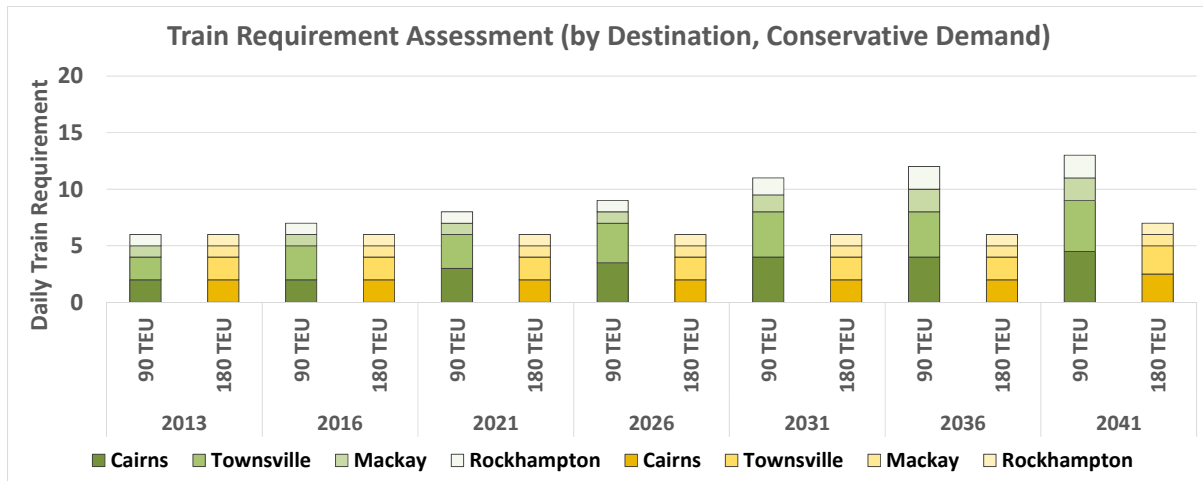
**Table 40.1 Current NCL train path task and capacity utilisation**

|  | A   | B                               | C   | D                       | E                    | F                     | G                      |
|--|---|---------------------------------|---|-------------------------|----------------------|-----------------------|------------------------|
| TRACK CORRIDOR                               | THEORETICAL MAXIMUM TRAIN PATH CAPACITY                       | TRACK MAINTENANCE WINDOW (MINS) | THEORETICAL TRAIN PATHS excluding MAINTENANCE WINDOWS | OPERATIONAL TRAIN PATHS | UTILISED TRAIN PATHS | AVAILABLE TRAIN PATHS | PERCENTAGE UTILISATION |
| <b>BRISBANE SUBURBAN AREA STH OF NAMBOUR</b> | <b>CITY NETWORK BRISBANE METROPOLITAN AREA RESPONSIBILITY</b> |                                 |   |                         |                      |                       |                        |
| Nambour To Gympie Nth                        | 720   | 810                             | 662   | 464                     | 175                  | 289                   | 38%                    |
| Gympie Nth To Bundaberg                      | 630   | 855                             | 577   | 404                     | 149                  | 255                   | 37%                    |
| Bundaberg To Meadowvale                      | 531   | 660                             | 496   | 347                     | 150                  | 197                   | 43%                    |
| Meadowvale To Parana                         | 480   | 1020                            | 431   | 302                     | 141                  | 161                   | 47%                    |
| <b>PARANA TO ROCKLANDS</b>                   | <b>AURIZON NETWORK RESPONSIBILITY</b>                         |                                 |   |                         |                      |                       |                        |
| Rocklands To Rockhampton                     | 630   | 0                               | 630   | 441                     | 218                  | 223                   | 49%                    |
| Rockhampton To Sarina                        | 403   | 1020                            | 362   | 254                     | 121                  | 133                   | 48%                    |
| Sarina To Mackay                             | 630   | 750                             | 583   | 408                     | 116                  | 292                   | 28%                    |
| Mackay To Erakala                            | 840   | 600                             | 790   | 553                     | 98                   | 455                   | 18%                    |
| Erakala To Proserpine                        | 480   | 870                             | 439   | 307                     | 122                  | 185                   | 40%                    |
| Proserpine To Bowen Jctn                     | 373   | 360                             | 360   | 252                     | 98                   | 154                   | 39%                    |
| Bowen Jctn To Merinda                        | 916   | 360                             | 884   | 619                     | 123                  | 496                   | 20%                    |
| Merinda To Durroburra                        | 5040  | 390                             | 4845  | 3392                    | 98                   | 3294                  | 3%                     |
| <b>DURROBURRA TO KAILI</b>                   | <b>AURIZON NETWORK RESPONSIBILITY</b>                         |                                 |   |                         |                      |                       |                        |
| Kaili To Home Hill                           | 531   | 390                             | 510   | 357                     | 104                  | 253                   | 29%                    |
| Home Hill To Ayr                             | 672   | 0                               | 672   | 470                     | 140                  | 330                   | 30%                    |
| Ayr To Pioneer                               | 672   | 0                               | 672   | 470                     | 172                  | 298                   | 37%                    |
| Pioneer To Giru                              | 672   | 0                               | 672   | 470                     | 200                  | 270                   | 43%                    |
| Giru To Nome                                 | 560   | 0                               | 560   | 392                     | 243                  | 149                   | 62%                    |
| <b>TOWNSVILLE SUBURBAN AREA</b>              | <b>DUPLICATION SHARED WITH THE MOUNT ISA LINE</b>             |                                 |   |                         |                      |                       |                        |
| Townsville Fork To Yabulu                    | 420   | 0                               | 420   | 294                     | 211                  | 83                    | 72%                    |
| Yabulu To Woree                              | 325   | 720                             | 302   | 211                     | 42                   | 169                   | 20%                    |
| Woree To Portsmith                           | 775   | 600                             | 729   | 510                     | 42                   | 468                   | 8%                     |
| Portsmith To Cairns                          | 630   | 0                               | 630   | 441                     | 47                   | 394                   | 11%                    |

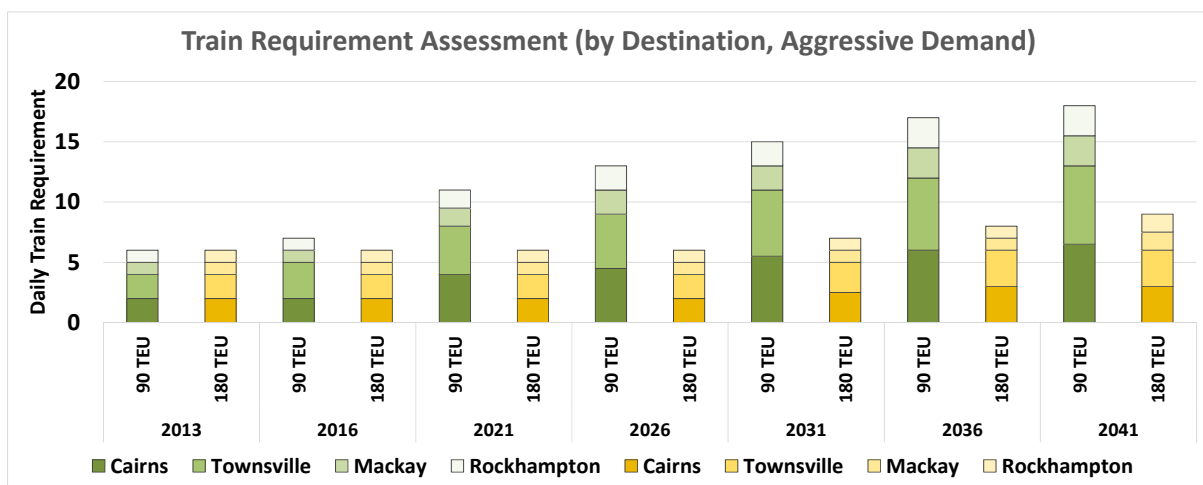
## 40.2 INTERMODAL TRAIN NUMBERS

Possible demand scenarios and peak daily, each-way intermodal train numbers are as identified in Section 32. Figures 40.1 and 40.2 indicate future train numbers on the specific OD pairs to satisfy a conservative and aggressive growth targets, with current length trains (90 TEU), or longer 180 TEU trains.

**Figure 40.1 Likely intermodal train numbers each way – conservative demand**



**Figure 40.2 Likely intermodal train numbers each way – aggressive demand**



The most utilised section of the route for intermodal trains is obviously Brisbane – Rockhampton, with the overlay of additional passenger (Traveltrain and Citytrain) and livestock trains, plus the coal trains.

### 40.3 BELOW RAIL EXPANSION SCENARIOS

The baseline capacity assessment for these pathways is taken from Section 7.1, and is as summarised in Table 40.1.

To determine if additional loops or duplications are required, the additional train demand has been added to the existing path requirements. If the specific track section utilisation exceeds 50% utilisation it is assumed that track capacity, while theoretically sufficient, can no longer provide adequate timetable reliability and recoverability. To reduce the utilisation below 50% the nominated sections in the tables below are either duplicated or have an additional loop placed on them.

### 40.3.1 Current length intermodal trains (90 TEU)

The limitation of intermodal train to the current 655 metre (90 TEU) length will result in a steady growth in total peak day train numbers for both the demand scenarios, with the aggressive growth scenario requiring 13 - 18 intermodal trains/day each way between Brisbane and Rockhampton by 2041, reducing further north. The impacts on the current corridor and capacity upgrade options are as indicated in Tables 40.2 and 40.3.

**Table 40.2 90 TEU train, conservative growth, below-rail upgrade requirements**

| Year      | Critical Segment(s)  | Utilisation | Action  | New Utilisation |
|-----------|--|-------------|---|-----------------|
| Base Line | Rockhampton-Mackay   | 48%         | No upgrades required  | 48%             |
| 2016      | Rockhampton-Mackay   | 50%         | No upgrades required  | 50%             |
| 2021      | Rockhampton-Mackay<br>Nambour-Rockhampton                      | 53%         | <b>Loops on:</b><br>Kunwarara-Princhester<br>Benaraby-Iveragh   | 47%             |
| 2026      | Rockhampton-Mackay<br>Mackay-Townsville                        | 47%         | No upgrades required  | 47%             |
| 2031      | Rockhampton-Mackay,<br>Mackay-Townsville                       | 50%         | No upgrades required  | 50%             |
| 2036      | Rockhampton-Mackay<br>Mackay-Townsville                        | 52%         | <b>Loops on:</b><br>Yamba-Glen Geddes<br>Glen Geddes-Kunwarara<br>Wumalgi-St Lawrence<br>St Lawrence-Kalarka<br>Littabella-Flinders                     | 50%             |
| 2041      | Nambour-Rockhampton<br>Rockhampton-Mackay<br>Mackay-Townsville | 53%         | <b>Loops on:</b><br>Bororen-Iveragh<br>Ogmore-Wumalgi<br>Marlborough-Kooltandra<br>Proserpine-Bubiolo<br><b>Duplication:</b><br>Rocklands - Rockhampton | 49%             |

Rocklands to Rockhampton will be one of the critical sections in 2041 at 49% utilisation, and may require a capacity upgrade. From a theoretical perspective a loop on the Rocklands to Rockhampton section would suffice, however in reality it is triggered due to it being a low speed section that is relatively short. Placing a loop in this section may provide no benefit hence a duplication has been recommended. Further detailed dynamic modelling would provide a more definitive recommendation. Alternatively the proposed western road/rail bypass would eliminate this NCL constraint for intermodal trains.

In total, 11 loops and an alternate option for the Rocklands Rockhampton section would be required to support this growth scenario out to 2041.

**Table 40.3 90 TEU train, aggressive growth, below-rail upgrade requirements**

| Year      | Critical Segment(s)  | Utilisation | Action   | New Utilisation |
|-----------|--|-------------|--|-----------------|
| Base Line | Rockhampton-Mackay   | 48%         | No upgrades required   | 48%             |
| 2016      | Rockhampton-Mackay   | 50%         | No upgrades required   | 50%             |
| 2021      | Nambour-Rockhampton<br>Rockhampton-Mackay<br>Mackay-Townsville | 60%         | <b>Loop on:</b><br>Iveragh-Benaraby<br>Kunwarara-Princhester   | 50%             |
| 2026      | Nambour-Rockhampton<br>Rockhampton-Mackay                      | 54%         | <b>Loops on:</b><br>Littabella-Flinders<br>Bororen-Iveragh<br>Marlborough-Kooltandra<br>Ogmore-Wumalgi<br>Proserpine-Bubialo   | 49%             |
| 2031      | Nambour-Rockhampton<br>Rockhampton-Mackay                      | 53%         | <b>Loops on:</b><br>Meadowvale-Avondale<br>Kooltandra-Ogmore<br>Elalie-Carmila<br><b>Duplication on:</b><br>Rocklands-Rockhampton  | 50%             |
| 2036      | Nambour-Rockhampton<br>Rockhampton-Mackay                      | 53%         | <b>Loops on:</b><br>Elliott-Bundaberg<br>Flinders-Berajondo<br>Berajondo-Baffle<br>Benaraby-Parana<br>Parkhurst-The Caves<br>Princhester-Marlborough<br>Kalarka-Elalie<br>Orkabie-Ilbilbie<br>Ilbilbie-Koumala | 48%             |
| 2041      | Nambour-Rockhampton<br>Mackay-Townsville                       | 50%         | No upgrades required   | 50%             |

With the current train configuration, a total of 19 new loops and one section duplication would be required to support the aggressive growth scenario.

The increased number of trains, and the extra train crossings this entails, would be expected to degrade the MTP and require the addition of some additional “make-up” time. Getting these trains through the Citytrain network to the current intermodal terminals would be problematic, with the combined impacts from more freight trains, and likely higher frequency off-peak passenger services, on the shared corridor sections and crossing moves across the flat junctions at Mayne, Countess Street and Sherwood.

Significant upgrade of terminal capacity, both to handle the increased container volumes, but also to turn around the increased number of intermodal trains to maximise corridor capacity, would also be required.

### 40.3.2 Longer 180 TEU Intermodal Trains

The modelled train assumes a doubling of the current train to provide for a 1300 metre, 180 TEU capacity train, when the demand warrants providing this extra train capacity. The train numbers are as indicated in Figures 40.1 and 40.2 for the two demand scenarios, and the track capacity requirements are as outlined in Tables 40.4 and 40.5.

Obviously to run the longer trains, longer crossing loops are required, together with terminal upgrades to make/break the longer trains, and handle the increased container volumes. A progressive upgrade of lengthening of crossing loops, prioritised to suit planned crossing locations for the crossing of the longer trains based on the MTP, including provision of a degree of operational robustness, would be required.

**Table 40.4 180 TEU train, conservative growth, below rail upgrade requirements**

| Year      | Critical Segment   | Utilisation | Action                  | New Utilisation |
|-----------|--------------------|-------------|-------------------------|-----------------|
| Base Line | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2016      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2021      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2026      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2031      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2036      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2041      | Rockhampton-Mackay | 48%         | No extra loops required | 50%             |

Tables 40.4 and 40.5 clearly shows the benefit of longer trains. Based on a conservative growth profile no additional crossing loops or duplications would be required. This assumes sectional run time is not impacted by running longer services and would require certain loops to be extended in order to support the longer services. Appendix B provides high level analysis and discusses solutions for running longer trains. Given the prospect of transit time improvements, further detailed analysis of running longer trains is recommended in order to determine the total costs versus the benefit.

**Table 40.5 180 TEU train, aggressive growth, below-rail upgrade requirements**

| Year      | Critical Segment   | Utilisation | Action                  | New Utilisation |
|-----------|--------------------|-------------|-------------------------|-----------------|
| Base Line | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2016      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2021      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2026      | Rockhampton-Mackay | 48%         | No extra loops required | 48%             |
| 2031      | Rockhampton-Mackay | 50%         | No extra loops required | 50%             |

| Year | Critical Segment                          | Utilisation | Action  | New Utilisation |
|------|---|-------------|---|-----------------|
| 2036 | Rockhampton-Mackay                        | 50%         | <b>Loops on:</b><br>Kunwarara-Princhester<br>Benaraby-Iveragh | 45%             |
| 2041 | Rockhampton-Mackay<br>Nambour-Rockhampton | 46%         | No upgrades required  | 46%             |

Operating longer trains under the aggressive growth scenario would require only two new loops to be constructed by 2036; but require progressive increase in loops requiring extension as the total number of long trains on the corridor increased.

In summary the longer train scenario, at face value, seems to offer the best expansion pathway as it requires less below-rail investment and greater operational efficiency for Rail Operators. Fewer longer trains will result in fewer train crosses, and should better preserve the integrity of the MTP, than would apply with the continuing with the current length train.

#### 40.4 CONCLUSIONS – CAPACITY

If the increase in rail intermodal demand can be realised in competition with road freight, the volumes on the NCL will grow significantly. Initial growth can be catered for by running additional trains using current spare train paths; however in the medium term extra train paths would be required. A new Northern Freight Terminal and a more aggressive re-configuration of the MTP will free up some more useable paths; but these will ultimately be absorbed. Upgrading to the longer intermodal train becomes a viable option, with the added benefit of reduced operating cost.

In any growth scenario extra rollingstock would be required, and terminal upgrades would also be required to accommodate either additional trains or longer trains.

From a network capacity perspective, the capacity provided by longer trains may be required in the early-2020s (2021 – 2026), subject to actual rail volume growth achieved by then. An earlier staged introduction to suit Rail Operator objectives (cost efficiencies) may be desirable.

## 41. Conclusions and recommendations

Demand modelling undertaken within the SEQRFTS has indicated significant growth in rail intermodal volumes are possible between South East Queensland and Central and North Queensland, based on regional population growth, economic development and the role SEQ plays as the major distribution centre for Queensland. It also forecast very strong growth in IMEX volumes from the north through Port of Brisbane.

However contestable rail intermodal freight volumes have been on a decline over the past 8 years, dropping by 20% in this period, in spite of major regional growth (clouded by the 2008 Global Financial Crisis). The major contributor to this rail decline has been road freight's growing market share, with some reduction in IMEX railed freight, lost to a direct container shipping line now servicing Townsville on a regular basis. The number of freight trains operating to/from Brisbane in this period has also reduced significantly, freeing up corridor capacity.

The focus of this North Coast Line Capacity Improvement Study has been around contestable intermodal freight, and what is needed to arrest the decline over recent years in total railed volumes, and even more so the loss in market share. If this decline can be arrested and volumes increased, then corridor capacity constraints would need to be addressed.

Key rail intermodal freight parameters that drive modal choice, and can be influenced by the rail network, are price, transit time and reliability. Others that are not directly influenced but are significant in mode choice decisions, include the relative complexity of the rail freight business (number of key stakeholders in the rail logistics chain), the rigidities of schedules (built around train paths and need to aggregate train loads), and the scale/responsiveness of rail investment for achieving measurable improved outcomes in the rail service offering and performance.

The very substantial investment in highway upgrades recently completed and planned on the east coast corridor (Hume, Pacific and Bruce Highways), and the rapid advance in road freight capability and efficiencies, has meant the targets for rail to retain and grow mode share are not static.

### 41.1 "STAY IN BUSINESS" INVESTMENT

The North Coast Line core infrastructure is a mix of legacy assets (old timber and steel bridges), sections of poor, slow speed alignments, extensive sections subject to outages due to inundation and flood damage, some track sections that are marginal for current axle loads, and aging rail systems (signalling and telecommunications equipment) that will progressively require renewal due to decreasing reliability and technical obsolescence.

There is **no DO NOTHING** investment strategy for the North Coast Line if it is to stay open, and provide a meaningful role in the freight logistics task. **Failure to invest to renew life-expired assets and address the service parameters essential to retain and grow freight volumes, will ultimately reduce the North Coast Line to irrelevance in the contestable freight market. Road freight will progressively increase its market share under this scenario.**

Likewise, a lack of strategy to invest in a meaningful way in the corridor, will signal to Rail Operators as well as current and future rail freight customers, that there is little incentive for them to invest in their business for a rail intermodal freight future. There is a high stranding risk in the above-rail business for the contestable freight market, which is not protected by the long-term take-or-pay contracting arrangements that apply in the bulk rail haul market. The contestable intermodal market



involves only short term contracting arrangements with even the major customers, which is a significant impediment to investment in long life rail assets.

Stay-in-business investments includes addressing safety, reliability and transit time parameters, and operating costs.

#### 41.1.1 Capital investments

The major corridor investment categories recommended under this category include:

- ▶ A comprehensive program of improving flood immunity, including a mix of raising low bridges and improving flood resilience by armouring track and embankments to accommodate short term flood water overtopping track with minimal flood damage and a quicker recovery timeframe. A “flood resilience” program could be readily implemented for known problem areas and provide early wins on improved reliability, but also to provide a clear message that these sections are being fixed.
- ▶ A longer term program of asset renewals, particularly covering old bridge structures and very low standard alignment and flood prone sections.
- ▶ Planning to address the more extensive sections of sub-standard alignment, including the long sub-standard sections between Nambour and Maryborough, and the Rockhampton Western Bypass. This would include route finalisation and corridor protection, preparatory to any funding commitment to proceed to construction.

The benefits of capital investment will be progressively realised. However, the extent of works required and likely capital constraints will mean that the benefits of major bridge renewals and curve easings will be cumulative and will provide material benefit in the medium to long term. A concerted prioritised flood mitigation and resilience program should result in a more immediate pay-back in terms of reduction in outages due to flooding and flood damage as well as improved service recovery for customers.

#### 41.1.2 Non-capital initiatives

Non-capital stay-in-business initiatives recommended to improve the reality and perceptions of reliability, that also include major transit time benefits, revolve around a fundamental review of the Master Train Plan (MTP) to increase the operational disciplines to meeting the MTP schedule, and removing the current levels of contingency (make-up time) needed under current operating practices.

This could be expected to provide up to a 3 hour reduction in transit time between Brisbane and Cairns for the premium intermodal trains, and 2 hour reduction between Brisbane and Townsville, with lesser time savings for the intermediate centres. (A 1 hour time saving by curve easings and major deviations would entail a capital cost of the order of \$1.2 billion.)

The ability to realise this transit time saving relies on running and sustaining a far more disciplined operation. The on-time departure from terminals is particularly critical in achieving this. A fundamental change to the MTP would require agreement between the key stakeholders on the quantum of the change and its implementation. These stakeholders include the major customers, both current Rail Operators and the 2 network owners.

### 41.2 CORRIDOR CAPACITY

There is substantial current “spare capacity” for rail intermodal freight out of Brisbane, following a significant reduction in freight trains operated over the past decade. This includes at least 50% spare capacity on the current peak freight day in the preferred overnight departure windows out of Brisbane.

The generation of some additional freight paths in this period would be expected with a more rigorous tightening up of the MTP. There is also significant additional spare capacity during the day-time off-peaks and on the non-peak days; but the ability to more fully utilise these low priority freight paths is likely to be constrained by freight customer service parameters and requirements.

The demand forecasts predict a potential significant growth in rail volumes. If these can be realised and the current spare paths are taken up, then further capacity is best achieved by increasing the length/payload of the intermodal trains. Doubling the length of these trains (from a current 650 metres to 1,300 metres) would effectively double capacity with no increase in the number of peak day trains. This would require an extension of crossing loops to accommodate the longer train, both for crossing passenger trains (with *passenger priority*) and crossing other long trains. Not all crossing loops would require extension, and the number and locations would be informed by the development of the new MTP. A progressive upgrade program is contemplated based on the rail market growth, take-up of the introduction of longer trains and the specific OD pairs for these services, and the required robustness of operational performance.

The introduction of longer trains also requires targeted investment in intermodal terminals by Rail Operators, to efficiently receive, strip and re-load, and despatch the longer trains at both origin and destination.

### 41.3 NORTH BRISBANE REGION FREIGHT TERMINAL (NFT)

There are significant limitations with the shared trackage within the Brisbane metro region, both on the daily scheduling of trains through the network to/from the current south-side freight terminals, and with the non-availability of the metro network for extended periods due to SCAS and late evening infrastructure maintenance shutdowns. These highlight the desirability of siting a Brisbane region terminal more remote from these impacts.

Demand modelling undertaken for the SEQRFTS suggests that the current three Brisbane region intermodal terminals could be capacity constrained by the mid-2020s, depending on the demand scenario.

An NFT would address both issues, with the reduction in rail line-haul transit time, greater flexibility of train scheduling with arrivals/departures in passenger peak periods, and significantly reduced impact from Brisbane metro infrastructure maintenance closures, offsetting the longer road PUD leg to the NFT. The planning and site protection/acquisition for an NFT is recommended. Site selection and concept planning is to be undertaken within the SEQRFTS.

### 41.4 RECOMMENDED ACTIONS

The recommended actions, how they align to the three major corridor business outcomes of “stay-in-business”, “improving service attributes to grow rail volumes”, and “providing adequate corridor capacity” are summarised as per Table 41.1.

**Table 41.1 Recommended actions and benefits**

| ACTIONS                   | ATTRIBUTES – CONTESTABLE INTERMODAL FREIGHT |              |             |       |          |
|---------------------------|---|--------------|-------------|-------|----------|
|                           | Stay in business (safety)                   | Transit time | Reliability | Price | Capacity |
| Bridge replacements       | ●   | ◐            | ◐           | ○     | ○        |
| Minor curve easings       | ◐   | ◐            | ◐           | ○     | ◐        |
| Major deviations          | ◐   | ◐            | ◐           | ○     | ◐        |
| Track upgrade             | ◐   | ◐            | ◐           | ○     | ◐        |
| Flood Resilience          | ◐   | ○            | ●           | ○     | ◐        |
| Longer trains             | ○   | ◐            | ◐           | ◐     | ●        |
| Northern freight terminal | ○   | ●            | ●           | ◐     | ●        |
| MTP engineering           | ○   | ●            | ◐           | ◐     | ◐        |

● High Impact      ○ Minimal Impact

Each action has a primary customer service justification, but also contributes to other desirable service attributes.

An implementation program has been suggested, with consideration of the lead-times needed to progress initiatives, likely funding and other resource constraints, and timing to meet capacity requirements. Table 41.2 provides a summary overview of this assessment, inclusive of an assessment of the comparative ease of implementation and realisation of the benefits. Section 41.5 provides an initial summary of likely capital costs, assuming availability of funding and resource constraints.

**Table 41.2 Overview of implementation issues**

| ACTIONS                   | ATTRIBUTES – CONTESTABLE INTERMODAL FREIGHT |                |                        |                   |                  |
|---------------------------|---|----------------|------------------------|-------------------|------------------|
|                           | Capital Cost                                | Implementation | Ease of Implementation | Time to Implement |                  |
| Bridge replacements       | High  | Staged         | Moderate               | 1-10yrs plus      | Slow-progressive |
| Minor curve easings       | High  | Staged         | Moderate/Hard          | 2-10yrs plus      | Slow-progressive |
| Major deviations          | High  | Staged         | Moderate/Hard          | 3-10yrs plus      | Slow-progressive |
| Track upgrade             | Medium                                      | Staged         | Easy                   | 2-5yrs            | Med-progressive  |
| Flood resilience          | Medium                                      | Staged         | Easy/Moderate          | 1-3yrs            | Early wins       |
| Longer trains             | Medium                                      | Staged         | Moderate               | 3-10yrs           | Early wins       |
| Northern freight terminal | Medium                                      | Part staged    | Moderate               | 5yrs              | Early wins       |
| MTP engineering           | Nil   | One-off        | Easy                   | Short             | Immediate        |

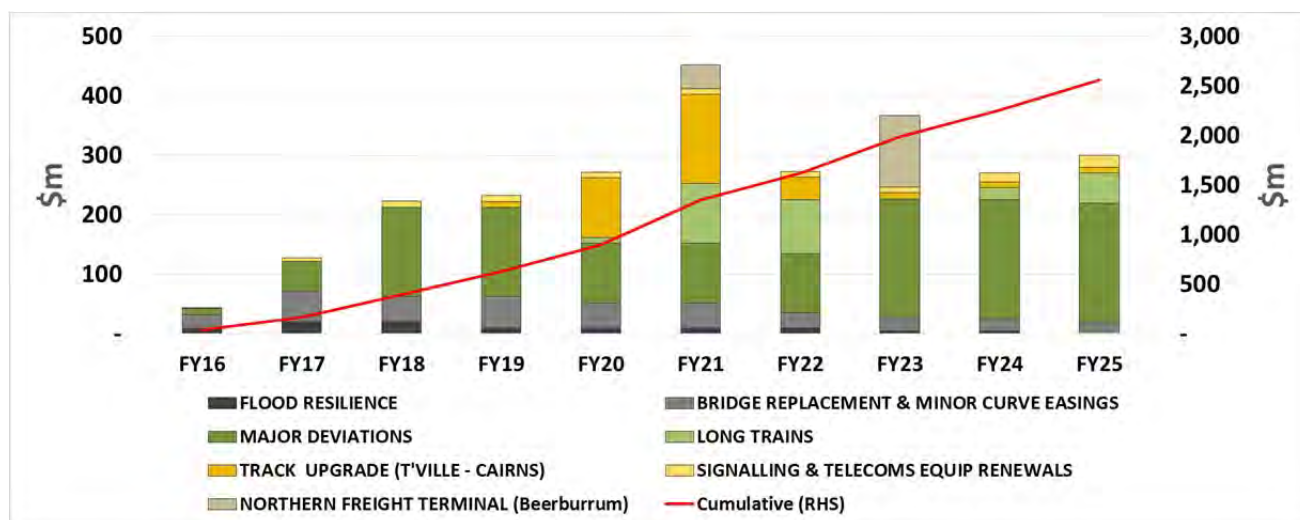
## 41.5 CAPITAL INVESTMENT PROGRAM

A possible implementation program and budget is outlined in Table 41.3. This assumes an initial 10 year program, commencing in 2015/16, and is intended to provide a guideline as to what will be required to meet the policy objectives of getting more freight on rail, and to providing the extra corridor capacity to cater for this increase in freight traffic.

Capital costs are indicative only (in 2014 \$s), with separate detailed engineering investigations required to define scopes and cost estimates, and the priorities for implementation within each Action Initiative, and where a number of initiatives provide multiple benefits. Scoping and the identification of the optimal technical solutions, would be informed by the operational and reliability benefit achievable, which would also include assessing priorities between the Action Initiatives, and the quantum of each as part of the overall program implementation. A key consideration in finalising any upgrade program would be consultation with key stakeholders to derive a common understanding and agreement that the suggested scope and implementation program can deliver the desired outcomes.

The recommended 10 year Action Plan initiatives and indicative expenditure profile is as indicated in Figure 41.1. This provides for the lead-times required to undertake the detailed engineering and other investigations for the early stay-in-business projects and an early start on the flood-resilience works. The lumpiness in the mid-period relates mainly to a desire to progress some major deviation re-alignment packages north of Nambour, and the track upgrade option north of Townsville, coupled with the likely need to initiate the long train loop extension option to address future capacity constraints. The former two are discretionary to some extent as to timing, with the latter being an outcome of the success in attracting additional intermodal rail volume on the NCL system.

**Figure 41.1 Indicative program and cash-flow**



## 41.6 NEXT STEPS

As noted above, the indicative budget funding estimate is based on very broad scope parameters for the major program sub-components. More detailed engineering and scoping needs to be undertaken to firm-up on the extent of works required, individual upgrade schemes, capital cost estimates and priorities, both within each of the Action Initiative areas and the relativity between these areas, to deliver the best “bang for the buck” as well as identifying the outcomes most likely to deliver on

intermodal freight growth. Key stakeholder involvement in agreeing on scope and the ability to achieve the desired outcomes is essential.

The next stages of this assessment are recommended to include:

- ▶ Key stakeholder engagement on the conclusions of this NCLCI study and suggested way forward.
- ▶ Progressing the re-engineering of the Master Train Plan, including consultation with major customers, Rail Operators and rail Network Owners.
- ▶ Detailed investigation of flooding issues including scoping of the best flood mitigation options to improve the flood resilience of the railway, including prioritising works, capital cost estimates, expected benefits and work packaging options. (This includes linkage with the bridge replacement and minor curve easing program investigation.)
- ▶ Detailed investigation of the elimination of the remaining timber bridges, including associated minor curve easings, flood mitigation approaches at these locations, development of cost estimates, and prioritising works based on current asset condition and other relevant criteria.
- ▶ Finalising of the desired strategic infrastructure standards to be adopted where feasible along the various route sections (e.g. horizontal alignment).
- ▶ Progress concept alignment designs for major deviations, including new alignment design, identification of land requirements, cost estimates and benefits assessment.
- ▶ Planning for siting and concept design and land footprint requirements for a new northern Brisbane Freight Terminal.
- ▶ Development of an implementation strategy for the introduction of longer intermodal trains, including finalising an optimal reference train length, assessment of terminal implications for both the Brisbane region terminals and northern terminals, and assessment of which crossing loops require extension as the number of long trains is progressively increased.

**Table 41.3 Indicative 10 year capital investment program**

| ITEM  | Indicative<br>Quantity<br>(No.) | AMOUNT<br>\$M    | INDICATIVE STAGING (\$M) |            |            |            |            |            |            |            |            |            |
|---|---------------------------------|------------------|--------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|   |                                 |                  | FY16                     | FY17       | FY18       | FY19       | FY20       | FY21       | FY22       | FY23       | FY24       | FY25       |
| <b>FLOOD RESILIENCE</b>   |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Stage 1 - strengthenen current rock armouring                           | 100                             | 50               | 10                       | 20         | 20         | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Stage 2 - Additional strengthening                                      | 100                             | 50               | 0                        | 0          | 0          | 10         | 10         | 10         | 10         | 5          | 5          | 0          |
| Subtotal  | 200                             | 100              | 10                       | 20         | 20         | 10         | 10         | 10         | 10         | 5          | 5          | 0          |
| <b>BRIDGE REPLACEMENT &amp; MINOR CURVE EASINGS</b>                     |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Timber bridge replacements (61 No.)                                     | 3                               | 130              | 10                       | 20         | 20         | 20         | 20         | 20         | 10         | 10         | 0          | 0          |
| Minor curve easings (associated with new bridges)                       | 30                              | 150              | 12                       | 22         | 23         | 22         | 22         | 22         | 15         | 12         | 0          | 0          |
| Selective old steel bridge upgrades/replacements (Total 62 No. bridges) | 1                               | 60               | 0                        | 10         | 0          | 10         | 0          | 0          | 0          | 0          | 20         | 20         |
| Subtotal  | 34                              | 340              | 22                       | 52         | 43         | 52         | 42         | 42         | 25         | 22         | 20         | 20         |
| <b>MAJOR DEVIATIONS</b>   |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Nambour - Gympie North  | 30                              | 450              |                          |            |            |            |            |            |            |            |            |            |
| Gympie North - Maryborough West   | 30                              | 450              |                          |            |            |            |            |            |            |            |            |            |
| Rockhampton - Mackay  | 18                              | 216              |                          |            |            |            |            |            |            |            |            |            |
| Mackay - Townsville   | 12                              | 144              |                          |            |            |            |            |            |            |            |            |            |
| Subtotal  | 90                              | 1,260            | 10                       | 50         | 150        | 150        | 100        | 100        | 100        | 200        | 200        | 200        |
| <b>LONG TRAINS</b>  |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| <b>Loop extensions</b>  |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Stage 1 (Brisbane - Townsville)   | 20                              | 200              | 0                        | 0          | 0          | 0          | 10         | 100        | 90         | 0          | 0          | 0          |
| Stage 2 (Brisbane - Townsville)   | 7                               | 70               | 0                        | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 20         | 50         |
| Stage 3 (Townsville - Cairns)   | 6                               |                  | 0                        | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Subtotal  | 33                              | 270              | 0                        | 0          | 0          | 0          | 10         | 100        | 90         | 0          | 20         | 50         |
| <b>TRACK UPGRADE (T'VILLE - CAIRNS)</b>                                 |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Purono - Ingham (PSC sleepers, 50kg/m rail)                             | 180                             | 288              | 0                        | 0          | 0          | 10         | 100        | 150        | 28         | 0          | 0          | 0          |
| Select re-railing Stage 1 (replace old 41kg with new 50kg rail)         | 100                             | 40               | 0                        | 0          | 0          | 0          | 0          | 0          | 10         | 10         | 10         | 10         |
| Subtotal  | 280                             | 328              | 0                        | 0          | 0          | 10         | 100        | 150        | 38         | 10         | 10         | 10         |
| <b>SIGNALLING &amp; TELECOMS EQUIP RENEWALS</b>                         |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Subtotal  | 0                               | 100              | 0                        | 5          | 10         | 10         | 10         | 10         | 10         | 10         | 15         | 20         |
| <b>NORTHERN FREIGHT TERMINAL (Beerburrum)</b>                           |                                 |                  |                          |            |            |            |            |            |            |            |            |            |
| Long (1300m) train staging sidings                                      | 1                               |                  | 0                        | 0          | 0          | 0          | 0          | 40         | 0          | 0          | 0          | 0          |
| Balance terminal (1300m trains)   | 1                               |                  | 0                        | 0          | 0          | 0          | 0          | 0          | 0          | 120        | 0          | 0          |
| Full Terminal (1300m long trains)                                       |                                 | 160              | 0                        | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Subtotal  |                                 | 160              | 0                        | 0          | 0          | 0          | 0          | 40         | 0          | 120        | 0          | 0          |
| <b>TOTALS</b>   |                                 | <b>\$M 2,558</b> | <b>42</b>                | <b>127</b> | <b>223</b> | <b>232</b> | <b>272</b> | <b>452</b> | <b>273</b> | <b>367</b> | <b>270</b> | <b>300</b> |

Note: The estimates above constitute a very preliminary ball-park assessment, and subject to more detailed scoping, adoption of the appropriate desirable and minimum engineering standards, particularly for horizontal alignment and flooding immunity. Re-allocation of budget between the broad line items would be expected following detailed assessment and prioritisation.

## Appendix A: Flood Prone Areas

| Location                            | Kilometrage Start | Kilometrage Finish | Section Length km | Comment Flood events | Location                          | Kilometrage Start | Kilometrage Finish | Section Length km | Comment Flood events               |
|-------------------------------------|-------------------|--------------------|-------------------|----------------------|-----------------------------------|-------------------|--------------------|-------------------|------------------------------------|
|                                     |                   |                    |                   | Representative years |                                   |                   |                    |                   | Representative years               |
| <b>NAMBOUR - ROCKHAMPTON</b>        |                   |                    |                   |                      | <b>ROCKHAMPTON - TOWNSVILLE</b>   |                   |                    |                   |                                    |
| <b>NAMBOUR</b>                      | <b>104.8</b>      |                    |                   |                      | <b>ROCKHAMPTON</b>                | <b>639</b>        |                    |                   |                                    |
| Pomona - Cooran                     | 143.4             | 146.3              | 2.9               | 1893                 | The Caves                         | 663.4             | 665                | 1.6               | 1983                               |
| Cooran - Traveston                  | 147.1             | 151.3              | 4.2               | 1893, 1974           | Yamba                             | 678               | 678.7              | 0.7               |                                    |
| Tiario                              | 233.7             | 234.7              | 1                 | 1893, 1974, 1989     |                                   | 680.8             | 681                | 0.2               |                                    |
| Tiario - Owanyilla                  | 237               | 240                | 3                 | 1893, 1974, 1981     |                                   | 686.5             | 686.7              | 0.2               |                                    |
| Owanyilla (Mary River)              | 242               | 245.3              | 3.3               | 1893, 1974, 1981     | Glen Geddes                       | 694.4             | 694.6              | 0.2               | 1918, 1972                         |
| Yengarie                            | 252.3             | 258.2              | 5.9               | 1893, 1974           | Mariborough                       | 742.8             | 744.4              | 1.6               | 1976, 1977, 1983                   |
| Cofton - Torbanlea                  | 280               | 280.4              | 0.4               | 1893, 1905           | Wumalgi                           | 793.8             | 794.2              | 0.4               | 1976, 1982                         |
|                                     | 283               | 284.5              | 1.5               | 1893, 1905, 1976     | Kalarka                           | 832.8             | 833.3              | 0.5               | 1976, 1979, 1989                   |
| Torbanlea                           | 289.1             | 289.4              | 0.3               | 1905                 |                                   | 841.6             | 842.2              | 0.6               |                                    |
| Wokka                               | 303.2             | 303.5              | 0.3               | 1905                 | Elalie                            | 847               | 847.5              | 0.5               | 1976, 1989                         |
| Wokka                               | 303.2             | 303.3              | 0.1               | 1905                 |                                   | 858.7             | 859.3              | 0.6               |                                    |
|                                     | 310.2             | 311                | 0.8               |                      |                                   | 867.4             | 867.3              | -0.1              | 1963                               |
| Kinkuna - Elliott                   | 330.5             | 333.8              | 3.3               | 1913                 |                                   | 870.2             | 874.6              | 4.4               | 1959, 1963, 1972, 1980             |
|                                     | 342.2             | 342.4              | 0.2               | 1913                 |                                   | 894               | 894.5              | 0.5               |                                    |
| North Bundaberg - Meadowvale        | 354.4             | 354.6              | 0.2               | 1983                 | Dawlish                           | 933               | 936.5              | 3.5               | 1963, 1973, 1979, 1980, 1981, 1985 |
|                                     | 357               | 360                | 3                 | 1983                 | Balberra                          | 942               | 942.6              | 0.6               | 1963, 1979                         |
| Lowmead                             | 428.2             | 428.4              | 0.2               | 1971                 | <b>MACKAY</b>                     | <b>959</b>        |                    |                   |                                    |
| Miriam Vale                         | 459.9             | 460.2              | 0.3               | 1973                 | <b>ROCKHAMPTON - MACKAY (km)</b>  | <b>320</b>        |                    | <b>16</b>         |                                    |
|                                     | 474.7             | 474.9              | 0.2               | 1973                 | <b>Percentage of route length</b> |                   |                    | <b>1.7%</b>       |                                    |
|                                     | 476.2             | 476.4              | 0.2               | 1973                 |                                   |                   |                    |                   |                                    |
|                                     | 481.7             | 481.9              | 0.2               | 1973                 |                                   | 979               | 982                | 3                 | 1970, 1977, 1979                   |
|                                     | 485.5             | 485.7              | 0.2               | 1973                 | Kuttatubul                        | 995.8             | 997.2              | 1.4               | 1967, 1970, 1974, 1976, 1989       |
|                                     | 499               | 499.3              | 0.3               | 1973                 |                                   | 1000.4            | 1000.7             | 0.3               | 1977, 1979, 1989                   |
| Benaraby                            | 506.5             | 506.7              | 0.2               |                      | Mt Ossa                           | 1008              | 1009.5             | 1.5               | 1970, 1977, 1985                   |
| <b>NAMBOUR - GLADSTONE</b>          |                   |                    | <b>32.2</b>       |                      |                                   | 1021.1            | 1022               | 0.9               | 1979, 1989                         |
|                                     |                   |                    |                   |                      |                                   | 1024.6            | 1025.2             | 0.6               | 1974, 1976, 1979, 1981, 1989       |
| Yeppen - Rocklands                  | 633.5             | 639.9              | 6.4               | 1918, 1971, 1991     |                                   | 1028              | 1028.5             | 0.5               | 1970, 1989                         |
| <b>ROCKHAMPTON</b>                  | <b>639</b>        |                    |                   |                      |                                   | 1066              | 1066.6             | 0.6               |                                    |
| <b>BRISBANE - ROCKHAMPTON (km)</b>  | <b>639</b>        |                    | <b>38.6</b>       |                      |                                   | 1074.1            | 1074.7             | 0.6               |                                    |
| <b>Percentage affected</b>          |                   |                    | <b>6.0%</b>       |                      |                                   | 1076.2            | 1078.3             | 2.1               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1079.2            | 1085               | 5.8               | 1977, 1979, 1980, 1989             |
|                                     |                   |                    |                   |                      |                                   | 1088.2            | 1089.5             | 1.3               | 1974, 1975, 1979, 1981             |
|                                     |                   |                    |                   |                      |                                   | 1090.3            | 1094.8             | 4.5               | 1974, 1985, 1989, 1990, 1991       |
|                                     |                   |                    |                   |                      |                                   | 1097.3            | 1097.8             | 0.5               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1097.6            | 1098.5             | 0.9               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1101              | 1103.3             | 2.3               | 1974, 1978                         |
|                                     |                   |                    |                   |                      |                                   | 1126.1            | 1126.6             | 0.5               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1129.4            | 1131.7             | 2.3               | 1974, 1979, 1989                   |
|                                     |                   |                    |                   |                      |                                   | 1133.1            | 1134.5             | 1.4               | 1974, 1977, 1979                   |
|                                     |                   |                    |                   |                      |                                   | 1137.3            | 1139.5             | 2.2               | 1974, 1976, 1977, 1990             |
|                                     |                   |                    |                   |                      |                                   | 1141.5            | 1142.3             | 0.8               | 1974, 1979                         |
|                                     |                   |                    |                   |                      |                                   | 1143              | 1144.5             | 1.5               | 1974, 1980                         |
|                                     |                   |                    |                   |                      |                                   | 1153.2            | 1157.8             | 4.6               | 1974, 1978, 1980, 1990             |
|                                     |                   |                    |                   |                      |                                   | 1157.6            | 1157.7             | 0.1               | 1974, 1978, 1980, 1990             |
|                                     |                   |                    |                   |                      |                                   | 1176.1            | 1178               | 1.9               | 1970, 1976, 1979                   |
|                                     |                   |                    |                   |                      |                                   | 1179.3            | 1186               | 6.7               | 1974, 1976, 1979, 1987             |
|                                     |                   |                    |                   |                      |                                   | 1191              | 1192.3             | 1.3               | 1974, 1976, 1978, 1984, 1990       |
|                                     |                   |                    |                   |                      |                                   | 1196.2            | 1197               | 0.8               | 1974, 1976, 1978, 1984, 1990       |
|                                     |                   |                    |                   |                      |                                   | 1198.5            | 1201.4             | 2.9               | 1974, 1976, 1978, 1984, 1990       |
|                                     |                   |                    |                   |                      |                                   | 1204              | 1205.5             | 1.5               | 1972, 1973, 1976, 1980             |
|                                     |                   |                    |                   |                      |                                   | 1207              | 1207.4             | 0.4               | 1973, 1987                         |
|                                     |                   |                    |                   |                      |                                   | 1208.5            | 1210.3             | 1.8               | 1972, 1973, 1977                   |
|                                     |                   |                    |                   |                      |                                   | 1213              | 1213.7             | 0.7               | 1972, 1973                         |
|                                     |                   |                    |                   |                      |                                   | 1216.8            | 1221               | 4.2               | 1973, 1974, 1979                   |
|                                     |                   |                    |                   |                      |                                   | 1225.1            | 1238.7             | 13.6              | 1974, 1983, 1986, 1989, 1990       |
|                                     |                   |                    |                   |                      |                                   | 1230.5            | 1231               | 0.5               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1240.6            | 1241.4             | 0.8               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1246.1            | 1246.8             | 0.7               | 1974, 1979                         |
|                                     |                   |                    |                   |                      |                                   | 1256.3            | 1257.7             | 1.4               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1258.5            | 1260               | 1.5               | 1974                               |
|                                     |                   |                    |                   |                      |                                   | 1261.5            | 1265               | 3.5               | 1979                               |
|                                     |                   |                    |                   |                      |                                   | 1267.3            | 1268.7             | 1.4               | 1979, 1991                         |
|                                     |                   |                    |                   |                      |                                   | 1270              | 1271.5             | 1.5               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1273.5            | 1274.5             | 1                 |                                    |
|                                     |                   |                    |                   |                      |                                   | 1275.1            | 1275.6             | 0.5               | 1976, 1978, 1979, 1980             |
|                                     |                   |                    |                   |                      |                                   | 1282              | 1284.2             | 2.2               | 1974, 1976, 1979, 1983, 1991       |
|                                     |                   |                    |                   |                      |                                   | 1285.4            | 1287.3             | 1.9               | 1974, 1976, 1979, 1983, 1991       |
|                                     |                   |                    |                   |                      |                                   | 1287.8            | 1289.2             | 1.4               | 1974, 1976, 1979, 1983, 1991       |
|                                     |                   |                    |                   |                      |                                   | 1289.7            | 1302.5             | 12.8              | 1974, 1976, 1979, 1983, 1991       |
|                                     |                   |                    |                   |                      |                                   | 1303.4            | 1304.5             | 1.1               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1305.8            | 1307               | 1.2               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1312              | 1314.2             | 2.2               | 1981, 1987, 1991                   |
|                                     |                   |                    |                   |                      |                                   | 1315.4            | 1316.6             | 1.2               | 1974, 1981                         |
|                                     |                   |                    |                   |                      |                                   | 1317.8            | 1319.4             | 1.6               | 1974, 1981                         |
|                                     |                   |                    |                   |                      |                                   | 1320              | 1320.4             | 0.4               |                                    |
|                                     |                   |                    |                   |                      |                                   | 1332.8            | 1339               | 6.2               | 1974, 1976, 1979, 1997, 1998       |
| <b>CAIRNS</b>                       | <b>1680</b>       |                    |                   |                      | <b>Stuart - Ross River</b>        | <b>1332.8</b>     |                    |                   |                                    |
| <b>TOWNSVILLE - CAIRNS (km)</b>     | <b>339</b>        |                    | <b>89.1</b>       |                      | <b>TOWNSVILLE</b>                 | <b>1341</b>       |                    |                   |                                    |
| <b>Percentage of route length</b>   |                   |                    | <b>26.3%</b>      |                      | <b>MACKAY - TOWNSVILLE (km)</b>   | <b>382</b>        |                    | <b>121</b>        |                                    |
|                                     |                   |                    |                   |                      | <b>Percentage of route length</b> |                   |                    | <b>31.7%</b>      |                                    |
|                                     |                   |                    |                   |                      |                                   |                   |                    |                   |                                    |
| <b>TOTAL BRISBANE - CAIRNS (ki)</b> | <b>1680</b>       |                    | <b>264.7</b>      |                      |                                   |                   |                    |                   |                                    |
| <b>Percentage of route length</b>   |                   |                    | <b>15.8%</b>      |                      |                                   |                   |                    |                   |                                    |

**FLOOD PRONE AREAS**  
**NCL North (Rockhampton - Cairns)**

Based on pre 2010 records -from QR NCL Upgrade Strategy Report

| Start                                      | Finish  | Length<br>km |  | Start                                     | Finish  | Length<br>km    |
|--|---------|--------------|--|---|---------|-----------------|
| <b>Rockhampton - Mackay</b>                |         |              |  | <b>Townsville - Cairns</b>                |         |                 |
| 743  | 744.6   | 1.6          |  | 1348                                      | 1350.5  | 2.5             |
| 789  | 789.6   | 0.6          |  | 1354                                      | 1367    | 13              |
| 795  | 796.6   | 1.6          |  | 1368.67                                   | 1370.5  | 1.83            |
| 836.8                                      | 837     | 0.2          |  | 1372.15                                   | 1374.6  | 2.45            |
| 842.1                                      | 842.5   | 0.4          |  | 1384.75                                   | 1386    | 1.25            |
| 853.8                                      | 854.1   | 0.3          |  | 1398                                      | 1398.38 | 0.38            |
| 855.8                                      | 859.3   | 3.5          |  | 1400                                      | 1402    | 2               |
| 867.4                                      | 868.1   | 0.7          |  | 1415.3                                    | 1418.8  | 3.5             |
| 872.5                                      | 872.6   | 0.1          |  | 1421                                      | 1422.7  | 1.7             |
| 874.8                                      | 874.9   | 0.1          |  | 1424.4                                    | 1427.7  | 3.3             |
| 879.2                                      | 879.8   | 0.6          |  | 1430                                      | 1433    | 3               |
| 892.1                                      | 892.5   | 0.4          |  | 1435.6                                    | 1436.5  | 0.9             |
| 893.3                                      | 893.5   | 0.2          |  | 1436.69                                   | 1437    | 0.31            |
| 893.9                                      | 897.6   | 3.7          |  | 1438                                      | 1461    | 23              |
| 899.58                                     | 899.7   | 0.12         |  | 1466                                      | 1466.25 | 0.25            |
| 912.6                                      | 912.8   | 0.2          |  | 1467.3                                    | 1468    | 0.7             |
| 923.1                                      | 923.2   | 0.1          |  | 1494.7                                    | 1494.75 | 0.05            |
| 924.7                                      | 924.8   | 0.1          |  | 1509.9                                    | 1512.6  | 2.7             |
|  |         |              |  | Murray Flats, Corduroy<br>Ck, Tully River |         |                 |
| 926.5                                      | 926.7   | 0.2          |  | 1530                                      | 1548    | 18              |
| 932.8                                      | 933.4   | 0.6          |  | 1573.5                                    | 1573.8  | 0.3             |
| 934.5                                      | 935     | 0.5          |  | 1582.6                                    | 1582.8  | 0.2             |
| 936.3                                      | 936.45  | 0.15         |  | 1588.4                                    | 1588.6  | 0.2             |
| 942.1                                      | 942.5   | 0.4          |  | 1592.2                                    | 1593    | 0.8             |
|  |         |              |  | 1608                                      | 1622    | 14              |
|  |         |              |  | 1627.2                                    | 1627.3  | 0.1             |
|  |         |              |  | 1629.2                                    | 1629.3  | 0.1             |
|  |         |              |  | 1632.1                                    | 1632.2  | 0.1             |
|  |         |              |  | 1656.25                                   | 1656.77 | 0.52            |
|  |         |              |  | <b>Townsville - Cairns TOTAL 97.14 km</b> |         |                 |
| <b>Rockhampton - Mackay TOTAL 16.37 km</b> |         |              |  |   |         |                 |
| <b>TOTAL LENGTH</b>                        |         |              |  |   |         |                 |
|  |         |              |  | <b>ROCKHAMPTON - CAIRNS</b>               |         | <b>145.5 km</b> |
| <b>Mackay - Townsville</b>                 |         |              |  |   |         |                 |
| 1032.7                                     | 1037.8  | 5.1          |  |   |         |                 |
| 1077                                       | 1077.1  | 0.1          |  |   |         |                 |
| 1092                                       | 1092.1  | 0.1          |  |   |         |                 |
| 1099.25                                    | 1099.26 | 0.01         |  |   |         |                 |
| 1155.3                                     | 1155.6  | 0.3          |  |   |         |                 |
| 1179.8                                     | 1180    | 0.2          |  |   |         |                 |
| 1183.95                                    | 1184.1  | 0.15         |  |   |         |                 |
| 1185.3                                     | 1185.4  | 0.1          |  |   |         |                 |
| 1191.4                                     | 1192    | 0.6          |  |   |         |                 |
| 1199.8                                     | 1200    | 0.2          |  |   |         |                 |
| 1204.7                                     | 1205    | 0.3          |  |   |         |                 |
| 1226.4                                     | 1227.7  | 1.3          |  |   |         |                 |
| 1246                                       | 1247    | 1            |  |   |         |                 |
| 1248                                       | 1250.6  | 2.6          |  |   |         |                 |
| 1252.25                                    | 1253.4  | 1.15         |  |   |         |                 |
| 1260.3                                     | 1261.5  | 1.2          |  |   |         |                 |
| 1261.7                                     | 1262.5  | 0.8          |  |   |         |                 |
| 1268                                       | 1268.5  | 0.5          |  |   |         |                 |
| 1290                                       | 1301.7  | 11.7         |  |   |         |                 |
| 1302.1                                     | 1302.3  | 0.2          |  |   |         |                 |
| 1304                                       | 1304.5  | 0.5          |  |   |         |                 |
| 1311.2                                     | 1313    | 1.8          |  |   |         |                 |
| 1313.2                                     | 1313.4  | 0.2          |  |   |         |                 |
| 1315.5                                     | 1316    | 0.5          |  |   |         |                 |
| 1319                                       | 1319.1  | 0.1          |  |   |         |                 |
| 1320.8                                     | 1320.9  | 0.1          |  |   |         |                 |
| 1328.6                                     | 1329.6  | 1            |  |   |         |                 |
| 1334.45                                    | 1334.6  | 0.15         |  |   |         |                 |
|  |         |              |  |   |         |                 |
| <b>Mackay - Townsville TOTAL 31.96 km</b>  |         |              |  |   |         |                 |



## Appendix B: Evaluation of Longer Trains

Ranbury Management Group

# North Coast Line Evaluation of Longer Intermodal Trains

13 October 2014



#### Document information

Client: Ranbury Management Group  
Title: North Coast Line Evaluation of Longer Intermodal Trains  
Document No: 2178033A-TPT-RPT-002 RevB  
Date: 13 October 2014

| Rev | Date       | Details               |
|-----|------------|-----------------------|
| A   | 26/09/2014 | Draft                 |
| B   | 13/10/2014 | Issue for information |

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# Glossary

|         |  |
|---------|--|
| NCL     | North Coast Line   |
| NCLI    | North Coast Line Capacity Improvement Study  |
| OHLE    | Overhead Line Equipment  |
| Pass/es | In this document, the terms 'pass' and 'passes' describe both crosses between facing moves, and overtakes by following moves |
| TOS     | Toe of Switch  |

# Introduction

Parsons Brinckerhoff is working with Ranbury Management Group (Ranbury) to help deliver the North Coast Line Capacity Improvement Study (NCLCI). Parsons Brinckerhoff's role is to provide design, cost estimation and other technical analysis to support the assessment of potential future infrastructure upgrades.

This report is a supporting appendix to Working Paper 4 of the NCLCI deliverables.

As part of the NCLCI project, several options to improve the economy and capacity of the North Coast freight corridor were evaluated. These options include means of improving transit times, and means of increasing capacity per train. This report addresses the latter; it considers the introduction of longer intermodal trains (and therefore loop extensions) as an option to enhance economy and capacity. Specifically, this report considers the loop requirements on the NCL to accommodate the following daily services:

- Two longer intermodal trains running north from Brisbane to Townsville; and
- Two longer intermodal trains running south from Townsville to Brisbane.

# 1. Report scope

As part of the NCLCI project several options to improve the economy and capacity of the NCL were evaluated. A number of infrastructure options were identified that reduced transit time. These options considered increasing train speed and introducing longer intermodal trains.

In many cases, trains which are longer than existing loops can pass shorter facing trains by timetabling adjustments which refuge the shorter train and allow the longer train to run through on the main-line. This is already common practice on many existing loops, but it does result in a reduced level of timetabling and day-of-operation flexibility.

The magnitude of the impact is increased when longer intermodal trains meet, or when longer intermodal trains meet or are overtaken by a higher-priority passenger service. In these instances a loop of sufficient length must be provided to execute the pass. Consideration must therefore be given to the level of additional infrastructure, if any, that is required to support these movements, and how the number of movements can be minimised.

Depending on a specific timetable, the variation planned from day-to-day, and the variation occurring on the day of operation, the desirable location of passes and overtakes change. Additional operational disciplines (e.g., access pricing incentives around on-time departure) can support a more uniform operating regime and more consistent and fewer passing locations. However, even with a high level of operational consistency, day-of-operation anomalies will occur. This will require some level of additional infrastructure, specifically, additional passing opportunities.

This report assumes that longer intermodal trains and longer loops should be configured in such a way as to not make services more prone to delay. No simulation has been conducted; rather inferences have been drawn from existing service plans. The nominated loop locations are considered to provide a representative and satisfactory margin for operating anomalies. An operational discipline of departing within approximately 30 minutes of planned is assumed to be plausible.

This report provides a strategic appraisal of loop extensions on the NCL and:

- describes the operational analysis process used to determine the number of loops that would need to be extended along the length of the NCL in order to provide for longer intermodal trains
- provides an engineering analysis and costings for two specific loops (Baffle and The Caves) selected as representative of generic loop extensions.

## 2. Summary of operational analysis

### 2.1 Methodology

A representative future scenario of longer intermodal trains identified two paths north and two paths south as the basis for this report's appraisal:

- Two trains travelling north from Brisbane after the PM peak (approximately 2000HRS) arriving in Townsville the next evening (approximately 2000HRS). These paths then continue north to Cairns.
- Two trains heading south from Townsville at approximately 2000HRS arriving in Brisbane the next evening (approximately 2000HRS). These paths are a continuation of paths from Cairns.

These paths were chosen because they offer the capability to service both Townsville and Cairns, with a division occurring at Townsville.

It was assumed that there would not be a significant change in passenger and other background traffic over the next 10 to 20 years. The current NCL train plan therefore provided a basis on which to evaluate the interaction of longer intermodal trains with each other and with passenger trains.

Multiple days of operation in the current weekly train plan were assessed to ensure that services with a period longer than one day were captured.

#### 2.1.1 Key assumptions

##### *Assumptions*

- Future increased length intermodals will perform similarly to current intermodals. That is they will have a similar or better power to weight ratio.
- Future passenger trains will be similar in operating approach. Note: It is known they will not be identical, for example the Sunlander is planned to be replaced with a faster tilt multiple-unit train, but for the purposes of this appraisal this assumption is considered sufficient.
- Passenger trains will continue to take priority over intermodal trains. It is assumed that it would be unacceptable to refuge passenger trains to support the run-through of longer intermodal trains.

##### *Sources*

A current weekly train plan was supplied by Queensland Rail's Corridor Strategy and Planning team.

## 2.2 Analysis outcomes

As previously noted, the appraisal overlaid the operation of longer intermodals on the current timetable, which day-to-day is relatively consistent. Crosses and overtakes involving the future scenario longer intermodal trains occurred in distinct clusters of stations, each covering an interval of 100 km to 200 km of track. These clusters are shown in Table 1.1 and indicate where loops would need to be lengthened to support the future scenario paths.

In total, approximately 20 loops would need to be extended to accommodate four longer intermodal trains per day (two in each direction). A reduction in the number of loops requiring lengthening might be achieved through a combination of increased performance, strict operating discipline, and modified timetables, but it is unlikely that a satisfactorily robust operating outcome could be achieved with fewer than 15 extended loops.

**Table 1.1 Clusters of crosses, and loops that could be lengthened to accommodate them**

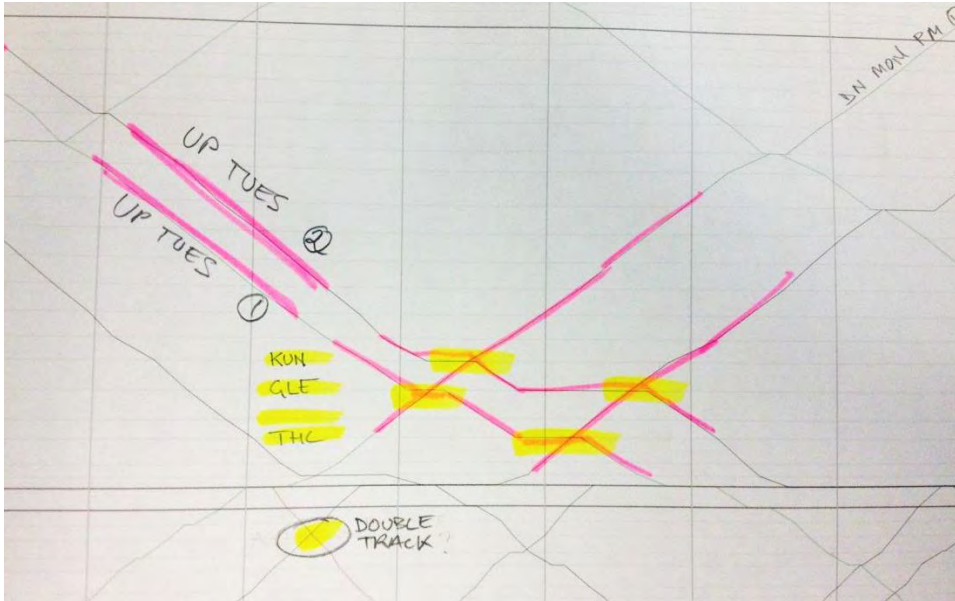
| Crossing cluster region                       | Cluster type  | Crossing locations to consider                        |
|---|---|---|
| Landsborough (72km) – Harvey’s Siding (187km) | Intermodal-Intermodal and Intermodal-Passenger passes | Mooloolah[1]<br>Nambour<br>Pomona<br>Harvey’s Siding  |
| Avondale (375km) – Benarby (507km)            | Intermodal-Passenger passes                           | Littabella<br>Flinders<br>Baffle<br>Netley<br>Benarby |
| Rockhampton (660km) – St Lawrence (811km)     | Intermodal-Intermodal passes                          | The Caves<br>Glen Geddes<br>Kunwarara<br>St Lawrence  |
| Mackay (959km) – Guthalungra (1194km)         | Intermodal-Passenger passes                           | Mackay<br>Thoopara<br>Mookarra<br>Guthalungra         |
| Ayr (1260km) – Partington (1329km)            | Intermodal-Intermodal passes                          | Pioneer<br>Nome[2]<br>Partington[2]                   |

[1] This could be at Eudlo, or could be negated by the completion of duplication to Landsborough North

[2] At these stations the network is already double-track, but the extent to which this infrastructure can be used for refueling requires further evaluation. This includes consideration of the current signalling configuration, and the impacts of routing in and out of junctions at Stuart and Nome, and the yard at Partington.

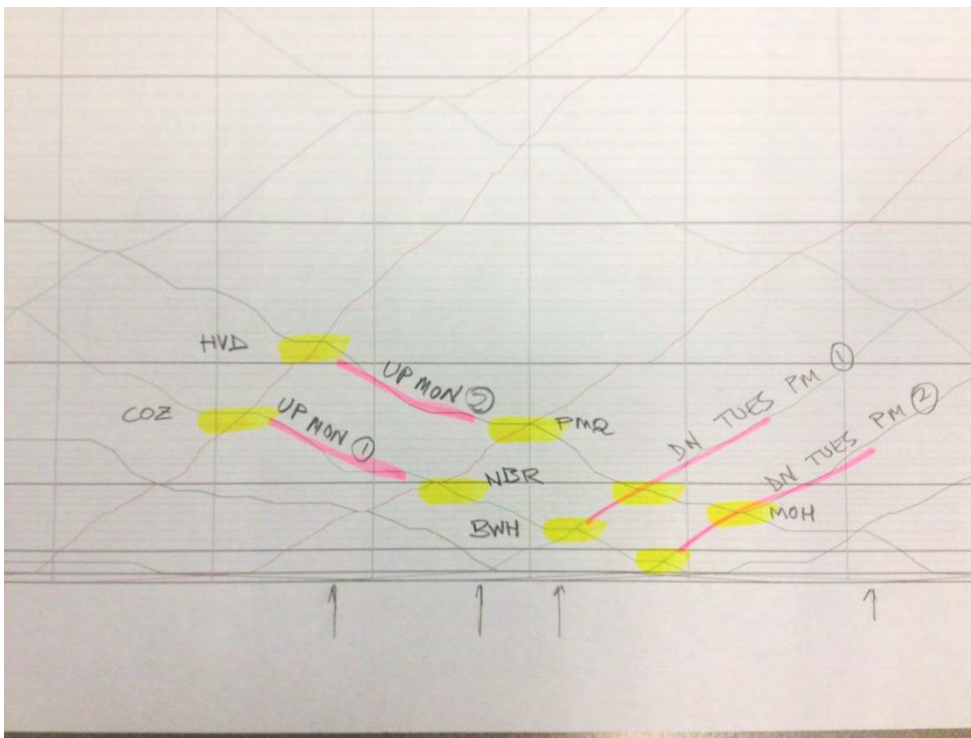
Typical examples of these clusters are illustrated below. These images are captured directly from the train plan, and illustrate the process of identifying crossing locations undertaken for this desktop assessment. In Figure 1.1 a series of four crossing moves, occurring between two consecutive longer intermodal paths in each direction, are shown occurring in the Rockhampton – St Lawrence area.





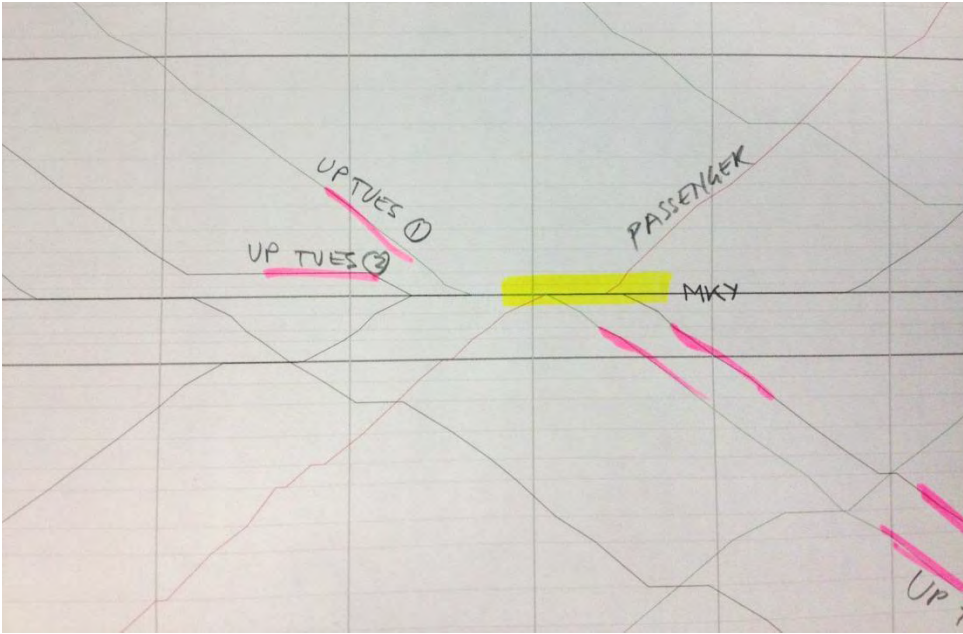
**Figure 1.1 Actual plan example: Typical daily cluster of passes between intermodal train paths north of Rockhampton**

Similarly, Figure 1.2 shows two Up direction longer intermodal paths crossing two Down passenger trains, and then two Down longer intermodal paths in the Landsborough – Harvey’s Siding area.



**Figure 1.2 Actual plan example: Typical cluster of intermodal-intermodal and intermodal-passenger passes north of Glasshouse**

There might be some opportunity to rationalise the number of loop sites that require extension by making some loops long enough to accommodate two trains, and fleeting following trains between these extended loops. This kind of operation comes at the cost of increased crossing delays but may be warranted if capital costs are significantly reduced. This may apply where the extension of a loop at an operationally desirable location is prohibitive (e.g. due to road crossings, topography, or built-up areas). Fleeting trains into crosses is illustrated in the current train plan in Figure 1.3.



**Figure 1.3** Actual plan example: Intermodal paths fled into Mackay prior to a facing passenger pass move

# 3. Summary of engineering analysis and costings

## 3.1 Methodology

The existing loops on the network typically provide clear storage lengths between 700 m – 900 m. Based on the preliminary operational assessment it is likely that 15 to 20 loops will be required to be extended at various locations along the NCL to cater for longer intermodal trains.

During future stages, a large number of operational, engineering and social constraints will need to be considered in detail to determine / optimise the loops to extend. Significant differences in terms of social impacts and capital costs between loop locations can be expected.

Key constraints that have the potential to significantly impact capital costs and loop selection include:

- existing track geometry (horizontal and vertical)
- geometric standards and requirements for loops and holding trains
- impact on / modification to existing infrastructure including the public road network.

In collaboration with Ranbury, two sites were chosen as representative of the work that would be required to an extend loop:

- Baffle (424 km) – Electrified
- The Caves (664 km) – Non-electrified

A high level costing of a new loop was also undertaken to provide a costing benchmark.

*Note: Loop locations are likely to vary based on future operational assessments and engineering input. Therefore, it was not considered beneficial to assess individual loops in this evaluation stage.*

Based on aerial imagery and network information, concept designs were developed for the loop sites at Baffle and The Caves. The concept designs were used to produce an inclusive cost estimate that considered civil earthworks, track, signalling, roads, bridges and land acquisition.

## 3.2 Key design criteria

- Maximum train consist – 1,350 m
- Float / operational clearance / signal siting – 100 m
- Turnouts – 1in16
- Track centres – 4 m absolute minimum
- Required loop length– 1,730 m minimum approximately (TOS – TOS)
- Ideally, a loop will be designed and constructed to provide a 1in200 holding area over the train length. Where this is not practicable due to existing loop geometry an average grade of the full train length could be considered (this might require additional track construction).

### 3.3 Investigation outcomes

Concept designs for the loop sites at Baffle and The Caves are provided in Appendix A and cost estimate schedules are provided in Appendix B.

The investigation showed that the rail geometry at both loops did not meet current standards for maximum track gradients where trains are to be held. However, both sites present opportunities to provide average grades over a train length. This will require specific engineering design, and safety and train performance assessment in future stages.

Within The Caves loop there is an existing level crossing for Rosmaya Road, and it has been assumed that this level crossing will need to be relocated. The requirement for relocation significantly increases the capital cost of extension. A preliminary review of the Queensland Rail network information packs for all identified loops sites confirmed that level crossings existed at several of them. Creating passing opportunities for longer intermodal trains is expected to increase loop occupation. As is the case at The Caves, this is likely to trigger road crossing relocation requirements or closure and will need to be assessed site by site. It is a factor that might influence loop selection.

#### 3.3.1 Costing summary and assumptions

Table 3.1 summarises the two sites assessed and includes a costing for a new loop.

**Table 3.1 Summary table**

| Loop site | Works required  | Existing holding length | Required holding length | Track length | Total cost* (\$m)                     | Roadworks cost component (\$m) |
|-----------|---|-------------------------|-------------------------|--------------|---------------------------------------|--------------------------------|
| Baffle    | Loop extension  | 920m                    | 1,450m                  | 755m         | \$12.5                                |                                |
| The Caves | Loop extension and existing level crossing/ road relocation | 712m                    | 1,450m                  | 870m         | \$17.5                                | \$4.8                          |
| New loop  | New loop (6.5m track centres)                               | -                       | 1,450m                  | 1,730m       | \$22.6<br>\$18.3<br>(Not electrified) |                                |

\*Total Cost is inclusive of construction, design and owner's costs (costed as individual projects)

The high level cost estimate has been based on the following assumptions:

- rates and quantities are correct
- civil costings are based on assumed average formation heights / depths only (no vertical track design work has been undertaken)
- grades and geometry of existing alignment taken from the Queensland Rail information packs are correct
- OHLE costs (for locations south of Rockhampton) are based on loop extension requirements only and not a full reconstruction and upgrade of the existing line or loop where appropriate
- signalling costs are based on number of junctions, loops and level crossings identified at each site

- track and formation costs are calculated for loop extension construction works only (not full reconstruction)
- costings include an allowance for upgrade of the rail maintenance access road adjacent to the existing loop
- quantities and costs are based solely on sound engineering judgement, with only limited, high level concept designs undertaken in developing the cost estimates.

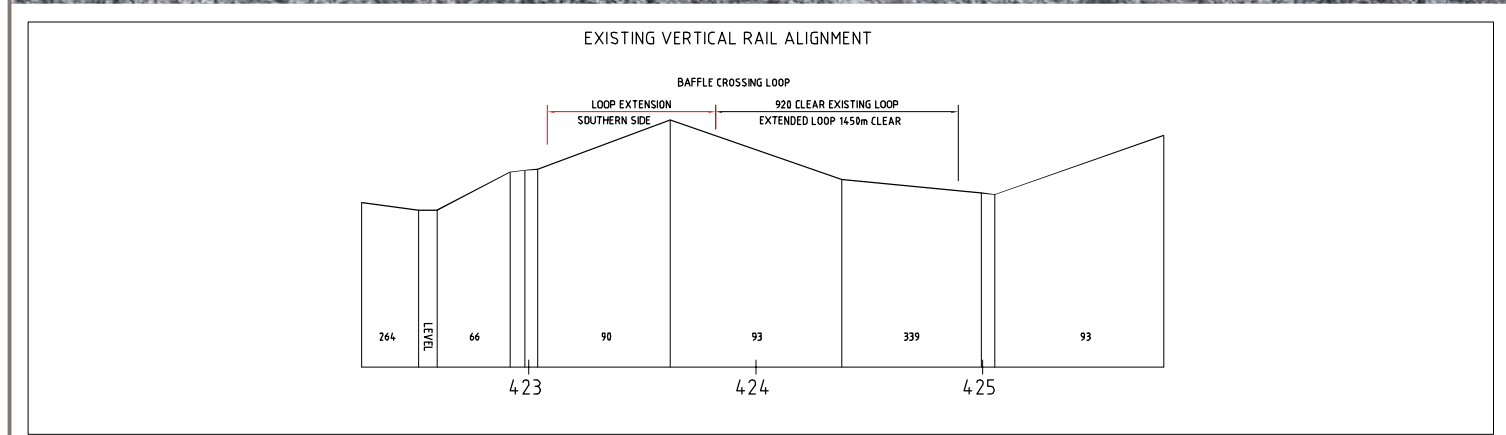
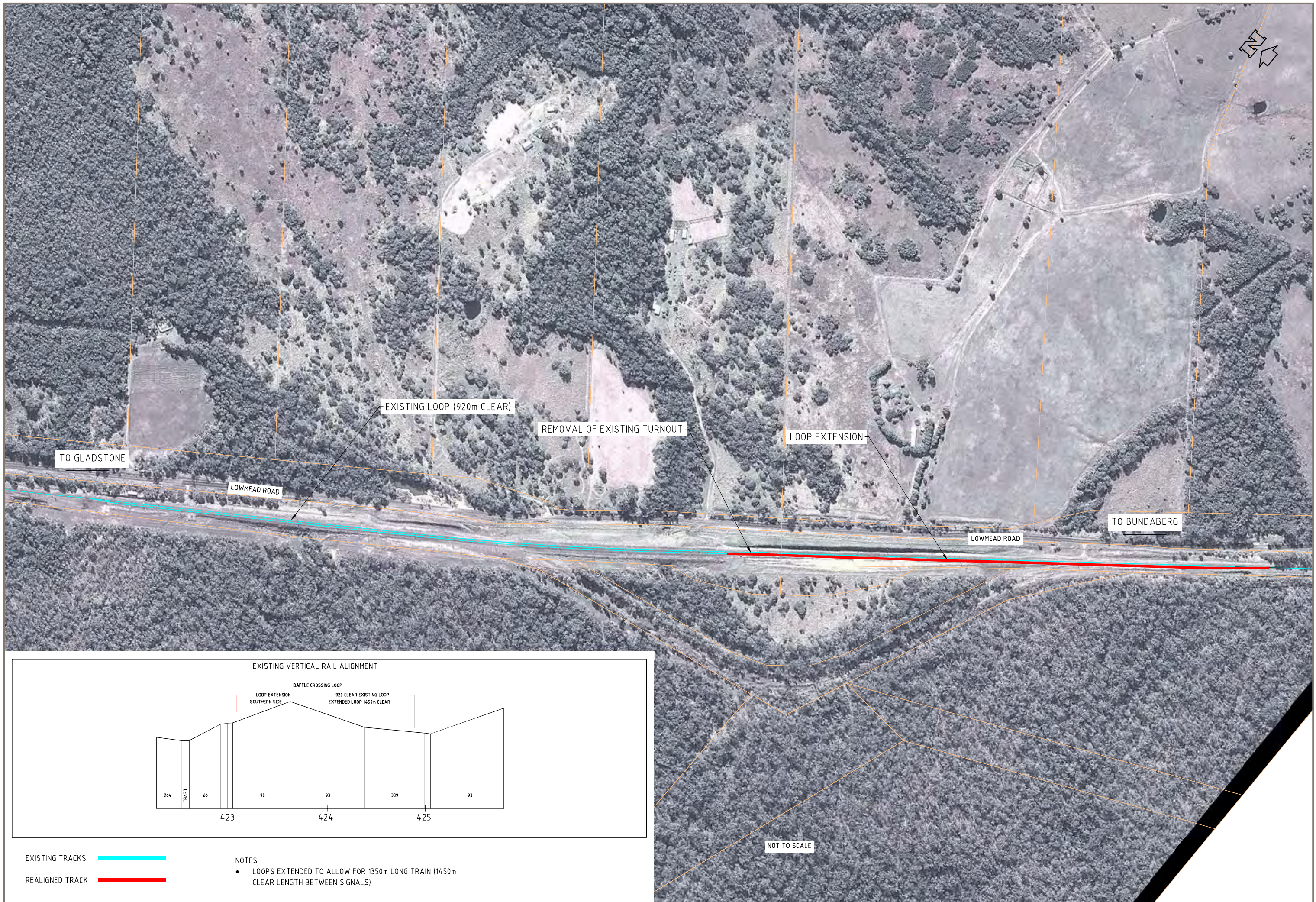
## 4. Issues for further consideration

- Current operating variability and the extent of improvement in operating discipline required to achieve consistent crossing locations. This includes both operator (e.g., origin despatch) and infrastructure (e.g., Temporary Speed Restriction planning) impacts.
- Impact of longer intermodal trains on Brisbane junctions (i.e., Tennyson-Sherwood-Roma Street West Junction).
- Impact of longer intermodal trains on level crossing 'boom down' times.
- Changes in train performance resulting in changed sectional running time which in turn changes the locations where crossing 'clusters' occur, for example:
  - ▶ How increasing line speed, maximum train (rolling stock) speed, power to weight ratio, braking performance (or all four) could reduce sectional running time and enable longer intermodal trains to pass in the Rockhampton-Callemondah double-track section rather than north of Rockhampton. This would eliminate the need for loop upgrades between Rockhampton and St Lawrence.
- Potential fleeting into loops, i.e., building a single 4.5 km long loop with intermediate crossovers rather than two 2 km long loops, where two longer intermodals can be held simultaneously. This offers a potential construction economy, at an increased average passing delay (and end-to-end journey time) cost.

# Appendix A

Concept designs



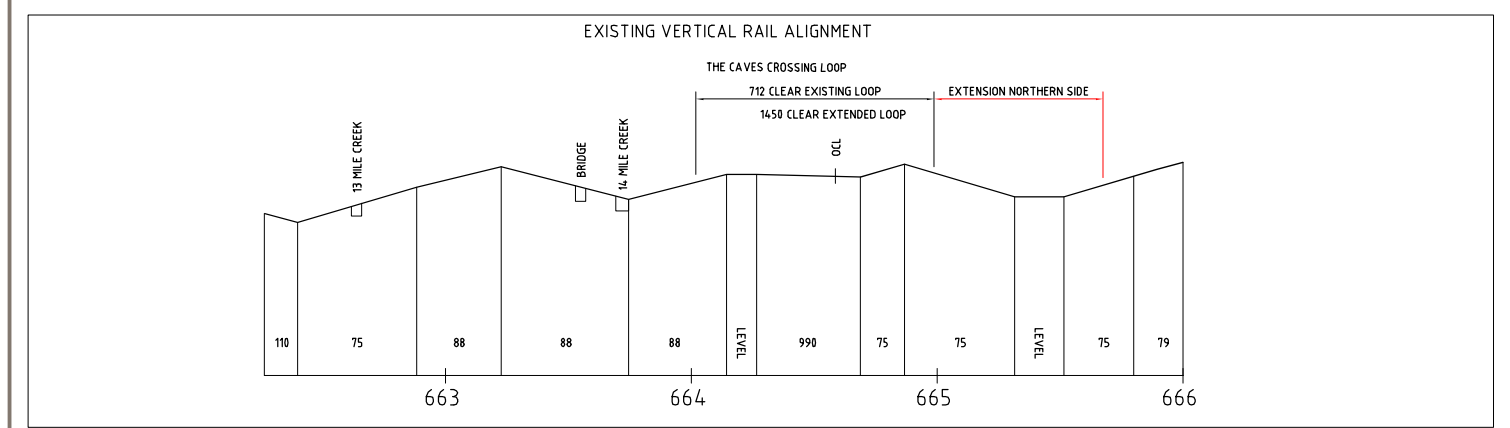
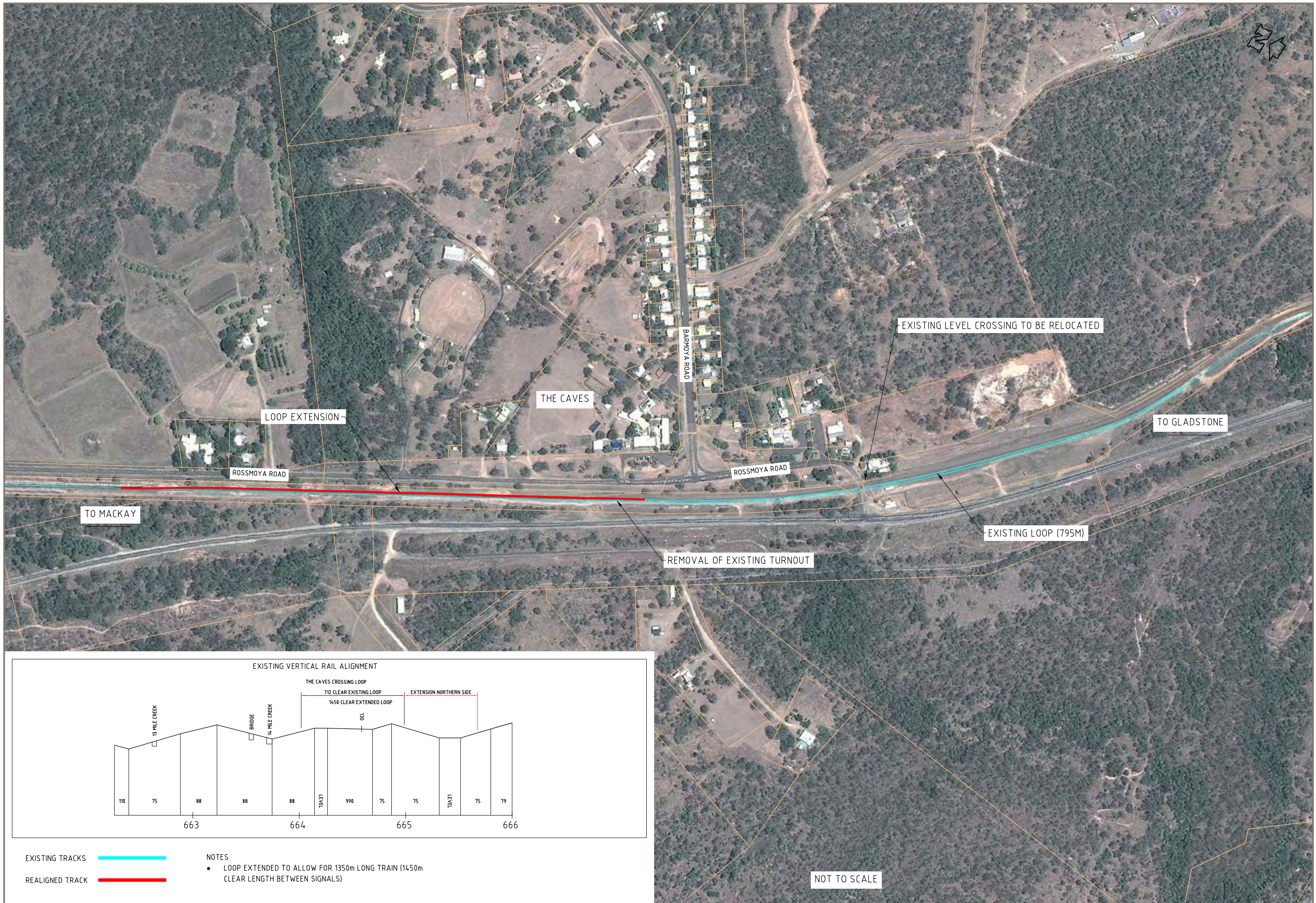


EXISTING TRACKS —  
 REALIGNED TRACK —

- NOTES
- LOOPS EXTENDED TO ALLOW FOR 1350m LONG TRAIN (1450m CLEAR LENGTH BETWEEN SIGNALS)

NOT TO SCALE





EXISTING TRACKS —  
 REALIGNED TRACK —

NOTES  
 • LOOP EXTENDED TO ALLOW FOR 1350m LONG TRAIN (1450m CLEAR LENGTH BETWEEN SIGNALS)

NOT TO SCALE

# Appendix B

Cost estimates



## North Coast Line Capacity Improvement Study

Revision A

## Baffle - Loop Extension

| Item Description  | Unit  | Quantity | Rate        | Total            | Comment                         |  |
|---|-------|----------|-------------|------------------|---------------------------------|--|
| <b>Rail - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$1,883,435</b>              |  |
| Rail length   |       | 755 m    |             |                  |                                 |  |
| Civil Formation Works & Minor Drainage - Single Track / duplication including access road at formation  | m     | 755      | \$2,054     | \$1,550,654      | Average depth - 2.0m            |  |
| Civil Formation Works & Minor Drainage - Single Existing  | m     | 0        | \$1,457     | \$0              | Average depth - 0.5m            |  |
| Civil Formation Works & Minor Drainage - Double Track   | m     | 0        | \$3,000     | \$0              | Average depth - 3.0m            |  |
| Civil Formation Works & Minor Drainage - Double Existing  | m     | 0        | \$1,600     | \$0              | Average depth - 0.5m            |  |
| Major Cross Drainage  | Item  | 1        | \$310,131   | \$310,131        | Assumed 20% of total civil work |  |
| Fencing   | m     | 755      | \$30        | \$22,650         | Utilising existing Corridor     |  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              | No Retaining wall needed        |  |
| Rail Bridge   |       |          |             |                  |                                 |  |
| Creek   | m     | 0        | \$40,000    | \$0              | No Bridges needed               |  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed        |  |
| <b>Road - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$447,500</b>                |  |
| Road length   |       | m        |             |                  |                                 |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m     |          | \$0         | \$2,700          | \$0                             | Average depth - 2.0m   |
| Major Cross Drainage  | item  | 0%       | \$0         | \$0              | \$0                             |  |
| Fencing   | m     | 0        | \$30        | \$0              | \$0                             |  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              | \$0                             |  |
| Road Bridge   | m2    | 0        | \$5,000     | \$0              | \$0                             | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | \$0                             | No Bridge removal needed   |
| Rail Maintenance access road upgrade to existing  | m     | 895      | \$500       | \$447,500        | \$447,500                       | Allowance to upgrade RMAR at existing loop                               |
| <b>Crossings</b>  |       |          |             | <b>Sub total</b> | <b>\$300,000</b>                |  |
| Public Level Crossing - Active  | each  | 0        | \$1,300,000 | \$0              | \$0                             | No Level crossings   |
| Public Level Crossing - Passive   | each  | 0        | \$150,000   | \$0              | \$0                             |  |
| Occupational Crossing - Passive   | each  | 2        | \$150,000   | \$300,000        | \$300,000                       |  |
| <b>Trackwork</b>  |       |          |             | <b>Sub total</b> | <b>\$1,423,000</b>              |  |
| Track - (Rail, Sleepers, Ballast)   | km    | 0.76     | \$1,100,000 | \$830,500        | \$830,500                       | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km    | 0.08     | \$100,000   | \$7,500          | \$7,500                         | length of in removal of turnout  |
| Track Slew (minor)  | km    | 0.10     | \$400,000   | \$40,000         | \$40,000                        | Allow 100m per connection  |
| Turnouts (1 in 16)  | each  | 1        | \$500,000   | \$500,000        | \$500,000                       | new connection   |
| Turnouts Removal  | each  | 1        | \$45,000    | \$45,000         | \$45,000                        | removal of existing turnout  |
| <b>Signals</b>  |       |          |             | <b>Sub total</b> | <b>\$3,000,000</b>              |  |
| Level Crossing  | each  | 0        | \$0         | \$0              | \$0                             | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each  | 1        | \$3,000,000 | \$3,000,000      | \$3,000,000                     | 1 connection   |
| Loop  | each  | 0        | \$5,000,000 | \$0              | \$0                             | included in junction   |
| Single track signalling   | allow | 0        | \$1,000,000 | \$0              | \$0                             | Allowance for possible signal impacts on single line track               |
| <b>Electrification</b>  |       |          |             | <b>Sub total</b> | <b>\$755,000</b>                |  |
| Overhead - (Catenary, Masts)  | km    | 0.76     | \$1,000,000 | \$755,000        | \$755,000                       |  |
| Overhead Removal  | km    | 0.00     | \$12,500    | \$0              | \$0                             |  |
| Power Supply  | each  | 0        | \$2,000,000 | \$0              | \$0                             | Assumed not required   |
| <b>Communication</b>  |       |          |             | <b>Sub total</b> | <b>\$37,750</b>                 |  |
| Services  | km    | 0.76     | \$50,000    | \$37,750         | \$37,750                        | Trenching and pits   |
| <b>Operational Rail interface</b>   |       |          |             | <b>Sub total</b> | <b>\$706,143</b>                |  |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item  | 1.00     | \$706,143   | \$706,143        | \$706,143                       | Assume 10% based on impact on existing rail                              |
| <b>Direct Cost</b>  |       |          |             |                  | <b>\$8,552,828</b>              |  |
| Contractors indirects including preliminaries, overheads, management and margin   |       |          | 35%         |                  | \$2,993,490                     |  |
| <b>Construction Cost</b>  |       |          |             |                  | <b>\$11,546,318</b>             |  |
| Design costs (5% of direct cost)  |       |          | 5%          |                  | \$427,641                       |  |
| Owners costs and approvals (8% of construction cost)  |       |          | 5%          |                  | \$577,316                       |  |
| Land Acquisition  | Allow | 0        | \$0         |                  | \$0                             |  |
| <b>Total</b>  |       |          |             |                  | <b>\$12,551,275</b>             |  |

## North Coast Line Capacity Improvement Study

Revision A

## The Caves - Loop Extension

| Item Description  | Unit  | Quantity | Rate        | Total            | Comment  |
|---|-------|----------|-------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$1,927,385</b>   |
| Rail length   |       | 870 m    |             |                  |  |
| Civil Formation Works & Minor Drainage - Single Track / duplication including access road at formation  | m     | 870      | \$1,846     | \$1,606,153.85   | Average depth - 2.0m   |
| Civil Formation Works & Minor Drainage - Single Existing  | m     | 0        | \$1,457     | \$0              | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m     | 0        | \$3,000     | \$0              | Average depth - 3.0m   |
| Civil Formation Works & Minor Drainage - Double Existing  | m     | 0        | \$1,600     | \$0              | Average depth - 0.5m   |
| Major Cross Drainage  | Item  | 1        | \$321,231   | \$321,231        | Assumed 20% of total civil work  |
| Fencing   | m     | 0        | \$30        | \$0              | Utilising existing Corridor  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              | No Retaining wall needed   |
| Rail Bridge   |       |          |             |                  |  |
| Creek   | m     |          | \$40,000    | \$0              | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed   |
| <b>Road - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$3,385,000</b>   |
| Road length   |       | 1000 m   |             |                  |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m     | 1,000    | \$2,700     | \$2,700,000      | Average depth - 2.0m   |
| Major Cross Drainage  | Item  | 1        | \$270,000   | \$270,000        | 10%  |
| Fencing   | m     | 0        | \$30        | \$0              |  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              |  |
| Road Bridge   | m2    | 0        | \$5,000     | \$0              | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed   |
| Rail Maintenance access road upgrade to existing  | m     | 830      | \$500       | \$415,000        | Allowance to upgrade RMAR at existing loop                               |
| <b>Crossings</b>  |       |          |             | <b>Sub total</b> | <b>\$1,400,000</b>   |
| Public Level Crossing - Active  | each  | 1        | \$1,300,000 | \$1,300,000      | Assumed road to be relocated   |
| Public Level Crossing - Passive   | each  | 0        | \$150,000   | \$0              |  |
| Occupational Crossing - Passive   | each  | 1        | \$100,000   | \$100,000        |  |
| <b>Trackwork</b>  |       |          |             | <b>Sub total</b> | <b>\$1,549,500</b>   |
| Track - (Rail, Sleepers, Ballast)   | km    | 0.87     | \$1,100,000 | \$957,000        | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km    | 0.08     | \$100,000   | \$7,500          | length of in removal of turnout  |
| Track Slew (minor)  | km    | 0.10     | \$400,000   | \$40,000         | Allow 100m per connection  |
| Turnouts (1 in 16)  | each  | 1        | \$500,000   | \$500,000        | new connection   |
| Turnouts Removal  | each  | 1        | \$45,000    | \$45,000         | removal of existing turnout  |
| <b>Signals</b>  |       |          |             | <b>Sub total</b> | <b>\$3,000,000</b>   |
| Level Crossing  | each  | 0        | \$0         | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each  | 1        | \$3,000,000 | \$3,000,000      | 1 connection   |
| Loop  | each  | 0        | \$5,000,000 | \$0              | included in junction   |
| Single track signalling   | allow | 0        | \$1,000,000 | \$0              | Allowance for possible signal impacts on single line track               |
| <b>Electrification</b>  |       |          |             | <b>Sub total</b> | <b>\$0</b>   |
| Overhead - (Catenary, Masts)  | km    | 0.00     | \$1,000,000 | \$0              |  |
| Overhead Removal  | km    | 0.00     | \$12,500    | \$0              |  |
| Power Supply  | each  | 0        | \$2,000,000 | \$0              | Assumed not required   |
| <b>Communication</b>  |       |          |             | <b>Sub total</b> | <b>\$43,500</b>  |
| Services  | km    | 0.87     | \$50,000    | \$43,500         | Trenching and pits   |
| <b>Operational Rail interface</b>   |       |          |             | <b>Sub total</b> | <b>\$323,844</b>   |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item  | 1.00     | \$323,844   | \$323,844        | Assume 5% based on impact on existing rail                               |
| <b>Direct Cost</b>  |       |          |             |                  | <b>\$11,629,229</b>  |
| Contractors indirect including preliminaries, overheads, management and margin  |       |          | 35%         |                  | \$4,070,230  |
| <b>Construction Cost</b>  |       |          |             |                  | <b>\$15,699,459</b>  |
| Design costs (5% of direct cost)  |       |          | 5%          |                  | \$581,461  |
| Owners costs and approvals (5% of construction cost)  |       |          | 5%          |                  | \$784,973  |
| Land Acquisition  | Allow | 1        | \$400,000   |                  | \$400,000  |
| <b>Total</b>  |       |          |             |                  | <b>\$17,465,893</b>  |

## North Coast Line Capacity Improvement Study

Revision A

## New Loop

| Item Description  | Unit  | Quantity | Rate        | Total            | Comment  |
|---|-------|----------|-------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$4,263,785</b>   |
| Rail length   |       | 1730 m   |             |                  |  |
| Civil Formation Works & Minor Drainage - Single Track / duplication including access road at formation  | m     | 1730     | \$2,054     | \$3,553,154      | Average depth - 2.0m   |
| Civil Formation Works & Minor Drainage - Single Existing  | m     | 0        | \$1,457     | \$0              | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m     | 0        | \$3,000     | \$0              | Average depth - 3.0m   |
| Civil Formation Works & Minor Drainage - Double Existing  | m     | 0        | \$1,600     | \$0              | Average depth - 0.5m   |
| Major Cross Drainage  | Item  | 1        | \$710,631   | \$710,631        | Assumed 20% of total civil work  |
| Fencing   | m     | 0        | \$30        | \$0              | Utilising existing Corridor  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              | No Retaining wall needed   |
| Rail Bridge   |       |          |             |                  |  |
| Creek   | m     |          | \$40,000    | \$0              | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed   |
| <b>Road - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$0</b>   |
| Road length   |       | 0 m      |             |                  |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m     | -        | \$2,700     | \$0              | Average depth - 2.0m   |
| Major Cross Drainage  | Item  | 1        | \$0         | \$0              | 10%  |
| Fencing   | m     | 0        | \$30        | \$0              |  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              |  |
| Road Bridge   | m2    | 0        | \$5,000     | \$0              | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed   |
| Rail Maintenance access road upgrade to existing  | m     | 0        | \$500       | \$0              | Allowance to upgrade RMAR at existing loop                               |
| <b>Crossings</b>  |       |          |             | <b>Sub total</b> | <b>\$0</b>   |
| Public Level Crossing - Active  | each  | 0        | \$1,300,000 | \$0              | Assumed road to be relocated   |
| Public Level Crossing - Passive   | each  | 0        | \$150,000   | \$0              |  |
| Occupational Crossing - Passive   | each  | 0        | \$100,000   | \$0              |  |
| <b>Trackwork</b>  |       |          |             | <b>Sub total</b> | <b>\$2,950,500</b>   |
| Track - (Rail, Sleepers, Ballast)   | km    | 1.73     | \$1,100,000 | \$1,903,000      | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km    | 0.08     | \$100,000   | \$7,500          | length of in removal of turnout  |
| Track Slew (minor)  | km    | 0.10     | \$400,000   | \$40,000         | Allow 100m per connection  |
| Turnouts (1 in 16)  | each  | 2        | \$500,000   | \$1,000,000      | new connection   |
| Turnouts Removal  | each  | 0        | \$45,000    | \$0              | removal of existing turnout  |
| <b>Signals</b>  |       |          |             | <b>Sub total</b> | <b>\$5,000,000</b>   |
| Level Crossing  | each  | 0        | \$0         | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each  | 0        | \$3,000,000 | \$0              | 1 connection   |
| Loop  | each  | 1        | \$5,000,000 | \$5,000,000      | included in junction   |
| Single track signalling   | allow | 0        | \$1,000,000 | \$0              | Allowance for possible signal impacts on single line track               |
| <b>Electrification</b>  |       |          |             | <b>Sub total</b> | <b>\$1,730,000</b>   |
| Overhead - (Catenary, Masts)  | km    | 1.73     | \$1,000,000 | \$1,730,000      |  |
| Overhead Removal  | km    | 0.00     | \$12,500    | \$0              |  |
| Power Supply  | each  | 0        | \$2,000,000 | \$0              | Assumed not required   |
| <b>Communication</b>  |       |          |             | <b>Sub total</b> | <b>\$86,500</b>  |
| Services  | km    | 1.73     | \$50,000    | \$86,500         | Trenching and pits   |
| <b>Operational Rail interface</b>   |       |          |             | <b>Sub total</b> | <b>\$1,394,428</b>   |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item  | 1.00     | \$1,394,428 | \$1,394,428      | Assume 10% based on impact on existing rail                              |
| <b>Direct Cost</b>  |       |          |             |                  | <b>\$15,425,213</b>  |
| Contractors indirect including preliminaries, overheads, management and margin  |       |          | 35%         |                  | \$5,398,825  |
| <b>Construction Cost</b>  |       |          |             |                  | <b>\$20,824,038</b>  |
| Design costs (5% of direct cost)  |       |          | 5%          |                  | \$771,261  |
| Owners costs and approvals (8% of construction cost)  |       |          | 5%          |                  | \$1,041,202  |
| Land Acquisition  | Allow | 0        | \$400,000   |                  | \$0  |
| <b>Total</b>  |       |          |             |                  | <b>\$22,636,500</b>  |

## North Coast Line Capacity Improvement Study

Revision A

## New Loop - Not electrified

| Item Description  | Unit  | Quantity | Rate        | Total            | Comment  |
|---|-------|----------|-------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$3,832,615</b>   |
| Rail length   |       | 1730 m   |             |                  |  |
| Civil Formation Works & Minor Drainage - Single Track / duplication including access road at formation  | m     | 1730     | \$1,846     | \$3,193,846      | Average depth - 2.0m   |
| Civil Formation Works & Minor Drainage - Single Existing  | m     | 0        | \$1,457     | \$0              | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m     | 0        | \$3,000     | \$0              | Average depth - 3.0m   |
| Civil Formation Works & Minor Drainage - Double Existing  | m     | 0        | \$1,600     | \$0              | Average depth - 0.5m   |
| Major Cross Drainage  | Item  | 1        | \$638,769   | \$638,769        | Assumed 20% of total civil work  |
| Fencing   | m     | 0        | \$30        | \$0              | Utilising existing Corridor  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              | No Retaining wall needed   |
| Rail Bridge   |       |          |             |                  |  |
| Creek   | m     |          | \$40,000    | \$0              | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed   |
| <b>Road - Civil and Earthworks</b>  |       |          |             | <b>Sub total</b> | <b>\$0</b>   |
| Road length   |       | 0 m      |             |                  |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m     | -        | \$2,700     | \$0              | Average depth - 2.0m   |
| Major Cross Drainage  | Item  | 1        | \$0         | \$0              | 10%  |
| Fencing   | m     | 0        | \$30        | \$0              |  |
| Retaining Wall  | m2    | 0        | \$750       | \$0              |  |
| Road Bridge   | m2    | 0        | \$5,000     | \$0              | No Bridges needed  |
| Bridge Demolition   | each  | 0        | \$10,000    | \$0              | No Bridge removal needed   |
| Rail Maintenance access road upgrade to existing  | m     | 0        | \$500       | \$0              | Allowance to upgrade RMAR at existing loop                               |
| <b>Crossings</b>  |       |          |             | <b>Sub total</b> | <b>\$0</b>   |
| Public Level Crossing - Active  | each  | 0        | \$1,300,000 | \$0              | Assumed road to be relocated   |
| Public Level Crossing - Passive   | each  | 0        | \$150,000   | \$0              |  |
| Occupational Crossing - Passive   | each  | 0        | \$100,000   | \$0              |  |
| <b>Trackwork</b>  |       |          |             | <b>Sub total</b> | <b>\$2,950,500</b>   |
| Track - (Rail, Sleepers, Ballast)   | km    | 1.73     | \$1,100,000 | \$1,903,000      | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km    | 0.08     | \$100,000   | \$7,500          | length of in removal of turnout  |
| Track Slew (minor)  | km    | 0.10     | \$400,000   | \$40,000         | Allow 100m per connection  |
| Turnouts (1 in 16)  | each  | 2        | \$500,000   | \$1,000,000      | new connection   |
| Turnouts Removal  | each  | 0        | \$45,000    | \$0              | removal of existing turnout  |
| <b>Signals</b>  |       |          |             | <b>Sub total</b> | <b>\$5,000,000</b>   |
| Level Crossing  | each  | 0        | \$0         | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each  | 0        | \$3,000,000 | \$0              | 1 connection   |
| Loop  | each  | 1        | \$5,000,000 | \$5,000,000      | included in junction   |
| Single track signalling   | allow | 0        | \$1,000,000 | \$0              | Allowance for possible signal impacts on single line track               |
| <b>Electrification</b>  |       |          |             | <b>Sub total</b> | <b>\$0</b>   |
| Overhead - (Catenary, Masts)  | km    | 0.00     | \$1,000,000 | \$0              |  |
| Overhead Removal  | km    | 0.00     | \$12,500    | \$0              |  |
| Power Supply  | each  | 0        | \$2,000,000 | \$0              | Assumed not required   |
| <b>Communication</b>  |       |          |             | <b>Sub total</b> | <b>\$86,500</b>  |
| Services  | km    | 1.73     | \$50,000    | \$86,500         | Trenching and pits   |
| <b>Operational Rail interface</b>   |       |          |             | <b>Sub total</b> | <b>\$589,156</b>   |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item  | 1.00     | \$589,156   | \$589,156        | Assume 5% based on impact on existing rail                               |
| <b>Direct Cost</b>  |       |          |             |                  | <b>\$12,458,771</b>  |
| Contractors indirect including preliminaries, overheads, management and margin  |       |          | 35%         |                  | \$4,360,570  |
| <b>Construction Cost</b>  |       |          |             |                  | <b>\$16,819,341</b>  |
| Design costs (5% of direct cost)  |       |          | 5%          |                  | \$622,939  |
| Owners costs and approvals (8% of construction cost)  |       |          | 5%          |                  | \$840,967  |
| Land Acquisition  | Allow | 0        | \$400,000   |                  | \$0  |
| <b>Total</b>  |       |          |             |                  | <b>\$18,283,247</b>  |

## Appendix C: Future Infrastructure Upgrades – Curve / Grade Easings and Bridge Replacements

Ranbury Management Group  
**North Coast Line Capacity Improvement Study**  
**Future Infrastructure Upgrades - Curve / Grade Easings and**  
**Bridge Replacements**

26 September 2014





## Document information

Client: Ranbury Management Group  
Title: North Coast Line Capacity Improvement Study  
Subtitle: Future Infrastructure Upgrades - Curve / Grade Easings and Bridge Replacements  
Document No: 2178033A-TPT-RPT-001 RevA  
Date: 26 September 2014

| Rev | Date       | Details |
|-----|------------|---------|
| B   | 26/09/2014 | Draft   |

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# Introduction

Parsons Brinckerhoff is working with Ranbury Management Group (Ranbury) to help deliver the North Coast Line Capacity Improvement Study (NCLCI). Parsons Brinckerhoff's role is to provide design, cost estimation and other technical analysis to support the assessment of potential future infrastructure upgrades.

This report will act as a supporting appendix to Working Paper 4 of the NCLCI deliverables.

Speed restrictions along the North Coast Line (NCL) reduce the line speed of freight and passenger services between Cairns and Brisbane, impacting overall transit times and therefore the attractiveness of rail as mode choice. Most speed restrictions are caused by a combination of sharp horizontal curves, steep vertical grades and old bridges. Consequently, to improve section running times along the NCL, horizontal curves and steep grades will need to be eased and aging bridges replaced.

## Report scope

Included in this report is an assessment of eight sites, identified by Ranbury, that have current speed restrictions in place. These sites were selected as a representative sample of the complete set of curve, grade and bridge related speed restriction issues on the NCL - with the outcomes of the analysis to be used by Ranbury to extrapolate the length of the NCL for an estimate of potential costs for removing all significant speed restrictions.

For each of the eight sites identified, a concept design was completed that would alleviate the problematic curve, grade or bridge, along with a high level, itemised cost estimate. The eight representative sites assessed in this report are listed below:

1. Yandaran Bank
2. Pomona to Traveston
3. Netherby to Mary River
4. Mary River to Yengarie
5. Cabbage Tree Creek
6. Twelve Mile Creek
7. Kunawarara to Princhester
8. Frenchman's Creek to Cucania

## Methodology

In collaboration with Ranbury, eight sites were chosen that were representative of the three major speed related constraints along the NCL:

- Ruling grade limitations (impacting on maximum trailing loads)
- Track curve easing to reduce transit time
- Aging timber bridges limiting future freight upgrades and current line speeds.

For all sites, a review of any previous concept work undertaken by Queensland Rail was conducted to ensure the inclusion of all ideas and to build on foundations previously laid<sup>1</sup>. This was supplemented with a fresh assessment of the relevant Working Plan and Section diagrams and latest aerial photos.

Based on this information gathered, concept design options were developed and a preferred option selected following reviews by senior engineers, including those from Ranbury. The preferred option was then engineered at a high level to produce cost estimated for major components of the work – including civil earthworks, track, signalling, roads, bridges and land acquisition.

## Key design and costing assumptions

- Horizontal and vertical design as per Queensland Rail Civil Engineering Track Standards (CETS)
- Design speed for Brisbane to Townsville is 100 km/h for freight, and 80 km/h between Townsville and Cairns
- None of the proposed designs will trigger power upgrade (for those areas within the electrified NCL area)
- Grades and geometry of existing alignment taken from the Queensland Rail information packs are correct
- OHLE (for locations south of Rockhampton) costs have been based on full reconstruction and upgrade of the existing line
- Signalling costs has been based upon number of junction, loops and level crossings identified at each site. An allowance for possible signal impacts on single track have been included in the costings.
- Track and formation have been based on a full reconstruction
- Quantities and costs have been based on sound engineering judgement only, with only limited, high level designs undertaken in developing the cost estimates.

## Summary of report outcomes

Below is a summary of the eight sites assessed, showing classification, before/after deviation length, estimated cost and travel time benefit<sup>2</sup>.

### Overall summary of designs

| Site                   | Type                   | Terrain | Existing Length (km) | Deviation Length (km) | Total Cost* (m) | Time benefit (sec) |
|------------------------|------------------------|---------|----------------------|-----------------------|-----------------|--------------------|
| Yandaran Bank          | Grade and curve easing | Hilly   | 4.80                 | 4.70                  | \$51.4          | 162                |
| Pomona to Traveston    | Curve easing           | Flat    | 14.27                | 13.40                 | \$218.2         | 558                |
| Netherby to Mary River | Curve easing           | Hilly   | 15.34                | 12.00                 | \$185.3         | 377                |
| Mary River to Yengarie | Curve easing           | Hilly   | 13.20                | 12.40                 | \$162.7         | 522                |
| Cabbage Tree Creek     | Bridge and curve/      | Hilly   | 2.90                 | 2.80                  | \$33.4          | 176                |

<sup>1</sup> Previous work was done by Queensland Rail for Yandaran, Cabbage Tree Creek and Kunawarara to Princhester

<sup>2</sup> Time benefits were calculated using a spreadsheet provided by Ranbury

|                              |                         |                   |      |      |         |     |
|------------------------------|-------------------------|-------------------|------|------|---------|-----|
|                              | grade easing            |                   |      |      |         |     |
| Twelve Mile Creek            | Bridge and curve easing | Hilly             | 5.28 | 4.95 | \$61.8  | 254 |
| Kunawarara to Princhester    | Curve easing            | Very hilly        | 7.30 | 7.50 | \$88.0  | 346 |
| Frenchman's Creek to Cucania | Curve easing            | Flat – minor hill | 9.82 | 9.50 | \$129.3 | 298 |

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# 1. Yandaran Bank

## 1.1 Site overview

Yandaran Bank is located approximately 378.200km to 383.000km along the NCL (Figure 1.1). The limiting factor for this location is the ruling grade on the northbound services of the intermodal traffic (1 in 50 grade). The geometry currently reduces the maximum line speed down to 60km/h.

To maintain the 100km/h operating speed throughout the area, both the horizontal and vertical track geometry will need to be realigned.

## 1.2 Proposed design benefits

Below is an outline of the benefits of the Yandaran Bank curve and grade easing.

**Table 1.1 Yandaran Bank cost benefit summary**

|  | Existing alignment | Realigned alignment |
|--|--------------------|---------------------|
| Track speed  | 60km/h             | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Two rail bridges   |                     |

## 1.3 Explanation of the proposed design

In order to regrade Yandaran Bank both the vertical and horizontal geometry of the local area were examined. The vertical geometry was found to have ruling grade was at 1 in 50. This was determined by using the network information packs, published by Queensland Rail. The horizontal geometry showed the limiting horizontal curve radius to be 400m.

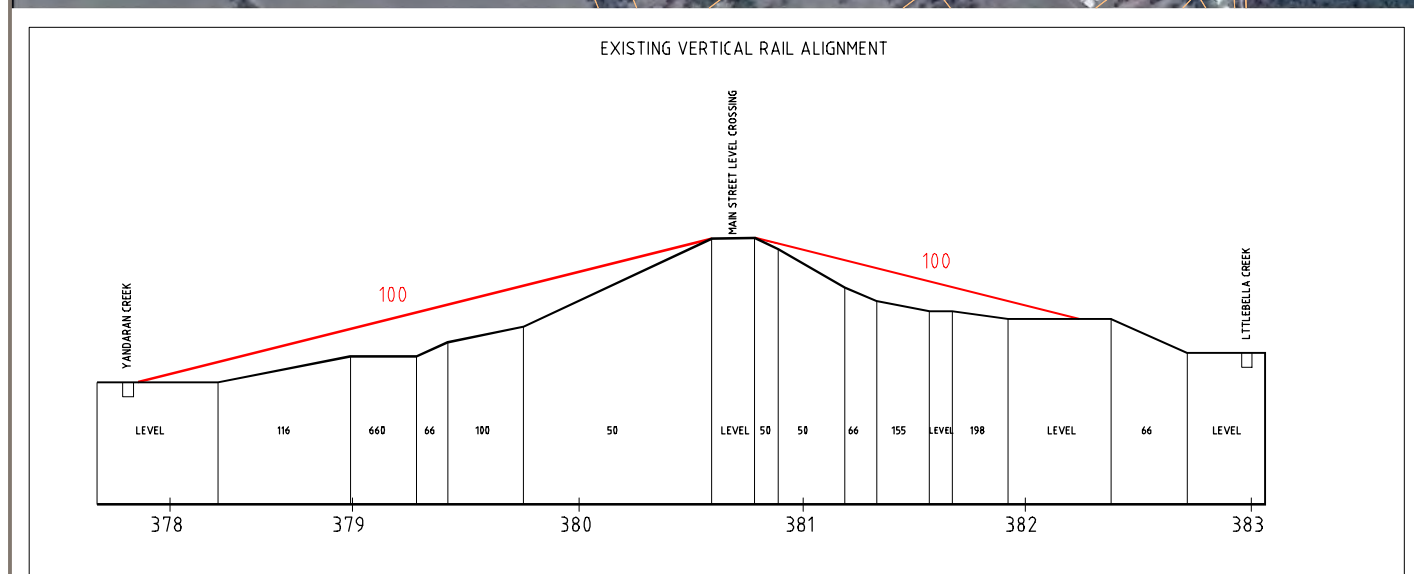
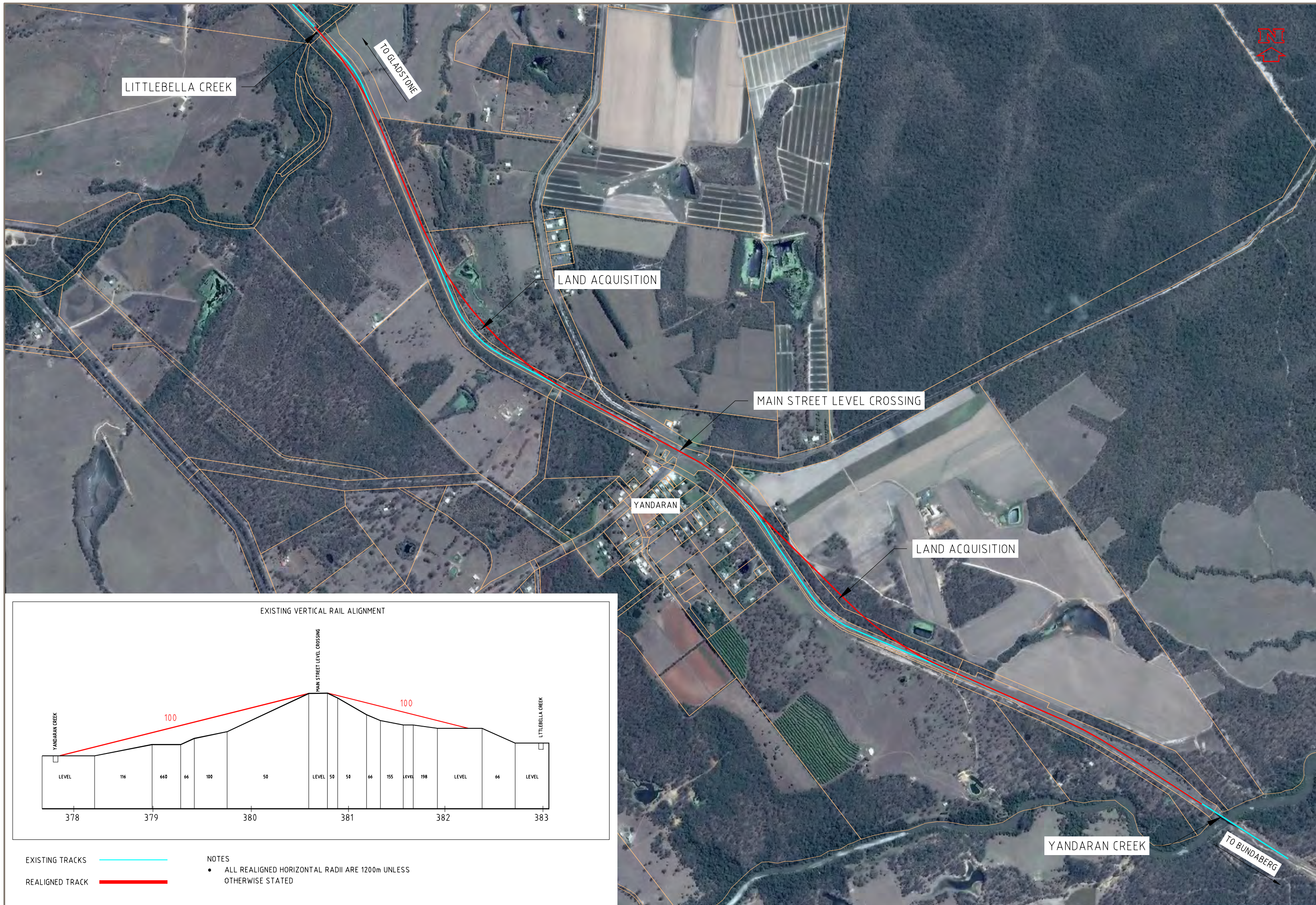
It was decided to retain the Main Street level crossing at Yandaran even though it limited possible design options. This is because keeping the level crossing at the existing grade will limit road works and avoid major impacts to the town. The design is believed to be the best cost/ impact benefit solution. The Yandaran Creek Bridge was treated as a design constraint and was left unmodified due to the cost of constructing a new rail bridge.

From the gradient information the NCL gradient easing assumed the vertical geometry was realigned back to the Yandaran Creek Bridge. Using the Queensland Rail - Civil Engineering Track Standards (CETS) the alignment was realigned to allow for a 100km/h radius curves and a 1 in 100 grade over the section.

**Table 1.2 Summary table**

| Site Summary                     |                              |
|----------------------------------|------------------------------|
| <b>Deviation start chainage</b>  | 378.200km                    |
| <b>Deviation finish chainage</b> | 383.000km                    |
| <b>Existing length</b>           | 4.80km                       |
| <b>Deviation length</b>          | 4.70km                       |
| <b>Time benefit</b>              | 162 seconds                  |
| <b>Cost<sup>#</sup></b>          | \$51,400,000                 |
| <b>Site type</b>                 | Grade easing<br>Curve easing |
| <b>Terrain type</b>              | Hilly                        |
| <b>Cost /seconds saving</b>      | \$317,000/sec                |

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EXISTING TRACKS —  
 REALIGNED TRACK —

NOTES  
 • ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED

## North Coast Line Capacity Improvement Study

Revision C

## Yandaran Bank - Grade Easing

| Item Description  | Unit              | Quantity | Rate         | Total            | Comment  |              |
|---|-------------------|----------|--------------|------------------|--|--------------|
| <b>Rail - Civil and Earthworks</b>  |                   |          |              | <b>Sub total</b> | <b>\$14,926,000</b>  |              |
| Rail length   |                   | 4700 m   |              |                  |  |              |
| Civil Formation Works & Minor Drainage - Single Track   | m                 | 4700     | \$1,900      | \$8,930,000      | Average depth - 3.0m   |              |
| Civil Formation Works & Minor Drainage - Single Existing  | m                 | 0        | \$980        | \$0              | Average depth - 0.5m   |              |
| Civil Formation Works & Minor Drainage - Double Track   | m                 | 0        | \$3,000      | \$0              | Average depth - 3.0m   |              |
| Civil Formation Works & Minor Drainage - Double Existing  | m                 | 0        | \$1,600      | \$0              | Average depth - 0.5m   |              |
| Major Cross Drainage  | Item              | 20%      | \$8,930,000  | \$1,786,000      | 20% of total civil work  |              |
| Fencing   | m                 | 0        | \$30         | \$0              | 4 Chain wire & mild steel star pickets                                   |              |
| Retaining Wall  | m2                | 0        | \$750        | \$0              |  |              |
| Rail Bridge   |                   |          |              |                  |  |              |
|   | Littlebella Creek | m        | 75           | \$40,000         | \$3,000,000  | Single track |
|   | Rollings Street   | m        | 30           | \$40,000         | \$1,200,000  | Single track |
|   | -                 | m        | 0            | \$80,000         | \$0  | Double track |
| Bridge Demolition   | each              | 1        | \$10,000     | \$10,000         |  |              |
| <b>Road - Civil and Earthworks</b>  |                   |          |              | <b>Sub total</b> | <b>\$860,400</b>   |              |
| Road length   |                   | 300 m    |              |                  |  |              |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m                 | 300.00   | \$2,700      | \$810,000        | Average depth - 2.0m   |              |
| Major Cross Drainage  | item              | 20%      | \$162,000    | \$32,400         | 20% of total civil work  |              |
| Fencing   | m                 | 600      | \$30         | \$18,000         |  |              |
| Retaining Wall  | m2                | 0        | \$750        | \$0              |  |              |
| Road Bridge   | m2                | 0        | \$5,000      | \$0              |  |              |
| Bridge Demolition   | each              | 0        | \$10,000     | \$0              | Bridge over Rolling Street   |              |
| <b>Crossings</b>  |                   |          |              | <b>Sub total</b> | <b>\$1,300,000</b>   |              |
| Public Level Crossing - Active  | each              | 1        | \$1,300,000  | \$1,300,000      | Existing level crossing to be modified                                   |              |
| Public Level Crossing - Passive   | each              | 0        | \$150,000    | \$0              |  |              |
| Occupational Crossing - Passive   | each              | 0        | \$100,000    | \$0              |  |              |
| <b>Trackwork</b>  |                   |          |              | <b>Sub total</b> | <b>\$5,800,000</b>   |              |
| Track - (Rail, Sleepers, Ballast)   | km                | 4.70     | \$1,100,000  | \$5,170,000      | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |              |
| Track Removal - (Rail, Sleepers, Ballast)   | km                | 4.70     | \$100,000    | \$470,000        |  |              |
| Track Slew (minor)  | km                | 0.40     | \$400,000    | \$160,000        | 100m of track slew per connection  |              |
| Turnouts (1 in 16)  | each              | 0        | \$500,000    | \$0              | Single track   |              |
| Turnouts Removal  | each              | 0        | \$45,000     | \$0              |  |              |
| <b>Signals</b>  |                   |          |              | <b>Sub total</b> | <b>\$1,000,000</b>   |              |
| Level Crossing  | each              | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |              |
| Junction  | each              | 0        | \$3,000,000  | \$0              |  |              |
| Loop  | each              | 0        | \$5,000,000  | \$0              |  |              |
| Single track signalling   | allow             | 1        | \$1,000,000  | \$1,000,000      | Allowance for possible signal impacts on single line track               |              |
| <b>Electrification</b>  |                   |          |              | <b>Sub total</b> | <b>\$4,758,750</b>   |              |
| Overhead - (Catenary, Masts)  | km                | 4.70     | \$1,000,000  | \$4,700,000      |  |              |
| Overhead Removal  | km                | 4.70     | \$12,500     | \$58,750         |  |              |
| Power Supply  | each              | 0        | \$2,000,000  | \$0              | Assumed not required   |              |
| <b>Communication</b>  |                   |          |              | <b>Sub total</b> | <b>\$235,000</b>   |              |
| Services  | km                | 4.70     | \$50,000     | \$235,000        | Trenching and pits   |              |
| <b>Operational Rail interface</b>   |                   |          |              | <b>Sub total</b> | <b>\$3,972,713</b>   |              |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item              | 15%      | \$26,484,750 | \$3,972,712.50   | Assume 15% based on impact on existing rail                              |              |
| <b>Direct Cost</b>  |                   |          |              |                  | <b>\$32,852,863</b>  |              |
| Contractors indirect including preliminaries, overheads, management and margin  |                   |          | 40%          |                  | \$13,141,145   |              |
| <b>Construction Cost</b>  |                   |          |              |                  | <b>\$45,994,008</b>  |              |
| Design costs (5% of direct cost)  |                   |          | 5%           |                  | \$1,642,643  |              |
| Owners costs and approvals (8% of construction cost)  |                   |          | 8%           |                  | \$3,679,521  |              |
| Land Acquisition  | Allow             | 1        | \$80,000     |                  | \$80,000   |              |
| <b>Total</b>  |                   |          |              |                  | <b>\$51,396,171</b>  |              |



## 2. Pomona to Traveston

### 2.1 Site overview

Pomona to Traveston curve easing is located approximately 138.9km to 153.2km along the NCL (Figure 2.1). The limiting factor for this location is the tight horizontal curves, with the average curve radius of the existing alignment, between 200m and 400m. The horizontal curves limit the speed through this section from 100km/h to an average speed of 50km/h. Along the alignment the terrain is fairly flat with an average grade around 1 in 600.

To maintain the 100km/h operating speed throughout the area, the existing track will need to be realigned. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

### 2.2 Proposed design benefits

Below is an outline showing the benefits of the Pomona to Traveston curve easing.

**Table 2.1 Pomona to Traveston benefit summary**

|  | Existing alignment                      | Realigned alignment |
|--|---|---------------------|
| Track speed  | 50km/h                                  | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Four rail bridges and one road overpass |                     |

### 2.3 Explanation of the proposed design

In order to realign the existing track alignment between Pomona and Traveston both the vertical and horizontal geometry of the local area was examined. The average horizontal curve radius was found to be below the required radius to operate at 100km/h. The limiting horizontal curve radius was shown to be 180m. This was determined by using the network information packs, published by Queensland Rail.

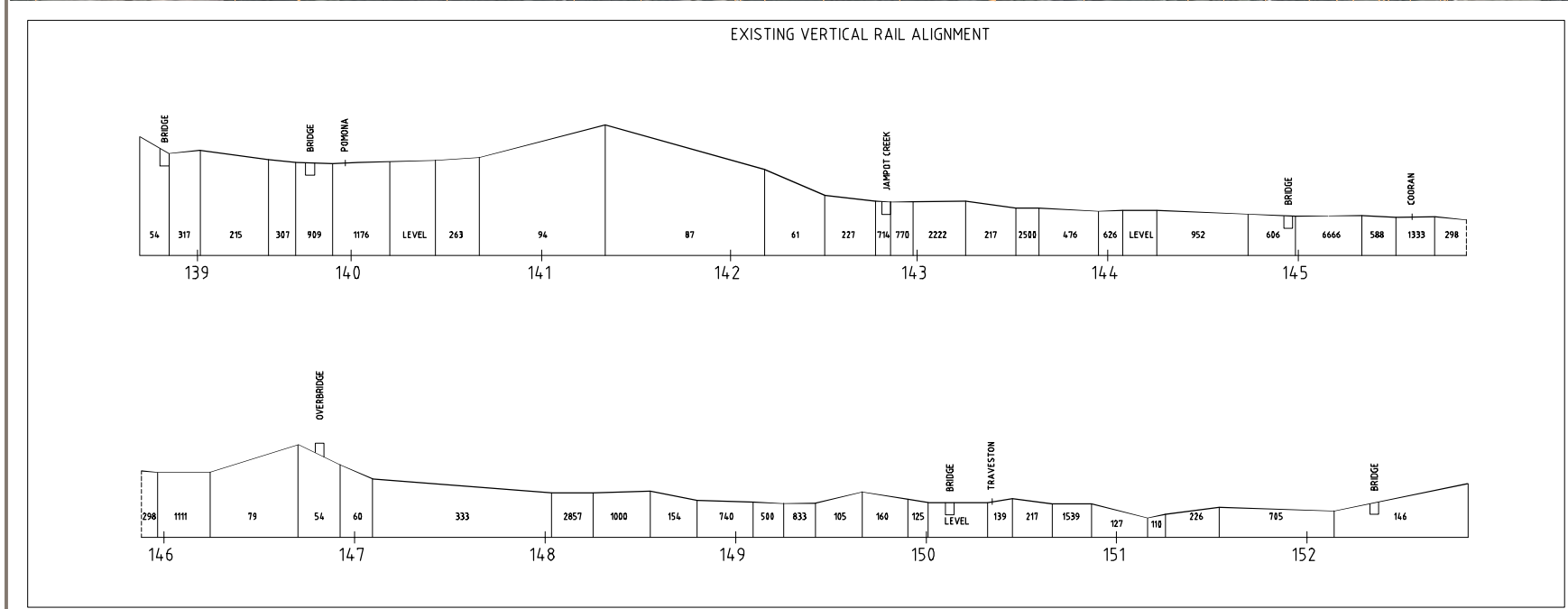
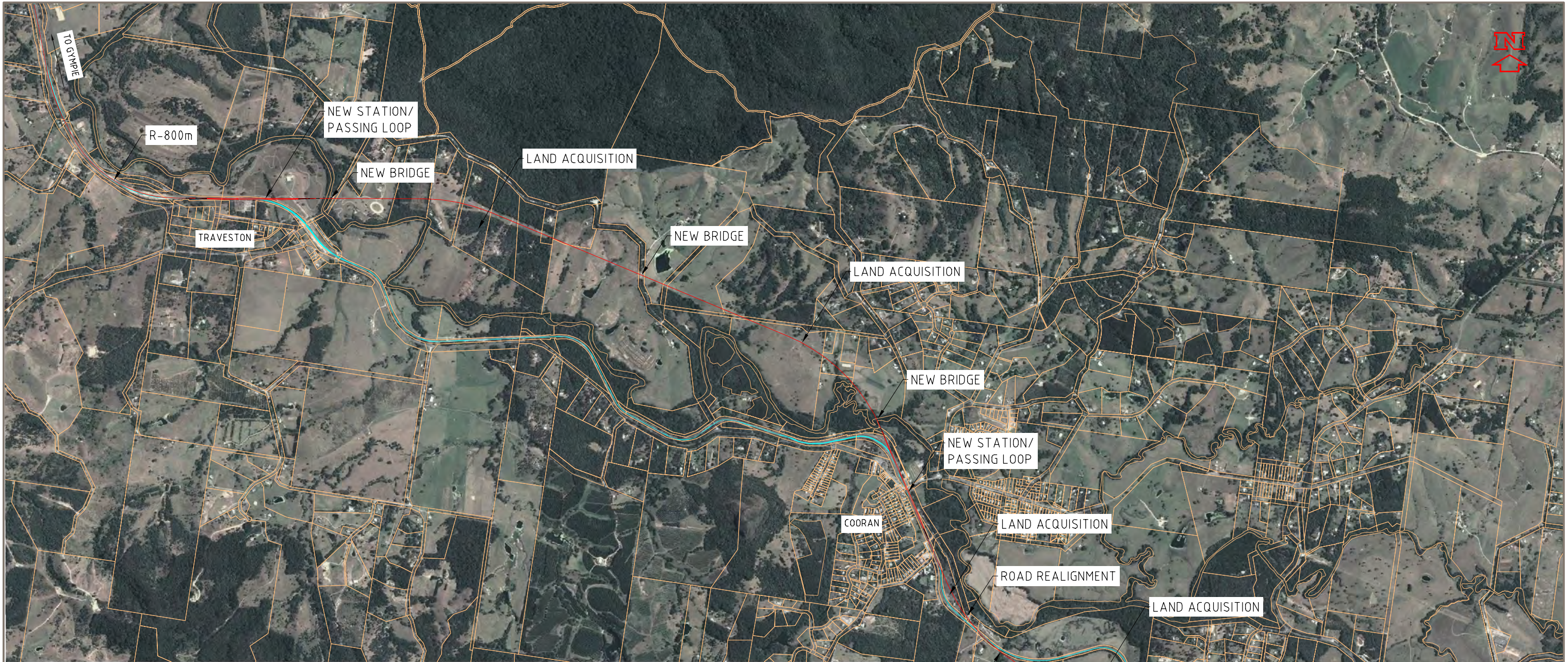
The three major townships of Pomona, Cooran and Traveston are a major design constraint as well as the amount of residential properties and creeks in the area. It was decided to use existing easements and Queensland Rail/ State owned land when realigning the existing track between Pomona and Traveston. This is to avoid any unnecessary social impacts and costly land resumptions. Due to the poor horizontal curve radius for the section and the minimum design standards, social and property impacts are unavoidable.

From this information the NCL horizontal geometry was realigned between chainage 138.9km and 153.2km. Using the Queensland Rail - Civil Engineering Track Standards (CETS) the alignment was realigned to allow for a 100km/h radius curves. It is assumed the vertical alignment will be designed to suit.

**Table 2.2 Summary table**

| Site Summary                     |               |
|----------------------------------|---------------|
| <b>Deviation start chainage</b>  | 138.930km     |
| <b>Deviation finish chainage</b> | 153.200km     |
| <b>Existing length</b>           | 14.27km       |
| <b>Deviation length</b>          | 13.40km       |
| <b>Time benefit</b>              | 558 Seconds   |
| <b>Cost<sup>#</sup></b>          | \$218,200,000 |
| <b>Site type</b>                 | Curve easing  |
| <b>Terrain type</b>              | Flat          |
| <b>Cost /seconds saving</b>      | \$391,000/sec |

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EXISTING TRACKS —  
 REALIGNED TRACK —

NOTES  
 • ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED



## North Coast Line Capacity Improvement Study

Revision C

## Pomona to Traveston - Curve Easing

| Item Description  | Unit  | Quantity | Rate          | Total            | Comment  |
|---|-------|----------|---------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |       |          |               | <b>Sub total</b> | <b>\$71,694,870</b>  |
| Rail length   |       | 13400 m  |               |                  |  |
| Civil Formation Works & Minor Drainage - Single Track   | m     | 9500     | \$1,900       | \$18,050,000     | Average depth - 3.0m   |
| Civil Formation Works & Minor Drainage - Single Existing  | m     | 2270     | \$980         | \$2,224,600      | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m     | 1133     | \$3,000       | \$3,397,500      | Average depth - 3.0m   |
| Civil Formation Works & Minor Drainage - Double Existing  | m     | 495      | \$1,600       | \$792,000        | Average depth - 0.5m   |
| Major Cross Drainage  | Item  | 20%      | \$24,464,100  | \$4,892,820      | 20% of total civil work  |
| Fencing   | m     | 21265    | \$30          | \$637,950        | 4 Chain wire & mild steel star pickets                                   |
| Retaining Wall  | m2    | 2000     | \$750         | \$1,500,000      |  |
| Rail Bridge   |       |          |               |                  |  |
| Hills Street  | m     | 35       | \$40,000      | \$1,400,000      | Single track   |
| Mills Street  | m     | 25       | \$80,000      | \$2,000,000      | Single track   |
| Creek   | m     | 50       | \$80,000      | \$4,000,000      | Double track   |
| Pound Road  | m     | 50       | \$40,000      | \$2,000,000      | Single track   |
| Creek   | m     | 50       | \$40,000      | \$2,000,000      | Single track   |
| Existing James Street   | m     | 0        | \$40,000      | \$0              | Existing   |
| Bridge Street Upgrade   | m     | 25       | \$80,000      | \$2,000,000      | Upgrade double track   |
| Six Mile Creek  | m     | 65       | \$40,000      | \$2,600,000      | Single track   |
| Old Noosa Road  | m     | 50       | \$40,000      | \$2,000,000      | Single track   |
| Howe Road and Six Mile Creek  | m     | 80       | \$40,000      | \$3,200,000      | Single track   |
| Property Access   | m     | 25       | \$40,000      | \$1,000,000      | Single track   |
| Bridge Demolition   | each  | 0        | \$10,000      | \$0              |  |
| <b>Stations</b>   |       |          |               |                  |  |
| Pomona  | each  | 1        | \$6,000,000   | \$6,000,000      | New Station  |
| Cooran  | each  | 1        | \$6,000,000   | \$6,000,000      | New Station  |
| Traveston   | each  | 1        | \$6,000,000   | \$6,000,000      | New Station  |
| <b>Road - Civil and Earthworks</b>  |       |          |               | <b>Sub total</b> | <b>\$2,215,500</b>   |
| Road length   |       | 700 m    |               |                  |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m     | \$700    | \$2,700       | \$1,890,000      | Average depth - 2.0m   |
| Major Cross Drainage  | item  | 15%      | \$1,890,000   | \$283,500        | 15% of total civil work  |
| Fencing   | m     | 1400     | \$30          | \$42,000         |  |
| Retaining Wall  | m2    | 0        | \$750         | \$0              |  |
| Road Bridge   | m2    | 0        | \$5,000       | \$0              |  |
| Bridge Demolition   | each  | 0        | \$10,000      | \$0              |  |
| <b>Crossings</b>  |       |          |               | <b>Sub total</b> | <b>\$0</b>   |
| Public Level Crossing - Active  | each  | 0        | \$1,300,000   | \$0              |  |
| Public Level Crossing - Passive   | each  | 0        | \$150,000     | \$0              |  |
| Occupational Crossing - Passive   | each  | 0        | \$100,000     | \$0              |  |
| <b>Trackwork</b>  |       |          |               | <b>Sub total</b> | <b>\$19,335,000</b>  |
| Track - (Rail, Sleepers, Ballast)   | km    | 13.40    | \$1,100,000   | \$14,740,000     | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km    | 1.50     | \$100,000     | \$150,000        |  |
| Track Slew (minor)  | km    | 1.00     | \$400,000     | \$400,000        |  |
| Turnouts (1 in 16)  | each  | 8        | \$500,000     | \$4,000,000      |  |
| Turnouts Removal  | each  | 1        | \$45,000      | \$45,000         |  |
| <b>Signals</b>  |       |          |               | <b>Sub total</b> | <b>\$15,000,000</b>  |
| Level Crossing  | each  | 0.00     | \$0           | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each  | 0.00     | \$3,000,000   | \$0              |  |
| Loop  | each  | 3        | \$5,000,000   | \$15,000,000     |  |
| Single track signalling   | allow | 0        | \$1,000,000   | \$0              | Allowance for possible signal impacts on single line track               |
| <b>Electrification</b>  |       |          |               | <b>Sub total</b> | <b>\$13,418,750</b>  |
| Overhead - (Catenary, Masts)  | km    | 13.40    | \$1,000,000   | \$13,400,000     |  |
| Overhead Removal  | km    | 1.50     | \$12,500      | \$18,750         |  |
| Power Supply  | each  | 0        | \$2,000,000   | \$0              | Assumed not required   |
| <b>Communication</b>  |       |          |               | <b>Sub total</b> | <b>\$670,000</b>   |
| Services  | km    | 13.40    | \$50,000      | \$670,000        | Trenching and pits   |
| <b>Operational Rail interface</b>   |       |          |               | <b>Sub total</b> | <b>\$11,944,862</b>  |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item  | 10%      | \$119,448,620 | \$11,944,862     | Assume 10% based on impact on existing rail                              |
| <b>Direct Cost</b>  |       |          |               |                  | <b>\$134,278,982</b>   |
| Contractors indirect including preliminaries, overheads, management and margin  |       |          | 40%           |                  | \$53,711,593   |
| <b>Construction Cost</b>  |       |          |               |                  | <b>\$187,990,575</b>   |
| Design costs (5% of direct cost)  |       |          | 5%            |                  | \$6,713,949  |

Table 2.3

North Coast Line Capacity Improvement Study  
Option Cost

|  |       |   |             |                      |
|--|-------|---|-------------|----------------------|
| Owners costs and approvals (8% of construction cost) |       |   | 8%          | \$15,039,246         |
| Land Acquisition                                     | Allow | 1 | \$8,500,000 | \$8,500,000          |
| <b>Total</b>   |       |   |             | <b>\$218,243,770</b> |

# 3. Netherby to Mary River

## 3.1 Site overview

Netherby to Mary River curve easing is located approximately 231.0km to 246.3km along the NCL (Figure 3.1). The limiting factor for this location is the tight horizontal curves, with the typical curve radius of the existing alignment between 300m and 600m. The horizontal curves limit the speed through this section from 100km/h to an average speed of 60km/h. Along the alignment the terrain is hilly with an average grade between 1 in 100 and 1 in 300.

To maintain the 100km/h operating speed throughout the area, the existing track will need to be realigned with the tight curves removed. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

## 3.2 Proposed design benefits

Below is an outline showing the benefits of the Netherby to Mary River curve easing.

**Table 3.1 Netherby to Mary River benefit summary**

|  | Existing alignment                   | Realigned alignment |
|--|--------------------------------------|---------------------|
| Track speed  | 60km/h                               | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Two rail bridges and one over bridge |                     |

## 3.3 Explanation of the proposed design

In order to realign the existing track alignment between Netherby and Mary River both the vertical and horizontal geometry of the area were examined. The average horizontal curve radius was found to be below the required radius to operate at 100km/h. The limiting horizontal curve radius was shown to be 300m. This was determined by using the network information packs, published by Queensland Rail.

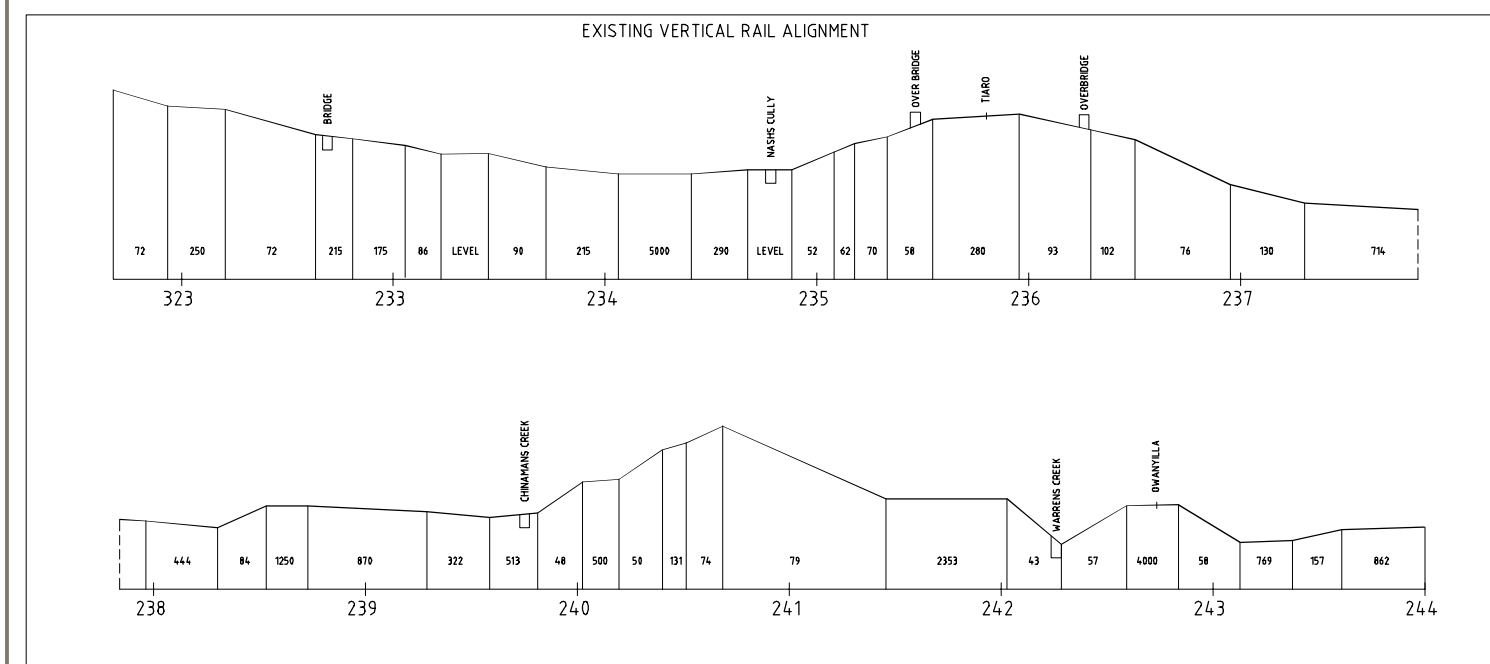
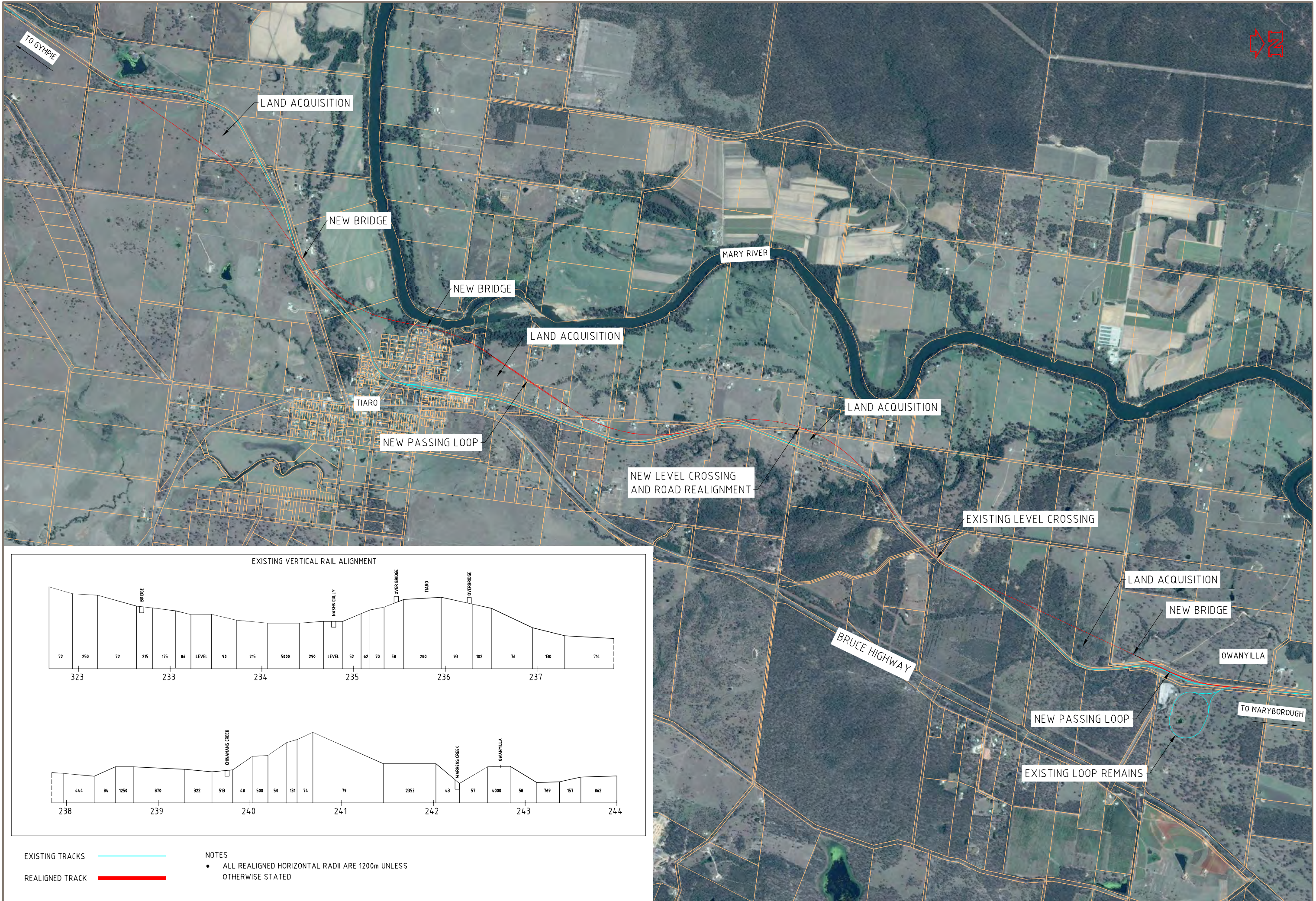
The major design constraint between Netherby and Mary River was the town of Tiaro. The alignment through Tiaro is very tight and requires large scale resumptions of the part of the town and major road impacts. It was decided it is best to avoid the township and the Bruce Highway and realign the existing track to the west of Tiaro, alongside the Mary River. This However this will require extensive viaduct to be constructed along the Mary river flood plain.

From this information the NCL horizontal geometry was realigned between chainage 231.0km and 246.3km. Using the Queensland Rail - Civil Engineering Track Standards (CETS) the alignment was realigned to allow for a 100km/h radius curves. It is assumed the vertical alignment will be designed to suit.

**Table 3.2 Summary table**

| Site Summary                     |               |
|----------------------------------|---------------|
| <b>Deviation start chainage</b>  | 231.00km      |
| <b>Deviation finish chainage</b> | 246.340m      |
| <b>Existing length</b>           | 15.34km       |
| <b>Deviation length</b>          | 12.05km       |
| <b>Time benefit</b>              | 337 seconds   |
| <b>Cost<sup>#</sup></b>          | \$185,300,000 |
| <b>Site type</b>                 | Curve easing  |
| <b>Terrain type</b>              | Hilly         |
| <b>Cost /seconds saving</b>      | \$492,000/sec |

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NOTES

- ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED



## North Coast Line Capacity Improvement Study

## Netherby to Mary River - Curve Easing

| Item Description  | Unit                   | Quantity | Rate         | Total            | Comment  |                 |
|---|------------------------|----------|--------------|------------------|--|-----------------|
| <b>Rail - Civil and Earthworks</b>  |                        |          |              | <b>Sub total</b> | <b>\$58,002,000</b>  |                 |
| Rail length   |                        | 12000 m  |              |                  |  |                 |
| Civil Formation Works & Minor Drainage - Single Track   | m                      | 8800     | \$1,900      | \$16,720,000     | Average depth - 3.0m   |                 |
| Civil Formation Works & Minor Drainage - Single Existing  | m                      | 2000     | \$980        | \$1,960,000      | Average depth - 0.5m   |                 |
| Civil Formation Works & Minor Drainage - Double Track   | m                      | 800      | \$2,400      | \$1,920,000      | Average depth - 2.0m   |                 |
| Civil Formation Works & Minor Drainage - Double Existing  | m                      | 400      | \$1,600      | \$640,000        | Average depth - 0.5m   |                 |
| Major Cross Drainage  | Item                   | 15%      | \$21,240,000 | \$3,186,000      | 15% of total civil work  |                 |
| Fencing   | m                      | 19200    | \$30         | \$576,000        | 4 Chain wire & mild steel star pickets                                   |                 |
| Retaining Wall  | m2                     | 0        | \$750        | \$0              |  |                 |
| Rail Bridge   |                        |          |              |                  |  |                 |
|   | Koorunga Road          | m        | 150          | \$40,000         | \$6,000,000  | Single track    |
|   | Mary River Flood Plane | m        | 600          | \$40,000         | \$24,000,000   | Single track    |
|   | Creek                  | m        | 0            | \$40,000         | \$0  | Existing Bridge |
|   | Creek                  | m        | 75           | \$40,000         | \$3,000,000  | Single track    |
| Bridge Demolition   | each                   | 0        | \$10,000     | \$0              |  |                 |
| <b>Road - Civil and Earthworks</b>  |                        |          |              | <b>Sub total</b> | <b>\$6,129,000</b>   |                 |
| Road length   |                        | 1350 m   |              |                  |  |                 |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m                      | \$1,350  | \$3,200      | \$4,320,000      | Average depth - 3.0m   |                 |
| Major Cross Drainage  | item                   | 40%      | \$4,320,000  | \$1,728,000      | 40% of total civil work  |                 |
| Fencing   | m                      | 2700     | \$30         | \$81,000         |  |                 |
| Retaining Wall  | m2                     | 0        | \$750        | \$0              |  |                 |
| Road Bridge   | m2                     | 0        | \$5,000      | \$0              | none   |                 |
| Bridge Demolition   | each                   | 0        | \$10,000     | \$0              |  |                 |
| <b>Crossings</b>  |                        |          |              | <b>Sub total</b> | <b>\$1,400,000</b>   |                 |
| Public Level Crossing - Active  | each                   | 1        | \$1,300,000  | \$1,300,000      | Pidgeon Road   |                 |
| Public Level Crossing - Passive   | each                   | 0        | \$150,000    | \$0              |  |                 |
| Occupational Crossing - Passive   | each                   | 1        | \$100,000    | \$100,000        | Property access  |                 |
| <b>Trackwork</b>  |                        |          |              | <b>Sub total</b> | <b>\$16,085,000</b>  |                 |
| Track - (Rail, Sleepers, Ballast)   | km                     | 12.00    | \$1,100,000  | \$13,200,000     | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |                 |
| Track Removal - (Rail, Sleepers, Ballast)   | km                     | 1.40     | \$100,000    | \$140,000        |  |                 |
| Track Slew (minor)  | km                     | 0.50     | \$400,000    | \$200,000        |  |                 |
| Turnouts (1 in 16)  | each                   | 5        | \$500,000    | \$2,500,000      |  |                 |
| Turnouts Removal  | each                   | 1        | \$45,000     | \$45,000         |  |                 |
| <b>Signals</b>  |                        |          |              | <b>Sub total</b> | <b>\$10,000,000</b>  |                 |
| Level Crossing  | each                   | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |                 |
| Junction  | each                   | 0        | \$3,000,000  | \$0              |  |                 |
| Loop  | each                   | 2        | \$5,000,000  | \$10,000,000     |  |                 |
| Single track signalling   | allow                  | 0        | \$1,000,000  | \$0              | Allowance for possible signal impacts on single line track               |                 |
| <b>Electrification</b>  |                        |          |              | <b>Sub total</b> | <b>\$12,017,500</b>  |                 |
| Overhead - (Catenary, Masts)  | km                     | 12.00    | \$1,000,000  | \$12,000,000     |  |                 |
| Overhead Removal  | km                     | 1.40     | \$12,500     | \$17,500         |  |                 |
| Power Supply  | each                   | 0        | \$2,000,000  | \$0              | Assumed not required   |                 |
| <b>Communication</b>  |                        |          |              | <b>Sub total</b> | <b>\$600,000</b>   |                 |
| Services  | km                     | 12.00    | \$50,000     | \$600,000        | Trenching and pits   |                 |
| <b>Operational Rail interface</b>   |                        |          |              | <b>Sub total</b> | <b>\$9,610,450</b>   |                 |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item                   | 10%      | \$96,104,500 | \$9,610,450.00   | Assume 10% based on impact on existing rail                              |                 |
| <b>Direct Cost</b>  |                        |          |              |                  | <b>\$113,843,950</b>   |                 |
| Contractors indirect including preliminaries, overheads, management and margin  |                        |          | 40%          |                  | \$45,537,580   |                 |
| <b>Construction Cost</b>  |                        |          |              |                  | <b>\$159,381,530</b>   |                 |
| Design costs (5% of direct cost)  |                        |          | 5%           |                  | \$5,692,197.50   |                 |
| Owners costs and approvals (8% of construction cost)  |                        |          | 8%           |                  | \$12,750,522   |                 |
| Land Acquisition  | Allow                  | 1        | \$7,500,000  |                  | \$7,500,000  |                 |
| <b>Total</b>  |                        |          |              |                  | <b>\$185,324,250</b>   |                 |

# 4. Mary River to Yengarie

## 4.1 Site overview

Mary River to Yengarie curve easing is located approximately 244.7km to 257.9km along the NCL (Figure 4.1). The limiting factor for this location is the tight horizontal curves, with the typical curve radius of the existing alignment between 200m and 400m. The horizontal curves limit the speed through this section from 100km/h to an average speed of 50km/h. Along the alignment the terrain is hilly with an average grade around 1 in 200.

To maintain the 100km/h operating speed throughout the area, the existing track will need to be realigned. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

## 4.2 Proposed design benefits

Below is an outline showing the benefits of the Mary River to Yengarie curve easing.

**Table 4.1 Mary River to Yengarie benefit summary**

|  | Existing alignment | Realigned alignment |
|--|--------------------|---------------------|
| Track speed  | 50km/h             | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Two rail bridges   |                     |

## 4.3 Explanation of the proposed design

In order to realign the existing track alignment between Mary River and Yengarie the track geometry of the local area was examined. The average horizontal curve radius was determined to be below the required radius to operate at 100km/h. The limiting horizontal curve radius was shown to be 200m. This was determined by using the network information packs, published by Queensland Rail.

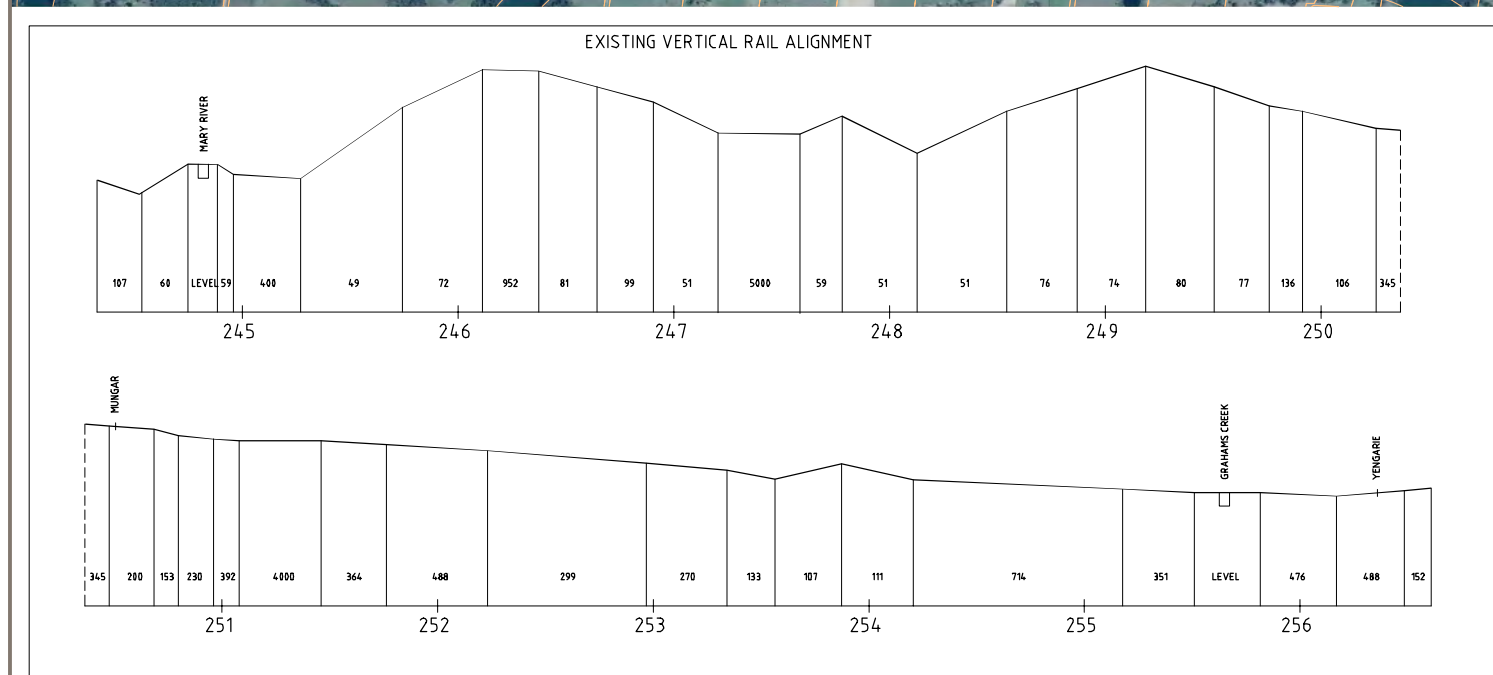
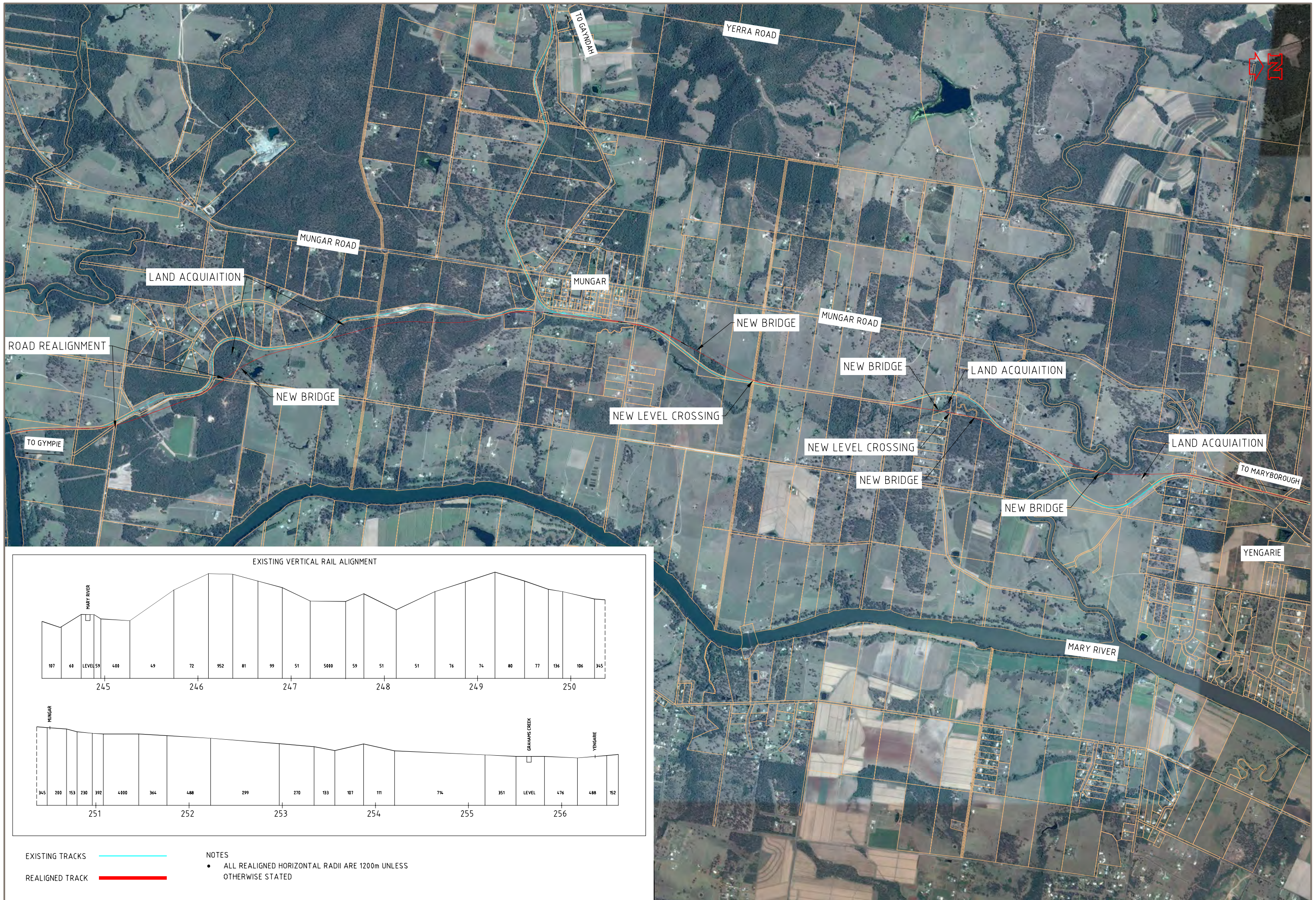
The level crossings and creeks between Mary River and Yengarie limited possible design option. It was decided that the existing level crossings and creeks were to be avoided and the use of existing road reserve and Queensland Rail owned land utilised were ever possible. The Gayndah connection was identified to be impacted as little possible, therefore reducing any impact of the line. Due to the poor horizontal curve radius for the section and the minimum design standards, it is unavoidable that level crossings and creeks will be impacted in the concept design.

From this information the NCL horizontal geometry was realigned between chainage 244.7km and 257.9km. Using the Queensland Rail - Civil Engineering Track Standards (CETS) the alignment was realigned to allow for a 100km/h radius curves. It is assumed the vertical alignment will not be a major design challenge. This is because the existing grade is 1 in 200.

**Table 4.2 Summary table**

| Site Summary                     |               |
|----------------------------------|---------------|
| <b>Deviation start chainage</b>  | 244.700km     |
| <b>Deviation finish chainage</b> | 257.900km     |
| <b>Existing length</b>           | 13.20km       |
| <b>Deviation length</b>          | 12.40km       |
| <b>Time benefit</b>              | 522 seconds   |
| <b>Cost<sup>#</sup></b>          | \$162,700,000 |
| <b>Site type</b>                 | Curve easing  |
| <b>Terrain type</b>              | Hilly         |
| <b>Cost /seconds saving</b>      | \$312,000/sec |

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EXISTING TRACKS —

REALIGNED TRACK —

NOTES

- ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED

## North Coast Line Capacity Improvement Study

Revision C

## Mary River to Yengarie - Curve Easing

| Item Description  | Unit          | Quantity | Rate         | Total            | Comment  |              |
|---|---------------|----------|--------------|------------------|--|--------------|
| <b>Rail - Civil and Earthworks</b>  |               |          |              | <b>Sub total</b> | <b>\$43,000,300</b>  |              |
| Rail length   |               | 12400 m  |              |                  |  |              |
| Civil Formation Works & Minor Drainage - Single Track   | m             | 9000     | \$1,900      | \$17,100,000     | Average depth - 3.0m   |              |
| Civil Formation Works & Minor Drainage - Single Existing  | m             | 2400     | \$980        | \$2,352,000      | Average depth - 0.5m   |              |
| Civil Formation Works & Minor Drainage - Double Track   | m             | 150      | \$3,000      | \$450,000        | Average depth - 3.0m   |              |
| Civil Formation Works & Minor Drainage - Double Existing  | m             | 850      | \$1,600      | \$1,360,000      | Average depth - 0.5m   |              |
| Major Cross Drainage  | Item          | 15%      | \$21,262,000 | \$3,189,300      | 15% of total civil work  |              |
| Fencing   | m             | 18300    | \$30         | \$549,000        | 4 Chain wire & mild steel star pickets                                   |              |
| Retaining Wall  | m2            | 0        | \$750        | \$0              |  |              |
| Rail Bridge   |               |          |              |                  |  |              |
|   | Creek/ Dam    | m        | 50           | \$40,000         | \$2,000,000  | Single track |
|   | Creek         | m        | 80           | \$40,000         | \$3,200,000  | Single track |
|   | Creek         | m        | 70           | \$40,000         | \$2,800,000  | Single track |
|   | Grahams Creek | m        | 250          | \$40,000         | \$10,000,000   | Single track |
| Bridge Demolition   | each          | 0        | \$10,000     | \$0              |  |              |
| <b>Road - Civil and Earthworks</b>  |               |          |              | <b>Sub total</b> | <b>\$4,732,500</b>   |              |
| Road length   |               | 1250 m   |              |                  |  |              |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m             | \$1,500  | \$2,700      | \$4,050,000      | Average depth - 2.0m   |              |
| Major Cross Drainage  | item          | 15%      | \$4,050,000  | \$607,500        | 15% of total civil work  |              |
| Fencing   | m             | 2500     | \$30         | \$75,000         |  |              |
| Retaining Wall  | m2            | 0        | \$750        | \$0              |  |              |
| Road Bridge   | m2            | 0        | \$5,000      | \$0              |  |              |
| Bridge Demolition   | each          | 0        | \$10,000     | \$0              |  |              |
| <b>Crossings</b>  |               |          |              | <b>Sub total</b> | <b>\$3,900,000</b>   |              |
| Public Level Crossing - Active  | each          | 3        | \$1,300,000  | \$3,900,000      | Dunford Road, Barrage Road, Boundary Road                                |              |
| Public Level Crossing - Passive   | each          | 0        | \$150,000    | \$0              |  |              |
| Occupational Crossing - Passive   | each          | 0        | \$100,000    | \$0              |  |              |
| <b>Trackwork</b>  |               |          |              | <b>Sub total</b> | <b>\$17,060,000</b>  |              |
| Track - (Rail, Sleepers, Ballast)   | km            | 12.40    | \$1,100,000  | \$13,640,000     | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |              |
| Track Removal - (Rail, Sleepers, Ballast)   | km            | 1.00     | \$100,000    | \$100,000        |  |              |
| Track Slew (minor)  | km            | 0.80     | \$400,000    | \$320,000        |  |              |
| Turnouts (1 in 16)  | each          | 6        | \$500,000    | \$3,000,000      |  |              |
| Turnouts Removal  | each          | 0        | \$45,000     | \$0              |  |              |
| <b>Signals</b>  |               |          |              | <b>Sub total</b> | <b>\$13,000,000</b>  |              |
| Level Crossing  | each          | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |              |
| Junction  | each          | 1        | \$3,000,000  | \$3,000,000      |  |              |
| Loop  | each          | 2        | \$5,000,000  | \$10,000,000     |  |              |
| Single track signalling   | allow         | 0        | \$1,000,000  | \$0              | Allowance for possible signal impacts on single line track               |              |
| <b>Electrification</b>  |               |          |              | <b>Sub total</b> | <b>\$12,412,500</b>  |              |
| Overhead - (Catenary, Masts)  | km            | 12.40    | \$1,000,000  | \$12,400,000     |  |              |
| Overhead Removal  | km            | 1.00     | \$12,500     | \$12,500         |  |              |
| Power Supply  | each          | 0        | \$2,000,000  | \$0              | Assumed not required   |              |
| <b>Communication</b>  |               |          |              | <b>Sub total</b> | <b>\$620,000</b>   |              |
| Services  | km            | 12.40    | \$50,000     | \$620,000        | Trenching and pits   |              |
| <b>Operational Rail interface</b>   |               |          |              | <b>Sub total</b> | <b>\$8,547,280</b>   |              |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item          | 10%      | \$85,472,800 | \$8,547,280      | Assume 10% based on impact on existing rail                              |              |
| <b>Direct Cost</b>  |               |          |              |                  | <b>\$103,272,580</b>   |              |
| Contractors indirect including preliminaries, overheads, management and margin  |               |          | 40%          |                  | \$41,309,032   |              |
| <b>Construction Cost</b>  |               |          |              |                  | <b>\$144,581,612</b>   |              |
| Design costs (5% of direct cost)  |               |          | 5%           |                  | \$5,163,629  |              |
| Owners costs and approvals (8% of construction cost)  |               |          | 8%           |                  | \$11,566,529   |              |
| Land Acquisition  | Allow         | 1        | \$1,400,000  |                  | \$1,400,000  |              |
| <b>Total</b>  |               |          |              |                  | <b>\$162,711,770</b>   |              |

# 5. Cabbage Tree Creek

## 5.1 Site overview

Cabbage Tree Creek bridge upgrade and curve/grade easing is located approximately 418.75km to 421.65km along the NCL (Figure 5.1). The main driver for the realignment of the section is due to the poor horizontal curves and an aging timber bridge. The design philosophy of realigning this section is to combine timber bridge upgrade and the curve/ grade easing into one project to save cost and minimise operational down time. The current bridge across Cabbage Tree Creek is a single span timber bridge approximately 80m long. The horizontal curves and timber bridge limit the speed through this section from 100km/h to an average speed of 50km/h. Along the alignment the terrain is hilly with an grade around 1 in 60.

To maintain the 100km/h operating speed throughout the area, the timber bridge will need to be replaced and the existing track will need to be realigned. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

## 5.2 Proposed design benefits

Below is an outline showing the benefits of the Cabbage tree Creek bridge upgrade and curve/ grade easing.

**Table 5.1 Cabbage Tree Creek benefit summary**

|  | Existing alignment     | Realigned alignment |
|--|------------------------|---------------------|
| Track speed  | 50km/h                 | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | One timber rail bridge |                     |

## 5.3 Explanation of the proposed design

In order to upgrade the timber bridge and realign the existing track alignment around Cabbage Tree Creek, both the bridge and the track geometry was examined. The average horizontal curve radius was determined to be below the required radius to operate at 100km/h. The limiting horizontal curve radius was found to be 240m. This was determined by using the network information packs, published by Queensland Rail.

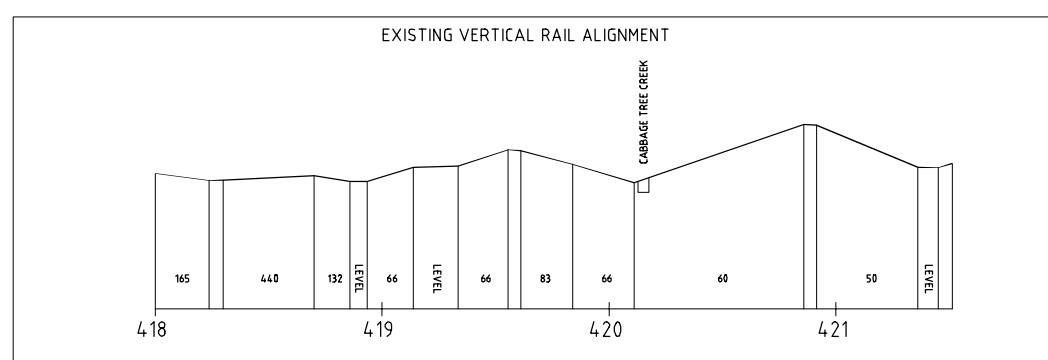
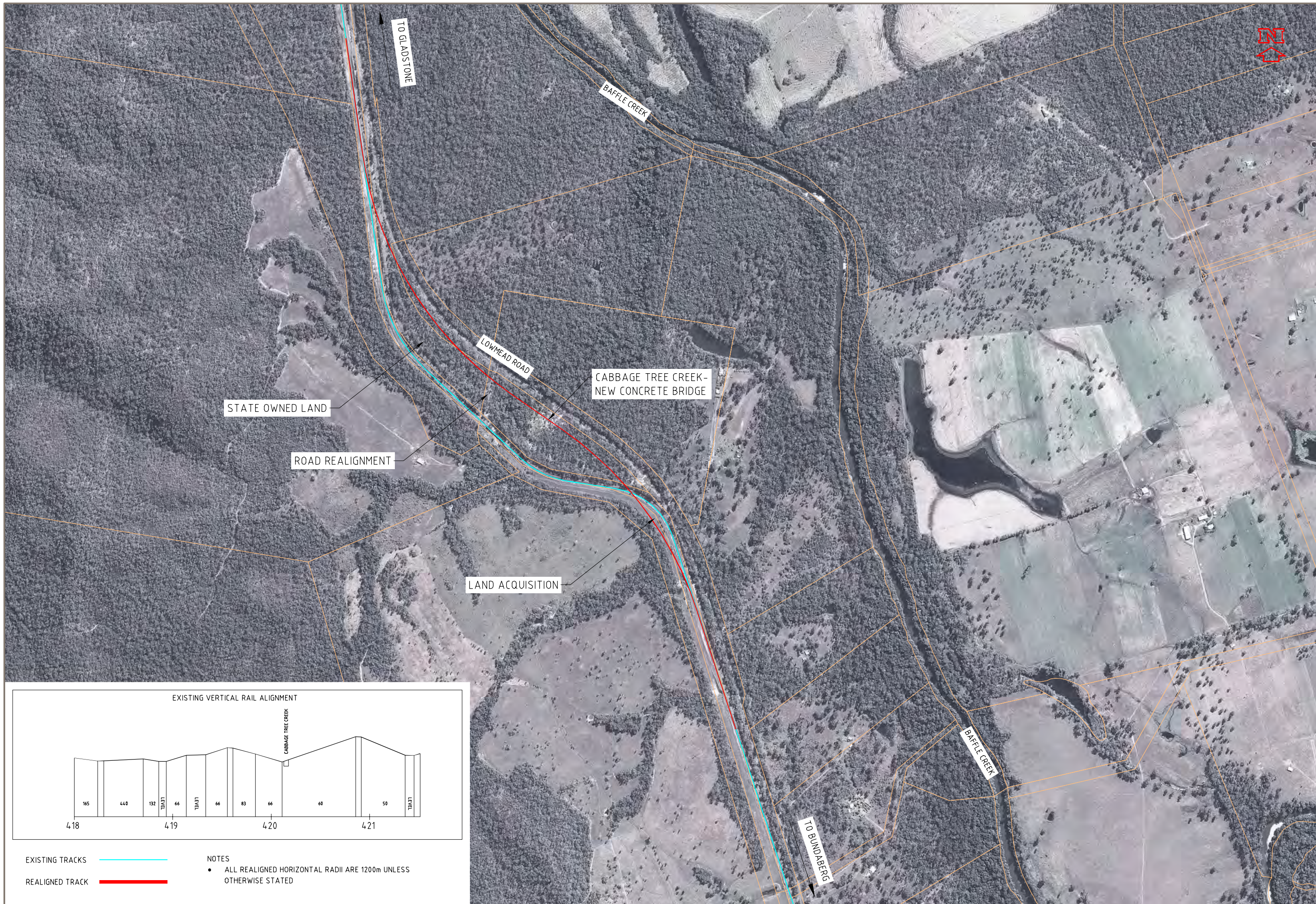
The major constraint between 418.75km and 421.65km is the timber bridge upgrade and the tight horizontal curves and easing vertical gradients. Realigning the section will require flattening of the horizontal curves and a new concrete bridge installed. It was decided that the realignment should take place between the existing alignment and Lowmead road. This is because the land is a road reserve or owned by Queensland Rail. Keeping the corridor between the existing road and rail the land resumptions required will be low.

From this information the NCL the horizontal geometry was realigned between chainage 418.75km and 421.65km and a new concrete bridge to be installed. Using the Queensland Rail - Civil Engineering Track Standards (CETS) and Civil Engineering Structural Standards (CESS), the alignment was realigned to allow for a 100km/h radius curves.

**Table 5.2 Summary table**

| Site Summary                     |  |
|----------------------------------|--|
| <b>Deviation start chainage</b>  | 418.750km                                      |
| <b>Deviation finish chainage</b> | 421.650km                                      |
| <b>Existing length</b>           | 2.90km   |
| <b>Deviation length</b>          | 2.80km   |
| <b>Time benefit</b>              | 176 seconds                                    |
| <b>Cost<sup>#</sup></b>          | \$33,400,000                                   |
| <b>Site type</b>                 | Curve easing<br>Grade easing<br>Bridge upgrade |
| <b>Terrain type</b>              | Hilly  |
| <b>Cost /seconds saving</b>      | \$190,000                                      |

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EXISTING TRACKS —

REALIGNED TRACK —

NOTES

- ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED



**North Coast Line Capacity Improvement Study**

Revision C

**Cabbage Tree Creek - Bridge Upgrade and Curve/ Grade Easing**

| Item Description  | Unit               | Quantity | Rate         | Total            | Comment  |
|---|--------------------|----------|--------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |                    |          |              | <b>Sub total</b> | <b>\$12,091,720</b>  |
| Rail length   |                    | 2800 m   |              |                  |  |
| Civil Formation Works & Minor Drainage - Single Track   | m                  | 1830     | \$2,200      | \$4,026,000      | Average depth - 4.0m   |
| Civil Formation Works & Minor Drainage - Single Existing  | m                  | 970      | \$980        | \$950,600        | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m                  | 0        | \$3,000      | \$0              | No Double Track  |
| Civil Formation Works & Minor Drainage - Double Existing  | m                  | 0        | \$1,600      | \$0              | No Double Track  |
| Major Cross Drainage  | Item               | 20%      | \$4,976,600  | \$995,320        | 20% of total civil work  |
| Fencing   | m                  | 3660     | \$30         | \$109,800        | 4 Chain wire & mild steel star pickets                                   |
| Retaining Wall  | m2                 | 0        | \$750        | \$0              |  |
| Rail Bridge   |                    |          |              |                  |  |
|   | Cabbage Tree Creek | m        | 150          | \$40,000         | Single track   |
|   | -                  | m        | 0            | \$80,000         | Double track   |
| Bridge Demolition   | each               | 1        | \$10,000     | \$10,000         |  |
| <b>Road - Civil and Earthworks</b>  |                    |          |              | <b>Sub total</b> | <b>\$1,131,900</b>   |
| Road length   |                    | 1100 m   |              |                  |  |
| 3.0m wide Access Road- Including Earthworks, Pavement and Minor Drainage  | m                  | \$1,100  | \$980        | \$1,078,000      | Average depth - 0.5m   |
| Major Cross Drainage  | item               | 5%       | \$1,078,000  | \$53,900         | 5% of total civil work   |
| Fencing   | m                  | 0        | \$30         | \$0              |  |
| Retaining Wall  | m2                 | 0        | \$750        | \$0              |  |
| Road Bridge   | m2                 | 0        | \$5,000      | \$0              |  |
| Bridge Demolition   | each               | 0        | \$10,000     | \$0              |  |
| <b>Crossings</b>  |                    |          |              | <b>Sub total</b> | <b>\$0</b>   |
| Public Level Crossing - Active  | each               | 0        | \$1,300,000  | \$0              |  |
| Public Level Crossing - Passive   | each               | 0        | \$150,000    | \$0              |  |
| Occupational Crossing - Passive   | each               | 0        | \$100,000    | \$0              |  |
| <b>Trackwork</b>  |                    |          |              | <b>Sub total</b> | <b>\$3,240,000</b>   |
| Track - (Rail, Sleepers, Ballast)   | km                 | 2.80     | \$1,100,000  | \$3,080,000      | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km                 | 0.80     | \$100,000    | \$80,000         |  |
| Track Slew (minor)  | km                 | 0.20     | \$400,000    | \$80,000         |  |
| Turnouts (1 in 16)  | each               | 0        | \$500,000    | \$0              |  |
| Turnouts Removal  | each               | 0        | \$45,000     | \$0              |  |
| <b>Signals</b>  |                    |          |              | <b>Sub total</b> | <b>\$1,000,000</b>   |
| Level Crossing  | each               | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each               | 0        | \$3,000,000  | \$0              |  |
| Loop  | each               | 0        | \$5,000,000  | \$0              |  |
| Single track signalling   | allow              | 1        | \$1,000,000  | \$1,000,000      | Allow ance for possible signal impacts on single line track              |
| <b>Electrification</b>  |                    |          |              | <b>Sub total</b> | <b>\$2,810,000</b>   |
| Overhead - (Catenary, Masts)  | km                 | 2.80     | \$1,000,000  | \$2,800,000      |  |
| Overhead Removal  | km                 | 0.80     | \$12,500     | \$10,000         |  |
| Power Supply  | each               | 0        | \$2,000,000  | \$0              | Assumed not required   |
| <b>Communication</b>  |                    |          |              | <b>Sub total</b> | <b>\$140,000</b>   |
| Services  | km                 | 2.80     | \$50,000     | \$140,000        | Trenching and pits   |
| <b>Operational Rail interface</b>   |                    |          |              | <b>Sub total</b> | <b>\$957,086</b>   |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item               | 5%       | \$19,141,720 | \$957,086        | Assume 5% based on impact on existing rail                               |
| <b>Direct Cost</b>  |                    |          |              |                  | <b>\$21,370,706</b>  |
| Contractors indirect including preliminaries, overheads, management and margin  |                    |          | 40%          |                  | \$8,548,282  |
| <b>Construction Cost</b>  |                    |          |              |                  | <b>\$29,918,988</b>  |
| Design costs (5% of direct cost)  |                    |          | 5%           |                  | \$1,068,535  |
| Owners costs and approvals (8% of construction cost)  |                    |          | 8%           |                  | \$2,393,519  |
| Land Acquisition  | Allow              | 1        | \$30,000     |                  | \$30,000   |
| <b>Total</b>  |                    |          |              |                  | <b>\$33,411,043</b>  |

# 6. Twelve Mile Creek

## 6.1 Site overview

Twelve Mile Creek bridge upgrade and curve easing is located approximately 476.0km to 481.3km along the NCL (Figure 6.1). The main driver for the realignment of the section is due to the poor horizontal curves and two aging timber bridges. The design philosophy of realigning this section is to combine timber bridge upgrades and the curves upgrades into one project to save cost and minimise operational down time. The current two bridges across Twelve Mile Creek are timber bridges approximately 40m and 55m long respectively, north to south. The horizontal curves and timber bridge limit the speed through this section from 100km/h to an average speed of 50km/h. Along the alignment the terrain is hilly with an grade around 1 in 50.

To maintain the 100km/h operating speed throughout the area, the timber bridge will need to be replaced and the existing track will need to be realigned. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

## 6.2 Proposed design benefits

Below is an outline showing the benefits of the Twelve Mile Creek bridge upgrade and curve easing.

**Table 6.1** Twelve Mile Creek benefit summary

|  | Existing alignment      | Realigned alignment |
|--|-------------------------|---------------------|
| Track speed  | 50km/h                  | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Two timber rail bridges |                     |

## 6.3 Explanation of the proposed design

In order to upgrade the timber bridge and realigning the existing track alignment around Twelve Mile Creek, both the bridge and the vertical and horizontal geometry was examined. The average horizontal curve radius was determined to be below the required radius to operate at 100km/h. The limiting horizontal curve radius was shown to be 240m. This was determined by using the network information packs, published by Queensland Rail.

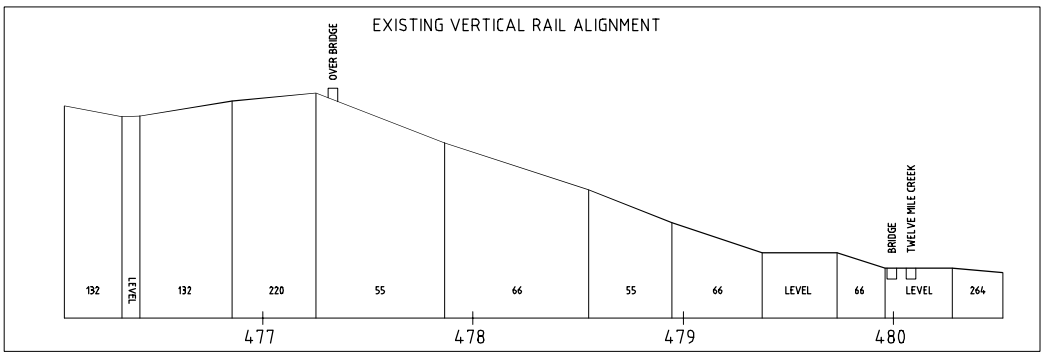
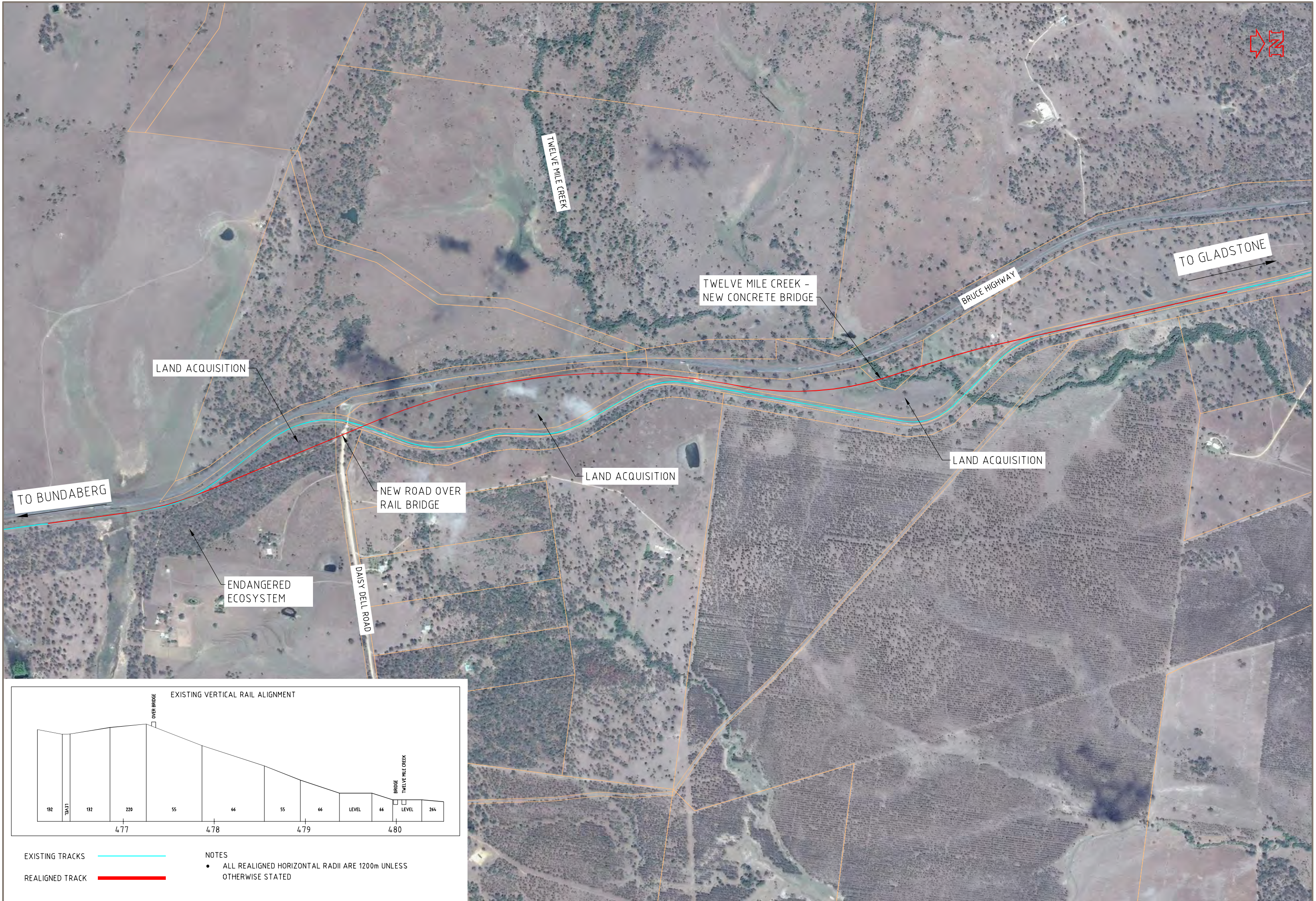
The major constraint between 476.0km and 481.3km is the timber bridge upgrade and the tight horizontal curves. Realigning the section will require flattening of the curves and a new concrete bridge. It was decided that the realignment should take place between the existing alignment and the Bruce Highway. This is to reduce property impacts on the surrounding land. A conscious effort was made to minimise impacts to the mapped endangered ecosystem and vegetation located at the southern section of the realignment.

From this information the NCL the horizontal geometry was realigned between chainage 476.0km and 481.3km and a new concrete bridge installed. Using the Queensland Rail - Queensland Rail - Civil Engineering Track Standards (CETS) and Civil Engineering Structural Standards (CESS), the alignment was realigned to allow for a 100km/h radius curves.

**Table 6.2 Summary table**

| Site Summary                     |  |
|----------------------------------|--|
| <b>Deviation start chainage</b>  | 476.000km                                      |
| <b>Deviation finish chainage</b> | 481.280km                                      |
| <b>Existing length</b>           | 5.28km   |
| <b>Deviation length</b>          | 4.95km   |
| <b>Time benefit</b>              | 254 seconds                                    |
| <b>Cost<sup>#</sup></b>          | \$61,800,000                                   |
| <b>Site type</b>                 | Curve easing<br>Grade easing<br>Bridge upgrade |
| <b>Terrain type</b>              | Hilly  |
| <b>Cost /seconds saving</b>      | \$243,000                                      |

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EXISTING TRACKS —

REALIGNED TRACK —

NOTES

- ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED

## North Coast Line Capacity Improvement Study

Revision C

## Twelve Mile Creek - Bridge Upgrade and Curve Easing

| Item Description  | Unit              | Quantity | Rate         | Total            | Comment  |
|---|-------------------|----------|--------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |                   |          |              | <b>Sub total</b> | <b>\$21,416,360</b>  |
| Rail length   |                   | 4950 m   |              |                  |  |
| Civil Formation Works & Minor Drainage - Single Track   | m                 | 3790     | \$2,600      | \$9,854,000      | Average depth - 5.0m   |
| Civil Formation Works & Minor Drainage - Single Existing  | m                 | 1160     | \$980        | \$1,136,800      | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m                 | 0        | \$3,000      | \$0              | No Double Track  |
| Civil Formation Works & Minor Drainage - Double Existing  | m                 | 0        | \$1,600      | \$0              | No Double Track  |
| Major Cross Drainage  | Item              | 20%      | \$10,990,800 | \$2,198,160      | 20% of total civil work  |
| Fencing   | m                 | 7580     | \$30         | \$227,400        | 4 Chain wire & mild steel star pickets                                   |
| Retaining Wall  | m2                | 0        | \$750        | \$0              |  |
| Rail Bridge   |                   |          |              |                  |  |
|   | Twelve Mile Creek | m        | 200          | \$40,000         | Single track   |
|   | -                 | m        | 0            | \$80,000         | Double track   |
| Bridge Demolition   | each              | 0        | \$10,000     | \$0              |  |
| <b>Road - Civil and Earthworks</b>  |                   |          |              | <b>Sub total</b> | <b>\$2,589,500</b>   |
| Road length   |                   | 650 m    |              |                  |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m                 | \$650    | \$2,700      | \$1,755,000      | Average depth - 2.0m   |
| Major Cross Drainage  | item              | 10%      | \$1,755,000  | \$175,500        | 10% of total civil work  |
| Fencing   | m                 | 1300     | \$30         | \$39,000         |  |
| Retaining Wall  | m2                | 0        | \$750        | \$0              |  |
| Road Bridge   | m2                | 120      | \$5,000      | \$600,000        | 3.0m x 40.0m   |
| Bridge Demolition   | each              | 2        | \$10,000     | \$20,000         |  |
| <b>Crossings</b>  |                   |          |              | <b>Sub total</b> | <b>\$0</b>   |
| Public Level Crossing - Active  | each              | 0        | \$1,300,000  | \$0              |  |
| Public Level Crossing - Passive   | each              | 0        | \$150,000    | \$0              |  |
| Occupational Crossing - Passive   | each              | 0        | \$100,000    | \$0              |  |
| <b>Trackwork</b>  |                   |          |              | <b>Sub total</b> | <b>\$5,740,000</b>   |
| Track - (Rail, Sleepers, Ballast)   | km                | 4.95     | \$1,100,000  | \$5,445,000      | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km                | 1.75     | \$100,000    | \$175,000        |  |
| Track Slew (minor)  | km                | 0.30     | \$400,000    | \$120,000        |  |
| Turnouts (1 in 16)  | each              | 0        | \$500,000    | \$0              |  |
| Turnouts Removal  | each              | 0        | \$45,000     | \$0              |  |
| <b>Signals</b>  |                   |          |              | <b>Sub total</b> | <b>\$1,000,000</b>   |
| Level Crossing  | each              | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each              | 0        | \$3,000,000  | \$0              |  |
| Loop  | each              | 0        | \$5,000,000  | \$0              |  |
| Single track signalling   | allow             | 1        | \$1,000,000  | \$1,000,000      | Allowance for possible signal impacts on single line track               |
| <b>Electrification</b>  |                   |          |              | <b>Sub total</b> | <b>\$4,971,875</b>   |
| Overhead - (Catenary, Masts)  | km                | 4.95     | \$1,000,000  | \$4,950,000      |  |
| Overhead Removal  | km                | 1.75     | \$12,500     | \$21,875         |  |
| Power Supply  | each              | 0        | \$2,000,000  | \$0              | Assumed not required   |
| <b>Communication</b>  |                   |          |              | <b>Sub total</b> | <b>\$247,500</b>   |
| Services  | km                | 4.95     | \$50,000     | \$247,500        | Trenching and pits   |
| <b>Operational Rail interface</b>   |                   |          |              | <b>Sub total</b> | <b>\$3,312,824</b>   |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item              | 10%      | \$33,128,235 | \$3,312,823.50   | Assume 10% based on impact on existing rail                              |
| <b>Direct Cost</b>  |                   |          |              |                  | <b>\$39,278,059</b>  |
| Contractors indirect including preliminaries, overheads, management and margin  |                   |          | 40%          |                  | \$15,711,223   |
| <b>Construction Cost</b>  |                   |          |              |                  | <b>\$54,989,282</b>  |
| Design costs (5% of direct cost)  |                   |          | 5%           |                  | \$1,963,903  |
| Owners costs and approvals (8% of construction cost)  |                   |          | 8%           |                  | \$4,399,143  |
| Land Acquisition  | Allow             | 1        | \$400,000    |                  | \$400,000  |
| <b>Total</b>  |                   |          |              |                  | <b>\$61,752,327</b>  |

# 7. Kunawarara to Princhester

## 7.1 Site overview

Kunawarara to Princhester curve easing is located approximately 717.2km to 724.5km along the NCL (Figure 7.1). The limiting factor for this location is the tight horizontal curves around a mountain, with the average curve radius between 200m and 400m. The horizontal curves limit the speed through this section from 100km/h to an average speed of 50km/h. Along the alignment the terrain is hilly with an average grade around 1 in 150. The existing alignment curves around the topography.

To maintain the 100km/h operating speed throughout the area, the existing track will need to be realigned. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

## 7.2 Proposed design benefits

Below is an outline showing the benefits of the Kunawarara to Princhester curve easing.

**Table 7.1 Kunawarara to Princhester benefit summary**

|  | Existing alignment | Realigned alignment |
|--|--------------------|---------------------|
| Track speed  | 50km/h             | 100km/h             |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Two rail bridges   |                     |

## 7.3 Explanation of the proposed design

In order to realign the existing track alignment between Kunawarara and Princhester the geometry of the local area was examined. The average horizontal curve radius was found to be below the required radius to operate at 100km/h. The limiting horizontal curve radius was shown to be 240m. This was determined by using the network information packs, published by Queensland Rail.

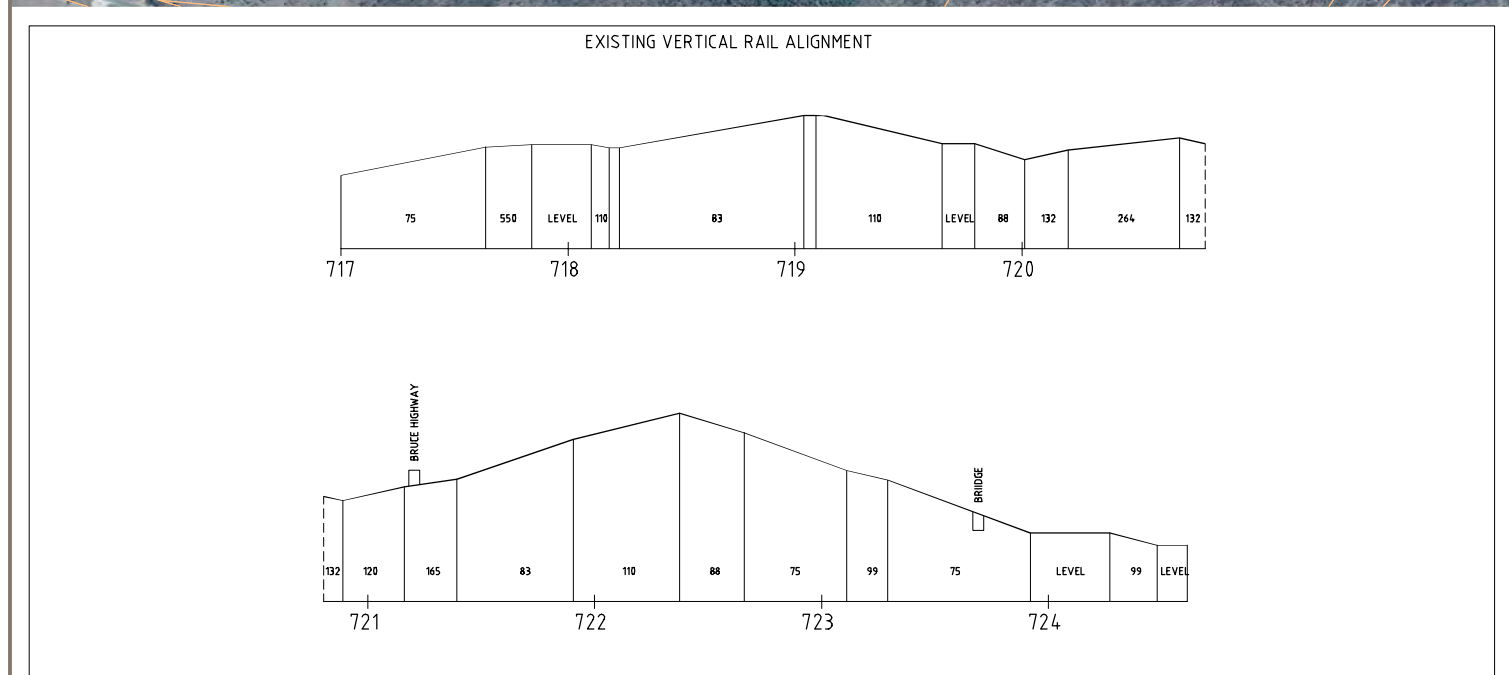
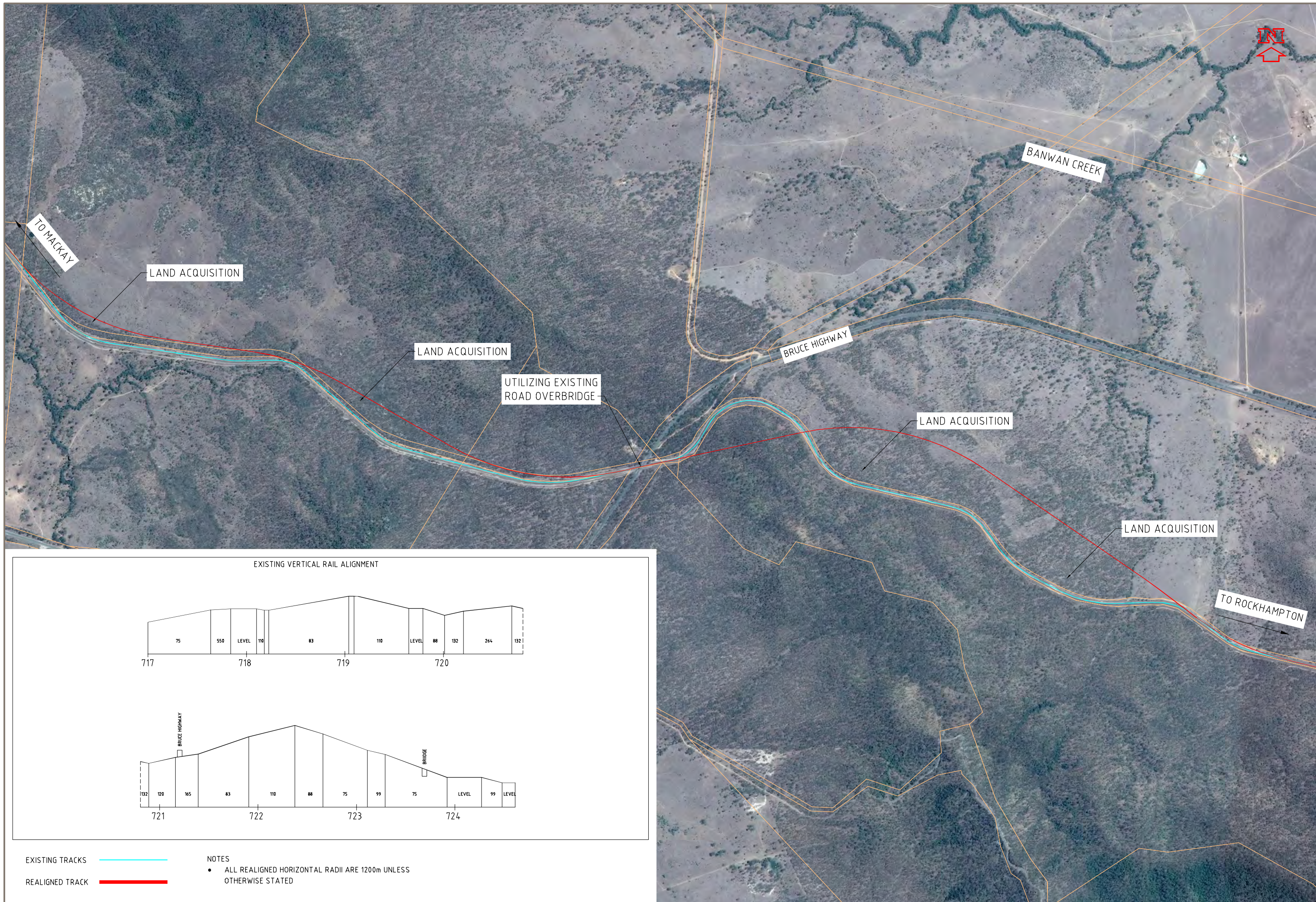
The mountainous terrain between Kunawarara and Princhester and the impacts to the Bruce highway limited possible design options. This is because the existing alignment snakes its way through the mountains with tight horizontal curves. In order to avoid any impacts on the Bruce highway it was decided that the alignment should stay close to the existing alignment and avoid constructing a new bridge over the Bruce highway. In doing this the design will have to go through a section of the mountain. It is believed that the cost of the earthworks would be less the cost of constructing a new bridge over the Bruce Highway.

From this information the North Coast Line horizontal geometry was realigned between chainage 717.2km and 724.5km. Using the Queensland Rail -Civil Engineering Track Standards the alignment was realigned to allow for a 100km/h radius curves. It is assumed the vertical alignment will not be a major design challenge.

**Table 7.2 Summary table**

| Site Summary                     |              |
|----------------------------------|--------------|
| <b>Deviation start chainage</b>  | 717.200 km   |
| <b>Deviation finish chainage</b> | 724.500km    |
| <b>Existing length</b>           | 7.30km       |
| <b>Deviation length</b>          | 7.50km       |
| <b>Time benefit</b>              | 346 seconds  |
| <b>Cost<sup>#</sup></b>          | \$88,000,000 |
| <b>Site type</b>                 | Curve easing |
| <b>Terrain type</b>              | Very hilly   |
| <b>Cost /seconds saving</b>      | \$245,000    |

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EXISTING TRACKS —  
 REALIGNED TRACK —

NOTES  
 • ALL REALIGNED HORIZONTAL RADII ARE 1200m UNLESS OTHERWISE STATED



## North Coast Line Capacity Improvement Study

## Kunawarara to Princhester - Curve Easing

| Item Description  | Unit  | Quantity | Rate         | Total            | Comment  |
|---|-------|----------|--------------|------------------|--|
| <b>Rail - Civil and Earthworks</b>  |       |          |              | <b>Sub total</b> | <b>\$34,311,100</b>  |
| Rail length   |       | 7500 m   |              |                  |  |
| Civil Formation Works & Minor Drainage - Single Track   | m     | 6325     | \$3,000      | \$18,975,000     | Average depth - 6.0m   |
| Major Civil Formation Works & Drainage - Single Track   | m     | 575      | \$8,000      | \$4,600,000      | Average depth - 20.0m  |
| Civil Formation Works & Minor Drainage - Single Existing  | m     | 600      | \$980        | \$588,000        | Average depth - 0.5m   |
| Civil Formation Works & Minor Drainage - Double Track   | m     | 0        | \$3,000      | \$0              | No Double Track  |
| Civil Formation Works & Minor Drainage - Double Existing  | m     | 0        | \$1,600      | \$0              | No Double Track  |
| Major Cross Drainage  | Item  | 20%      | \$24,163,000 | \$4,832,600      | 20% of total civil work  |
| Fencing   | m     | 13850    | \$30         | \$415,500        | 4 Chain wire & mild steel star pickets                                   |
| Retaining Wall  | m2    | 1200     | \$750        | \$900,000        |  |
| Rail Bridge   |       |          |              |                  | 20% of total civil work  |
|   | - m   | 100      | \$40,000     | \$4,000,000      | Single track   |
|   | - m   | 0        | \$80,000     | \$0              | Double track   |
| Bridge Demolition   | each  | 0        | \$10,000     | \$0              |  |
| <b>Road - Civil and Earthworks</b>  |       |          |              | <b>Sub total</b> | <b>\$0</b>   |
| Road length   |       | 0 m      |              |                  |  |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m     | \$0      | \$2,700      | \$0              | Average depth - 2.0m   |
| Major Cross Drainage  | item  | 0%       | \$0          | \$0              | No road required   |
| Fencing   | m     | 0        | \$30         | \$0              |  |
| Retaining Wall  | m2    | 0        | \$750        | \$0              |  |
| Road Bridge   | m2    | 0        | \$5,000      | \$0              | Existing Bruce Highway Bridge utilised                                   |
| Bridge Demolition   | each  | 0        | \$10,000     | \$0              |  |
| <b>Crossings</b>  |       |          |              | <b>Sub total</b> | <b>\$150,000</b>   |
| Public Level Crossing - Active  | each  | 0        | \$1,300,000  | \$0              |  |
| Public Level Crossing - Passive   | each  | 1        | \$150,000    | \$150,000        |  |
| Occupational Crossing - Passive   | each  | 0        | \$100,000    | \$0              |  |
| <b>Trackwork</b>  |       |          |              | <b>Sub total</b> | <b>\$8,710,000</b>   |
| Track - (Rail, Sleepers, Ballast)   | km    | 7.50     | \$1,100,000  | \$8,250,000      | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |
| Track Removal - (Rail, Sleepers, Ballast)   | km    | 1.40     | \$100,000    | \$140,000        |  |
| Track Slew (minor)  | km    | 0.80     | \$400,000    | \$320,000        |  |
| Turnouts (1 in 16)  | each  | 0        | \$500,000    | \$0              |  |
| Turnouts Removal  | each  | 0        | \$45,000     | \$0              |  |
| <b>Signals</b>  |       |          |              | <b>Sub total</b> | <b>\$0</b>   |
| Level Crossing  | each  | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |
| Junction  | each  | 0        | \$3,000,000  | \$0              |  |
| Loop  | each  | 0        | \$5,000,000  | \$0              |  |
| Single track signalling   | allow | 0        | \$1,000,000  | \$0              | Allow ance for possible signal impacts on single line track              |
| <b>Electrification</b>  |       |          |              | <b>Sub total</b> | <b>\$7,517,500</b>   |
| Overhead - (Catenary, Masts)  | km    | 7.50     | \$1,000,000  | \$7,500,000      |  |
| Overhead Removal  | km    | 1.40     | \$12,500     | \$17,500         |  |
| Power Supply  | each  | 0        | \$2,000,000  | \$0              | Assumed not required   |
| <b>Communication</b>  |       |          |              | <b>Sub total</b> | <b>\$375,000</b>   |
| Services  | km    | 7.50     | \$50,000     | \$375,000        | Trenching and pits   |
| <b>Operational Rail interface</b>   |       |          |              | <b>Sub total</b> | <b>\$5,053,860</b>   |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item  | 10%      | \$50,538,600 | \$5,053,860      | Assume 10% based on impact on existing rail                              |
| <b>Direct Cost</b>  |       |          |              |                  | <b>\$56,117,460</b>  |
| Contractors indirect including preliminaries, overheads, management and margin  |       |          | 40%          |                  | \$22,446,984   |
| <b>Construction Cost</b>  |       |          |              |                  | <b>\$78,564,444</b>  |
| Design costs (5% of direct cost)  |       |          | 5%           |                  | \$2,805,873  |
| Owners costs and approvals (8% of construction cost)  |       |          | 8%           |                  | \$6,285,156  |
| Land Acquisition  | Allow | 1        | \$350,000    |                  | \$350,000  |
| <b>Total</b>  |       |          |              |                  | <b>\$88,005,473</b>  |

# 8. Frenchmans Creek to Cucania

## 8.1 Site overview

Frenchmans Creek to Cucania curve easing is located approximately 1624.8km to 1634.6km along the NCL (Figure 8.1). The limiting factor for this location is the tight horizontal curves, with the average curve radius of the existing alignment between 200m and 350m. The horizontal curves limit the speed through this section from 80km/h to an average speed of 40km/h. Along the alignment the terrain is mostly flat with an average grade around 1 in 350.

To maintain the 80km/h operating speed throughout the area, the existing track will need to be realigned. The track geometry will be designed as per the Queensland Rail Civil Engineering Track Standards (CETS) for the realigned track.

## 8.2 Proposed design benefits

Below is an outline showing the benefits of the Frenchmans Creek to Cucania curve easing.

**Table 8.1 Frenchmans Creek to Cucania benefit summary**

|  | Existing alignment | Realigned alignment |
|--|--------------------|---------------------|
| Track speed  | 50km/h             | 80km/h              |
| Existing bridges bypassed on existing alignment (Bridge upgrade or modification avoided) | Three rail bridges |                     |

## 8.3 Explanation of the proposed design

In order to realign the existing track alignment between Frenchmans Creek and Cucania the geometry of the local area was examined. The average horizontal curve radius was found to be below the required radius to operate at 80km/h. The limiting horizontal curve radius was shown to be 200m. This was determined by using the network information packs, published by Queensland Rail.

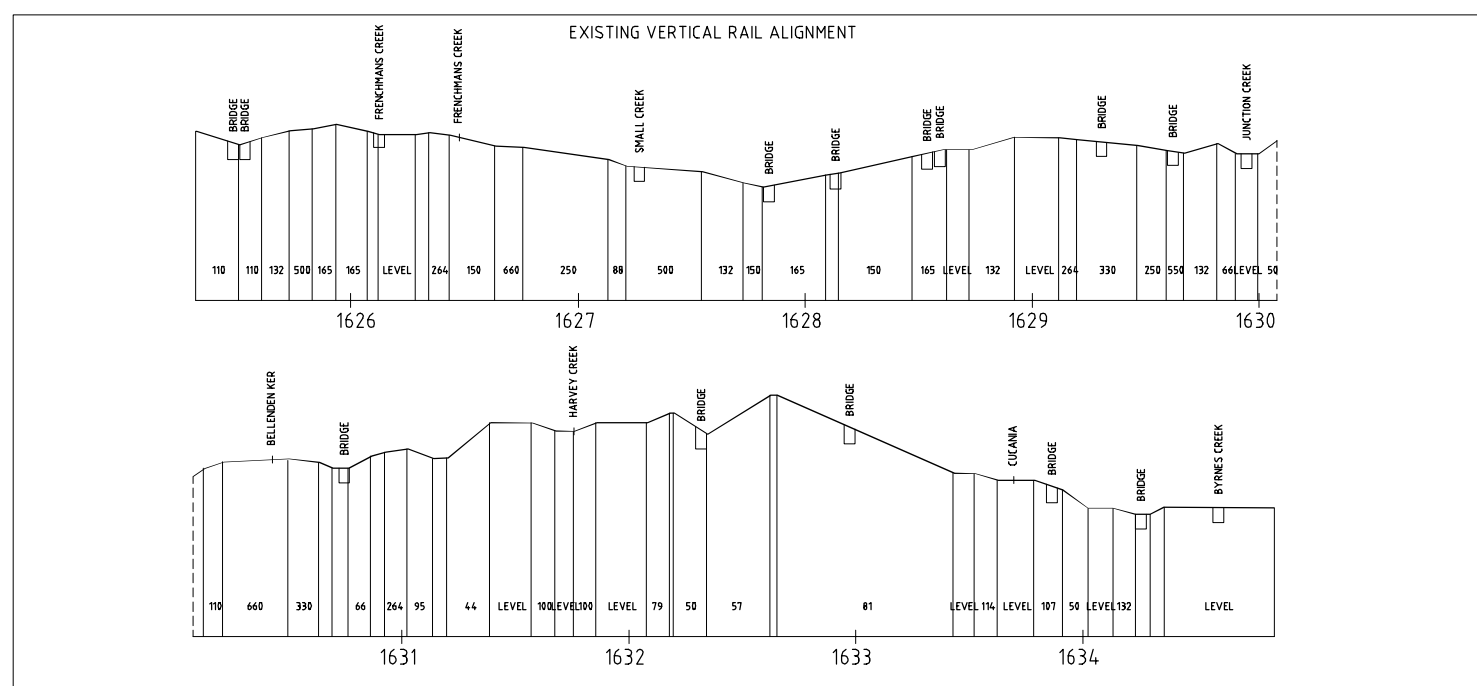
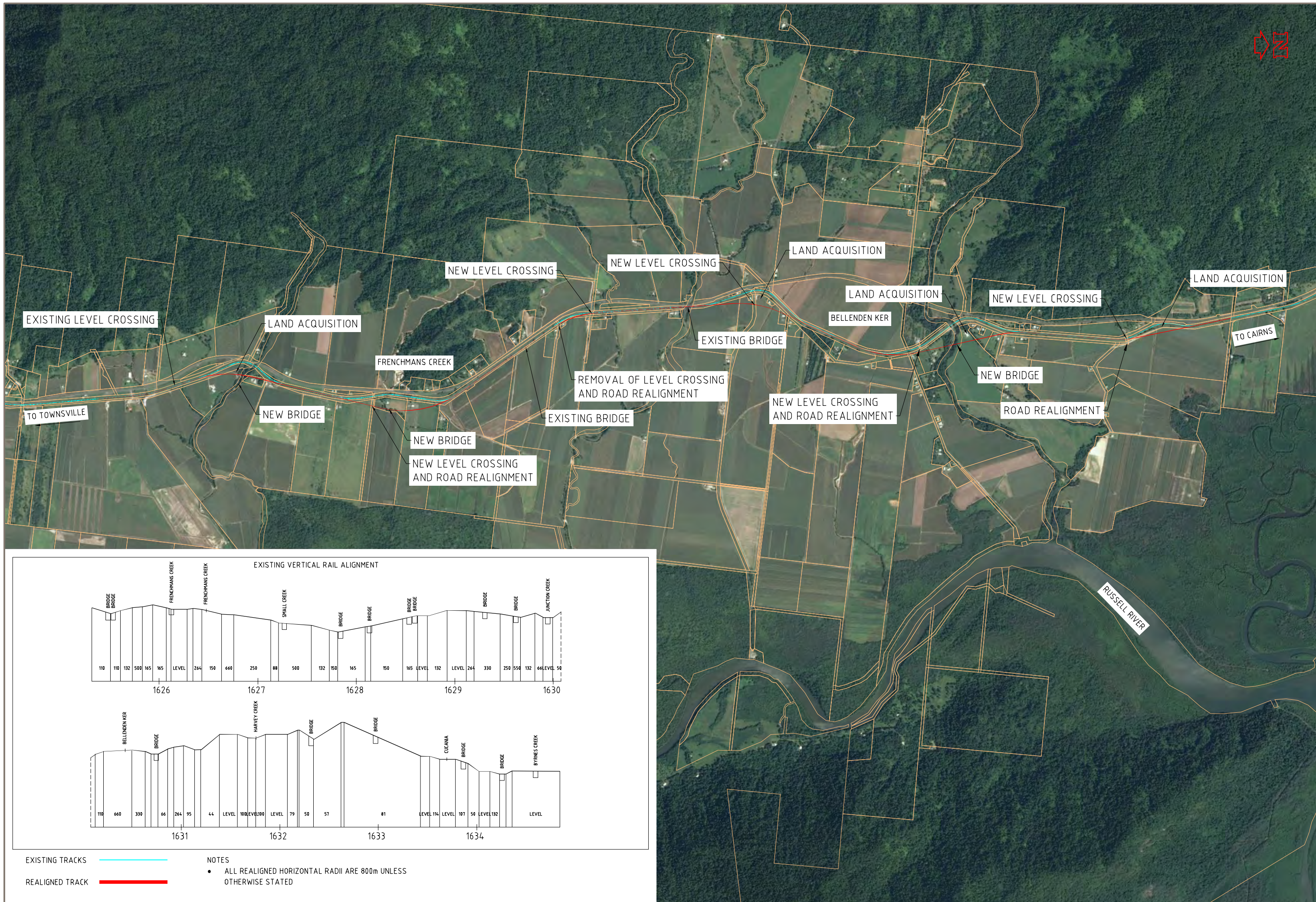
The level crossings, creeks and properties between Frenchmans Creek and Cucania limited possible design options. It was decided that keeping to the realigning the existing alignment as much as possible was the best way to minimise impacts on level crossings and creeks. It was also decided that the utilisation of existing road reserve or Queensland Rail owned land would be best in order to reduce costs. But due to poor horizontal curve radius for the section and the minimum design standards, new level crossings and bridges are inevitable.

From this information the NCL horizontal geometry was realigned between chainage 1624.8km and 1634.6km. Using the Queensland Rail -Civil Engineering Track Standards the alignment was realigned to allow for an 80km/h radius curves. It is assumed the vertical alignment will be designed to suit.

**Table 8.2 Summary table**

| Site Summary                     |                   |
|----------------------------------|-------------------|
| <b>Deviation start chainage</b>  | 1624.830km        |
| <b>Deviation finish chainage</b> | 1634.650km        |
| <b>Existing length</b>           | 9.82km            |
| <b>Deviation length</b>          | 9.50km            |
| <b>Time benefit</b>              | 298 seconds       |
| <b>Cost<sup>#</sup></b>          | \$129,300,000     |
| <b>Site type</b>                 | Curve easing      |
| <b>Terrain type</b>              | Flat – minor hill |
| <b>Cost /seconds saving</b>      | \$434,000         |

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EXISTING TRACKS —  
 REALIGNED TRACK —

NOTES  
 • ALL REALIGNED HORIZONTAL RADII ARE 800m UNLESS OTHERWISE STATED

## North Coast Line Capacity Improvement Study

Revision C

## Frenchman's Creek to Cucania - Curve Easing

| Item Description  | Unit              | Quantity | Rate         | Total            | Comment  |              |
|---|-------------------|----------|--------------|------------------|--|--------------|
| <b>Rail - Civil and Earthworks</b>  |                   |          |              | <b>Sub total</b> | <b>\$43,914,800</b>  |              |
| Rail length   |                   | 9500 m   |              |                  |  |              |
| Civil Formation Works & Minor Drainage - Single Track   | m                 | 4080     | \$1,900      | \$7,752,000      | Average depth - 3.0m   |              |
| Civil Formation Works & Minor Drainage - Single Existing  | m                 | 5420     | \$1,900      | \$10,298,000     | Average depth - 2.0m   |              |
| Civil Formation Works & Minor Drainage - Double Track   | m                 | 0        | \$3,000      | \$0              | No Double Track  |              |
| Civil Formation Works & Minor Drainage - Double Existing  | m                 | 0        | \$1,600      | \$0              | No Double Track  |              |
| Major Cross Drainage  | Item              | 20%      | \$18,050,000 | \$3,610,000      | 20% of total civil work  |              |
| Fencing   | m                 | 8160     | \$30         | \$244,800        | 4 Chain wire & mild steel star pickets                                   |              |
| Retaining Wall  | m2                | 0        | \$750        |                  |  |              |
| Rail Bridge   |                   |          |              |                  |  |              |
|   | Frenchman's Creek | m        | 300          | \$40,000         | \$12,000,000   | Single track |
|   | Creek             | m        | 50           | \$40,000         | \$2,000,000  | Single track |
|   | Creek             | m        | 0            | \$40,000         | \$0  | Existing     |
|   | Creek             | m        | 0            | \$40,000         | \$0  | Existing     |
|   | Creek             | m        | 0            | \$40,000         | \$0  | Existing     |
|   | Harvey Creek      | m        | 200          | \$40,000         | \$8,000,000  | Single track |
|   | -                 | m        | 0            | \$80,000         | \$0  | Double track |
| Bridge Demolition   | each              | 1        | \$10,000     | \$10,000         |  |              |
| <b>Road - Civil and Earthworks</b>  |                   |          |              | <b>Sub total</b> | <b>\$11,880,000</b>  |              |
| Road length   |                   | 3600 m   |              |                  |  |              |
| Two Sealed Road - Including Earthworks, Pavement and Minor Drainage   | m                 | 3,600.00 | \$2,700      | \$9,720,000      | Average depth - 2.0m   |              |
| Major Cross Drainage  | item              | 20%      | \$9,720,000  | \$1,944,000      | 20% of total civil work  |              |
| Fencing   | m                 | 7200     | \$30         | \$216,000        |  |              |
| Retaining Wall  | m2                | 0        | \$750        | \$0              |  |              |
| Road Bridge   | m2                | 0        | \$5,000      | \$0              |  |              |
| Bridge Demolition   | each              | 0        | \$10,000     | \$0              |  |              |
| <b>Crossings</b>  |                   |          |              | <b>Sub total</b> | <b>\$7,800,000</b>   |              |
| Public Level Crossing - Active  | each              | 6        | \$1,300,000  | \$7,800,000      |  |              |
| Public Level Crossing - Passive   | each              | 0        | \$150,000    | \$0              |  |              |
| Occupational Crossing - Passive   | each              | 0        | \$100,000    | \$0              |  |              |
| <b>Trackwork</b>  |                   |          |              | <b>Sub total</b> | <b>\$10,970,000</b>  |              |
| Track - (Rail, Sleepers, Ballast)   | km                | 9.50     | \$1,100,000  | \$10,450,000     | 60kg rail, sleepers @ 685mm, fasteners, ballast,                         |              |
| Track Removal - (Rail, Sleepers, Ballast)   | km                | 3.80     | \$100,000    | \$380,000        |  |              |
| Track Slew (minor)  | km                | 0.35     | \$400,000    | \$140,000        |  |              |
| Turnouts (1 in 16)  | each              | 0        | \$500,000    | \$0              |  |              |
| Turnouts Removal  | each              | 0        | \$45,000     | \$0              |  |              |
| <b>Signals</b>  |                   |          |              | <b>Sub total</b> | <b>\$100,000</b>   |              |
| Level Crossing  | each              | 0        | \$0          | \$0              | Level crossing signalling cost allowed for in Active level crossing rate |              |
| Junction  | each              | 0        | \$3,000,000  | \$0              |  |              |
| Loop  | each              | 0        | \$5,000,000  | \$0              |  |              |
| Single track signalling   | allow             | 1        | \$100,000    | \$100,000        | Allowance for DTC possible signal impacts on single line track           |              |
| <b>Electrification</b>  |                   |          |              | <b>Sub total</b> | <b>\$0</b>   |              |
| Overhead - (Catenary, Masts)  | km                | 0.00     | \$1,000,000  | \$0              |  |              |
| Overhead Removal  | km                | 0.00     | \$12,500     | \$0              |  |              |
| Power Supply  | each              | 0        | \$2,000,000  | \$0              | Assumed not required   |              |
| <b>Communication</b>  |                   |          |              | <b>Sub total</b> | <b>\$475,000</b>   |              |
| Services  | km                | 9.50     | \$50,000     | \$475,000        | Trenching and pits   |              |
| <b>Operational Rail interface</b>   |                   |          |              | <b>Sub total</b> | <b>\$5,498,480</b>   |              |
| Extra over cost allowance for additional construction requirements due to rail operational interface / requirements (eg. additional staging / multiple mobilisations) | Item              | 10%      | \$54,984,800 | \$5,498,480      | 10%  |              |
| <b>Direct Cost</b>  |                   |          |              |                  | <b>\$80,638,280</b>  |              |
| Contractors indirect including preliminaries, overheads, management and margin  |                   |          | 40%          |                  | \$32,255,312   |              |
| <b>Construction Cost</b>  |                   |          |              |                  | <b>\$112,893,592</b>   |              |
| Design costs (5% of direct cost)  |                   |          | 5%           |                  | \$4,031,914  |              |
| Owners costs and approvals (8% of construction cost)  |                   |          | 8%           |                  | \$9,031,487  |              |
| Land Acquisition  | Allow             | 1        | \$3,300,000  |                  | \$3,300,000  |              |
| <b>Total</b>  |                   |          |              |                  | <b>\$129,256,993</b>   |              |

# Confidential Attachment D:

*PwC, Queensland Regional Rail Network Review, Freight Logistics  
Chains Working Paper, August 2016*

**REDACTED**

# Attachment E - Part 1 of 3:

Executed Deed Poll

# **QUEENSLAND RAIL'S ACCESS FRAMEWORK**

## **IRREVOCABLE DEED POLL**

Queensland Rail Limited ACN 132 181 090



## CONTENTS

|  |    |
|--|----|
| DETAILS .....  | 1  |
| BACKGROUND .....   | 1  |
| TERMS .....  | 3  |
| 1     DEFINITIONS AND INTERPRETATION .....   | 3  |
| 2     BENEFICIARIES OF DEED POLL .....   | 4  |
| 3     DEED POLL IS IRREVOCABLE .....   | 4  |
| 4     ACCESS FRAMEWORK TO REMAIN IN EFFECT AND COMPLIANCE WITH ACCESS<br>FRAMEWORK ..... | 4  |
| 5     NOTICE OF INTENTION TO RENEW OR NOT RENEW .....                                    | 5  |
| 6     AMENDMENTS TO ACCESS FRAMEWORK .....   | 5  |
| 7     BREACH OF DEED POLL.....   | 7  |
| 8     GOVERNING LAW .....  | 8  |
| 9     JURISDICTION AND DISPUTE RESOLUTION .....  | 8  |
| EXECUTION.....   | 9  |
| ANNEXURE A.....  | 10 |

## DETAILS

**Date** 11 March 2019

**Parties**

|         |                                |
|---------|--------------------------------|
| Name    | Queensland Rail Limited        |
| Address | GPO BOX 1429 Brisbane QLD 4001 |

## BACKGROUND

- A Queensland Rail is a statutory authority established by the Queensland Government under the Rail Authority Act. The Rail Authority Act sets out the functions of Queensland Rail, including:
- a. management of railways;
  - b. provision of rail transport services, including passenger services; and
  - c. construction and maintenance of railway infrastructure.
- B Queensland Rail's Network extends more than 6600 kilometres across the state. The regional network spans more than 5,700 kilometres of track and comprises seven rail systems that convey passenger and freight services across Queensland to support the state's economy in the tourism, mining, agriculture, construction, wholesale and retail sectors. The vast majority of freight is carried on the West Moreton System, Mt Isa Line System and North Coast Line System. Some freight carried on the West Moreton System and North Coast Line System traverses the Metropolitan System.
- C Queensland Rail operates passenger services connecting regional communities across Queensland with other regional centres and the SEQ corner, and provides rail access to freight operators and other supply chain customers, to enable the transport of resources and general freight across the state. Queensland Rail is not a rail freight operator (i.e. it does not participate in the above rail freight market).
- D The needs of Rolling Stock Operators on Queensland Rail's network vary greatly due to their different supply chain dynamics, geographic locations, rail corridor characteristics and interactions with other rail traffics.

- E Much of Queensland Rail’s network is supported by Transport Service Payments from the Queensland Government. The absence of these Transport Service Payments would result in large parts of the rail network being commercially unviable.
- F Road transport provides a viable alternative mode of transport for most non-coal commodities, as well as coastal shipping, air transport, slurry pipelines and other transport options.
- G On 8 September 2020, the existing declaration of the service under section 250 of the *Queensland Competition Authority Act 1997 (Qld) (QCA Act)* will expire. The Access Framework has been developed in response and provides a balanced approach to the provision of Access and a framework (based on a negotiate/arbitrate model) to manage negotiations in an efficient and transparent manner for Access Seekers (Rolling Stock Operators and End User Access Seekers) seeking Access to the Systems. The Access Framework applies to Access for the purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the QCA Act.
- H The Access Framework has been prepared in accordance with, and gives effect to, the Framework Objective (as that term is defined in clause 1 below).
- I The Access Framework addresses matters including:
- a. the process for seeking Access in relation to the Systems;
  - b. the pricing rules for Access Charges;
  - c. Network Management Principles for the scheduling and prioritisation of Train Services;
  - d. reporting obligations and dispute resolution; and
  - e. a Standard Access Agreement.
- J This Deed Poll:
- a. confirms that the Access Framework will remain in effect (and continue to apply to Access for the purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the QCA Act) throughout the Term; and

- b. prescribes how the Access Framework may be amended.

## TERMS

### 1 DEFINITIONS AND INTERPRETATION

#### Definitions

- 1.1 In this Deed Poll, capitalised terms not defined in this Deed Poll will have the same meaning as the meaning given to those terms in Part 7 - Definitions and Interpretation- of the Access Framework.

**Access Framework** means the Queensland Rail Access Framework which will come into effect on 9 September 2020, as may be amended from time to time. A copy of the Access Framework which is current as at the date of this Deed Poll is at Annexure A to this Deed Poll.

**Confirmed Access Seekers** has the meaning given in clause 2.1.1.

**Covenantees** has the meaning given in clause 2.1.

**Framework Objective** has the meaning given in section 69E of the QCA Act, as may be amended from time-to-time. In the event that section 69E of the QCA Act is repealed, the Framework Objective will have the meaning given in section 69E of the QCA Act immediately prior to its repeal.

**Queensland Rail** means Queensland Rail Limited ACN 132 181 090.

**The State** means the Treasurer of the State of Queensland from time to time.

#### Interpretation

- 1.2 In the interpretation of this Deed Poll, the following provisions apply unless the context otherwise requires:
  - 1.2.1 headings are inserted for convenience only and do not affect the interpretation of this Deed Poll;
  - 1.2.2 a reference in this Deed Poll to any document or agreement is to that document or agreement as amended, novated, supplemented or replaced;
  - 1.2.3 a reference to a clause, part, schedule or attachment is a reference to a clause, part, schedule or attachment of or to this Deed Poll;
  - 1.2.4 where a word or phrase is given a defined meaning, another part of speech or other grammatical form in respect of that word or phrase has a corresponding meaning;

- 1.2.5 a word which indicates the singular also indicates the plural, a word which indicates the plural also indicates the singular, and a reference to any gender also indicates the other genders;
- 1.2.6 references to the word 'include' or 'including' are to be interpreted without limitation;
- 1.2.7 the word 'day' or 'days' is a reference to calendar days; and
- 1.2.8 if a provision of this Deed Poll is reasonably capable of an interpretation which would make that provision valid, lawful and enforceable, and an alternative interpretation that would make it unenforceable, illegal, invalid or void then, so far as is possible, that provision will be interpreted or construed to be limited and read down to the extent necessary to make it valid and enforceable.

## **2 BENEFICIARIES OF DEED POLL**

- 2.1 Queensland Rail makes the covenants in this Deed Poll exclusively in favour of, and only for the benefit of:
  - 2.1.1 Access Seekers who have signed an Access Application or Renewal Access Application (**Confirmed Access Seekers**);
  - 2.1.2 Access Holders; and
  - 2.1.3 the State,(together, **Covenantees**).
- 2.2 Queensland Rail makes the covenants in this Deed Poll on the date of this Deed Poll, and then each day until the end of the Term.
- 2.3 Queensland Rail makes the covenants in this Deed Poll subject to the conditions set out at clauses 6, 7, 8 and 9 of this Deed Poll.

## **3 DEED POLL IS IRREVOCABLE**

- 3.1 Queensland Rail covenants in favour of the Covenantees that it will not revoke or amend this Deed Poll until the expiry of the Term.

## **4 ACCESS FRAMEWORK TO REMAIN IN EFFECT AND COMPLIANCE WITH ACCESS FRAMEWORK**

- 4.1 Subject to any amendments permitted in accordance with clause 6 of this Deed Poll, Queensland Rail covenants in favour of the Covenantees that the Access Framework will remain in effect (and continue to apply to Access for the purpose of operating a Train Service

on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the QCA Act) throughout the Term.

- 4.2 Queensland Rail covenants in favour of the Covenantees that it will comply with the Access Framework for the Term.

## **5 NOTICE OF INTENTION TO RENEW OR NOT RENEW**

- 5.1 At least 12 months before the fifth anniversary of the Effective Date, Queensland Rail will publish the following on its website:

- 5.1.1 notice of its intention to renew, or not renew, the operation of the Access Framework for a further term; and
- 5.1.2 where operation of the Access Framework is being renewed for a further term, details of the term and a copy of the Access Framework with any amendment(s).

## **6 AMENDMENTS TO ACCESS FRAMEWORK**

- 6.1 The Access Framework can only be amended in accordance with this clause 6.

- 6.2 Queensland Rail can amend the Access Framework, from time to time, so long as the amendment(s) are:

- 6.2.1 not inconsistent with the Framework Objective; and
- 6.2.2 appropriate having regard to each of the mandatory considerations set out in clause 6.3.

- 6.3 Queensland Rail covenants in favour of the Covenantees that if, and when, it amends the Access Framework it will have regard to each of the following mandatory considerations:

- 6.3.1 the legitimate interests of the State of Queensland in its capacity as the owner of the Network;
- 6.3.2 the legitimate business interests of Queensland Rail in its capacity as the operator of the Network;
- 6.3.3 public interest, including the public interest in having competition in markets (whether or not in Australia);
- 6.3.4 the interests of Confirmed Access Seekers, including whether adequate provision has been made for compensation if the rights of Access Holders are adversely affected;
- 6.3.5 the effect of excluding existing assets for pricing purposes; and
- 6.3.6 the following pricing principles in relation to the price of Access:

- 6.3.6.1 the price should generate expected revenue for the Network that is at least enough to meet the efficient costs of providing access to the Network and include a return on investment commensurate with the risks involved;
  - 6.3.6.2 the price should allow for multi-part pricing and price discrimination when it aids efficiency;
  - 6.3.6.3 the price should not allow Queensland Rail to set terms and conditions that discriminate in favour of the downstream operations of Queensland Rail or a Related Party of Queensland Rail, except to the extent the cost of providing Access to other operators is higher; and
  - 6.3.6.4 the price should provide incentives to reduce costs or otherwise improve productivity.
- 6.4 Queensland Rail will consult with Confirmed Access Seekers and Access Holders regarding any proposed amendment(s) to the Access Framework as follows:
- 6.4.1 Queensland Rail will provide written notice to all Covenantees of its intention to amend the Access Framework (**Notice**). The Notice will:
    - 6.4.1.1 be sent by express post on the day that the Notice is dated to the Covenantees' registered offices (except in the case of the State, in which case the Notice will be sent by express post to the office of the Treasurer of the State of Queensland);
    - 6.4.1.2 advise the date on which the proposed amendments to the Access Framework will be available for review on Queensland Rail's website (such date must be not more than seven days after the day that the Notice is dated) (**Review Date**); and
    - 6.4.1.3 advise that any comments on the proposed amendments to the Access Framework must be received by Queensland Rail by post (at its registered office) no later than 45 days after the Review Date.
  - 6.4.2 Queensland Rail will publish the proposed amendments to the Access Framework on its website on the Review Date. The proposed amendments are to remain on Queensland Rail's website for not less than 180 days.
  - 6.4.3 Queensland Rail will review and consider any comments that may be received in relation to the proposed amendments to the Access Framework (**Comments**), however it will not be bound to implement any Comments.
  - 6.4.4 Following its review and consideration of the Comments, Queensland Rail will publish the final form of the proposed amendments to the Access Framework (**Final Proposed Amendments**) on its website for a period of not less than 121 days.

- 6.4.5 On the day the Final Proposed Amendments are published on its website, Queensland Rail will provide written notice, dated the same date as the publication on the website, to the Covenantees, that the Final Proposed Amendments are available on its website (**Final Notice**). The Final Notice will:
- 6.4.5.1 be sent by express post to the Covenantees' registered offices (except in the case of the State, in which case the Notice will be sent by express post to the office of the Treasurer of the State of Queensland);
  - 6.4.5.2 state the date on which, absent the commencement of legal proceedings in accordance with clause 9, the Final Proposed Amendments will become effective (with such date being no less than 121 days after the day that the Final Notice is dated) (**Provisional Date**);
  - 6.4.5.3 state that if any Covenantee(s) wishes to challenge the validity of the Final Proposed Amendments, it must do so by commencing legal proceedings in accordance with clause 9 within 120 days after the day that the Final Notice is dated;
  - 6.4.5.4 state that if a Convenantee does not commence legal proceedings in accordance with clause 9 within 120 days after the day that the Final Notice is dated, that Convenantee will lose any right to challenge the validity of the Final Proposed Amendments.
- 6.5 If no Covenantee commences legal proceedings to challenge the validity of the Final Proposed Amendments within 120 days after the day that the Final Notice is dated, the Final Proposed Amendments will become effective on the Provisional Date.
- 6.6 If any Covenantee commences legal proceedings to challenge the validity of the Final Proposed Amendments within 120 days after the day that the Final Notice is dated, the Final Proposed Amendments will not become effective:
- 6.6.1 unless and until such time as the court has determined the legal proceedings in favour of Queensland Rail by dismissing any legal proceedings brought by a Covenantee; and then
  - 6.6.2 on a date to be advised by Queensland Rail by publication on its website.
- 6.7 Any Final Proposed Amendments that become effective in accordance with clauses 6.5 or 6.6 will remain published on Queensland Rail's website together with a note advising of the date that the Final Proposed Amendments became effective.

## **7 BREACH OF DEED POLL**

- 7.1 Queensland Rail acknowledges that damages are an adequate remedy for any breach of this Deed Poll.
- 7.2 Queensland Rail makes the covenants in this Deed Poll subject to the following conditions:



- 7.2.1 specific performance is an available remedy for any breach of this Deed Poll (other than a breach of clause 6 of this Deed Poll);
- 7.2.2 the only remedies available for breach of clause 6 of this Deed Poll are declaratory relief and / or damages; and
- 7.2.3 if a Covenantee alleges that Queensland Rail has not complied with its obligations at 4.2, any dispute arising will be determined in accordance with the dispute resolution provisions contained in the Access Framework, and not this Deed Poll.

## **8 GOVERNING LAW**

- 8.1 This Deed Poll is governed by the laws in force in the State of Queensland.

## **9 JURISDICTION AND DISPUTE RESOLUTION**

- 9.1 Subject to clause 7.2.3, the courts of Queensland have exclusive jurisdiction to determine any disputes arising out of or in connection with this Deed Poll.

### **Legal proceedings for breach of clause 3, clause 4.1 or clause 5**

- 9.2 Any legal proceeding commenced by a Covenantee against Queensland Rail for an alleged breach of clause 3, clause 4.1, or clause 5 must be filed and served on Queensland Rail within 120 days after the date that the alleged breach of this Deed Poll is said to have occurred.
- 9.3 Queensland Rail may rely upon clause 9.2 as a complete defence to any proceedings filed or served 121 days or more after the date that the alleged breach of this Deed Poll is said to have occurred.

### **Legal proceedings for breach of clause 6**

- 9.4 Any legal proceeding commenced by a Covenantee against Queensland Rail for an alleged breach of clause 6 must be filed and served on Queensland Rail within 120 days after the date of the Final Notice.
- 9.5 Queensland Rail may rely upon clause 9.4 as a complete defence to any proceedings filed or served 121 days or more after the date of the Final Notice.

**EXECUTION**

Executed as a Deed.

**SIGNED, SEALED AND DELIVERED** by  
Queensland Rail Pty Ltd ACN 132 181 090  
acting by the following persons or, if the seal is  
affixed, witnessed by the following persons in  
accordance with s127 of the Corporations Act  
2001:



Signature of director

*David William Marchant*  
.....

Name of director (print)



Signature of ~~director~~/company secretary

*PETER DOUGLAS MCNAMARA*  
.....

Name of ~~director~~/company secretary (print)

# Attachment E - Part 2 of 3:

Queensland Rail Access Framework

ANNEXURE A

Access Framework (current as at 11 March 2019)

# Queensland Rail's Access Framework

9 September 2020



# Contents

|   |           |
|---|-----------|
| <b>Preamble</b>   | <b>1</b>  |
| <b>Part 1 Application and scope</b>                                   | <b>3</b>  |
| 1.1 Duration  | 3         |
| 1.2 Scope   | 3         |
| 1.2.1 Application of this Framework                                   | 3         |
| 1.2.2 Objective of this Framework                                     | 3         |
| 1.2.3 Procurement of services other than Access                       | 4         |
| 1.2.4 Line diagrams   | 4         |
| 1.3 Consistency and differentiation                                   | 4         |
| 1.4 Extensions – Capacity investment framework                        | 5         |
| 1.4.1 Application   | 5         |
| 1.4.2 Extending the Network   | 6         |
| 1.4.3 Funding Agreements  | 8         |
| 1.4.4 Construction, ownership, operation and management of Extensions | 8         |
| 1.4.5 Disputes  | 9         |
| 1.4.6 Building Queensland Act   | 9         |
| 1.5 Master planning and extension coordination                        | 9         |
| <b>Part 2 Negotiation process</b>                                     | <b>11</b> |
| 2.1 Preparing and submitting an Access Application                    | 11        |
| 2.1.1 Access Applications   | 11        |
| 2.1.2 Preliminary steps   | 11        |
| 2.2 Confidentiality   | 11        |
| 2.2.1 Obligation to keep Confidential Information confidential        | 11        |
| 2.2.2 Requirement for confidentiality agreement                       | 12        |
| 2.2.3 Ring fencing arrangements                                       | 12        |
| 2.3 Acknowledgment of an Access Application                           | 13        |
| 2.3.1 Requests for additional information or clarification            | 13        |
| 2.3.2 Acknowledging Access Applications                               | 13        |
| 2.4 Provision of an Indicative Access Proposal                        | 13        |
| 2.4.1 Time period for provision of Indicative Access Proposal         | 13        |
| 2.4.2 Inclusions in Indicative Access Proposal                        | 13        |
| 2.4.3 Indicative nature   | 13        |
| 2.5 Notification of intent to negotiate                               | 14        |
| 2.5.1 Access Seeker to give notice of intent to negotiate or not      | 14        |
| 2.5.2 Consequence of late notification of intent to negotiate         | 14        |
| 2.5.3 Extension of time – IAP and ITN                                 | 14        |

|                                      |   |           |
|--------------------------------------|---|-----------|
| 2.6                                  | Competing Access Applications                             | 15        |
| 2.7                                  | Negotiation of an Access Agreement                        | 16        |
|                                      | 2.7.1 The negotiation period                              | 16        |
|                                      | 2.7.2 Issues to be addressed in negotiations              | 17        |
| 2.8                                  | Cessation of negotiation process                          | 19        |
|                                      | 2.8.1 Negotiation Cessation Notice                        | 19        |
|                                      | 2.8.2 Safety considerations                               | 21        |
|                                      | 2.8.3 Access Seekers must satisfy prudential requirements | 22        |
| 2.9                                  | Access Agreement  | 23        |
|                                      | 2.9.1 Access Rights granted under an Access Agreement     | 23        |
|                                      | 2.9.2 Mutually Exclusive Access Applications              | 23        |
|                                      | 2.9.3 Renewals  | 24        |
|                                      | 2.9.4 Development of Standard Agreements                  | 25        |
|                                      | 2.9.5 Execution of Access Agreements                      | 26        |
|                                      | 2.9.6 Transfer of Access Rights                           | 26        |
| <b>Part 3 Pricing rules</b>          |   | <b>27</b> |
| 3.1                                  | Pricing objectives  | 27        |
|                                      | 3.1.1 Revenue adequacy                                    | 27        |
| 3.2                                  | Pricing limits  | 27        |
|                                      | 3.2.1 Applying a Ceiling Revenue Limit                    | 27        |
|                                      | 3.2.2 Applying a Floor Revenue Limit                      | 27        |
|                                      | 3.2.3 Determination of Ceiling Revenue Limit              | 27        |
| 3.3                                  | Limits on price differentiation                           | 29        |
|                                      | 3.3.1 Access Charge differentiation                       | 29        |
|                                      | 3.3.2 Limits on Access Charge differentiation             | 30        |
| 3.4                                  | Conflict between pricing rules                            | 30        |
| 3.5                                  | General   | 31        |
|                                      | 3.5.1 Rate review provisions                              | 31        |
|                                      | 3.5.2 Take or Pay Charges                                 | 31        |
| 3.6                                  | Consequences of contravention                             | 31        |
| <b>Part 4 Operating requirements</b> |   | <b>33</b> |
| 4.1                                  | Network Management Principles                             | 33        |
| 4.2                                  | Consultation for Through-Running Trains                   | 33        |
| 4.3                                  | Operating Requirements Manual                             | 33        |
| <b>Part 5 Reporting</b>              |   | <b>35</b> |
| 5.1                                  | Annual financial report                                   | 35        |
| 5.2                                  | Monthly Operational Reports                               | 35        |

|  |   |           |
|--|---|-----------|
| 5.2.1  | Provision of report                                     | 35        |
| 5.2.2  | Content of report                                       | 35        |
| 5.3  | Rail User Groups  | 36        |
| <b>Part 6 Administrative provisions</b>                              |   | <b>37</b> |
| 6.1  | Dispute and complaint resolution process                | 37        |
| 6.1.1  | Governing law   | 37        |
| 6.1.2  | Alternative dispute process                             | 37        |
| 6.1.3  | Application of dispute and complaint resolution process | 37        |
| 6.1.4  | Resolution by senior management                         | 37        |
| 6.1.5  | Arbitration   | 38        |
| 6.1.6  | Urgent matters  | 40        |
| 6.2  | Limitations   | 40        |
| 6.3  | Notices   | 40        |
| 6.3.1  | Form of Notices   | 40        |
| 6.3.2  | Means of giving Notices                                 | 40        |
| 6.3.3  | Effect and receipt of a Notice                          | 40        |
| 6.3.4  | Process service is not affected                         | 41        |
| 6.4  | Transitional provisions                                 | 41        |
| 6.5  | Severability  | 41        |
| <b>Part 7 Definitions and interpretation</b>                         |   | <b>42</b> |
| 7.1  | Definitions   | 42        |
| 7.2  | Interpretation  | 65        |
| <b>Schedule A – Preliminary Information and Capacity Information</b> |   |           |
| <b>Schedule B – Access Application information requirements</b>      |   |           |
| <b>Schedule C – Network Management Principles</b>                    |   |           |
| <b>Schedule D – Standard Access Agreement</b>                        |   |           |
| <b>Schedule E – Extension Access Principles</b>                      |   |           |

## Preamble

Queensland Rail is a statutory authority established by the Queensland Government under the Rail Authority Act.

The Rail Authority Act sets out the functions of Queensland Rail, including:

- management of railways;
- provision of rail transport services, including passenger services; and
- construction and maintenance of railway infrastructure.

Queensland Rail's Network extends more than 6600 kilometres across the state. The regional network spans more than 5,700 kilometres of track and comprises seven rail systems that convey passenger and freight services across Queensland to support the state's economy in the tourism, mining, agriculture, construction, wholesale and retail sectors. The vast majority of freight is carried on the West Moreton System, Mt Isa Line System and North Coast Line System. Some freight carried on the West Moreton System and North Coast Line System traverses the Metropolitan System.

Queensland Rail operates passenger services connecting regional communities across Queensland with other regional centres and the SEQ corner, and provides rail access to freight operators and other supply chain customers, to enable the transport of resources and general freight across the state. Queensland Rail is not a rail freight operator (i.e. it does not participate in the above rail freight market).

The needs of Rolling Stock Operators on Queensland Rail's network vary greatly due to their different supply chain dynamics, geographic locations, rail corridor characteristics and interactions with other rail traffics.

Much of Queensland Rail's network is supported by Transport Service Payments from the Queensland Government. The absence of these Transport Service Payments would result in large parts of the rail network being commercially unviable.

Road transport provides a viable alternative mode of transport for most non-coal commodities, as well as coastal shipping, air transport, slurry pipelines and other transport options.

On 8 September 2020, the declaration of the service under the *Queensland Competition Authority Act 1997* (Qld) expired. This Framework has been developed in response and provides a balanced approach to the provision of Access and a framework (based on a negotiate/arbitrate model) to manage negotiations in an efficient and transparent manner for Access Seekers (Rolling Stock Operators and End User Access Seekers) seeking Access to the Systems. This Framework applies to Access for the purpose of operating a Train Service on one or more of the Systems where that Train Service does



not constitute a service declared under Part 5, Division 2 of the *Queensland Competition Authority Act 1997* (Qld). This Framework addresses matters including:

- the process for seeking Access in relation to the Systems;
- the pricing rules for Access Charges;
- Network Management Principles for the scheduling and prioritisation of Train Services;
- reporting obligations and dispute resolution; and
- a Standard Access Agreement.

For further information on the negotiation of Access in accordance with the provisions of this Framework, please contact:

General Manager, Access  
Revenue  
Queensland Rail Limited  
Commercial and Strategy  
GPO Box 1429  
Brisbane QLD 4000

Phone: (07) 3072 1145

Email: [aarf.freight@qr.com.au](mailto:aarf.freight@qr.com.au)

# Part 1 Application and scope

## 1.1 Duration

This Framework is effective during the Term.

## 1.2 Scope

### 1.2.1 Application of this Framework

- (a) Subject to **clauses 1.2.1(b)** and **1.2.1(d)**, this Framework applies to negotiations between Queensland Rail and Access Seekers in relation to Access Rights.
- (b) Despite any other provision in this Framework:
  - (i) this Framework does not apply:
    - (A) to the negotiation or provision of services other than Access; or
    - (B) to any matter involving an Access Holder or an Access Agreement, to the extent that compliance with this Framework is inconsistent with the relevant Access Agreement; and
  - (ii) subject to **schedule C**, Queensland Rail is not obliged to comply with this Framework to the extent that it is inconsistent with Queensland Rail's compliance with its Passenger Priority Obligations and Preserved Train Path Obligations.
- (c) Nothing in this Framework requires Queensland Rail or any other party to an Access Agreement executed before the Effective Date to vary a term or provision of that Access Agreement.
- (d) The Network comprises a number of individual systems. This Framework applies to Access for the purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the *Queensland Competition Authority Act 1997* (Qld) and the provisions of the Framework (including those imposing any obligations on Queensland Rail in relation to a System) will only operate, and must be interpreted, accordingly.

### 1.2.2 Objective of this Framework

- (a) The objective of the Framework is to promote the economically efficient operation of, use of and investment in, the Network, with the effect of promoting effective competition in upstream and downstream markets.

- (b) This Framework has been prepared in accordance with, and gives effect to, the Framework Objective.

### **1.2.3 Procurement of services other than Access**

Unless Queensland Rail otherwise agrees, Access Seekers are responsible for procuring any services other than Access and Below Rail Services (which Queensland Rail will provide), including Above Rail Services, required for the operation of Train Services.

### **1.2.4 Line diagrams**

Queensland Rail will publish and maintain on its website up-to-date line diagrams showing its rail network including:

- (a) the parts of that rail network comprising the Network;
- (b) existing Private Infrastructure connection points to the Network; and
- (c) a description of the amendments made to the line diagrams (if any) since the last version of those line diagrams.

## **1.3 Consistency and differentiation**

- (a) Queensland Rail will consistently apply this Framework to all Access Seekers and requests and negotiations for Access.
- (b) Queensland Rail and each Access Seeker must negotiate in Good Faith for reaching an Access Agreement.
- (c) Queensland Rail will:
  - (i) in negotiating an Access Agreement, not unfairly differentiate between Access Seekers in a way that has a material adverse effect on the ability of one or more of the Access Seekers to compete with other Access Seekers;
  - (ii) in providing Access, not unfairly differentiate between Access Holders in a way that has a material adverse effect on the ability of one or more of the Access Holders to compete with other Access Holders, other than to the extent that the different treatment is expressly required or permitted by this Framework, relevant Access Agreements or an arbitration determination under this Framework or the relevant Access Agreements; and
  - (iii) not engage in conduct for the purpose of preventing or hindering an Access Holder's Access under an Access Agreement, other than to the extent that the conduct is expressly required or permitted under this Framework or the Access Agreement or is reasonable conduct done in, and for, an emergency (including an emergency that involves, or may involve, injury to persons or damage to property).

- (d) **Clause 1.3(c)(i)** does not prevent Queensland Rail treating Access Seekers differently to the extent the different treatment is:
  - (i) reasonably justified because of the different circumstances applicable to Queensland Rail or any of the Access Seekers; or
  - (ii) expressly required or permitted by this Framework or an arbitration determination under this Framework.

## 1.4 Extensions – Capacity investment framework

### 1.4.1 Application

- (a) This **clause 1.4** applies when an Access Seeker notifies Queensland Rail, in accordance with **clause 2.7.2(d)**, that it is willing to fund an Extension (or an Extension Stage).
- (b) Queensland Rail is obliged to complete the relevant Extension Stage (as applicable) (unless otherwise agreed by Queensland Rail and the relevant Access Funder) to provide the Additional Capacity required by the Access Funder if:
  - (i) the proposed Extension satisfies those Extension Conditions in **clause 1.4.2(d)** which are relevant to the applicable Extension Stage; and
  - (ii) the Access Funder provides a bank guarantee in support of its commitments under the Funding Agreement as agreed by Queensland Rail (acting reasonably) and the Access Funder unless this requirement is waived, or another form of security is accepted, by Queensland Rail.
- (c) Nothing in this **clause 1.4**:
  - (i) restricts or otherwise limits Queensland Rail's ability:
    - (A) to Extend the Network;
    - (B) to fund any Extension Stage, or part thereof, or otherwise invest in the Network;
    - (C) to enter into arrangements with other persons (other than Access Funders) in relation to Extending the Network; or
    - (D) to, at its cost, prepare plans and strategies and undertake studies and investigations in relation to Extending the Network (including Concept Studies, Pre-feasibility Studies and Feasibility Studies); or
  - (ii) obliges Queensland Rail to bear some or all of any costs related to an Extension or to incur any Extension Costs in advance of funding being provided by the Access Funder.

## 1.4.2 Extending the Network

- (a) If Queensland Rail is notified under **clause 2.7.2(d)**, then Queensland Rail will promptly:
- (i) provide the Access Funder with all reasonably relevant and available information on the Extension required to provide the Additional Capacity required to grant the Access Rights in the Access Application. Without limiting the foregoing, this includes information on:
    - (A) necessary Authorisations that are reasonably required for the Extension;
    - (B) rights and interests in land that are reasonably required for the Extension;
    - (C) rail safety requirements reasonably appropriate to the Extension; and
    - (D) engineering, operational and other requirements that are reasonably required for the Extension;
  - (ii) discuss with the relevant Access Funder the options to proceed by completing the required Extension Stage (or Stages);
  - (iii) discuss with the relevant Access Funder options for that Access Funder to provide funding for each applicable Extension Stage (or Stages); and
  - (iv) negotiate and enter into arrangements in accordance with the Extension Access Principles set out in **schedule E**, and **clause 1.4.3**, with the Access Funder in relation to the funding of the relevant stage of the Extension (**Funding Agreement**).

For clarity, separate Funding Agreements may be entered into for each Extension Stage. The Access Funder is then free to make a decision on whether to proceed with each subsequent Extension Stage at the completion of each preceding Extension Stage.

- (b) If either Queensland Rail or an Access Funder considers that an Extension Stage should be discontinued, then the parties (acting reasonably) will seek to agree whether the study process should continue but if the parties cannot agree then the relevant Extension Stage will continue subject to that Extension Stage being funded.
- (c) There is no requirement to complete all Extension Stages if both parties agree (each acting reasonably) that a particular Extension Stage is unnecessary.
- (d) The Extension must satisfy the following conditions (**Extension Conditions**):

- (i) the Access Funder or Queensland Rail has obtained, or is reasonably likely to obtain, all necessary Authorisations reasonably required to Extend the Network;
  - (ii) the Access Funder or Queensland Rail has acquired or procured, or is reasonably likely to acquire or procure, all of the rights and interests in land that, in Queensland Rail's opinion (acting reasonably), are required to construct, own, operate and manage the Extension (on terms satisfactory to Queensland Rail (acting reasonably)) including, for example, the inclusion of additional land into Queensland Rail's land tenure arrangements with the State relating to the Network;
  - (iii) in Queensland Rail's opinion (acting reasonably), the Extension (including constructing the Extension):
    - (A) is technically feasible;
    - (B) is consistent with the safe and reliable provision of Access and operation of the Network;
    - (C) does not adversely impact on the safety of any person maintaining, operating or using the Network;
    - (D) does not adversely affect existing Access Rights; and
    - (E) complies with the engineering, operational and other requirements of Queensland Rail (acting reasonably);
  - (iv) relevant Access Agreement negotiations are continuing in accordance with **Part 2** of this Framework; or
  - (v) those Access Agreements are or have become unconditional in all material respects except for conditions relating to Extending the Network which cannot be satisfied until the Network has been Extended;
  - (vi) the Access Funder and Queensland Rail have executed a Funding Agreement for the relevant Extension Stage(s) in accordance with **clause 1.4.3**; and
  - (vii) the Access Funder and Queensland Rail have executed construction, operational and other material arrangements reasonably required for the relevant Extension Stage(s) (including the matters referred to above) which are unconditional in all material respects except for conditions relating to the Extension which cannot be satisfied until the Network has been Extended.
- (e) Queensland Rail and an Access Funder must use reasonable endeavours and act promptly to assist each other such that the Extension complies with the Extension Conditions.

- (f) Queensland Rail will not unreasonably delay the negotiation, and execution of, a Funding Agreement.
- (g) For clarity, unless Queensland Rail agrees otherwise, Queensland Rail has no obligation to assist in satisfying the requirements set out in **clause 1.4.2** if it is required to incur or pay any costs in order to do so.

### **1.4.3 Funding Agreements**

- (a) The intent of a Funding Agreement is to have a workable, bankable and credible mechanism for Access Funders to fund each relevant Extension Stage where Queensland Rail elects not to do so.
- (b) Without limitation to **clause 1.4.2**, a Funding Agreement must, unless otherwise agreed by Queensland Rail and the relevant Access Funder:
  - (i) be consistent with this Framework including the Extension Access Principles in **schedule E** (provided however that if there is any conflict between the terms of **clause 1.4** and the terms of **schedule E**, the terms of this **clause 1.4** will be paramount);
  - (ii) result in the transaction being structured in a reasonable way for all parties;
  - (iii) not result in Queensland Rail bearing some or all of the relevant Extension Costs;
  - (iv) require that, in accordance with **clause 6 of schedule E**, Queensland Rail transfer to the Access Funder the full economic benefit that Queensland Rail derives from the Extension over the economic life of the Extension; and
  - (v) require Queensland Rail to provide that an Extension Stage is (as applicable):
    - (A) scoped and studied in accordance with Prudent Practices;
    - (B) constructed efficiently in accordance with Prudent Practices; and
    - (C) operated and managed by Queensland Rail in a manner that is consistent with Queensland Rail's obligations in relation to the operation and management of the Network under this Framework.

### **1.4.4 Construction, ownership, operation and management of Extensions**

Unless otherwise agreed by Queensland Rail, an Extension which is funded by an Access Funder must only be designed, constructed, owned, operated and

managed by Queensland Rail in accordance with this Framework and the relevant Funding Agreement and Access Agreement.

#### **1.4.5 Disputes**

- (a) If:
  - (i) no Funding Agreement has been executed, any dispute between an Access Funder and Queensland Rail in relation to this **clause 1.4** (including in relation to the negotiation of a Funding Agreement) may be referred for resolution in accordance with the dispute resolution process under **clause 6.1**; or
  - (ii) a Funding Agreement has been executed, any dispute between an Access Funder and Queensland Rail in relation to the Extension will be subject to the dispute resolution process contained in that Funding Agreement.

#### **1.4.6 Building Queensland Act**

- (a) If the Building Queensland Act applies to an Extension or any Extension Stage (and without limiting **clauses 1.4.6(b)** and **1.4.6(c)** below):
  - (i) the Access Funder and Queensland Rail will comply with the Building Queensland Act and continue to adhere to this Framework to the extent that that adherence would not cause either party to be in breach of the Building Queensland Act; and
  - (ii) Queensland Rail will keep the relevant Access Seeker or Access Holder fully informed of the material details of all communications which Queensland Rail has with Building Queensland.
- (b) Either Queensland Rail or an Access Funder may request that the relevant Minister exercises any relevant discretion to direct Building Queensland to not exercise its functions in relation to that Extension or Extension Stage(s).
- (c) If, despite **clause 1.4.6(b)**, Building Queensland becomes involved in an Extension or Extension Stage, either Queensland Rail or the Access Funder may request that the relevant Minister exercises any relevant discretion to direct Building Queensland to exercise its functions consistently with this Framework.

#### **1.5 Master planning and extension coordination**

- (a) This **clause 1.5** only applies in relation to Extension projects relating to those parts of the Mt Isa Line System, North Coast Line System and West Moreton System where the Train Services operating or proposed to be operating on those parts of those Systems do not



constitute a service declared under Part 5, Division 2 of the *Queensland Competition Authority Act 1997* (Qld).

- (b) Queensland Rail will consult with relevant Access Holders and Nominated Rolling Stock Operators regarding Queensland Rail's master planning for Extension projects for the Mt Isa Line System, North Coast Line System and West Moreton System.
- (c) Access Holders and Nominated Rolling Stock Operators may request Queensland Rail to undertake a Concept Study, Pre-Feasibility Study or Feasibility Study on their behalf (and at their cost), in accordance with the process set out in **clause 1.4** and **schedule E**, to investigate Extension projects on the Mt Isa Line System, North Coast Line System and West Moreton System.
- (d) For clarity and despite any other provision in this Framework, the party or parties requesting a Concept Study, Pre-Feasibility Study or Feasibility Study will be responsible for the costs thereof.

## Part 2 Negotiation process

### 2.1 Preparing and submitting an Access Application

#### 2.1.1 Access Applications

- (a) A request for Access Rights must be submitted to Queensland Rail in the form of an Access Application, unless otherwise agreed by Queensland Rail. Access Applications must be sent to the address nominated in **schedule B**.
- (b) Queensland Rail will publish on its website the application forms for Access Applications. These may identify different requirements for different types of Train Services. However, the information requirements must be in accordance with this Framework.
- (c) An Access Seeker must, when submitting an Access Application, unconditionally and irrevocably agree to comply with the requirements, obligations and processes in:
  - (i) this Framework relating to it or its Access Application; and
  - (ii) the Deed Poll, including the conditions set out in clauses 6, 7, 8 and 9 of the Deed Poll,

and if the Access Seeker does not do so then Queensland Rail may refuse to accept the Access Application.

#### 2.1.2 Preliminary steps

- (a) A prospective Access Seeker may request initial meetings with Queensland Rail, prior to submitting an Access Application, to discuss the proposed Access Application and to clarify any matters relating to the negotiation process including any application requirements under **schedule B**.
- (b) Queensland Rail will:
  - (i) make the Preliminary Information available to Access Seekers on its website; and
  - (ii) keep the Preliminary Information to be made available to Access Seekers current and accurate.

### 2.2 Confidentiality

#### 2.2.1 Obligation to keep Confidential Information confidential

- (a) Subject to **clause 2.2.1(b)**, Queensland Rail and each Access Seeker (by submitting an Access Application) acknowledge, as a Recipient, that Confidential Information disclosed to it must:
  - (i) be treated as and kept confidential;

- (ii) only be used for the purpose for which it was disclosed;
  - (iii) be treated as the property of the Disclosing Party; and
  - (iv) subject to **clause 2.2.2(a)**, only be disclosed in accordance with this Framework.
- (b) A Recipient of Confidential Information is not required to comply with **clause 2.2.1(a)** in relation to a disclosure or use of Confidential Information to the extent that:
- (i) the Disclosing Party has given its written consent (which must not be unreasonably withheld) to that disclosure or use; or
  - (ii) another Confidentiality Exception applies to that disclosure or use.

### **2.2.2 Requirement for confidentiality agreement**

- (a) Queensland Rail or the relevant Access Seeker may require the other to enter into a confidentiality agreement and, if so, the parties must act reasonably and promptly to negotiate and execute such an agreement which shall govern the confidentiality obligations as between those parties.
- (b) Neither Queensland Rail nor an Access Seeker is obliged to disclose Confidential Information to the other unless a confidentiality agreement on terms satisfactory to it (acting reasonably) has been executed.
- (c) Any confidentiality agreement between Queensland Rail and an Access Seeker must permit Queensland Rail to disclose Confidential Information:
- (i) as required by Law;
  - (ii) to any responsible Minister (as defined in the Rail Authority Act);
  - (iii) to DTMR;
  - (iv) to the Rail Safety Regulator; and
  - (v) to the Rail Authority (including board members, officers and employees).

### **2.2.3 Ring fencing arrangements**

Queensland Rail does not presently have interests in markets upstream or downstream from the Below Rail Services that are in competition with third parties in those markets and there is no expectation that it is likely to do so during the Term. However, if such interests are likely to, or do, arise during the Term, then Queensland Rail will consider the need for ring fencing arrangements, taking into account the Framework Objective and its obligations under this Framework.

## 2.3 Acknowledgment of an Access Application

### 2.3.1 Requests for additional information or clarification

Queensland Rail may (acting reasonably) require the Access Seeker to provide additional or clarified information for the purpose of preparing an Indicative Access Proposal. Queensland Rail will notify the Access Seeker of any such requirement within five Business Days after receiving the Access Application.

### 2.3.2 Acknowledging Access Applications

Within five Business Days after the later of the receipt of:

- (a) an Access Application; or
- (b) the additional or clarified information required under **clause 2.3.1** in respect of that Access Application,

Queensland Rail will, subject to **clause 2.8**, give the Access Seeker a written acknowledgement of receipt of the Access Application.

## 2.4 Provision of an Indicative Access Proposal

### 2.4.1 Time period for provision of Indicative Access Proposal

Subject to **clause 2.8** and **clause 2.5.3**, Queensland Rail will use reasonable endeavours to provide an Indicative Access Proposal to the Access Seeker within 20 Business Days after giving the acknowledgment under **clause 2.3.2**.

### 2.4.2 Inclusions in Indicative Access Proposal

The Indicative Access Proposal will, amongst other things:

- (a) outline the relevant Rolling Stock, Train Configuration and operating characteristics;
- (b) outline the results of an indicative Capacity Analysis including (if applicable) a notice advising that insufficient Capacity exists to accommodate the Access Application without an Extension;
- (c) outline whether any other Access Seekers have requested Access Rights which, if provided, would limit Queensland Rail's ability to grant Access Rights in accordance with the Indicative Access Proposal; and
- (d) provide an initial estimate of the Access Charges for the requested Access Rights (including basis for calculation).

### 2.4.3 Indicative nature

An Indicative Access Proposal is non-binding and, unless it contains express provisions to the contrary, contains arrangements that are only indicative or preliminary in nature. An Indicative Access Proposal does not oblige Queensland Rail to provide Access in accordance with specific terms and conditions (including the methodology for calculating Access Charges or estimated rates and other inputs for formulae) set out in it.

## 2.5 Notification of intent to negotiate

### 2.5.1 Access Seeker to give notice of intent to negotiate or not

- (a) If an Access Seeker intends to proceed with its Access Application on the basis of the relevant Indicative Access Proposal, it must, subject to **clause 2.5.2**, give Queensland Rail written notice of its intention to do so as soon as reasonably practicable after receiving the Indicative Access Proposal.
- (b) If an Access Seeker does not intend to proceed with its Access Application on the basis of the relevant Indicative Access Proposal, it must give Queensland Rail written notice of that intention as soon as reasonably practicable after receiving the Indicative Access Proposal.

### 2.5.2 Consequence of late notification of intent to negotiate

- (a) If an Access Seeker gives the notice referred to in **clause 2.5.1(a)** to Queensland Rail more than 20 Business Days after being given the Indicative Access Proposal, Queensland Rail may review the Indicative Access Proposal and either:
  - (i) give the Access Seeker a revised Indicative Access Proposal; or
  - (ii) proceed on the basis of the existing Indicative Access Proposal.
- (b) If Queensland Rail gives a revised Indicative Access Proposal to an Access Seeker under **clause 2.5.2(a)**, then:
  - (i) the process in this **Part 2** recommences as though the revised Indicative Access Proposal was given to the Access Seeker under **clause 2.4**; and
  - (ii) the Access Seeker must comply with this **clause 2.5** in relation to that revised Indicative Access Proposal.
- (c) Subject to **clause 2.5.3**, if an Access Seeker has not given the notice referred to in **clause 2.5.1(a)** within three months after it was given an Indicative Access Proposal, or has given the notice referred to in **clause 2.5.1(b)**, then the Access Seeker is taken to have withdrawn its Access Application.

### 2.5.3 Extension of time – IAP and ITN

Queensland Rail may extend the time for providing an Indicative Access Proposal under **clause 2.4.1** and an Access Seeker may extend the time for giving a notice of intention to proceed under **clause 2.5.1(a)** respectively if:

- (a) the party seeking the extension gives reasonable grounds for the extension to the other party prior to the date otherwise required under **clause 2.4.1** or **2.5.1(a)** (as the case may be); and
- (b) the other party agrees to the extension, such agreement not to be unreasonably withheld.

## 2.6 Competing Access Applications

- (a) If there are Competing Access Seekers and:
  - (i) one of those Competing Access Seekers is a Customer Access Seeker, then:
    - (A) this Framework and Queensland Rail will treat that Customer Access Seeker as the sole Access Seeker as between those Competing Access Seekers; and
    - (B) Queensland Rail must negotiate solely with that Customer Access Seeker as between those Competing Access Seekers; or
  - (ii) if a Competing Access Seeker is nominated in writing by the Customer as the Customer's preferred Access Seeker, then:
    - (A) this Framework and Queensland Rail will treat the Competing Access Seeker nominated in writing by the Customer to Queensland Rail as the sole Access Seeker as between those Competing Access Seekers; and
    - (B) Queensland Rail must negotiate solely with that nominated Access Seeker as between those Competing Access Seekers.
- (b) Where there are Competing Access Seekers, Queensland Rail will disclose to the Customer the identity of the Competing Access Seekers.
- (c) Where:
  - (i) the Customer does not nominate a Competing Access Seeker under **clause 2.6(a)(ii)**;
  - (ii) each Competing Access Seeker has given a notice of intention under **clause 2.5** to negotiate; and
  - (iii) each Competing Access Seeker is either:
    - (A) currently engaged in negotiations with a Customer regarding a potential haulage agreement in respect of the Access Rights sought; or
    - (B) a party to an existing haulage agreement with the Customer in respect of the Access Rights being sought,

then Queensland Rail will commence negotiations with each Competing Access Seeker in accordance with **Part 2** of this Framework and progress those negotiations to a stage where Queensland Rail has provided each Competing Access Seeker with

an Access Charge for the Access Rights sought based on the operational information provided by the relevant Competing Access Seeker and both parties have accepted an Access Agreement consistent with this Framework and the terms of the Standard Access Agreement. However, an Access Agreement will be negotiated and executed with the Competing Access Seeker who demonstrates to Queensland Rail's reasonable satisfaction that it does, or will in the immediate future, hold the contractual rights to provide the Train Service/s for the Customer for which Access Rights are sought, and that the Customer is agreeable to the execution of an Access Agreement with that Competing Access Seeker.

## 2.7 Negotiation of an Access Agreement

### 2.7.1 The negotiation period

- (a) Subject to **clause 2.5.2**, if an Access Seeker gives Queensland Rail a notice under **clause 2.5.1(a)**, then Queensland Rail and the Access Seeker will commence negotiations as soon as reasonably practicable to progress towards an Access Agreement.
- (b) If negotiations have commenced in accordance with **clause 2.7.1(a)**, the period for negotiations (**Negotiation Period**):
  - (i) starts on the day Queensland Rail was given the notice under **clause 2.5.1(a)** (subject to **clause 2.5.2(b)**); and
  - (ii) ends on the earlier of:
    - (A) execution of an Access Agreement by the parties in relation to the relevant Access Application;
    - (B) the Access Seeker notifying Queensland Rail that it no longer wishes to proceed with its Access Application (or in addition, for a Rolling Stock Operator who is an Access Seeker, the relevant Customer gives such a notification to Queensland Rail in respect of the relevant Access Rights);
    - (C) the date nine months after the date on which the period for negotiations started, or such later date as agreed by the parties (acting reasonably);
    - (D) Queensland Rail giving the Access Seeker a Negotiation Cessation Notice; and
    - (E) the occurrence of any other event or circumstance where negotiations cease in accordance with this Framework.
- (c) Negotiations for Access cease at the end of the Negotiation Period and Queensland Rail is not obliged to continue negotiations with an

Access Seeker after the Negotiation Period for the relevant Access Application has ceased.

## **2.7.2 Issues to be addressed in negotiations**

- (a) During the Negotiation Period, Queensland Rail and the Access Seeker will negotiate, and endeavour to agree, the terms of an Access Agreement. In order to facilitate the negotiation process:
  - (i) Queensland Rail will provide to the Access Seeker:
    - (A) information that is reasonably required by the Access Seeker for the purpose of the negotiation with Queensland Rail, provided such information is reasonably able to be provided by Queensland Rail and cannot be reasonably obtained from a source other than Queensland Rail at no cost and without restriction; and
    - (B) if requested by the Access Seeker, the following information to the extent that it has not already been provided:
      - (1) information about the price at which Queensland Rail provides Access, including the way in which the price is calculated (including details of the floor and ceiling);
      - (2) an estimate of the Available Capacity; and
      - (3) in relation to the rail transport infrastructure (as defined in the TIA) used to provide Access, a diagram or map of the infrastructure and information about its operation and safety system;
  - (ii) if requested in writing by the Access Seeker, Queensland Rail will make available to the Access Seeker Capacity Information relevant to the Access Seeker's Access Application;
  - (iii) the Access Seeker must, in order for the impacts and requirements of the operations proposed by the Access Seeker to be analysed:
    - (A) prepare, and submit to Queensland Rail, a draft Operating Plan<sup>1</sup> prior to the parties undertaking the Interface Risk Assessment; and

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<sup>1</sup> Queensland Rail will use the Operating Plan to refine and finalise the Train Service Entitlement, the methodology, rates and other inputs for calculating Access Charges and other terms and conditions of the



- (B) finalise the Operating Plan while the Interface Risk Assessment is being undertaken and prior to the development of an IRMP;
- (iv) the parties (for the purposes of this **clause 2.7.2(a)(iv)**, if the Access Seeker is an End User Access Seeker the relevant Nominated Rolling Stock Operator will be the relevant Access Seeker party) must jointly:
  - (A) undertake an Interface Risk Assessment<sup>2</sup>; and
  - (B) after the Interface Risk Assessment is completed, develop an IRMP,

unless the parties agree (or if the Access Seeker is an End User Access Seeker, the End User Access Seeker and Queensland Rail agree) that those matters will be completed after the relevant Access Agreement has been executed in accordance with that Access Agreement;
- (v) the Access Seeker must (unless the Access Seeker is an End User Access Seeker and the obligations under this **clause 2.7.2(a)(v)** have or will be satisfied by the relevant Nominated Rolling Stock Operator) commission a suitably qualified person, acceptable to Queensland Rail (acting reasonably), to prepare an environmental investigation and risk management assessment for the purposes of the Interface Risk Assessment and development of an IRMP;
- (vi) Queensland Rail will provide the Access Charge for the requested Access Rights, including the basis for calculating the Access Charges and details of how **Part 3** has been applied in calculating the Access Charge;
- (vii) Queensland Rail will provide a Capacity Analysis to the Access Seeker;
- (viii) Queensland Rail will provide a detailed description of the relevant Train Service Entitlement and the initial timetable;
- (ix) the Access Seeker must demonstrate that the Rolling Stock and Train Configurations for which the Access Rights are

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Access Agreement. The Operating Plan will also be used as a basis for any further or refined Capacity Analysis prepared by Queensland Rail.

<sup>2</sup> Queensland Rail will publish on its website indicative information, standards and requirements for the Interface Risk Assessment and IRMP. For example, Queensland Rail will make available a sample IRMP which specifies a list of safety and Rolling Stock issues that should, at a minimum, be addressed by the parties during the Interface Risk Assessment, along with suggested controls for the identified safety and Rolling Stock issues. However, the IRMP developed and agreed by the parties may cover additional safety and/or Rolling Stock issues and associated controls depending on the circumstances of the particular operation.

applicable are consistent with the agreed Interface Standards incorporated in the IRMP; and

- (x) Queensland Rail will provide the other terms comprising the Access Agreement.
- (b) During the Negotiation Period, if Queensland Rail has given the Access Seeker a notice that there is insufficient Capacity pursuant to **clause 2.4.2(b)**, Queensland Rail will, as soon as reasonably practicable, give to the Access Seeker written notice of whether Queensland Rail is willing to fund the Extension (or any Extension Stages) required to provide the Additional Capacity to accommodate the Access Application.
- (c) If Queensland Rail advises the Access Seeker, in accordance with **clause 2.7.2(b)**, that it is willing to fund the required Extension the Access Application negotiations will continue in accordance with this **Part 2**.
- (d) If Queensland Rail advises the Access Seeker, in accordance with **clause 2.7.2(b)**, that it is not willing to fund the required Extension and the Access Seeker subsequently advises Queensland Rail that the Access Seeker is willing to fund the required Extension (or an Extension Stage), Queensland Rail and the Access Seeker will commence, concurrently with Access Application negotiations, negotiations on the terms of the Funding Agreement that is required to proceed with the Access Application in accordance with **clause 1.4**.
- (e) If the Access Seeker is a Renewal Access Seeker, then the terms of the Access Agreement are to be negotiated generally in accordance with **clause 2.7.2** except that:
  - (i) **clauses 2.4.2(b), 2.7.2(a)(vii) and 2.7.2(b)** will not apply; and
  - (ii) the relevant Access Charges are to be consistent with **Part 3**.

## 2.8 Cessation of negotiation process

### 2.8.1 Negotiation Cessation Notice

- (a) Queensland Rail may, at any time, give a notice to an Access Seeker that it does not intend to enter into an Access Agreement with the Access Seeker pursuant to the relevant Access Application (**Negotiation Cessation Notice**) for any one or more of the following reasons:
  - (i) the Access Seeker fails to comply with all of the relevant provisions of this Framework, and Queensland Rail (acting reasonably) is of the opinion that such non-compliance is material;

- (ii) Queensland Rail (acting reasonably) is of the opinion that:
    - (A) there is no reasonable likelihood of material compliance by the Access Seeker with the terms and conditions of an Access Agreement; or
    - (B) the Access Seeker has no genuine intention of obtaining, or has no reasonable likelihood of using, the Access Rights requested;
  - (iii) the requirements under **clause 2.8.2** for giving a notice have been satisfied;
  - (iv) the Access Seeker has concurrent requests for Access which Queensland Rail reasonably believes to be duplicate requests such that if any one of those requests for Access were granted then the remainder of the concurrent requests would not be required by the Access Seeker (**Duplicate Requests**) and provided that:
    - (A) Queensland Rail has given the Access Seeker notice that it intends to cease negotiations because of the existence of Duplicate Requests and the reasons for this; and
    - (B) the Access Seeker has not responded to the notice within ten Business Days (or such later date as agreed by Queensland Rail (such agreement not to be unreasonably withheld)) either:
      - (1) with information which demonstrates to Queensland Rail's reasonable satisfaction that the requests are not Duplicate Requests; or
      - (2) advising which of the Duplicate Requests the Access Seeker (acting reasonably) wants to proceed with (if any); or
  - (v) the Access Seeker fails to comply with the dispute resolution process under **clause 6.1** (including any outcome of that dispute resolution process) in relation to the relevant Access Application.
- (b) Without limitation to **clause 2.8.1(a)(ii)(A)**, it will be reasonable for Queensland Rail to form the opinion that the circumstance in **clause 2.8.1(a)(ii)(A)** exists where, at any time, the Access Seeker does not comply with the requirements under **clause 2.8.3**.

- (c) In forming an opinion referred to in **clause 2.8.1(a)(ii)(B)**, Queensland Rail may, without limitation, consider any one or more of the following factors:
  - (i) whether the Access Seeker has secured, or is reasonably likely to secure:
    - (A) the rights required to enter and leave the Network (for example, rights to unload at its destination); and
    - (B) if applicable, a rail haulage agreement for the operation of Train Services referred to in its Access Application except if the Access Seeker is a Competing Access Seeker for the purposes of **clause 2.6**, in which case this **clause 2.8.1(c)(i)(B)** is subject to the process under **clause 2.6(c)(iii)** being completed; and
  - (ii) the promptness of the Access Seeker in conducting its negotiations.
- (d) For clarity, if an Access Seeker responds to Queensland Rail's notice given pursuant to **clause 2.8.1(a)(iv)(A)**, and informs Queensland Rail that it wants to proceed with one of the Duplicate Requests, Queensland Rail can only give a Negotiation Cessation Notice in respect of the unwanted Duplicate Request.

## 2.8.2 Safety considerations

If:

- (a) in the opinion of Queensland Rail (acting reasonably), the use of any proposed Access Rights sought by an Access Seeker may adversely affect the safety of any persons using or intending to use a passenger Train Service;
- (b) Queensland Rail and the Access Seeker have discussed the matter in **clause 2.8.2(a)** and after those discussions Queensland Rail (acting reasonably) still considers that the circumstance in **clause 2.8.2(a)** continues to apply;
- (c) Queensland Rail (acting reasonably) does not consider that any measures can reasonably and practicably be implemented by Queensland Rail (in its capacity as either a Below Rail or Above Rail Services provider) or the Access Seeker to avoid, or mitigate to Queensland Rail's satisfaction (acting reasonably), those adverse effects; and
- (d) refusal to enter into an Access Agreement would be consistent with Queensland Rail acting in accordance with Prudent Practices,

then Queensland Rail may give a Negotiation Cessation Notice to the relevant Access Seeker. An Access Seeker is not entitled to dispute a Negotiation

Cessation Notice issued under this **clause 2.8.2** and the dispute resolution process under **clause 6.1** does not apply to the issue of such a notice under this **clause 2.8.2**.

### **2.8.3 Access Seekers must satisfy prudential requirements**

- (a) An Access Seeker must at all times satisfy the following prudential requirements, namely:
  - (i) the Access Seeker must not be Insolvent;
  - (ii) the Access Seeker (and any Related Party of the Access Seeker) must not be, or have been at any time in the previous two years, in Material Default of:
    - (A) this Framework;
    - (B) any agreement with Queensland Rail; or
    - (C) any agreement under which access to Private Infrastructure has been provided to the Access Seeker or a Related Party of the Access Seeker; and
  - (iii) the Access Seeker must be able to demonstrate to Queensland Rail (acting reasonably) that it has the financial capacity to perform its obligations, and satisfy its liabilities, under an Access Agreement (including timely payment of Access Charges or other amounts and of insurance premiums and deductibles under any required policies of insurance).
- (b) Queensland Rail may, at any time, require an Access Seeker to (and, if so required, the Access Seeker must) demonstrate to Queensland Rail (acting reasonably), within a reasonable period of no more than ten Business Days, that the Access Seeker satisfies the prudential requirements set out in **clause 2.8.3(a)**.
- (c) Queensland Rail and an Access Seeker may agree a different time frame within which an Access Seeker must satisfy the prudential requirements set out in **clause 2.8.3(a)** if:
  - (i) the Access Seeker seeking the extension provides Queensland Rail with reasonable grounds for the proposed time frame prior to the time frame in **clause 2.8.3(b)** expiring; and
  - (ii) Queensland Rail agrees to the proposed time frame (such agreement not to be unreasonably withheld).

## 2.9 Access Agreement

### 2.9.1 Access Rights granted under an Access Agreement

The granting of Access Rights occurs when Queensland Rail and the Access Seeker execute an Access Agreement and that Access Agreement is or becomes unconditional.

### 2.9.2 Mutually Exclusive Access Applications

- (a) Subject to **clause 2.9.2(b)**, this **clause 2.9.2** applies to the extent that:
- (i) two or more Access Seekers have submitted Access Applications for Access Rights relating to Available Capacity; and
  - (ii) it is not reasonably possible for Queensland Rail to fulfil, in whole, the request for Access Rights made under those Access Applications,
- (each a **Mutually Exclusive Access Application**).
- (b) Where the application of **clause 2.9.2(a)** involves Queensland Rail taking into account Competing Access Seekers for a traffic task and:
- (i) one of those Competing Access Seekers is a Customer Access Seeker:
    - (A) the Customer Access Seeker's Access Application will be used for the purpose of applying **clause 2.9.2(a)**; and
    - (B) the other Competing Access Seekers' Applications will not be used for the purpose of applying **clause 2.9.2(a)**;
  - (ii) the relevant Customer has nominated one of the Competing Access Seekers under **clause 2.6(a)(ii)**:
    - (A) the nominated Competing Access Seeker's Access Application will be used for the purpose of applying **clause 2.9.2(a)**; and
    - (B) the other Competing Access Seekers' Applications will not be used for the purpose of applying **clause 2.9.2(a)**; or

- (iii) the relevant Customer has not nominated one of the Competing Access Seekers under **clause 2.6(a)(ii)**, then pending a relevant nomination under **clause 2.6(a)(ii)** (if any) the process in **clause 2.6(c)** will apply and a determination regarding Mutually Exclusive Access Applications will be made by Queensland Rail under **clause 2.9.2(f)**.
- (c) An Access Application may become a Mutually Exclusive Access Application at any time before an Access Agreement is executed in relation to that Access Application.
- (d) An Access Seeker will be notified as soon as reasonably practicable after Queensland Rail identifies that its Access Application has become a Mutually Exclusive Access Application and the extent to which it is a Mutually Exclusive Access Application.
- (e) Queensland Rail will, if requested, provide reasonable assistance to an Access Seeker to identify whether its Access Application can be modified so that it ceases to be a Mutually Exclusive Access Application.
- (f) Where Queensland Rail has identified that there are Mutually Exclusive Access Applications, Access will be granted to the Access Seeker who accepts (and executes) an Access Agreement with Queensland Rail which, in the opinion of Queensland Rail, is most favourable to it. Ordinarily, but without limiting Queensland Rail's discretion in this regard, Queensland Rail will make such a decision based on the Access Agreement that represents the highest present value of future returns to Queensland Rail after considering all risks associated with the Access Agreement.
- (g) Queensland Rail will expand the Capacity of the Network in order to create sufficient Available Capacity to provide Access Rights sought by an Access Seeker where Queensland Rail is required to do so under **clause 1.4**.

### **2.9.3 Renewals**

- (a) Where an Access Seeker (who is not a Renewal Access Seeker) submits an Access Application for Access Rights concerning the Available Capacity that will arise when an existing Access Agreement expires, Queensland Rail will notify:
  - (i) the Access Holder for the expiring Access Agreement;
  - (ii) that Access Holder's Customer (if any); and
  - (iii) the relevant Renewal Access Seeker (if any),
 of Queensland Rail's receipt of that Access Application, as soon as reasonably practicable after receiving it, provided the then current term of that expiring Access Agreement (whether initial or as

renewed) is at least 5 years. Where the then current term of that expiring Access Agreement (whether initial or as renewed) is less than 5 years, Queensland Rail will not be required to give such notification and **clause 2.9.3(b)** will not apply.

- (b) Subject to **clauses 2.9.3(a), 2.9.3(c) and 2.9.3(d)** but despite any other provision in this Framework to the contrary, Queensland Rail will not execute an Access Agreement with the Access Seeker referred to in **clause 2.9.3(a)** unless the relevant Renewal Access Seeker fails to, or cannot, submit a Renewal Application to Queensland Rail in respect of the relevant Renewal by the date which is no later than 20 Business Days after the date on which Queensland Rail gave the notice under **clause 2.9.3(a)**.
- (c) A decision to grant Access to the Access Seeker referred to in **clause 2.9.3(a)** or the relevant Renewal Access Seeker will be made by Queensland Rail on the basis of which of those parties accepts (and executes) an Access Agreement with Queensland Rail which, in the opinion of Queensland Rail, is most favourable to it. Ordinarily, but without limiting Queensland Rail's discretion in this regard, Queensland Rail will make such a decision based on the Access Agreement that represents the highest present value of future returns to Queensland Rail after considering all risks associated with the Access Agreement.
- (d) Nothing in this **clause 2.9.3** obliges Queensland Rail to enter into an Access Agreement with a Renewal Access Seeker or to do so on the same terms as the relevant existing Access Agreement for the relevant existing Access Rights.
- (e) Any renewal of Access Rights is subject to compliance with all applicable Laws, including sections 266 and 266A of the TIA as they apply to Queensland Rail.

#### **2.9.4 Development of Standard Agreements**

- (a) Subject to **clause 2.7.2(e)**, unless otherwise agreed between Queensland Rail and the Access Seeker, an Access Agreement must be consistent with:
  - (i) this Framework; and
  - (ii) the terms of the Standard Access Agreement.
- (b) If an Access Seeker proposes variations to the terms of the Standard Access Agreement which the Access Seeker can demonstrate would promote, or are required to accommodate, productivity or efficiency improvements to the Access Seeker's proposed Above Rail Services and the supply chain and Queensland Rail rejects those proposed variations, Queensland Rail will provide written reasons for that rejection.



- (c) An Access Seeker is not entitled to dispute a rejection by Queensland Rail under **clause 2.9.4(b)** and the dispute resolution process under **clause 6.1** does not apply to such a rejection.

### **2.9.5 Execution of Access Agreements**

- (a) If an Access Seeker and Queensland Rail execute an Access Agreement that is unconditional in all material respects except for the conditions relating to a Funding Agreement and which cannot be satisfied until the Funding Agreement has been executed and the Network has been Extended, then Queensland Rail and the Access Seeker must use reasonable endeavours to execute the Funding Agreement as soon as reasonably practicable.
- (b) Despite any other provision in this Framework, Queensland Rail may, but is not obliged to, grant Access Rights by agreeing to amend an existing Access Agreement.

### **2.9.6 Transfer of Access Rights**

An Access Holder may only assign, novate or otherwise transfer the Access Holder's interest in an Access Agreement to a third party in accordance with the terms of that Access Agreement.

## Part 3 Pricing rules

### 3.1 Pricing objectives

#### 3.1.1 Revenue adequacy

Access Charges and Transport Service Payments (if applicable) should:

- (a) generate expected revenue for Access that is at least enough to meet the efficient costs of providing Access; and
- (b) include a return on investment commensurate with the risks involved.

### 3.2 Pricing limits

#### 3.2.1 Applying a Ceiling Revenue Limit

In setting the methodology, rates and other inputs for calculating Access Charges for an Access Seeker's proposed Train Services, Queensland Rail must do so such that, over the Evaluation Period, the Expected Access Revenue from any one of those Train Services and any combination of those Train Services does not exceed the Ceiling Revenue Limit for that Train Service or combination of Train Services, as applicable.

#### 3.2.2 Applying a Floor Revenue Limit

In setting the methodology, rates and other inputs for calculating Access Charges for an Access Seeker's proposed Train Services, Queensland Rail must do so such that, over the Evaluation Period, the Expected Access Revenue from any one of those Train Services or any combination of those Train Services does not fall below the Floor Revenue Limit for that Train Service or combination of Train Services, as applicable, after taking into account the level of contribution provided by Transport Service Payments towards the relevant rail transport infrastructure (as defined in the TIA) for which Queensland Rail is the Railway Manager.

#### 3.2.3 Determination of Ceiling Revenue Limit

- (a) The Ceiling Revenue Limit means the aggregate of the following:
  - (i) the maximum amount of Expected Access Revenue; and
  - (ii) where the Access Seeker's proposed Train Services comprise all of the Train Services using the relevant part of the Network, the Transport Services Payments (if any) that are reasonably expected to be received by Queensland Rail in respect of that part of the Network (on a pro rata basis for that individual Train Service or combination of Train Services, as applicable),

over the Evaluation Period where the Ceiling Revenue Limit is measured such that the net present value of the cashflows associated

with providing Access for the relevant Train Service(s) over the Evaluation Period is zero. This measurement can be expressed as:

$$0 = -AV_o + \sum_{t=1}^n \frac{(CRL_t - C_t - M_t - T_t)}{(1 + WACC)^t} + \frac{AV_n}{(1 + WACC)^n}$$

where:

**AV<sub>o</sub>** is the value of assets reasonably expected to be required for the Stand Alone provision of Access for the Train Service(s), assessed in accordance with **clause 3.2.3(c)**, at the commencement of the Evaluation Period;

**n** is the number of years in the Evaluation Period;

**t** is each year within the Evaluation Period from one to n;

**CRL<sub>t</sub>** is the Ceiling Revenue Limit for the Train Service(s) expressed as revenue that may be earned in each year of the Evaluation Period;

**C<sub>t</sub>** is the capital expenditure for assets reasonably expected to be required for the Stand Alone provision of Access for the Train Service(s) in each year of the Evaluation Period;

**M<sub>t</sub>** is the Efficient Costs for the Stand Alone provision of Access for the Train Service(s) in each year of the Evaluation Period;

**T** is the tax expense assessed through the application of the statutory tax rate for corporations to the taxable income reasonably expected to be earned through the Stand Alone provision of Access for the Train Service(s) in each year of the Evaluation Period, where such tax expense is reduced in each year by the application of the gamma factor, reflecting the market value of dividend imputation;

**AV<sub>n</sub>** is the value of assets reasonably expected to be required for the Stand Alone provision of Access for the Train Service(s), assessed in accordance with **clause 3.2.3(c)**, at the end of the Evaluation Period; and

**WACC** has the meaning given to that term in **clause 7.1**.

- (b) It will be necessary, for the purposes of determining the variables under **clause 3.2.3(a)**, to make assumptions for the Train Services(s) over the Evaluation Period based on the forecast, as reasonably determined by Queensland Rail, for the Train Service(s) (including making allowance for any changes that are expected to result from the commencement of projects that impact significantly on the Train Service(s)).

- (c) The value of assets used in **clause 3.2.3(a)** will be calculated by Queensland Rail using the Depreciated Optimised Replacement Cost (**DORC**) methodology as follows:
  - (i) optimisation - determination of the optimal configuration and sizing of network assets;
  - (ii) replacement cost - a modern engineering equivalent (MEE) is established for each asset in the optimised assets and a replacement cost established; and
  - (iii) depreciation - those MEE assets are depreciated using the standard economic life of each existing asset together with an estimate of the remaining life of each existing asset.
- (d) Queensland Rail will publish annually on its website the estimated asset value for the West Moreton System and Mt Isa Line System, as determined in accordance with **clause 3.2.3(c)**, including key assumptions used.

### 3.3 Limits on price differentiation

#### 3.3.1 Access Charge differentiation

- (a) In formulating Access Charges, Queensland Rail will have regard to a range of factors which impact on its business, including the following:
  - (i) the initial estimate of the Access Charges for the requested Access Rights as included in an Indicative Access Proposal;
  - (ii) the particular characteristics of the relevant Train Service which include axle load, speed, wheel diameter, Train length, origin and destination (including number and length of intermediate stops), departure and arrival times and days of the week;
  - (iii) the commercial impact on Queensland Rail's business, which includes factors such as:
    - (A) the terms of the Access Agreement;
    - (B) the potential for growth of the business;
    - (C) the opportunity costs to Queensland Rail;
    - (D) the consumption of Queensland Rail's resources, including Capacity;
    - (E) the credit risk associated with the business;
    - (F) the market value of the Train Path sought;
    - (G) the part of the Network relevant to the Access being sought; and

- (H) previously negotiated Access Charges agreed under the Framework, where relevant;
- (iv) logistical impacts on Queensland Rail's business, including:
  - (A) the impact on other Train Services and risk of failure of the relevant Rolling Stock Operator to perform; and
  - (B) reduced Capacity and system flexibility;
- (v) capital or other contributions by the Access Seeker to Queensland Rail's costs; and
- (vi) the cost of any Additional Capacity.

### 3.3.2 Limits on Access Charge differentiation

- (a) Subject to **clause 3.3.1** and Queensland Rail's Passenger Priority Obligations, in formulating Access Charges Queensland Rail will not have regard to the identity of the Access Seeker.
- (b) Subject to **clause 3.3.1**, in formulating Access Charges Queensland Rail will not differentiate between Access Seekers in circumstances where:
  - (i) the characteristics of the Train Services are alike; and
  - (ii) the Access Seekers are operating in the same end market.
- (c) For the purpose of **clause 3.3.2(b)**, Queensland Rail will determine whether the characteristics of the Train Services are alike having regard to matters including:
  - (i) location;
  - (ii) duration and quality of the Train Path;
  - (iii) nature of Train consist;
  - (iv) characteristics of the Train Service;
  - (v) longevity of Access; and
  - (vi) arrival and departure times of the day and week.

## 3.4 Conflict between pricing rules

If **clauses 3.1 to 3.3** cannot be applied without giving rise to a conflict between those provisions, then those provisions will be applied in the following order of precedence (from highest to lowest) to the extent of that conflict:

- (a) **clause 3.3 (Limits on price differentiation);**
- (b) **clause 3.2 (Pricing limits);** and
- (c) **clause 3.1.1 (Revenue adequacy).**

## 3.5 General

### 3.5.1 Rate review provisions

- (a) Queensland Rail or an Access Seeker may require reasonable and balanced rate review provisions in an Access Agreement that is being negotiated to enable the methodology, rates and other inputs for calculating Access Charges to be adjusted to be consistent with changes over time.
- (b) The rate review provisions referred to in **clause 3.5.1(a)**, if included in an Access Agreement, must be drafted so as to provide that, if Queensland Rail adjusts Access Charges to be consistent with changes to those matters referred to in **clause 3.5.1(a)** then Queensland Rail must also provide details of how the provisions were applied and how the adjusted Access Charges were calculated.

### 3.5.2 Take or Pay Charges

Unless otherwise agreed with Queensland Rail, Take or Pay Charges will be payable under Access Agreements. For this purpose, a **Take or Pay Charge** means a charge or other amount payable by an Access Holder to Queensland Rail under an Access Agreement in relation to the Access Holder not fully utilising its Access Rights for a specified period calculated on up to a 100% take or pay basis.

## 3.6 Consequences of contravention

- (a) If an Access Holder (**Aggrieved Access Holder**) is of the opinion (acting reasonably) that, after entering into an Access Agreement with the Aggrieved Access Holder, Queensland Rail has subsequently entered into an Access Agreement with another Access Holder for a like Train Service (where a like Train Service is one that transports the same specified commodity in the same specified geographic area), and that subsequent Access Agreement contains an Access Charge in contravention of **Part 3** of this Framework (**Pricing Contravention**), then:
  - (i) the Aggrieved Access Holder may refer the matter for arbitration in accordance with the dispute resolution process under **clause 6.1**;
  - (ii) if the Aggrieved Access Holder can demonstrate to the reasonable satisfaction of the arbitrator appointed under **clause 6.1** that the relevant Pricing Contravention has occurred, the arbitrator may direct Queensland Rail to offer the Aggrieved Access Holder either:
    - (A) the same Access Charge as the like Train Service;  
or

- (B) if the arbitrator considers it appropriate, a particular Access Charge that, in its view, neutralises the effect of the identified contravention; and
  - (iii) Queensland Rail must immediately make a legally binding offer to the Aggrieved Access Holder to give effect to the arbitrator's decision.
- (b) Queensland Rail agrees to promptly provide the arbitrator appointed under **clause 6.1** with all information requested by the arbitrator to enable it to determine whether any contravention of this **Part 3** has occurred.

## Part 4 Operating requirements

### 4.1 Network Management Principles

- (a) All Access Agreements must include obligations for the Access Holder and Queensland Rail to comply with the Network Management Principles.<sup>3</sup>
- (b) Without limitation to **clause 4.1(a)**, Queensland Rail acknowledges its obligations under each Access Agreement to:
  - (i) perform scheduling, Network Control and associated services; and
  - (ii) provide information to Access Holders, in accordance with the Network Management Principles and subject to the terms of that Access Agreement.
- (c) Each Train Service Entitlement will:
  - (i) include specified scheduling constraints (which will vary between different types of Train Services); and
  - (ii) be expressed in terms so that it can be used in the development of any MTP and DTP.
- (d) The Network Management Principles must relate to all Train Services (including passenger services provided by Queensland Rail) and must be applied reasonably and fairly subject to specific requirements of the TIA.

### 4.2 Consultation for Through-Running Trains

Queensland Rail will consult with other relevant Railway Managers in relation to:

- (a) the coordination of maintenance activities; and
- (b) the development of MTPs,

and if any of Queensland Rail's proposed changes or activities might affect other Railway Managers, Queensland Rail will use reasonable endeavours to minimise adverse effects in relation to Through-Running Trains.

### 4.3 Operating Requirements Manual

- (a) Queensland Rail will publish and maintain an up-to-date version of the Operating Requirements Manual on its website.

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<sup>3</sup> For clarity, the Network Management Principles are set out in **schedule C**.



- (b) Queensland Rail will consult with Access Holders regarding changes to the Operating Requirements Manual (other than those of a minor or administrative nature).
- (c) Subject to **clause 4.3(b)**, Queensland Rail may amend the Operating Requirements Manual from time to time in its absolute discretion.

## Part 5 Reporting

### 5.1 Annual financial report

- (a) Within six months after the end of each Year, Queensland Rail will publicly release a financial report in relation to the preceding Year showing the following in connection with the Below Rail Services:
  - (i) revenue and expenses; and
  - (ii) return on assets for each of the West Moreton System, North Coast Line System and Mt Isa Line System.
- (b) The financial report published pursuant to **clause 5.1(a)** must be accompanied by an audit certificate prepared by a suitable auditor.
- (c) The audit certificate referred to in **clause 5.1(b)** will specify whether or not the financial report has been prepared, in all material respects, in accordance with the processes outlined in the Costing Manual and consistent with the format specified in the Costing Manual.
- (d) Access Seekers and Access Holders may notify Queensland Rail of any inaccuracies or omissions which they believe have been made in the financial report published pursuant to **clause 5.1(a)**. Queensland Rail will consider relevant comments and, where necessary, publish on its website an updated report or other information to address any inaccuracies or omissions.

### 5.2 Monthly Operational Reports

#### 5.2.1 Provision of report

- (a) Queensland Rail will provide each Nominated Rolling Stock Operator and Access Holder with an Operational Report for each relevant System on which it operates or in respect of which it holds Access Rights.
- (b) Unless otherwise agreed with Queensland Rail, the Operational Report will be provided monthly by the last Business Day of each calendar month.
- (c) Nominated Rolling Stock Operators and Access Holders may notify Queensland Rail of any inaccuracies or omissions which they believe have been made in the report provided pursuant to **clause 5.1(a)**. Queensland Rail will consider relevant comments and, where necessary, provide an updated report or other information to address any inaccuracies or omissions.

#### 5.2.2 Content of report

- (a) The Operational Report will contain the following information:

- (i) on time train performance, including entry and exit performance and reasons for delays;
  - (ii) actual and scheduled Train transit times;
  - (iii) actual Train Services summary, including Trains operated compared with the Master Train Plan, cancellations and additional services;
  - (iv) Train cancellations and reasons;
  - (v) major operational, safety or environmental incidents; and
  - (vi) summary of speed restrictions in place at the end of the month.
- (b) Unless agreed by the relevant Nominated Rolling Stock Operator or Access Holder (as the case may be), confidentiality of specific operator or haulage information will be maintained by aggregating information or de-identifying the information.
  - (c) Queensland Rail, Access Holders and Nominated Rolling Stock Operators may agree to vary the information contained in the monthly Operational Reports to include additional information and delete information which is no longer useful or relevant.

### 5.3 Rail User Groups

- (a) Queensland Rail and relevant Nominated Rolling Stock Operators and Access Holders may agree to establish a Rail User Group for each of the West Moreton System, North Coast Line System and Mt Isa Line System.
- (b) The purpose of a Rail User Group is to provide a forum to review, discuss and improve rail operational issues which can affect supply chain performance. Rail operational issues may include on time performance, maintenance scheduling, Train cancellations and Network-wide operational, environmental and rail safety matters, as contained in the Operational Reports.
- (c) The frequency and rules for the conduct of meetings will be as agreed with relevant Nominated Rolling Stock Operators and Access Holders and, failing agreement, as determined by Queensland Rail (acting reasonably). Queensland Rail acknowledges that, ideally, meetings would be held either monthly or quarterly.
- (d) Queensland Rail and relevant Nominated Rolling Stock Operators and Access Holders may agree to invite other supply chain participants (including port operators, adjoining rail network owners and other Rail Managers) to relevant Rail User Groups.

## Part 6 Administrative provisions

### 6.1 Dispute and complaint resolution process

#### 6.1.1 Governing law

This Framework is governed by the laws in force in the State of Queensland.

#### 6.1.2 Alternative dispute process

- (a) Nothing in this **clause 6.1** prevents an Access Seeker and Queensland Rail from agreeing in writing (in each party's absolute discretion) to use a different dispute resolution process or different timeframes to the dispute resolution process or timeframes set out in this **clause 6.1**.
- (b) However, if an Access Seeker and Queensland Rail do agree a different dispute resolution process or timeframe (as applicable), then the different dispute resolution process or timeframe (as applicable) will be binding on them and neither of them may seek to change the dispute process (except with the written agreement of the other).

#### 6.1.3 Application of dispute and complaint resolution process

- (a) **(Disputes under this Framework)** If any dispute, complaint or question arises between Queensland Rail and an Access Seeker in relation to any provision of this Framework, a request for Access or the negotiation of an Access Agreement (**Dispute**), then:
  - (i) that Dispute will be resolved in accordance with this **clause 6.1**; and
  - (ii) either the Access Seeker or Queensland Rail may give the other a notice in writing (**Dispute Notice**) setting out details of the Dispute and that the Dispute is to be dealt with in the manner set out in this **clause 6.1**.
- (b) **(Disputes under Access Agreement)** Disputes in relation to an Access Holder or an Access Agreement must be dealt with in accordance with the provisions of the relevant Access Agreement and must not be dealt with under this Framework.
- (c) **(Disputes under Deed Poll)** Subject to clause 7.2.3 of the Deed Poll, the courts of Queensland have exclusive jurisdiction to determine any disputes arising under the Deed Poll.

#### 6.1.4 Resolution by senior management

- (a) Within five Business Days (or such longer period as agreed by the parties) after the date on which a party gives the other party a Dispute Notice (**Dispute Notice Date**), representatives of the parties (comprising their chief executive officers or nominees) must meet and use reasonable endeavours to resolve the Dispute (**Meeting**).

- (b) If the Dispute is not resolved under **clause 6.1.4(a)** within 10 Business Days from the commencement date of the Meeting, either party can refer the Dispute to arbitration under **clause 6.1.5**.

### **6.1.5 Arbitration**

- (a) All Disputes referred to arbitration under this Framework must be conducted in accordance with this **clause 6.1.5**.
- (b) The Dispute shall be submitted to arbitration in accordance with, and subject to, the Resolution Institute Arbitration Rules.
- (c) The arbitration must be effected either:
  - (i) by a single arbitrator agreed upon between the parties; or
  - (ii) in default of such agreement within 10 days after the Dispute is referred for arbitration, then by a single arbitrator nominated by the Resolution Institute.
- (d) Any party to the arbitration may be represented before the arbitrator by a member of the legal profession without the need for leave of the arbitrator.
- (e) Any arbitration commenced under this Framework may be consolidated with any other arbitration commenced under:
  - (i) this Framework (or any agreement referred to in the Framework); or
  - (ii) an Access Agreement,regardless of the Parties involved, provided that the issue(s) which each arbitrator has been asked to determine concern common questions of fact or law. Such consolidated arbitration shall be determined by the arbitrator appointed for the arbitration proceeding that was commenced first in time.
- (f) In making a determination, the arbitrator must have regard to the terms of the Framework and the following matters:
  - (i) the Framework Objective;
  - (ii) Queensland Rail's binding legal obligations and obligations under Law, including under:
    - (A) the TIA (including Passenger Priority Obligations and Preserved Train Path Obligations);
    - (B) the Rail Authority Act;
    - (C) the contract under which Transport Service Payments are made to Queensland Rail;
    - (D) service level agreements with DTMR, the Rail Authority or other Authorities; and

- (E) the Sublease (or other relevant land tenure in connection with the Network);
- (iii) Ministerial directions given to Queensland Rail under the Rail Authority Act;
- (iv) Queensland Rail's constitution;
- (v) Queensland Rail's legitimate business interests and investment in the Network;
- (vi) the legitimate business interests of Access Seekers or Access Holders (as the case may be);
- (vii) the public interest, including the benefit to the public in having competitive markets;
- (viii) the value of the service to:
  - (A) the Access Seeker; or
  - (B) a class of Access Seekers or Access Holders;
- (ix) the direct costs to Queensland Rail of providing the Access the subject of the Dispute (if relevant), including any costs of Extending the Network, but not costs associated with losses arising from increased competition;
- (x) the economic value to Queensland Rail of any Extensions, or other additional investment in the Network, that Queensland Rail or the Access Seeker has undertaken or agreed to undertake;
- (xi) the quality of the services to be provided to the Access Seeker or Access Holder who is party to the Dispute (if relevant);
- (xii) the operational and technical requirements necessary for the safe and reliable operation of the Network;
- (xiii) the economically efficient operation of the Network;
- (xiv) the effect of excluding existing assets for pricing purposes; and
- (xv) pricing principles in relation to the price of Access that the price should:
  - (A) generate expected revenue for the Train Service that is at least enough to meet the efficient costs of providing Access and include a return on investment commensurate with the risks involved;
  - (B) allow for multi-part pricing and price discrimination when it aids efficiency;

- (C) not allow Queensland Rail to set terms and conditions that discriminate in favour of the downstream operations of Queensland Rail or a Related Party of Queensland Rail, except to the extent the cost of providing Access to other operators is higher; and
- (D) provide incentives to reduce costs or otherwise improve productivity; and
- (xvi) any other matters to which the arbitrator thinks it is appropriate to have regard.
- (g) The venue for any arbitration will be Brisbane, Queensland.
- (h) Unless otherwise determined by the arbitrator, the costs of the arbitration shall be paid by the unsuccessful party.

#### **6.1.6 Urgent matters**

Nothing in this **clause 6.1** prevents a party from seeking urgent injunctive relief from the courts of Queensland.

## **6.2 Limitations**

Subject to the terms of an Access Agreement, Funding Agreement or any other agreement entered into with Queensland Rail as contemplated by this Framework, Queensland Rail is not liable to Access Holders, Access Seekers, Rolling Stock Operators or any other person for any Consequential Loss arising under or in connection with this Framework.

## **6.3 Notices**

### **6.3.1 Form of Notices**

A notice or other document relating to this Framework (**Notice**) must be in writing in English.

### **6.3.2 Means of giving Notices**

In addition to any other lawful means, a Notice may be given by being personally delivered or sent by pre-paid post or email.

### **6.3.3 Effect and receipt of a Notice**

- (a) Unless a later time is specified in it, any Notice takes effect and is given from the earlier of the time it is actually given or is taken to be given.
- (b) A Notice is taken to be given, in the case of a Notice given by:
  - (i) hand, at the time of delivery;
  - (ii) post, on the second day following the date of posting (other than a Notice acknowledging the receipt of an Access

Application which is taken to be given on the date of posting); and

- (iii) email, unless the sender receives an automated message that the email has not been delivered, when the sender receives an automated message confirming delivery to the recipient or the recipient's email server,

provided that, if a Notice is given:

- (iv) after 5:00pm in the place of receipt; or
- (v) on a day which is not a Business Day in the place of receipt, it is taken as having been given on the next Business Day.

#### **6.3.4 Process service is not affected**

This **clause 6.3** does not affect any process or other document relating to litigation, administrative or arbitral proceedings relating to this Framework (which may be served in accordance with any other applicable Law).

### **6.4 Transitional provisions**

- (a) All acts, applications, approvals, approval processes, arrangements, circumstances, conduct, decisions, determinations, dispute resolution processes, events, Force Majeure Events, matters, negotiations, notices, omissions, requests, time periods, votes, warranties or any other process or thing whatsoever (**Matter**) done, agreed, arising, given, received, undertaken, commenced or established (**Done**) or deemed to be Done under the 2016 Undertaking are deemed to be Done and, as applicable, continue under this Framework as though the Matter was Done under this Framework to the extent that this Framework provides for equivalent Matters to be Done.
- (b) Any access applications or renewal applications Done before the Effective Date and not subject to **clause 6.4(a)** are deemed to be Done and, as applicable, continue under this Framework to the extent this Framework provides for equivalent matters to be Done (for example, Access Application negotiations).

### **6.5 Severability**

- (a) Subject to **clause 6.5(b)**, if a provision of this Framework is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of the other provisions of this Framework.
- (b) **Clause 6.5(a)** does not apply if severing the provision:
  - (i) materially alters the scope and nature of this Framework; or
  - (ii) would be contrary to public policy.



## Part 7 Definitions and interpretation

### 7.1 Definitions

In this Framework:

**2016 Undertaking** means Queensland Rail's access undertaking in relation to the Network as approved by the QCA on 11 October 2016 (as amended pursuant to draft amending access undertakings approved by the QCA);

**Above Rail Services** means those activities, other than Below Rail Services, required to provide and operate Train Services, including Rolling Stock provision, Rolling Stock maintenance, non-Network Control related communications, train crewing, terminal provision and services, freight handling and marketing and the administration of those activities and **Above Rail** has a similar meaning;

**Access** means the non-exclusive right to use a specified part of the Network for the purpose of operating Train Services;

**Access Agreement** means an agreement between Queensland Rail and an Access Holder for the provision of Access;

**Access Application** means a request for Access Rights by an Access Seeker that includes:

- (a) the information referred to under **schedule B**; and
- (b) all additional or clarified information required by Queensland Rail under **clause 2.3.1**;

**Access Charge** means the charge or other amount payable by an Access Holder to Queensland Rail for the provision of Access under an Access Agreement and includes, except where the context requires otherwise, Take or Pay Charges;

**Access Funder** means a reference to an Access Seeker, an Access Seeker's Customer or an End User Access Seeker depending on which party (or parties) elects to fund the Extension (or relevant Extension Stage);

**Access Holder** means a person who holds Access Rights under an Access Agreement;

**Access Rights** means an entitlement to Access in accordance with a specified Train Service Entitlement;

**Access Seeker** means a person who is seeking new or additional Access Rights from Queensland Rail including, for clarity, a Renewal Access Seeker;

**Accredited** means accredited (including exempted from the requirement to be accredited and any conditions applying to that accreditation or exemption) in accordance with Part 3 Division 4 of the RSNL;

**Additional Capacity** means the additional capability of the Network to accommodate Train Services that would result from an Extension;

**Aggrieved Access Holder** has the meaning given to that term in **clause 3.6(a)**;

**Alternative Schedule Time** means a Train Service proposed by Queensland Rail, which is a Useable Schedule Time;

**Authorisation** means any consent, accreditation, authorisation, registration, filing, lodgement, notification, agreement, licence, certification, commission, permit, approval, exemption, ruling or other permission from, by or with an Authority required by any Law or lawfully required by any Authority;

**Authority** means:

- (a) the Crown or any minister of the Crown;
- (b) any government, federal, state or local government department or other governmental, semi-governmental or judicial body or authority including local government, a court or a tribunal;
- (c) any corporation, authority, body or force constituted for a public purpose (including any police service or force);
- (d) any holder of an office for a public purpose;
- (e) any governmental, semi-governmental or judicial person; and
- (f) any person (whether autonomous or not) who is charged with the administration or enforcement of a Law,

including any officer or agent of the foregoing acting in that capacity but excluding the Rail Authority;

**Available Capacity** means Capacity excluding:

- (a) all Committed Capacity other than, in relation to an Access Application:
  - (i) Committed Capacity that will cease being Committed Capacity prior to the time period for which Capacity is being assessed for that Access Application; and
  - (ii) Capacity that is required to comply with any Passenger Priority Obligation or Preserved Train Path Obligation that can be allocated by Queensland Rail to that Access Application in accordance with that Passenger Priority Obligation or Preserved Train Path Obligation and is not otherwise Committed Capacity;
- (b) Queensland Rail's reasonable requirements for the exclusive use of the Network for the purposes of:
  - (i) performing activities associated with the maintenance or repair of the Network, or undertaking Extensions, including the operation of work Trains; and

- (ii) attending to and performing activities associated with safety matters or the management of safety risks; and
- (c) Capacity that is not available as a result of:
  - (i) an Operational Constraint from time to time; or
  - (ii) restrictions imposed or required from time to time in accordance with any Law;

**Below Rail Delay** means a delay to a Train Service from its Scheduled Train Path in the DTP, where that delay can be solely attributed directly to Queensland Rail in its capacity as the Railway Manager, but excludes:

- (a) cancellations;
- (b) delays resulting from compliance with a Passenger Priority Obligation; and
- (c) delays resulting from a Force Majeure Event;

**Below Rail Services** means the activities associated with the ownership, provision and management of the Network, including:

- (a) the construction, maintenance and renewal of Network assets including to ensure that the Network is provided to the standard required to meet Queensland Rail's obligations to each Network Participant; and
- (b) the network management services required for the safe operation of Train Services on the Network including:
  - (i) Network Control; and
  - (ii) the implementation of procedures and systems, including supporting communications systems, for the safe operation of Train Services and protection of work sites on the Network,

and **Below Rail** has a similar meaning;

**Building Queensland Act** means the *Building Queensland Act 2015* (Qld);

**Building Queensland** means the body corporate of that name established pursuant to the Building Queensland Act;

**Business Day** means a day which is not a Saturday, Sunday or public holiday in Brisbane or, if and to the extent that this Framework expressly refers to another place, in that other place;

**Capacity** means the capability of the Network to accommodate Train Services including all Additional Capacity that is expected to result from Extensions that Queensland Rail has committed to construct;

**Capacity Analysis** means an assessment of:

- (a) whether there is sufficient Available Capacity to accommodate an Access Seeker's requested Access Rights; and

- (b) if there is not sufficient Available Capacity to accommodate the requested Access Rights, the Additional Capacity required to grant the requested Access Rights including either:
  - (i) an indicative outline of the works which would be reasonably required to complete the Extensions and an indicative estimate of the cost, standard and scope of, and timing for, the required Extension; or
  - (ii) the scope, standard and cost of the required Extension,

which provides a basis for the negotiation of an Access Agreement and Funding Agreement (if applicable);

**Capacity Information** means the information referred to under **schedule A**;

**Ceiling Revenue Limit** has the meaning given to that term in **clause 3.2.3**;

**Committed Capacity** means that portion of the Capacity that is required:

- (a) to meet Train Service Entitlements;
- (b) to comply with any Passenger Priority Obligation or Preserved Train Path Obligation;
- (c) without limitation to **paragraph (b)** of this definition, to comply with any Law requiring Queensland Rail to provide a passenger Train Service with access to the Network; or
- (d) without limitation to **paragraphs (b)** and **(c)** of this definition, to meet Queensland Rail's requirements from time to time for the operation of passenger Train Services;

**Comparison Train Length** means, in respect of a Train, the amount in metres calculated as the sum of:

- (a) the aggregate of the lengths (in metres) of each item of Rolling Stock comprising or to comprise the Train (including its locomotives) multiplied by 1.02; and
- (b) 125mm multiplied by the number of items of Rolling Stock comprising or to comprise the Train (including its locomotives);<sup>4</sup> or
- (c) such other allowance as can be reasonably substantiated as a prudent allowance;

**Competing Access Applications** means the Access Applications of two or more Access Seekers that are seeking Access Rights relating to the same traffic task<sup>5</sup>;

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<sup>4</sup> By way of explanation, the 2% and 125mm allowances are allowances for train handling accuracy and slack movement in drawgear (including free slack in the drag box, compression of the draftgear, clearance/free slack due to coupler wear and pin clearance at the yoke).

<sup>5</sup> This is a situation where if one of the Access Seekers is granted Access Rights, then the other Access Seekers will no longer need a grant of Access Rights – for example:

**Competing Access Seekers** means the Access Seekers whose Access Applications are Competing Access Applications;

**Concept Study** means a study that:

- (a) identifies possible Extension solutions for creating additional Capacity;
- (b) makes a preliminary assessment of potential costs, benefits and risks involved in those possible Extension solutions;
- (c) unless otherwise agreed by Queensland Rail and the relevant Access Seeker, includes an indicative assessment of:
  - (i) the project objectives in relation to the creation of additional Capacity; and
  - (ii) for the possible Extension solutions:
    - (A) a broad cost estimate with a +/- 50% accuracy (or such other accuracy where agreed with the funding Access Seekers (acting reasonably));
    - (B) a preliminary financial analysis and risk assessment; and
    - (C) indicative timeframes for developing and completing the possible Extension solution; and
- (d) includes a proposed scope, budget, duration and deliverables for a Pre-feasibility Study including the reasons for selecting the possible Extension solutions that will be considered during that Pre-feasibility Study;

**Confidential Information** means any information, data or other matter (in this definition, **information**) disclosed to a Recipient by, or on behalf of, a Disclosing Party where:

- (a) the disclosure of the information by the Recipient would reasonably be expected to adversely affect the commercial interests of the Disclosing Party; or
- (b) the information is marked or otherwise indicated as confidential at the time of disclosure to the Recipient,

excluding information that:

- (c) was in the Recipient's lawful possession prior to the disclosure; or

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- Where two Access Seekers are competing to provide Train Services under a rail haulage agreement with the same Customer for the same Train Service. This might occur where a mine is conducting a competitive tender for the provision of rail haulage services, there is more than one person seeking to provide those rail haulage services and each of those persons submits an Access Application.
  - Where an Access Seeker is seeking Access Rights in order to provide Train Services under a rail haulage agreement with a Customer and that Customer is also seeking Access Rights itself for the same Train Service.

- (d) whether before or after the disclosure:
  - (i) is in the public domain through means other than a breach of confidentiality by the Recipient (or anyone to whom the Recipient has disclosed it); or
  - (ii) is received by the Recipient independently from a third party who is free to disclose such information;

**Confidentiality Exception** means:

- (a) any disclosure or use of Confidential Information consented to by the Disclosing Party under **clause 2.2.1(b)(i)**;
- (b) any disclosure of Confidential Information to another person who is a party to the negotiations involving the Disclosing Party and Recipient, provided that the confidentiality obligations under this Framework continue to apply to that Confidential Information as if the disclosure was made directly by the Disclosing Party to that other person; or
- (c) any disclosure or use of Confidential Information:
  - (i) to the extent necessary to:
    - (A) the Recipient's directors, officers or employees; or
    - (B) without limiting **paragraph (c)(xii)** of this definition, the directors, officers or employees of a Related Party of the Recipient;
  - (ii) to the extent required or compelled by, or necessary to observe, administer or comply with, any Law;
  - (iii) to the extent consistent with a person's right to disclosure under any Law;
  - (iv) without limiting **paragraphs (c)(ii)** or **(iii)** of this definition, in accordance with this Framework (including the Network Management Principles) including:
    - (A) in publishing or providing MTPs and DTPs; and
    - (B) for the purpose of consultations or negotiations relating to a modification of a MTP or the scheduling of a DTP in variation from an MTP;
  - (v) to the extent necessary for the conduct of any legal proceedings (including any dispute resolution process under this Framework);
  - (vi) to the extent required under any stock exchange listing requirement or rule;
  - (vii) to the Rail Safety Regulator;

- (viii) to the Recipient's solicitors, barristers, or accountants under a duty of confidentiality (which is not waived by the Recipient without the prior written consent of the Disclosing Party);
- (ix) to the Recipient's engineering or other technical consultants and advisers to the extent necessary for the provision of advice to the Recipient (provided they are under a legal obligation not to disclose the Confidential Information to any third party);
- (x) to the Recipient's banker, financier or other financial institution, to the extent required for the purpose of raising funds or maintaining compliance with credit arrangements, if such banker or financial institution has executed a legally enforceable confidentiality deed in favour of the Disclosing Party under which they are obliged to keep the Confidential Information confidential;
- (xi) if Queensland Rail is the Recipient, to any responsible Minister (as defined in the Rail Authority Act);
- (xii) if Queensland Rail is the Recipient, to the extent necessary to:
  - (A) the Rail Authority;
  - (B) the Rail Authority's board members; and
  - (C) the Rail Authority's:
    - (1) chief executive officer, chief finance officer and other senior executives (as those terms are defined under the Rail Authority Act); and
    - (2) other officers and employees;
- (xiii) for the purpose of facilitating Network Control Directions where the disclosure of information is by Queensland Rail in the usual course of undertaking Network Control;
- (xiv) to the extent necessary by any person involved in clearing an event or incident that is preventing or affecting the operation of Train Services on the Network; or
- (xv) to the extent necessary by Queensland Rail for the purpose of responding to, managing or clearing an event or incident that is preventing or affecting, or is likely to prevent or affect, the operation of Train services on the Network;

**Consequential Loss** means:

- (a) any special, indirect or consequential loss;
- (b) any economic loss in respect of any claim in tort;

(c) any loss of profits, loss of revenue, loss of production, loss of use, loss of contract, loss of opportunity, loss of reputation, loss of goodwill, wasted overheads or any damage to credit rating whatsoever; and

(d) any loss arising out of any claim by a third party,

whether arising in contract, in tort (including negligence), under any Law or otherwise and whether present or future, fixed or unascertained, actual or contingent.

**Costing Manual** means a cost allocation manual prepared by Queensland Rail;

**Corporations Act** means the *Corporations Act 2001* (Cth);

**Customer** means a person that the Access Holder or Access Seeker is providing or intending to provide Train Services (as a Rolling Stock Operator) for or on behalf of;

**Customer Access Seeker** means, where there are Competing Access Seekers and one of those Access Seekers (**Principal Access Seeker**) is the Customer for the other Competing Access Seekers, the Principal Access Seeker;

**Daily Train Plan** or **DTP** means a plan that details the scheduled times for all Train Services and any Planned Possessions, Urgent Possessions and Emergency Possessions for a particular day on a specified part of the Network;

**Dangerous Goods** means any substance or thing defined as dangerous goods, explosives or radioactive material under a Dangerous Goods Code or any substance or thing identified as such in a relevant Access Agreement;

**Dangerous Goods Code** means:

(a) the Australian Code for the Transport of Dangerous Goods by Road and Rail;

(b) the Australian Code for the Transport of Explosives by Road and Rail; or

(c) the Code of Practice for the Safe Transport of Radioactive Material, as published and in force from time to time and as amended or replaced;

**Deed Poll** means the irrevocable deed poll signed by Queensland Rail in March 2019 in respect of this Framework;

**Disclosing Party** means, in respect of Queensland Rail and an Access Seeker, either party to the extent that information is disclosed by or on behalf of that party to the other party during the negotiation of Access (including, as applicable, in an Access Application or by the provision of information prior to an Access Application being made);

**Dispute** has the meaning given to that term in **clause 6.1.3(a)**;

**Dispute Notice** has the meaning given to that term in **clause 6.1.3(a)(ii)**;



**Dispute Notice Date** has the meaning given to that term in **clause 6.1.4(a)**;

**DORC** has the meaning given in **clause 3.2.3(c)**;

**DTMR** means the Department of Transport and Main Roads for the State of Queensland or other department from time to time responsible for the administration of the TIA;

**Duplicate Requests** has the same meaning given to that term in **clause 2.8.1(a)(iv)**;

**Effective Date** means 9 September 2020;

**Efficient Costs** means, for each Year during the Evaluation Period, the costs that would be reasonably expected to be incurred by a Railway Manager adopting efficient work practices to, amongst other things, provide, operate and maintain the Network at the required service standard and meet its obligations under Access Agreements, having regard to the circumstances in which Queensland Rail operates its business and including business and corporate overheads;

**Emergency Possession** means a Possession:

- (a) that is required to rectify a fault with the Network:
  - (i) that is considered by Queensland Rail to be dangerous or potentially dangerous to any person; or
  - (ii) where severe speed restrictions have been imposed that affect the scheduled Train Services of Access Holders; and
- (b) that Queensland Rail intends to carry out within five Business Days after the detection of the fault;

**End User Access Seeker** means an Access Seeker who is, or will be, party to an Access Agreement with a Nominated Rolling Stock Operator, granting rights to that Nominated Rolling Stock Operator for the non-exclusive utilisation of a specified section of the Network for the purposes of operating Train Services;

**Environmental Harm** means environmental harm as defined in the *Environmental Protection Act 1994* (Qld);

**Evaluation Period** means:

- (a) for an individual Train Service, the expected duration of the proposed Access Rights in respect of that Train Service; and
- (b) for a combination of Train Services, the lesser of:
  - (i) the expected duration of the longest proposed Access Rights in respect of any one of those Train Services; and
  - (ii) ten years;

**Expected Access Revenue** means:

- (a) for an individual Train Service, the revenue reasonably expected from the Access Charge from that Train Service; and

- (b) for a combination of Train Services, the aggregate revenue reasonably expected from the Access Charges for all Train Services comprising that combination of Train Services, where the expected Access Charges for different Train Service types will be developed on a basis consistent with current applicable Access Charges;

**Extension** includes an enhancement, expansion, augmentation, duplication or replacement of all or part of the Network (excluding Private Infrastructure) and “Extend” or “Extended” will have a comparable meaning;

**Extension Access Principles** means the principles outlined in **schedule E**;

**Extension Costs** means the costs that would be reasonably expected to be incurred in undertaking an Extension adopting efficient work practices to construct and commission the Extension to the required service standard and to meet the Railway Manager’s obligations under Access Agreements, including:

- (a) costs incurred by Queensland Rail and/or an Access Funder in connection with:
- (i) obtaining all Authorisations required for the purpose of the Extension, including the acquisition, lease, sublease or licence of any land;
  - (ii) designing, constructing and commissioning the Extension, including:
    - (i) amounts paid to contractors and suppliers of materials;
    - (ii) legal costs;
    - (iii) statutory fees and charges;
    - (iv) compliance costs; and
    - (v) insurance premiums; and
  - (iii) internal administrative, travel, accommodation and overhead costs to the extent that the costs relate to the Extension;
- (b) capitalised interest incurred during the construction of an Extension that Queensland Rail and an Access Funder elect to add to the cost basis of the Extension in accordance with the Financial Accounting Standards Board’s (FASB) *Statement of Financial Accounting Standards No. 34, Capitalization of Interest Cost*. Capitalised interest is to be calculated on daily resets and capitalised monthly, from the date the construction costs for an Extension are incurred by Queensland Rail and/or an Access Funder through to the date the Extension is commissioned by Queensland Rail as a part of the Network;
- (c) but for the avoidance of doubt Extension Costs do not include:

- (i) the GST component of any such costs, expenses or liabilities to the extent that Queensland Rail or an Access Funder is entitled to claim an input tax credit;
- (ii) any costs, expenses or liabilities for which Queensland Rail has been otherwise reimbursed; or
- (iii) any costs or expenses Queensland rail would routinely incur when assessing an Access Application;

**Extension Conditions** has the meaning given to that term in **clause 1.4.2(d)**;

**Extension Stage** means one of the following (as applicable):

- (a) Concept Study;
- (b) Pre-feasibility Study;
- (c) Feasibility Study; or
- (d) construction and commissioning of an Extension;

**Feasibility Study** means a study that, in relation to a preferred Extension solution identified in a Pre-feasibility Study:

- (a) details the project objective for the preferred Extension solution;
- (b) provides a detailed assessment of technical and operating requirements of the preferred Extension solution;
- (c) includes survey and geotechnical investigations to support the level of design and cost accuracy;
- (d) provides a detailed design for the preferred Extension solution (including independent design verification against Queensland Rail's standards, where Queensland Rail has elected not to fund the Extension and the relevant Access Seekers require it); and
- (e) provides the following details of the preferred Extension solution's scope:
  - (i) an optimised project configuration that would provide the targeted additional Capacity to be created by the preferred Extension solution;
  - (ii) a detailed cost estimate with a +/-10% level of accuracy (or such other accuracy where agreed with the funding Access Seekers (acting reasonably) – for example, for larger projects);
  - (iii) a detailed design and construction project schedule;
  - (iv) the basis on which the project contingency was determined;
  - (v) a financial evaluation;

- (vi) a procurement methodology and report on any previous approaches to the construction market that are relevant to the preferred Extension solution; and
- (vii) a project management plan comprised of:
  - (A) resource management plan;
  - (B) cost management plan;
  - (C) design management plan
  - (D) quality management plan;
  - (E) safety management plan;
  - (F) schedule management plan;
  - (G) risk management plan;
  - (H) project packaging and delivery strategy;
  - (I) procurement management plan;
  - (J) interface management plan;
  - (K) change management plan;
  - (L) environmental management plan;
  - (M) project phases, milestones and deliverables;
  - (N) project risk assessment report; and
  - (O) regulators notification, if needed,

and including the outcomes of any analysis and decisions made in relation to the above matters (with reasons, where applicable);

**Floor Revenue Limit** means the level of revenue that will recover the expected Incremental Cost of providing Access to the individual Train Service or combination of Train Services, as applicable;

**Force Majeure Event** means any cause, event or circumstance or combination of causes, events or circumstances which:

- (a) is beyond the reasonable control of the affected party; and
- (b) by the exercise of due diligence, the affected party was not reasonably able to prevent or is not reasonably able to overcome,

and includes:

- (c) compliance with a lawful requirement, order, demand or direction of an Authority or an order of any court having jurisdiction other than where that requirement, order, demand or direction results from any act or omission of the affected party;
- (d) a strike, lockout, boycott, stoppage, go slow, labour disturbance or other such industrial action, whether or not the affected party is a

party to such industrial action or would be able to influence or procure the settlement of such industrial action;

- (e) an act of God;
- (f) war, invasion, act of terrorists, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, military or usurped power, blockade, civil disturbance or public disorder;
- (g) equipment failure or breakdown where such failure or breakdown could not have been prevented by Prudent Practices or accident or accidental damage to any thing;
- (h) malicious damage or sabotage;
- (i) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste;
- (j) failure of electricity supply from the electricity grid;
- (k) delay, restraint, restriction, embargo or other material adverse effect arising from any act or omission of any Authority;
- (l) fire, flood, storm surge, cyclone, tornado, tsunami, earthquake, washaway, landslide, explosion, hail, lightning, severe weather conditions or other catastrophe or natural calamity;
- (m) any act or omission of any person other than the affected party or Queensland Rail (including the presence of any such person on or near the Network), without the express authorisation of Queensland Rail, that results in damage to the Network or the use or operation of the Network being prevented or impeded;
- (n) epidemic or quarantine restriction; and
- (o) delay of a supplier due to any of the foregoing whenever arising;

**Framework** means this document (including all schedules) as amended from time to time;

**Framework Objective** means the objective set out in **clause 1.2.2(a)**;

**Funding Agreement** has the meaning given to that term in **clause 1.4.2(a)(iv)**;

**Good Faith** means honestly, and with fidelity to the Framework Objective;

**Incremental Costs** means the costs of providing Access that:

- (a) would not be incurred by Queensland Rail if the individual Train Service or combination of Train Services (as applicable) did not operate on the basis of the assets reasonably required for the provision of Access, including:
  - (i) capital (renewal and expansion) costs; and
  - (ii) the cost of bringing expenditure forward in time; and

(b) are assessed as Efficient Costs;

**Indicative Access Proposal** means a non-binding written response from Queensland Rail to an Access Application which includes the information set out in **clause 2.4.2**;

**Insolvent** means, for an Access Seeker, that at any time in the last five years, one or more of the following events has happened in relation to the Access Seeker:

- (a) the Access Seeker has not been able to pay all its debts from the Access Seeker's own money as and when they become due or has stated that it is unable to do so;
- (b) the Access Seeker has been presumed to be insolvent or unable to pay its debts under any applicable legislation;
- (c) a resolution is passed that the Access Seeker be wound up or placed in liquidation voluntarily or that an administrator be appointed;
- (d) an application or order has been made for the winding up or dissolution of the Access Seeker (other than an application which is dismissed or withdrawn within ten Business Days after such proceedings were commenced);
- (e) a controller, administrator, receiver, liquidator or provisional liquidator has been appointed to the Access Seeker or in respect of any of its property;
- (f) the Access Seeker has entered into or taken any action to enter into (whether formally or informally) an arrangement (including a scheme of arrangement or deed of company arrangement), composition or compromise with, or assignment for the benefit of, all or any class of its creditors or members or a moratorium involving any of them;
- (g) a mortgagee has entered into possession of any of the Access Seeker's assets or undertakings; or
- (h) anything analogous to or of a similar effect to anything described above under the law of any relevant jurisdiction has occurred in respect of the Access Seeker,

provided that, for the purposes of this definition, a reference to the Access Seeker includes any Related Party of the Access Seeker;

**Interface Risk** means a risk to the safety of persons or property or to the environment<sup>6</sup> arising from the interaction between the Access Seeker's proposed operations and any one or more of:

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<sup>6</sup> Environmental risks include:

- risks in relation to water quality, pollution, contaminated land, nature conservation, hazardous substances and Dangerous Goods, waste and noise; and
- risks of serious environmental harm, material environmental harm and environmental nuisance as defined in the *Environmental Protection Act 1994* (Qld).

- (a) the Network;
- (b) operations on the Network (including those of other Network Participants and Queensland Rail); and
- (c) persons using the Network, persons on or near the Network or members of the public (including any activities on the Network that may affect those matters),

including risks of Environmental Harm arising out of the Rolling Stock Operator's proposed operations on the Network, provided that a reference to operations in this definition includes railway operations as defined in the RSNL;

**Interface Risk Assessment** means an assessment to:

- (a) identify all reasonably foreseeable Interface Risks;
- (b) evaluate the possibility of the Interface Risks occurring and the safety, commercial and other consequences of those Interface Risks;
- (c) identify appropriate controls and measures to adequately manage all Interface Risks (including any training required for the Access Seeker, any director, officer, employee, contractor, agent or consultant of the Access Seeker and any other person under the control or supervision of, or acting for or on behalf of, the Access Seeker);
- (d) identify the party (as between Queensland Rail and the Access Seeker) responsible for implementing such controls and measures and ensuring their on-going effectiveness;
- (e) identify the applicable Safeworking Procedures and Safety Standards to be adhered to including Queensland Rail's safety policies and procedures and the Operating Requirements Manual;
- (f) identify the minimum standards relating to the interface between Rolling Stock and the Network with which the Rolling Stock and Train Configurations must comply in order for them to be able to be operated on the relevant parts of the Network;
- (g) identify the environmental procedures and standards to be adhered to including relevant elements of Queensland Rail's environmental management system and the Operating Requirements Manual;
- (h) satisfy the requirements under the RSNL (including for an interface agreement (as defined in the RSNL)) or under any other relevant Laws relating to health or safety; and
- (i) satisfy the relevant requirements under the Operating Requirements Manual for such an assessment;

**Interface Standards** has the meaning given to that term in the Operating Requirements Manual;

**IRMP** means an interface risk management plan prepared jointly by the Access Seeker and Queensland Rail in accordance with the Operating Requirements

Manual which incorporates the outcomes of the relevant Interface Risk Assessment;

**Law** includes:

- (a) any statute, ordinance, code, law, by-law, proclamation, rule or regulation or any other subordinate legislation, whether State, Commonwealth or otherwise;
- (b) the terms of any Authorisation;
- (c) common law and equity; and
- (d) any order, circular, requirement, condition, notice, decree, decision, direction or guidelines of any Authority with which Queensland Rail, an Access Seeker, an Access Holder or other relevant person (as the case may be) is legally required to comply including any requirement to pay fees and charges,

whether now, or at any time in the future, in effect;

**Master Train Plan** or **MTP** means a plan detailing the scheduled times as advised by Queensland Rail from time to time for all Train Services and any Planned Possessions on a specified part of the Network, where such scheduled times remain unchanged from week to week;

**Material Default** means, in respect of any document referred to in **clause 2.8.3(a)(ii)**:

- (a) any breach of a term of that document that could reasonably result or have resulted in the termination of that document; or
- (b) the repeated breach of the terms of that document;

**Metropolitan System** means that part of the Network bounded to the north by (and including) Nambour station and to the west by (and including) Rosewood and including all branch lines comprised in that part of the Network;

**Meeting** has the meaning given in **clause 6.1.4(a)**;

**Mt Isa Line System** means that part of the Network bounded to the east by (and including) Stuart and to the west by (and including) Mt Isa and including all branch lines comprised in that part of the Network;

**Negotiation Cessation Notice** has the meaning given to that term in **clause 2.8.1(a)**;

**Negotiation Period** has the meaning given to that term in **clause 2.7.1(b)**;

**Network** means the rail transport infrastructure (as defined in the TIA) for which Queensland Rail is the Railway Manager and which is owned or leased by Queensland Rail or Queensland Rail's successor, assignor or subsidiary, but excluding rail transport infrastructure which is standard gauge track and



over which the transportation is effected by using standard gauge rolling stock;<sup>7</sup>

**Network Control** means the control, management and monitoring (including, as applicable, scheduling) of:

- (a) all Train Movements;
- (b) all other operations of Rolling Stock on the Network; and
- (c) any activities affecting or potentially affecting such Train Movements or Rolling Stock operation or the proper, efficient and safe operation and management of the Network;

**Network Control Directions** means instructions, directions and notifications from time to time issued by Queensland Rail for the purpose of Network Control (including, in relation to an Access Holder or an Access Agreement, preventing or minimising the effect of a material breach of the relevant Access Agreement);

**Network Controller** means a person appointed by Queensland Rail from time to time to perform Network Control for a relevant part of the Network;

**Network Management Principles** means the principles set out in **schedule C**;

**Network Participant** means:

- (a) any person who holds, or uses any other person's, rights of access to any part of the Network in relation to Train Services; and
- (b) any Accredited rail transport operator (as defined in the RSNL) who uses the Network,

including:

- (c) the relevant Access Holder (and its Nominated Rolling Stock Operator); and
- (d) any person in control of, or operating, any Private Infrastructure that is connected to the Network;

**Nominated Rolling Stock Operator** means, for an Access Holder, a Rolling Stock Operator nominated or appointed by that Access Holder in accordance with an Access Agreement for the purpose of operating Train Services for that Access Holder for specified periods in accordance with that Access Holder's Access Rights;

**North Coast Line System** means those parts of the Network bounded to the south by (and including) Nambour station, to the north by (and including)

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<sup>7</sup> Examples of rail transport infrastructure include, without limitation, railway tracks and works built for the railway (e.g. cuttings, drainage works, track support earthworks etc.); and other things associated with a railway's operation (e.g. bridges, marshalling yards, stations, overhead electrical power supply systems, tunnels, train operation control facilities etc.)

Cairns and to the west by (but excluding) Stuart and including all branch lines comprised in that part of the Network;

**Notice** has the meaning given to that term in **clause 6.3.1**;

**Operating Plan** means an operating plan setting out how the proposed Train Services are to be operated and which either:

- (a) is consistent with the template published on Queensland Rail's website; or
- (b) where the Access Seeker already has a pre-existing operating plan, includes the same information as that referred to in the template published on Queensland Rail's website;

**Operating Requirements Manual** means the document published by Queensland Rail in accordance with **clause 4.3(a)**, as amended from time to time by Queensland Rail

**Operational Constraint** means any temporary or permanent constraint on the operation or use of any part of the Network imposed by Queensland Rail (acting reasonably) as it considers necessary in relation to the proper, efficient or safe operation or management of the Network (including speed restrictions, load restrictions, Planned Possessions, Urgent Possessions, Emergency Possessions and signalling or overhead restrictions);

**Operational Report** means the operational report referred to in **clause 5.2**;

**Passenger Priority Obligations** means the obligations of a Railway Manager pursuant to sections 265 and 266 of the TIA;

**Planned Possession** means a Possession (other than an Urgent Possession or an Emergency Possession) where such Possession is entered into the MTP or DTP and adversely affects the operation of Train Services;

**Possession** means a temporary closure or occupation by Queensland Rail of part of the Network (including closure of Track or isolation of any electrical overhead traction system) for the purpose of carrying out Rail Infrastructure Operations, other work or other activities on or in the proximity of the Network;

**Pre-feasibility Study** means a study that, in relation to the possible Extension solutions identified in a Concept Study for consideration in this stage of the study process (**Possible Extensions**):

- (a) confirms the project objectives in relation to the creation of additional Capacity;
- (b) assesses each of the Possible Extensions in respect of:
  - (i) the technical and operating requirements for that Possible Extension;
  - (ii) an indicative assessment of the additional Capacity that might reasonably be expected by implementing that Possible Extension; and

- (iii) a preliminary risk assessment for that Possible Extension;
- (c) includes preliminary survey and geotechnical investigation to support the level of design and cost accuracy required for the study;
- (d) identifies as the preferred Extension solution to be studied under a Feasibility Study, the Possible Extension that is fit-for-purpose and the most efficient and effective solution; and
- (e) provides:
  - (i) a high level engineering assessment of the preferred Extension solution in respect of the total cost of ownership, after allowing for risk, for the purpose of minimising that total cost of ownership;
  - (ii) analysis of the technical and economic feasibility of the preferred Extension solution and identifies why it is preferred;
  - (iii) a project budget, with a +/-20% level of accuracy (or such other accuracy where agreed with the funding Access Seekers (acting reasonably));
  - (iv) an indicative design and construct schedule for the preferred Extension solution that includes time tolerances; and
  - (v) potential benefits (including Capacity, maintenance and operating benefits) of the preferred Extension solution; and
- (f) includes a proposed scope, budget, duration and deliverables for a Feasibility Study,

and including the outcomes of any analysis and decisions made in relation to the above matters (with reasons, where applicable);

**Preliminary Information** means the information referred to in **clause 1 of schedule A** (as applicable) and, where that information is published on Queensland Rail's website, that information as published on that website from time to time;

**Preserved Train Path Obligations** means the obligations of a Railway Manager pursuant to section 266A of the TIA;

**Pricing Contravention** has the meaning given to that term in **clause 3.6(a)**;

**Private Infrastructure** means rail transport infrastructure (as defined in the TIA), including but not limited to the track, signalling and electrical overhead traction system (if applicable) for which neither Queensland Rail nor Queensland Rail's successor, assignor or subsidiary is the Railway Manager;

**Prudent Practices** means the exercise of that degree of diligence, care, foresight, prudence and skill that would reasonably be expected from a competent, skilled and experienced person in the same type of undertaking in the same or similar circumstances;

**Queensland Rail** means Queensland Rail Limited ACN 132 181 090;

**Queensland Rail Cause** means, subject to the exceptions set out below, Queensland Rail's inability to make the Network available for the operation of Train Services in accordance with a Train Service Entitlement as a result of:

- (g) an Operational Constraint;
- (h) a Force Majeure Event (to the extent that the Force Majeure Event prevents Queensland Rail from providing Access to the Network);
- (i) the derailment of any Train caused primarily by an act or omission of Queensland Rail; or
- (j) any other action by Queensland Rail other than Queensland Rail complying with an obligation in accordance with any applicable Law or the relevant Access Agreement,

except where Queensland Rail's inability to make the Network available for the operation of Train Services in accordance with a Train Service Entitlement is primarily attributable to the Rolling Stock Operator, another Network Participant (other than Queensland Rail) or any other person;

**Rail Authority** means the authority established under section 6 of the Rail Authority Act;

**Rail Authority Act** means the *Queensland Rail Transit Authority Act 2013* (Qld);

**Rail Infrastructure Operations** means:

- (a) the construction of any rail transport infrastructure (as defined in the TIA) to improve, upgrade, expand, extend, replace or vary the whole or any part of the Network;
- (a) any management, maintenance or operational activities relating to the Network, including the improvement, maintenance, repair, modification, installation, removal, renewal or decommissioning of the whole or any part of the Network; and
- (b) any inspections or investigations of the Network;

**Railway Manager** means an Accredited rail infrastructure manager (as defined in the RSNL);

**Rail Safety Regulator** means the National Rail Safety Regulator or the Acting National Rail Safety Regulator appointed under Part 2 Division 2 of the RSNL;

**Rail User Group** means each of the rail user groups referred to in **clause 5.3(a)**;

**Recipient** means, in respect of Queensland Rail and an Access Seeker, either party to the extent that it receives information which is provided by or on behalf of the other party during the negotiation of Access (including, as applicable, in an Access Application or by the provision of information prior to an Access Application being made);

**Related Party** means a related body corporate as defined in the Corporations Act and, for Queensland Rail, includes the Rail Authority;

**Renewal** means, in relation to an Access Holder's Access Rights that are to expire, the Renewal Access Seeker entering into an Access Agreement to hold or continue to hold Access Rights for a further term commencing immediately after the expiry of the relevant Access Rights that have the same origin and destination, require the same or less Train Path requirements and otherwise are substantially equivalent to the relevant Access Holder's Access Rights immediately prior to their expiry;

**Renewal Access Seeker** means, in relation to an Access Holder's Access Rights that are to expire:

- (a) the Access Holder;<sup>8</sup>
- (b) an Access Holder's Rolling Stock Operator; or
- (c) another Rolling Stock Operator competing for the relevant Access Rights;

**Renewal Application** means an Access Application by a Renewal Access Seeker solely for a Renewal;

**Rolling Stock** means rolling stock (as defined under the RSNL) that operates on or uses Track;

**Rolling Stock Operator** means a rolling stock operator (as defined under the RSNL) who operates or will operate Rolling Stock on the Network;

**RSNL** means the Rail Safety National Law (Queensland) as defined in the *Rail Safety National Law (Queensland) Act 2017* (Qld);

**Safety Standards** has the meaning given to that term in the Operating Requirements Manual;

**Safeworking Procedures** has the meaning given to that term in the Operating Requirements Manual;

**Scheduled Train Path** means a Train Path that has been scheduled by Queensland Rail in a Train Schedule;

**Stand Alone provision of Access** means the provision of Access as if the relevant Train Service(s) was (were) the only Train Service(s) provided with Access by Queensland Rail;

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<sup>8</sup> For example, the mine operator who uses the Access Rights to transport coal from its mine is the Access Holder.

**Standard Access Agreement** means a pro forma Access Agreement set out in **schedule D**;

**System** means:

- (a) the Metropolitan System;
- (b) the Mt Isa Line System;
- (c) the North Coast Line System; and
- (d) the West Moreton System,

or any of them, as the context requires.

**Sublease** has the meaning given to that term in the Standard Access Agreement;

**Take or Pay Charge** has the meaning given to that term in **clause 3.5.2**;

**Term** means the period beginning on the Effective Date and ending on the Terminating Date;

**Terminating Date** means the earlier of:

- (a) the date which is 5 years from the Effective Date;
- (b) the date on which use of all of the Systems is a service declared under Part 5, Division 2 of the *Queensland Competition Authority Act 1997* (Qld); and
- (c) the date on which use of each of the Systems are services declared under Part 5, Division 2 of the *Queensland Competition Authority Act 1997* (Qld).

**TIA** means the *Transport Infrastructure Act 1994* (Qld);

**Through-Running Train** means a Train that operates both on the Network (in accordance with a Train Service Entitlement) and Private Infrastructure over its journey from a specified origin to a specified destination;

**Track** means that part of the Network comprising the rail, ballast, sleepers and associated fittings;

**Train** means any self-propelled configuration of Rolling Stock operating as a unit on Track;

**Train Configuration** means the description of the combination of Rolling Stock comprising a Train including the identification number, gross mass and tare mass of individual items of Rolling Stock and the order in which those Rolling Stock items are placed in the Train;

**Train Movement** means the operation of a Train on the Network by a Network Participant;

**Train Path** means the use of a specified portion of the Network, which may include multiple sections in sequential order, at a specified time;

**Train Service** means a Train operating on the Network from a specified origin to a specified destination;

**Train Service Entitlement** means an Access Holder's entitlement under an Access Agreement to operate, in accordance with that Access Agreement, a specified number and type of Train Services over the Network within a specified time period and in accordance with specified scheduling constraints for the purpose of either carrying a specified commodity or providing a specified transport service;

**Train Schedule** means the train diagrams, yard schedules, terminal schedules and any other form of train timetable, plan or schedule prepared by Queensland Rail in accordance with the Network Management Principles showing the programmed times of arrival or departure for Train Movements at specified locations on the Network;

**Transfer** means the relinquishment by an Access Holder under an Access Agreement of all or part of its Access Rights in order to create Available Capacity that can be used to grant new Access Rights to that Access Holder (who will be an Access Seeker in relation to those new Access Rights) or to an Access Seeker nominated by that Access Holder;

**Transferee** means the relevant Access Seeker for a Transfer;

**Transport Service Payments** means payments to Queensland Rail from DTMR or any other Authority for specified Below Rail Services for nominated sections of the Network;

**Urgent Possession** means a Possession:

- (a) that is required to correct problems in relation to the Network that are considered by Queensland Rail to be potentially dangerous to persons or property; and
- (b) that Queensland Rail intends to carry out within less than three months after the detection of the problem,

other than an Emergency Possession;

**Useable Schedule Time** means a proposed Train Service that considers an Operator's ability to utilise Rolling Stock and crew (as contemplated by the Operating Plan) to operate on that proposed Train Service. Queensland Rail must also consider, as part of the development of the proposed Train Service, the Operator's ability to operate any connecting Train Services;

**WACC** means the allowable rate of return for the Network consistent with efficient financing costs of a benchmark efficient rail infrastructure owner with a similar degree of risk as that which applies to Queensland Rail;

**West Moreton System** means that part of the Network comprising the rail corridor from (and including) Rosewood to Miles, excluding all branch lines not directly connecting coal mine loading facilities to that rail corridor; and

**Year** means the period of 12 months commencing 1 July.

## 7.2 Interpretation

- (a) In this Framework, unless the context otherwise requires:
- (i) words in the singular include the plural and vice versa;
  - (ii) any gender includes the other genders;
  - (iii) if a word or phrase is defined, its other grammatical forms have corresponding meanings;
  - (iv) “include”, “includes” and “including” must be read as if followed by the words “without limitation”;
  - (v) a reference to a person includes a partnership, joint venture, unincorporated association, corporation, government or statutory body or authority and any other entity recognised by law;
  - (vi) where:
    - (A) a group of persons are in a partnership, an unincorporated joint venture, an unincorporated association or other similar arrangement; and
    - (B) that group of persons together execute or seek to execute an agreement (including an Access Agreement or a rail haulage agreement) or such an agreement is executed or is sought to be executed for or on behalf of that group of persons,then that group of persons is deemed to constitute a single person, Customer, Access Seeker or Access Holder (as applicable);
  - (vii) a reference to:
    - (A) “dollars” or “\$” is a reference to Australian currency;
    - (B) a person includes the person’s legal personal representatives, successors, permitted assignees and persons substituted by novation;
    - (C) employees includes secondees;
    - (D) constructing includes all associated activities such as designing, installing, procuring and commissioning;
    - (E) an Extension includes any part of that Extension;
    - (F) conduct includes:
      - (1) a benefit, remedy, discretion, authority or power; and



- (2) any omission and any representation, statement or undertaking, whether or not in writing;
- (G) time is to local time in Brisbane;
- (H) a month is a reference to a calendar month;
- (I) subject to **clause 7.2(a)(vii)(J)**, a “Part”, “clause” or “schedule” is a reference to the corresponding Part or clause found in **Part 1 to Part 7** of this Framework or “schedule” to this Framework as amended or replaced from time to time;
- (J) in a schedule to this Framework:
  - (1) a “Part” or “clause”, is a reference to a Part or clause of that schedule unless otherwise stated; and
  - (2) a “Part” or “clause” of this Framework, is a reference to a Part or clause found in **Part 1 to Part 7** of this Framework;
- (K) this or any other document or agreement includes the document or agreement as varied, amended or replaced and despite any change in the identity of the parties to that document or agreement;
- (L) any legislation includes subordinate legislation under it and includes that legislation and subordinate legislation as modified or replaced; and
- (M) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes facsimile transmissions;
- (viii) if the date on or by which any act must be done under this Framework is not a Business Day, the act must be done on or by the next Business Day;
- (ix) where time is to be calculated by reference to a day or event, that day or the day of that event is excluded;
- (x) if a term used in this agreement has the meaning given, or as defined, under any legislation, then that term has the meaning:
  - (A) given, or as defined, under that legislation from time to time; and
  - (B) where that legislation ceases to define that term, last given, or as last defined, under that legislation; and

- (xi) if there is any inconsistency between matters contained in a Schedule or the Preamble and **Part 1 to Part 7** of this Framework, the provisions in **Part 1 to Part 7** of this Framework prevail.
- (b) Headings do not affect the interpretation of this Framework.
- (c) To the extent that Queensland Rail's obligations under this Framework are or become inconsistent with Queensland Rail's obligations under any Law, this Framework does not apply to the extent of that inconsistency.
- (d) If this Framework obliges Queensland Rail to provide any information, reports, documents or other material (in whatever form) (**Information**) to any person then, despite any other provision in this Framework, Queensland Rail is not required to comply with that obligation if Queensland Rail claims:
  - (i) on the ground of self incrimination, a privilege Queensland Rail would be entitled to claim against providing the Information were Queensland Rail a witness in a prosecution for an offence in the Supreme Court; or
  - (ii) that legal professional privilege applies in respect of that Information.
- (e) Despite any other provision in this Framework, this Framework does not expressly or impliedly waive any claim that Queensland Rail may have to legal professional privilege in respect of any information, reports, documents or other material (in whatever form).
- (f) The preamble to this Framework does not affect the interpretation of this Framework and no reference may be made to that preamble to interpret this Framework.

# Schedule A – Preliminary Information and Capacity Information

## 1 Preliminary Information

The following preliminary information will be made available on Queensland Rail's website for Access Seekers:

- (a) **(Introduction)** The criteria for the use of data and the purpose of the preliminary information.
- (b) **(Civil Infrastructure)** A description of the railway and Track and any operational constraints, e.g. grades and curves.
- (c) **(Telecommunications)** A description of the communication system used.
- (d) **(Electric Traction)** A general system description.
- (e) **(Interface Requirements)** Information on track gauge, axle loads, train speeds, Rolling Stock gauge and noise limits.
- (f) **(Locality Information)** Terrain information and climatic conditions and resultant system disruptions.
- (g) **(Committed Corridor Upgrades)** Identification of any relevant committed corridor upgrades.
- (h) **(Maps and Drawings)** Corridor maps and Line Diagrams including plans specifying Track Segments and Mainline Paths.
- (i) **(Level Crossings)** The number of level crossings and the type of protection used.
- (j) **(Train Operations)** Sectional running times (calculated based on the projected average sectional running times), maximum Train lengths incident recovery times.
- (k) **(Systems)** A description of operational, safeworking and signalling systems.
- (l) **(Interface Standards)** A copy of the relevant Interface Standards.
- (m) **(Commercial Information)** The Standard Access Agreement (if any).

## 2 Capacity Information

For the purpose of **clause 2.7.2** of this Framework, the Capacity Information is as follows:

- (a) Master Train Plan; and
- (b) the relevant current Daily Train Plan (being the current Daily Train Plan for the relevant day (or days) of the week) for the relevant part of the

Network<sup>9</sup> which, for clarity, will be complete and will not be redacted in any way.

### 3 Capacity Information for an Extension

- (a) For the purpose of **clause 2.7.2(a)(ii)** of this Framework, the Capacity Information must identify if an Extension is required to the Network to provide the access rights sought in the Access Application.
- (b) If an Extension is required then Queensland Rail must during the Negotiation Period provide detailed information on the required Extension, including:
  - (i) the capacity analysis, capacity modelling assumptions, and the modelling simulation outputs that underpin Queensland Rail's decision to require an Extension;
  - (ii) either:
    - (A) an outline of the investigations and works in relation to identifying and undertaking the Extension and indicative estimate of the cost of, and timing for, such investigations and works; or
    - (B) the proposed scope, standard and cost of the rail transport infrastructure (as defined in the TIA) works that will comprise the required Extension;
  - (iii) any information on the Extension that Queensland Rail relied on in developing its response to **3(b)(ii)** above; and
  - (iv) reasons why Queensland Rail has identified the proposed rail transport infrastructure works as comprising an Extension.
- (c) Queensland Rail will provide ancillary information for the Access Seeker, including:
  - (i) the operational integrity of the relevant corridor that is to be extended;
  - (ii) minimum technical, engineering and Safety Standards required for the required Extension;
  - (iii) design specifications, infrastructure standards for the Network near to or adjoining the required Extension;
  - (iv) planning procedures developed and maintained by Queensland Rail which need to be taken into account in considering whether to proceed with an Extension;

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<sup>9</sup> The relevant current Daily Train Plan provided will not show the whole Network. However, Queensland Rail will provide sufficient information about all Train Services that potentially impact on Existing Capacity.

- (v) all necessary authorisations reasonably required by Queensland Rail to proceed with the Extension;
  - (vi) all rights and interests in land that, in Queensland Rail's opinion, are reasonably required and the acquisition terms that would be satisfactory to Queensland Rail, acting reasonably; and
  - (vii) subject to the Access Seeker having entered into an applicable confidentiality agreement in accordance with **clause 2.2.2(b)** of the Framework with Queensland Rail, the protocols, standards and procedures an Access Seeker is required to comply with under the terms of the Standard Access Agreement.
- (d) Queensland Rail will also provide:
- (i) the indicative funding requirements for it to assist the Access Seeker to develop the required Extension through the relevant stage of the Access Seeker's investment process; and
  - (ii) a first draft funding agreement that is consistent with the Extension Access Principles in **schedule E** of this Framework.

# Schedule B – Access Application information requirements

## 1 Application

- (a) Without limiting the information requirements that an Access Application must satisfy in accordance with this Framework, an Access Application must satisfy the information requirements set out in this **schedule B**.
- (b) This **schedule B** applies as follows:
  - (i) where the proposed Access Application is solely for a Transfer in respect of Transferred Access Rights, **clause 7** applies (and, except as expressly referred to in **clause 7**, **clauses 2 to 6** and **clause 8** do not apply);
  - (ii) where the proposed Access Application is solely a Renewal Application, **clause 8** applies (and, except as expressly referred to in **clause 8**, **clauses 2 to 7** do not apply); and
  - (iii) subject to **clauses 1(b)(i)** and **(ii)**, for all other proposed Access Applications, **clauses 2 to 6** apply with **clauses 7** and **8** only applying to the extent that (if it does at all) the Access Application also in part relates to a Transfer in respect of Transferred Access Rights or is in part a Renewal Application.
- (c) Access Applications must be sent to the address nominated in the application forms published on Queensland Rail's website.

## 2 Access Seeker and Customer details

Relevant identity and contact details including:

- (a) the Access Seeker's name and contact details;
- (b) if the Access Seeker has a Customer, that Customer's name and contact details; and
- (c) if the Access Seeker or its Customer is an unincorporated joint venture, the names and contact details for all of the joint venture participants.

## 3 Ability to use Access Rights

Information needed to assess matters referred to in **clause 2.8.1(a)** of this Framework including the following information about matters to be taken in account under **clause 2.8.1(a)** of this Framework:

- (a) where the Access Seeker seeks Access Rights that will be used for a person who is the Access Seeker's Customer, information evidencing that the Access Seeker is reasonably likely to have such a Customer at the commencement date of the Access Agreement.

- (b) whether the Access Seeker has secured, or is reasonably likely to secure:
  - (i) the rights required to enter and leave the Network (for example, rights to unload at its destination); and
  - (ii) if applicable, a rail haulage agreement for the operation of Train Services referred to in its Access Application,
    - including within timeframes consistent with the Access Application;
- (c) whether the Access Seeker or its Nominated Rolling Stock Operator has sufficient facilities (including Rolling Stock, provisioning facilities, maintenance facilities and storage facilities) to enable it to run Train Services to fully utilise the Access Rights sought; and
- (d) where the Access Rights are sought to transport the output of a mine, whether the anticipated output of the mine is sufficient to support full utilisation of the Access Rights sought.

## 4 Form of Access Agreement

Nominate whether the form of Access Agreement that the Access Seeker is seeking will be principally based on the form of the Standard Access Agreement or, where a different form is proposed, a description of (including the contractual outcomes being sought) and reasons for the proposed form.

## 5 Coal and freight Train Services

### 5.1 General Train Service details

Information describing the requested Train Services, including:

- (a) the route of operation (include diagram if necessary) including origin, destination, loading facility, unloading facility and depot;
- (b) the proposed commencement date for Train Services;
- (c) the proposed term of the Access Agreement;
- (d) the method of transporting freight (e.g. containers, louvered wagons, bulk wagons);
- (e) a description of freight/commodity;
- (f) the net tonnes of product per annum for each Year of operation, represented on a monthly basis or, where monthly railings are not even, the proposed distribution of net tonnes; and
- (g) the proposed non standard operating modes or methods (if applicable);

### 5.2 Timetable requirements

Information setting out the timetabling requirements, including:

- (a) whether the Access Rights sought are for a new Train Service or a variation to an existing Train Service for the Access Seeker;

- (b) required frequency of Train Services, including weekly requirements, seasonality variations and any trends over the proposed Access Agreement term;
- (c) the preferred departure and arrival windows on preferred days of operation, separately for forward and return journeys, where relevant; and
- (d) the requirements for shunting or dwell times<sup>10</sup> enroute, separately for forward and return journeys.

### **5.3 Rolling Stock and above rail operational details**

For all Access Seekers other than an End User Access Seeker, information describing the Rolling Stock and Train Configurations, including:

- (a) the proposed number of locomotives per Train;
- (b) the proposed number of wagons per Train;
- (c) the type and class of locomotive;
- (d) the mass of each locomotive (includes full sand and fuel load);
- (e) the type and class of wagons;
- (f) the nominal gross mass of wagon;
- (g) the tare mass of each wagon;
- (h) if carrying containers:
  - (i) the tare mass per container; and
  - (ii) the average number of containers per wagon;
- (i) the average proposed load (of product) per wagon;
- (j) the maximum proposed gross tonnes per wagon;
- (k) the maximum axle load of locomotives and wagons;
- (l) the gross tonnes and the nominal payload per Train Service, separately for forward and return journeys;
- (m) the Comparison Train Length for the proposed Train;
- (n) the proposed sectional run times;
- (o) the proposed maximum dwell times, time at loading facility, time at unloading facility and time at depot; and
- (p) the proposed requirements (if any) for the short-term storage of Trains (excluding individual items of Rolling Stock) on the Network at locations

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<sup>10</sup> A dwell time is the time period from when the Train Service arrives at a specified point on its journey until it has completed all relevant activities and is ready to depart from that point and has advised the relevant Network Controller accordingly.



specified by Queensland Rail during Possessions or during the operation of a Train Service.

#### **5.4 Infrastructure requirements**

Details of any Extensions and Private Infrastructure and any other rail transport infrastructure that may be necessary for operation of the Train Service, where known.

## **6 Passenger Train Services**

### **6.1 General Train Service details**

Information describing the Train Services, including:

- (a) the route of operation (including a diagram, if necessary);
- (b) the proposed term of the Access Agreement;
- (c) the type of passenger traffic (e.g. long distance, commuter, tourist);
- (d) the proposed sectional run times; and
- (e) the proposed requirements (if any) for the short-term storage of Trains (excluding individual items of Rolling Stock) on the Network at locations specified by Queensland Rail during Possessions or during the operation of a Train Service.

### **6.2 Timetable requirements**

Information setting out the timetabling requirements, including:

- (a) whether the Access Rights sought are for a new Train Service, or variation to an existing Train Service, for the Access Seeker;
- (b) whether the Access Rights sought are for a new Train Service, or a variation to an existing Train Service, for the Network;
- (c) the required frequency of Train Services, including weekly requirements, seasonality variations and any trends over the proposed Access Agreement term;
- (d) the preferred departure and arrival windows on preferred days of operation, separately for forward and return journeys; and
- (e) the requirements for shunting or dwell times<sup>11</sup> enroute, separately for forward and return journeys.

### **6.3 Rolling Stock details**

Information describing the Rolling Stock, including:

- (a) the total number of locomotives per Train;

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<sup>11</sup> A dwell time is the time period from when the Train Service arrives at a specified point on its journey until it has completed all relevant activities and is ready to depart from that point and has advised the relevant Network Controller accordingly.

- (b) the total number of carriages per Train;
- (c) the total number of passenger multiple units (**PMU**) per Train;
- (d) the type and class of locomotive;
- (e) the mass of each locomotive (including full sand and fuel load);
- (f) the type and class of carriage;
- (g) the nominal gross mass of each carriage;
- (h) the type and class of PMU;
- (i) the average gross mass of PMU;
- (j) the maximum number of vehicles including locomotives, carriages or units within PMU;
- (k) the maximum axle load of locomotives and carriages;
- (l) the Comparison Train Length for the proposed Train;
- (m) the gross tonnes per Train Service, separately for forward and return journeys; and
- (n) the maximum operation speed separately for loaded and empty Trains.

#### **6.4 Infrastructure requirements**

Details of any Extensions and Private Infrastructure and any other rail transport infrastructure that may be necessary for operation of the Train Service, where known.

## **7 Transfers**

Information relating to the Transfer including:

- (a) relevant identity and contact details relating to the Transferee including:
  - (i) the Transferee's name and contact details;
  - (ii) if the Transferee has a Customer, that Customer's name and contact details; and
  - (iii) if the Transferee or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;
- (b) where the Transferee is not the current Access Holder (**Transferor**) who intends to undertake the relevant Transfer, relevant identity and contact details relating to the Transferor including:
  - (i) the Transferor's name and contact details;
  - (ii) if the Transferor has a Customer, that Customer's name and contact details; and
  - (iii) if the Transferor or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;

- (c) details identifying the Transferor's Access Agreement, and the Access Right under it (including by reference to origin and destination), to which the Transfer relates;
- (d) details referred to in **clauses 3 and 4** with reference to the proposed Transfer;
- (e) the proposed date and term for the Transfer;
- (f) the information referred to in **clause 5.1 to 5.3** or **clauses 6.1 to 6.3** (as applicable);
- (g) evidence that the Transferor's Customer and the Transferee's Customer have been notified of, and have agreed to, the Transfer (except where the Transferor's Customer initiated the Transfer by notice to Queensland Rail); and
- (h) any other information that:
  - (i) it is necessary to provide under this Framework; or
  - (ii) is otherwise necessary and has been notified to the Access Seeker by Queensland Rail.

Transferors and Transferees should note that where only part of the Transferor's Access Rights are to be relinquished as a part of the Transfer, that relinquishment will only occur based on whole Train Paths from origin to destination.

## 8 Renewals

Information relating to the Renewal including:

- (a) relevant identity and contact details in relation to the Renewing Access Seeker including:
  - (i) the Renewing Access Seeker's name and contact details;
  - (ii) if the Renewing Access Seeker has a Customer, that Customer's name and contact details; and
  - (iii) if the Renewing Access Seeker or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;
- (b) where the Renewing Access Seeker is not the current Access Holder, relevant contact details for the current Access Holder including:
  - (i) the current Access Holder's name and contact details;
  - (ii) if the current Access Holder has a Customer, that Customer's name and contact details; and
  - (iii) if the current Access Holder or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;

- (c) a description identifying the current Access Agreement to which the Renewal relates;
- (d) details referred to in **clauses 3 and 4** with reference to the proposed Renewal;
- (e) whether the Renewal is for all or part of the relevant existing Access Rights and, where for part only, details of the relevant part;
- (f) details of all changes (if any) in:
  - (i) the information referred to in **clause 5.1 to 5.3** or **clauses 6.1 to 6.3** (as applicable)<sup>12</sup>; and
  - (ii) the Operating Plan,from that relating to the relevant existing Access Agreement.<sup>13</sup>

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<sup>12</sup> A Renewal will not require any Extension therefore **clauses 5.4** and **6.4**, as applicable, are not relevant.

<sup>13</sup> It should be noted that a Renewal only arises where a Renewing Access Seeker wishes to hold or to continue to hold (as applicable) Access Rights equivalent to the relevant existing Access Rights. The greater the nature and degree of change the greater the risk that the relevant Access Application will not be a Renewal.

# Schedule C – Network Management Principles

## 1 Application

Unless otherwise required by any Law, the Network Management Principles set out in this **schedule C** will apply in relation to all Train Services.

## 2 Repairs, maintenance and upgrading of the Network

- (a) Subject to **clauses 2(b) and 2(c)** below, Queensland Rail may at any time, without notice to a Rolling Stock Operator, perform repairs, maintenance or upgrading of the Network, carry out any new work on the Network or take Possession.
- (b) If repairs, maintenance or upgrading of the Network, the carrying out of new work on the Network or taking of Possession are reasonably likely to materially affect Scheduled Train Paths, Queensland Rail will, prior to commencement of the works:
  - (i) take all reasonable steps to minimise any disruption to the Scheduled Train Paths;
  - (ii) notify the relevant Rolling Stock Operator of the works as soon as reasonably practicable; and
  - (iii) use reasonable endeavours to provide an alternative Train Path, but need not obtain the Rolling Stock Operator's consent to such repairs, maintenance, upgrading, new work or Possession.
- (c) Queensland Rail will consult with the relevant Rolling Stock Operator a reasonable time before taking Possession (except in the case of an emergency) with a view to efficient Possession planning and minimising disruption to Train Services.
- (d) Nothing in this **clause 2** obliges Queensland Rail to pay compensation to Access Holders whose Train Services are adversely affected.

## 3 Network Control Principles

### Objective

- (a) The prime objective of Network Control is to facilitate the safe running of Train Services, and the commencement and completion of Possessions, as scheduled in the DTPs.

**Access Holders**

- (b) Access Holders must ensure that Above Rail issues, including Train crewing, locomotive and wagon availability and loading and unloading requirements, are appropriately managed to ensure that such issues do not adversely affect a DTP.

**Provision of Network Control information**

- (c) Queensland Rail will provide an Access Holder with:
  - (i) real time Network Control information that indicates actual running of that Access Holder’s Train Services against the relevant DTP;
  - (ii) on request and subject to reasonable terms and conditions, access to Network Control diagrams that indicate actual running of that Access Holder’s Train Services against the relevant DTP;
  - (iii) on request and subject to reasonable terms and conditions, information about the type of Train Services operated on the same network (including, for example, coal, freight, passenger and livestock Train Services) to assist Access Holders to determine whether the Network Controller is applying the principles in this **schedule C** in a consistent manner between Access Holders; and
  - (iv) on request, the Monthly Train Plan.

**Traffic Management Decision Making Matrix**

- (d) Where the operation of a Train Service differs from a DTP, the Network Controller will apply the Traffic Management Decision Making Matrix in **clause 3(f)**, for the purposes of giving a Network Control Direction.
- (e) In the context of the Traffic Management Decision Making Matrix the meaning of “On Time”, “Ahead” and “Late” are determined by the scheduling of paths in the relevant DTP. For example, if a Train Service is travelling in accordance with the path allocated to it in the relevant DTP, it is running “On Time”.
- (f) The Traffic Management Decision Making Matrix is as follows:

|   |   | <b>Train Service A - Current Status</b>           |                                     |
|---|---|---|-------------------------------------|
|   |   | <b>Train Service Running “On Time” or “Ahead”</b> | <b>Train Service Running “Late”</b> |
| <b>Train Service B - Current Status</b> | <b>Train Service Running “On Time” or “Ahead”</b> | Rule 2  | Rule 1                              |
|   | <b>Train Service Running “Late”</b>               | Rule 1  | Rule 3                              |

- Rule 1. The “Late” Train Service may be given priority provided that the other Train Service will still meet its “On Time” objective, subject to the principles for managing deviations from the DTP in **clause 3(g)**.
- Rule 2. Both Train Services must meet their “On Time” objective.
- Rule 3. Give priority to the Train Service that (in the Network Controller’s opinion), based on its performance, will lose the least time (or make up more time) and hold a greater gain, subject to the principles for managing deviations from the DTP in **clause 3(g)**.

**Principles for managing deviations from a DTP**

- (g) It is necessary for Network Controllers to have sufficient discretion to take into account the varying objectives of different traffic types, and the circumstances of a particular part of the Network, in assessing the priority to be given to Train Services and other activities on the Network. Network Controllers will apply the following principles in managing deviations from a DTP:
  - (i) a Train Service may be given priority over other Train Services if it is reasonably necessary to do so:
    - (A) due to, or to avoid, an accident, emergency or incident relating to any part of the Network;
    - (B) to remedy, or to mitigate or avoid, the operation of Train Services on any part of the Network being congested, prevented or otherwise materially adversely affected;
    - (C) to remedy, or to mitigate or avoid, any Emergency Possession or Urgent Possession on any part of the Network being prevented or otherwise materially adversely affected; or
    - (D) to ensure the safe operation of any part of the Network;
  - (ii) subject to **clause 3(g)(i)**, passenger Train Services may be given priority over other Train Services if the Network Controller reasonably believes that this is necessary to seek:
    - (A) to bring a “Late” passenger Train Service back to being “On Time” or closer to being “On Time”;
    - (B) to prevent that “Late” passenger Train Service becoming “Later”; or
    - (C) to avoid an “On Time” or “Ahead” passenger Train Service that is operating, is scheduled to operate, or will be scheduled to operate in the Metropolitan

Network during any peak period<sup>14</sup> from becoming a “Late” passenger Train Service;

- (iii) subject to **clause 3(g)(i)**, livestock Train Services may be given priority over other Train Services if the Network Controller believes that this is desirable taking into consideration the livestock being transported (including, for example, the welfare of the livestock);
- (iv) subject to **clauses 3(g)(i) to (iii)**, a Train Service may be given priority over other Train Services if it is necessary to do so to remedy, or to mitigate or avoid, any Planned Possession on any part of the Network being prevented or otherwise materially adversely affected; and
- (v) subject to **clauses 3(g)(i) to (iv)**, where a Train Service is running “Late” due to a Below Rail Delay, it may be given preference over other Train Services if the Network Controller believes that this is consistent with the critical objectives of the Train Services in question, and that it will result in less aggregated consequential delays to other Train Services than otherwise would be the case.

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<sup>14</sup> The time periods: (a) from 6:00am to 9:00am; and (b) from 3:30pm to 6:30pm, on Business Days or as otherwise notified by Queensland Rail (acting reasonably) from time to time.



# Attachment E - Part 3 of 3:

Standard Access Agreement

## Schedule D – Standard Access Agreement

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Queensland Rail Limited

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[Insert name of Operator]

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[Insert name of Access Holder]

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# Access Agreement

[Note: insert title of Agreement here]

[Note: This agreement is a standard access agreement and is based on the following assumptions, that:

- the grant of Access Rights only involves the allocation of Available Capacity;
- no provisions relating to the provision of Additional Capacity in respect of an Extension are required; and
- no conditions precedent are necessary.

Without limiting the ability of the parties to negotiate terms, if any of these assumptions are not true, then the Parties will need to seek to negotiate amendments.

This standard access agreement contains various notes in respect of alternative clauses (for example, in relation to Dangerous Goods) and in respect of adjustments that are needed where this agreement is in relation to a Subsequent Operator. For example, if this agreement relates to a Subsequent Operator it will be amended to incorporate a new Schedule 1 and Schedule 2 to reflect the Train Services to be operated by that Subsequent Operator.]

Version: 1

Date Approved: [insert date]

## Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Term and renewal</b>                                 | <b>1</b>  |
| 1.1      | Term  | 1         |
| 1.2      | Right to renewal  | 2         |
| 1.3      | Productivity and efficiency variations                  | 2         |
| <b>2</b> | <b>Access Rights</b>                                    | <b>2</b>  |
| 2.1      | Grant of Access Rights                                  | 2         |
| 2.2      | Exercise of Access Rights and Operator nomination       | 3         |
| <b>3</b> | <b>Operational Rights</b>                               | <b>3</b>  |
| 3.1      | Grant of Operational Rights                             | 3         |
| 3.2      | Nature and scope of Operational Rights                  | 3         |
| 3.3      | Nomination of Subsequent Operators                      | 4         |
| <b>4</b> | <b>Relationship with Operator</b>                       | <b>6</b>  |
| 4.1      | Changes to Operator nominations                         | 6         |
| 4.2      | Nominations with different Train Descriptions           | 6         |
| 4.3      | Reduction of rights resulting in an Over-Allocation     | 7         |
| 4.4      | Information   | 8         |
| 4.5      | Participation in Disputes                               | 8         |
| 4.6      | Representations and warranties                          | 9         |
| <b>5</b> | <b>Accreditation</b>                                    | <b>10</b> |
| <b>6</b> | <b>Payment obligations</b>                              | <b>11</b> |
| 6.1      | Access Charges  | 11        |
| 6.2      | Obligation to make payments                             | 11        |
| 6.3      | Method of payment                                       | 12        |
| 6.4      | Disputing payments                                      | 12        |
| 6.5      | Interest on overdue payments                            | 12        |
| 6.6      | Adjustments   | 12        |
| 6.7      | Performance Level Reporting Regime                      | 13        |
| <b>7</b> | <b>Network management</b>                               | <b>13</b> |
| 7.1      | Maintenance   | 13        |
| 7.2      | Network Control   | 14        |
| 7.3      | Compliance  | 15        |
| <b>8</b> | <b>Train operations</b>                                 | <b>16</b> |
| 8.1      | Operation of Train Services                             | 16        |
| 8.2      | Additional Train Services                               | 16        |
| 8.3      | Ad Hoc Train Services                                   | 16        |
| 8.4      | Compliance  | 16        |
| 8.5      | Compliance before commencing to operate a Train Service | 19        |
| 8.6      | Compliance with Scheduled Time                          | 21        |
| 8.7      | Alterations to Train Services                           | 21        |
| 8.8      | Operator to supply information                          | 22        |

|           |   |           |
|-----------|---|-----------|
| 8.9       | Queensland Rail must supply Data  | 22        |
| 8.10      | Authorisation of Rolling Stock and Train Configurations                   | 23        |
| 8.11      | Entering and exiting the Network  | 24        |
| 8.12      | Notification of damage or disrepair                                       | 24        |
| 8.13      | Replacement of Operating Requirements Manual                              | 24        |
| <b>9</b>  | <b>Interface risk management</b>  | <b>25</b> |
| 9.1       | Compliance with IRMP  | 25        |
| 9.2       | Review of IRMP  | 25        |
| 9.3       | Application of RSNL   | 26        |
| 9.4       | Rights for Inspection or Audit  | 27        |
| 9.5       | Notice of Inspection or Audit   | 27        |
| 9.6       | Conduct of Inspection or Audit  | 28        |
| 9.7       | Cooperation for Inspection or Audit                                       | 29        |
| 9.8       | Costs for Inspection or Audit   | 30        |
| 9.9       | Results of Inspection or Audit and general compliance                     | 30        |
| 9.10      | Cooperation for rail safety investigation                                 | 30        |
| <b>10</b> | <b>Incident, environmental and emergency management plan requirements</b> | <b>31</b> |
| 10.1      | Operator's Emergency Management Plan                                      | 31        |
| 10.2      | Obstructions  | 33        |
| 10.3      | Notification  | 34        |
| 10.4      | Management and response   | 35        |
| 10.5      | Dangerous Goods   | 35        |
| 10.6      | Intervention to prevent or mitigate damage                                | 36        |
| 10.7      | Noise mitigation  | 37        |
| <b>11</b> | <b>Inspection of Trains and Rolling Stock</b>                             | <b>38</b> |
| <b>12</b> | <b>Risk and indemnities</b>   | <b>39</b> |
| 12.1      | Indemnities for personal injury and property damage                       | 39        |
| 12.2      | Operator's carriage indemnity   | 40        |
| 12.3      | Conditions of carriage exclusions and limitations of liability            | 41        |
| 12.4      | Assistance in defence of Claims arising from Network Incidents            | 41        |
| 12.5      | Parties responsible for their Associates                                  | 41        |
| 12.6      | Benefit of indemnities in favour of Associates                            | 42        |
| <b>13</b> | <b>Limitations on liability</b>   | <b>42</b> |
| 13.1      | No liability for Consequential Loss                                       | 42        |
| 13.2      | Limitation on Claims  | 43        |
| 13.3      | Failure to pay amounts  | 43        |
| 13.4      | Liability for Network   | 43        |
| 13.5      | Claims in respect of delays to Train Movements                            | 43        |
| 13.6      | Claims in respect of non-provision of access                              | 44        |
| <b>14</b> | <b>Suspension</b>   | <b>45</b> |
| 14.1      | Right of suspension – Operator  | 45        |
| 14.2      | Right of suspension – Access Holder                                       | 46        |
| 14.3      | Details of suspension   | 46        |

---

|           |   |           |
|-----------|---|-----------|
| 14.4      | Effect of suspension  | 46        |
| <b>15</b> | <b>Default and termination</b>                              | <b>47</b> |
| 15.1      | Ipso Facto Amendments                                       | 47        |
| 15.2      | Termination of Operator by Queensland Rail                  | 47        |
| 15.3      | Termination of Access Holder by Queensland Rail             | 48        |
| 15.4      | Termination by the Operator                                 | 48        |
| 15.5      | Termination by the Access Holder                            | 49        |
| 15.6      | Remedy  | 49        |
| 15.7      | Termination for Change in Control                           | 50        |
| 15.8      | Effect of Termination of Operator                           | 50        |
| 15.9      | Effect of Termination of Access Holder                      | 50        |
| 15.10     | Obligations and other rights upon termination or expiration | 50        |
| 15.11     | Removal of Rolling Stock following termination              | 51        |
| 15.12     | Access Holder remedy of Operator breach                     | 51        |
| <b>16</b> | <b>Insurance</b>  | <b>51</b> |
| 16.1      | Operator's Obligation to obtain and maintain Insurance      | 51        |
| 16.2      | Access Holder's obligation to obtain and maintain Insurance | 52        |
| 16.3      | Insurer   | 53        |
| 16.4      | Essential terms and conditions                              | 53        |
| 16.5      | Payment of premium and deductibles                          | 53        |
| 16.6      | No prejudicial action by the Operator                       | 53        |
| 16.7      | Disclosure of Insurance                                     | 53        |
| 16.8      | Compliance  | 54        |
| 16.9      | Claims  | 54        |
| 16.10     | Insurance not a limit of Operator's liability               | 55        |
| 16.11     | Joint Insurance Policy                                      | 55        |
| <b>17</b> | <b>Security</b>   | <b>55</b> |
| 17.1      | Obligation to provide Security                              | 55        |
| 17.2      | Recourse to Security  | 56        |
| 17.3      | Review of Security  | 57        |
| 17.4      | Return of Security  | 57        |
| <b>18</b> | <b>Adjustment for changes</b>                               | <b>58</b> |
| 18.1      | Adjustment for a Material Change                            | 58        |
| <b>19</b> | <b>Disputes</b>   | <b>59</b> |
| 19.1      | Application of Dispute resolution process                   | 59        |
| 19.2      | Resolution by escalation                                    | 59        |
| 19.3      | Resolution by Expert  | 60        |
| 19.4      | Determination by arbitration                                | 61        |
| 19.5      | Injunctive Relief   | 62        |
| 19.6      | Dispute not to affect performance of obligations            | 62        |
| 19.7      | Extension of time frames                                    | 63        |
| <b>20</b> | <b>Force majeure</b>  | <b>63</b> |
| 20.1      | Force Majeure Event occurrence                              | 63        |

|           |  |           |
|-----------|--|-----------|
| 20.2      | Suspension of obligations                                | 63        |
| 20.3      | Duty to Mitigate   | 63        |
| 20.4      | End of period of Force Majeure                           | 63        |
| 20.5      | Termination for Loss or Damage to the Network            | 64        |
| 20.6      | Repair Negotiations                                      | 65        |
| 20.7      | Termination after extended Force Majeure Event           | 65        |
| <b>21</b> | <b>Reduction and relinquishment of Access Rights</b>     | <b>65</b> |
| 21.1      | Reduction of Access Rights                               | 65        |
| 21.2      | Relinquishment of Access Rights                          | 67        |
| 21.3      | Replacement Access Agreement                             | 68        |
| 21.4      | Termination where no Access Rights remain                | 68        |
| 21.5      | Effect on entitlement to operate and Access Charge Rates | 69        |
| <b>22</b> | <b>Assignment</b>  | <b>69</b> |
| 22.1      | Assignment by Queensland Rail                            | 69        |
| 22.2      | Assignment by the Access Holder                          | 69        |
| 22.3      | Assignment by Operator                                   | 70        |
| 22.4      | Charging   | 70        |
| 22.5      | Effect of Assignment or Charge                           | 71        |
| <b>23</b> | <b>Representations and warranties</b>                    | <b>71</b> |
| <b>24</b> | <b>Confidentiality</b>                                   | <b>73</b> |
| 24.1      | Confidentiality obligation                               | 73        |
| 24.2      | Exceptions   | 73        |
| <b>25</b> | <b>Notices</b>   | <b>73</b> |
| 25.1      | Form of Notice   | 73        |
| 25.2      | Notices to each Party                                    | 73        |
| 25.3      | Method of giving a Notice                                | 74        |
| 25.4      | Particulars for the giving of Notices                    | 74        |
| 25.5      | Effect and receipt of Notices                            | 74        |
| 25.6      | Process service  | 75        |
| 25.7      | Representatives of the Operator                          | 75        |
| <b>26</b> | <b>GST</b>   | <b>75</b> |
| 26.1      | Definitions  | 75        |
| 26.2      | Sums exclude GST   | 75        |
| 26.3      | Responsibility for GST                                   | 76        |
| 26.4      | Reimbursement of expenses                                | 76        |
| 26.5      | Tax invoice  | 76        |
| 26.6      | Adjustment   | 76        |
| <b>27</b> | <b>General</b>   | <b>76</b> |
| 27.1      | Duty   | 76        |
| 27.2      | Legal costs  | 77        |
| 27.3      | Waiver and exercise of rights                            | 77        |
| 27.4      | Amendments   | 77        |

---

|   |                             |            |
|---|-----------------------------|------------|
| 27.5  | Rights cumulative           | 77         |
| 27.6  | Consents                    | 77         |
| 27.7  | Further steps               | 77         |
| 27.8  | Governing law               | 78         |
| 27.9  | Liability                   | 78         |
| 27.10   | Counterparts                | 78         |
| 27.11   | Legally binding             | 78         |
| 27.12   | Entire understanding        | 78         |
| 27.13   | Relationship of Parties     | 78         |
| 27.14   | Severability                | 78         |
| 27.15   | Survival                    | 79         |
| 27.16   | Benefit                     | 79         |
| 27.17   | No merger                   | 79         |
| 27.18   | Enforcement of indemnities  | 79         |
| 27.19   | Sublease                    | 79         |
| 27.20   | Most favoured nation status | 81         |
| 27.21   | Transitional provisions     | 82         |
| <b>28</b>   | <b>Interpretation</b>       | <b>82</b>  |
| 28.1  | Definitions                 | 82         |
| 28.2  | Construction                | 101        |
| 28.3  | Headings                    | 103        |
| <b>Schedule 1- Reference Schedule</b>                               |                             | <b>104</b> |
| <b>Schedule 2 – Train Service Description</b>                       |                             | <b>106</b> |
| <b>Schedule 3 – Calculation of Access Charges and other charges</b> |                             | <b>111</b> |
| <b>Schedule 4 – Interface Risk Management Plan</b>                  |                             | <b>112</b> |
| <b>Schedule 5 - Performance Levels</b>                              |                             | <b>113</b> |

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**Date**

## Parties

**Queensland Rail Limited** ABN 71 132 181 090 of 14 Railcentre 1, 305 Edward Street, Brisbane, Queensland (**Queensland Rail**)

and

The person set out in item 1 of **schedule 1 (Access Holder)**

and

The person set out in item 3 of **schedule 1 (Operator)**

---

## Background

- A Queensland Rail operates, and is the Railway Manager for, the Network.
  - B The Access Holder is seeking, and Queensland Rail has agreed to grant non-exclusive Access Rights to the Access Holder for the operation of Train Services over the Network by an Accredited Rolling Stock Operator (or Subsequent Operators).
  - C This agreement sets out the terms agreed by the Parties in accordance with which the Access Holder is granted non-exclusive access to the Network for the operation of Train Services by an Accredited Rolling Stock Operator (or Subsequent Operators).
- 

## Agreed terms

### 1 Term and renewal

#### 1.1 Term

This agreement:

- (a) commences on the Commencement Date; and
- (b) terminates on the Termination Date unless otherwise terminated in accordance with its terms (except to the extent that any provisions of this agreement are expressed or implied to survive the expiry or termination of this agreement).

## 1.2 Right to renewal

- (a) The Parties acknowledge that any rights which the Access Holder may have in relation to the renewal of this agreement will be as expressly provided in the Access Framework.
- (b) Where the Access Holder seeks a renewal of this agreement, each Party acknowledges that:
  - (i) negotiations in respect of renewal must occur as required by and subject to the Access Framework;
  - (ii) the negotiations and any renewal are subject to compliance with all applicable Laws including section 266 and 266A of the TIA as they apply to Queensland Rail.
- (c) In this **clause 1.2** a reference to a renewal is a reference to the execution of a new access agreement that has the effect of continuing all or some of the Train Services under this agreement for a further term.

## 1.3 Productivity and efficiency variations

- (a) Where the Access Holder or the Operator, during the term of this agreement, seeks a variation to this agreement to promote, or accommodate, a demonstrable efficiency or productivity improvement for the supply chain, Queensland Rail must reasonably consider those proposed variations, having regard to factors including the impact on the use of the Network by Access Seekers or Access Holders (as defined in the Access Framework), whether the proposed variation creates a capacity increase, demand for capacity and any realisable gains to all Parties.
- (b) If, despite reasonable consideration, Queensland Rail rejects any variation proposed pursuant to clause **1.3(a)**, Queensland Rail must provide written reasons for not accepting any such variations in whole or in part.

# 2 Access Rights

## 2.1 Grant of Access Rights

- (a) Queensland Rail *[[grants] or [confirms that it is has granted]]*<sup>1</sup> to the Access Holder the non-exclusive right to access the Network commencing on the Commitment Date for all of the Train Services until the End Date for each of those Train Services (unless this agreement terminates earlier in accordance with its provisions or any Law) subject to, and in accordance with, this agreement (Access Rights).

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<sup>1</sup> Wording dependent on whether this agreement is an initial Agreement or a Subsequent Agreement.

- (b) The Access Rights create a non-exclusive contractual right and do not give the Access Holder any right, title or interest of any proprietary nature in the Network.
- (c) The Access Holder unconditionally and irrevocably agrees to comply with the requirements, obligations and processes in:
  - (i) the Access Framework; and
  - (ii) the Deed Poll, including the conditions set out in clauses 6, 7, 8 and 9 of the Deed Poll.

## 2.2 **Exercise of Access Rights and Operator nomination**

- (a) The Parties acknowledge and agree that:
  - (i) the grant of the Access Rights does not entitle the Access Holder to operate Train Services itself on the Network (unless it is also an Accredited Rolling Stock Operator and is nominated to operate all or some of the Train Services in accordance with this agreement);
  - (ii) the Access Holder can only utilise the Access Rights by nominating an Accredited Rolling Stock Operator from time to time in accordance with this agreement;
  - (iii) the Access Holder may nominate more than one Accredited Rolling Stock Operator.

# 3 **Operational Rights**

## 3.1 **Grant of Operational Rights**

On and from the Commitment Date for each Train Service until the End Date for that Train Service, Queensland Rail grants, and must provide, to the Operator the right to operate that Train Service in accordance with the Train Service Description on the terms and conditions of this agreement.

## 3.2 **Nature and scope of Operational Rights**

- (a) The right to operate granted under **clause 3.1** is a non-exclusive contractual right and does not give the Operator any right, title or interest of any proprietary nature in the Network.
- (b) The Operator must:
  - (i) only operate on, or use any part of, the Network that is specifically included in this agreement; and
  - (ii) not use the Network for:
    - (A) carrying out any provisioning, inspection, testing or maintenance of Rolling Stock;
    - (B) any marshalling, shunting or other relocation of Rolling Stock;

(C) storage of Rolling Stock; or

(D) any purpose other than the operation of Train Services,

unless otherwise expressly:

(iii) permitted or required to do so under this agreement;

(iv) directed to do so by Queensland Rail in accordance with this agreement; or

(v) expressly permitted under another agreement with Queensland Rail.

### 3.3 Nomination of Subsequent Operators

(a) Subject to clause **3.3(c)**, the Access Holder may, from time to time, provided that it is not in material breach of any of its obligations under this agreement, nominate one or more Accredited Rolling Stock Operators (**Subsequent Operator**) to utilise all or part of the Access Rights upon giving at least 20 Business Days prior written notice to Queensland Rail. The notice must:

(i) specify:

(A) the name, ABN, address and contact details of the Subsequent Operator;

(B) the Access Rights which the Access Holder wishes to allocate to that Subsequent Operator for that Operator to use in providing some or all of the Train Services for the Access Holder;

(C) the first day and the last day of the period for which the Access Rights are to be allocated to that Subsequent Operator; and

(ii) be accompanied by:

(A) a Subsequent Agreement, executed by the relevant Subsequent Operator, which reflects, in **schedule 1** to that agreement, particulars applicable to the relevant Subsequent Operator, and which reflects in **schedule 2** to that agreement, the Access Rights which the Access Holder wishes to allocate to that Subsequent Operator and includes any further changes required pursuant to **clause 4.2**;<sup>2</sup> or

(B) where the Subsequent Operator is a party to an Existing Agreement, a statement and evidence identifying that

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<sup>2</sup> For the avoidance of doubt, the Access Holder and Queensland Rail are not required to renegotiate the terms of a Subsequent Agreement. The terms, unless otherwise agreed by the Access Holder and Queensland Rail will be identical to the terms of this agreement except as is necessary to reflect the Train Services to be operated by that Subsequent Operator and to reflect that Subsequent Operator's operations.

Rolling Stock Operator's execution of the Existing Agreement in respect of utilisation of Access Rights and evidence of that Rolling Stock Operator's agreement to the relevant nomination.

- (b) Access Rights allocated by the Access Holder to be used from time to time by the Initial Operator and any Subsequent Operators may not exceed, in aggregate, the Access Holder's Access Rights under this agreement.
- (c) Despite any other provision in this agreement, Queensland Rail is not obliged to accept, or act on:
  - (i) any nomination by the Access Holder under **clause 3.3(a)**; or
  - (ii) any variation which increases the allocation of Access Rights (including an increase to the period for which the Access Rights are to be allocated) under **clause 4.1**,if Queensland Rail (acting reasonably) determines that the Subsequent Operator, either:
  - (iii) is in material breach of any of its obligations under an existing access agreement with Queensland Rail; or
  - (iv) is not Accredited.
- (d) Queensland Rail must:
  - (i) promptly assess any nomination against the matters listed in **clause 3.3(c)**;
  - (ii) within ten Business Days of receiving a nomination under **clause 3.3(a)**, notify the Access Holder and the Subsequent Operator whether it accepts or rejects the nomination; and
  - (iii) if it rejects the nomination, provide reasons for the rejection in writing to the Access Holder and the Subsequent Operator and thereafter use reasonable endeavours to facilitate the resolution of any matter the subject of its reasons for the rejection; or
  - (iv) if it accepts the nomination, promptly do all things reasonably required to give effect to the nomination and minimise any delay to Train Services to the extent practicable including agreeing to amendments in this agreement and any Subsequent Operator's Subsequent Agreement (if applicable) to the extent required and including compliance with **clause 4.2(a)** (where applicable); and
  - (v) after accepting the nomination and, if required, complying with **clause 4.2(a)**, exchange executed counterparts of a Subsequent Agreement with the Subsequent Operator and the Access Holder.

## 4 Relationship with Operator

### 4.1 Changes to Operator nominations

- (a) The Access Holder may, from time to time, upon giving at least ten Business Days prior written notice to Queensland Rail and the Operator:
  - (i) vary any nomination previously given by the Access Holder under this agreement so as to vary either or both of the following:
    - (A) the Access Rights which the Access Holder has allocated to the Operator; or
    - (B) the period for which the Access Rights are to be allocated to the Operator (provided that the period does not extend beyond the End Date for the relevant Train Service); or
  - (ii) withdraw any nomination previously given by the Access Holder under **clause 3.3(a)** or this **clause 4.1(a)**.
- (b) Queensland Rail must notify the Access Holder and the Operator if it accepts or rejects the variation (providing its reasons) in accordance with **clause 3.3(c)**.
- (c) If Queensland Rail accepts a variation made in accordance with **clauses 2.2** or **4.1**:
  - (i) this agreement is varied in accordance with the variation and, despite any other provision in this agreement, each Party agrees, and is deemed, to be bound by the varied agreement on and from the date the Access Holder receives the notice referred to in **clause 4.1(b)**; or
  - (ii) Queensland Rail must comply with **clause 4.2** (if applicable).
- (d) The Access Holder is deemed to have withdrawn its nomination of the Operator if this agreement is terminated or expires.

### 4.2 Nominations with different Train Descriptions

- (a) If at any time:
  - (i) the Access Holder intends to:
    - (A) nominate an Accredited Rolling Stock Operator to utilise all or part of the Access Rights in accordance with **clause 3.3(a)**; or
    - (B) vary a nomination previously given by the Access Holder in accordance with **clause 4.1**;

and

- (ii) the Train Services of the Subsequent Operator will have a Train Service Description different from that contemplated in **schedule 2**; or
- (iii) the Access Holder otherwise wishes to vary the Train Services from the Train Service Description contemplated in **schedule 2**,

then:

- (iv) prior to nominating the Subsequent Operator or varying a nomination, Queensland Rail and the Access Holder must negotiate and endeavour to agree any amendments to any relevant agreements (including any amendments to the Access Rights and the Access Charges and providing replacement **schedules** (as relevant)) that may be necessary to reflect the Train Service Description of the Train Services to be operated by that Operator for that part of the Access Rights to be allocated to that Operator;
- (v) Queensland Rail and the Access Holder (each acting reasonably and using reasonable endeavours to minimise any disruptions to Train Movements) must agree the date on which those amendments take effect;
- (vi) this agreement is varied in accordance with those amendments and, despite any other provision in this agreement, each Party agrees, and is deemed, to be bound by the varied agreement on and from the date referred to in **clause 4.2(a)(v)**; and
- (vii) no amendment to the Access Rights that results in the Access Holder being granted increased rights to access the Network has any effect unless and until the Access Holder and Queensland Rail have complied with Queensland Rail's Access Framework (as amended by any change in the Access Framework) (including with respect to the allocation of those increased Access Rights).

#### 4.3 **Reduction of rights resulting in an Over-Allocation**

If at any time:

- (a) the Access Rights of:
  - (i) the Access Holder are reduced, relinquished or transferred under this agreement; or
  - (ii) the Nominated Monthly Train Services in respect of a Train Service Description are reduced or varied under this agreement; and
- (b) as a result of such reduction, relinquishment or transfer of Access Rights or reduction or variation of Nominated Monthly Train Services in respect of a Train Service Description, the Access Rights allocated

by the Access Holder to the Operator or any Subsequent Operators under **clauses 2.2 or 4.1** for a Train Service Description exceed, in aggregate, the Access Holder's Access Rights for that Train Service Description following the reduction, relinquishment or transfer (such excess being the **Over-Allocation**),

then, unless the Access Holder varies the nominations in accordance with **clause 4.1(a)** within ten Business Days of such reduction, relinquishment or transfer to eliminate the Over-Allocation, the Access Holder will be deemed to have varied the nominations in accordance with **clause 4.1(a)** as follows:

- (c) if the Access Holder has nominated only the Initial Operator for that Train Service Description, reducing the Access Rights for that Train Service Description which the Access Holder has allocated to the Initial Operator under this agreement by the Over-Allocation; or
- (d) if the Access Holder has nominated the Initial Operator and one or more Subsequent Operators in respect of an affected Train Service Description, reducing the Access Rights for that Train Service Description which the Access Holder has allocated to each the Initial Operator and each Subsequent Operator under each relevant agreement by a share of the Over-Allocation that is as closely as possible proportionate to the Train Services allocated to the Initial Operator and each Subsequent Operator for the affected Train Service Description as a share of the total Train Services allocated to the Initial Operator and Subsequent Operators for that Train Service Description,

and such reduction will take effect on the date the reduction, variation, relinquishment or transfer takes effect, with Queensland Rail providing written notice of the reduction to the Initial Operator and Subsequent Operators, if affected by same, as soon as practicable.

#### 4.4 **Information**

- (a) Nothing in **clause 24** prevents or otherwise restricts the Parties from disclosing to one another information in relation to or in connection with this agreement.
- (b) If requested by a Party, then the Party who received the request must promptly provide to the requesting Party any information in relation to the exercise of rights or performance of obligations under this agreement.
- (c) Without limitation to **clause 4.4(b)**, where either Queensland Rail, the Operator or the Access Holder gives a Notice (including an invoice) under this agreement to another Party, then that Party must also give a copy of that Notice (including an invoice) to each other Party.

#### 4.5 **Participation in Disputes**

- (a) Despite **clause 19**, where:



- (i) a Dispute Notice is given to the Access Holder under **clause 19.1(a)(ii)**; and
- (ii) the Dispute is solely between the Operator and Queensland Rail and does not require the Access Holder's participation to resolve the Dispute,

the Access Holder may elect not to participate in the dispute resolution process under **clause 19** by giving notice to that effect to the other Parties.

- (b) Where the Access Holder gives a notice under **clause 4.5(a)**, **clause 19** will apply as though a reference to the Parties does not include the Access Holder in relation to that Dispute.
- (c) Despite **clause 19**, where:
  - (i) a Dispute Notice is given to the Operator under **clause 19.1(a)(ii)**; and
  - (ii) the Dispute is solely between the Access Holder and Queensland Rail and does not require the Operator's participation to resolve the Dispute, the Operator is not entitled to participate in the dispute resolution process.

#### 4.6 **Representations and warranties**

- (a) In addition to any other express or implied representations and warranties in this agreement, each of the Access Holder, Operator and Queensland Rail represent, warrant and undertake to each other that:
  - (i) it is a corporation validly existing under the laws applicable to it;
  - (ii) it has the power to enter into and perform all of its obligations under this agreement and has obtained all necessary consents and approvals to enable it to do so;
  - (iii) its obligations under this agreement are enforceable in accordance with the relevant terms and are fully binding on it;
  - (iv) it is not in breach or default under any agreement to which it is a party to an extent or in a manner which would have a material adverse effect on its ability to perform its obligations under this agreement;
  - (v) there is:
    - (A) no litigation, arbitration or administrative proceeding taking place, pending, commenced or, to its knowledge, threatened against it; and
    - (B) no judgment or award has been given or made by, any court, arbitrator, other tribunal or governmental agency against it,

which would or could have a material adverse effect on its ability to perform its obligations under this agreement; and

- (vi) it will, as soon as practicable, notify the other Party of the occurrence of, or pending or threatened occurrence of, any event that may cause or constitute a material breach of any of the acknowledgments, representations, warranties or covenants of the that Party under this agreement and any event that could have a material adverse effect on its ability to perform its obligations under this agreement; and
  - (vii) all information provided by each Party to the other Party, whether pursuant to this agreement or otherwise, in relation to or in connection with the Train Services, the Party's rights or obligations under this agreement or the negotiation of this agreement, is correct and complete in all material respects and is not, whether by omission or otherwise, misleading or deceptive.
- (b) The representations and warranties set out in **clause 4.6(a)** are taken to be given and made on the Commencement Date and on each day during the Term.

## 5 Accreditation

- (a) The Operator and Queensland Rail must, on the Commitment Date for Train Services and then until the End Date for those Train Services, hold the necessary Accreditation in accordance with this agreement.
- (b) The Operator must, at least 20 Business Days prior to the Commitment Date, satisfy Queensland Rail (acting reasonably) of its compliance with **clause 5(a)**.
- (c) Queensland Rail and the Operator will provide to the other Party, and continue to provide to the other Party, a copy of the relevant Accreditation, including:
  - (i) all relevant notices from any Authority affecting or likely to affect the Accreditation;
  - (ii) the relevant details of any renewal, suspension, variation, restriction or termination of that Accreditation; and
  - (iii) all relevant conditions or restrictions imposed on the accreditation by the Rail Safety Regulator.
- (d) The Operator must not operate Rolling Stock on the Network unless the Operator holds the Accreditation necessary to do so and then must do so in accordance with that Accreditation and this agreement.

## 6 Payment obligations

### 6.1 Access Charges

- (a) The Access Holder must pay to Queensland Rail the Access Charges at the times and in the manner set out in this agreement and any other charges or amounts payable in accordance with this agreement.
- (b) The Access Charges include amounts payable in relation to:
  - (i) the reservation of capacity in the Network for the Train Services; and
  - (ii) the utilisation of the Access Rights for the Train Services.
- (c) After:
  - (i) the last day of each calendar month during the Term; and
  - (ii) where this agreement has expired or terminated, after that expiration or termination,

Queensland Rail will provide to the Access Holder an invoice for the Access Charges and any other charges or amounts payable by the Access Holder under this agreement (if any such amounts are payable) for that month or on or after the expiry or termination of this agreement (as applicable).
- (d) For clarity, Queensland Rail will review and amend **schedule 3** (including to vary or escalate Access Charges Inputs) from time to time in accordance with this agreement.

### 6.2 Obligation to make payments

- (a) Unless this agreement provides otherwise, the due date for the payment of an amount payable by a Party under this agreement is that date which is ten Business Days from the date the invoice is received.
- (b) After a Party receives an invoice from another Party for an amount payable in accordance with this agreement, the paying Party must, on or prior to the due date for the payment of that amount, either:
  - (i) pay the other Party an amount equal to the amount payable as shown on the invoice; or
  - (ii) if the paying Party disputes on a bona fide basis all or part of the amount payable as shown on the invoice:
    - (A) pay by the due date the amount not in dispute and 50% of the amount in dispute; and
    - (B) give notice in writing to the other Party that it disputes the amount payable as shown on the invoice and a detailed statement as to the reasons for disputing the amount payable.

### 6.3 **Method of payment**

A Party must pay any amounts payable to another Party in accordance with this agreement in Australian currency by:

- (a) direct deposit into an account nominated by the invoicing Party for that purpose; or
- (b) such other method as the invoicing Party may reasonably require from time to time.

### 6.4 **Disputing payments**

- (a) If a Party has paid the amounts and given a notice in accordance with **clause 6.2** then, unless the Parties resolve the dispute in accordance with **clause 19.2**, the dispute must be referred for determination by an Expert under **clause 19.3**.
- (b) Upon resolution of any dispute between the Parties about the calculation of an amount payable as shown on an invoice, if the amount payable as agreed by the Parties or determined by an Expert or Arbitrator is more or less than the amount that was paid, then the difference must be paid or refunded by the relevant Party to the other Party within five Business Days after the resolution of the dispute together with interest on that amount calculated in accordance with **clause 6.5** (provided that for the purpose of calculating that interest, the due date for payment is deemed to be the date when the amount in dispute would have been due and payable but for the dispute).

### 6.5 **Interest on overdue payments**

- (a) If any amount which a Party is required to pay to another Party under this agreement is not paid on or before the due date for payment, interest will accrue on the outstanding amount from the due date for payment until that amount, together with the interest thereon, has been paid.
- (b) Interest will be calculated at the Interest Rate and must be paid monthly. Any interest accrued but unpaid at the end of each month will be capitalised and will thereafter itself bear interest.

### 6.6 **Adjustments**

- (a) If any change, escalation or variation in the Access Charges is backdated, or otherwise relates, to a date on or before the date on which particular Train Services were operated in accordance with this agreement, then the Access Charges paid or payable in respect of those Train Services must be adjusted by Queensland Rail and the Access Holder to pass through that change, escalation or variation.
- (b) After taking account of the adjustment referred to under **clause 6.6(a)**:

- (i) if there has been an under-recovery of Access Charges by Queensland Rail, then the Access Holder must pay the amount of that under-recovery to Queensland Rail; and
  - (ii) if there has been an over-recovery of Access Charges by Queensland Rail, then Queensland Rail must refund the amount of that over-recovery to the Access Holder.
- (c) For clarity, if Queensland Rail has issued an invoice for Train Services but the Access Holder has not yet paid that invoice, then Queensland Rail may issue a replacement or additional invoice for the purposes of giving effect to **clauses 6.6(a) and (b)**.
- (d) Any adjustment of an Access Charge in accordance with this **clause 6.6** will include interest calculated in accordance with **clause 6.5** as though the adjustment was due and payable on the date when the original invoice for the Access Charge to which the adjustment relates was due and payable.

## 6.7 Performance Level Reporting Regime

- (a) Performance levels for this agreement, including reporting and assessment requirements, are as set out in **schedule 5 (Performance Levels)**.
- (b) Queensland Rail will provide monthly reports to each other Party documenting Queensland Rail's performance against the Performance Levels.
- (c) Disputes regarding Queensland Rail's documentation of its Performance Levels will be determined in accordance with **clause 19**.
- (d) The Parties must monitor, record and assess the performance of their respective obligations under this agreement against the Performance Levels. Each Party must comply with the reporting and assessment requirements as agreed by the Parties in **schedule 5**.

## 7 Network management

### 7.1 Maintenance

- (a) Queensland Rail is responsible for the management of the Network and shall retain control over all activities on the Network. Maintenance Works may be undertaken as provided under the Network Management Principles and this agreement.
- (b) Queensland Rail must carry out Maintenance Work on the Network such that subject to any agreed criteria and the Network Management Principles:
  - (i) the Network is consistent with the Rolling Stock Interface Standards; and

- (ii) the Operator can operate Train Services in accordance with this agreement.
- (c) Nothing in this agreement obliges Queensland Rail to fund or construct any Extension required to provide the Access Rights held under the agreement.
- (d) Queensland Rail reserves the right to authorise third parties to carry out Third Party Works on, under or over the land on which the Network is located. In the event that Queensland Rail has a contractual relationship with the third party, Queensland Rail must ensure that the third party undertakes the work in a manner that meets the requirements listed in **clause 7.1(b)**.

## 7.2 Network Control

- (a) Queensland Rail will provide, and has exclusive responsibility for, Network Control in respect of the Network.
- (b) Queensland Rail may exercise Network Control by issuing Network Control Directions to the Operator and the Operator's Associates.
- (c) In exercising Network Control, Queensland Rail may, subject to the Network Management Principles:
  - (i) delay, alter, add, cancel, re-route or re-schedule a Train Service; and
  - (ii) alter the Scheduled Times for Train Services in the Train Schedule.
- (d) The Operator must:
  - (i) comply with Network Control Directions;
  - (ii) ensure that:
    - (A) Train drivers are contactable by the Network Controller to receive Network Control Directions using communications systems which comply with the Operating Requirements Manual; and
    - (B) all of the Operator's Trains are equipped with means of communication to permit the Operator's Associates to comply with this agreement;
  - (iii) notify the Network Controller as soon as the Operator becomes aware that it is not possible for the Operator (or the Operator's Associates) to comply with a Network Control Direction or the Operator (or the Operator's Associates) has not complied with a Network Control Direction; and
  - (iv) notify the Network Controller as soon as the Operator becomes aware of any changes or delays in Train Services or any circumstances which have affected or may affect Network

Control including the ability of any Train Service to conform to its Scheduled Times.

### 7.3 Compliance

- (a) Queensland Rail must observe and comply with:
  - (i) all applicable Laws and Authorisations including Queensland Rail's Accreditation, to the extent that the Laws and Authorisations relate to Queensland Rail's performance of its obligations or exercise of its rights under this agreement;
  - (ii) the lawful requirements of relevant Authorities, to the extent that those requirements relate to Queensland Rail's performance of its obligations or exercise of its rights under this agreement;
  - (iii) this agreement;
  - (iv) the IRMP including any safety and environment standards identified in the IRMP as applicable to Queensland Rail;
  - (v) the Network Management Principles;
  - (vi) the Operating Requirements Manual; and
  - (vii) the Access Framework, to the extent that the Access Framework relates to Queensland Rail's performance of its obligations or exercise of its rights under this agreement,

- (b) Queensland Rail must provide that as far as practicable:
  - (i) the Network Management Principles; and
  - (ii) the Operating Requirements Manual,will be applied consistently for all Rolling Stock Operators on the Network,

and, where observance or compliance with the matters in **paragraphs (i) to (vii) of clause 7.3(a)** cannot occur because of an inconsistency between those matters, then:

- (c) for the purpose of observance and compliance, those matters must be prioritised in the above order (with a matter earlier in the list having a higher priority for observance and compliance to a matter later in the list); and
- (d) Queensland Rail's obligation under this **clause 7.3** is to observe and comply with those matters in that order of priority,

to the extent of the inconsistency.

- (e) Without limitation to this **clause 7**, Queensland Rail must at all times act in accordance with Prudent Practices.

## 8 Train operations

### 8.1 Operation of Train Services

The Operator must only operate Train Services in accordance with this agreement (including the Train Service Description and any Network Control Directions) if the Operator has obtained the prior written approval of Queensland Rail (not to be unreasonably withheld) (for example, an authority to travel) including any terms and conditions of that approval in addition to or varying this agreement in respect of those Train Services (including in respect of the Access Charges applicable) and complies with that approval and those terms and conditions in operating the Train Services.

### 8.2 Additional Train Services

If the Access Holder notifies Queensland Rail that it wishes to have the Operator (who the Access Holder must identify when notifying Queensland Rail) operate an Additional Train Service, and the Operator has notified Queensland Rail that it is able and willing to operate the Additional Train Service then:

- (a) Queensland Rail must use reasonable endeavours to schedule the Additional Train Service in accordance with the Network Management Principles; and
- (b) on and from the Additional Train Service being scheduled in the relevant Daily Train Plan, the Additional Train Service will be treated as though it was a Train Service for the purpose of this agreement including in relation to the payment of Access Charges.

### 8.3 Ad Hoc Train Services

- (a) If the Access Holder notifies Queensland Rail that it wishes to operate an Ad Hoc Train Service, then Queensland Rail may, but is not obliged to, schedule the Ad Hoc Train Service in the Daily Train Plan.
- (b) If Queensland Rail schedules the Ad Hoc Train Service in the Daily Train Plan then, on and from the Ad Hoc Train Service being scheduled in the relevant Daily Train Plan, the Ad Hoc Train Service will be treated as though it was a Train Service for the purpose of this agreement except that Ad Hoc Train Services will not be counted as Train Services for the purpose of calculation of Take or Pay Charges.
- (c) If Queensland Rail schedules an Ad Hoc Train Service in the Daily Train Plan then, despite any other provision in this agreement the Operator must, in operating the Ad Hoc Train Service, comply with the Train Service Description subject to any derogations permitted by Queensland Rail.

### 8.4 Compliance

- (a) The Operator must observe and comply with:
  - (i) all applicable Laws and Authorisations including the Operator's Accreditation and the Operator's Emergency Management



Plan, to the extent that the Laws and Authorisations relate to the Operator's performance of its obligations or exercise of its rights under this agreement;

- (ii) the lawful requirements of relevant Authorities, to the extent that those requirements relate to the Operator's performance of its obligations or exercise of its rights under this agreement;
- (iii) this agreement;
- (iv) the IRMP including any safety and environment standards identified in the IRMP as applicable to the Operator;
- (v) the Network Management Principles;
- (vi) the Operating Requirements Manual;
- (vii) all Network Control Directions;
- (viii) the relevant requirements of:
  - (A) any Authorisation; and
  - (B) any other consent, approval, lease, licence or other authority,

held by or applying to Queensland Rail, or to which Queensland Rail is a Party, from time to time in relation to the Network, other relevant facilities (if any) or land to which the Operator is provided access by Queensland Rail in accordance with this agreement (provided Queensland Rail has notified the Operator of those relevant requirements); and

- (ix) the Access Framework, to the extent that the Access Framework relates to the Operator's performance of its obligations or exercise of its rights under this agreement,

and, where observance or compliance with the matters in **paragraphs (i) to (ix)** cannot occur because of an inconsistency between those matters, then:

- (x) for the purpose of observance and compliance, those matters must be prioritised in the above order (with a matter earlier in the list having a higher priority for observance and compliance to a matter later in the list); and
- (xi) the Operator's obligation under this **clause 8.4(a)** is to observe and comply with those matters in that order of priority,

to the extent of the inconsistency.

- (b) Without limitation to **clause 8.4(a)**, the Operator must:
  - (i) not access or be upon the Network (or the land on which the Network is located) for any purpose other than to exercise its rights and to comply with its obligations in accordance with this agreement;
  - (ii) at all times act in accordance with Prudent Practices;

- (iii) do everything necessary in accordance with Prudent Practices to avoid causing or contributing to any nuisance, annoyance or disturbance to Queensland Rail or the occupiers or users of the Network, or land adjacent to the Network;
- (iv) in accordance with Prudent Practices, not do or omit to do anything that would cause or contribute to the Network (or the land on which the Network is located) not being clean, presentable, well maintained and in good repair, appearance and condition;
- (v) not cause or allow any rubbish, debris, or freight, in accordance with Prudent Practices, to be deposited or released on or about the Network (or the land on which the Network is located) except as expressly required by the Operating Requirements Manual or any Network Control Directions;
- (vi) obtain and maintain all necessary Authorisations required for the Operator to exercise the Operator's rights or comply with the Operator's obligations under this agreement;
- (vii) not interfere with, hinder or prejudice:
  - (A) Queensland Rail's conduct of its operations;
  - (B) Queensland Rail's or any other Network Participant's use of the Network; or
  - (C) the functions and obligations of Queensland Rail as a Railway Manager (including under Queensland Rail's Accreditation);
- (viii) not in breach of this agreement or through negligent act or omission:
  - (A) cause, permit or contribute to any act or omission that may result in Queensland Rail:
    - (1) failing to comply with any Law; or
    - (2) incurring (for clarity, directly or indirectly) any costs or expenses in complying with any Law that Queensland Rail would not otherwise have incurred; or
  - (B) fail to promptly comply with a direction given by Queensland Rail for the purpose of Queensland Rail's compliance with any Law relating to the Network, Queensland Rail's Rail Infrastructure Operations or this agreement (including the Train Services).
- (ix) ensure that its Rolling Stock operate safely, and otherwise be responsible for the operation of its Rolling Stock, on the

Network (including ensuring that its Rolling Stock are accompanied at all times while on the Network by a member of the Operator's Associates who has authority to manage, and to keep secure, that Rolling Stock and anything on, or being transported by, that Rolling Stock); and

- (x) without limitation to **clause 8.4(b)(ix)**, ensure that the operation of its Rolling Stock (including the loading, unloading and cleaning of its Rolling Stock) is undertaken in a manner that:
  - (A) does not affect:
    - (1) the safe operation of the Rolling Stock or the Network; or
    - (2) the operations or activities of Queensland Rail or other Network Participants; and
  - (B) in accordance with Prudent Practices, ensures that all things on or in the Operator's Rolling Stock remain on or in the Operator's Rolling Stock (and, if applicable, are secured in position) during transit.
- (c) Where the Operator fails to comply with **clause 8.4(b)(v)**, Queensland Rail may remove and dispose of the relevant rubbish, debris, or freight and the Operator must pay Queensland Rail's costs and expenses incurred by Queensland Rail in doing so and those costs and expenses will be a debt due and owing by the Operator to Queensland Rail.

## 8.5 **Compliance before commencing to operate a Train Service**

- (a) Without limiting any other provisions of this agreement, the Operator must only commence operating Train Services under this agreement if in respect of those Train Services:
  - (i) all Security as required in accordance with **clause 17** has been provided;
  - (ii) an Operating Plan has been prepared by the Operator and a copy provided to Queensland Rail;
  - (iii) an EIRMR has been prepared by the Operator and a copy provided to Queensland Rail so that any environmental risks and associated controls identified in the EIRMR can be addressed as part of the IRMP process under **clause 9**;
  - (iv) an IRMP has been agreed, determined or reviewed in relation to those Train Services in accordance with **clause 9** (except to the extent that **clauses 9.1 to 9.2** do not apply in accordance with **clause 9.3(c)**);

- (v) the Operator has done all things necessary in relation to the Operator's Emergency Management Plan to comply with **clause 10.1**;
  - (vi) all Insurances in accordance with **clause 16** have been effected and evidence of those Insurances has been provided to Queensland Rail in accordance with **clause 16.7(a)**;
  - (vii) the Operator holds the Accreditation necessary for it to operate the Train Services and has provided to Queensland Rail all things relating to that Accreditation in accordance with **clause 5(c)**;
  - (viii) the Operator has observed, complied with or implemented, all aspects of the Operator's Emergency Management Plan, the Operator's Accreditation and the IRMP that are required to be complied with prior to Train Services commencing;
  - (ix) the Operator has satisfied the requirements in **clause 8.10** which relate to the authorisation of Rolling Stock and Train Configurations; and
  - (x) the Operator has done all things that are necessary, and which can reasonably be done prior to operating the Train Services, to ensure the Operator's compliance with this agreement including the IRMP.
- (b) Queensland Rail must use reasonable endeavours to cooperate with the Operator to facilitate the Operator's compliance with **clause 8.5(a)**.
- (c) If the Operator has not complied with **clause 8.5(a)** for the relevant Train Services:
- (i) by the Compliance Date and Queensland Rail does not reasonably expect that the Operator can do so before the Commitment Date for those Train Services; or
  - (ii) by the Commitment Date for those Train Services,
- then:
- (iii) provided that Queensland Rail has complied with **clause 8.5(b)**, Queensland Rail may notify the Operator and Access Holder requiring the Operator to comply with **clause 8.5(a)** in respect of those Train Services by a date which is 20 Business Days after the date of that notice; and
  - (iv) where the Operator does not comply with **clause 8.5(a)** by that date (**Failure**), Queensland Rail may, by notice to the Operator and the Access Holder:
    - (A) reduce the Operator's right to operate under this agreement in relation to the relevant Train Services

relating to the Failure, but that reduction will not affect any other right to operate (if any) under this agreement relating to other Train Services which are not affected by that Failure (if any); and

- (B) a reduction referred to under **clause 8.5(c)(iv)(A)** will not affect any Access Rights held by the Access Holder.
- (v) Without limiting the Access Holder's rights under **clauses 2.2** and **4.1**, the Access Holder will have the right, under **clauses 2.2** and **4.1**, to nominate a new Operator to utilise the Access Rights which were previously allocated to the non-complaint Operator.

## 8.6 Compliance with Scheduled Time

The Operator must only operate Train Services in accordance with the applicable Scheduled Times and the relevant Train Schedule unless:

- (a) the Operator is expressly permitted or required to do otherwise in accordance with this agreement, the Operating Requirements Manual, the Network Management Principles or a Network Control Direction; or
- (b) the Parties agree otherwise.

## 8.7 Alterations to Train Services

- (a) If the Operator is not able to operate a Train Service in accordance with its Scheduled Time, then:
  - (i) the Operator must, as soon as practicable prior to the time when that Train Service was scheduled for operation, notify Queensland Rail and the Access Holder that it is not able to operate that Train Service and specify the reason(s) for its inability; and
  - (ii) if the Operator has complied with **clause 8.7(a)(i)**, then Queensland Rail will use reasonable endeavours to provide an Alternative Schedule Time for the relevant Train Service unless this would:
    - (A) alter the Scheduled Times for other Train Movements; or
    - (B) result in Queensland Rail incurring additional costs or expenses.
- (b) If Queensland Rail provides an Alternative Schedule Time for a Train Service in accordance with **clause 8.7(a)(ii)**, the Operator must notify Queensland Rail and the Access Holder promptly whether the Operator accepts that Alternative Schedule Time. If the Operator accepts that Alternative Schedule Time, then the Operator must operate the Train Service in accordance with that Alternative

Schedule Time. For clarity, **clause 8.7(a)(ii)** does not apply to that Alternative Schedule Time.

- (c) If the Operator is not able to operate a Train Service in accordance with its Scheduled Time or an Alternative Schedule Time made available in accordance with **clause 8.7(a)(ii)** (or has not immediately notified Queensland Rail accepting such an Alternative Schedule Time), Queensland Rail may authorise the operation of another Train Movement at that Scheduled Time.

## 8.8 Operator to supply information

- (a) The Operator must provide and maintain all software, hardware and associated communication links necessary to ensure, to Queensland Rail's satisfaction (acting reasonably), an effective interface between the Operator's and Queensland Rail's information systems as nominated by Queensland Rail. The interface with Queensland Rail's information systems will be subject to any requirements and controls specified by Queensland Rail (in its reasonable discretion) including to protect the integrity and confidentiality of those information systems and the information contained in them.
- (b) Prior to substantially varying or amending the interface standards referred to in **clause 8.8(a)** Queensland Rail will consult with the Operator in relation to any proposed amendments and Queensland Rail will use reasonable endeavours to minimise any cost and disruption to the Operator which may result from any proposed amendments.
- (c) The Operator must provide information to Queensland Rail as required in accordance with the Operating Requirements Manual (including any details in relation to Train Services or contact and other details for interface coordination).

## 8.9 Queensland Rail must supply Data

- (a) The Parties acknowledge that Queensland Rail may from time to time collect data in respect of the Operator's Rolling Stock (**Data**).
- (b) Queensland Rail must, if reasonably requested by an Operator, provide the Operator with access to the Data. The Operator will be responsible for all costs related to the transfer, conversion, modification and storage of any Data made available to the Operator by Queensland Rail.
- (c) Despite any other provision in this agreement, if the Operator receives any data from Queensland Rail that is not in respect of the Operator's Rolling Stock, then the Operator must:
  - (i) immediately notify Queensland Rail, providing details of the relevant data;
  - (ii) not use the data for any purpose;

- (iii) not disclose the data to any person; and
  - (iv) comply with all directions given by Queensland Rail in relation to that data including the deletion, redirection or return of that data.
- (d) All material supplied or made available by one Party (the Supplier) to the other Party remains the intellectual property of the Supplier and cannot be reproduced or used for any purpose other than the purpose for which it was supplied without the prior written approval of the Supplier.

#### 8.10 Authorisation of Rolling Stock and Train Configurations

- (a) The Operator must only operate a Train Service using Rolling Stock or a Train Configuration in respect of which the Operator has:
- (i) provided to Queensland Rail:
    - (A) a certificate by a suitably qualified person, approved by Queensland Rail and appointed by and at the cost of the Operator, that the Operator's Rolling Stock and Train Configurations comply with the Interface Standards agreed in the IRMP (other than exceptions or unverified/unknown characteristics listed on that certificate); and
    - (B) relevant documentation (including reports on trials and/or commissioning tests and load tables) if required to demonstrate to the reasonable satisfaction of Queensland Rail that the Operator's Rolling Stock and Train Configurations comply with the Interface Standards agreed in the IRMP (other than exceptions or unverified/unknown characteristics listed on the certificate),  
**(Certification)**; and
  - (ii) obtained a notice from Queensland Rail (whose notice and satisfaction will not be unreasonably withheld or delayed) indicating that Queensland Rail is satisfied with that Certification for the purposes of those Train Services.

If the Operator obtains a notice referred to in **paragraph (ii)** that is subject to conditions (including conditions relating to the period for which that notice will apply), then the Operator must comply with those conditions and must only operate a Train Service in accordance with those conditions and while that notice applies.

- (b) During the Term, if the Operator wishes to modify any of the Rolling Stock or Train Configurations used for Train Services or add new or additional Rolling Stock or Train Configurations, then the Operator

must not use any such Rolling Stock or Train Configurations for those Train Services unless and until:

- (i) the IRMP has been reviewed in accordance with **clause 9.2** in relation the modified Rolling Stock or Train Configurations;
- (ii) the Operator has complied with **clause 8.10(a)** in relation to the modified Rolling Stock or Train Configurations, as applicable; and
- (iii) where such modification is not otherwise covered by **clause 4.2**, the Parties (each acting reasonably) have agreed any amendments to this agreement (including varying the methodology, rates or other inputs for calculating Access Charges and any necessary changes to the IRMP) reasonably necessary to reflect the authorisation and use of the modified Rolling Stock or Train Configurations on the Network.

#### **8.11 Entering and exiting the Network**

- (a) The Access Holder and the Operator are responsible for, and bear the cost and risk of, obtaining and maintaining any rights to access or use Private Infrastructure that are necessary in order to enter or exit the Network or otherwise operate the Train Services in accordance with this agreement.
- (b) Despite any other provision in this agreement, the Access Holder and the Operator are not relieved of their respective obligations under this agreement (and must continue to comply with all of their respective obligations under this agreement) even if the Access Holder or the Operator cannot or does not obtain or maintain any such rights.

#### **8.12 Notification of damage or disrepair**

- (a) The Operator must notify Queensland Rail as soon as practicable of any damage to, disrepair of or failure in the operation or function of any part of the Network, or any potential risks to the Network caused by adverse weather events, of which the Operator becomes aware.
- (b) Queensland Rail must notify the Operator as soon as practicable of any damage to, disrepair of or failure in the operation or function of any part of the Network relevant to the Operator of which Queensland Rail becomes aware.

#### **8.13 Replacement of Operating Requirements Manual**

Nothing in this agreement restricts or limits Queensland Rail's right to amend or replace the Operating Requirements Manual in accordance with the Access Framework.



## 9 Interface risk management

### 9.1 Compliance with IRMP

- (a) The Operator and Queensland Rail must observe and comply with their respective responsibilities and obligations set out in the IRMP.
- (b) The Operator must use reasonable endeavours to not cause, permit or contribute to any act or omission which may give rise to Interface Risks that are not addressed in the IRMP. If the Operator does cause, permit or contribute to any act or omission that gives rise to, or is likely to give rise to, Interface Risks that are not addressed in the IRMP, the Operator must notify Queensland Rail as soon as practicable of the act or omission (as applicable) and the relevant Interface Risk.
- (c) Queensland Rail must use reasonable endeavours to not cause, permit or contribute to any act or omission which may give rise to Interface Risks that are not addressed in the IRMP. If Queensland Rail does cause, permit or contribute to any act or omission that gives rise to, or is likely to give rise to, Interface Risks that are not addressed in the IRMP, Queensland Rail must notify the Operator as soon as practicable of the act or omission (as applicable) and the relevant Interface Risk.
- (d) If either Queensland Rail or the Operator (as applicable) fails to comply with the IRMP it must notify the Operator or Queensland Rail (as applicable) of the non-compliance as and when it becomes aware of such non-compliance. The notice must include details of the nature of the non-compliance and how the non-complying Party has rectified or intends to rectify the non-compliance.

### 9.2 Review of IRMP

- (a) The Operator and Queensland Rail must:
  - (i) upon the reasonable request at any time by either of them; or
  - (ii) if the Operator changes its Operating Plan (in which case the Operator must provide a copy of the amended Operating Plan to Queensland Rail); and
  - (iii) for any new or varied Train Services or Ad Hoc Train Services from time to time,jointly review the IRMP, and amend it (including by replacing it) as necessary, to ensure that the Operator and Queensland Rail continue to agree that the Interface Risk Assessment is still applicable and all reasonably foreseeable Interface Risks are effectively managed under the IRMP.
- (b) For the purposes of a review referred to in **clause 9.2(a)**:
  - (i) if either Queensland Rail or the Operator is not satisfied that the Interface Risk Assessment is still applicable and all

reasonably foreseeable Interface Risks are effectively managed under the IRMP, then those Parties will undertake a joint Interface Risk Assessment (including, if those Parties agree that it is appropriate, only in relation to specific matters or activities) as part of such a review;

- (ii) Queensland Rail (acting reasonably) may request that the Operator review and update its EIRMR and provide Queensland Rail with a copy of its updated EIRMR prior to and for the purposes of the Parties undertaking a joint Interface Risk Assessment; and
  - (iii) if Queensland Rail and the Operator are not able to agree any matter in relation to such a review, either of those Parties may treat that inability to agree as a Dispute for the purposes of **clause 19**.
- (c) For clarity, the Operator must not:
- (i) operate any new or varied Train Services under this agreement unless the IRMP has been reviewed in accordance with this **clause 9.2** in relation to those new or varied Train Services (as applicable); and
  - (ii) use any Rolling Stock or Train Configuration in operating a Train Service unless the IRMP has either been:
    - (A) prepared on the basis of the Train Services being operated using that Rolling Stock or Train Configuration (as applicable); or
    - (B) reviewed in accordance with this **clause 9.2** in relation to that Rolling Stock or Train Configuration (as applicable).
- (d) For administrative ease, the IRMP may be amended by the exchange of written notices by the duly authorised representatives of the Parties.

### 9.3 **Application of RSNL**

- (a) To the extent that anything under this **clause 9** is inconsistent with the RSNL, the RSNL prevails to the extent of the inconsistency.
- (b) The IRMP and the provisions under this agreement relating to the IRMP (including in relation to compliance with it and its review):
  - (i) together comprise an interface agreement (as defined under the RSNL) between the Operator and Queensland Rail; and
  - (ii) despite any other provision to the contrary in this agreement, may be disclosed to the Rail Safety Regulator to the extent that it is reasonably necessary to do so to comply with this agreement or the RSNL or any other Law.

- (c) Without limiting **clause 9.3(a)**, to the extent that the Rail Safety Regulator has:
  - (i) determined under section 110 of the RSNL an arrangement that is to apply in relation to the management of risks to safety as between the Operator and Queensland Rail; and
  - (ii) directed that the Operator or Queensland Rail give effect to those arrangements (as defined under the RSNL),

**clauses 9.1 to 9.2** (including any IRMP) are subject to and must be consistent with that direction.

#### 9.4 **Rights for Inspection or Audit**

- (a) Subject to **clause 9.4(b)**, if either the Operator or Queensland Rail has reasonable grounds to believe that the other has not complied, or is not complying, with any aspect of the IRMP or the Operating Requirements Manual, or any obligation or duty under the RSNL, then that Party may conduct, or require the conduct of, an inspection or audit in respect of that compliance.
- (b) Prior to exercising a right under **clause 9.4(a)**, a Party must:
  - (i) notify the other of those Parties of that belief (including the grounds supporting that belief) and require that other Party to demonstrate that they are compliant; and
  - (ii) only proceed to an inspection or audit if that other Party fails to demonstrate compliance to the first Party's satisfaction (acting reasonably).
- (c) Without limiting **clause 9.4(a)**, each of Queensland Rail and the Operator may conduct or require the conduct of an inspection or audit to assess the other's compliance with the IRMP periodically as specified in the IRMP.

#### 9.5 **Notice of Inspection or Audit**

The Party (**Inspecting Party**) conducting or requiring the conduct of an inspection or audit referred to in **clause 9.4 (Inspection or Audit)** must give the other Party reasonable prior notice of that Inspection or Audit (except in the case of emergencies or if an event or circumstance referred to in **clauses 14 or 15** has occurred) and that notice must include the following:

- (a) details of the Inspection or Audit to be carried out;
- (b) the name of the person conducting the Inspection or Audit;
- (c) the timing and expected duration of the Inspection or Audit;
- (d) the location of the Inspection or Audit;
- (e) the grounds on which the Inspecting Party requires the Inspection or Audit; and

- (f) the Inspecting Party's requirements (acting reasonably) of the other Party in relation to the Inspection or Audit.

## 9.6 Conduct of Inspection or Audit

- (a) Subject to **clause 9.6(b)**, any Inspection or Audit may be conducted by:
- (i) the Inspecting Party or its appointed representative; or
  - (ii) by a suitably qualified person acceptable to Queensland Rail and the Operator (each acting reasonably).
- (b) If an Inspection or Audit requires access to commercially sensitive information, then:
- (i) the Inspection or Audit must only be conducted by a person referred to in **clause 9.6(a)(ii)**; and
  - (ii) that person must:
    - (A) prior to being provided with the commercially sensitive information, execute a confidentiality deed:
      - (1) in favour of the Party who is subject to the Inspection or Audit;
      - (2) on terms satisfactory to that Party (acting reasonably); and
      - (3) that requires the person:
        - to keep that information confidential;
        - to use it only for the purpose of the Inspection or Audit;
        - to not disclose that information to the Inspecting Party or any other person (or another Party); and
        - to return (or, if applicable, destroy any copy of) that information after completion of the Inspection or Audit,
- subject to reasonable exceptions including except to the extent:
- required or compelled by, or necessary to observe, administer or comply with, any Law;
  - consistent with a person's right to disclosure under any Law; and
  - necessary for the conduct of any legal proceedings (including any dispute

resolution process under this agreement);  
and

- (B) be given access to the commercially sensitive information, once they have executed that confidentiality deed and delivered it to the Party who it is in favour of.
- (c) Each Party must use reasonable endeavours to ensure that an Inspecting Party, its appointed representative or the person appointed to conduct an Inspection or Audit are entitled to enter and be on its land and premises (whether or not owned or leased) and to access and inspect any other of its relevant property, including in the case of the Operator, its Rolling Stock, for the purposes of carrying out any Inspection or Audit.
- (d) An Inspecting Party, in exercising any right of Inspection or Audit, must:
  - (i) not interfere unreasonably with another Party's Trains and Rolling Stock or the Network;
  - (ii) ensure that the Inspection or Audit does not adversely affect any other Network Participant's Train services or Train Movements;
  - (iii) not cause or contribute to any damage to property, any Environmental Harm or any injury or death of persons;
  - (iv) comply with the health, safety, environment and other requirements as required by another relevant Party (acting reasonably); and
  - (v) use reasonable endeavours to minimise any disruption to the Party who is subject to the Inspection or Audit.
  - (vi) use all reasonable endeavours to mitigate any loss or damage arising from the conduct of an Inspection or Audit.
- (e) An Inspecting Party is not liable for:
  - (i) any delays or cancellation of Train Services; or
  - (ii) Claims suffered or incurred by or made or brought by or against another Party,

as a result of the Inspecting Party exercising its rights under **clause 9.4** provided that the Inspecting Party complies with **clause 9.6(d)**.

## 9.7 Cooperation for Inspection or Audit

- (a) Each Party must provide all reasonable assistance required by the Inspecting Party in conducting any Inspection or Audit, including allowing the Inspecting Party, its appointed representative or a person appointed to conduct an Inspection or Audit to discuss any relevant matter with that Party's Associates. A member of the Associates of

the Party who is subject to the Inspection or Audit may be present at the Inspection or Audit.

- (b) Nothing in **clauses 9.4 to 9.7(a)**:
  - (i) obliges Queensland Rail (as a Party subject to Inspection or Audit), or entitles the Operator (as the Inspecting Party), to do anything that may adversely affect:
    - (A) the operation of Train services by another Network Participant; or
    - (B) Queensland Rail's compliance with another Network Participant's access agreement or, if applicable, the Access Framework; or
  - (ii) obliges a Party who is subject to an Inspection or Audit, or entitles the Inspecting Party, to do anything that:
    - (A) would result in the Party who is subject to the Inspection or Audit not complying with any Law; or
    - (B) adversely affects the safe operation of the Network including the safety of any person.

#### 9.8 **Costs for Inspection or Audit**

- (a) For an Inspection or Audit under **clause 9.4(c)**, the Inspecting Party must bear the costs of conducting the Inspection or Audit.
- (b) For an Inspection or Audit under **clause 9.4(a)**:
  - (i) the Party whose operations are Inspected or Audited must bear the reasonable costs of the conduct of the Inspection or Audit to the extent that the stated grounds for requiring the Inspection or Audit are demonstrated to exist; or
  - (ii) the Inspecting Party must bear the costs of conducting such Inspection or Audit to the extent that the stated grounds for requiring the Inspection or Audit are not demonstrated to exist, as a result of the Inspection or Audit.

#### 9.9 **Results of Inspection or Audit and general compliance**

- (a) The Inspecting Party must provide the other Party with a copy of the report for the relevant Inspection or Audit.
- (b) An Inspection or Audit by a Party does not relieve either Party of its obligations under this agreement or at Law.

#### 9.10 **Cooperation for rail safety investigation**

If the Rail Safety Regulator, a rail safety officer, a prescribed authority (as those terms are defined under the RSNL) or other Authority is undertaking an investigation, inspection, audit or other review in relation to a Party's compliance with its obligations or duties under the RSNL, then the Parties will provide such cooperation and assistance to each other, as is reasonable in the

circumstances, in relation to that investigation, inspection, audit or other review.

## 10 Incident, environmental and emergency management plan requirements

### 10.1 Operator's Emergency Management Plan

- (a) Prior to commencing to operate any Train Services (including any new or varied Train Services) the Operator must develop a proposed Operator's Emergency Management Plan which:
- (i) complies with the RSNL's requirements for an emergency management plan; and
  - (ii) except to the extent inconsistent with those requirements:
    - (A) details procedures that are adequate to manage an Incident including all actions to be taken to prevent, minimise or mitigate any threat or danger to any person or property including:
      - (1) the matters outlined in the Operating Requirements Manual, from time to time, relevant to the management of Network Incidents – for example, safety and environment matters; and
      - (2) any matters otherwise referred to in this agreement for inclusion in such a plan;
    - (B) at all times during the Term is compatible with this agreement and the Queensland Rail Emergency Procedures and with Queensland Rail's emergency management plan; and
    - (C) is consistent with:
      - (1) Prudent Practices, all relevant Laws and all applicable Australian or other industry standards; and
      - (2) this agreement including the Network Management Principles, the IRMP and the Operating Requirements Manual,
- and obtain a notice from Queensland Rail (whose satisfaction must not be unreasonably withheld or delayed) that it has no objection to that plan.
- (b) As soon as practicable after receiving the proposed Operator's Emergency Management Plan, Queensland Rail (acting reasonably) must either notify the Operator that it:
- (i) has no objections; or
  - (ii) has objections (including details of those objections),

- to the proposed Operator's Emergency Management Plan.
- (c) If Queensland Rail notifies the Operator, under **clause 10.1(b)**, that Queensland Rail has objections, then:
    - (i) the Operator must develop an amended plan in accordance with **clause 10.1(a)**; and
    - (ii) **clause 10.1(b)** and this **clause 10.1(c)** will apply in respect of that amended plan.
  - (d) If the Operator intends to amend the Operator's Emergency Management Plan, then:
    - (i) the Operator must notify Queensland Rail and provide Queensland Rail with details of the proposed amendments and the reasons for them;
    - (ii) **clauses 10.1(a) to (c)** will also apply in respect of those amendments as if they were a proposed Operator's Emergency Management Plan; and
    - (iii) those amendments will not be effective unless and until the Operator has obtained a notice from Queensland Rail that it has no objection to those amendments.
  - (e) The Operator must ensure procedures are in place, and are implemented, which ensure compliance by the Operator with any reporting requirements in the Operator's Emergency Management Plan and, to the extent relevant, the Queensland Rail Emergency Procedures and Queensland Rail's emergency management plan.
  - (f) Without limitation to Queensland Rail's right to object to a proposed Operator's Emergency Management Plan (or an amendment to the Operator's Emergency Management Plan) under this **clause 10.1**, Queensland Rail must raise an objection if Queensland Rail considers that the proposed Operator's Emergency Management Plan (or the relevant amendment) is inconsistent with Queensland Rail's or another Network Participant's emergency management plan or would adversely affect a coordinated response to a Network Incident or other event or incident that is preventing or affecting, or is likely to prevent or affect, the operation of Train services on the Network.
  - (g) Queensland Rail (acting reasonably) may request the Operator to coordinate and cooperate with Queensland Rail or another Network Participant to ensure that the Operator, Queensland Rail and other Network Participants have emergency management plans that are not inconsistent and allow a coordinated response to Network Incidents or other emergencies.
  - (h) Without limitation to the Operator's obligations under section 113(2) of the RSNL, if requested by Queensland Rail (acting reasonably), the Operator must assist and participate in exercises with Queensland



Rail and, if applicable, other Network Participants, to test the effectiveness of the emergency management plans of Queensland Rail, the Operator and, if applicable, other Network Participants including whether those emergency management plans are inconsistent and allow for a coordinated response to Network Incidents or other emergencies.

- (i) Despite **clauses 10.1(f) to (h)** or any other provision of this agreement, Queensland Rail is not obliged to ensure, and does not assume any responsibility for ensuring, that the Operator's Emergency Management Plan:
  - (i) is consistent with Queensland Rail's or any other Network Participant's emergency management plan; or
  - (ii) will allow for a coordinated response to Network Incidents or other emergencies.
- (j) For the purpose of this **clause 10.1**, a reference to an **emergency management plan** is a reference to an emergency management plan as referred to under section 113 of the RSNL and, in the case of the Operator, the Operator's Emergency Management Plan.

## 10.2 Obstructions

- (a) The Operator must not cause or contribute to any Obstruction or permit to continue any Obstruction to the extent caused or contributed to by the Operator.
- (b) Queensland Rail must not cause or contribute to any Obstruction or permit to continue any Obstruction to the extent caused or contributed to by Queensland Rail.
- (c) Queensland Rail may do anything that it considers necessary:
  - (i) to remove, rectify, mitigate or otherwise deal with any Obstruction; or
  - (ii) to recommence Train Movements where there is or was an Obstruction,

including to move, or remove from the Network, any of the Operator's Rolling Stock (including any freight) that is causing or contributing to an Obstruction or preventing or hindering Train Movements. To the extent that costs and expenses from an Obstruction are caused or contributed to by the Operator, the Operator must pay Queensland Rail's costs and expenses incurred by Queensland Rail in relation to that Obstruction (including costs and expenses for doing anything under this **clause 10.2(c)**) and those costs and expenses will be a debt due and owing by the Operator to Queensland Rail.

- (d) Queensland Rail will use reasonable endeavours to consult with the Operator, prior to exercising any right under **clause 10.2(c)**, where

Queensland Rail intends to interfere with the Operator's Rolling Stock or any other thing for which the Operator is responsible.

- (e) If Queensland Rail gives a Network Control Direction to the Operator to assist Queensland Rail to remove, rectify, mitigate or otherwise deal with an Obstruction caused or contributed to by another Network Participant (including to use any of the Operator's Rolling Stock to move, or remove from the Network, any Rolling Stock of another Network Participant), Queensland Rail will reimburse to the Operator its reasonable direct costs and expenses of providing such assistance.

### 10.3 Notification

- (a) Queensland Rail will notify the Operator of any Network Incident (other than an Incident) that may reasonably be expected to materially adversely affect the Train Services as soon as practicable after the Network Incident comes to Queensland Rail's attention.
- (b) As soon as practicable after the Operator or the Operator's Associates become aware of:
  - (i) any Incident;
  - (ii) any Environmental Harm;
  - (iii) any event, circumstance, condition, operation or activity which it is reasonably foreseeable is likely to result in:
    - (A) Environmental Harm; or
    - (B) a category A notifiable occurrence (as defined under the RSNL) or any other requirement for Queensland Rail to notify an Authority in accordance any Law;
  - (iv) any Obstruction;
  - (v) any material breach or suspected material breach of any Safeworking Procedures, Safety Standards or other safety requirements set out in the Operating Requirements Manual; or
  - (vi) anything which the Operator observes may cause or contribute to the occurrence of any matter referred to in **clauses 10.3(b)(i) to (v)**,  
**(Notifiable Events)**, the Operator must notify Queensland Rail of that Notifiable Event (including any action or intervention taken or being taken by the Operator).
- (c) Where:
  - (i) the Operator is required to give a notice under **clause 10.3(b)**; and

- (ii) a Train Service is affected by, involved with or has caused or contributed to the relevant event,

the Operator's notice must specify the Train Service and provide details of:

- (iii) any substance or thing carried by that Train Service that could potentially cause or contribute to any:
  - (A) Environmental Harm;
  - (B) loss of, damage to or destruction of real or personal property (including property of another Party); or
  - (C) personal injury to or death of any person; and
- (iv) any Dangerous Goods (if any) carried by the Train Service.
- (d) Without limitation to **clauses 10.3(b)** and **(c)**, where any substance or thing referred to in **clause 10.3(c)** (including any Dangerous Goods carried by that Train Service) have escaped or been released or discharged or there is a material or imminent risk of such an escape, release or discharge, the Operator must immediately notify Queensland Rail and provide all relevant details of the release, discharge or risk (including as requested by Queensland Rail) relevant to Queensland Rail's Rail Infrastructure Operations.
- (e) For clarity, **clauses 10.3(c)(iv)** or **(iv)** apply without limitation to **clause 10.5**.

#### 10.4 **Management and response**

- (a) If an Incident occurs:
  - (i) the Operator and Queensland Rail must coordinate and manage the response to that Incident in accordance with this agreement and the relevant requirements in the Operating Requirements Manual; and
  - (ii) an investigation into that Incident will be conducted where required, and in accordance with the relevant provisions of the Operating Requirements Manual, the Operator and Queensland Rail must cooperate, and ensure their Associates cooperate, fully with any such investigation.

#### 10.5 **Dangerous Goods**

**[Option A: Where the Train Service is not to carry Dangerous Goods:**

The Operator must ensure that the Train Services do not carry Dangerous Goods. ]

**[Option B: Where the Train Service will or may carry Dangerous Goods:**

- (a) The Operator must ensure that the Train Services do not carry Dangerous Goods, except:
  - (i) as expressly provided in this agreement; or

- (ii) with the prior permission of Queensland Rail (not to be unreasonably withheld).
- (b) If the Operator wishes to obtain Queensland Rail's permission to carry any Dangerous Goods, the Operator must first satisfy Queensland Rail (acting reasonably) that:
- (i) carrying the relevant Dangerous Goods in the manner proposed by the Operator is permitted under all relevant Laws and Authorities and any applicable Dangerous Goods Code;
  - (ii) any Authorisations required under any applicable Law or Dangerous Goods Code have been, or will be, obtained and maintained and are, or will be, available for inspection by Queensland Rail if requested; and
  - (iii) all Laws, including Authorisations, applicable in relation to those Dangerous Goods and all requirements of any applicable Dangerous Goods Code are, or will be, complied with.
- (c) Unless otherwise expressly provided in this agreement, where either **clause 10.5(a)(i)** or **(ii)** are satisfied and the relevant Train Service will carry Dangerous Goods, the Operator must ensure that:
- (i) any Authorisations required under any applicable Law or the applicable Dangerous Goods Code have been obtained prior to the operation of that Train Service and are available for inspection by, or for copies to be provided to, Queensland Rail if requested;
  - (ii) all Laws, including Authorisations, applicable in relation to those Dangerous Goods and all requirements of any applicable Dangerous Goods Code are complied with;
  - (iii) Queensland Rail is notified of the details of the Dangerous Goods (including an accurate description of the Dangerous Goods and the applicable Dangerous Goods United Nations (UN) Number) as soon as practicable prior to the operation of that Train Service; and
  - (iv) before any Dangerous Goods are carried on that Train Service, the Operator's Emergency Management Plan includes procedures for responding to an Incident involving those Dangerous Goods, or any other event or circumstance that gives rise to a material or imminent risk of an escape, release or discharge of those Dangerous Goods.]

## 10.6 Intervention to prevent or mitigate damage

Where Queensland Rail becomes aware of:

- (a) any event, circumstance, condition, operation, activity or omission in connection with the Network, the Train Services or any other related

activity of the Operator which has caused or contributed to or is likely to cause or contribute to:

- (i) any Environmental Harm;
  - (ii) any failure by Queensland Rail to comply with or observe any Law;
  - (iii) Queensland Rail being subject to a lawful direction, order or other requirement by any Authority;
  - (iv) any loss of, damage to or destruction of real or personal property (including property of the other Party); or
  - (v) any personal injury to or death of any person; and
- (b) Queensland Rail:
- (i) considers that action or intervention is required; or
  - (ii) is given a direction by an Authority that action or intervention is required,

to prevent, mitigate or remedy the matter referred to in **clause 10.6(a)**,

then:

- (c) Queensland Rail will notify the Operator of that requirement and, where practicable, any action or intervention that Queensland Rail (acting reasonably) or, if applicable, the relevant Authority considers necessary to prevent, mitigate or remedy the matter referred to in **clause 10.6(a)**; and
- (d) as soon as practicable after receiving such a notice, the Operator will:
  - (i) comply with the requirements of the applicable Authority and any other requirements specified by Queensland Rail in that notice; and
  - (ii) take whatever other action or intervention is required to prevent, mitigate or remedy the matter referred to in **clause 10.6(a)**.

## 10.7 Noise mitigation

- (a) In addition to any noise mitigation or management requirements under the IRMP or as otherwise agreed between the Parties, the Operator must pay to Queensland Rail a contribution, as determined by Queensland Rail (acting reasonably), to the costs and expenses incurred by Queensland Rail in relation to any noise mitigation or management measures on the Network, or land adjacent to the Network, that are considered necessary by Queensland Rail (acting reasonably) to comply with noise levels, limits, standards, guidelines or other requirements that Queensland Rail is required to comply with or which are required in order for Queensland Rail to comply with under any applicable Law (**Noise Mitigation Requirements**).

- (b) Queensland Rail will (acting reasonably):
  - (i) consult with the Operator prior to Queensland Rail electing to implementing noise mitigation or management measures on the Network, or land adjacent to the Network, to comply with any applicable Noise Mitigation Requirements from time to time; and
  - (ii) notify the Operator of how it will determine the Operator's contribution to its costs and expenses in relation to any noise mitigation or management measures, including, prior to electing to implement noise mitigation or management measures on the Network, provide to the Operator any tender documents and quotes to support any expenses which Queensland Rail will seek to recover.

## 11 Inspection of Trains and Rolling Stock

- (a) Where:
  - (i) Queensland Rail believes (acting reasonably) that the Operator's Rolling Stock or Train Configurations do not comply with:
    - (A) the authorised Rolling Stock and Train Configurations applicable to the Train Services;
    - (B) any applicable Laws relevant to the Train Services; and
  - (ii) Queensland Rail cannot otherwise reasonably confirm that compliance,  
Queensland Rail may:
    - (iii) notify the Operator of its belief (including the grounds supporting that belief) and require the Operator to demonstrate that the Rolling Stock or Train Configurations are compliant; and
    - (iv) where the Operator fails to demonstrate compliance:
      - (A) inspect any Trains or Rolling Stock utilised or intended to be utilised for the Train Services; or
      - (B) require the Operator to have an inspection conducted, after giving notice of that inspection or requirement to the Operator and for this purpose, Queensland Rail or Queensland Rail's Associates will be entitled at any time to enter and ride on the Operator's Trains or Rolling Stock.
- (b) Queensland Rail may require any of the Operator's Rolling Stock (either loaded or empty) to be available at such location on the Network as Queensland Rail may require (acting reasonably) for

weighing, measuring or other inspection at any time specified by Queensland Rail (acting reasonably), provided that Queensland Rail must use reasonable endeavours to minimise any diversion or delay to a Train Service.

- (c) If any of the Operator's Rolling Stock is reasonably considered by Queensland Rail to be loaded:
  - (i) in excess of its rated carrying capacity; or
  - (ii) in an unsafe or insecure manner,then Queensland Rail may:
  - (iii) at any time require the Operator to discontinue the Train Service or to remove the excess or adjust the load at the Operator's expense; or
  - (iv) where the Operator fails to immediately remove the excess or adjust the load, arrange for its removal or adjustment and Queensland Rail's costs and expenses of doing so will be a debt due and owing by the Operator to Queensland Rail.
- (d) The Operator must provide all reasonable assistance required by Queensland Rail in conducting any inspection, including allowing Queensland Rail, its appointed representative or a person appointed to conduct an inspection to discuss any relevant matter with the Operator's Associates. A member of the Operator's Associates may be present at the inspection.
- (e) Nothing in this **clause 11** obliges the Operator, or entitles Queensland Rail, to do anything that would result in the Operator not complying with any Law.
- (f) The Operator must bear the reasonable costs of the conduct of the inspection to the extent that the inspection demonstrates that a relevant non-compliance exists.
- (g) Queensland Rail must bear the costs of conducting the inspection to the extent that the inspection demonstrates that no relevant non-compliance exists.
- (h) An inspection by Queensland Rail under this **clause 11** does not relieve the Operator of its obligations under this agreement or at Law.

## 12 Risk and indemnities

### 12.1 Indemnities for personal injury and property damage

- (a) Subject to **clause 13** (and without limitation to **clause 12.2**), the Operator indemnifies and will keep indemnified each other Party and that other Party's Associates against all Losses suffered or incurred by, or Claims brought against or made upon, that other Party or its Associates (as applicable) in respect of:

- (i) any loss of, damage to or destruction of real or personal property (including property of any Party); or
  - (ii) personal injury to or death of any person,
  - (iii) in each case to the extent caused or contributed to by:
  - (iv) a breach of this agreement by the Operator; or
  - (v) any negligent act or omission of the Operator or the Operator's Associates in the performance of obligations, or in the exercise of rights, under this agreement.
- (b) Subject to **clause 13** (and without limitation to **clause 12.2**), Queensland Rail indemnifies and will keep indemnified each other Party and that other Party's Associates against all Losses suffered or incurred by, or Claims brought against or made upon, that other Party or its Associates (as applicable) in respect of:
- (i) any loss of, damage to or destruction of real or personal property (including property of any Party); or
  - (ii) personal injury to or death of any person,
  - (iii) in each case to the extent caused or contributed to by:
  - (iv) a breach of this agreement by Queensland Rail; or
  - (v) any negligent act or omission of Queensland Rail or Queensland Rail's Associates in the performance of obligations, or in the exercise of rights under this agreement.
- (c) Subject to **clause 13**, the Access Holder indemnifies and will keep indemnified each other Party and that other Party's Associates against all Losses suffered or incurred by, or Claims brought against or made upon, that other Party or its Associates (as applicable) in respect of:
- (i) any loss of, damage to or destruction of real or personal property (including property of any Party); or
  - (ii) personal injury to or death of any person,
  - (iii) in each case to the extent caused or contributed to by:
  - (iv) a breach of this agreement by the Access Holder; or
  - (v) any negligent act or omission of the Access Holder or the Access Holder's Associates in the performance of obligations, or in the exercise of rights under this agreement.

## 12.2 Operator's carriage indemnity

- (a) This **clause 12.2** only applies where the Operator holds the Access Rights and the Operator's Customer is not a Party.
- (b) The Parties acknowledge and agree that if the Operator's Customer were a Party to this agreement, then **clause 13** should and would



apply as if a reference to the Operator in **clause 13** included a reference to the Operator's Customer with the effect of limiting and excluding Claims and liability for Losses as between the Operator's Customer and Queensland Rail – for example, excluding Claims by the Operator's Customer against Queensland Rail for Consequential Loss (where applicable).

- (c) As there is no contract between Queensland Rail and the Operator's Customer addressing the matters referred to under **clause 12.2(b)**, the Operator indemnifies and will keep indemnified Queensland Rail and its Associates from all Claims by the Operator's Customer (including any Loss arising out of Claims) in a way that gives effect to **clause 13** as if **clause 13** did apply as between Queensland Rail and the Operator's Customer (with any reference to the Operator in **clause 13** being a reference to the Operator's Customer). For example, if the Operator's Customer is not a Party and commences a Claim against Queensland Rail for Consequential Loss in circumstances where the Operator is excluded from making any such Claim, then the Operator will indemnify Queensland Rail for that Consequential Loss.
- (d) The Operator is responsible for all conduct of the Operator's Customer relating to this agreement (including the Train Services). Any act or omission of the Operator's Customer is deemed to be an act or omission by the Operator for the purposes of this agreement.

### 12.3 **Conditions of carriage exclusions and limitations of liability**

Without limiting **clause 12.2**, the Operator (and where the Operator's Customer is a Party, the Operator's Customer) must:

- (a) ensure Queensland Rail has the benefit of any exclusion or limitation of liability in favour of, or for the benefit of, the Operator under the Operator's conditions of carriage in relation to any person, or any person whose property is, being transported on Train Services including the Operator's Customer; and
- (b) provide to Queensland Rail details of the provisions of the conditions of carriage relevant to those exclusions and limitations of liability in place from time to time.

### 12.4 **Assistance in defence of Claims arising from Network Incidents**

Each Party must provide reasonable assistance to each other Party in the defence of any Claim made against that other Party by a third party arising out of any event in connection with a Network Incident.

### 12.5 **Parties responsible for their Associates**

- (a) A Party may allow any of that Party's Associates to exercise any of the Party's rights or to comply with any of the Party's obligations under this agreement.

- (b) Each Party is responsible for the conduct of that Party's Associates in exercising any of that Party's rights or complying with any of the Party's obligations as if that conduct was the conduct of that Party itself.
- (c) If a Party delegates or subcontracts the exercise or performance of any of its rights or obligations under this agreement to any person, then:
  - (i) that Party remains fully responsible for the exercise or performance of the delegated or subcontracted (as applicable) rights or obligations; and
  - (ii) any conduct of any delegate or subcontractor (as applicable) will be taken to be the conduct of the Party.

## 12.6 Benefit of indemnities in favour of Associates

- (a) Each Party acknowledges and agrees that its obligation to indemnify the other Party's Associates under this **clause 12** is for the benefit of the other Party's Associates.
- (b) For the purpose of section 55 of the *Property Law Act 1974* (Qld) (and without limiting the operation of that section), each Party acknowledges that any person who is comprised in the other Party's Associates may accept that benefit.
- (c) Each of the Parties acknowledge that valuable consideration was received for the grant of the benefit referred to in **clause 12.6(a)** and that benefit may be enforced by its Associates (as applicable) in accordance with section 55 of the *Property Law Act 1974* (Qld).
- (d) Without limiting **clauses 12.6(a) to (c)**, each Party hereby gives notice, for and on behalf of that Party's Associates, to the other Party accepting the benefit of the indemnities under this **clause 12** that are in favour of that Party's Associates. The notice under this **clause 12.6(d)** is taken to be given on each day during the Term (including the Commencement Date and the Termination Date) and on each day after the Termination Date while those indemnities survive the expiry or termination of this agreement.

## 13 Limitations on liability

### 13.1 No liability for Consequential Loss

- (a) Subject to **clause 13.1(b)**, despite any other provision in this agreement no Party is liable to another Party for any Consequential Loss suffered or incurred by, or Claimed against, the other Party.
- (b) **Clause 13.1(a)** does not apply in relation to any Loss suffered or incurred by, or Claimed against, a Party to the extent caused or contributed to by an Inspecting Party failing to comply with its

obligations under **clauses 9.4 to 9.10** in relation to conducting that Inspection or Audit.

### 13.2 **Limitation on Claims**

A Party must not make any Claim against the other Party under, in relation to or arising out of this agreement or its subject matter including any breach of this agreement by, or any act or omission of, the other Party unless:

- (a) notice and full details of the Claim have been given to the other Party within one year after the occurrence of the event or circumstance out of which such Claim arises; and
- (b) subject to **clause 13.3**, the amount of the Claim exceeds \$100,000 in respect of any one event or cause of action or series of related events or causes of action (and, for clarity, the amount of any Claim is not limited to the amount exceeding that threshold).

### 13.3 **Failure to pay amounts**

No exclusion or limitation of liability, or restriction on the existence of or ability to make any Claim, in this **clause 13** applies to Claims made by a Party against the other Party for monies due and payable in accordance with this agreement including under **clause 6** and **clauses 13.4, 13.5, and 13.6**.

### 13.4 **Liability for Network**

- (a) Subject to **clause 13.4(b)**, without limiting any other provisions of this agreement and to the extent permitted by law, Queensland Rail and its Associates are not liable to another Party for any Losses, and the other Party must not make any Claim against either Queensland Rail or its Associates, including in respect of any damage to or loss or destruction of any property (including that other Party's property) or any injury to or death of any person, arising out of or in connection with:
  - (i) the standard, capability or condition of the Network; or
  - (ii) any failure of or defect in the Network;
  - (iii) maintenance of the Network; or
  - (iv) failure to meet Performance Levels.
- (b) Despite **clause 13.4(a)**, another Party may bring a Claim against Queensland Rail to the extent that any Loss, damage, injury, cost or expense results directly from the failure of Queensland Rail to perform its obligations under **clause 7.1** or Queensland Rail's negligence in performing those obligations.

### 13.5 **Claims in respect of delays to Train Movements**

No Party (**Affected Party**) will have or make any Claim against another Party (**Defaulting Party**) in respect of delays to Train Movements unless, and will only have a Claim to the extent that:

- (a) the delay was a result of a breach of this agreement by the Defaulting Party, or negligence on the part of the Defaulting Party; and
- (b) the delay is not attributable to:
  - (i) the Affected Party;
  - (ii) another Network Participant or Party (other than the Defaulting Party);
  - (iii) a Force Majeure Event;
  - (iv) a Planned Possession, Urgent Possession or Emergency Possession of the Network in a manner consistent with the Network Management Principles;
  - (v) Rail Infrastructure Operations scheduled in a manner consistent with the Network Management Principles;
  - (vi) an event, incident or circumstance on Private Infrastructure; or
  - (vii) any action taken by Queensland Rail (acting reasonably) or by an Authority in response to, or as a consequence of, an emergency<sup>3</sup> or a genuine safety risk (including a Network Incident), or any personal injury to or the death of any person on or near the Network, any Rolling Stock or any land or other thing on or near the Network.

### 13.6 **Claims in respect of non-provision of access**

Another Party will not have, and must not make, any Claim against Queensland Rail in respect of the non-provision of access or the cancellation of any Train Service (**Claim Event**) unless, and will only have a Claim to the extent that each of the following is satisfied:

- (a) the Claim Event was a result of a breach of this agreement by, or the negligence of, Queensland Rail;
- (b) the Claim Event is not attributable primarily to:
  - (i) a Party other than Queensland Rail;
  - (ii) another Network Participant (other than Queensland Rail);
  - (iii) a Force Majeure Event;
  - (iv) a Planned Possession, Urgent Possession, Emergency Possession or Rail Infrastructure Operations or other works related to such a Possession;

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<sup>3</sup> An emergency includes any actual or impending circumstance that poses a threat of causing or contributing to:

- injury or death of any person;
- the destruction of or material damage to any real or personal property;
- a material interference with, or loss or disruption of, a person's normal business operations; or
- any Environmental Harm.

- (v) Rail Infrastructure Operations scheduled in a manner consistent with the Network Management Principles;
  - (vi) an event, incident or circumstance on Private Infrastructure; or
  - (vii) any action taken by Queensland Rail (acting reasonably) or by an Authority in response to, or as a consequence of, an emergency<sup>4</sup> or a genuine safety risk (including a Network Incident), or any personal injury to or the death of any person on or near the Network, any Rolling Stock or any land or other thing on or near the Network;
- (c) a Train Service is cancelled due to Queensland Rail failing to make the Network available for the Operator to operate the Train Service at the Scheduled Time and Queensland Rail was not able to offer a reasonable Alternative Scheduled Time.

## 14 Suspension

### 14.1 Right of suspension – Operator

- (a) Queensland Rail (acting reasonably) may, by notice in writing to the Operator, immediately suspend the right of the Operator to operate some or all of the Train Services upon the occurrence of any one or more of the following events or circumstances:
- (i) any event or circumstance described in **clauses 15.2(a) to (j)** occurs;
  - (ii) the rights of the Access Holder are suspended in accordance with **clause 14.2**;
  - (iii) the Operator fails to comply with a notice given by Queensland Rail requiring the Operator (within the reasonable time specified in that notice) to cease conduct that Queensland Rail considers (acting reasonably) is causing or threatening to cause serious environmental harm or material environmental harm (as those terms are defined in the *Environmental Protection Act 1994* (Qld)); or
  - (iv) the Operator has failed, or in Queensland Rail's reasonable opinion the Operator will, or intends to fail, to comply with:
    - (A) any Law or Network Control Direction or the Operating Requirements Manual relating to the operation of Train Services; or

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<sup>4</sup> An emergency includes any actual or impending circumstance that poses a threat of causing or contributing to:

- injury or death of any person;
- the destruction of or material damage to any real or personal property; or
- a material interference with, or loss or disruption of, a person's normal business operations
- any Environmental Harm.

- (B) any obligation of the Operator under this agreement.
- (b) Such a suspension will continue until such time as the Operator has satisfied Queensland Rail (acting reasonably) that:
  - (i) the relevant event or circumstance has been remedied or, if applicable, has been avoided and will not re-occur; and
  - (ii) where appropriate, that the Operator has taken action to prevent the recurrence of that event or circumstance.

#### 14.2 **Right of suspension – Access Holder**

- (a) Queensland Rail (acting reasonably) may, by notice in writing to the Access Holder, immediately suspend the right of the Access Holder to have an Operator operate some or all of the Train Services upon the occurrence of any one or more of the following events or circumstances:
  - (i) any event or circumstance described in **clauses 15.3(a) to 15.3(f)** occurs which has not been remedied in accordance with **clause 15.6**.
- (b) Such a suspension will continue until such time as the Access Holder has satisfied Queensland Rail (acting reasonably) that:
  - (i) the relevant event or circumstance has been remedied or, if applicable, has been avoided and will not re-occur; and
  - (ii) where appropriate, the Access Holder has taken action to prevent the recurrence of that event or circumstance.

#### 14.3 **Details of suspension**

A notice of suspension given by Queensland Rail in accordance with this **clause 14** must set out:

- (a) the rights of the Access Holder or the Operator which are affected by the suspension;
- (b) the reasons for the suspension; and
- (c) the actions the Access Holder or the Operator must take to have the suspension lifted.

#### 14.4 **Effect of suspension**

The suspension of any rights by Queensland Rail in accordance with this **clause 14**:

- (a) is revocable at any time by Queensland Rail;
- (b) has no effect upon obligations, debts or liabilities which have accrued before that suspension took effect;
- (c) does not affect or suspend any other obligation of the Access Holder or the Operator, including the obligation to pay Access Charges relating to the period of the suspension;

- (d) is without prejudice to any Party's other rights and remedies in respect of the relevant default, event or circumstance; and
- (e) if it is the Operator whose rights have been suspended:
  - (i) does not affect the Access Holder's Access Rights or the ability of the Access Holder to nominate an Operator generally in accordance with **clauses 2.2** or **4.1**; and
  - (ii) does not prohibit the Access Holder from nominating a different Operator to utilise the suspended Train Services in accordance with **clauses 2.2** or **4.1**.

## 15 Default and termination

### 15.1 **Ipso Facto Amendments**

- (a) For the purpose of this clause 15, **Ipso Facto Amendments** means:
  - (i) the amendments to the *Corporations Act 2001 (Cth)* set out in Part 2 of the *Treasury Laws Amendment (2017 Enterprise Incentives No.2) Act 2017 (Cth)*; and
  - (ii) any regulations, declarations or legislative instruments, prescribed, made or declared pursuant to sections 415D, 434J or 451E of the *Corporations Act 2001 (Cth)*.
- (b) Clauses **15.2(c)**, **15.3(c)**, **15.4(a)**, **15.5(a)** and **17.2(c)** are subject to the Ipso Facto Amendments to the extent that they apply to this agreement.

### 15.2 **Termination of Operator by Queensland Rail**

Subject to **clause 15.6**, without limiting any other rights of termination in this agreement or otherwise existing at Law, Queensland Rail (acting reasonably) may, by notice in writing to the Operator, immediately terminate this agreement in relation to the Operator upon the occurrence of any one or more of the following events or circumstances:

- (a) the Operator fails, in any material respect, to perform or comply with this agreement;
- (b) the Operator fails to pay when due any amount payable, or to provide and maintain Security, in accordance with this agreement;
- (c) without limiting any other clause of this agreement and subject to clause 15.1, an Insolvency Event occurs in relation to the Operator;
- (d) there are no Access Rights under this agreement including as a result of reductions or relinquishments in accordance with **clause 21**;
- (e) a Repeated Breach by the Operator exists;
- (f) the Operator fails to comply with a notice given by Queensland Rail requiring the Operator (within the reasonable time specified in that notice) to cease conduct that Queensland Rail considers (acting

reasonably) is causing or threatening to cause serious environmental harm or material environmental harm (as those terms are defined in the *Environmental Protection Act 1994* (Qld));

- (g) the Operator purports to Assign or Charge its rights or interest in this agreement other than in accordance with **clause 22**;
- (h) the Operator fails to comply with the Train Service Description without first obtaining the prior written consent of Queensland Rail;
- (i) the Operator fails to comply with the IRMP or any other safety or environment related obligation under this agreement; or
- (j) the Operator's Accreditation is suspended, cancelled or amended so that it cannot perform its obligations or exercise its rights under this agreement.

### 15.3 Termination of Access Holder by Queensland Rail

Subject to **clause 15.6**, without limiting any other rights of termination in this agreement or otherwise existing at Law, Queensland Rail (acting reasonably) may, by notice in writing to the Access Holder, immediately terminate this agreement in relation to the Access Holder upon the occurrence of any one or more of the following events or circumstances:

- (a) the Access Holder fails, in any material respect, to perform or comply with this agreement;
- (b) the Access Holder fails to pay when due any amount payable, or to provide and maintain Security, in accordance with this agreement;
- (c) without limiting any other clause of this agreement and subject to **clause 15.1**, an Insolvency Event occurs in relation to the Access Holder;
- (d) a Repeated Breach by the Access Holder exists;
- (e) the Access Holder fails to comply with a notice given by Queensland Rail requiring the Access Holder (within the reasonable time specified in that notice) to cease conduct that Queensland Rail considers (acting reasonably) is causing or threatening to cause serious environmental harm or material environmental harm (as those terms are defined in the *Environmental Protection Act 1994* (Qld)); or
- (f) the Access Holder purports to Assign or Charge its rights or interest in this agreement other than in accordance with **clause 22**.

### 15.4 Termination by the Operator

Subject to **clause 15.6**, without limiting any other rights of termination in this agreement or otherwise existing at Law, the Operator (acting reasonably) may, by notice in writing to the other Parties, immediately terminate this agreement insofar as it relates to the Operator upon the occurrence of any one or more of the following events or circumstances:



- (a) without limiting any other clause of this agreement and subject to **clause 15.1**, an Insolvency Event occurs in relation to Queensland Rail;
- (b) Queensland Rail fails to pay when due any amount payable under this agreement; or
- (c) Queensland Rail fails, in any material respect, to perform or comply with this agreement other than where this agreement excludes Queensland Rail's liability for that failure, or where Queensland Rail is not otherwise liable under this agreement for that failure.

### 15.5 Termination by the Access Holder

Subject to **clause 15.6**, without limiting any other rights of termination in this agreement or otherwise existing at Law, the Access Holder (acting reasonably) may, by notice in writing to the other Parties, immediately terminate this agreement upon the occurrence of any one or more of the following events or circumstances:

- (a) without limiting any other clause of this agreement and subject to **clause 15.1**, an Insolvency Event occurs in relation to Queensland Rail;
- (b) Queensland Rail fails to pay when due any amount payable under this agreement; or
- (c) Queensland Rail fails, in any material respect, to perform or comply with this agreement other than where this agreement excludes Queensland Rail's liability for that failure, or where Queensland Rail is not otherwise liable under this agreement for that failure.

### 15.6 Remedy

If an event or circumstance set out in **clause 15.2 or 15.3** (except **clauses 15.2(c) to (d) and clause 15.3(c) to (d)**) (**Event**) occurs then the relevant Party (**Terminating Party**) may only terminate this agreement if:

- (a) the Terminating Party serves a notice (**Notice to Remedy**) on the other Party (**Defaulting Party**) notifying the Defaulting Party of the Event, providing details of the Event and requiring the Defaulting Party:
  - (i) to remedy the Event (if the Event is capable of being remedied); or
  - (ii) to take action to ensure such an Event does not recur (if the Event is not capable of being remedied),

and specifying a reasonable period in which to do the things in **paragraph (i) or (ii)**, as applicable having regard to the nature of the Event (**Relevant Period**) – however, if the Event is one in:

- (iii) **clause 15.2(b) or 15.3(b)**, then the Relevant Period must be ten Business Days; or

- (iv) **clause 15.2(a) or 15.3(a)**, then the Relevant Period must be 20 Business Days; and
- (b) no Defaulting Party:
  - (i) remedies the Event, if the Event is capable of being remedied; or
  - (ii) takes action to ensure such an Event does not recur and pays, if applicable, reasonable compensation to the Terminating Party in respect of the Event (subject to any relevant exclusions or limitations of liability under this agreement including **clause 13**), if the Event is not capable of being remedied,

within the Relevant Period.

### 15.7 **Termination for Change in Control**

Queensland Rail may terminate this agreement immediately if:

- (a) there is a Change in Control of the Access Holder; and
- (b) the Access Holder has not obtained Queensland Rail's prior consent (such consent not to be unreasonably withheld) to that Change in Control.

### 15.8 **Effect of Termination of Operator**

The termination of any Operator's rights to operate by Queensland Rail in accordance with this **clause 15**:

- (a) does not affect the Access Holder's Access Rights or the ability of the Access Holder to nominate an Operator generally in accordance with **clauses 2.2 or 4.1**; and
- (b) does not prohibit the Access Holder from nominating a different Operator to utilise the suspended Train Services in accordance with **clauses 2.2 or 4.1**.

### 15.9 **Effect of Termination of Access Holder**

If the agreement is terminated in accordance with **clause 15.3**; then the Access Holder is deemed to have withdrawn its nomination of the Operator in accordance with **clause 4.1**.

### 15.10 **Obligations and other rights upon termination or expiration**

- (a) A Party's right to make a Claim or recover damages or avail itself of other remedies under this agreement or at Law or to recover monies due to it under this agreement is not prejudiced by the termination, pursuant to **clause 15**, or expiry of this agreement.
- (b) The expiry or termination of this agreement releases all Parties from all further obligations or liabilities under this agreement except for:
  - (i) rights which accrued on or before termination, including for breach of this agreement which occurred before termination.

Any liability in respect of such prior breach will be limited in the manner provided in this agreement; or

- (ii) any provisions which are expressed as surviving the expiry or termination of this agreement.

#### 15.11 **Removal of Rolling Stock following termination**

- (a) Immediately on expiration of the Term, and as soon as practicable after termination of the operational right to operate for any other reason, the Operator must, at the Operator's cost and risk, remove from the Network (or the land on which the Network is located) all of the Operator's Rolling Stock and all vehicles, equipment, freight, debris, or rubbish brought onto the Network (or the land on which the Network is located) by, for or on behalf of the Operator relating to the Train Services.
- (b) If the Operator fails to remove its Rolling Stock from the Network:
  - (i) Queensland Rail may give a notice to the Operator demanding the removal of Rolling Stock by a time specified by Queensland Rail; and
  - (ii) if the Operator fails to remove that Rolling Stock by that time, Queensland Rail may remove that Rolling Stock and recover the reasonable costs of doing so from the Operator.
- (c) The Operator is liable, and indemnifies Queensland Rail, for all costs and expenses incurred by Queensland Rail in relation to any damage caused to the Network by the Operator in removing any Rolling Stock.
- (d) The Operator must comply with all Network Control Directions, and all other directions issued by Queensland Rail (acting reasonably), in relation to the removal of the Rolling Stock in accordance with this **clause 15.11**.

#### 15.12 **Access Holder remedy of Operator breach**

If the Operator has breached the agreement then the Access Holder, at its election, may seek to remedy the breach in accordance with **clause 15.6**.

## 16 Insurance

### 16.1 **Operator's Obligation to obtain and maintain Insurance**

The Operator must:

- (a) effect, or cause to be effected, before the Commitment Date (or, if applicable, the earliest Commitment Date); and
- (b) maintain, or cause to be maintained, until both the expiry of the Term and the Operator having fully complied with **clause 15.11**,

insurances in accordance with Prudent Practices having regard to the Operator's activities, works, obligations and responsibilities under this agreement (including insurances covering all risks of an insurable nature in

respect of which the Operator is obliged to indemnify Queensland Rail under this agreement) provided that such insurances must include (without limitation):

- (c) a public liability policy of insurance:
  - (i) that covers the Operator and each of the Operator's agents, consultants, contractors and their sub-contractors (each an **Insured Party**);
  - (ii) for an amount of not less than \$350 million per occurrence;
  - (iii) the coverage of which includes (without limitation):
    - (A) the rights, interests and liability in respect of any Claim against an Insured Party arising out of:
      - (1) any damage or loss occurring to any property; and
      - (2) injury (including death) to any person, arising out of or in connection with any thing done or omitted to be done in the performance or purported performance of this agreement; and
    - (B) the Operator's operations and activities on the Network; and
  - (iv) that has a maximum deductible for any one claim of \$500,000;
- (d) a carrier liability policy of insurance:
  - (i) that covers the Operator's liability in relation to goods being transported by Train Services;
  - (ii) for an amount of not less than \$10 million per occurrence; and
  - (iii) that has a maximum deductible for any one claim of \$500,000; and
- (e) all other insurances that the Operator or the Operator's agents, consultants, contractors and their sub-contractors are required by Law to hold in relation to or in connection with the exercise of rights or the performance of obligations under this agreement.

## 16.2 **Access Holder's obligation to obtain and maintain Insurance**

The Access Holder must:

- (a) effect and maintain insurance covering such liability as arises at common law or by virtue of any relevant Workers Compensation Legislation in respect of any Access Holder's staff; and
- (b) effect, or cause to be effected, before the Commitment Date (or, if applicable, the earliest Commitment Date); and

- (c) maintain, or cause to be maintained, until both the expiry of the Term and the Operator having fully complied with **clause 15.11**,

insurance in accordance with Prudent Practices having regard to the Access Holder's activities, works, obligations and responsibilities under this agreement (including insurances covering all risks of an insurable nature in respect of which the Access Holder is obliged to indemnify Queensland Rail under this agreement).

### 16.3 **Insurer**

The Access Holder and the Operator must ensure that their respective Insurance, effected and maintained in accordance with **clause 16.1** or **16.2**, is with an insurer having an insurance financial strength rating of "A" or better by Standard & Poor's or, if Standard & Poor's ceases to exist or to provide such ratings, the rating which most closely corresponds to that rating by another agency or person which is recognised in global financial markets as a major ratings agency.

### 16.4 **Essential terms and conditions**

The Access Holder and the Operator must ensure that, for their respective Insurances, to the extent permitted by Law, all Insurances effected and maintained in accordance with **clause 16.1** or **16.2** must:

- (a) note the interests of Queensland Rail; and
- (b) not contain any exclusions, endorsements or alterations which adversely amend the cover provided without the written consent of Queensland Rail (which consent must not be unreasonably withheld or delayed).

### 16.5 **Payment of premium and deductibles**

The Access Holder and the Operator:

- (a) must pay when due all premiums, charges and other expenses necessary for effecting and maintaining in force their respective Insurances; and
- (b) are responsible for the payment of all policy deductibles or excesses for their respective Insurances.

### 16.6 **No prejudicial action by the Operator**

The Access Holder and the Operator respectively must not do, or permit anything to be done (including any omission), which:

- (a) may result in any respective Insurance being vitiated or rendered void or voidable; or
- (b) would give rise to an entitlement by its insurer to avoid payment of any claim in whole or in part under its respective Insurances.

### 16.7 **Disclosure of Insurance**

- (a) The Access Holder and the Operator must provide to Queensland Rail evidence of their respective insurance policies effected and

maintained pursuant to this **clause 16** (including evidence that the cover provided under those insurance policies comply with **clause 16** and of the currency of those insurance policies) to Queensland Rail's reasonable satisfaction:

- (i) at least ten Business Days prior to the initial Commitment Date;
  - (ii) upon renewal of each Insurance during the Term; and
  - (iii) whenever requested to do so in writing by Queensland Rail.
- (b) If the Access Holder or the Operator, whenever required to do so under this agreement, fails to produce to Queensland Rail evidence to the satisfaction of Queensland Rail (acting reasonably) of Insurances that have been effected or maintained by it, Queensland Rail may:
- (i) effect and maintain the Insurance and pay the premiums and any amount so paid will be a debt due from the Operator to Queensland Rail; or
  - (ii) suspend this agreement under **clause 14.1(a)(i)** or **14.2(a)**.
- (c) For the avoidance of doubt, a certificate of currency which provides evidence of compliance with **clause 16** will be considered sufficient evidence for the purposes of **clause 16.7(a)**.

## 16.8 Compliance

The Access Holder and the Operator must at all times comply with the terms of their respective Insurances effected under this **clause 16**.

## 16.9 Claims

- (a) In addition to any other obligation on the Access Holder or the Operator, the Access Holder and the Operator respectively must:
- (i) notify Queensland Rail as soon as practicable after the occurrence of any claim under their respective Insurance (including providing reasonable details of the claim relevant to or arising out of the subject matter of this agreement); and
  - (ii) keep Queensland Rail informed of subsequent developments concerning any claim.
- (b) Upon settlement of a claim under any Insurance covering damage to the Network, if Queensland Rail is entitled to payment in respect of such damage, the Insurance monies received must be paid to Queensland Rail commensurate with the amount to be paid out by Queensland Rail in relation to the damage unless the Access Holder or the Operator has already partially or totally indemnified Queensland Rail for the relevant damage (including in respect of the amount of any deductible), in which case the monies will be paid to the Access Holder or the Operator (as applicable) but only to the extent that Queensland Rail has been indemnified.

## 16.10 Insurance not a limit of Operator's liability

The Access Holder and the Operator's compliance with their respective Insurances does not limit that Party's liabilities or obligations under this agreement.

## 16.11 Joint Insurance Policy

- (a) To the extent that the Operator has complied with its obligations to insure in accordance with **clause 16.1**, the Access Holder is not required to take out insurance which would cover the same risks.
- (b) If the Operator and Access Holder deem it efficient and appropriate, the Operator and Access Holder may take out joint insurance policies to comply with their respective insurance obligations under this **clause 16**.

# 17 Security

## 17.1 Obligation to provide Security

- (a) The Operator and the Access Holder (if the Access Holder is not also the Operator) must (in appropriate cases and having regard to the Parties' financial capability):
  - (i) on or before the Commitment Date, provide to Queensland Rail security in the form set out in **clause 17.1(b)** for the relevant Security Amount respectively; and
  - (ii) thereafter maintain that security (including for any increased or decreased amount or any top up) in accordance with this **clause 17**,
- (b) Security must be in the form of:
  - (i) a bank guarantee that:
    - (A) is unconditional and irrevocable and in favour of Queensland Rail;
    - (B) is issued by an Australian institution:
      - (1) authorised to carry on a banking business and entitled to call itself a 'bank' pursuant to the *Banking Act 1959* (Cth); and
      - (2) which has an Acceptable Credit Rating;
    - (C) requires the issuing bank to pay on demand by Queensland Rail:
      - (1) without recourse to the Operator or the Access Holder (as the case may be) or any other person;
      - (2) irrespective of the performance or non-performance of the Operator or the Access Holder (as the case may be) or Queensland Rail under this agreement; and

- (3) despite any notice or other communication from the Operator or the Access Holder (as the case may be) or any other person,
  - an amount or amounts up to the amount specified in the bank guarantee;
- (D) has no expiry date; and
- (E) is otherwise in a form acceptable to Queensland Rail; or
- (ii) any other form acceptable to Queensland Rail (in its absolute discretion).

## 17.2 Recourse to Security

- (a) A Security may be called upon by Queensland Rail in any circumstance where the Access Holder or Operator (as the case may be):
  - (i) fails to pay, on or before the due date, any amount that is payable by the Access Holder or Operator (as the case may be) to Queensland Rail under this agreement; or
  - (ii) Queensland Rail otherwise suffers or incurs a Loss in respect of which the Access Holder or Operator (as the case may be) is required to indemnify Queensland Rail in accordance with this agreement.
- (b) If Queensland Rail calls on a Security, the Access Holder or Operator (as the case may be) must deliver to Queensland Rail a further Security for the amount called upon, or a replacement Security for the remaining amount of the existing Security plus the amount called upon in exchange for the existing Security, within five Business Days after Queensland Rail calls on the Security so that the Security held by Queensland Rail is equal to the Security Amount.
- (c) Without limiting any other clause of this agreement and subject to **clause 15.1**, if an Insolvency Event occurs, or Queensland Rail (acting reasonably) suspects that an Insolvency Event has occurred, in relation to the Access Holder or Operator (as the case may be), Queensland Rail may:
  - (i) in respect of any amounts due but unpaid by the Access Holder or Operator (as the case may be) under this agreement:
    - (A) decline payment from the Access Holder or Operator (as the case may be) of all or part of those amounts; and
    - (B) immediately call upon the Security for those amounts for which payment was so declined; or
  - (ii) in respect of any amounts paid by the Access Holder or Operator (as the case may be) under this agreement after the



time when the Insolvency Event occurred or Queensland Rail (acting reasonably) suspects that an Insolvency Event occurred:

- (A) refund all or part of those amounts to the Access Holder or Operator (as the case may be); and
- (B) immediately call upon the Security for the amounts so refunded.

### 17.3 Review of Security

- (a) Queensland Rail may:
  - (i) at any time, from time to time, and must upon a request from the Access Holder or Operator (who may each request a review only once in any 12 month period), review the amount of the Security Amount, taking into consideration all of the matters that Queensland Rail considers relevant including:
    - (A) the financial performance of the Operator or the Access Holder (as the case may be);
    - (B) the Operator's or the Access Holder's (as the case may be) past performance under this agreement (whether in relation to payments or otherwise); and
    - (C) expected future payment obligations under this agreement; and
  - (ii) acting reasonably, determine that the amount of the Security Amount should be increased or decreased.
- (b) If Queensland Rail determines under **clause 17.3(a)** that the amount of the Security Amount should be:
  - (i) increased, the relevant Security provider must deliver to Queensland Rail further Security for the amount of the increase, or a replacement Security for the revised amount in exchange for the existing Security; or
  - (ii) decreased, the relevant Security provider must deliver to Queensland Rail a replacement Security for the revised amount in exchange for the existing Security,

within ten Business Days after Queensland Rail gives notice of its determination so that the Security held by Queensland Rail is equal to the Security Amount as determined by Queensland Rail.

### 17.4 Return of Security

Queensland Rail must, subject to the rights of recourse to the Security under this **clause 17**, promptly return the Security to the relevant Security provider as soon as practicable after both of **(a)** and **(b)** below occur or **(c)** below occurs:

- (a) this agreement has expired or terminated; and
- (b) in Queensland Rail's opinion (acting reasonably) there is no reasonable prospect that:
  - (i) money or damages will become owing (whether actually or contingently) by that Party to Queensland Rail in connection with this agreement; and
  - (ii) any payment towards the satisfaction of that Party's obligation to pay any amount to Queensland Rail under this agreement will be void, voidable or refundable under any Law (including any Law relating to insolvency),

provided that, in any event, Queensland Rail will return the Security to the relevant Party within three months of the expiry or termination of this agreement; or
- (c) an Assignee provides a replacement Security in accordance with **clause 22.2(d)(ii)** (in which case Queensland Rail must return the relevant Security within 2 Business Days of lodgement of that replacement Security).

## 18 Adjustment for changes

### 18.1 Adjustment for a Material Change

- (a) This **clause 18.1** does not apply in relation to a Material Change to the extent that the Net Financial Effect of that Material Change has been, or will be, removed as a result of the escalation or variation of Access Charge Inputs in accordance with this agreement.
- (b) If a Material Change occurs, then Queensland Rail must as soon as reasonably practicable notify the Access Holder giving details of the Net Financial Effect of that Material Change.
- (c) Within five Business Days after Queensland Rail gives a notice under **clause 18.1(b)**, the Access Holder and Queensland Rail must meet and negotiate adjustments to this agreement (acting reasonably), including adjustments to the Access Charges, in order to remove as far as practicable the relevant Net Financial Effect and to put Queensland Rail in the position it would have been in had there been no Material Change.
- (d) If the Access Holder and Queensland Rail do not reach agreement within 15 Business Days after Queensland Rail's notice under **clause 18.1(b)** or otherwise resolve the matter in accordance with **clause 19.2**, then the matter must be referred to an Expert for determination in accordance with **clause 19.3**.
- (e) Each Party's obligations under this agreement will continue despite the existence of a Material Change.

## 19 Disputes

### 19.1 Application of Dispute resolution process

- (a) **(Disputes under this agreement)** If any dispute, complaint or question arises between the Parties in relation to this agreement (**Dispute**), then:
  - (i) that Dispute must be resolved in accordance with this **clause 19**; and
  - (ii) a Party may give the other Parties a notice in writing (**Dispute Notice**) setting out details of the Dispute and requiring that it be dealt with in the manner set out in this **clause 19**.
- (b) **(Disputes under the Access Framework)** Disputes between Queensland Rail and an Access Seeker in relation to any provision of the Access Framework, a request for Access or the negotiation of an Access Agreement must be dealt with in accordance with the provisions of the Access Framework and must not be dealt with under this agreement. In this clause, the terms **Access Seeker**, **Access** and **Access Agreement** have the meaning given in the Access Framework.
- (c) **(Disputes under Deed Poll)** Subject to clause 7.2.3 of the Deed Poll, the Parties agree that the courts of Queensland have exclusive jurisdiction to determine any disputes arising under the Deed Poll.

### 19.2 Resolution by escalation

- (a) Within five Business Days after the date on which a Party gives the other Parties a Dispute Notice (**Dispute Notice Date**), representatives of the Parties must meet and use reasonable endeavours to resolve the Dispute.
- (b) If the Dispute is not resolved under **clause 19.2(a)**, senior management representatives of the Parties (who, for a Party, are senior to that Party's representative(s) referred to in **clause 19.2(a)**) must, within ten Business Days after the Dispute Notice Date, meet and use reasonable endeavours to resolve the Dispute.
- (c) If the Dispute is not resolved under **clause 19.2(b)**, the Dispute must be referred to each Party's chief executive officer (or his or her nominee – who, for a Party, must be more senior than that Party's representative(s) referred to in **clauses 19.2(a) and (b)**) for resolution.
- (d) If the Dispute is not resolved under **clause 19.2(c)** within 20 Business Days after the Dispute Notice Date (or such other time as agreed between the Parties), the relevant Dispute:
  - (i) must, where this agreement requires referral to an Expert; and
  - (ii) may, by agreement of the Parties (in each Party's absolute discretion) in any other case,

be referred for resolution by an Expert in accordance with **clause 19.3**.

- (e) If a Party's representative under **clause 19.2(a)** or **19.2(b)** is not authorised:
  - (i) to act on behalf of that Party in relation to the Dispute; or
  - (ii) to resolve the Dispute with immediate binding effect on that Party,

the Dispute is deemed to have not been resolved under **clause 19.2(a)** or **19.2(b)** (as applicable).

### 19.3 Resolution by Expert

- (a) If a Dispute, or any other matter, is required to be referred to, or determined by, an Expert in accordance with this agreement (including under **clause 19.2(d)**):
  - (i) the Expert must be appointed by agreement between the Parties or, in default of such appointment within ten Business Days after the need to refer the Dispute to an Expert, will be that person nominated, at either Party's request, by the Resolution Institute;
  - (ii) the Expert must:
    - (A) have appropriate qualifications and practical experience having regard to the nature of the Dispute;
    - (B) have no interest or duty which conflicts or may conflict with his or her function as Expert, he or she being required to fully disclose any such interest or duty by written notice to the Parties before his or her appointment;
    - (C) not be an employee of a Party or of a Related Party of a Party;
    - (D) not be permitted to act until he or she has given written notice to each Party that he or she is willing and able to accept the appointment;
    - (E) have regard to the provisions of this agreement and consider all submissions (including oral submissions by each Party provided that such oral submissions are made in the presence of the Parties), supporting documentation, information and data with respect to the matter submitted by the Parties;
    - (F) for clarity, only make a determination in a way that is consistent with this agreement;

- (G) provide the Parties with a copy of his or her determination in the form of a report within a reasonable time after his or her appointment;
  - (H) be required to undertake to keep confidential all matters coming to his or her knowledge by reason of his or her appointment and performance of his or her duties; and
  - (I) be deemed to be and act as an expert and not an arbitrator and the law relating to arbitration, including the *Commercial Arbitration Act 2013* (Qld), will not apply to him or her or the determination or the procedures by which he or she may reach a determination; and
- (iii) if the Expert is to be nominated by a person referred to in **clause 19.3(a)(i)**, the Parties must comply with and do all things necessary to satisfy and to give effect to the reasonable requirements of that person (including providing relevant indemnities and paying any charges or fees (which charges or fees will be borne equally by the Parties)) that must be satisfied or complied with as a condition of that person agreeing to nominate an Expert; and
  - (iv) the Parties must comply with, and do all things necessary to satisfy and to give effect to, the reasonable requirements of an agreed or nominated Expert (including providing relevant indemnities and paying any charges or fees (which charges or fees will be borne equally by the Parties)) that must be satisfied or complied with as a condition of that person accepting appointment as the Expert.
- (b) The Parties must do everything reasonably requested by the Expert to assist the Expert including producing information and materials as requested by the Expert and attending any hearing convened by the Expert.
  - (c) In the absence of manifest error, a decision of the Expert is final and binding upon all Parties.
  - (d) The costs of the Expert (and any advisers engaged by the Expert) will be borne in equal shares by the Parties. Each Party must bear its own costs of participating in the dispute resolution process (unless otherwise agreed by the Parties).

#### 19.4 **Determination by arbitration**

- (a) Any Disputes that are not otherwise resolved in accordance with this **clause 19** will be submitted to arbitration in accordance with, and subject to, the Resolution Institute Arbitration Rules (**Rules**).
- (b) Notice of a Party's decision to commence arbitration under this **clause 19.4** must be given in accordance with Article 3 of the Rules

and must be copied to all Parties to this agreement, regardless of whether they will be a party to the arbitration (**Arbitration Notice**).

- (c) Any Party to this agreement who is not a Party to an arbitration commenced under this **clause 19.4** may intervene in the arbitration by written notice to all other Parties. Such notice must be given within 14 days of receipt of the Arbitration Notice.
- (d) Any Party to this agreement who is a respondent to an arbitration may join any other Party to this agreement by written notice to all other Parties. Such notice must be given within 14 days of receipt of the Arbitration Notice.
- (e) Any joined or intervening party shall be bound by any award rendered even if such party chooses not to participate in the arbitration.
- (f) The arbitration must be effected either:
  - (i) by a single arbitrator agreed upon between the Parties; or
  - (ii) in default of such agreement within 10 days after the Dispute is referred for arbitration, then by a single arbitrator nominated by the Resolution Institute.
- (g) Any Party to the arbitration may be represented before the arbitrator by a member of the legal profession without the need for leave of the arbitrator.
- (h) Any arbitration commenced under this agreement may be consolidated with any other arbitration commenced under:
  - (i) this agreement; or
  - (ii) the Access Framework (or any agreement referred to in the Framework),regardless of the Parties involved, provided that the issue(s) which each arbitrator has been asked to determine concern common questions of fact or law. Such consolidated arbitration shall be determined by the arbitrator appointed for the arbitration proceeding that was commenced first in time.
- (i) The venue for any arbitration will be Brisbane, Queensland.
- (j) Unless otherwise determined by the arbitrator, the costs of the arbitration shall be paid by the unsuccessful party.

#### 19.5 **Injunctive Relief**

Nothing in this **clause 19** prevents a Party from seeking urgent injunctive relief from the courts of Queensland.

#### 19.6 **Dispute not to affect performance of obligations**

The Parties are not relieved from performing their obligations under this agreement because of the existence of a Dispute.

## 19.7 Extension of time frames

Where a timeframe applies under this **clause 19** in relation to a Dispute, the Parties may (acting reasonably) agree to vary that timeframe and if the Parties do agree a varied timeframe then this **clause 19** will apply in relation to that Dispute subject to that varied timeframe.

## 20 Force majeure

### 20.1 Force Majeure Event occurrence

- (a) If a Party (**Affected Party**) is prevented or hindered by a Force Majeure Event from fully or partly complying with any obligation (except for any obligation to pay money) under this agreement, the Affected Party must, as soon as reasonably practicable, give notice of the Force Majeure Event to the other Parties including reasonable details of:
- (i) the Force Majeure Event;
  - (ii) the effect of the Force Majeure Event on the performance of the Affected Party's obligations;
  - (iii) the likely duration of the delay in performance of those obligations; and
  - (iv) details of the actions the Affected Party has taken to remedy the situation and details of any actions that the Affected Party proposes to take to remedy the situation.

### 20.2 Suspension of obligations

- (a) The obligations of the Affected Party will be suspended where by reason of a Force Majeure Event that Party is delayed in, or prevented from, carrying out its obligations under this agreement.
- (b) Notwithstanding **clause 20.2(a)**, the Access Holder will be relieved from obligations in respect of the payment of Access Charges during the period that the Network is damaged or destroyed by a Force Majeure Event or the Force Majeure Event otherwise prevents Queensland Rail from providing access to the Network in accordance with **clause 2** of this agreement.

### 20.3 Duty to Mitigate

Each Party will use all reasonable diligence to remedy or overcome the effect of the Force Majeure Event as soon as possible and will attempt to identify alternative viable means of providing the Access Rights affected and to mitigate the effect of the Force Majeure Event. No Party will be obliged to settle any strike, lockout or other labour dispute on terms not acceptable to it.

### 20.4 End of period of Force Majeure

Subject to **clauses 20.5(c)** and **20.6**, the suspension of the obligations of the Parties due to a Force Majeure Event ends when the Party that issued the

notice of the Force Majeure Event is able to resume full performance of its obligations under this agreement at which time it must issue a notice to the other Parties advising that it intends to recommence the performance of its obligations and must thereafter recommence the performance of its obligations.

## 20.5 Termination for Loss or Damage to the Network

- (a) In the event that any part of the Network is damaged or destroyed by a Force Majeure Event and in Queensland Rail's reasonable opinion the cost of repairing such damage or replacing that part of the Network is not economic on the basis of the then and committed future utilisation of that part of the Network, Queensland Rail must promptly by written notice advise the Access Holder of:
- (i) the estimated cost of effecting the necessary repairs or replacement works;
  - (ii) the amount of insurance available to effect the necessary repairs and replacement works;
  - (iii) a detailed explanation as to why the cost of repairing or replacing is not economic; and
  - (iv) Queensland Rail's intention to not repair or replace the relevant part of the Network unless the Access Holder or any other Access Holder using that part of the Network pay the difference between the amount of insurance available to effect the necessary repairs or replacement and the actual anticipated cost to effect those repairs or replacements.
- (b) If the Access Holder gives notice to Queensland Rail advising that it will pay the difference between the amount of insurance available to effect the necessary repairs or replacement works and the cost of necessary repairs or works (or a part of that cost as requested by Queensland Rail), then Queensland Rail will proceed with the repairs or replacement within a reasonable time after receipt by Queensland Rail from the Access Holder of payment of the relevant amount subject to reaching agreement with any other Access Holder using the affected part of the Network. Where the Access Holder pays to Queensland Rail the whole of the estimated cost, Queensland Rail must, upon completion of the necessary repairs or replacement works, refund to the Access Holder any amount by which the amount paid by the Access Holder exceeds the actual cost and the Access Holder shall pay to Queensland Rail the amount by which the actual cost exceeds the amount paid by the Access Holder.
- (c) If within three months after receipt of a notice from Queensland Rail under **clause 20.5(a)** the Access Holder has not given notice to Queensland Rail pursuant to **clause 20.5(b)** indicating that it will pay the whole, or that part requested by Queensland Rail, of the cost of the necessary repairs or replacement works, and Queensland Rail



has not subsequently agreed to fund the repairs or replacement works within that period, the Access Holder or Queensland Rail shall have the right to terminate this agreement in accordance with **clause 20.7**.

## 20.6 **Repair Negotiations**

If an Access Holder gives Queensland Rail a notice pursuant to **clause 20.5(b)**, then the Access Holder and Queensland Rail will promptly commence negotiations of a Funding agreement in accordance with **clause 1.4** of the Access Framework.

## 20.7 **Termination after extended Force Majeure Event**

Subject to **clause 20.6** or the process under **clause 20.5** having been finalised (if applicable), if by reason of a Force Majeure Event either Queensland Rail or the Access Holder (relevantly the **Afflicted Party**) is rendered unable to perform its obligations under this agreement for a period of more than 6 consecutive months, the Access Holder and Queensland Rail must meet in an endeavour to identify any alternative viable means to provide the suspended Access Rights and failing an alternative means being agreed upon within one month of the end of the six month period the other Party may terminate this agreement by 30 days' written notice to the Afflicted Party and the provisions of this agreement relating to termination set out in **clauses 15.10** and **15.11** apply without prejudice to any of the rights of the Parties accrued prior to the date of such termination.

# 21 **Reduction and relinquishment of Access Rights**

## 21.1 **Reduction of Access Rights**

- (a) If:
- (i) the Access Holder fails to have an Operator operate all Train Services on Scheduled Train Paths for seven or more (not necessarily consecutive) weeks out of any 12 consecutive weeks when such Train Services are scheduled; and
  - (ii) Queensland Rail can demonstrate that it has a reasonable expectation of:
    - (A) a sustained alternative demand for the capacity used by the Access Rights in question; or
    - (B) receiving a commercial benefit sufficiently material to justify the resumption of the Access Rights in question,
- then:
- (iii) Queensland Rail may, within ten Business Days after the last of those seven occasions, give a notice to the Access Holder (**Resumption Notice**):

- (A) that Queensland Rail is considering reducing the Access Holder's Access Rights from a nominated date (**Date of Resumption**) to the extent of that underutilisation; and
  - (B) requesting the Access Holder to demonstrate a sustained requirement for the Access Rights.
- (b) If a Resumption Notice is given to the Access Holder and the Access Holder has not demonstrated to Queensland Rail's reasonable satisfaction, within 40 Business Days (or longer period if agreed between the Access Holder and Queensland Rail (both acting reasonably)) of receiving the Resumption Notice, a sustained requirement for the Access Rights that were not utilised:
  - (i) Queensland Rail must promptly notify the Access Holder of whether Queensland Rail has decided to proceed with the resumption and, if Queensland Rail has decided to proceed, whether Queensland Rail has decided to reduce the level of resumption, or nominate a later date for the Date of Resumption, from that given in the Resumption Notice (**Resumption Decision Notice**); and
  - (ii) if Queensland Rail has decided to proceed with the resumption, the Access Holder's entitlement to operate Train Services shall be reduced to the level specified in the Resumption Notice with effect on and from the Date of Resumption (except to the extent that those matters have been varied in accordance with **clause 21.1(b)(i)**).
- (c) If the Access Holder does not agree with the reduction of the Access Holder's entitlement proposed by Queensland Rail pursuant to **clause 21.1(a)** and **(b)**, the Access Holder may, within 20 Business Days of the receipt of the Resumption Decision Notice, notify Queensland Rail in writing that it disputes the proposed reduction in which case the Access Holder may refer the dispute for determination by an Expert in accordance with **clause 19.3** of this agreement. The Expert will determine whether the conditions for a reduction in Access Rights set out in **clause 21.1(a)** have been met and whether the Access Holder has demonstrated a sustained requirement for that part of the Access Rights to which the reduction would apply. The reduction proposed in the Resumption Decision Notice will not take effect until resolution of the dispute and then only to the extent that the reduction is consistent with the Expert's determination.
- (d) Queensland Rail may withdraw the Resumption Notice or the Resumption Decision Notice at any time prior to the later of the Date of Resumption and ten Business Days following the resolution of the dispute.

- (e) In the event that the Access Holder's entitlement to operate Train Services is reduced in accordance with this **clause 21.1**, the agreement (including the Access Charges) will be varied accordingly.
- (f) A Train Service has not been operated on a Scheduled Train Path if the Operator has failed:
  - (i) to present the relevant Train at the scheduled entry point onto the Network; or
  - (ii) to operate the relevant Train so that it completes its full journey,
 in conformance with the locations and days set out in the Scheduled Train Paths applicable to such Train Service except:
  - (iii) where the prior agreement of Queensland Rail and the Operator has resulted in the Operator using an alternative Train Path for that Train service.

## 21.2 Relinquishment of Access Rights

- (a) If the Access Holder intends to relinquish all or part of the Access Rights, the Access Holder must give Queensland Rail reasonable notice of its intention to do so specifying:
  - (i) the Access Rights that the Access Holder intends to relinquish (**Nominated Access Rights**);
  - (ii) if the Access Holder intends that all or part of the Relinquished Access Rights be used so Queensland Rail can grant specific access rights to a specified Access Seeker (as defined in the Access Framework) (**Transfer**), the identity of that Access Seeker (**Transferee**) – and, for clarity, the Access Holder may itself be that Access Seeker; and
  - (iii) subject to **clause 21.2(b)**, the date (**Relinquishment Date**) on which and the period for which the Nominated Access Rights are to be relinquished.
- (b) The period from the giving of the notice under **clause 21.2(a)** until the Relinquishment Date must not exceed nine months.
- (c) The relinquishment of any Nominated Access Rights in accordance with this **clause 21.2** is subject to and conditional on the Access Holder paying to Queensland Rail the Relinquishment Fee on or before the Relinquishment Date.
- (d) If the Access Holder pays the Relinquishment Fee to Queensland Rail on or before the Relinquishment Date, then the terms of this agreement will cease to apply in respect of the Nominated Access Rights on the Relinquishment Date.
- (e) Queensland Rail must facilitate a Transfer in respect of a Transferee if:

- (i) the relevant access rights to be granted to the Transferee are included in a new or varied access agreement with the Transferee on terms satisfactory to Queensland Rail (acting reasonably);
  - (ii) Queensland Rail is satisfied (acting reasonably) that the new or varied access agreement with the Transferee has been developed in accordance with the requirements of the Access Framework;
  - (iii) the Access Holder has complied with **clause 21.2(a)** and paid the Relinquishment Fee to Queensland Rail on or before the Relinquishment Date; and
  - (iv) Queensland Rail has sufficient Available Capacity (as defined in the Access Framework) so that it can grant all of the relevant access rights to the Transferee without adversely affecting any other third Party.
- (f) If the Relinquishment Fee is not paid on or prior to the Relinquishment Date, then the Access Holder is taken to have withdrawn the notice given under **clause 21.2(a)** and Queensland Rail has no further obligations under this **clause 21.2** in relation to the relevant relinquishment.

### 21.3 Replacement Access Agreement

If Queensland Rail or the Access Holder identify an opportunity for Queensland Rail to enter into an Access Agreement with an existing or prospective Access Holder that would result in a lessening of the Relinquishment Fee that would otherwise be payable to Queensland Rail under **clause 21.2**, Queensland Rail will not unreasonably delay the process for negotiating and executing an Access Agreement with that existing or prospective Access Holder.

### 21.4 Termination where no Access Rights remain

- (a) Subject to **clause 21.4(b)**, where Access Rights have been resumed, reduced, relinquished or transferred in accordance with this agreement to the extent that there are no longer any Access Rights remaining the subject of this agreement, then Queensland Rail may terminate this agreement by notice to the Access Holder (without prejudice to those provisions which are stated to survive this agreement).
- (b) Where, but for the operation of Ad Hoc Train Services, the Access Holder has no right to utilise the Network, unless otherwise agreed between the Parties (each acting reasonably), this agreement will continue to operate in relation to those Ad Hoc Train Services.
- (c) Any termination under **clause 21.4** is without prejudice to any rights of any Party which accrued on or before termination.

## 21.5 **Effect on entitlement to operate and Access Charge Rates**

Where Access Rights have been resumed, reduced, relinquished or transferred in accordance with this agreement then for the avoidance of doubt:

- (a) the Access Holder's entitlements to have an Operator operate Train Services is also reduced in accordance with that resumption, reduction, relinquishment or transfer of Access Rights;
- (b) the Access Holder's Nominated Monthly Train Services for each applicable Train Service Description will be taken to be varied to be reduced in accordance with that resumption, reduction, relinquishment or transfer of Access Rights; and
- (c) the Access Holder will no longer be obliged to pay Access Charges in respect of the resumed, reduced, relinquished or transferred Access Rights (except for any such Access Charges that accrued prior to the resumption, reduction, relinquishment or transfer payable in respect of the part of the Year prior to the resumption, reduction, relinquishment or transfer).

## 22 **Assignment**

### 22.1 **Assignment by Queensland Rail**

- (a) Queensland Rail may Assign all or part of its rights or obligations under this agreement to an Assignee who has the expertise, the financial resources and other relevant resources to enable it to discharge the obligations of Queensland Rail under the Access Framework and this agreement without the prior consent of the other Parties provided that Queensland Rail procures the Assignee to covenant by deed with the other Parties to be bound by and to perform the obligations of Queensland Rail under the Access Framework and this agreement to the extent of the rights and obligations Assigned to the Assignee.
- (b) On the Assignee entering into that deed, and subject to that deed becoming effective in accordance with its terms, Queensland Rail is released and discharged from further liability under this agreement in respect of the obligations which the Assignee has undertaken to be bound by and to perform.

### 22.2 **Assignment by the Access Holder**

- (a) The Access Holder may only Assign all or part of its rights and obligations under this agreement in accordance with this **clause 22.2**.
- (b) The Access Holder may, provided it is not in material default in the performance or observance of any of its obligations under this agreement, Assign the whole of its rights and obligations under this agreement to:

- (i) subject to **clause 22.2(c)**, a Related Party who is capable of performing the obligations of the Access Holder under this agreement; or
- (ii) a person who is not a Related Party with the prior written consent of Queensland Rail provided that such consent will not be unreasonably withheld:
  - (A) if Queensland Rail is satisfied (acting reasonably) that such person:
    - (1) has the financial resources and capability to perform the Access Holder's obligations under this agreement; and
    - (2) is otherwise capable of performing the Access Holder's obligations under this agreement
- (c) Where **clause 22.2(b)(i)** applies:
  - (i) the Access Holder remains liable for the performance of the duties, responsibilities and obligations assumed by the Assignee (**Assigned Obligations**); and
  - (ii) the Assignee's performance of the Assigned Obligations will (to the extent of such performance) discharge the Access Holder's liability for performance of those Assigned Obligations.
- (d) Any Assignment **by** the Access Holder of its rights or obligations under this agreement is conditional on and does not take effect until:
  - (i) the Assignee covenants with Queensland Rail by deed, in such terms as Queensland Rail may reasonably require, to be bound by and to perform the obligations of the Access Holder under this agreement; and
  - (ii) the Assignee provides to Queensland Rail any Security that is required to be provided and maintained by the Access Holder in accordance with **clause 17**.

### 22.3 **Assignment by Operator**

The Operator cannot Assign all or part of its rights and obligations under this agreement.

### 22.4 **Charging**

- (a) The Access Holder (**Chargor**) may only mortgage, charge, encumber or otherwise grant any security over (**Charge**) all or any of its rights and obligations under this agreement in whole or in part, in favour of any person (**Chargee**), if the Chargor, the Chargee and Queensland Rail execute a covenant by deed on terms satisfactory to Queensland Rail (acting reasonably), including terms that the Chargee, and any person (including any receiver or receiver and manager or agent) claiming through the Chargee, must comply with the provisions of this

agreement including this **clause 22** in the exercise of its rights in relation to the Charge (including in exercising any power of sale) as if it were originally a Party to this agreement in the position of the Charger.

- (b) If the Operator is not also the Access Holder, then the Operator cannot Charge all or any of its rights and obligations under this agreement in favour of any person.

## 22.5 **Effect of Assignment or Charge**

Any purported Assignment or Charge in breach of this **clause 22** is of no effect.

## 23 **Representations and warranties**

- (a) In addition to any other express or implied representations and warranties in this agreement, Queensland Rail and the Operator respectively represent, warrant and undertake to each other that:
  - (i) it is a corporation validly existing under the laws applicable to it;
  - (ii) it has the power to enter into and perform all of its obligations under this agreement and has obtained all necessary consents and approvals to enable it to do so;
  - (iii) it has the resources and capability to perform all of its obligations under this agreement and is able to pay its debts as and when they fall due;
  - (iv) its obligations under this agreement are enforceable in accordance with the relevant terms and are fully binding on it;
  - (v) it is not in breach or default under any agreement to which it is a Party to an extent or in a manner which would have a material adverse effect on its ability to perform its obligations under this agreement;
  - (vi) there is:
    - (A) no litigation, arbitration or administrative proceeding taking place, pending, commenced or, to its knowledge, threatened against it; and
    - (B) no judgment or award has been given or made by, any court, arbitrator, other tribunal or governmental agency against it,

which would or could have a material adverse effect on its ability to perform its obligations under this agreement;

- (vii) it will as soon as practicable notify the other Party of the occurrence of, or pending or threatened occurrence of, any event that may cause or constitute a material breach of any of

the acknowledgments, representations, warranties or covenants of that Party under this agreement and any event that could have a material adverse effect on its ability to perform its obligations under this agreement;

- (viii) it and its Associates have all of the necessary competencies, skills and experience to exercise its rights (including to operate the Train Services) and perform its obligations, under this agreement in accordance with Prudent Practices;
  - (ix) all information provided by each Party to the other Party, whether pursuant to this agreement or otherwise, in relation to or in connection with the Train Services, the Party's rights or obligations under this agreement or the negotiation of this agreement, is correct and complete in all material respects and is not, whether by omission or otherwise, misleading or deceptive.
- (b) The representations and warranties set out in **clause 23(a)** are taken to be given and made on the Commencement Date and on each day during the Term.
- (c) The Operator has the right, at its cost and risk, to inspect the Network (including circumstances of the Network such as fencing and level crossing protection) subject to:
- (i) the Operator giving written notice to Queensland Rail of its request to inspect the Network a reasonable time prior to the date of the intended inspection;
  - (ii) the Operator receiving from Queensland Rail a notice (not to be unreasonably withheld) confirming that the inspection may occur and setting out the requirements for that inspection including in relation to any of the matters referred to in **clauses 23(c)(iii) to (v)**;
  - (iii) that inspection being conducted:
    - (A) in the presence of a nominated representative of Queensland Rail;
    - (B) at a time satisfactory to Queensland Rail; and
    - (C) in a manner that does not cause or contribute to any disruption of, or other adverse effect to, any Train Movements or Rail Infrastructure Operations;
  - (iv) the Operator paying, or if paid by Queensland Rail reimbursing, to Queensland Rail the costs and expenses reasonably incurred by Queensland Rail in relation to the Operator's inspection (including the costs and expenses of a representative of Queensland Rail attending the inspection and, if relevant, for any track protection officers) and those



costs and expenses will be a debt due and owing by the Operator to Queensland Rail; and

- (v) such other conditions as may be required by Queensland Rail (acting reasonably) in relation to the inspection including compliance with Queensland Rail's Safeworking Procedures and Safety Standards.
- (d) Any inspection undertaken pursuant to **clause 23(c)** does not restrict or limit any obligation which Queensland Rail has under this agreement.

## 24 Confidentiality

### 24.1 Confidentiality obligation

Subject to **clause 24.2**, a Party (**Recipient**), in respect of the Confidential Information of another Party (**Disclosing Party**) that is provided to the Recipient by or on behalf of the Disclosing Party, must:

- (a) treat that Confidential Information as (and keep it) confidential;
- (b) only use that Confidential Information for the purposes of this agreement or for which it was disclosed; and
- (c) treat that Confidential Information as the property of the Disclosing Party.

### 24.2 Exceptions

A Recipient of Confidential Information is not required to comply with **clause 24.1** to the extent that:

- (a) the Disclosing Party has given its written consent (which must not be unreasonably withheld) to the relevant disclosure or use; or
- (b) another Confidentiality Exception applies to the relevant disclosure or use.

## 25 Notices

### 25.1 Form of Notice

A notice, demand, certification, process or other communication (**Notice**) relating to this agreement (other than Network Control Directions) must be in writing in English and may be given by an agent of the sender and may be in electronic form.

### 25.2 Notices to each Party

If a provision of this agreement requires a Party to give Notice to a particular Party, then the Party giving the Notice must, at the same time, also give that Notice to every other Party to this agreement in the same manner as the original Notice was required to be given.

### 25.3 **Method of giving a Notice**

In addition to any other lawful means, a Notice may be given by being:

- (a) personally delivered;
- (b) left at the Party's current delivery address for Notices;
- (c) sent to the Party's current postal address for Notices by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail; or
- (d) sent by email to the Party's current email address for Notices.

### 25.4 **Particulars for the giving of Notices**

- (a) The particulars for the giving of Notices are initially:

#### **Queensland Rail**

Delivery Floor 14, 305 Edward Street, Brisbane Qld 4000  
dress:

Postal address: GPO Box 1429, Brisbane Qld 4001

Email: GeneralCounsel@qr.com.au

Attention: General Counsel

Access Holder

As set out in **item 2** of **schedule 1**.

#### **Operator**

As set out in **item 4** of **schedule 1**.

- (b) Each Party may change its particulars for delivery of Notices by notice to each other Party.

### 25.5 **Effect and receipt of Notices**

- (a) Subject to **clause 25.5(b)**, a Notice is given:
  - (i) if personally delivered, at the time of delivery;
  - (ii) if posted, on the third day after the date of posting; and
  - (iii) if sent by email, on receipt of a delivery confirmation report by the sender which records the time that the email was delivered to the recipient or the recipient's email server.
- (b) If a Notice is given:
  - (i) after 5:00pm in the place of receipt; or

- (ii) on a day which is a Saturday, Sunday or public holiday in the place of receipt,

it is taken to have been given on the next day which is not a Saturday, Sunday or public holiday in the place of receipt.

## 25.6 **Process service**

Any process or other document relating to litigation, administrative or arbitral proceedings relating to this agreement may be served by any method contemplated by this **clause 25** or in accordance with any applicable law.

## 25.7 **Representatives of the Operator**

- (a) The persons referred to in **item 12** of **schedule 1** are the relevant Party's representatives in relation to the relevant matters for which they have been nominated in respect of this agreement or the Train Services.
- (b) The initial contact details for those persons are as set out in **item 12** of **schedule 1**.
- (c) Each Party:
  - (i) must notify all other Parties of any changes to those representatives or their contact details on or prior to that change occurring (subject to **clause 25.7(c)(ii)**); and
  - (ii) must ensure that any person ceasing to be such a representative is replaced on or prior to (or, if this is not possible, as soon as practicable after) the time when that person ceases to be a representative.
- (d) Nothing in this **clause 25.7** limits the requirements that may be set out in the Operating Requirements Manual in relation to the nomination of representatives or the provision of contact details for nominated representatives (including, for example, the nomination of persons as incident response coordinators or for the recovery of Rolling Stock).

## 26 **GST**

### 26.1 **Definitions**

In this agreement the expressions **adjustment note**, **consideration**, **GST**, **input tax credit**, **supply**, **tax invoice**, **recipient** and **taxable supply** have the meanings given to those expressions in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

### 26.2 **Sums exclude GST**

Unless otherwise expressly stated, all prices or other sums payable or consideration to be provided under this agreement are exclusive of GST.

### 26.3 **Responsibility for GST**

- (a) Despite any other provisions in this agreement, if GST is imposed on any supply made by a Party (or any entity through which that Party acts) (**Supplier**) under or in connection with this agreement, the recipient must pay to the Supplier an amount equal to the GST payable on the supply.
- (b) Subject to **clause 26.5**, the recipient must pay the amount referred to in **clause 26.3(a)** in addition to, and at the same time as, payment for the supply is required to be made under this agreement.

### 26.4 **Reimbursement of expenses**

If this agreement requires a Party to reimburse or indemnify any other Party for any expense, loss or outgoing (**reimbursable expense**) incurred by another Party, the amount required to be reimbursed or indemnified by the first Party will be the sum of:

- (a) the amount of the reimbursable expense net of input tax credits (if any) to which the other Party (or the representative member of the GST group of which the other Party is a member) is entitled in respect of the reimbursable expense; and
- (b) if the other Party's recovery from the first Party is a taxable supply, any GST payable in respect of that supply.

### 26.5 **Tax invoice**

If an amount on account of GST or a GST inclusive price is charged or varied under this agreement, the Supplier must provide to the recipient of the supply a valid tax invoice or adjustment note at or before the time of payment or variation.

### 26.6 **Adjustment**

If the amount of GST paid or payable by the Supplier (or the representative member of the GST group of which the Supplier is a member) on any supply made under this agreement differs from the amount on account of GST paid by the recipient, because the Commissioner of Taxation lawfully adjusts the value of the taxable supply for the purpose of calculating GST, then the amount of GST paid by the recipient will be adjusted accordingly by a further payment by the recipient to the Supplier or the Supplier to the recipient, as the case requires.

## 27 **General**

### 27.1 **Duty**

- (a) The Access Holder, as between the Parties, is liable for and must pay all duty (including any fine, interest or penalty except where it arises from default by Queensland Rail) on or relating to this agreement, any document executed under it or any dutiable transaction evidenced or effected by it.

- (b) If Queensland Rail pays any duty (including any fine, interest or penalty except where such fine, interest or penalty arises from a default by Queensland Rail) on or relating to this agreement, any document executed under it or any dutiable transaction evidenced or effected by it, the Access Holder must pay that amount to Queensland Rail on demand.

## 27.2 Legal costs

Except as expressly stated otherwise in this agreement, each Party must pay its own legal and other costs and expenses of negotiating, preparing, executing and performing its obligations under this agreement.

## 27.3 Waiver and exercise of rights

- (a) Waiver of any right arising in relation to a failure to comply with this agreement must be in writing and signed by the Party granting the waiver.
- (b) A single or partial exercise or waiver by a Party of a right relating to this agreement does not prevent any other exercise of that right or the exercise of any other right.
- (c) A Party is not liable for any Loss of any other Party caused or contributed to by the waiver, exercise, attempted exercise, failure to exercise or delay in the exercise of a right.
- (d) A failure or delay in the exercise, or partial exercise, of a right arising from a breach of this agreement does not result in a waiver of that right.

## 27.4 Amendments

Except as otherwise provided in this agreement and subject to **clauses 4.1(c) and 4.2(a)(vi)**, an amendment of this agreement will only be effective if it is in writing and executed by all Parties.

## 27.5 Rights cumulative

Except as expressly stated otherwise in this agreement, the rights of a Party under this agreement are cumulative and are in addition to any other rights of that Party.

## 27.6 Consents

Except as expressly stated otherwise in this agreement, a Party may conditionally or unconditionally give or withhold any consent, approval, acceptance or notice of no objection to be given under this agreement and is not obliged to give its reasons for doing so.

## 27.7 Further steps

Each Party must promptly do whatever any other Party reasonably requires of it to give effect to this agreement and to perform its obligations under it.

## 27.8 **Governing law**

This agreement is governed by and is to be construed in accordance with the laws in force in the State of Queensland.

## 27.9 **Liability**

An obligation of two or more persons binds them separately.

## 27.10 **Counterparts**

This agreement may consist of a number of counterparts (electronic or otherwise) and, if so, the counterparts taken together constitute one document and become binding upon each Party upon exchange of counterparts.

## 27.11 **Legally binding**

- (a) This agreement is binding on the Access Holder and Queensland Rail when executed by those Parties or when counterparts are exchanged between those Parties pursuant to **clause 27.10**.
- (b) This agreement is binding as between the Access Holder, Queensland Rail and the Operator when:
  - (i) the Operator has signed the agreement or the Parties have exchanged counterparts pursuant to **clause 27.10**; or
  - (ii) if the Operator does not execute the agreement at the same time as the Access Holder and Queensland Rail, when Queensland Rail accepts the nomination of the Operator in accordance with **clause 2.2** and Queensland Rail provides the Access Holder and the Operator with an executed counterpart of the agreement in accordance with **clause 3.3(d)(v)**.

## 27.12 **Entire understanding**

- (a) This agreement contains the entire understanding between the Parties as to the subject matter of this agreement.
- (b) All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this agreement are merged in and superseded by this agreement and are of no effect.
- (c) No oral explanation or information provided by any Party to another:
  - (i) affects the meaning or interpretation of this agreement; or
  - (ii) constitutes any collateral agreement, warranty or understanding between any of the Parties.

## 27.13 **Relationship of Parties**

This agreement is not intended to create a partnership, joint venture or agency relationship between the Parties.

## 27.14 **Severability**

- (a) Subject to **clause 27.14(b)**, if a provision of this agreement is illegal or unenforceable in any relevant jurisdiction, it may be severed for the

purposes of that jurisdiction without affecting the enforceability of the other provisions of this agreement.

- (b) **Clause 27.14(a)** does not apply if severing the provision:
  - (i) materially alters:
    - (A) the scope and nature of this agreement; or
    - (B) the relative commercial or financial positions of the Parties; or
  - (ii) would be contrary to public policy.

#### **27.15 Survival**

- (a) **Clauses 4.4, 4.5, 6, 8.9(c) to (d), 12, 13, 15.9, 15.11, 16.9, 17.2, 17.4, 18, 19 and 24 to 28** remain in full force and effect and survive the expiry or termination of this agreement.
- (b) **Clause 15.11** remains in full force and effect and survives the expiry or termination of this agreement until the Operator has fully complied with it.
- (c) All indemnities and exclusions, limitations and other restrictions on liability contained in this agreement survive the expiration or termination of this agreement.
- (d) All representations and warranties in this agreement survive the execution and delivery of this agreement and the completion of the transactions contemplated by it.

#### **27.16 Benefit**

The provisions of this agreement will, subject as otherwise provided in this agreement, continue for the benefit of and be binding on the Parties and their respective successors and permitted novatees and assigns.

#### **27.17 No merger**

The rights and obligations of the Parties:

- (a) continue until satisfied in full;
- (b) do not merge on the completion of any transaction contemplated by this agreement; and
- (c) survive the execution and delivery of any assignment or other document entered into for the purpose of implementing a transaction.

#### **27.18 Enforcement of indemnities**

It is not necessary for a Party to incur expense or make a payment before enforcing an indemnity contained in this agreement.

#### **27.19 Sublease**

- (a) The Parties acknowledges that:

- (i) Queensland Rail's interest in all or part of the land on which the Network is located and over which the Train Services will operate is or will be held under:
    - (A) the Sublease; or
    - (B) a lease, easement, licence, statutory right or other arrangement or right other than the Sublease, **(Land Tenure)**; and
  - (ii) this agreement is subject to the terms and conditions (including all reservations), whether express or implied, of the Sublease (or the Head Lease) and any other Land Tenure.
- (b) Queensland Rail must do either or both of the following:
- (i) give the Access Holder and the Operator a copy of any Land Tenure (together with any relevant amendments from time to time); or
  - (ii) notify the Access Holder and the Operator of any requirements that the Operator must comply with in relation to that Land Tenure (together with any amendments from time to time) **(Tenure Requirements)**.
- (c) Despite any other clause in this agreement and to the extent that the Operator operates Train Services on any part of the Network on land, or otherwise accesses land, that is the subject of any Land Tenure, the Operator must:
- (i) observe and comply with all relevant obligations of Queensland Rail under that Land Tenure and the Tenure Requirements; and
  - (ii) not act, omit to act or permit, cause or contribute to any act or omission that may result in Queensland Rail:
    - (A) breaching a term of any Land Tenure; or
    - (B) incurring (directly or indirectly) any costs or expenses in complying with a Land Tenure that Queensland Rail would not otherwise have incurred.
- (d) If there is an inconsistency between the terms of this agreement and the terms of any Land Tenure or Tenure Requirements which means that Queensland Rail or the Operator cannot comply with both this agreement and that Land Tenure or those Tenure Requirements, then the terms of that Land Tenure or those Tenure Requirements (as applicable) prevail to the extent of the inconsistency and the provisions of this agreement will be construed accordingly.
- (e) If Queensland Rail's rights in respect of the Land Tenure are terminated for any reason other than the default of Queensland Rail of any agreement that affects Queensland Rail's use of that Land



Tenure or other than by agreement between Queensland Rail and the relevant land owner, then Queensland Rail may by notice to the Access Holder and the Operator suspend and/or terminate this agreement insofar as it relates to that part of Network which is situated on that Land Tenure (in which case the Access Holder's obligation to pay Access Charges is suspended and/or terminated commensurate with that suspension or termination).

## 27.20 Most favoured nation status

- (a) The Access Holder may (acting reasonably) notify Queensland Rail that it believes that:
- (i) Queensland Rail has entered into an access agreement with another Network Participant for a Train service that transports the same commodity in the same geographic area as a Train Service (**Like Train Service**); and
  - (ii) the access charges applicable to the Like Train Service have been developed in contravention of the price differentiation provisions under the relevant Access Framework's pricing principles that applied to the development of those access charges (**Price Differentiation Provisions**),
- and provide Queensland Rail with reasons why the Access Holder considers this to be the case.
- (b) Within 20 Business Days after receiving such a notice, Queensland Rail must notify the Access Holder:
- (i) whether it agrees that the access agreement with the other Network Participant is for a Like Train Service including, if it does not agree, its reasons; and
  - (ii) where it does agree with the matter in **clause 27.20(b)(i)**, whether it agrees that the access charges applicable to the Like Train Service have been developed in contravention of the Price Differentiation Provisions including, if it does not agree, its reasons.
- (c) Within 40 Business Days after giving a notice under **clause 27.20(b)** agreeing to the matter in **clause 27.20(b)(ii)**, Queensland Rail must notify the Access Holder:
- (i) whether Queensland Rail has been able to vary the access charges applicable to the Like Train Service to rectify the contravention of the Price Differentiation Provisions; or
  - (ii) where Queensland Rail has not been able to vary those access charges, that Queensland Rail agrees to vary the Access Charge to rectify the contravention of the Price Differentiation Provisions including how the Access Charge will be varied.

- (d) If the Access Holder (acting reasonably) is not satisfied with Queensland Rail's responses under **clauses 27.20(b) or (c)**, the dispute must be referred to an Expert for resolution in accordance with **clause 19.3**.
- (e) If:
  - (i) another Network Participant notifies Queensland Rail that it believes:
    - (A) that some or all of the Train Services transport the same commodity in the same geographic area as a Train service operated by that other Network Participant; and
    - (B) that the Access Charges for those Train Services have been developed in contravention of the price differentiation provisions under the relevant Access Framework's pricing principles that applied to the development of the Access Charges; and
  - (ii) Queensland Rail agrees with the matters referred to in **clauses 27.20(e)(i)(A) and (B)**,  
 then Queensland Rail may notify the Access Holder varying the Access Charge to rectify the relevant contravention.
- (f) In this **clause 27.20**, a reference to the Access Charges, or the access charges applicable to another Network Participant's Train service, includes the methodology, rates and other inputs used to calculate those Access Charges or access charges, as applicable.
- (g) This **clause 27.20** only applies in relation to an access agreement or access charges for a Like Train Service where that access agreement was entered into by the relevant parties after the date of this agreement.

## 27.21 Transitional provisions

In the event that the Access Framework expires during the Term, the Parties must promptly:

- (a) consult regarding consequential changes to this agreement; and
- (b) endeavour to negotiate and agree any changes.

## 28 Interpretation

### 28.1 Definitions

In this agreement:

**Acceptable Credit Rating** means a minimum long term credit rating of not less than "A" from Standard and Poor's Rating Service (or equivalent rating by another internationally recognised ratings agency).

**Access Charge Input** means a rate or other input, used for the purpose of calculating Access Charges, as specified in **schedule 3** (including as varied, escalated or replaced from time to time in accordance with this agreement).

**Access Charges** means the charges, including Take or Pay Charges, determined in accordance with **schedule 3**.

**Access Framework** means Queensland Rail's Access Framework dated 9 September 2020 as published on Queensland Rail's website, as amended from time to time in accordance with its terms.

**Access Rights** has the meaning given in **clause 2.1(a)**.

**Accreditation** means accreditation (including any exemption from the requirement for such accreditation and any conditions applying to that accreditation or exemption) in accordance with Part 3 Division 4 of the RSNL and **Accredited** means to have Accreditation.

**Ad Hoc Train Service** means a train service additional to the number of Train Services permitted under this agreement and varying from the Train Service Description, but agreed to by Queensland Rail.

**Additional Train Service** means the operation of a Train in accordance with this agreement that would be a Train Service but for it being in addition to the Train Service Levels set out in the Train Service Description.

**Affected Party** has the meaning given in **clause 20.1(a)**.

**Alternative Schedule Time** has the meaning given to that term in the Access Framework.

**Arbitrator** means the arbitrator appointed in accordance with **clause 19.4**.

**Arbitration Notice** has the meaning given to that term in **clause 19.4**.

**Assign** means assign, novate, transfer or otherwise deal with, and **Assignment** and **Assignee** have a corresponding meaning.

**Associates** means, for a Party:

- (a) directors, officers, employees, contractors, agents or consultants of that Party; and
- (b) where the Party is:
  - (i) the Operator, any other person under the control or supervision of, or acting for or on behalf of, the Operator in connection or relating to the Train Services;
  - (ii) the Access Holder, any other person under the control or supervision of, or acting for or on behalf of, the Access Holder in connection or relating to the Access Holder's obligations under this agreement; or
  - (iii) Queensland Rail, and any other person under the control or supervision of, or acting for or on behalf of, Queensland Rail in

connection with or relating to the provision of the Access Rights,

including any worker (as defined under the *Work Health and Safety Act 2011* (Qld)) who carries out work for that Party, but for the avoidance of doubt, the Operator is not an Associate of the Access Holder and the Access Holder is not an Associate of the Operator for the purposes of this agreement.

**Authorisation** means any consent, accreditation, authorisation, registration, filing, lodgement, notification, agreement, licence, certification, commission, permit, approval, exemption, ruling or other permission from, by or with an Authority required by any Law or lawfully required by any Authority.

**Authority** means:

- (a) the Crown or any minister of the Crown;
- (b) any government, federal, state or local government department or other governmental, semi-governmental or judicial body or authority including local government, a court or a tribunal;
- (c) any corporation, authority, body or force constituted for a public purpose (including any police service or force);
- (d) any holder of an office for a public purpose;
- (e) any governmental, semi-governmental or judicial person; and
- (f) any person (whether autonomous or not) who is charged with the administration or enforcement of a Law,

including any officer or agent of the foregoing acting in that capacity but excluding the Rail Authority and, for the avoidance of doubt, excluding Queensland Rail.

**Business Day** means a day which is not a Saturday, Sunday or public holiday in Brisbane.

**Certification** has the meaning given in **clause 8.10(a)(i)**.

**Change in Control** means:

- (a) a change in the entity that controls a Party;
- (b) an entity that controls a Party ceases to control a Party; or
- (c) if a Party is not controlled, another entity acquires control of a Party, except where:
  - (d) a Party is listed on the Australian Securities Exchange before, and remains listed after, the relevant change;
  - (e) the relevant change relates directly to the initial listing of a Party on the Australian Securities Exchange; or
  - (f) for paragraphs (a) and (b), the ultimate holding company of a Party remains the same following the relevant change.

For the purposes of this definition “control”, “controls”, “controlled” and “ultimate holding company” have the meaning given to those terms in the Corporations Act.

**Change in Law** means:

- (a) any amendment, repeal, modification or enactment of any Law;
- (b) any change in the interpretation or application, including by the exercise of delegated authority, of any Law resulting from a decision of a court or Authority;
- (c) the making of any new directive, or any change in an existing directive, of any Authority;
- (d) the imposition of a requirement for Authorisations not required as at the Commencement Date;
- (e) after the date of grant of any Authorisation, a change in the terms, conditions or requirements relating to that Authorisation including any new terms, conditions or requirements;
- (f) any such Authorisation as has been granted ceasing to remain in full force and effect or, if granted for a limited period, not being renewed on a timely basis on application therefore being duly made, or being renewed on a basis that is materially less favourable than the original Authorisation;
- (g) an amendment to or replacement of the Access Framework; or
- (h) a change in the application or interpretation of the Access Framework resulting from a decision of a court or other Authority.

**Change to Credit** means:

- (a) (i) a change in the rate, or basis of calculation, of; or  
(ii) the introduction or cessation of,  
a credit, rebate, deduction, refund, exemption, concession or any other benefit or allowance (whether or not relating to an Impost), including, without limitation, a fuel tax credit, diesel fuel rebate or similar credit to which Queensland Rail is or was entitled; or
- (b) any change in the funding received by Queensland Rail from any Authority in relation to the relevant part of the Network.

**Charge** has the meaning given in **clause 22.4**.

**Chargee** has the meaning given in **clause 22.4**.

**Claim** means any claim, cause of action, proceeding, liability, suit or demand (including by way of contribution or indemnity) whether:

- (a) arising in contract, in tort (including negligence), under any Law or otherwise; or
- (b) present or future, fixed or unascertained, actual or contingent.

**Claim Event** has the meaning given in **clause 13.6**.

**Commitment Date**, for a Train Service, has the meaning given in **item 10** of **schedule 1** for that Train Service.

**Commencement Date** has the meaning given in **item 7** of **schedule 1**.

**Compliance Date**, for a Train Service, has the meaning given in **item 9** of **schedule 1** for that Train Service.

**Confidential Information** means:

- (a) the terms of this agreement; and
- (b) any information, data or other matter (in this definition, **information**) disclosed to a Recipient by, or on behalf of, a Disclosing Party where:
  - (i) the disclosure of the information by the Recipient would reasonably be expected to adversely affect the commercial interests of the Disclosing Party; or
  - (ii) the information is marked or otherwise indicated as confidential at the time of the disclosure to the Recipient,  
excluding information that:
    - (iii) was in the Recipient's lawful possession prior to the disclosure; or
    - (iv) whether before or after the disclosure:
      - (A) is in the public domain through means other than a breach of confidentiality by the Recipient (or anyone to whom the Recipient has disclosed it); or
      - (B) is received by the Recipient independently from a third party who is free to disclose such information.

**Confidentiality Exception** means:

- (a) any disclosure or use of Confidential Information consented to by the Disclosing Party under **clause 24.2(a)**;
- (b) any disclosure of Confidential Information to another Party, provided that the confidentiality obligations under this agreement continue to apply to that Confidential Information as if the disclosure was made directly by the Disclosing Party to that other Party; or
- (c) any disclosure or use of Confidential Information:
  - (i) to the extent necessary to:
    - (A) the Recipient's directors, officers or employees; or
    - (B) without limiting **paragraph (c)(xii)** of this definition, the directors, officers or employees of a Related Party of the Recipient;

- (ii) to the extent required or compelled by, or necessary to observe, administer or comply with, any Law (other than section 275(1) of the *Personal Property Securities Act 2009* (Cth));
- (iii) to the extent consistent with a person's right to disclosure under any Law;
- (iv) without limiting **paragraphs (c)(ii) or (iii)** of this definition, in accordance with the Access Framework (including the Network Management Principles) including:
  - (A) in publishing or providing MTPs and DTPs; and
  - (B) for the purpose of consultations or negotiations relating to a modification of a MTP or the scheduling of a DTP in variation from an MTP,
- (v) to the extent necessary for the conduct of any legal proceedings (including any dispute resolution process under the Access Framework);
- (vi) to the extent required under any stock exchange listing requirement or rule;
- (vii) to the Rail Safety Regulator;
- (viii) to the Recipient's solicitors, barristers, or accountants under a duty of confidentiality (which is not waived by the Recipient without the prior written consent of the Disclosing Party);
- (ix) to the Recipient's engineering or other technical consultants and advisers to the extent necessary for the provision of advice to the Recipient (provided they are under a legal obligation not to disclose the Confidential Information to any third party);
- (x) to the Recipient's banker, financier or other financial institution, to the extent required for the purpose of raising funds or maintaining compliance with credit arrangements, if such banker or financial institution has executed a legally enforceable confidentiality deed in favour of the Disclosing Party under which they are obliged to keep the Confidential Information confidential;
- (xi) if Queensland Rail is the Recipient, to any responsible Minister (as defined in the Rail Authority Act);
- (xii) if Queensland Rail is the Recipient, to the extent necessary to:
  - (A) the Rail Authority; and
  - (B) the Rail Authority's board members;
  - (C) the Rail Authority's:

- (1) chief executive officer, chief finance officer and other senior executives (as those terms are defined under the Rail Authority Act); and
- (2) other officers and employees;
- (xiii) for the purpose of facilitating Network Control Directions where the disclosure of information is by Queensland Rail in the usual course of undertaking Network Control;
- (xiv) to the extent necessary by any person involved in clearing a Network Incident or other event or incident that is preventing or affecting the operation of Train services on the Network;
- (xv) to the extent necessary by Queensland Rail for the purpose of responding to, managing or clearing a Network Incident or other event or incident that is preventing or affecting, or is likely to prevent or affect, the operation of Train services on the Network;
- (xvi) to any bona fide assignee if such assignee has executed a legally enforceable confidentiality deed in favour of the Disclosing Party under which they are obliged to keep the Confidential Information confidential.

**Consequential Loss** means, subject to **paragraphs (e) and (f)** of this definition:

- (a) any special, indirect or consequential loss;
- (b) any economic loss in respect of any claim in tort;
- (c) any loss of profits, loss of revenue, loss of production, loss of use, loss of contract, loss of opportunity, loss of reputation, loss of goodwill, wasted overheads or any damage to credit rating whatsoever; and
- (d) any loss arising out of any Claim by a third party, whether arising in contract, in tort (including negligence), under any law or otherwise and whether present or future, fixed or unascertained, actual or contingent, but does not include:
  - (e) a loss (including a loss arising out of a Claim by a third party) in respect of:
    - (i) the cost of repairing, replacing or reinstating any real or personal property owned or leased by any person (including a Party) that has been lost, damaged or destroyed; or
    - (ii) personal injury to or death of any person; or
  - (f) in respect of any personal injury claim, special loss or economic loss as those terms are used in the context of personal injury claims.

**Corporations Act** means the *Corporations Act 2001* (Cth).



**Daily Train Plan** or **DTP** has the meaning given to that term in the Access Framework.

**Dangerous Goods** means any substance or thing defined as dangerous goods, explosives or radioactive material under a Dangerous Goods Code.

**Dangerous Goods Code** means:

- (a) the Australian Code for the Transport of Dangerous Goods by Road and Rail;
- (b) the Australian Code for the Transport of Explosives by Road and Rail; or
- (c) the Code of Practice for the Safe Transport of Radioactive Material, as published and in force from time to time and as amended or replaced.

**Data** has the meaning given in **clause 8.9(a)**.

**Deed Poll** has the meaning given in the Access Framework.

**Disclosing Party** has the meaning given in **clause 24.1**.

**Dispute** has the meaning given in **clause 19.1**.

**Dispute Notice** has the meaning given in **clause 19.1(a)(ii)**.

**Dispute Notice Date** has the meaning given in **clause 19.2(a)**.

**Emergency Possession** means a Possession:

- (a) that is required to rectify a fault with the Network:
  - (i) that is considered by Queensland Rail to be dangerous or potentially dangerous to any person; or
  - (ii) where severe speed restrictions have been imposed that affect the scheduled Train services of Network Participants; and
- (b) that Queensland Rail intends to carry out within five Business Days after the detection of the fault.

**End Date** means, for a Train Service, the date specified in **item 8 of schedule 1**.

**Environmental Harm** means environmental harm as defined in the *Environmental Protection Act 1994* (Qld).

**EIRMR** means the environmental investigation and risk management report developed by the Operator to identify and assess the environmental risks associated with the proposed Train Services and to identify applicable control measures to effectively manage those risks and as further outlined in the Operating Requirements Manual. For the avoidance of doubt, the EIRMR is used to inform the Interface Risk Assessment and the development of the IRMP.

**Existing Agreement** means an existing access agreement between Queensland Rail, the Access Holder and a nominated Accredited Rolling Stock Operator relating to the operation of any of the Train Services.

**Expert** means an expert appointed in accordance with **clause 19.3**.

**Extension** has the meaning given to that term in the Access Framework.

**Force Majeure Event** means any cause, event or circumstance or combination of causes, events or circumstances which:

- (a) is beyond the reasonable control of the Affected Party; and
- (b) by the exercise of due diligence the Affected Party was not reasonably able to prevent or is not reasonably able to overcome,

and includes:

- (c) compliance with a lawful requirement, order, demand or direction of an Authority or an order of any court having jurisdiction other than where that requirement, order, demand or direction results from any act or omission of the Affected Party;
- (d) a strike, lockout, stoppage, go slow, labour disturbance or other such industrial action, whether or not the Affected Party is a party to such industrial action or would be able to influence or procure the settlement of such industrial action;
- (e) an act of God;
- (f) war, invasion, act of terrorists, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, military or usurped power, blockade, civil disturbance or public disorder;
- (g) equipment failure or breakdown where such failure or breakdown could not have been prevented by Prudent Practices or accident or accidental damage to any thing;
- (h) malicious damage or sabotage;
- (i) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste;
- (j) failure of electricity supply from the electricity grid;
- (k) delay, restraint, restriction, embargo or other material adverse effect arising from any act or omission of any Authority;
- (l) fire, flood, storm surge, cyclone, tornado, tsunami, earthquake, washaway, landslide, explosion, hail, lightning, severe weather conditions or other catastrophe or natural calamity;
- (m) any act or omission of any third party (including any third party's presence on or near the Network), without the express authorisation of Queensland Rail, that results in damage to the Network or the use or operation of the Network being prevented or impeded;

- (n) epidemic or quarantine restriction; and
- (o) delay of a supplier due to any of the foregoing whenever arising.

**GST** has the meaning given in **clause 26.1**.

**Head Lease** means the lease from the Governor in Council to the State of Queensland (represented by the Department of Transport and Main Roads) of land on which all or part of the Network is located, granted in accordance with section 240(2) of the TIA.

**Impost** means a tax, excise, charge, levy, duty, fee, impost, rate, royalty, imposition, withholding, fee for any Authorisation or other licence or approval fee or any other charge which is imposed, applied or administered by, or payable to or by, any Authority but excluding any income tax, fringe benefits tax, capital gains tax or any tax that replaces any of those taxes.

**Impost Change** means:

- (a) the introduction or imposition of a new Impost;
- (b) a change in the rate, amount or application of an Impost; or
- (c) a change in the basis of calculation of an Impost.

**Incident** means any Network Incident involving the activities of the Operator.

**Initial Operator** means the first Accredited Rolling Stock Operator nominated by the Access Holder to become bound to an access agreement with Queensland Rail and the Access Holder relating to the operation of any of the Train Services.

**Insolvency Event** means, in relation to a Party, any one or more of the following events:

- (a) the Party is not able to pay all its debts from the Party's own money as and when they become due or has stated that it is unable to do so;
- (b) the Party has been presumed to be insolvent or unable to pay its debts under any applicable legislation;
- (c) a resolution is passed that the Party be wound up or placed in liquidation voluntarily or that an administrator be appointed;
- (d) an application or order has been made for the winding up or dissolution of the Party (other than an application which is dismissed or withdrawn within ten Business Days after such proceedings were commenced);
- (e) a controller, administrator, receiver, liquidator or provisional liquidator has been appointed to the Party or in respect of any of its property;
- (f) the Party has entered into or taken any action to enter into (whether formally or informally) an arrangement (including a scheme of arrangement or deed of company arrangement), composition or compromise with, or assignment for the benefit of, all or any class of its creditors or members or a moratorium involving any of them;

- (g) a mortgagee has entered into possession of any of the Party's assets or undertakings; or
- (h) anything analogous to or of a similar effect to anything described above under the law of any relevant jurisdiction has occurred in respect of the Party,

provided that, for the purposes of this definition, a reference to the Party includes any Related Party of the Party.

**Inspecting Party** has the meaning given in **clause 9.5**.

**Inspection or Audit** has the meaning given in **clause 9.5**.

**Insurance** means those insurances to be effected and maintained in accordance with **clause 16**.

**Interest Rate** means the rate which is the aggregate of:

- (a) 2% per annum; and
- (b) the Commonwealth Bank of Australia's reference rate being the "Reference Rate" quoted by the Commonwealth Bank of Australia (or any successor bank) for borrowers with overdrafts of \$100,000 or more on any relevant date as published in the Australian Financial Review (or in the event that such a rate is not so quoted or published at or in respect of any relevant date, such other similar rate to the "Reference Rate" specified by a major commercial bank agreed between the Parties or, if not agreed, a rate determined by an Expert in accordance with **clause 19.3**).

**Interface Risk** means a risk to the safety of persons or property or to the environment<sup>5</sup> arising from the interaction between the Operator's proposed operations and any one or more of:

- (a) the Network;
- (b) operations on the Network (including those of other Network Participants and Queensland Rail); and
- (c) persons using the Network, persons on or near the Network or members of the public (including any activities on the Network that may affect those matters),

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<sup>5</sup> Environmental risks include:

- risks in relation to water quality, pollution, contaminated land, nature conservation, hazardous substances and dangerous goods, waste and noise; and
- risks of serious environmental harm, material environmental harm and environmental nuisance as defined in the *Environmental Protection Act 1994* (Qld).

including risks of Environmental Harm arising out of the Operator's proposed operations on the Network, provided that a reference to operations in this definition includes railway operations as defined in the RSNL.

**Interface Risk Assessment** means an assessment to:

- (a) identify all reasonably foreseeable Interface Risks;
- (b) evaluate the possibility of the Interface Risks occurring and the safety, commercial and other consequences of those Interface Risks;
- (c) identify appropriate controls and measures to adequately manage all Interface Risks (including any training required for the Operator's Associates);
- (d) identify the Party responsible for implementing such controls and measures and ensuring their on-going effectiveness;
- (e) identify the applicable Safeworking Procedures and Safety Standards to be adhered to including Queensland Rail's safety policies and procedures and the Operating Requirements Manual;
- (f) identify the minimum standards relating to the interface between Rolling Stock and the Network with which the Rolling Stock and Train Configurations must comply in order for them to be able to be operated on the relevant parts of the Network (or, if already agreed, agree variations (if any) to those standards);
- (g) identify:
  - (i) any relevant Laws and the controls, standards and procedures developed from time to time by Queensland Rail to comply with such Laws; and
  - (ii) any relevant elements of Queensland Rail's environmental management system and the Operating Requirements Manual,to be adhered to;
- (h) satisfy the requirements under the RSNL (including for an interface agreement (as defined in the RSNL)) or under any other relevant Laws relating to health or safety; and
- (i) satisfy the relevant requirements under the Operating Requirements Manual for such an assessment.

**Interface Standards** has the meaning given to that term in the Operating Requirements Manual.

**IRMP** means the interface risk management plan set out in **schedule 4**, as amended from time to time in accordance with **clause 9.2**.

**Land Tenure** has the meaning given in **clause 27.19(a)(i)**.

**Law includes:**

- (a) any statute, ordinance, code, law, by-law, proclamation, rule or regulation or any other subordinate legislation, whether State, Commonwealth or otherwise;
- (b) the terms of any Authorisation;
- (c) common law and equity; and
- (d) any order, circular, requirement, condition, notice, decree, decision, direction or guidelines of any Authority with which the Operator or Queensland Rail (as the case may be) is legally required to comply including any requirement to pay fees and charges,

whether **now**, or at any time in the future, in effect.

**Loss** means loss, damage, cost or expense including the costs and expenses of **defending** or settling any Claim (including legal costs and expenses on a full indemnity basis) whether:

- (a) arising in contract, in tort (including negligence), under any Law or otherwise; or
- (b) present or future, fixed or unascertained, actual or contingent.

**Maintenance Work** means any works involving maintenance, repairs to, renewal, and associated alterations or removal of, the whole or any part of the Network and includes any inspections or investigations of the Network.

**Master Train Plan** or **MTP** has the meaning given to that term in the Access Framework.

**Material Change** means:

- (a) an Impost Change;
- (b) a Change in Law; or
- (c) a Change to Credit.

**Metropolitan System** means that part of the Network bounded to the north by (and including) Nambour station and to the west by (and including) Rosewood and including all branch lines comprised in that part of the Network.

**Net Financial Effect** means the net effect in financial terms of a Material Change on Queensland Rail in relation to performing its obligations or exercising its rights under this agreement including any offsetting benefits or adverse effects directly or indirectly connected to the Material Change (and, for clarification, any change in the funding from governments in respect of the relevant part of the Network for the relevant commodity which is adverse to Queensland Rail shall, to the extent that change affects the financial position of Queensland Rail, be deemed to be an additional cost to Queensland Rail of performing its obligations under this agreement).

**Network** means the rail transport infrastructure (as defined in the TIA) for which Queensland Rail is the Railway Manager and which is owned or lease by Queensland Rail or Queensland Rail's successor, assignor or subsidiary,

but excluding rail transport infrastructure which is standard gauge track and over which the transportation is effected by using standard gauge rolling stock.

**Network Control** means the control, management and monitoring (including, as applicable, scheduling) of:

- (a) all Train Movements;
- (b) all other operations of Rolling Stock on the Network; and
- (c) any activities affecting or potentially affecting such Train Movements or Rolling Stock operation or the proper, efficient and safe operation and management of the Network.

**Network Control Directions** means instructions, directions and notifications from time to time issued by Queensland Rail for the purpose of Network Control (including preventing or minimising the effect of a material breach of this agreement).

**Network Controller** means a person appointed by Queensland Rail from time to time to perform Network Control for a relevant part of the Network.

**Network Control System** means the software, databases and systems used from time to time by Queensland Rail in connection with Network Control.

**Network Incident** means any Rolling Stock derailment, Rolling Stock disablement or breakdown, accident, collision or any other unplanned occurrence on the Network which causes or could cause death or injury to any person, damage to property or Environmental Harm or a disruption to or cancellation by Queensland Rail of any Train Movement.

**Network Management Principles** has the meaning given to that term in the Access Framework (from time to time) or, if the Access Framework ceases to define that term, the network management principles included in the Operating Requirements Manual from time to time.

**Network Participant** means:

- (a) any person who holds, or uses any other person's, rights of access to any part of the Network in relation to Train services; and
- (b) any Accredited rail transport operator (as defined in the RSNL) who uses the Network,

including:

- (c) the Operator; and
- (d) any person in control of, or operating, any Private Infrastructure that is connected to the Network.

**Nominated Access Rights** has the meaning given in **clause 21.2(a)(i)**.

**Nominated Monthly Train Services** means the number of Train Services for that Train Service Description that the Access Holder is entitled to have operated during any calendar month.

**Notice** has the meaning given in **clause 25.1**.

**Obstruction** means any thing or circumstance (including debris or other things on the Network), which has the potential to cause a disruption to or cancellation by Queensland Rail of Train Services or Train Movements and includes any Network Incident but does not include an Operational Constraint imposed by Queensland Rail.

**Operating Plan** has the meaning given to that term in the Access Framework.

**Operating Requirements Manual** has the meaning given in the Access Framework.

**Operational Constraint** means any temporary or permanent constraint on the operation or use of any part of the Network imposed by Queensland Rail (acting reasonably) as it considers necessary in relation to the proper, efficient or safe operation or management of the Network (including speed restrictions, load restrictions, Planned Possessions, Urgent Possessions, Emergency Possessions and signalling or overhead restrictions).

**Operator's Customer** means:

- (a) any person that has a rail haulage agreement or arrangement with the Operator in relation to the Access Rights;
- (b) any consignor of goods to be transported by the Operator; and
- (c) any person with title to, or an interest in, any thing to be transported by the Operator;

provided that if **items 5** and **6** of **schedule 1** have been completed and the **person** whose details are set out in **items 5** and **6** of **schedule 1** has executed this agreement, then that person is the "Operator's Customer".

**Operator's Emergency Management Plan** means the emergency management plan, including as amended or replaced from time to time:

- (a) that is developed and maintained by the Operator under **clause 10.1**; and
- (b) for which the Operator has obtained a notice from Queensland Rail, in accordance with **clause 10.1(a)** (and, if applicable, **clause 10.1(d)(iii)**), that Queensland Rail has no objection to that plan (including any amendments).

**Parties** means collectively the parties to this agreement, and **Party** means one of them.

**Performance Levels** has the meaning given in **clause 6.7(a)**.

**Planned Possession** means a Possession (other than an Urgent Possession or an Emergency Possession) where such Possession is entered into the Train Schedule and adversely affects the operation of Train Services.

**Possession** means the temporary closure or occupation by Queensland Rail of part of the Network (including closure of Track or isolation of any electrical



overhead traction system) for the purpose of carrying out Rail Infrastructure Operations, other work or other activities on or in the proximity of the Network.

**Present Value** means the present value calculated at a discount rate equal to the Weighted Average Cost of Capital (WACC) (as defined in the Access Framework from time to time).

**Private Infrastructure** means rail transport infrastructure (as defined in the TIA), including but not limited to the track, signalling and electrical overhead traction system (if applicable) for which neither Queensland Rail nor Queensland Rail's successors, assignors or subsidiaries is the Railway Manager.

**Prudent Practices** means the exercise of that degree of diligence, care, foresight, prudence and skill that would reasonably be expected from a competent, skilled and experienced person in the same type of undertaking in the same or similar circumstances.

**Queensland Rail Cause** means, subject to the exceptions set out below, Queensland Rail's inability to make the Network available for the operation of Train Services in accordance with this agreement as a result of:

- (a) an Operational Constraint;
- (b) a Force Majeure Event (to the extent that the Force Majeure Event prevents Queensland Rail from providing access to the Network in accordance with **clause 2**);
- (c) the derailment of any Train caused primarily by an act or omission of Queensland Rail; or
- (d) any other action by Queensland Rail other than Queensland Rail complying with an obligation in accordance with this agreement, the Access Framework or any applicable Law,

except where Queensland Rail's inability to make the Network available for the operation of Train Services in accordance with this agreement is primarily attributable to the Operator or the Access Holder.

**Queensland Rail Emergency Procedures** means Queensland Rail's emergency procedures as set out in the Operating Requirements Manual.

**Rail Authority** means the authority established under section 6 of the Rail Authority Act.

**Rail Authority Act** means the *Queensland Rail Transit Authority Act 2013* (Qld).

**Rail Infrastructure Operations** means:

- (a) the construction of any rail transport infrastructure (as defined in the TIA) to improve, upgrade, expand, extend, replace or vary the whole or any part of the Network;
- (b) any management, maintenance or operational activities relating to the Network, including the improvement, maintenance, repair,

modification, installation, removal, renewal or decommissioning of the whole or any part of the Network; and

- (c) any inspections or investigations of the Network.

**Railway Manager** means an Accredited rail infrastructure manager (as defined in the RSNL).

**Rail Safety Regulator** means the National Rail Safety Regulator or the Acting National Rail Safety Regulator appointed under Part 2 Division 2 of the RSNL.

**Recipient** has the meaning given in **clause 24.1**.

**Related Party** means a related body corporate as defined in the Corporations Act and, for Queensland Rail, includes the Rail Authority.

**Relinquished Access Rights** means the Available Capacity (as defined in the Access Framework) that is created as a result of a relinquishment by the Operator of Nominated Access Rights in accordance with **clause 21.2**.

**Relinquishment Date** has the meaning given in **clause 21.2(a)(iii)**.

**Relinquishment Fee** means a fee:

- (a) which, unless the Parties (each acting reasonably) agree otherwise, is equivalent to 80 per cent of the Present Value of the aggregate of the Take or Pay Charges that would have been payable on and from the Relinquishment Date until the end of the Term if the relevant Access Rights were not relinquished and the Operator did not use those Access Rights; and
- (b) if, prior to the Relinquishment Date, Queensland Rail has granted access rights (with effect on or after the Relinquishment Date) to a third party (including a Transferee) (**New Access Holder**) under an access agreement using the Relinquished Access Rights, adjusted to offset an amount equivalent to the Present Value of the aggregate of the take or pay charges, under that access agreement, payable by the New Access Holder:
- (i) that are directly attributable to that part of the access rights granted to the New Access Holder derived solely from the Relinquished Access Rights;
  - (ii) for all or part of the same period as that used to calculate the amount under **paragraph (a)**; and
  - (iii) calculated assuming the New Access Holder does not use the relevant access rights,

provided that if this calculation would result in an amount less than zero, then the fee equals zero.

**Repeated Breach** means an event or circumstance where:

- (a) Queensland Rail has given to the Operator at least two notices to remedy a material breach of a particular provision of this agreement;

- (b) each notice referred to in **paragraph (a)** relates to a separate breach of the particular provision;
- (c) the Operator commits a further breach of the particular provision; and
- (d) all of the breaches happened within a period of 12 months.

**Rolling Stock** means rolling stock (as defined under the RSNL) that operates on or uses Track.

**Rolling Stock Operator** has the meaning given to that term in the RSNL and, for clarity, includes an Access Holder's nominated Operator.

**RSNL** means the Rail Safety National Law (Queensland) as defined in the *Rail Safety National Law (Queensland) Act 2017* (Qld).

**Rules** has the meaning given to that term in **clause 19.4**.

**Safety Standards** has the meaning given to that term in the Operating Requirements Manual.

**Safeworking Procedures** has the meaning given to that term in the Operating Requirements Manual.

**Scheduled Time** means the time at which a Train Service has been scheduled by Queensland Rail to operate on the Network as detailed in the Train Schedule or as modified or varied by Queensland Rail from time to time on the day of operation in accordance with the Network Management Principles.

**Scheduled Train Path** means a Train Path that has been scheduled by Queensland Rail in a Train Schedule.

**Security** has the meaning given in **clause 17.1(a)**.

**Security Amount** has, subject to **clause 17.3**, the meaning given in **item 11 of schedule 1**.

**Standard and Poor's** means Standard and Poor's Financial Services LLC and its Related Parties.

**Sublease** means:

- (a) the sublease of the Head Lease between the State of Queensland (represented by the Department of Transport and Main Roads) (as sublessor) and Queensland Rail (as sublessee) for all or part of the land on which the Network is located; and
- (b) any tenure or other right to that land which replaces all or part of that sublease from time to time and entitles Queensland Rail to operate, and provide access to, the Network.

**Subsequent Agreement** means an access agreement between Queensland Rail, the Access Holder and a Subsequent Operator relating to the operation of any of the Train Services in the same terms as this agreement (unless otherwise agreed by the Access Holder and Queensland Rail) which reflects, in **schedule 1** to that agreement, particulars applicable to the relevant

Subsequent Operator and which reflects, in **schedule 2** to that agreement, the Access Rights which the Access Holder wishes to allocate to that Subsequent Operator and includes any further changes required pursuant to **clause 4.2**.

**Subsequent Operator** means any Accredited Rolling Stock Operator nominated by the Access Holder other than the Initial Operator.

**Take or Pay Charges** means that part of the Access Charges as determined in accordance with **schedule 3**.

**Tenure Requirements** has the meaning given in **clause 27.19(b)(ii)**.

**Term** means the term of this agreement as determined in accordance with **clause 1**.

**Termination Date** means the earlier of:

- (a) the latest End Date; and
- (b) the termination of this agreement in accordance with its provisions (including **clauses 15** and **8.5(c)(iv)(B)**, **20.5(c)**, and **20.7** as applicable) or any Law.

**Third Party Works** means any works, maintenance of any thing or other activities (including design, construction, testing and commissioning activities) undertaken or required to be undertaken on, over or under the land on which the Network is located:

- (a) by or on behalf of an Authority;
- (b) which Queensland Rail must permit in accordance with any Law or direction from an Authority;
- (c) by or on behalf of a third party who wants and is entitled under any Law to install and operate services or other infrastructure on, over or under that land; or
- (d) which Queensland Rail is required to permit either in accordance with the Sublease or because Queensland Rail's rights under the Sublease are subject to the rights of a third party to install and operate services or other infrastructure on, over or under that land.

For clarity, Third Party Works does not include any works or maintenance of any thing or other activities (including design, construction, testing and commissioning activities) undertaken in connection with or relating to the provision of the Access Rights and the operation of Train Services.

**TIA** means the *Transport Infrastructure Act 1994* (Qld).

**Track** means that part of the Network comprising the rail, ballast, sleepers and associated fittings.

**Train** means any self-propelled configuration of Rolling Stock operating as a unit on Track.

**Train Configuration** means the description of the combination of Rolling Stock comprising a Train including the identification number, gross mass and tare mass of individual items of Rolling Stock and the order in which those Rolling Stock items are placed in the Train.

**Train Movement** means the operation of a Train on the Network by the Operator or any other Network Participant.

**Train Path** means the use of a specified portion of the Network, which may include multiple sections in sequential order, at a specified time.

**Train Schedule** means the train diagrams, yard schedules, terminal schedules and any other form of train timetable, plan or schedule prepared by Queensland Rail in accordance with the Network Management Principles showing the programmed times of arrival or departure for Train Movements at specified locations on the Network.

**Train Service** means a Train operating on the Network in accordance with this agreement (including the Train Service Description) and, in **schedule 3**, a Train Service is a one way Train Service – that is, the journey from the origin to the destination is one Train Service, and the return journey from the destination to the origin is a second Train Service.

**Train Service Description** means the details set out in **schedule 2**.

**Transfer** has the meaning given in **clause 21.2(a)(ii)**.

**Transferee** has the meaning given in **clause 21.2(a)(ii)**.

**Urgent Possession** means a Possession:

- (a) that is required to correct problems in relation to the Network that are considered by Queensland Rail to be potentially dangerous to persons or property; and
- (b) that Queensland Rail intends to carry out within less than three months after the detection of the problem,

other than an Emergency Possession.

**Year** means, as applicable:

- (a) the period from the Commencement Date to the next 30 June;
- (b) a 12 month period during the Term subsequent to the period in **paragraph (a)** of this definition (subject to **paragraph (c)** of this definition); and
- (c) if the Termination Date is not 30 June, the period from (and including) 1 July immediately preceding the Termination Date and ending on the Termination Date.

## 28.2 Construction

Unless expressed to the contrary, in this agreement:

- (a) words in the singular include the plural and vice versa;

- (b) any gender includes the other genders;
- (c) if a word or phrase is defined its other grammatical forms have corresponding meanings;
- (d) “include”, “includes” and “including” must be read as if followed by the words “without limitation”;
- (e) no rule of construction will apply to a clause to the disadvantage of a Party merely because that Party put forward the clause or would otherwise benefit from it;
- (f) a reference to:
  - (i) a person includes a partnership, joint venture, unincorporated association, corporation, a government or statutory body or authority and any other entity recognised by law;
  - (ii) a person includes the person’s legal personal representatives, successors, permitted assignees and persons substituted by novation;
  - (iii) any legislation includes subordinate legislation under it and includes that legislation and subordinate legislation as modified or replaced;
  - (iv) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;
  - (v) a right includes a benefit, remedy, discretion or power;
  - (vi) conduct includes:
    - (A) a benefit, remedy, discretion, authority or power; and
    - (B) any omission and any representation, statement or undertaking, whether or not in writing;
  - (vii) time is to local time in Brisbane;
  - (viii) a month is a reference to a calendar month;
  - (ix) “\$” or “dollars” is a reference to Australian currency;
  - (x) this or any other document includes this agreement or that other document, as applicable, as novated, varied or replaced and despite any change in the identity of the Parties or, for another document, the parties to that document;
  - (xi) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes facsimile transmissions;
  - (xii) this agreement includes all schedules and annexures to it;

- (xiii) a clause, schedule or annexure is a reference to a clause, schedule or annexure, as the case may be, of this agreement; and
- (xiv) an Authority includes:
  - (A) any successor to, or replacement of, that Authority;
  - (B) any re-constitution or re-naming of that Authority; and
  - (C) any other Authority who is transferred any of the powers of functions of that Authority;
- (g) if the date on or by which any act must be done under this agreement is not a Business Day, the act must be done on or by the next Business Day;
- (h) where time is to be calculated by reference to a day or event, that day or the day of that event is excluded;
- (i) if a term used in this agreement has the meaning given to that term, or as defined, under any legislation, then:
  - (i) that term has the meaning given, or as defined, under that legislation from time to time; and
  - (ii) where that legislation ceases to define that term, the meaning given to that term in this agreement is the last meaning given to that term under the relevant legislation; and
- (j) if there is any inconsistency:
  - (i) between matters contained in a schedule to this agreement and other provisions of this agreement that are not contained in a schedule, then those other provisions of this agreement prevail; or
  - (ii) between matters contained in the Access Framework and this agreement, the provisions of this agreement prevail.

### 28.3 Headings

Headings do not affect the interpretation of this agreement.

## Schedule 1- Reference Schedule

|    |   |   |
|----|---|---|
| 1  | <b>Access Holder</b>                                      | [insert name] ABN [insert] of [insert]  |
| 2  | <b>Access Holder's particulars for Notices</b>            | Delivery address: [insert]<br>Postal address: [insert]<br>Facsimile: [insert]<br>Email:..... [insert]<br>Attention: [insert]  |
| 3  | <b>Operator</b>   | [insert name] ABN [insert] of [insert]  |
| 4  | <b>Operator's particulars for Notices</b>                 | Delivery address: [insert]<br>Postal address: [insert]<br>Facsimile: [insert]<br>Email [insert]<br>Attention: [insert]  |
| 5  | <b>Operator's Customer</b>                                | [Note: If the Operator's Customer is a Party to this agreement, then complete items 5 and 6 in the same format as for Items 3 and 4. If the Operator's Customer is not a Party to this agreement, then do not insert details in items 3 and 4.] |
| 6  | <b>Operator's Customer's particulars for Notices</b>      |   |
| 7  | <b>Commencement Date</b>                                  | [insert date of execution by Parties]   |
| 8  | <b>End Date</b>   | [insert date when access will cease to be available]  |
| 9  | <b>Compliance Date</b>                                    | [insert date when compliance with clause 8.4(a) should be completed]  |
| 10 | <b>Commitment Date</b>                                    | [insert date when access is to be available]  |
| 11 | <b>Security Amount</b>                                    | [the Security Amount for the Access Holder is to be an amount equal to at least six months' Access Charges]   |
| 12 | <b>Initial details for the Operator's representatives</b> | <b>Representative for Obstructions</b><br>Name:<br>Position:  |



|  |  |   |
|--|--|---|
|  |  | <p>Phone:</p> <p>Mobile:</p> <p>Facsimile:</p> <p>Email:</p> <p><b>Representative for loading of Train Services</b></p> <p>Name:</p> <p>Position:</p> <p>Phone:</p> <p>Mobile:</p> <p>Facsimile:</p> <p>Email:</p> <p><b>Representative for Operational Meetings</b></p> <p>Name:</p> <p>Position:</p> <p>Phone:</p> <p>Mobile:</p> <p>Facsimile:</p> <p>Email:</p> <p><b>Representative for Contractual Meetings</b></p> <p>Name:</p> <p>Position:</p> <p>Phone:</p> <p>Mobile:</p> <p>Facsimile:</p> <p>Email:</p> <p><b>Representative for Document Control</b></p> <p>Name:</p> <p>Position:</p> <p>Phone:</p> <p>Mobile:</p> <p>Facsimile:</p> <p>Email:</p> |
|--|--|---|

## Schedule 2 – Train Service Description

The details for the Train Service Description are as follows:

|  |  |
|--|--|
| <b>Origin</b>                                |  |
| <b>Destination</b>                           |  |
| <b>Average Haul Distance</b>                 |  |
| <b>Traffic Task / Commodity</b>              |  |
| <b>Dwell Times<sup>6</sup></b>               |  |
| <b>Accredited Railway Operator(s)</b>        | [insert each Accredited Railway Operator who has been nominated to operate some or all of the Train Services and identify the relevant Train Services which each Accredited Railway Operator has been nominated to operate.] |
| <b>Applicable Network</b>                    | The part of the Network to be used by the Train Services is described in the train route acceptance in Attachment 3 of this <b>schedule 2</b> .  |
| <b>Rolling Stock and Train Configuration</b> | The details for the Rolling Stock and Train Configuration to be used for the Train Services are set out in the train route acceptance in Attachment 3 of this <b>schedule 2</b> .  |
| <b>Train Service Levels</b>                  | The description of the Train Service levels is set out in Attachment 1 of this <b>schedule 2</b> .   |
| <b>Special Operating Requirements</b>        | The special operating requirements of the Train Service are set out in Attachment 2 of this <b>schedule 2</b> .  |
| <b>Storage</b>                               | The Train Services do not include the storage of Trains (whether short or long term) on the Network except short term storage as agreed, from time to time, between the Parties (in each Party's absolute discretion).       |

<sup>6</sup> A dwell time is the time period from when the Train Service arrives at a specified point on its journey until it has completed all relevant activities and is ready to depart from that point and has advised the relevant Network Controller accordingly.

|                        |  |
|------------------------|--|
| <b>Dangerous Goods</b> | [insert]   |
| <b>Stowage</b>         | [If any part of the relevant Network is not available, stowage will be provided for the Operator's Rolling Stock at mutually agreed locations taking into consideration the Operator's maintenance requirements, depot locations and crew accessibility i.e. walkways] |

## (A) Attachment 1 – Train Service levels

[insert relevant Train Services levels including daily, weekly, monthly and/or annual description of Train Services and other details relevant to the preparation of the Master Train Plan, including section run times.]

[Note: If a Train Service is only a one way Train Service for the purposes of this description, then this should be specifically referred to in the description.]

## (B) Attachment 2 – Special operating requirements

### 1 Provisioning locations

The provisioning locations for Train Services are:

- (a) [insert]; and
- (b) any other locations as agreed with Queensland Rail (in its absolute discretion),

except that if a Network Incident or delay occurs that affects more than one Train Service, the provisioning locations will be as agreed between the Parties (acting reasonably) for agreed Train Services and an agreed time period.

### 2 [insert]

[insert other requirements – for example, exit and entry points, shunting areas]

(C) Attachment 3 – Train route acceptance

1 Applicable Network

[insert]

2 Rolling Stock and Train Configuration

[insert]

## Schedule 3 – Calculation of Access Charges and other charges

[Note: Insert relevant details.]

## Schedule 4 – Interface Risk Management Plan

[Note: Insert initial IRMP as agreed during the negotiation process with the access seeker and/or Operator.]



## Schedule 5 - Performance Levels

[Note: insert agreed Performance Levels prior to signing; relevant categories to be considered are:

- transit times, including speed restrictions, and reasons for delay

- Network availability / reliability

- planned and actual services

- on-time running

- above rail train delays

- operator cancellations

- safety]

**Executed** as an agreement.

**Executed by Queensland Rail** )  
**Limited** by its duly authorised officer in )  
the presence of: )

.....  
Witness

.....  
Officer

.....  
Name of Witness (print)

.....  
Name of Officer (print)

**Executed by [Insert name of Access** )  
**Holder]** )

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director  
(print)

.....  
Name of Director (print)

**Executed by [Insert name of** )  
**Operator]** )

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director  
(print)

.....  
Name of Director (print)

[Note: If the Operator's Customer is not a Party to the agreement, then the execution block above should be deleted.]

# Schedule E – Extension Access Principles

## 1 Undertaking Premises

- (a) Queensland Rail cannot be forced to fund an Extension other than in accordance with this Framework.
- (b) Where Queensland Rail has elected, at their option, to not fund an Extension, an:
  - (i) Access Seeker will have the right to fund an Extension to create the Additional Capacity required to accommodate its Access Application;
  - (ii) Access Holder will have the right to fund an Extension to create the Additional Capacity to remedy or replace sections of the network damaged or destroyed by a Force Majeure Event; and
  - (iii) Access Holder will have the right to fund an Extension to increase the Capacity in a System.

## 2 Framework Coverage

- (a) Access Charges in respect of Access Rights which are able to be provided as a result of an Extension will be determined in accordance with the pricing rules incorporated in this Framework unless Queensland Rail and an Access Funder agree an alternative approach is appropriate in the circumstances.

## 3 Access Funder Rights and Responsibilities

- (a) The Access Funder, at their option, can elect to
  - (i) undertake each Extension Stage with the assistance of Queensland Rail so that the Extension complies with **clause 1.4** of the Framework;
  - (ii) require Queensland Rail to undertake each Extension Stage so that the Extension complies with **clause 1.4** of the Framework; or
  - (iii) execute separate Funding Agreements with Queensland Rail for each Extension Stage.
- (b) Unless otherwise agreed between the parties, the Access Funder is required to fund all of Queensland Rail's costs related to the Extension including, but not limited to:
  - (i) providing assistance to the Access Funder to develop the scope, standard and cost of the Extension at each stage of the Extension project;

- (ii) undertaking an Extension study or investigation on behalf of the Access Funder at each stage of the Extension project; and
  - (iii) constructing and commissioning an Extension.
- (c) Subject to **clause 6**, the Access Funder will absorb all costs incurred by the Access Funder that relate to the Extension.

## 4 Queensland Rail Rights and Responsibilities

- (a) Queensland Rail, at the request of an Access Funder, and in accordance with **clause 1.4.2(a)** of the Framework, will promptly:
- (i) provide the Access Funder with all reasonably required information on the Extension;
  - (ii) provide a first draft contract to underpin negotiations of a Funding Agreement; and
  - (iii) subject to executing a Funding Agreement in accordance with **clause 1.4.3(b)** of the Framework and as relevant to the Extension Stage being funded:
    - (A) provide all project assistance that is reasonably required by an Access Funder to develop an Extension to the required study standard;
    - (B) apply for any Authorisation, land tenure or land rights required for the Extension; and
    - (C) construct, commission and own the Extension.
- (b) No additional fees or on-costs may be charged by Queensland Rail in respect of the Extension unless there are additional costs or risks assumed by Queensland Rail which Queensland Rail would not have assumed but for the Extension. Queensland Rail must act reasonably in calculating any additional costs or risks and must provide reasonably satisfactory justification for the additional costs and/or risks.

## 5 Extension Stages

- (a) Queensland Rail must collaborate with Access Funders in relation to key matters affecting the cost and timing of the Extension, including, but not limited to, project scope, standard, approvals, procurement strategy, cost, construction and timing.
- (b) Prior to the execution of a study Funding Agreement in relation to a Concept Study, Pre-feasibility Study, or Feasibility Study (as applicable), the:
- (i) Access Funder and Queensland Rail (each acting reasonably) must agree the scope of works to be delivered by Queensland Rail at the relevant study stage; and

- (ii) Queensland Rail must provide an Access Funder with:
  - (A) an estimate of the reasonable Extension Costs it expects to incur during the relevant Extension Stage;
  - (B) project controls to manage the timing and cost risks in the Funding Agreement; and
  - (C) a timetable for the completion of the scope of works.
- (c) Following the execution of a study Funding Agreement for a Concept Study, Pre-feasibility Study, or Feasibility Study (as applicable), Queensland Rail must expeditiously assist, investigate and/or undertake the studies for that Extension Stage that are funded by an Access Funder and report variations to the agreed timetable.
- (d) Prior to the execution of a Funding Agreement in relation to the construction and commissioning Extension Stage:
  - (i) the Access Funder should be given the opportunity to collaborate with Queensland Rail in relation to key matters affecting the cost and timing of the Extension, including but not limited, project scope, standard, cost, procurement strategy, construction, and timing; and
  - (ii) the Access Funder and Queensland Rail, both acting reasonably, must agree;
    - (A) the Extension project scope to be delivered by Queensland Rail in constructing and commissioning the Extension;
    - (B) the procurement strategy;
    - (C) the estimated cost of the construction project;
    - (D) the project timetable for the commissioning of the Extension;
    - (E) the inclusion of appropriate project controls and/or contract terms for the Access Funder to manage the timing and cost risks in constructing and commissioning the Extension;
    - (F) construction, operational, and other material arrangements reasonably required for the construction of the Extension; and
    - (G) rights of inspection and audit in relation to each party's compliance with the Funding Agreement.

## 6 Full Economic Benefit Transfer

- (a) The capitalised cost of an Extension will include all costs expended by the Access Funder on the Extension in accordance with the Framework.
- (b) The capitalised cost of an Extension will be used to calculate the full economic benefit that is to be transferred from Queensland Rail to the

Access Funder over the economic life of the Extension, regardless of whether or not the Access Funder remains an Access Holder over that time period.

- (c) The full economic benefit derived by Queensland Rail as a result of the capital contribution comprises:
  - (i) an amount equal to the return on and of the capital component of Access Charges from any Access Holders that utilise the Capacity created by an Access Funder's contributed asset (with Queensland Rail being entitled to receive an amount equal to the components of Access Charges based on managing, maintaining and operating the network and their contribution to the capital cost of the Extension); and
  - (ii) any tax or other financial benefit accruing to Queensland Rail as legal owner of the Rail Transport Infrastructure covered by the Funding Agreement, where the risks have been transferred to the Access Funder as a result of the Funding Agreement.
- (d) Unless otherwise agreed by the Access Funder, the Funding Agreement should be such that Queensland Rail receives no benefit (tax or cash flow) from the Access Funder's contributed asset, with Queensland Rail retaining only the portion of Access Charges related to its operating and maintenance costs.
- (e) For clarity, where the Access Charges from the contributed asset are not sufficient to cover both the return to the Access Funder, and the operating and maintenance costs, and any other necessary capital expenditure, for that section of the network, Queensland Rail should only be obliged to return the amount it has received from Access Charges net of the operating and maintenance costs and capital expenditure in any given year (with Access Holders that continue to use the relevant Rail Transport Infrastructure receiving priority over Access Holders that have ceased using it, where Access Charges are not sufficient to cover all returns of capital).

## 7 Multiple and Subsequent Access Funders

- (a) If a number of Access Funders fund an Extension, the Access Funders should have the right to contract for Access Rights for the Additional Capacity up to the proportion of the funding that they provided at the commencement of the Extension. Any uncontracted Additional Capacity would then be available for contracting as per the terms of the Undertaking.
- (b) Where an Extension has been, or is being, funded by an Access Funder (**First Party**) and a subsequent party lodges an Access Application for Access Rights that were, or are being, created as a result of that funding by the First Party (**Subsequent Party**), Queensland Rail will:

- (i) take into account advice from the First Party to determine, acting reasonably, whether to apply similar funding requirements in its negotiations with the Subsequent Party;
  - (ii) require the Subsequent Party to execute a Funding Agreement to share responsibility in respect of part of the funding originally borne by the First Party where it is reasonable for the Subsequent Party to do so; and
  - (iii) re-negotiate the terms of the First Party's Funding Agreement to reflect the fact that the Subsequent Party is sharing the responsibility that was originally borne by the First Party, if paragraph (ii) above applies.
- (c) For the purposes of determining whether this clause applies to a Subsequent Party, a Subsequent Party will be deemed to use the funded Extension, if the Subsequent Party's Train Service would have required Additional Capacity if the funded Extension had not been built.

## 8 Funding Agreement Terms and Conditions

### 8.1 Allocation of Contract Risks

- (a) The identification, allocation and management of risks should be balanced and contract risks should be allocated to the party best placed to manage the risk.
- (b) An appropriate balancing of risks in a Funding Agreement should recognise the following risk positions of the parties in an Extension undertaken:
  - (i) a Funding Agreement is only required if Queensland Rail elects, at its option, to not fund an Extension;
  - (ii) apart from funding an Extension, an Access Funder has to comply with the Framework; and
  - (iii) the Framework gives Queensland Rail responsibility for:
    - (A) approving the efficient scope and standard of an Extension;
    - (B) efficiently constructing and owning the Extension; and
    - (C) operating and maintaining the Network, inclusive of the Extension; and
- (c) A balancing of risks in a Funding Agreement should provide appropriate project controls for the Access Funder to manage the cost and timing risks that it has accepted in funding an Extension to accommodate its request for Access.

## **8.2 Security**

- (a) As per **clause 1.4.1(b)(ii)** of the Framework, Queensland Rail may require the Access Funder to provide a bank guarantee in support of its commitments under a Funding Agreement.
- (b) Any required bank guarantee should reflect the cash flow risk that Queensland Rail has taken on in the Extension and may provide the ability for Queensland Rail to issue 3-6 month 'cash calls' in advance to cover Queensland Rail's costs during construction of the Extension.
- (c) Where an Access Funder defaults on a cash call, Queensland Rail is entitled to:
  - (i) require some form of security deposit equivalent to its financial exposure, where the default was not attributable to a legitimate Dispute; and
  - (ii) stop all construction activities until the default has been remedied.
- (d) An Access Holder paying a cash security deposit should be credited with interest on the security at a market-based rate for as long as it is held by Queensland Rail.
- (e) The Access Funder shall not be entitled to commence Train Services specified in the Access Agreement unless and until all provisions of the Funding Agreement are completed or complied with. Queensland Rail will use all reasonable endeavours to facilitate the Access Funder's completion or compliance with such provisions.

## **8.3 Infrastructure Management**

Queensland Rail is responsible for the management, operation and control of the Extension during construction and commissioning, in accordance with the Undertaking.

## **8.4 Insurance**

Insurances are to be effected by the parties to appropriately provide for the relevant insurance risks in the construction of the Extension.

## **8.5 Indemnities and Liabilities**

Each party is liable for, and is required to release and indemnify each other for, all claims in respect of personal injury, death or property damage caused or contributed to (to the extent of the contribution) by the wilful default or negligent act or omission of that party or its staff.

## **8.6 Limitation of Liability**

- (a) The liabilities of the parties for default shall be limited as agreed in the Funding Agreement.
- (b) The Funding Agreement will specify the circumstances in which each party has a claim against the other party for delays in the Extension project caused by breach of the Funding Agreement or negligence by the other party.



- (c) Claims by either party must be lodged within twelve months of the occurrence of the event or circumstance giving rise to the claim.

### **8.7 Default, suspension and termination**

The Funding Agreement will specify reasonable events of default and mutual rights of suspension and termination having regard to the commercial interests of both parties.

### **8.8 Force Majeure Event**

- (a) The obligations of either party (other than an obligation to pay monies outstanding) will be suspended where by reason of a Force Majeure Event that party is delayed in, or prevented from, carrying out its obligations under the Funding Agreement.
- (b) The Funding Agreement will provide for a process that might result in termination of the Funding Agreement if circumstances of a prolonged Force Majeure Event prevent the performance by a party of its obligations.

### **8.9 Assignment**

On commissioning of the Extension, the Access Funder may assign the whole of its Economic Benefit Transfer calculated in accordance with **clause 6**, under the Funding Agreement to another person, with the prior written consent of Queensland Rail (such consent not to be unreasonably withheld).

### **8.10 Representation and warranties**

The Funding Agreement may set out representations and warranties given by both the Access Funder to Queensland Rail and Queensland Rail to the Access Funder.

### **8.11 Material Change**

- (a) Extension Costs may need to be adjusted to reflect the net impact of any material change where such material change results in a variation to the net cost of Queensland Rail performing its obligations under the Funding Agreement.
- (b) A material change will be defined in the Funding Agreement and should be limited to changes in taxes, laws or approvals and are to be assessed on a case-by-case basis in consultation with the Access Funder.

# Attachment F:

Deed Poll (changes to June 2018 version marked up)

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# QUEENSLAND RAIL'S ACCESS FRAMEWORK

## IRREVOCABLE DEED POLL

Queensland Rail Limited ACN 132 181 090

*Queensland Rail Submission Draft: 18 June 2018*

**CONTENTS**

~~DETAILS—~~  
~~BACKGROUND—~~  
~~TERMS—~~  
~~3~~

|  |          |
|--|----------|
| <u>DETAILS</u>   | <u>1</u> |
| <u>BACKGROUND</u>  | <u>1</u> |
| <u>TERMS</u>   | <u>3</u> |
| 1 <del>DEFINITIONS AND INTERPRETATION</del>  |          |
| 3 <u>DEFINITIONS AND INTERPRETATION</u>  | <u>3</u> |
| 2 <del>BENEFICIARIES OF DEED POLL</del>  |          |
| 4 <u>BENEFICIARIES OF DEED POLL</u>  | <u>4</u> |
| 3 <del>DEED POLL IS IRREVOCABLE</del>  |          |
| 4 <u>DEED POLL IS IRREVOCABLE</u>  | <u>4</u> |
| 4 <del>ACCESS FRAMEWORK TO BE REMAIN IN EFFECT</del>                               |          |
| 4 <u>ACCESS FRAMEWORK TO REMAIN IN EFFECT AND COMPLIANCE WITH ACCESS FRAMEWORK</u> | <u>4</u> |
| 5 <del>FRAMEWORK OBJECTIVE</del>   |          |
| 4 <u>NOTICE OF INTENTION TO RENEW OR NOT RENEW</u>                                 | <u>5</u> |
| 6 <del>NOTICE OF INTENTION TO RENEW OR NOT RENEW</del>                             |          |
| 4 <u>AMENDMENTS TO ACCESS FRAMEWORK</u>  | <u>5</u> |
| 7 <del>AMENDMENTS TO ACCESS FRAMEWORK</del>  |          |
| 5 <u>BREACH OF DEED POLL</u>   | <u>7</u> |
| 8 <del>BREACH OF DEED POLL</del>   |          |
| 6 <u>GOVERNING LAW</u>   | <u>8</u> |
| 9 <del>GOVERNING LAW</del>   |          |
| 6 <u>JURISDICTION AND DISPUTE RESOLUTION</u>                                       | <u>8</u> |
| <u>EXECUTION</u>   | <u>9</u> |
| <u>ANNEXURE A</u>  |          |
| 10 <del>JURISDICTION</del>   |          |
| 6 <del>EXECUTION</del>   |          |
| 7 <del>ANNEXURE A</del>  | <u>8</u> |

## DETAILS

|                |   |
|----------------|---|
| <b>Date</b>    | <del>2018</del> <a href="#">11 March 2019</a>   |
| <b>Parties</b> | Name                      Queensland Rail Limited Address<br>GPO BOX 1429 Brisbane QLD 4001 |

## BACKGROUND

- A      Queensland Rail is a statutory authority established by the Queensland Government under the Rail Authority Act. The Rail Authority Act sets out the functions of Queensland Rail, including:
- a.                      management of railways;
  - b.                      provision of rail transport services, including passenger services; and
  - c.                      construction and maintenance of railway infrastructure.
- B      Queensland Rail's Network extends more than 6600 kilometres across the state. The regional network spans more than 5,700 kilometres of track and comprises seven rail ~~Systems~~[systems](#) that convey passenger and freight services across Queensland to support the state's economy in the tourism, mining, agriculture, construction, wholesale and retail sectors. [The vast majority of freight is carried on the West Moreton System, Mt Isa Line System and North Coast Line System. Some freight carried on the West Moreton System and North Coast Line System traverses the Metropolitan System.](#)
- C      Queensland Rail operates passenger services connecting regional communities across Queensland with other regional centres and the SEQ corner, and provides rail access to freight operators and other supply chain customers, to enable the transport of resources and general freight across the state. Queensland Rail is not a rail freight operator (i.e. it does not participate in the above rail freight market).
- D      The needs of Rolling Stock Operators on Queensland Rail's network vary greatly due to their different supply chain dynamics, geographic locations, rail corridor characteristics and interactions with other rail traffics.

E Much of Queensland Rail's network is supported by Transport Service Payments from the Queensland Government. The absence of these Transport Service Payments would result in large parts of the rail network being commercially unviable.

F Road transport provides a viable alternative mode of transport for most non-coal commodities, as well as coastal shipping, air transport, slurry pipelines and other transport options.

G On 8 September 2020, the existing declaration of the service under section 250 of the Queensland Competition Authority Act 1997 (Qld) expired(QCA Act) will expire. The Access Framework has been developed in response and provides a balanced approach to the provision of Access and a framework (based on a negotiate/arbitrate model) to manage negotiations in an efficient and transparent manner for Access Seekers (Rolling Stock Operators and End User Access Seekers) seeking Access to ~~Queensland Rail's Network~~the Systems. The Access Framework applies to Access for the purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the QCA Act.

H The Access Framework has been prepared in accordance with, and gives effect to, the Framework Objective (as that term is defined in clause 1 below).

I ~~H~~The Access Framework addresses matters including:

- a. the process for seeking Access in relation to the ~~Network~~Systems;
- b. the pricing rules for Access Charges;
- c. Network Management Principles for the scheduling and prioritisation of Train Services;
- d. reporting obligations and dispute resolution; and
- e. a Standard Access Agreement.

~~As prescribed in clause 1.2.2 of the Access Framework, the objective of the Access Framework is to promote the economically efficient operation of, use of and investment in, the Network, with the effect of promoting effective competition in upstream and downstream markets.~~

J ~~For the benefit of the Covenantees only, this~~This Deed Poll:

- a. confirms that, ~~subject to clauses 5 and 7 of this Deed Poll,~~ the Access Framework will remain in effect ~~for~~(and continue to apply to Access for the

purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the QCA Act) throughout the Term; and

- b. prescribes how the Access Framework may be amended.

## TERMS

### 1 DEFINITIONS AND

#### INTERPRETATION Definitions

- 1.1 In this Deed Poll, capitalised terms not defined in this Deed Poll will have the same meaning as the meaning given to those terms in ~~the definitions section~~ Part 7 - Definitions and Interpretation- of the Access Framework.

**Access Framework** means the Queensland Rail Access Framework ~~dated~~ which will come into effect on 9 September 2020, as ~~it~~ may be amended from time to time. A copy of the Access Framework which is current as at the date of this Deed Poll is at Annexure A to this Deed Poll.

~~**Background** means the background section of this Deed Poll.~~ **Confirmed Access Seekers** has the meaning given in clause ~~2.1.1.~~ 2.1.1.

**Covenantees** has the meaning given in clause ~~2.1.2.1.~~ 2.1.2.1.

**Framework Objective** has the meaning given in ~~clause 1.2.2 of the Access Framework~~ section 69E of the QCA Act, as may be amended from time-to-time. In the event that section 69E of the QCA Act is repealed, the Framework Objective will have the meaning given in section 69E of the QCA Act immediately prior to its repeal.

**Queensland Rail** means Queensland Rail Limited ACN 132 181 090.

**The State** means the Treasurer of the State of Queensland from time to time.

#### Interpretation

- 1.2 In the interpretation of this Deed Poll, the following provisions apply unless the context otherwise requires:
  - 1.2.1 headings are inserted for convenience only and do not affect the interpretation of this Deed Poll;
  - 1.2.2 a reference in this Deed Poll to any document or agreement is to that document or agreement as amended, novated, supplemented or replaced;
  - 1.2.3 a reference to a clause, part, schedule or attachment is a reference to a clause, part, schedule or attachment of or to this Deed Poll;
  - 1.2.4 where a word or phrase is given a defined meaning, another part of speech or other grammatical form in respect of that word or phrase has a corresponding meaning;

1.2.5 a word which indicates the singular also indicates the plural, a word which indicates the plural also indicates the singular, and a reference to any gender also indicates the other genders;

1.2.6 references to the word 'include' or 'including' are to be interpreted without limitation;

1.2.7 the word 'day' or 'days' is a reference to calendar days; and

1.2.8 ~~1.2.7 any schedules and attachments form part of this Deed Poll.~~ if a provision of this Deed Poll is reasonably capable of an interpretation which would make that provision valid, lawful and enforceable, and an alternative interpretation that would make it unenforceable, illegal, invalid or void then, so far as is possible, that provision will be interpreted or construed to be limited and read down to the extent necessary to make it valid and enforceable.

## **2 BENEFICIARIES OF DEED POLL**

2.1 Queensland Rail makes the covenants in this Deed Poll exclusively in favour of, and only for the benefit of:

2.1.1 Access Seekers who have signed an Access Application or Renewal Access Application (**Confirmed Access Seekers**);

2.1.2 Access Holders, ~~including Access Holders as at the date of this Deed Poll and entities who become Access Holders in the future~~; and

2.1.3 the State,

(together, **Covenantees**).

2.2 Queensland Rail makes the covenants in this Deed Poll on the date of this Deed Poll, and then each day until the end of the Term.

2.3 Queensland Rail makes the covenants in this Deed Poll subject to the conditions set out at clauses ~~7.4, 8, 9~~ 6, 7, 8 and ~~10~~ 9 of this Deed Poll.

## **3 DEED POLL IS IRREVOCABLE**

3.1 Queensland Rail covenants in favour of the Covenantees that it will not revoke or amend this Deed Poll ~~during~~ until the expiry of the Term.

## **4 ACCESS FRAMEWORK TO ~~BE~~ REMAIN IN EFFECT AND COMPLIANCE WITH ACCESS FRAMEWORK**

4.1 Subject to any amendments permitted in accordance with ~~clauses 5 and 7~~ clause 6 of this Deed Poll, Queensland Rail covenants in favour of the Covenantees that the Access Framework will remain in effect (and continue to apply to Access for the purpose of operating a Train Service

on one or more of the Systems where that Train Service does not constitute a service.



declared under Part 5, Division 2 of the QCA Act) throughout the Term.

## ~~5~~ **FRAMEWORK OBJECTIVE**

4.2 ~~5.1~~ Queensland Rail covenants in favour of the Covenantees that it will ~~not amend~~ comply with the Access Framework ~~Objective, except with the prior written consent of the State for~~ the Term.

## 5 ~~6~~ **NOTICE OF INTENTION TO RENEW OR NOT RENEW**

5.1 ~~6.1~~ At least 12 months before the ~~tenth~~ fifth anniversary of the Effective Date, Queensland Rail will publish the following on its website:

5.1.1 ~~6.1.1~~ notice of its intention to renew, or not renew, the operation of the Access Framework for a further term; and

5.1.2 ~~6.1.2~~ where operation of the Access Framework is being renewed for a further term, details of the term and a copy of the Access Framework with any amendment(s).

## 6 ~~7~~ **AMENDMENTS TO ACCESS FRAMEWORK**

6.1 ~~7.1~~ The Access Framework can only be amended in accordance with this clause ~~7.6~~.

6.2 ~~7.2~~ Queensland Rail can amend the Access Framework, from time to time, so long as the amendment(s) ~~is are~~:

6.2.1 not inconsistent with the Framework Objective; ~~and~~

~~7.3~~ Queensland Rail will consult with Confirmed Access Seekers and Access Holders regarding proposed amendment(s).

6.2.2 ~~7.4~~ In the event that a Confirmed Access Seeker or Access Holder has any concern about, or objection to, the proposed amendment(s), it must bring the concern or objection to Queensland Rail's attention within one month of it having first been consulted by Queensland Rail in relation to the proposed amendment(s) appropriate having regard to each of the mandatory considerations set out in clause 6.3.

6.3 ~~7.5~~ Queensland Rail covenants in favour of the Covenantees that if, and when, it amends the Access Framework it will have regard to each of the following mandatory considerations:

6.3.1 ~~7.5.1~~ the legitimate interests of the State of Queensland in its capacity as the owner of the Network;

6.3.2 ~~7.5.2~~ the legitimate business interests of Queensland Rail in its capacity as the operator of the Network;

6.3.3 ~~7.5.3~~ public interest, including the public interest in having competition in markets (whether or not in Australia);

6.3.4 ~~7.5.4~~ the interests of Confirmed Access Seekers, including whether adequate

provision has been made for compensation if the rights of Access Holders are adversely affected;

6.3.5 ~~7.5.5~~ the effect of excluding existing assets for pricing purposes; and

6.3.6 ~~7.5.6~~ the following pricing principles in relation to the price of Access:

6.3.6.1 ~~7.5.6.1~~ the price should generate expected revenue for the Network that is at least enough to meet the efficient costs of providing access to the Network and include a return on investment commensurate with the risks involved;

6.3.6.2 ~~7.5.6.2~~ the price should allow for multi-part pricing and price discrimination when it aids efficiency;

6.3.6.3 ~~7.5.6.3~~ the price should not allow Queensland Rail to set terms and conditions that discriminate in favour of the downstream operations of Queensland Rail or a Related Party of Queensland Rail, except to the extent the cost of providing Access to other operators is higher; and

6.3.6.4 ~~7.5.6.4~~ the price should provide incentives to reduce costs or otherwise improve productivity.

6.4 ~~7.6~~ Any amendment(s) to the Access Framework in accordance with this clause 7 will be published as soon as reasonably practicable on Queensland Rail's website. Queensland Rail will consult with Confirmed Access Seekers and Access Holders regarding any proposed amendment(s) to the Access Framework as follows:

6.4.1 Queensland Rail will provide written notice to all Covenantees of its intention to amend the Access Framework (Notice). The Notice will:

6.4.1.1 be sent by express post on the day that the Notice is dated to the Covenantees' registered offices (except in the case of the State, in which case the Notice will be sent by express post to the office of the Treasurer of the State of Queensland);

6.4.1.2 advise the date on which the proposed amendments to the Access Framework will be available for review on Queensland Rail's website (such date must be not more than seven days after the day that the Notice is dated) (Review Date); and

6.4.1.3 advise that any comments on the proposed amendments to the Access Framework must be received by Queensland Rail by post (at its registered office) no later than 45 days after the Review Date.

6.4.2 Queensland Rail will publish the proposed amendments to the Access Framework on its website on the Review Date. The proposed amendments are to remain on Queensland Rail's website for not less than 180 days.

6.4.3 Queensland Rail will review and consider any comments that may be received in relation to the proposed amendments to the Access Framework (Comments), however it will not be bound to implement any Comments.

6.4.4 Following its review and consideration of the Comments, Queensland Rail will publish the final form of the proposed amendments to the Access

Framework (Final Proposed Amendments) on its website for a period of not less than 121 days.

6.4.5 On the day the Final Proposed Amendments are published on its website, Queensland Rail will provide written notice, dated the same date as the publication on the website, to the Covenantees, that the Final Proposed Amendments are available on its website (Final Notice). The Final Notice will:

6.4.5.1 be sent by express post to the Covenantees' registered offices (except in the case of the State, in which case the Notice will be sent by express post to the office of the Treasurer of the State of Queensland);

6.4.5.2 state the date on which, absent the commencement of legal proceedings in accordance with clause 9, the Final Proposed Amendments will become effective (with such date being no less than 121 days after the day that the Final Notice is dated) (Provisional Date);

6.4.5.3 state that if any Covenantee(s) wishes to challenge the validity of the Final Proposed Amendments, it must do so by commencing legal proceedings in accordance with clause 9 within 120 days after the day that the Final Notice is dated;

6.4.5.4 state that if a Convenantee does not commence legal proceedings in accordance with clause 9 within 120 days after the day that the Final Notice is dated, that Convenantee will lose any right to challenge the validity of the Final Proposed Amendments.

6.5 If no Covenantee commences legal proceedings to challenge the validity of the Final Proposed Amendments within 120 days after the day that the Final Notice is dated, the Final Proposed Amendments will become effective on the Provisional Date.

6.6 If any Covenantee commences legal proceedings to challenge the validity of the Final Proposed Amendments within 120 days after the day that the Final Notice is dated, the Final Proposed Amendments will not become effective:

6.6.1 unless and until such time as the court has determined the legal proceedings in favour of Queensland Rail by dismissing any legal proceedings brought by a Covenantee; and then

6.6.2 on a date to be advised by Queensland Rail by publication on its website.

6.7 Any Final Proposed Amendments that become effective in accordance with clauses 6.5 or 6.6 will remain published on Queensland Rail's website together with a note advising of the date that the Final Proposed Amendments became effective.

## 7 **8BREACH OF DEED POLL**

7.1 ~~8.1~~ Queensland Rail acknowledges that damages are ~~not~~ an adequate remedy for any breach of this Deed Poll.

7.2 ~~8.2~~ Queensland Rail makes the covenants in this Deed Poll subject to the following conditions:

~~8.2.1 damages are not a remedy for any breach of this Deed Poll; and~~

7.2.1 ~~8.2.2 the only remedy available for breach of this Deed Poll is specific performance.~~ specific performance is an available remedy for any breach of this Deed Poll (other than a breach of clause 6 of this Deed Poll);

7.2.2 the only remedies available for breach of clause 6 of this Deed Poll are declaratory relief and / or damages; and

7.2.3 if a Covenantee alleges that Queensland Rail has not complied with its obligations at 4.2, any dispute arising will be determined in accordance with the dispute resolution provisions contained in the Access Framework, and not this Deed Poll.

## **8 ~~9~~ GOVERNING LAW**

8.1 ~~9.1~~ This Deed Poll is governed by the laws in force in the State of Queensland.

## **9 ~~10~~ JURISDICTION AND DISPUTE RESOLUTION**

9.1 ~~10.1~~ The Subject to clause 7.2.3, the courts of Queensland have exclusive jurisdiction to determine any disputes arising out of or in connection with this Deed Poll.

### **Legal proceedings for breach of clause 3, clause 4.1 or clause 5**

9.2 Any legal proceeding commenced by a Covenantee against Queensland Rail for an alleged breach of clause 3, clause 4.1, or clause 5 must be filed and served on Queensland Rail within 120 days after the date that the alleged breach of this Deed Poll is said to have occurred.

9.3 Queensland Rail may rely upon clause 9.2 as a complete defence to any proceedings filed or served 121 days or more after the date that the alleged breach of this Deed Poll is said to have occurred.

### **Legal proceedings for breach of clause 6**

9.4 Any legal proceeding commenced by a Covenantee against Queensland Rail for an alleged breach of clause 6 must be filed and served on Queensland Rail within 120 days after the date of the Final Notice.

~~10.2 In the event that any one or more of the Covenantees commences proceedings against Queensland Rail for an alleged breach of clause 4, 5, 6 and / or 7, such proceedings must be filed and served on Queensland Rail within 90 days of the date that the relevant amendment(s) to the Access Framework were first published on Queensland Rail's website.~~

9.5 Queensland Rail may rely upon ~~this~~ clause ~~10.2~~ 9.4 as a complete defence to any ~~proceeding~~ proceedings filed or served ~~91~~ 121 days or more after the date ~~that the relevant amendment(s) to the Framework were first published on Queensland Rail's website~~ of the Final Notice.

**EXECUTION**

Executed as a Deed.

|  |   |
|--|---|
| <b>SIGNED, SEALED AND DELIVERED</b> by<br>Queensland Rail Pty Ltd ACN 132 181 090<br>acting by the following persons or, if the seal<br>is affixed, witnessed by the following persons<br>in accordance with s127 of the Corporations<br>Act 2001: |   |
| .....<br>Signature of director   | .....<br>Signature of director/company secretary    |
| .....<br>Name of director (print)  | .....<br>Name of director/company secretary (print) |

~~**ANNEXURE A**~~

~~**Access Framework (current as at *insert date of Deed Poll*)**~~

Document comparison by Workshare 9.5 on Monday, 11 March 2019  
11:09:27 AM

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| Description   | Deed Poll (June 2018) - BASE  |
| Document 2 ID | file:///C:/Users/Joe.Malcolm/Desktop/Queensland Rail Attachments/Actual 10 March/Attachment F - Deed Poll (changes to June 2018 marked up)/Deed Poll execution Version (March 2019).pdf |
| Description   | Deed Poll execution Version (March 2019)  |
| Rendering set | Standard  |

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| <u>Moved to</u>           |  |
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| Format change             |  |
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| Split/Merged cell         |  |
| Padding cell              |  |

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| Moved to       | 2     |
| Style change   | 0     |
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| Total changes  | 264   |

# Attachment G:

Access Framework (changes to June 2018 version marked up)

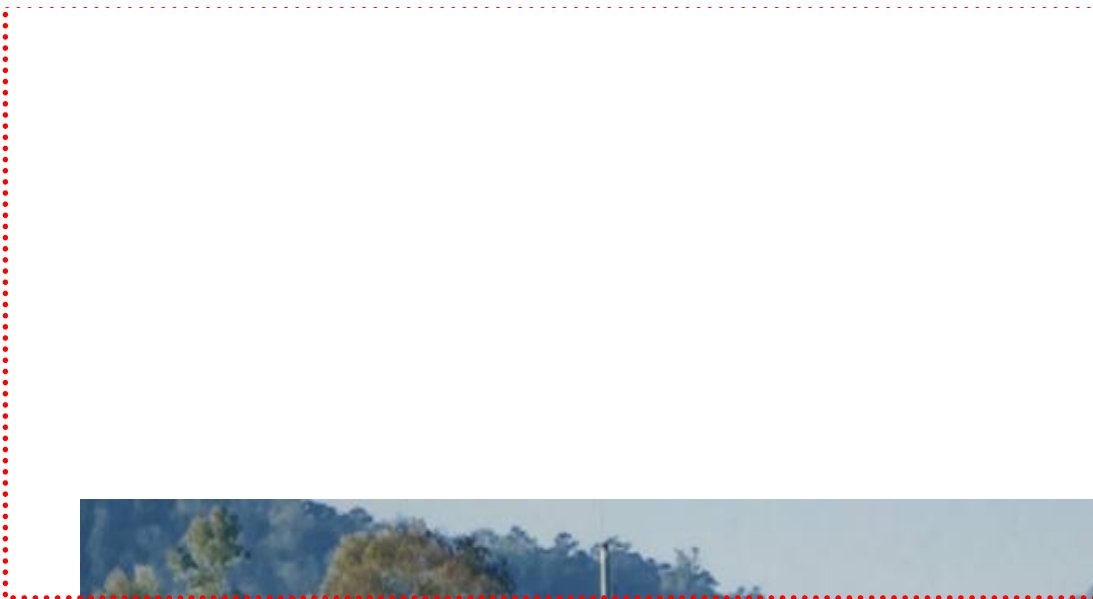
[ANNEXURE A](#)

[Access Framework \(current as at 11 March 2019\)](#)

# Queensland Rail's Access Framework

9 September 2020

~~Queensland Rail Submission Draft: 18  
June 2018~~





# Contents

|                                     |  |                                     |  |
|-------------------------------------|--|-------------------------------------|--|
| <b>Preamble</b>                     | <b>1</b>   | <b>Part 1 Application and scope</b> | <b>3</b>   |
| <b>Part 1 Application and scope</b> | <b>3</b>   |                                     |  |
| 1.1                                 | <del>Duration</del>  | <del>3</del>                        | <u>Duration</u> 3  |
| 1.2                                 | <del>Scope</del>   | <del>3</del>                        | <u>Scope</u> 3   |
| 1.2.1                               | <del>Application of this Framework</del>                                   | <del>3</del>                        | <u>Application of this Framework</u> 3                                   |
| 1.2.2                               | <del>Objective of this Framework</del>                                     | <del>3</del>                        | <u>Objective of this Framework</u> 3                                     |
| 1.2.3                               | <del>Procurement of services other than Access</del>                       | <del>4</del>                        | <u>Procurement of services other than Access</u> 4                       |
| 1.2.4                               | <del>Line diagrams</del>   | <del>4</del>                        | <u>Line diagrams</u> 4   |
| 1.3                                 | <del>Consistency and differentiation</del>                                 | <del>4</del>                        | <u>Consistency and differentiation</u> 4                                 |
| 1.4                                 | <del>Extensions – Capacity investment framework</del>                      | <del>5</del>                        | <u>Extensions – Capacity investment framework</u> 5                      |
| 1.4.1                               | <del>Application</del>   | <del>5</del>                        | <u>Application</u> 5   |
| 1.4.2                               | <del>Extending the Network</del>   | <del>6</del>                        | <u>Extending the Network</u> 6   |
| 1.4.3                               | <del>Funding Agreements</del>  | <del>8</del>                        | <u>Funding Agreements</u> 8  |
| 1.4.4                               | <del>Construction, ownership, operation and management of Extensions</del> | <del>8</del>                        | <u>Construction, ownership, operation and management of Extensions</u> 8 |
| 1.4.5                               | <del>Disputes</del>  | <del>9</del>                        | <u>Disputes</u> 9  |
| 1.4.6                               | <del>Building Queensland Act</del>   | <del>9</del>                        | <u>Building Queensland Act</u> 9   |
| 1.5                                 | <del>Master planning and extension coordination</del>                      | <del>9</del>                        | <u>Master planning and extension coordination</u> 9                      |
|                                     |  | <b>9</b>                            | <b>Part 2 Negotiation process</b> <b>11</b>                              |
| <b>Part 2 Negotiation process</b>   |  |                                     | <b>11</b>  |
| 2.1                                 | <del>Preparing and submitting an Access Application</del>                  | <del>11</del>                       | <u>Preparing and submitting an Access Application</u> 11                 |
| 2.1.1                               | <del>Access Applications</del>   | <del>11</del>                       | <u>Access Applications</u> 11  |
| 2.1.2                               | <del>Preliminary steps</del>   | <del>11</del>                       | <u>Preliminary steps</u> 11  |
| 2.2                                 | <del>Confidentiality</del>   | <del>11</del>                       | <u>Confidentiality</u> 11  |
| 2.2.1                               | <del>Obligation to keep Confidential Information confidential</del>        | <del>11</del>                       | <u>Obligation to keep Confidential Information confidential</u> 11       |
| 2.2.2                               | <del>Requirement for confidentiality agreement</del>                       | <del>12</del>                       | <u>Requirement for confidentiality agreement</u> 12                      |
| 2.2.3                               | <del>Ring fencing arrangements</del>                                       | <del>12</del>                       | <u>Ring fencing arrangements</u> 12                                      |
| 2.3                                 | <del>Acknowledgment of an Access Application</del>                         | <del>13</del>                       | <u>Acknowledgment of an Access Application</u> 13                        |
| 2.3.1                               | <del>Requests for additional information or clarification</del>            | <del>13</del>                       | <u>Requests for additional information or clarification</u> 13           |
| 2.3.2                               | <del>Acknowledging Access Applications</del>                               | <del>13</del>                       | <u>Acknowledging Access Applications</u> 13                              |
| 2.4                                 | <del>Provision of an Indicative Access Proposal</del>                      | <del>13</del>                       | <u>Provision of an Indicative Access Proposal</u> 13                     |
| 2.4.1                               | <del>Time period for provision of Indicative Access Proposal</del>         | <del>13</del>                       | <u>Time period for provision of Indicative Access Proposal</u> 13        |
| 2.4.2                               | <del>Inclusions in Indicative Access Proposal</del>                        | <del>13</del>                       | <u>Inclusions in Indicative Access Proposal</u> 13                       |

|       |   |               |   |           |
|-------|---|---------------|---|-----------|
| 2.4.3 | <del>Indicative nature</del>  | <del>13</del> | <u>Indicative nature</u>  | <u>13</u> |
| 2.5   | <del>Notification of intent to negotiate</del>                        | <del>14</del> | <u>Notification of intent to negotiate</u>                        | <u>14</u> |
| 2.5.1 | <del>Access Seeker to give notice of intent to negotiate or not</del> | <del>14</del> | <u>Access Seeker to give notice of intent to negotiate or not</u> | <u>14</u> |
| 2.5.2 | <del>Consequence of late notification of intent to negotiate</del>    | <del>14</del> | <u>Consequence of late notification of intent to negotiate</u>    | <u>14</u> |
| 2.5.3 | <del>Extension of time – IAP and ITN</del>                            | <del>14</del> | <u>Extension of time – IAP and ITN</u>                            | <u>14</u> |
| 2.6   | <del>Competing Access Applications</del>                              | <del>15</del> | <u>Competing Access Applications</u>                              | <u>15</u> |
| 2.7   | <del>Negotiation of an Access Agreement</del>                         | <del>16</del> | <u>Negotiation of an Access Agreement</u>                         | <u>16</u> |
| 2.7.1 | <del>The negotiation period</del>                                     | <del>16</del> | <u>The negotiation period</u>                                     | <u>16</u> |
| 2.7.2 | <del>Issues to be addressed in negotiations</del>                     | <del>17</del> | <u>Issues to be addressed in negotiations</u>                     | <u>17</u> |
| 2.8   | <del>Cessation of negotiation process</del>                           | <del>19</del> | <u>Cessation of negotiation process</u>                           | <u>19</u> |
| 2.8.1 | <del>Negotiation Cessation Notice</del>                               | <del>19</del> | <u>Negotiation Cessation Notice</u>                               | <u>19</u> |
| 2.8.2 | <del>Safety considerations</del>                                      | <del>21</del> | <u>Safety considerations</u>                                      | <u>21</u> |
| 2.8.3 | <del>Access Seekers must satisfy prudential requirements</del>        | <del>22</del> | <u>Access Seekers must satisfy prudential requirements</u>        | <u>22</u> |
| 2.9   | <del>Access Agreement</del>   | <del>23</del> | <u>Access Agreement</u>   | <u>23</u> |
| 2.9.1 | <del>Access Rights granted under an Access Agreement</del>            | <del>23</del> | <u>Access Rights granted under an Access Agreement</u>            | <u>23</u> |
| 2.9.2 | <del>Mutually Exclusive Access Applications</del>                     | <del>23</del> | <u>Mutually Exclusive Access Applications</u>                     | <u>23</u> |
| 2.9.3 | <del>Renewals</del>   | <del>24</del> | <u>Renewals</u>   | <u>24</u> |
| 2.9.4 | <del>Development of Standard Agreements</del>                         | <del>25</del> | <u>Development of Standard Agreements</u>                         | <u>25</u> |
| 2.9.5 | <del>Execution of Access Agreements</del>                             | <del>26</del> | <u>Execution of Access Agreements</u>                             | <u>26</u> |
| 2.9.6 | <del>Transfer of Access Rights</del>                                  | <del>26</del> | <u>Transfer of Access Rights</u>                                  | <u>26</u> |
|       | <del>3 Pricing rules</del>  | <del>27</del> |   |           |
|       | <u>Part 3 Pricing rules</u>   |               |   | <u>27</u> |
| 3.1   | <del>Pricing objectives</del>   | <del>27</del> | <u>Pricing objectives</u>   | <u>27</u> |
| 3.1.1 | <del>Revenue adequacy</del>   | <del>27</del> | <u>Revenue adequacy</u>   | <u>27</u> |
| 3.2   | <del>Pricing limits</del>   | <del>27</del> | <u>Pricing limits</u>   | <u>27</u> |
| 3.2.1 | <del>Applying a Ceiling Revenue Limit</del>                           | <del>27</del> | <u>Applying a Ceiling Revenue Limit</u>                           | <u>27</u> |
| 3.2.2 | <del>Applying a Floor Revenue Limit</del>                             | <del>27</del> | <u>Applying a Floor Revenue Limit</u>                             | <u>27</u> |
| 3.2.3 | <del>Determination of Ceiling Revenue Limit</del>                     | <del>27</del> | <u>Determination of Ceiling Revenue Limit</u>                     | <u>27</u> |
| 3.3   | <del>Limits on price differentiation</del>                            | <del>29</del> | <u>Limits on price differentiation</u>                            | <u>29</u> |
| 3.3.1 | <del>Access Charge differentiation</del>                              | <del>29</del> | <u>Access Charge differentiation</u>                              | <u>29</u> |
| 3.3.2 | <del>Limits on Access Charge differentiation</del>                    | <del>30</del> | <u>Limits on Access Charge differentiation</u>                    | <u>30</u> |
| 3.4   | <del>Conflict between pricing rules</del>                             | <del>30</del> | <u>Conflict between pricing rules</u>                             | <u>30</u> |
| 3.5   | <del>General</del>  | <del>31</del> | <u>General</u>  | <u>31</u> |
| 3.5.1 | <del>Rate review provisions</del>                                     | <del>31</del> | <u>Rate review provisions</u>                                     | <u>31</u> |
| 3.5.2 | <del>Take or Pay Charges</del>  | <del>31</del> | <u>Take or Pay Charges</u>  | <u>31</u> |
| 3.6   | <del>Consequences of contravention</del>                              | <del>31</del> | <u>Consequences of contravention</u>                              | <u>31</u> |
|       | <del>4 Operating requirements</del>                                   | <del>33</del> |   |           |

|                                      |   |                        |
|--------------------------------------|---|------------------------|
| <b>Part 4 Operating requirements</b> |   | <b>33</b>              |
| 4.1                                  | <del>Network Management Principles</del> <del>33</del> <u>Network Management Principles</u>                     | <u>33</u>              |
| 4.2                                  | <del>Consultation for Through-Running Trains</del> <del>33</del> <u>Consultation for Through-Running Trains</u> | <u>33</u>              |
| 4.3                                  | <del>Operating Requirements Manual</del> <del>33</del> <u>Operating Requirements Manual</u>                     | <u>33</u> <b>Part-</b> |
| <b>5 Reporting</b>                   |   | <b>35</b>              |

|                                    |   |                        |
|------------------------------------|---|------------------------|
| <b>Part 5 Reporting</b>            |   | <b>35</b>              |
| 5.1                                | <del>Annual financial report</del> <del>35</del> <u>Annual financial report</u>         | <u>35</u>              |
| 5.2                                | <del>Monthly Operational Reports</del> <del>35</del> <u>Monthly Operational Reports</u> | <u>35</u>              |
| 5.2.1                              | <del>Provision of report</del> <del>35</del> <u>Provision of report</u>                 | <u>35</u>              |
| 5.2.2                              | <del>Content of report</del> <del>36</del> <u>Content of report</u>                     | <u>35</u>              |
| 5.3                                | <del>Rail User Groups</del> <del>36</del> <u>Rail User Groups</u>                       | <u>36</u> <b>Part-</b> |
| <b>6 Administrative provisions</b> |   | <b>37</b>              |

|   |   |                     |
|---|---|---------------------|
| <b>Part 6 Administrative provisions</b>   |   | <b>37</b>           |
| <del>Dispute and complaint resolution process</del> <del>37</del> <u>Dispute and complaint resolution process</u> |   | <u>37</u>           |
| 6.1   | <del>Dispute and complaint resolution process</del> <del>37</del> <u>Dispute and complaint resolution process</u>                 | <u>37</u>           |
| 6.1.16.1  | <del>Governing law</del> <u>Governing law</u>   | <u>37</u> <u>37</u> |
| 6.1.26.1  | <del>Alternative dispute process</del> <u>Alternative dispute process</u>   | <u>37</u> <u>37</u> |
| 6.1.36.1  | <del>Application of dispute and complaint resolution process</del> <u>Application of dispute and complaint resolution process</u> | <u>37</u> <u>37</u> |
| 6.1.46.1  | <del>Resolution by senior management</del> <u>Resolution by senior management</u>   | <u>37</u> <u>37</u> |
| 6.1.56.1  | <del>Arbitration</del> <u>Arbitration</u>   | <u>38</u> <u>38</u> |
| 6.1.66.1  | <del>Urgent matters</del> <u>Urgent matters</u>   | <u>40</u> <u>40</u> |
| <del>Limitations</del> <del>40</del> <u>Limitations</u>   |   | <u>40</u>           |
| 6.2   | <del>Limitations</del> <del>40</del> <u>Limitations</u>   | <u>40</u>           |
| 6.36.3  | <del>Notices</del> <u>Notices</u>   | <u>40</u> <u>40</u> |
| 6.3.16.3  | <del>Form of Notices</del> <u>Form of Notices</u>   | <u>40</u> <u>40</u> |
| 6.3.26.3  | <del>Means of giving Notices</del> <u>Means of giving Notices</u>   | <u>40</u> <u>40</u> |
| 6.3.36.3  | <del>Effect and receipt of a Notice</del> <u>Effect and receipt of a Notice</u>   | <u>40</u> <u>40</u> |
| 6.3.46.3  | <del>Process service is not affected</del> <u>Process service is not affected</u>   | <u>41</u> <u>41</u> |
| 6.4   | <del>Transitional provisions</del> <del>41</del> <u>Transitional provisions</u>   | <u>41</u>           |
| 6.5   | <del>Severability</del> <del>41</del> <u>Severability</u>   | <u>41</u>           |
| 7   | <del>Definitions</del> <u>Definitions</u>   | <u>43</u> <u>42</u> |
| 4   |   |                     |
| 7   |   |                     |
| 1   |   |                     |

|   |             |
|---|-------------|
| <p>7 Interpretation <a href="#">Interpretation</a></p> <p>2</p> <p>7</p> <p>2</p> | <p>6665</p> |
|---|-------------|

~~Part 7 Definitions and interpretation — 43~~ [Part 7 Definitions and interpretation](#) 42

~~Schedule A — Preliminary Information and Capacity Information~~  
~~Schedule B — Access Application information requirements~~  
~~Schedule C — Network Management Principles~~  
~~Schedule D — Standard Access Agreement~~  
~~Schedule E — Extension Access Principles~~

[Schedule A – Preliminary Information and Capacity Information](#)  
[Schedule B – Access Application information requirements](#)  
[Schedule C – Network Management Principles](#)  
[Schedule D – Standard Access Agreement](#)  
[Schedule E – Extension Access Principles](#)

# Preamble

Queensland Rail is a statutory authority established by the Queensland Government under the Rail Authority Act.

The Rail Authority Act sets out the functions of Queensland Rail, including:

- management of railways;
- provision of rail transport services, including passenger services; and
- construction and maintenance of railway infrastructure.

Queensland Rail's Network extends more than 6600 kilometres across the state. The regional network spans more than 5,700 kilometres of track and comprises seven rail ~~Systems~~[systems](#) that convey passenger and freight services across Queensland to support the state's economy in the tourism, mining, agriculture, construction, wholesale and retail sectors. [The vast majority of freight is carried on the West Moreton System, Mt Isa Line System and North Coast Line System. Some freight carried on the West Moreton System and North Coast Line System traverses the Metropolitan System.](#)

Queensland Rail operates passenger services connecting regional communities across Queensland with other regional centres and the SEQ corner, and provides rail access to freight operators and other supply chain customers, to enable the transport of resources and general freight across the state. Queensland Rail is not a rail freight operator (i.e. it does not participate in the above rail freight market).

The needs of Rolling Stock Operators on Queensland Rail's network vary greatly due to their different supply chain dynamics, geographic locations, rail corridor characteristics and interactions with other rail traffics.

Much of Queensland Rail's network is supported by Transport Service Payments from the Queensland Government. The absence of these Transport Service Payments would result in large parts of the rail network being commercially unviable.

Road transport provides a viable alternative mode of transport for most non-coal commodities, as well as coastal shipping, air transport, slurry pipelines and other transport options.

On 8 September 2020, the declaration of the service under the *Queensland Competition Authority Act 1997* (Qld) expired. This Framework has been developed in response and provides a balanced approach to the provision of Access and a framework (based on a negotiate/arbitrate model) to manage negotiations in an efficient and transparent manner for Access Seekers (Rolling Stock Operators and End User Access Seekers) seeking Access to ~~Queensland Rail's Network~~[the Systems. This Framework applies to Access for the purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the Queensland Competition Authority Act 1997 \(Qld\).](#) This Framework addresses matters including:

- the process for seeking Access in relation to the [Network Systems](#);

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- the pricing rules for Access Charges;
- Network Management Principles for the scheduling and prioritisation of Train Services;
- reporting obligations and dispute resolution; and
- a Standard Access Agreement.

For further information on the negotiation of Access in accordance with the provisions of this Framework, please contact:

|   |  |
|---|--|
| General Manager,<br>Access Revenue<br>Queensland Rail Limited<br>Commercial and Strategy<br>GPO Box 1429 Brisbane<br>QLD 4000 | Phone: (07) 3072 1145<br>Email: <a href="mailto:aarf.freight@qr.com.au">aarf.freight@qr.com.au</a> |
|---|--|

# Part 1 Application and scope

## 1.1 Duration

This Framework is effective during the Term.

## 1.2 Scope

### 1.2.1 Application of this Framework

- (a) Subject to ~~clause 1.2.1(b)~~, [clauses 1.2.1\(b\) and 1.2.1\(d\)](#), this Framework applies to negotiations between Queensland Rail and Access Seekers in relation to Access Rights.
- (b) Despite any other provision in this Framework:
  - (i) this Framework does not apply:
    - (A) to the negotiation or provision of services other than Access; or
    - (B) to any matter involving an Access Holder or an Access Agreement, to the extent that compliance with this Framework is inconsistent with the relevant Access Agreement; and
  - (ii) subject to **schedule 6C**, Queensland Rail is not obliged to comply with this Framework to the extent that it is inconsistent with Queensland Rail's compliance with its Passenger Priority Obligations and Preserved Train Path Obligations.
- (c) Nothing in this Framework requires Queensland Rail or any other party to an Access Agreement executed before the Effective Date to vary a term or provision of that Access Agreement.
- (d) The Network comprises a number of individual ~~Systems~~[systems](#). This Framework applies to Access ~~in respect of each of the individual Systems~~[for the purpose of operating a Train Service on one or more of the Systems where that Train Service does not constitute a service declared under Part 5, Division 2 of the Queensland Competition Authority Act 1997 \(Qld\) and the provisions of the Framework \(including those imposing any obligations on Queensland Rail in relation to a System\) will only operate, and must be interpreted, accordingly.](#)

### 1.2.2 Objective of this Framework

- (a) The objective of the Framework is to promote the economically efficient operation of, use of and investment in, the Network, with the effect of promoting effective competition in upstream and downstream markets.

- (b) This Framework has been prepared in accordance with, and gives effect to, the Framework Objective.

### 1.2.3 Procurement of services other than Access

Unless Queensland Rail otherwise agrees, Access Seekers are responsible for procuring any services other than Access and Below Rail Services (which Queensland Rail will provide), including Above Rail Services, required for the operation of Train Services.

### 1.2.4 Line diagrams

Queensland Rail will publish and maintain on its website up-to-date line diagrams showing its rail network including:

- (a) the parts of that rail network comprising the Network;
- (b) existing Private Infrastructure connection points to the Network; and
- (c) a description of the amendments made to the line diagrams (if any) since the last version of those line diagrams.

## 1.3 Consistency and differentiation

- (a) Queensland Rail will consistently apply this Framework to all Access Seekers and requests and negotiations for Access.
- (b) Queensland Rail and each Access Seeker must negotiate in Good Faith for reaching an Access Agreement.
- (c) Queensland Rail will:
  - (i) in negotiating an Access Agreement, not unfairly differentiate between Access Seekers in a way that has a material adverse effect on the ability of one or more of the Access Seekers to compete with other Access Seekers;
  - (ii) in providing Access, not unfairly differentiate between Access Holders in a way that has a material adverse effect on the ability of one or more of the Access Holders to compete with other Access Holders, other than to the extent that the different treatment is expressly required or permitted by this Framework, relevant Access Agreements or an arbitration determination under this Framework or the relevant Access Agreements; and
  - (iii) not engage in conduct for the purpose of preventing or hindering an Access Holder's Access under an Access Agreement, other than to the extent that the conduct is expressly required or permitted under this Framework or the Access Agreement or is reasonable conduct done in, and for, an emergency (including an emergency that involves, or may involve, injury to persons or damage to property).
- (d) **Clause 1.3(c)(i)** does not prevent Queensland Rail treating Access Seekers differently to the extent the different treatment is:
  - (i) reasonably justified because of the different circumstances



applicable to Queensland Rail or any of the Access Seekers; or

- (ii) expressly required or permitted by this Framework or an arbitration determination under this Framework.

## 1.4 Extensions – Capacity investment framework

### 1.4.1 Application

- (a) This **clause 1.4.1.4** applies when an Access Seeker notifies Queensland Rail, in accordance with **clause ~~2.7.2(d)~~, 2.7.2(d)**, that it is willing to fund an Extension (or an Extension Stage).
- (b) Queensland Rail is obliged to complete the relevant Extension Stage (as applicable) (unless otherwise agreed by Queensland Rail and the relevant Access Funder) to provide the Additional Capacity required by the Access Funder if:
  - (i) the proposed Extension satisfies those Extension Conditions in **clause ~~1.4.2(d)~~ 1.4.2(d)** which are relevant to the applicable Extension Stage; and
  - (ii) the Access Funder provides a bank guarantee in support of its commitments under the Funding Agreement as agreed by Queensland Rail (acting reasonably) and the Access Funder unless this requirement is waived, or another form of security is accepted, by Queensland Rail.
- (c) Nothing in this **clause 1.4.1.4**:
  - (i) restricts or otherwise limits Queensland Rail's ability:
    - (A) to Extend the Network;
    - (B) to fund any Extension Stage, or part thereof, or otherwise invest in the Network;
    - (C) to enter into arrangements with other persons (other than Access Funders) in relation to Extending the Network; or
    - (D) to, at its cost, prepare plans and strategies and undertake studies and investigations in relation to Extending the Network (including Concept Studies, Pre-feasibility Studies and Feasibility Studies); or
  - (ii) obliges Queensland Rail to bear some or all of any costs related to an Extension or to incur any Extension Costs in advance of funding being provided by the Access Funder.

### 1.4.2 Extending the Network

- (a) If Queensland Rail is notified under **clause ~~2.7.2(d)~~ 2.7.2(d)**, then Queensland Rail will promptly:
  - (i) provide the Access Funder with all reasonably relevant and

available information on the Extension required to provide the Additional Capacity required to grant the Access Rights in the Access Application. Without limiting the foregoing, this includes information on:

- (A) necessary Authorisations that are reasonably required for the Extension;
  - (B) rights and interests in land that are reasonably required for the Extension;
  - (C) rail safety requirements reasonably appropriate to the Extension; and
  - (D) engineering, operational and other requirements that are reasonably required for the Extension;
- (ii) discuss with the relevant Access Funder the options to proceed by completing the required Extension Stage (or Stages);
  - (iii) discuss with the relevant Access Funder options for that Access Funder to provide funding for each applicable Extension Stage (or Stages); and
  - (iv) negotiate and enter into arrangements in accordance with the Extension Access Principles set out in **schedule EE**, and **clause 1.4.3, 1.4.3** with the Access Funder in relation to the funding of the relevant stage of the Extension (**Funding Agreement**).

For clarity, separate Funding Agreements may be entered into for each Extension Stage. The Access Funder is then free to make a decision on whether to proceed with each subsequent Extension Stage at the completion of each preceding Extension Stage.

- (b) If either Queensland Rail or an Access Funder considers that an Extension Stage should be discontinued, then the parties (acting reasonably) will seek to agree whether the study process should continue but if the parties cannot agree then the relevant Extension Stage will continue subject to that Extension Stage being funded.
- (c) There is no requirement to complete all Extension Stages if both parties agree (each acting reasonably) that a particular Extension Stage is unnecessary.
- (d) The Extension must satisfy the following conditions (**Extension Conditions**):
  - (i) the Access Funder or Queensland Rail has obtained, or is reasonably likely to obtain, all necessary Authorisations reasonably required to Extend the Network;
  - (ii) the Access Funder or Queensland Rail has acquired or

- procured, or is reasonably likely to acquire or procure, all of the rights and interests in land that, in Queensland Rail's opinion (acting reasonably), are required to construct, own, operate and manage the Extension (on terms satisfactory to Queensland Rail (acting reasonably)) including, for example, the inclusion of additional land into Queensland Rail's land tenure arrangements with the State relating to the Network;
- (iii) in Queensland Rail's opinion (acting reasonably), the Extension (including constructing the Extension):
    - (A) is technically feasible;
    - (B) is consistent with the safe and reliable provision of Access and operation of the Network;
    - (C) does not adversely impact on the safety of any person maintaining, operating or using the Network;
    - (D) does not adversely affect existing Access Rights; and
    - (E) complies with the engineering, operational and other requirements of Queensland Rail (acting reasonably);
  - (iv) relevant Access Agreement negotiations are continuing in accordance with **Part 2** of this Framework; or
  - (v) those Access Agreements are or have become unconditional in all material respects except for conditions relating to Extending the Network which cannot be satisfied until the Network has been Extended;
  - (vi) the Access Funder and Queensland Rail have executed a Funding Agreement for the relevant Extension Stage(s) in accordance with **clause ~~1.4.3~~; [1.4.3](#)**; and
  - (vii) the Access Funder and Queensland Rail have executed construction, operational and other material arrangements reasonably required for the relevant Extension Stage(s) (including the matters referred to above) which are unconditional in all material respects except for conditions relating to the Extension which cannot be satisfied until the Network has been Extended.
- (e) Queensland Rail and an Access Funder must use reasonable endeavours and act promptly to assist each other such that the Extension complies with the Extension Conditions.
  - (f) Queensland Rail will not unreasonably delay the negotiation, and execution of, a Funding Agreement.
  - (g) For clarity, unless Queensland Rail agrees otherwise, Queensland Rail has no obligation to assist in satisfying the requirements set out

in ~~clause 1.4.2-1.4.2~~ if it is required to incur or pay any costs in order to do so.

### 1.4.3 Funding Agreements

- (a) The intent of a Funding Agreement is to have a workable, bankable and credible mechanism for Access Funders to fund each relevant Extension Stage where Queensland Rail elects not to do so.
- (b) Without limitation to ~~clause 1.4.2, 1.4.2~~, a Funding Agreement must, unless otherwise agreed by Queensland Rail and the relevant Access Funder:
  - (i) be consistent with this Framework including the Extension Access Principles in ~~schedule E, E~~ (provided however that if there is any conflict between the terms of ~~clause 1.4.1.4~~ and the terms of ~~schedule E, E~~, the terms of this ~~clause 1.4.1.4~~ will be paramount);
  - (ii) result in the transaction being structured in a reasonable way for all parties;
  - (iii) not result in Queensland Rail bearing some or all of the relevant Extension Costs;
  - (iv) require that, in accordance with ~~clause 6-6~~ of ~~schedule E, E~~, Queensland Rail transfer to the Access Funder the full economic benefit that Queensland Rail derives from the Extension over the economic life of the Extension; and
  - (v) require Queensland Rail to provide that an Extension Stage is (as applicable):
    - (A) scoped and studied in accordance with Prudent Practices;
    - (B) constructed efficiently in accordance with Prudent Practices; and
    - (C) operated and managed by Queensland Rail in a manner that is consistent with Queensland Rail's obligations in relation to the operation and management of the Network under this Framework.

### 1.4.4 Construction, ownership, operation and management of Extensions

Unless otherwise agreed by Queensland Rail, an Extension which is funded by an Access Funder must only be designed, constructed, owned, operated and managed by Queensland Rail in accordance with this Framework and the relevant Funding Agreement and Access Agreement.

### 1.4.5 Disputes

- (a) If:
  - (i) no Funding Agreement has been executed, any dispute between an Access Funder and Queensland Rail in relation to this ~~clause 1.4-1.4~~ (including in relation to the negotiation

of a Funding Agreement) may be referred for resolution in accordance with the dispute resolution process under **clause ~~6.1~~; 6.1**; or

- (ii) a Funding Agreement has been executed, any dispute between an Access Funder and Queensland Rail in relation to the Extension will be subject to the dispute resolution process contained in that Funding Agreement.

#### **1.4.6 Building Queensland Act**

- (a) If the Building Queensland Act applies to an Extension or any Extension Stage (and without limiting **clauses ~~1.4.6(b)~~ 1.4.6(b)** and **~~1.4.6(c)~~ 1.4.6(c)** below):
  - (i) the Access Funder and Queensland Rail will comply with the Building Queensland Act and continue to adhere to this Framework to the extent that that adherence would not cause either party to be in breach of the Building Queensland Act; and
  - (ii) Queensland Rail will keep the relevant Access Seeker or Access Holder fully informed of the material details of all communications which Queensland Rail has with Building Queensland.
- (b) Either Queensland Rail or an Access Funder may request that the relevant Minister exercises any relevant discretion to direct Building Queensland to not exercise its functions in relation to that Extension or Extension Stage(s).
- (c) If, despite **clause ~~1.4.6(b)~~ 1.4.6(b)**, Building Queensland becomes involved in an Extension or Extension Stage, either Queensland Rail or the Access Funder may request that the relevant Minister exercises any relevant discretion to direct Building Queensland to exercise its functions consistently with this Framework.

#### **1.5 Master planning and extension coordination**

- (a) This **clause ~~1.5~~ 1.5** only applies in relation to Extension projects relating to those parts of the Mt Isa Line System, North Coast Line System and West Moreton System where the Train Services operating or proposed to be operating on those parts of those Systems do not

(b)

[constitute a service declared under Part 5, Division 2 of the Queensland Competition Authority Act 1997 \(Qld\).](#)

(c)

Queensland Rail will consult with relevant Access Holders and Nominated Rolling Stock Operators regarding Queensland Rail's master planning for Extension projects for the Mt Isa Line System, North Coast Line System and West Moreton System.

(d)

Access Holders and Nominated Rolling Stock Operators may request Queensland Rail to undertake a Concept Study, Pre-Feasibility Study or Feasibility Study on their behalf (and at their cost), in accordance with the process set out in **clause 4.4.1.4** and **schedule EE**, to investigate Extension projects on the Mt Isa Line System, North Coast Line System and West Moreton System.

(e)

For clarity and despite any other provision in this Framework, the party or parties requesting a Concept Study, Pre-Feasibility Study or Feasibility Study will be responsible for the costs thereof.

(f)

## Part 2 Negotiation process

### 2.1 Preparing and submitting an Access Application

#### 2.1.1 Access Applications

- (a) A request for Access Rights must be submitted to Queensland Rail in the form of an Access Application, unless otherwise agreed by Queensland Rail. Access Applications must be sent to the address nominated in **schedule B.B.**
- (b) Queensland Rail will publish on its website the application forms for Access Applications. These may identify different requirements for different types of Train Services. However, the information requirements must be in accordance with this Framework.
- (c) An Access Seeker must, when submitting an Access Application, unconditionally and irrevocably agree to comply with the requirements, obligations and processes in:
  - (i) this Framework relating to it or its Access Application; and
  - (ii) the Deed Poll, including the conditions set out in clauses ~~7.4, 8, 96, 7, 8~~ and ~~409~~ of the Deed Poll,and if the Access Seeker does not do so then Queensland Rail may refuse to accept the Access Application.

#### 2.1.2 Preliminary steps

- (a) A prospective Access Seeker may request initial meetings with Queensland Rail, prior to submitting an Access Application, to discuss the proposed Access Application and to clarify any matters relating to the negotiation process including any application requirements under **schedule B.B.**
- (b) Queensland Rail will:
  - (i) make the Preliminary Information available to Access Seekers on its website; and
  - (ii) keep the Preliminary Information to be made available to Access Seekers current and accurate.

### 2.2 Confidentiality

#### 2.2.1 Obligation to keep Confidential Information confidential

- (a) Subject to **clause ~~2.2.1(b)~~, 2.2.1(b)**, Queensland Rail and each Access Seeker (by submitting an Access Application) acknowledge, as a Recipient, that Confidential Information disclosed to it must:
  - (i) be treated as and kept confidential;

- (ii) only be used for the purpose for which it was disclosed;
  - (iii) be treated as the property of the Disclosing Party; and
  - (iv) subject to **clause 2.2.2(a), 2.2.2(a)** only be disclosed in accordance with this Framework.
- (b) A Recipient of Confidential Information is not required to comply with **clause 2.2.1(a)** in relation to a disclosure or use of Confidential Information to the extent that:
  - (i) the Disclosing Party has given its written consent (which must not be unreasonably withheld) to that disclosure or use; or
  - (ii) another Confidentiality Exception applies to that disclosure or use.

## **2.2.2 Requirement for confidentiality agreement**

- (a) Queensland Rail or the relevant Access Seeker may require the other to enter into a confidentiality agreement and, if so, the parties must act reasonably and promptly to negotiate and execute such an agreement which shall govern the confidentiality obligations as between those parties.
- (b) Neither Queensland Rail nor an Access Seeker is obliged to disclose Confidential Information to the other unless a confidentiality agreement on terms satisfactory to it (acting reasonably) has been executed.
- (c) Any confidentiality agreement between Queensland Rail and an Access Seeker must permit Queensland Rail to disclose Confidential Information:
  - (i) as required by Law;
  - (ii) to any responsible Minister (as defined in the Rail Authority Act);
  - (iii) to DTMR;
  - (iv) to the Rail Safety Regulator; and
  - (v) to the Rail Authority (including board members, officers and employees).

## **2.2.3 Ring fencing arrangements**

Queensland Rail does not presently have interests in markets upstream or downstream from the Below Rail Services that are in competition with third parties in those markets and there is no expectation that it is likely to do so during the Term. However, if such interests are likely to, or do, arise during the Term, then Queensland Rail will consider the need for ring fencing arrangements, taking into account the Framework Objective and its obligations under this Framework.

## **2.3 Acknowledgment of an Access Application**

### **2.3.1 Requests for additional information or clarification**



Queensland Rail may (acting reasonably) require the Access Seeker to provide additional or clarified information for the purpose of preparing an Indicative Access Proposal. Queensland Rail will notify the Access Seeker of any such requirement within five Business Days after receiving the Access Application.

### **2.3.2 Acknowledging Access Applications**

Within five Business Days after the later of the receipt of:

- (a) an Access Application; or
- (b) the additional or clarified information required under **clause [2.3.1](#)** in respect of that Access Application,

Queensland Rail will, subject to **clause [2.8](#),[2.8](#)**, give the Access Seeker a written acknowledgement of receipt of the Access Application.

## **2.4 Provision of an Indicative Access Proposal**

### **2.4.1 Time period for provision of Indicative Access Proposal**

Subject to **clause [2.8](#),[2.8](#)** and **clause [2.5.3](#),[2.5.3](#)**, Queensland Rail will use reasonable endeavours to provide an Indicative Access Proposal to the Access Seeker within 20 Business Days after giving the acknowledgment under **clause [2.3.2](#),[2.3.2](#)**.

### **2.4.2 Inclusions in Indicative Access Proposal**

The Indicative Access Proposal will, amongst other things:

- (a) outline the relevant Rolling Stock, Train Configuration and operating characteristics;
- (b) outline the results of an indicative Capacity Analysis including (if applicable) a notice advising that insufficient Capacity exists to accommodate the Access Application without an Extension;
- (c) outline whether any other Access Seekers have requested Access Rights which, if provided, would limit Queensland Rail's ability to grant Access Rights in accordance with the Indicative Access Proposal; and
- (d) provide an initial estimate of the Access Charges for the requested Access Rights (including basis for calculation).

### **2.4.3 Indicative nature**

An Indicative Access Proposal is non-binding and, unless it contains express provisions to the contrary, contains arrangements that are only indicative or preliminary in nature. An Indicative Access Proposal does not oblige Queensland Rail to provide Access in accordance with specific terms and conditions (including the methodology for calculating Access Charges or estimated rates and other inputs for formulae) set out in it.

## **2.5 Notification of intent to negotiate**

### **2.5.1 Access Seeker to give notice of intent to negotiate or not**

- (a) If an Access Seeker intends to proceed with its Access Application

on the basis of the relevant Indicative Access Proposal, it must, subject to **clause ~~2.5.2~~, ~~2.5.2~~**, give Queensland Rail written notice of its intention to do so as soon as reasonably practicable after receiving the Indicative Access Proposal.

- (b) If an Access Seeker does not intend to proceed with its Access Application on the basis of the relevant Indicative Access Proposal, it must give Queensland Rail written notice of that intention as soon as reasonably practicable after receiving the Indicative Access Proposal.

## **2.5.2 Consequence of late notification of intent to negotiate**

- (a) If an Access Seeker gives the notice referred to in **clause 2.5.1(a)** to Queensland Rail more than 20 Business Days after being given the Indicative Access Proposal, Queensland Rail may review the Indicative Access Proposal and either:
  - (i) give the Access Seeker a revised Indicative Access Proposal; or
  - (ii) proceed on the basis of the existing Indicative Access Proposal.
- (b) If Queensland Rail gives a revised Indicative Access Proposal to an Access Seeker under **clause ~~2.5.2(a)~~2.5.2(a)**, then:
  - (i) the process in this **Part 2 ~~Part 2~~** recommences as though the revised Indicative Access Proposal was given to the Access Seeker under **clause ~~2.4~~, ~~2.4~~**; and
  - (ii) the Access Seeker must comply with this **clause ~~2.5-2.5~~2.5** in relation to that revised Indicative Access Proposal.
- (c) Subject to **clause ~~2.5.3~~, ~~2.5.3~~**, if an Access Seeker has not given the notice referred to in **clause 2.5.1(a)** within three months after it was given an Indicative Access Proposal, or has given the notice referred to in **clause ~~2.5.1(b)~~, ~~2.5.1(b)~~**, then the Access Seeker is taken to have withdrawn its Access Application.

## **2.5.3 Extension of time – IAP and ITN**

Queensland Rail may extend the time for providing an Indicative Access Proposal under **clause 2.4.1** and an Access Seeker may extend the time for giving a notice of intention to proceed under **clause 2.5.1(a)** respectively if:

- (a) the party seeking the extension gives reasonable grounds for the extension to the other party prior to the date otherwise required under **clause 2.4.1** or **2.5.1(a)** (as the case may be); and
- (b) the other party agrees to the extension, such agreement not to be unreasonably withheld.

(c)

## 2.6 Competing Access Applications

- (a) If there are Competing Access Seekers and:
- (i) one of those Competing Access Seekers is a Customer Access Seeker, then:
    - (A) this Framework and Queensland Rail will treat that Customer Access Seeker as the sole Access Seeker as between those Competing Access Seekers; and
    - (B) Queensland Rail must negotiate solely with that Customer Access Seeker as between those Competing Access Seekers; or
  - (ii) if a Competing Access Seeker is nominated in writing by the Customer as the Customer's preferred Access Seeker, then:
    - (A) this Framework and Queensland Rail will treat the Competing Access Seeker nominated in writing by the Customer to Queensland Rail as the sole Access Seeker as between those Competing Access Seekers; and
    - (B) Queensland Rail must negotiate solely with that nominated Access Seeker as between those Competing Access Seekers.
- (b) Where there are Competing Access Seekers, Queensland Rail will disclose to the Customer the identity of the Competing Access Seekers.
- (c) Where:
- (i) the Customer does not nominate a Competing Access Seeker under **clause 2.6(a)(iii); 2.6(a)(ii);**
  - (ii) each Competing Access Seeker has given a notice of intention under **clause 2.5** to negotiate; and
  - (iii) each Competing Access Seeker is either:
    - (A) currently engaged in negotiations with a Customer regarding a potential haulage agreement in respect of the Access Rights sought; or
    - (B) a party to an existing haulage agreement with the Customer in respect of the Access Rights being sought,

then Queensland Rail will commence negotiations with each Competing Access Seeker in accordance with **Part 2-Part 2** of this Framework and progress those negotiations to a stage where Queensland Rail has provided each Competing Access Seeker with

an Access Charge for the Access Rights sought based on the operational information provided by the relevant Competing Access Seeker and both parties have accepted an Access Agreement consistent with this Framework and the terms of the Standard Access Agreement. However, an Access Agreement will be negotiated and executed with the Competing Access Seeker who demonstrates to Queensland Rail's reasonable satisfaction that it does, or will in the immediate future, hold the contractual rights to provide the Train Service/s for the Customer for which Access Rights are sought, and that the Customer is agreeable to the execution of an Access Agreement with that Competing Access Seeker.

## 2.7 Negotiation of an Access Agreement

### 2.7.1 The negotiation period

- (a) Subject to **clause 2.5.2, 2.5.2** if an Access Seeker gives Queensland Rail a notice under **clause 2.5.1(a), 2.5.1(a)** then Queensland Rail and the Access Seeker will commence negotiations as soon as reasonably practicable to progress towards an Access Agreement.
- (b) If negotiations have commenced in accordance with **clause 2.7.1(a) 2.7.1(a)**, the period for negotiations (**Negotiation Period**):
  - (i) starts on the day Queensland Rail was given the notice under **clause 2.5.1(a)** (subject to **clause 2.5.2(b) 2.5.2(b)**); and
  - (ii) ends on the earlier of:
    - (A) execution of an Access Agreement by the parties in relation to the relevant Access Application;
    - (B) the Access Seeker notifying Queensland Rail that it no longer wishes to proceed with its Access Application (or in addition, for a Rolling Stock Operator who is an Access Seeker, the relevant Customer gives such a notification to Queensland Rail in respect of the relevant Access Rights);
    - (C) the date nine months after the date on which the period for negotiations started, or such later date as agreed by the parties (acting reasonably);
    - (D) Queensland Rail giving the Access Seeker a Negotiation Cessation Notice; and
    - (E) the occurrence of any other event or circumstance where negotiations cease in accordance with this Framework.
- (c) Negotiations for Access cease at the end of the Negotiation Period and Queensland Rail is not obliged to continue negotiations with an Access Seeker after the Negotiation Period for the relevant

Access Application has ceased.

## **2.7.2 Issues to be addressed in negotiations**

- (a) During the Negotiation Period, Queensland Rail and the Access Seeker will negotiate, and endeavour to agree, the terms of an Access Agreement. In order to facilitate the negotiation process:
  - (i) Queensland Rail will provide to the Access Seeker:
    - (A) information that is reasonably required by the Access Seeker for the purpose of the negotiation with Queensland Rail, provided such information is reasonably able to be provided by Queensland Rail and cannot be reasonably obtained from a source other than Queensland Rail at no cost and without restriction; and
    - (B) if requested by the Access Seeker, the following information to the extent that it has not already been provided:
      - (1) information about the price at which Queensland Rail provides Access, including the way in which the price is calculated (including details of the floor and ceiling);
      - (2) an estimate of the Available Capacity; and
      - (3) in relation to the rail transport infrastructure (as defined in the TIA) used to provide Access, a diagram or map of the infrastructure and information about its operation and safety system;
  - (ii) if requested in writing by the Access Seeker, Queensland Rail will make available to the Access Seeker Capacity Information relevant to the Access Seeker's Access Application;
  - (iii) the Access Seeker must, in order for the impacts and requirements of the operations proposed by the Access Seeker to be analysed:
    - (A) prepare, and submit to Queensland Rail, a draft Operating Plan<sup>1</sup> prior to the parties undertaking the Interface Risk Assessment; and

<sup>1</sup> Queensland Rail will use the Operating Plan to refine and finalise the Train Service Entitlement, the methodology, rates and other inputs for calculating Access Charges and other terms and conditions of the

- (B) finalise the Operating Plan while the Interface Risk Assessment is being undertaken and prior to the development of an IRMP;
- (iv) the parties (for the purposes of this ~~clause 2.7.2(a)(iv)~~, [2.7.2\(a\)\(iv\)](#), if the Access Seeker is an End User Access Seeker the relevant Nominated Rolling Stock Operator will be the relevant Access Seeker party) must jointly:
  - (A) undertake an Interface Risk Assessment<sup>2</sup>; and
  - (B) after the Interface Risk Assessment is completed, develop an IRMP,

unless the parties agree (or if the Access Seeker is an End User Access Seeker, the End User Access Seeker and Queensland Rail agree) that those matters will be completed after the relevant Access Agreement has been executed in accordance with that Access Agreement;
- (v) the Access Seeker must (unless the Access Seeker is an End User Access Seeker and the obligations under this ~~clause 2.7.2(a)(v)~~ [2.7.2\(a\)\(v\)](#) have or will be satisfied by the relevant Nominated Rolling Stock Operator) commission a suitably qualified person, acceptable to Queensland Rail (acting reasonably), to prepare an environmental investigation and risk management assessment for the purposes of the Interface Risk Assessment and development of an IRMP;
- (vi) Queensland Rail will provide the Access Charge for the requested Access Rights, including the basis for calculating the Access Charges and details of how **Part 3** has been applied in calculating the Access Charge;
- (vii) Queensland Rail will provide a Capacity Analysis to the Access Seeker;
- (viii) Queensland Rail will provide a detailed description of the relevant Train Service Entitlement and the initial timetable;
- (ix) the Access Seeker must demonstrate that the Rolling Stock and Train Configurations for which the Access Rights are

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Access Agreement. The Operating Plan will also be used as a basis for any further or refined Capacity Analysis prepared by Queensland Rail.

<sup>2</sup> Queensland Rail will publish on its website indicative information, standards and requirements for the Interface Risk Assessment and IRMP. For example, Queensland Rail will make available a sample IRMP which specifies a list of safety and Rolling Stock issues that should, at a minimum, be addressed by the parties during the Interface Risk Assessment, along with suggested controls for the identified safety and Rolling Stock issues. However, the IRMP developed and agreed by the parties may cover additional safety and/or Rolling Stock issues and associated controls depending on the circumstances of the particular operation.

applicable are consistent with the agreed Interface Standards incorporated in the IRMP; and

- (x) Queensland Rail will provide the other terms comprising the Access Agreement.
- (b) During the Negotiation Period, if Queensland Rail has given the Access Seeker a notice that there is insufficient Capacity pursuant to **clause ~~2.4.2(b)~~, ~~2.4.2(b)~~**, Queensland Rail will, as soon as reasonably practicable, give to the Access Seeker written notice of whether Queensland Rail is willing to fund the Extension (or any Extension Stages) required to provide the Additional Capacity to accommodate the Access Application.
- (c) If Queensland Rail advises the Access Seeker, in accordance with **clause ~~2.7.2(b)~~, ~~2.7.2(b)~~**, that it is willing to fund the required Extension the Access Application negotiations will continue in accordance with this ~~Part 2~~, **Part 2**.
- (d) If Queensland Rail advises the Access Seeker, in accordance with **clause ~~2.7.2(b)~~, ~~2.7.2(b)~~**, that it is not willing to fund the required Extension and the Access Seeker subsequently advises Queensland Rail that the Access Seeker is willing to fund the required Extension (or an Extension Stage), Queensland Rail and the Access Seeker will commence, concurrently with Access Application negotiations, negotiations on the terms of the Funding Agreement that is required to proceed with the Access Application in accordance with **clause ~~1.4.1.4~~**.
- (e) If the Access Seeker is a Renewal Access Seeker, then the terms of the Access Agreement are to be negotiated generally in accordance with **clause ~~2.7.2~~ ~~2.7.2~~** except that:
  - (i) **clauses ~~2.4.2(b)~~, ~~2.7.2(a)(vii)~~ ~~2.4.2(b)~~, ~~2.7.2(a)(vii)~~ and ~~2.7.2(b)~~ ~~2.7.2(b)~~** will not apply; and
  - (ii) the relevant Access Charges are to be consistent with **Part 3**, **Part 3**.

## 2.8 Cessation of negotiation process

### 2.8.1 Negotiation Cessation Notice

- (a) Queensland Rail may, at any time, give a notice to an Access Seeker that it does not intend to enter into an Access Agreement with the Access Seeker pursuant to the relevant Access Application (**Negotiation Cessation Notice**) for any one or more of the following reasons:
  - (i) the Access Seeker fails to comply with all of the relevant provisions of this Framework, and Queensland Rail (acting reasonably) is of the opinion that such non-compliance is material;

- (ii)
  - (iii) Queensland Rail (acting reasonably) is of the opinion that:
    - (A) there is no reasonable likelihood of material compliance by the Access Seeker with the terms and conditions of an Access Agreement; or
    - (B) the Access Seeker has no genuine intention of obtaining, or has no reasonable likelihood of using, the Access Rights requested;
  - (iv) the requirements under **clause ~~2.8.2~~ 2.8.2** for giving a notice have been satisfied;
  - (v) the Access Seeker has concurrent requests for Access which Queensland Rail reasonably believes to be duplicate requests such that if any one of those requests for Access were granted then the remainder of the concurrent requests would not be required by the Access Seeker (**Duplicate Requests**) and provided that:
    - (A) Queensland Rail has given the Access Seeker notice that it intends to cease negotiations because of the existence of Duplicate Requests and the reasons for this; and
    - (B) the Access Seeker has not responded to the notice within ten Business Days (or such later date as agreed by Queensland Rail (such agreement not to be unreasonably withheld)) either:
      - (1) with information which demonstrates to Queensland Rail's reasonable satisfaction that the requests are not Duplicate Requests; or
      - (2) advising which of the Duplicate Requests the Access Seeker (acting reasonably) wants to proceed with (if any); or
  - (vi) the Access Seeker fails to comply with the dispute resolution process under **clause 6.1** (including any outcome of that dispute resolution process) in relation to the relevant Access Application.
- (b) Without limitation to **clause ~~2.8.1(a)(ii)(A)~~, ~~2.8.1(a)(ii)(A)~~**, it will be reasonable for Queensland Rail to form the opinion that the circumstance in **clause ~~2.8.1(a)(ii)(A)~~ ~~2.8.1(a)(ii)(A)~~** exists where, at any time, the Access Seeker does not comply with the requirements under **clause ~~2.8.3~~ 2.8.3**.
- (c) In forming an opinion referred to in **clause ~~2.8.1(a)(ii)(B)~~**,



2.8.1(a)(ii)(B). Queensland Rail may, without limitation, consider any one or more of the following factors:

- (i) whether the Access Seeker has secured, or is reasonably likely to secure:
  - (A) the rights required to enter and leave the Network (for example, rights to unload at its destination); and
  - (B) if applicable, a rail haulage agreement for the operation of Train Services referred to in its Access Application except if the Access Seeker is a Competing Access Seeker for the purposes of **clause 2-6, 2.6**, in which case this **clause ~~2-8.1(e)(i)(B)~~ 2.8.1(c)(i)(B)** is subject to the process under **clause ~~2-6(e)(iii)~~ 2.6(c)(iii)** being completed; and
- (ii) the promptness of the Access Seeker in conducting its negotiations.
- (d) For clarity, if an Access Seeker responds to Queensland Rail's notice given pursuant to **clause ~~2-8.1(a)(iv)(A)~~ 2.8.1(a)(iv)(A)**, and informs Queensland Rail that it wants to proceed with one of the Duplicate Requests, Queensland Rail can only give a Negotiation Cessation Notice in respect of the unwanted Duplicate Request.

## 2.8.2 Safety considerations

If:

- (a) in the opinion of Queensland Rail (acting reasonably), the use of any proposed Access Rights sought by an Access Seeker may adversely affect the safety of any persons using or intending to use a passenger Train Service;
- (b) Queensland Rail and the Access Seeker have discussed the matter in **clause 2.8.2(a)** and after those discussions Queensland Rail (acting reasonably) still considers that the circumstance in **clause ~~2-8.2(a)~~ 2.8.2(a)** continues to apply;
- (c) Queensland Rail (acting reasonably) does not consider that any measures can reasonably and practicably be implemented by Queensland Rail (in its capacity as either a Below Rail or Above Rail Services provider) or the Access Seeker to avoid, or mitigate to Queensland Rail's satisfaction (acting reasonably), those adverse effects; and
- (d) refusal to enter into an Access Agreement would be consistent with Queensland Rail acting in accordance with Prudent Practices,

then Queensland Rail may give a Negotiation Cessation Notice to the relevant Access Seeker. An Access Seeker is not entitled to dispute a Negotiation

Cessation Notice issued under this **clause ~~2.8.2~~ 2.8.2** and the dispute resolution process under **clause 6.1** does not apply to the issue of such a notice under this **clause ~~2.8.2~~ 2.8.2**.

### **2.8.3 Access Seekers must satisfy prudential requirements**

- (a) An Access Seeker must at all times satisfy the following prudential requirements, namely:
  - (i) the Access Seeker must not be Insolvent;
  - (ii) the Access Seeker (and any Related Party of the Access Seeker) must not be, or have been at any time in the previous two years, in Material Default of:
    - (A) this Framework;
    - (B) any agreement with Queensland Rail; or
    - (C) any agreement under which access to Private Infrastructure has been provided to the Access Seeker or a Related Party of the Access Seeker; and
  - (iii) the Access Seeker must be able to demonstrate to Queensland Rail (acting reasonably) that it has the financial capacity to perform its obligations, and satisfy its liabilities, under an Access Agreement (including timely payment of Access Charges or other amounts and of insurance premiums and deductibles under any required policies of insurance).
- (b) Queensland Rail may, at any time, require an Access Seeker to (and, if so required, the Access Seeker must) demonstrate to Queensland Rail (acting reasonably), within a reasonable period of no more than ten Business Days, that the Access Seeker satisfies the prudential requirements set out in **clause ~~2.8.3(a)~~ 2.8.3(a)**.
- (c) Queensland Rail and an Access Seeker may agree a different time frame within which an Access Seeker must satisfy the prudential requirements set out in **clause 2.8.3(a)** if:
  - (i) the Access Seeker seeking the extension provides Queensland Rail with reasonable grounds for the proposed time frame prior to the time frame in **clause ~~2.8.3(b)~~ 2.8.3(b)** expiring; and
  - (ii) Queensland Rail agrees to the proposed time frame (such agreement not to be unreasonably withheld).

(iii)

## 2.9 Access Agreement

### 2.9.1 Access Rights granted under an Access Agreement

The granting of Access Rights occurs when Queensland Rail and the Access Seeker execute an Access Agreement and that Access Agreement is or becomes unconditional.

### 2.9.2 Mutually Exclusive Access Applications

- (a) Subject to ~~clause 2.9.2(b)~~, ~~2.9.2(b)~~, this ~~clause 2.9.2~~ ~~2.9.2~~ applies to the extent that:
- (i) two or more Access Seekers have submitted Access Applications for Access Rights relating to Available Capacity; and
  - (ii) it is not reasonably possible for Queensland Rail to fulfil, in whole, the request for Access Rights made under those Access Applications,
- (each a **Mutually Exclusive Access Application**).
- (b) Where the application of **clause 2.9.2(a)** involves Queensland Rail taking into account Competing Access Seekers for a traffic task and:
- (i) one of those Competing Access Seekers is a Customer Access Seeker:
    - (A) the Customer Access Seeker's Access Application will be used for the purpose of applying **clause 2.9.2(a)** ~~2.9.2(a)~~; and
    - (B) the other Competing Access Seekers' Applications will not be used for the purpose of applying **clause 2.9.2(a)** ~~2.9.2(a)~~;
  - (ii) the relevant Customer has nominated one of the Competing Access Seekers under **clause 2.6(a)(ii)** ~~2.6(a)(ii)~~:
    - (A) the nominated Competing Access Seeker's Access Application will be used for the purpose of applying **clause 2.9.2(a)** ~~2.9.2(a)~~; and
    - (B) the other Competing Access Seekers' Applications will not be used for the purpose of applying **clause 2.9.2(a)** ~~2.9.2(a)~~; or

(C)

- (iii) the relevant Customer has not nominated one of the Competing Access Seekers under ~~clause 2.6(a)(iii)~~, [2.6\(a\)\(ii\)](#), then pending a relevant nomination under ~~clause 2.6(a)(ii)~~ [2.6\(a\)\(ii\)](#) (if any) the process in ~~clause 2.6(c)~~ [2.6\(c\)](#) will apply and a determination regarding Mutually Exclusive Access Applications will be made by Queensland Rail under ~~clause 2.9.2(f)~~, [2.9.2\(f\)](#).
- (c) An Access Application may become a Mutually Exclusive Access Application at any time before an Access Agreement is executed in relation to that Access Application.
- (d) An Access Seeker will be notified as soon as reasonably practicable after Queensland Rail identifies that its Access Application has become a Mutually Exclusive Access Application and the extent to which it is a Mutually Exclusive Access Application.
- (e) Queensland Rail will, if requested, provide reasonable assistance to an Access Seeker to identify whether its Access Application can be modified so that it ceases to be a Mutually Exclusive Access Application.
- (f) Where Queensland Rail has identified that there are Mutually Exclusive Access Applications, Access will be granted to the Access Seeker who accepts (and executes) an Access Agreement with Queensland Rail which, in the opinion of Queensland Rail, is most favourable to it. Ordinarily, but without limiting Queensland Rail's discretion in this regard, Queensland Rail will make such a decision based on the Access Agreement that represents the highest present value of future returns to Queensland Rail after considering all risks associated with the Access Agreement.
- (g) Queensland Rail will expand the Capacity of the Network in order to create sufficient Available Capacity to provide Access Rights sought by an Access Seeker where Queensland Rail is required to do so under ~~clause 1.4.1.4~~, [1.4.1.4](#).

### 2.9.3 Renewals

- (a) Where an Access Seeker (who is not a Renewal Access Seeker) submits an Access Application for Access Rights concerning the Available Capacity that will arise when an existing Access Agreement expires, Queensland Rail will notify:
  - (i) the Access Holder for the expiring Access Agreement;
  - (ii) that Access Holder's Customer (if any); and
  - (iii) the relevant Renewal Access Seeker (if any),of Queensland Rail's receipt of that Access Application, as soon as reasonably practicable after receiving it, provided the then current term of that expiring Access Agreement (whether initial or as

renewed) is at least 5 years. Where the then current term of that expiring Access Agreement (whether initial or as renewed) is less than 5 years, Queensland Rail will not be required to give such notification and **clause ~~2.9.3(b)~~ 2.9.3(b)** will not apply.

- (b) Subject to **clauses ~~2.9.3(a)~~ 2.9.3(a), ~~2.9.3(e)~~ 2.9.3(c) and ~~2.9.3(d)~~ 2.9.3(d)** but despite any other provision in this Framework to the contrary, Queensland Rail will not execute an Access Agreement with the Access Seeker referred to in **clause 2.9.3(a)** unless the relevant Renewal Access Seeker fails to, or cannot, submit a Renewal Application to Queensland Rail in respect of the relevant Renewal by the date which is no later than 20 Business Days after the date on which Queensland Rail gave the notice under **clause ~~2.9.3(a)~~ 2.9.3(a)**.
- (c) A decision to grant Access to the Access Seeker referred to in **clause 2.9.3(a)** or the relevant Renewal Access Seeker will be made by Queensland Rail on the basis of which of those parties accepts (and executes) an Access Agreement with Queensland Rail which, in the opinion of Queensland Rail, is most favourable to it. Ordinarily, but without limiting Queensland Rail's discretion in this regard, Queensland Rail will make such a decision based on the Access Agreement that represents the highest present value of future returns to Queensland Rail after considering all risks associated with the Access Agreement.
- (d) Nothing in this **clause ~~2.9.3~~ 2.9.3** obliges Queensland Rail to enter into an Access Agreement with a Renewal Access Seeker or to do so on the same terms as the relevant existing Access Agreement for the relevant existing Access Rights.
- (e) Any renewal of Access Rights is subject to compliance with all applicable Laws, including sections 266 and 266A of the TIA as they apply to Queensland Rail.

#### **2.9.4 Development of Standard Agreements**

- (a) Subject to **clause ~~2.7.2(e)~~ 2.7.2(e)** unless otherwise agreed between Queensland Rail and the Access Seeker, an Access Agreement must be consistent with:
  - (i) this Framework; and
  - (ii) the terms of the Standard Access Agreement.
- (b) If an Access Seeker proposes variations to the terms of the Standard Access Agreement which the Access Seeker can demonstrate would promote, or are required to accommodate, productivity or efficiency improvements to the Access Seeker's proposed Above Rail Services and the supply chain and Queensland Rail rejects those proposed variations, Queensland Rail will provide written reasons for that rejection.

- (c) An Access Seeker is not entitled to dispute a rejection by Queensland Rail under **clause 2.9.4(b)** ~~2.9.4(b)~~ and the dispute resolution process under **clause 6.1** does not apply to such a rejection.

## **2.9.5 Execution of Access Agreements**

- (a) If an Access Seeker and Queensland Rail execute an Access Agreement that is unconditional in all material respects except for the conditions relating to a Funding Agreement and which cannot be satisfied until the Funding Agreement has been executed and the Network has been Extended, then Queensland Rail and the Access Seeker must use reasonable endeavours to execute the Funding Agreement as soon as reasonably practicable.
- (b) Despite any other provision in this Framework, Queensland Rail may, but is not obliged to, grant Access Rights by agreeing to amend an existing Access Agreement.

## **2.9.6 Transfer of Access Rights**

An Access Holder may only assign, novate or otherwise transfer the Access Holder's interest in an Access Agreement to a third party in accordance with the terms of that Access Agreement.

# Part 3 Pricing rules

## **3.1 Pricing objectives**

### **3.1.1 Revenue adequacy**

Access Charges and Transport Service Payments (if applicable) should:

- (a) generate expected revenue for Access that is at least enough to meet the efficient costs of providing Access; and
- (b) include a return on investment commensurate with the risks involved.

## **3.2 Pricing limits**

### **3.2.1 Applying a Ceiling Revenue Limit**

In setting the methodology, rates and other inputs for calculating Access Charges for an Access Seeker's proposed Train Services, Queensland Rail must do so such that, over the Evaluation Period, the Expected Access Revenue from any one of those Train Services and any combination of those Train Services does not exceed the Ceiling Revenue Limit for that Train Service or combination of Train Services, as applicable.

### **3.2.2 Applying a Floor Revenue Limit**

In setting the methodology, rates and other inputs for calculating Access Charges for an Access Seeker's proposed Train Services, Queensland Rail must do so such that, over the Evaluation Period, the Expected Access Revenue from any one of those Train Services or any combination of those Train Services does not fall below the Floor Revenue Limit for that Train Service or combination of Train Services, as applicable, after taking

into account the level of contribution provided by Transport Service Payments towards the relevant rail transport infrastructure (as defined in the TIA) for which Queensland Rail is the Railway Manager.

### 3.2.3 Determination of Ceiling Revenue Limit

- (a) The Ceiling Revenue Limit means the aggregate of the following:
- (i) the maximum amount of Expected Access Revenue; and
  - (ii) where the Access Seeker's proposed Train Services comprise all of the Train Services using the relevant part of the Network, the Transport Services Payments (if any) that are reasonably expected to be received by Queensland Rail in respect of that part of the Network (on a pro rata basis for that individual Train Service or combination of Train Services, as applicable),

over the Evaluation Period where the Ceiling Revenue Limit is measured such that the net present value of the cashflows associated with providing Access for the relevant Train Service(s) over the Evaluation Period is zero. This measurement can be expressed as:

$$0 = -AV_0 + \sum_{t=1}^n \frac{(CRL_t - C_t - M_t - T_t)}{(1 + WACC)^t} - \frac{AV_n}{(1 + WACC)^n}$$

where:

- AV<sub>0</sub>** is the value of assets reasonably expected to be required for the Stand Alone provision of Access for the Train Service(s), assessed in accordance with **clause 3.2.3(e)3.2.3(c)**, at the commencement of the Evaluation Period;
- n** is the number of years in the Evaluation Period;
- t** is each year within the Evaluation Period from one to n;
- CRL<sub>t</sub>** is the Ceiling Revenue Limit for the Train Service(s) expressed as revenue that may be earned in each year of the Evaluation Period;
- C<sub>t</sub>** is the capital expenditure for assets reasonably expected to be required for the Stand Alone provision of Access for the Train Service(s) in each year of the Evaluation Period;
- M<sub>t</sub>** is the Efficient Costs for the Stand Alone provision of Access for the Train Service(s) in each year of the Evaluation Period;
- T** is the tax expense assessed through the application of the statutory tax rate for corporations to the taxable income reasonably expected to be earned through the Stand Alone provision of Access for the Train Service(s) in each year of the Evaluation Period, where such tax expense is reduced in each year by the application of the gamma factor, reflecting the market value of dividend imputation;

**AV<sub>n</sub>** is the value of assets reasonably expected to be required for the Stand Alone provision of Access for the Train Service(s), assessed in accordance with **clause ~~3.2.3(e)~~3.2.3(c)**, at the end of the Evaluation Period; and

**WACC** has the meaning given to that term in **clause ~~7.4.7.1~~**.

- (b) It will be necessary, for the purposes of determining the variables under **clause ~~3.2.3(a)~~3.2.3(a)**, to make assumptions for the Train Services(s) over the Evaluation Period based on the forecast, as reasonably determined by Queensland Rail, for the Train Service(s) (including making allowance for any changes that are expected to result from the commencement of projects that impact significantly on the Train Service(s)).
- (c) The value of assets used in **clause 3.2.3(a)** will be calculated by Queensland Rail using the Depreciated Optimised Replacement Cost (**DORC**) methodology as follows:
- (i) optimisation - determination of the optimal configuration and sizing of network assets;
  - (ii) replacement cost - a modern engineering equivalent (MEE) is established for each asset in the optimised assets and a replacement cost established; and
  - (iii) depreciation - those MEE assets are depreciated using the standard economic life of each existing asset together with an estimate of the remaining life of each existing asset.
- (d) Queensland Rail will publish annually on its website the estimated asset value for the West Moreton System and Mt Isa Line System, as determined in accordance with **clause ~~3.2.3(e)~~3.2.3(c)**, including key assumptions used.

### 3.3 Limits on price differentiation

#### 3.3.1 Access Charge differentiation

- (a) In formulating Access Charges, Queensland Rail will have regard to a range of factors which impact on its business, including the following:
- (i) the initial estimate of the Access Charges for the requested Access Rights as included in an Indicative Access Proposal;
  - (ii) the particular characteristics of the relevant Train Service which include axle load, speed, wheel diameter, Train length, origin and destination (including number and length of intermediate stops), departure and arrival times and days of the week;
  - (iii) the commercial impact on Queensland Rail's business, which includes factors such as:
    - (A) the terms of the Access Agreement;



- (B) the potential for growth of the business;
- (C) the opportunity costs to Queensland Rail;
- (D) the consumption of Queensland Rail's resources, including Capacity;
- (E) the credit risk associated with the business;
- (F) the market value of the Train Path sought;
- (G) the part of the Network relevant to the Access being sought; and

- (H)
- (I) previously negotiated Access Charges agreed under the Framework, where relevant;
- (iv) logistical impacts on Queensland Rail's business, including:
  - (A) the impact on other Train Services and risk of failure of the relevant Rolling Stock Operator to perform; and
  - (B) reduced Capacity and system flexibility;
- (v) capital or other contributions by the Access Seeker to Queensland Rail's costs; and
- (vi) the cost of any Additional Capacity.

### 3.3.2 Limits on Access Charge differentiation

- (a) Subject to **clause 3.3.1** and Queensland Rail's Passenger Priority Obligations, in formulating Access Charges Queensland Rail will not have regard to the identity of the Access Seeker.
- (b) Subject to **clause 3.3.1, 3.3.1**, in formulating Access Charges Queensland Rail will not differentiate between Access Seekers in circumstances where:
  - (i) the characteristics of the Train Services are alike; and
  - (ii) the Access Seekers are operating in the same end market.
- (c) For the purpose of **clause 3.3.2(b) 3.3.2(b)**, Queensland Rail will determine whether the characteristics of the Train Services are alike having regard to matters including:
  - (i) location;
  - (ii) duration and quality of the Train Path;
  - (iii) nature of Train consist;
  - (iv) characteristics of the Train Service;
  - (v) longevity of Access; and
  - (vi) arrival and departure times of the day and week.

## 3.4 Conflict between pricing rules

If **clauses 3.1 to 3.3.3.3** cannot be applied without giving rise to a conflict between those provisions, then those provisions will be applied in the following order of precedence (from highest to lowest) to the extent of that conflict:

- (a) **clause 3.3 (~~Limits on price differentiation~~ 3.3 (Limits on price differentiation))**;
- (b) **clause (~~Pricing limits~~ 3.2 (Pricing limits))**; and
- (c) **clause (~~Revenue adequacy~~ 3.1.1 (Revenue adequacy))**.

(d)

## 3.5 General

### 3.5.1 Rate review provisions

- (a) Queensland Rail or an Access Seeker may require reasonable and balanced rate review provisions in an Access Agreement that is being negotiated to enable the methodology, rates and other inputs for calculating Access Charges to be adjusted to be consistent with changes over time.
- (b) The rate review provisions referred to in **clause 3.5.1(a)**, **3.5.1(a)**, if included in an Access Agreement, must be drafted so as to provide that, if Queensland Rail adjusts Access Charges to be consistent with changes to those matters referred to in **clause 3.5.1(a)** then Queensland Rail must also provide details of how the provisions were applied and how the adjusted Access Charges were calculated.

### 3.5.2 Take or Pay Charges

Unless otherwise agreed with Queensland Rail, Take or Pay Charges will be payable under Access Agreements. For this purpose, a **Take or Pay Charge** means a charge or other amount payable by an Access Holder to Queensland Rail under an Access Agreement in relation to the Access Holder not fully utilising its Access Rights for a specified period calculated on up to a 100% take or pay basis.

## 3.6 Consequences of contravention

- (a) If an Access Holder (**Aggrieved Access Holder**) is of the opinion (acting reasonably) that, after entering into an Access Agreement with the Aggrieved Access Holder, Queensland Rail has subsequently entered into an Access Agreement with another Access Holder for a like Train Service (where a like Train Service is one that transports the same specified commodity in the same specified geographic area), and that subsequent Access Agreement contains an Access Charge in contravention of **Part 3** of this Framework (**Pricing Contravention**), then:
  - (i) the Aggrieved Access Holder may refer the matter for arbitration in accordance with the dispute resolution process under **clause 6.1;6.1**;
  - (ii) if the Aggrieved Access Holder can demonstrate to the reasonable satisfaction of the arbitrator appointed under **clause 6.1** that the relevant Pricing Contravention has occurred, the arbitrator may direct Queensland Rail to offer the Aggrieved Access Holder either:
    - (A) the same Access Charge as the like Train Service; or
    - (B) if the arbitrator considers it appropriate, a particular

Access Charge that, in its view, neutralises the effect of the identified contravention; and

- (iii) Queensland Rail must immediately make a legally binding offer to the Aggrieved Access Holder to give effect to the arbitrator's decision.
- (b) Queensland Rail agrees to promptly provide the arbitrator appointed under **clause 6.1** with all information requested by the arbitrator to enable it to determine whether any contravention of this **Part 3** has occurred.

## Part 4 Operating requirements

### 4.1 Network Management Principles

- (a) All Access Agreements must include obligations for the Access Holder and Queensland Rail to comply with the Network Management Principles.<sup>3</sup>
- (b) Without limitation to **clause 4.1(a)4.1(a)**, Queensland Rail acknowledges its obligations under each Access Agreement to:
  - (i) perform scheduling, Network Control and associated services; and
  - (ii) provide information to Access Holders, in accordance with the Network Management Principles and subject to the terms of that Access Agreement.
- (c) Each Train Service Entitlement will:
  - (i) include specified scheduling constraints (which will vary between different types of Train Services); and
  - (ii) be expressed in terms so that it can be used in the development of any MTP and DTP.
- (d) The Network Management Principles must relate to all Train Services (including passenger services provided by Queensland Rail) and must be applied reasonably and fairly subject to specific requirements of the TIA.

### 4.2 Consultation for Through-Running Trains

Queensland Rail will consult with other relevant Railway Managers in relation to:

- (a) the coordination of maintenance activities; and
- (b) the development of MTPs,

and if any of Queensland Rail's proposed changes or activities might affect other Railway Managers, Queensland Rail will use reasonable endeavours to minimise adverse effects in relation to Through-Running Trains.

<sup>3</sup>For clarity, the Network Management Principles are set out in [schedule C](#).

## 4.3 Operating Requirements Manual

- (a) Queensland Rail will publish and maintain an up-to-date version of the Operating Requirements Manual on its website.

~~e.~~

- (b) Queensland Rail will consult with Access Holders regarding changes to the Operating Requirements Manual (other than those of a minor or administrative nature).
- (c) Subject to **clause 4.3(b), 4.3(b)**, Queensland Rail may amend the Operating Requirements Manual from time to time in its absolute discretion.

## Part 5 Reporting

### 5.1 Annual financial report

- (a) Within six months after the end of each Year, Queensland Rail will publicly release a financial report in relation to the preceding Year showing the following in connection with the Below Rail Services:
  - (i) revenue and expenses; and
  - (ii) return on assets for each of the West Moreton System, North Coast Line System and Mt Isa Line System; ~~and (iii) return on assets for other Systems on an aggregated basis.~~
- (b) The financial report published pursuant to **clause 5.1(a)** must be accompanied by an audit certificate prepared by a suitable auditor.
- (c) The audit certificate referred to in **clause 5.1(b)** will specify whether or not the financial report has been prepared, in all material respects, in accordance with the processes outlined in the Costing Manual and consistent with the format specified in the Costing Manual.
- (d) Access Seekers and Access Holders may notify Queensland Rail of any inaccuracies or omissions which they believe have been made in the financial report published pursuant to **clause 5.1(a) 5.1(a)**. Queensland Rail will consider relevant comments and, where necessary, publish on its website an updated report or other information to address any inaccuracies or omissions.

### 5.2 Monthly Operational Reports

### 5.2.1 Provision of report

- (a) Queensland Rail will provide each Nominated Rolling Stock Operator and Access Holder with an Operational Report for each relevant System on which it operates or in respect of which it holds Access Rights.
- (b) Unless otherwise agreed with Queensland Rail, the Operational Report will be provided monthly by the last Business Day of each calendar month.
- (c) Nominated Rolling Stock Operators and Access Holders may notify Queensland Rail of any inaccuracies or omissions which they believe have been made in the report provided pursuant to **clause 5.1(a)**. Queensland Rail will consider relevant comments and, where necessary, provide an updated report or other information to address any inaccuracies or omissions.

### 5.2.2 Content of report

- (a) The Operational Report will contain the following information:
  - (i) on time train performance, including entry and exit performance and reasons for delays;
  - (ii) actual and scheduled Train transit times;
  - (iii) actual Train Services summary, including Trains operated compared with the Master Train Plan, cancellations and additional services;
  - (iv) Train cancellations and reasons;
  - (v) major operational, safety or environmental incidents; and
  - (vi) summary of speed restrictions in place at the end of the month.
- (b) Unless agreed by the relevant Nominated Rolling Stock Operator or Access Holder (as the case may be), confidentiality of specific operator or haulage information will be maintained by aggregating information or de-identifying the information.
- (c) Queensland Rail, Access Holders and Nominated Rolling Stock Operators may agree to vary the information contained in the monthly Operational Reports to include additional information and delete information which is no longer useful or relevant.

## 5.3 Rail User Groups

- (a) Queensland Rail and relevant Nominated Rolling Stock Operators and Access Holders may agree to establish a Rail User Group for each of the West Moreton System, North Coast Line System and Mt Isa Line System.
- (b) The purpose of a Rail User Group is to provide a forum to review, discuss and improve rail operational issues which can affect supply chain performance. Rail operational issues may include on time

performance, maintenance scheduling, Train cancellations and Network-wide operational, environmental and rail safety matters, as contained in the Operational Reports.

- (c) The frequency and rules for the conduct of meetings will be as agreed with relevant Nominated Rolling Stock Operators and Access Holders and, failing agreement, as determined by Queensland Rail (acting reasonably). Queensland Rail acknowledges that, ideally, meetings would be held either monthly or quarterly.
- (d) Queensland Rail and relevant Nominated Rolling Stock Operators and Access Holders may agree to invite other supply chain participants (including port operators, adjoining rail network owners and other Rail Managers) to relevant Rail User Groups.

## Part 6 Administrative provisions

### 6.1 Dispute and complaint resolution process

#### 6.1.1 Governing law

This Framework is governed by the laws in force in the State of Queensland.

#### 6.1.2 Alternative dispute process

- (a) Nothing in this **clause 6.1** prevents an Access Seeker and Queensland Rail from agreeing in writing (in each party's absolute discretion) to use a different dispute resolution process or different timeframes to the dispute resolution process or timeframes set out in this **clause ~~6.1.6.1~~ 6.1**.
- (b) However, if an Access Seeker and Queensland Rail do agree a different dispute resolution process or timeframe (as applicable), then the different dispute resolution process or timeframe (as applicable) will be binding on them and neither of them may seek to change the dispute process (except with the written agreement of the other).

#### 6.1.3 Application of dispute and complaint resolution process

- (a) **(Disputes under this Framework)** If any dispute, complaint or question arises between Queensland Rail and an Access Seeker in relation to any provision of this Framework, a request for Access or the negotiation of an Access Agreement (**Dispute**), then:
  - (i) that Dispute will be resolved in accordance with this **clause ~~6.1.6.1~~ 6.1** and
  - (ii) either the Access Seeker or Queensland Rail may give the other a notice in writing (**Dispute Notice**) setting out details of the Dispute and that the Dispute is to be dealt with in the manner set out in this **clause ~~6.1.6.1~~ 6.1**.
- (b) **(Disputes under Access Agreement)** Disputes in relation to an Access Holder or an Access Agreement must be dealt with in accordance with the provisions of the relevant Access Agreement

and must not be dealt with under this Framework.

- (c) **(Disputes under Deed Poll)** ~~The~~[Subject to clause 7.2.3 of the Deed Poll, the](#) courts of Queensland have exclusive jurisdiction to determine any disputes arising under the Deed Poll.

#### **6.1.4 Resolution by senior management**

- (a) Within five Business Days (or such longer period as agreed by the parties) after the date on which a party gives the other party a Dispute Notice (**Dispute Notice Date**), representatives of the parties (comprising their chief executive officers or nominees) must meet and use reasonable endeavours to resolve the Dispute (**Meeting**).
- (b) If the Dispute is not resolved under **clause 6.1.4(a)** within 10 Business Days from the commencement date of the Meeting, either party can refer the Dispute to arbitration under **clause ~~6.1.5-6.1.5~~**.

#### **6.1.5 Arbitration**

- (a) All Disputes referred to arbitration under this Framework must be conducted in accordance with this **clause ~~6.1.5-6.1.5~~**.
- (b) The Dispute shall be submitted to arbitration in accordance with, and subject to, the Resolution Institute Arbitration Rules.
- (c) The arbitration must be effected either:
  - (i) by a single arbitrator agreed upon between the parties; or
  - (ii) in default of such agreement within 10 days after the Dispute is referred for arbitration, then by a single arbitrator nominated by the Resolution Institute.
- (d) Any party to the arbitration may be represented before the arbitrator by a member of the legal profession without the need for leave of the arbitrator.
- (e) Any arbitration commenced under this Framework may be consolidated with any other arbitration commenced under:
  - (i) this Framework (or any agreement referred to in the Framework); or
  - (ii) an Access Agreement,regardless of the Parties involved, provided that the issue(s) which each arbitrator has been asked to determine concern common questions of fact or law. Such consolidated arbitration shall be determined by the arbitrator appointed for the arbitration proceeding that was commenced first in time.
- (f) In making a determination, the arbitrator must have regard to the terms of the Framework and the following matters:
  - (i) the Framework Objective;
  - (ii) Queensland Rail's binding legal obligations and obligations under Law, including under:



- (A) the TIA (including Passenger Priority Obligations and Preserved Train Path Obligations);
- (B) the Rail Authority Act;
- (C) the contract under which Transport Service Payments are made to Queensland Rail;
- (D) service level agreements with DTMR, the Rail Authority or other Authorities; and
- (E) the Sublease (or other relevant land tenure in connection with the Network);
- (iii) Ministerial directions given to Queensland Rail under the Rail Authority Act;
- (iv) Queensland Rail's constitution;
- (v) Queensland Rail's legitimate business interests and investment in the Network;
- (vi) the legitimate business interests of Access Seekers or Access Holders (as the case may be);
- (vii) the public interest, including the benefit to the public in having competitive markets;
- (viii) the value of the service to:
  - (A) the Access Seeker; or
  - (B) a class of Access Seekers or Access Holders;
- (ix) the direct costs to Queensland Rail of providing the Access the subject of the Dispute (if relevant), including any costs of Extending the Network, but not costs associated with losses arising from increased competition;
- (x) the economic value to Queensland Rail of any Extensions, or other additional investment in the Network, that Queensland Rail or the Access Seeker has undertaken or agreed to undertake;
- (xi) the quality of the services to be provided to the Access Seeker or Access Holder who is party to the Dispute (if relevant);
- (xii) the operational and technical requirements necessary for the safe and reliable operation of the Network;
- (xiii) the economically efficient operation of the Network;
- (xiv) the effect of excluding existing assets for pricing purposes; and
- (xv) pricing principles in relation to the price of Access that the price should:
  - (A) generate expected revenue for the Train Service

that is at least enough to meet the efficient costs of providing Access and include a return on investment commensurate with the risks involved;

- (B) allow for multi-part pricing and price discrimination when it aids efficiency;
  - (C) not allow Queensland Rail to set terms and conditions that discriminate in favour of the downstream operations of Queensland Rail or a Related Party of Queensland Rail, except to the extent the cost of providing Access to other operators is higher; and
  - (D) provide incentives to reduce costs or otherwise improve productivity; and
  - (xvi) any other matters to which the arbitrator thinks it is appropriate to have regard.
- (g) The venue for any arbitration will be Brisbane, Queensland.
  - (h) Unless otherwise determined by the arbitrator, the costs of the arbitration shall be paid by the unsuccessful party.

### 6.1.6 Urgent matters

Nothing in this **clause 6.1** prevents a party from seeking urgent injunctive relief from the courts of Queensland.

## 6.2 Limitations

Subject to the terms of an Access Agreement, Funding Agreement or any other agreement entered into with Queensland Rail as contemplated by this Framework:

~~(a) damages is not a remedy for any breach of this Framework;~~

~~(b) the only remedy available for any breach of this Framework is specific performance; and (c)~~

Queensland Rail is not liable to Access Holders, Access Seekers, Rolling Stock Operators or any other person for any Consequential Loss arising under or in connection with this Framework.

## 6.3 Notices

### 6.3.1 Form of Notices

A notice or other document relating to this Framework (**Notice**) must be in writing in English.

### 6.3.2 Means of giving Notices

In addition to any other lawful means, a Notice may be given by being personally delivered or sent by pre-paid post or email.

### 6.3.3 Effect and receipt of a Notice

- (a) Unless a later time is specified in it, any Notice takes effect and is given from the earlier of the time it is actually given or is taken to be given.
- (b) A Notice is taken to be given, in the case of a Notice given by:
  - (i) hand, at the time of delivery;
  - (ii) post, on the second day following the date of posting (other than a Notice acknowledging the receipt of an Access Application which is taken to be given on the date of posting); and
  - (iii) email, unless the sender receives an automated message that the email has not been delivered, when the sender receives an automated message confirming delivery to the recipient or the recipient's email server,provided that, if a Notice is given:
  - (iv) after 5:00pm in the place of receipt; or
  - (v) on a day which is not a Business Day in the place of receipt, it is taken as having been given on the next Business Day.

#### **6.3.4 Process service is not affected**

This **clause 6.3** does not affect any process or other document relating to litigation, administrative or arbitral proceedings relating to this Framework (which may be served in accordance with any other applicable Law).

### **6.4 Transitional provisions**

- (a) All acts, applications, approvals, approval processes, arrangements, circumstances, conduct, decisions, determinations, dispute resolution processes, events, Force Majeure Events, matters, negotiations, notices, omissions, requests, time periods, votes, warranties or any other process or thing whatsoever (**Matter**) done, agreed, arising, given, received, undertaken, commenced or established (**Done**) or deemed to be Done under the 2016 Undertaking are deemed to be Done and, as applicable, continue under this Framework as though the Matter was Done under this Framework to the extent that this Framework provides for equivalent Matters to be Done.
- (b) Any access applications or renewal applications Done before the Effective Date and not subject to **clause 6.4(a)** are deemed to be Done and, as applicable, continue under this Framework to the extent this Framework provides for equivalent matters to be Done (for example, Access Application negotiations).

### **6.5 Severability**

- (a) Subject to **clause 6.5(b), 6.5(b)**, if a provision of this Framework is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of the other provisions of this Framework.

- (b) **Clause 6.5(a)** does not apply if severing the provision:
- (i) materially alters the scope and nature of this Framework; or
  - (ii) would be contrary to public policy.

## Part 7 Definitions and interpretation

### 7.1 Definitions

In this Framework:

**2016 Undertaking** means Queensland Rail's access undertaking in relation to the Network as approved by the QCA on 11 October 2016 (as amended pursuant to draft amending access undertakings approved by the QCA);

**Above Rail Services** means those activities, other than Below Rail Services, required to provide and operate Train Services, including Rolling Stock provision, Rolling Stock maintenance, non-Network Control related communications, train crewing, terminal provision and services, freight handling and marketing and the administration of those activities and **Above Rail** has a similar meaning;

**Access** means the non-exclusive right to use a specified part of the Network for the purpose of operating Train Services;

**Access Agreement** means an agreement between Queensland Rail and an Access Holder for the provision of Access;

**Access Application** means a request for Access Rights by an Access Seeker that includes:

- (a) the information referred to under **schedule BB**; and
- (b) all additional or clarified information required by Queensland Rail under **clause 2.3.1; 2.3.1**;

**Access Charge** means the charge or other amount payable by an Access Holder to Queensland Rail for the provision of Access under an Access Agreement and includes, except where the context requires otherwise, Take or Pay Charges;

**Access Funder** means a reference to an Access Seeker, an Access Seeker's Customer or an End User Access Seeker depending on which party (or parties) elects to fund the Extension (or relevant Extension Stage);

**Access Holder** means a person who holds Access Rights under an Access Agreement;

**Access Rights** means an entitlement to Access in accordance with a specified Train Service Entitlement;

**Access Seeker** means a person who is seeking new or additional Access Rights from Queensland Rail including, for clarity, a Renewal Access Seeker;

**Accredited** means accredited (including exempted from the requirement to

be accredited and any conditions applying to that accreditation or exemption)  
in accordance with Part 3 Division 4 of the RSNL;

**Additional Capacity** means the additional capability of the Network to accommodate Train Services that would result from an Extension;

**Aggrieved Access Holder** has the meaning given to that term in **clause 3.6(a)**[3.6\(a\)](#);

**Alternative Schedule Time** means a Train Service proposed by Queensland Rail, which is a Useable Schedule Time;

**Authorisation** means any consent, accreditation, authorisation, registration, filing, lodgement, notification, agreement, licence, certification, commission, permit, approval, exemption, ruling or other permission from, by or with an Authority required by any Law or lawfully required by any Authority;

**Authority** means:

- (a) the Crown or any minister of the Crown;
- (b) any government, federal, state or local government department or other governmental, semi-governmental or judicial body or authority including local government, a court or a tribunal;
- (c) any corporation, authority, body or force constituted for a public purpose (including any police service or force);
- (d) any holder of an office for a public purpose;
- (e) any governmental, semi-governmental or judicial person; and
- (f) any person (whether autonomous or not) who is charged with the administration or enforcement of a Law,

including any officer or agent of the foregoing acting in that capacity but excluding the Rail Authority;

**Available Capacity** means Capacity excluding:

- (a) all Committed Capacity other than, in relation to an Access Application:
  - (i) Committed Capacity that will cease being Committed Capacity prior to the time period for which Capacity is being assessed for that Access Application; and
  - (ii) Capacity that is required to comply with any Passenger Priority Obligation or Preserved Train Path Obligation that can be allocated by Queensland Rail to that Access Application in accordance with that Passenger Priority Obligation or Preserved Train Path Obligation and is not otherwise Committed Capacity;
- (b) Queensland Rail's reasonable requirements for the exclusive use of the Network for the purposes of:
  - (i) performing activities associated with the maintenance or repair of the Network, or undertaking Extensions, including the operation of work Trains; and

- (ii)
- (iii) attending to and performing activities associated with safety matters or the management of safety risks; and
- (c) Capacity that is not available as a result of:
  - (i) an Operational Constraint from time to time; or
  - (ii) restrictions imposed or required from time to time in accordance with any Law;

**Below Rail Delay** means a delay to a Train Service from its Scheduled Train Path in the DTP, where that delay can be solely attributed directly to Queensland Rail in its capacity as the Railway Manager, but excludes:

- (a) cancellations;
- (b) delays resulting from compliance with a Passenger Priority Obligation; and
- (c) delays resulting from a Force Majeure Event;

**Below Rail Services** means the activities associated with the ownership, provision and management of the Network, including:

- (a) the construction, maintenance and renewal of Network assets including to ensure that the Network is provided to the standard required to meet Queensland Rail's obligations to each Network Participant; and
- (b) the network management services required for the safe operation of Train Services on the Network including:
  - (i) Network Control; and
  - (ii) the implementation of procedures and systems, including supporting communications systems, for the safe operation of Train Services and protection of work sites on the Network,

and **Below Rail** has a similar meaning;

**Building Queensland Act** means the *Building Queensland Act 2015* (Qld);

**Building Queensland** means the body corporate of that name established pursuant to the Building Queensland Act;

**Business Day** means a day which is not a Saturday, Sunday or public holiday in Brisbane or, if and to the extent that this Framework expressly refers to another place, in that other place;

**Capacity** means the capability of the Network to accommodate Train Services including all Additional Capacity that is expected to result from Extensions that Queensland Rail has committed to construct;

**Capacity Analysis** means an assessment of:

- (a) whether there is sufficient Available Capacity to accommodate an Access Seeker's requested Access Rights; and

- (b)
- (c) if there is not sufficient Available Capacity to accommodate the requested Access Rights, the Additional Capacity required to grant the requested Access Rights including either:
  - (i) an indicative outline of the works which would be reasonably required to complete the Extensions and an indicative estimate of the cost, standard and scope of, and timing for, the required Extension; or
  - (ii) the scope, standard and cost of the required Extension,

which provides a basis for the negotiation of an Access Agreement and Funding Agreement (if applicable);

**Capacity Information** means the information referred to under **schedule**

**A:A: Ceiling Revenue Limit** has the meaning given to that term in **clause**

**3.2.33.2.3; Committed Capacity** means that portion of the Capacity that is required:

- (a) to meet Train Service Entitlements;
- (b) to comply with any Passenger Priority Obligation or Preserved Train Path Obligation;
- (c) without limitation to **paragraph (b)** of this definition, to comply with any Law requiring Queensland Rail to provide a passenger Train Service with access to the Network; or
- (d) without limitation to **paragraphs (b) and (c)** of this definition, to meet Queensland Rail's requirements from time to time for the operation of passenger Train Services;

**Comparison Train Length** means, in respect of a Train, the amount in metres calculated as the sum of:

- (a) the aggregate of the lengths (in metres) of each item of Rolling Stock comprising or to comprise the Train (including its locomotives) multiplied by 1.02; and
- (b) 125mm multiplied by the number of items of Rolling Stock comprising or to comprise the Train (including its locomotives);<sup>4</sup> or
- (c) such other allowance as can be reasonably substantiated as a prudent allowance;

**Competing Access Applications** means the Access Applications of two or more Access Seekers that are seeking Access Rights relating to the same traffic task<sup>5</sup>;

<sup>4</sup>By way of explanation, the 2% and 125mm allowances are allowances for train handling accuracy and slack movement in draftgear (including free slack in the drag box, compression of the draftgear, clearance/free slack due to coupler wear and pin clearance at the yoke).

<sup>5</sup>This is a situation where if one of the Access Seekers is granted Access Rights, then the other Access Seekers will no longer need a grant of Access Rights – for example:



**Competing Access Seekers** means the Access Seekers whose Access Applications are Competing Access Applications;

**Concept Study** means a study that:

- (a) identifies possible Extension solutions for creating additional Capacity;
- (b) makes a preliminary assessment of potential costs, benefits and risks involved in those possible Extension solutions;
- (c) unless otherwise agreed by Queensland Rail and the relevant Access Seeker, includes an indicative assessment of:
  - (i) the project objectives in relation to the creation of additional Capacity; and
  - (ii) for the possible Extension solutions:
    - (A) a broad cost estimate with a +/- 50% accuracy (or such other accuracy where agreed with the funding Access Seekers (acting reasonably));
    - (B) a preliminary financial analysis and risk assessment; and
    - (C) indicative timeframes for developing and completing the possible Extension solution; and
- (d) includes a proposed scope, budget, duration and deliverables for a Pre-feasibility Study including the reasons for selecting the possible Extension solutions that will be considered during that Pre-feasibility Study;

**Confidential Information** means any information, data or other matter (in this definition, **information**) disclosed to a Recipient by, or on behalf of, a Disclosing Party where:

- (a) the disclosure of the information by the Recipient would reasonably be expected to adversely affect the commercial interests of the Disclosing Party; or
- (b) the information is marked or otherwise indicated as confidential at the time of disclosure to the Recipient,

excluding information that:

- (c) was in the Recipient's lawful possession prior to the disclosure; or

- 
- Where two Access Seekers are competing to provide Train Services under a rail haulage agreement with the same Customer for the same Train Service. This might occur where a mine is conducting a competitive tender for the provision of rail haulage services, there is more than one person seeking to provide those rail haulage services and each of those persons submits an Access Application.
  - Where an Access Seeker is seeking Access Rights in order to provide Train Services under a rail haulage agreement with a Customer and that Customer is also seeking Access Rights itself for the same Train Service.

- (d) whether before or after the disclosure:
  - (i) is in the public domain through means other than a breach of confidentiality by the Recipient (or anyone to whom the Recipient has disclosed it); or
  - (ii) is received by the Recipient independently from a third party who is free to disclose such information;

**Confidentiality Exception** means:

- (a) any disclosure or use of Confidential Information consented to by the Disclosing Party under **clause 2.2.1(b)(i); 2.2.1(b)(i)**.
- (b) any disclosure of Confidential Information to another person who is a party to the negotiations involving the Disclosing Party and Recipient, provided that the confidentiality obligations under this Framework continue to apply to that Confidential Information as if the disclosure was made directly by the Disclosing Party to that other person; or
- (c) any disclosure or use of Confidential Information:
  - (i) to the extent necessary to:
    - (A) the Recipient's directors, officers or employees; or
    - (B) without limiting **paragraph (e)(c)(xii)** of this definition, the directors, officers or employees of a Related Party of the Recipient;
  - (ii) to the extent required or compelled by, or necessary to observe, administer or comply with, any Law;
  - (iii) to the extent consistent with a person's right to disclosure under any Law;
  - (iv) without limiting **paragraphs (e)(c)(ii) or (iii)** of this definition, in accordance with this Framework (including the Network Management Principles) including:
    - (A) in publishing or providing MTPs and DTPs; and
    - (B) for the purpose of consultations or negotiations relating to a modification of a MTP or the scheduling of a DTP in variation from an MTP;
  - (v) to the extent necessary for the conduct of any legal proceedings (including any dispute resolution process under this Framework);
  - (vi) to the extent required under any stock exchange listing requirement or rule;
  - (vii) to the Rail Safety Regulator;
  - (viii) to the Recipient's solicitors, barristers, or accountants under

a duty of confidentiality (which is not waived by the Recipient without the prior written consent of the Disclosing Party);

- (ix) to the Recipient's engineering or other technical consultants and advisers to the extent necessary for the provision of advice to the Recipient (provided they are under a legal obligation not to disclose the Confidential Information to any third party);
- (x) to the Recipient's banker, financier or other financial institution, to the extent required for the purpose of raising funds or maintaining compliance with credit arrangements, if such banker or financial institution has executed a legally enforceable confidentiality deed in favour of the Disclosing Party under which they are obliged to keep the Confidential Information confidential;
- (xi) if Queensland Rail is the Recipient, to any responsible Minister (as defined in the Rail Authority Act);
- (xii) if Queensland Rail is the Recipient, to the extent necessary to:
  - (A) the Rail Authority;
  - (B) the Rail Authority's board members; and
  - (C) the Rail Authority's:
    - (1) chief executive officer, chief finance officer and other senior executives (as those terms are defined under the Rail Authority Act); and
    - (2) other officers and employees;
- (xiii) for the purpose of facilitating Network Control Directions where the disclosure of information is by Queensland Rail in the usual course of undertaking Network Control;
- (xiv) to the extent necessary by any person involved in clearing an event or incident that is preventing or affecting the operation of Train Services on the Network;  
or
- (xv) to the extent necessary by Queensland Rail for the purpose of responding to, managing or clearing an event or incident that is preventing or affecting, or is likely to prevent or affect, the operation of Train services on the Network;

**Consequential Loss** means:

- (a) any special, indirect or consequential loss;
- (b) any economic loss in respect of any claim in tort;
- (c) any loss of profits, loss of revenue, loss of production, loss of use, loss

of contract, loss of opportunity, loss of reputation, loss of goodwill, wasted overheads or any damage to credit rating whatsoever; and

(d) any loss arising out of any claim by a third party,

whether arising in contract, in tort (including negligence), under any Law or otherwise and whether present or future, fixed or unascertained, actual or contingent.

**Costing Manual** means a cost allocation manual prepared by Queensland Rail;

**Corporations Act** means the *Corporations Act 2001* (Cth);

**Customer** means a person that the Access Holder or Access Seeker is providing or intending to provide Train Services (as a Rolling Stock Operator) for or on behalf of;

**Customer Access Seeker** means, where there are Competing Access Seekers and one of those Access Seekers (**Principal Access Seeker**) is the Customer for the other Competing Access Seekers, the Principal Access Seeker;

**Daily Train Plan** or **DTP** means a plan that details the scheduled times for all Train Services and any Planned Possessions, Urgent Possessions and Emergency Possessions for a particular day on a specified part of the Network;

**Dangerous Goods** means any substance or thing defined as dangerous goods, explosives or radioactive material under a Dangerous Goods Code or any substance or thing identified as such in a relevant Access Agreement;

**Dangerous Goods Code** means:

- (a) the Australian Code for the Transport of Dangerous Goods by Road and Rail;
- (b) the Australian Code for the Transport of Explosives by Road and Rail; or
- (c) the Code of Practice for the Safe Transport of Radioactive Material, as published and in force from time to time and as amended or replaced;

**Deed Poll** means the irrevocable deed poll ~~dated [insert date]~~ ~~given~~ signed by Queensland Rail in March 2019 in respect of this Framework;

**Disclosing Party** means, in respect of Queensland Rail and an Access Seeker, either party to the extent that information is disclosed by or on behalf of that party to the other party during the negotiation of Access (including, as applicable, in an Access Application or by the provision of information prior to an Access Application being made);

**Dispute** has the meaning given to that term in ~~clause 6.1.3(a)~~6.1.3(a);

**Dispute Notice** has the meaning given to that term in ~~clause 6.1.3(a)(ii)~~6.1.3(a)(ii); **Dispute Notice Date** has the meaning given to that term in ~~clause 6.1.4(a)~~6.1.4(a); **DORC** has the meaning given in ~~clause 3.2.3(c)~~3.2.3(c); **DTMR** means the Department of Transport and Main Roads for the State of Queensland or other department from time to time responsible

for the administration of the TIA;

**Duplicate Requests** has the same meaning given to that term in clause ~~2.8.1(a)(iv)~~; 2.8.1(a)(iv);

**Effective Date** means 9 September 2020;

**Efficient Costs** means, for each Year during the Evaluation Period, the costs that would be reasonably expected to be incurred by a Railway Manager adopting efficient work practices to, amongst other things, provide, operate and maintain the Network at the required service standard and meet its obligations under Access Agreements, having regard to the circumstances in which Queensland Rail operates its business and including business and corporate overheads;

**Emergency Possession** means a Possession:

- (a) that is required to rectify a fault with the Network:
  - (i) that is considered by Queensland Rail to be dangerous or potentially dangerous to any person; or
  - (ii) where severe speed restrictions have been imposed that affect the scheduled Train Services of Access Holders; and
- (b) that Queensland Rail intends to carry out within five Business Days after the detection of the fault;

**End User Access Seeker** means an Access Seeker who is, or will be, party to an Access Agreement with a Nominated Rolling Stock Operator, granting rights to that Nominated Rolling Stock Operator for the non-exclusive utilisation of a specified section of the Network for the purposes of operating Train Services;

**Environmental Harm** means environmental harm as defined in the *Environmental Protection Act 1994* (Qld);

**Evaluation Period** means:

- (a) for an individual Train Service, the expected duration of the proposed Access Rights in respect of that Train Service; and
- (b) for a combination of Train Services, the lesser of:
  - (i) the expected duration of the longest proposed Access Rights in respect of any one of those Train Services; and
  - (ii) ten years;

**Expected Access Revenue** means:

- (a) for an individual Train Service, the revenue reasonably expected from the Access Charge from that Train Service; and

- (b)
- (c) for a combination of Train Services, the aggregate revenue reasonably expected from the Access Charges for all Train Services comprising that combination of Train Services, where the expected Access Charges for different Train Service types will be developed on a basis consistent with current applicable Access Charges;

**Extension** includes an enhancement, expansion, augmentation, duplication or replacement of all or part of the Network (excluding Private Infrastructure) and “**Extend**” or “**Extended**” will have a comparable meaning;

**Extension Access Principles** means the principles outlined in **schedule EE**;

**Extension Costs** means the costs that would be reasonably expected to be incurred in undertaking an Extension adopting efficient work practices to construct and commission the Extension to the required service standard and to meet the Railway Manager’s obligations under Access Agreements, including:

- (a) costs incurred by Queensland Rail and/or an Access Funder in connection with:
  - (i) obtaining all Authorisations required for the purpose of the Extension, including the acquisition, lease, sublease or licence of any land;
  - (ii) designing, constructing and commissioning the Extension, including:
    - (i) amounts paid to contractors and suppliers of materials;
    - (ii) legal costs;
    - (iii) statutory fees and charges;
    - (iv) compliance costs; and
    - (v) insurance premiums; and
  - (iii) internal administrative, travel, accommodation and overhead costs to the extent that the costs relate to the Extension;
- (b) capitalised interest incurred during the construction of an Extension that Queensland Rail and an Access Funder elect to add to the cost basis of the Extension in accordance with the Financial Accounting Standards Board’s (FASB) *Statement of Financial Accounting Standards No. 34, Capitalization of Interest Cost*). Capitalised interest is to be calculated on daily resets and capitalised monthly, from the date the construction costs for an Extension are incurred by Queensland Rail and/or an Access Funder through to the date the Extension is commissioned by Queensland Rail as a part of the Network;
- (c) but for the avoidance of doubt Extension Costs do not include:

- (i) the GST component of any such costs, expenses or liabilities to the extent that Queensland Rail or an Access Funder is entitled to claim an input tax credit;
- (ii) any costs, expenses or liabilities for which Queensland Rail has been otherwise reimbursed; or
- (iii) any costs or expenses Queensland rail would routinely incur when assessing an Access Application;

**Extension Conditions** has the meaning given to that term in **clause**

~~1.4.2(d)~~1.4.2(d); **Extension Stage** means one of the following (as applicable):

- (a) Concept Study;
- (b) Pre-feasibility Study;
- (c) Feasibility Study; or
- (d) construction and commissioning of an Extension;

**Feasibility Study** means a study that, in relation to a preferred Extension solution identified in a Pre-feasibility Study:

- (a) details the project objective for the preferred Extension solution;
- (b) provides a detailed assessment of technical and operating requirements of the preferred Extension solution;
- (c) includes survey and geotechnical investigations to support the level of design and cost accuracy;
- (d) provides a detailed design for the preferred Extension solution (including independent design verification against Queensland Rail's standards, where Queensland Rail has elected not to fund the Extension and the relevant Access Seekers require it); and
- (e) provides the following details of the preferred Extension solution's scope:
  - (i) an optimised project configuration that would provide the targeted additional Capacity to be created by the preferred Extension solution;
  - (ii) a detailed cost estimate with a +/-10% level of accuracy (or such other accuracy where agreed with the funding Access Seekers (acting reasonably) – for example, for larger projects);
  - (iii) a detailed design and construction project schedule;
  - (iv) the basis on which the project contingency was determined;
  - (v) a financial evaluation;

- (vi)
- (vii) a procurement methodology and report on any previous approaches to the construction market that are relevant to the preferred Extension solution; and
- (viii) a project management plan comprised of:
  - (A) resource management plan;
  - (B) cost management plan;
  - (C) design management plan
  - (D) quality management plan;
  - (E) safety management plan;
  - (F) schedule management plan;
  - (G) risk management plan;
  - (H) project packaging and delivery strategy;
  - (I) procurement management plan;
  - (J) interface management plan;
  - (K) change management plan;
  - (L) environmental management plan;
  - (M) project phases, milestones and deliverables;
  - (N) project risk assessment report; and
  - (O) regulators notification, if needed,

and including the outcomes of any analysis and decisions made in relation to the above matters (with reasons, where applicable);

**Floor Revenue Limit** means the level of revenue that will recover the expected Incremental Cost of providing Access to the individual Train Service or combination of Train Services, as applicable;

**Force Majeure Event** means any cause, event or circumstance or combination of causes, events or circumstances which:

- (a) is beyond the reasonable control of the affected party; and
- (b) by the exercise of due diligence, the affected party was not reasonably able to prevent or is not reasonably able to overcome,

and includes:

- (c) compliance with a lawful requirement, order, demand or direction of an Authority or an order of any court having jurisdiction other than where that requirement, order, demand or direction results from any act or omission of the affected party;
- (d) a strike, lockout, boycott, stoppage, go slow, labour disturbance or other such industrial action, whether or not the affected party is a



- (e) party to such industrial action or would be able to influence or procure the settlement of such industrial action;
- (f) an act of God;
- (g) war, invasion, act of terrorists, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, military or usurped power, blockade, civil disturbance or public disorder;
- (h) equipment failure or breakdown where such failure or breakdown could not have been prevented by Prudent Practices or accident or accidental damage to any thing;
- (i) malicious damage or sabotage;
- (j) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste;
- (k) failure of electricity supply from the electricity grid;
- (l) delay, restraint, restriction, embargo or other material adverse effect arising from any act or omission of any Authority;
- (m) fire, flood, storm surge, cyclone, tornado, tsunami, earthquake, washaway, landslide, explosion, hail, lightning, severe weather conditions or other catastrophe or natural calamity;
- (n) any act or omission of any person other than the affected party or Queensland Rail (including the presence of any such person on or near the Network), without the express authorisation of Queensland Rail, that results in damage to the Network or the use or operation of the Network being prevented or impeded;
- (o) epidemic or quarantine restriction; and
- (p) delay of a supplier due to any of the foregoing whenever arising;

**Framework** means this document (including all schedules) as amended from time to time;

**Framework Objective** means the objective set out in **clause 1.2.2(a)1.2.2(a)**;

**Funding Agreement** has the meaning given to that term in **clause**

**1.4.2(a)(iv);1.4.2(a)(iv)**; **Good Faith** means honestly, and with fidelity to the

Framework Objective; **Incremental Costs** means the costs of providing Access that:

- (a) would not be incurred by Queensland Rail if the individual Train Service or combination of Train Services (as applicable) did not operate on the basis of the assets reasonably required for the provision of Access, including:
  - (i) capital (renewal and expansion) costs; and
  - (ii) the cost of bringing expenditure forward in time; and

(iii)

(b) are assessed as Efficient Costs;

**Indicative Access Proposal** means a non-binding written response from Queensland Rail to an Access Application which includes the information set out in **clause 2.4.22.4.2**;

**Insolvent** means, for an Access Seeker, that at any time in the last five years, one or more of the following events has happened in relation to the Access Seeker:

- (a) the Access Seeker has not been able to pay all its debts from the Access Seeker's own money as and when they become due or has stated that it is unable to do so;
- (b) the Access Seeker has been presumed to be insolvent or unable to pay its debts under any applicable legislation;
- (c) a resolution is passed that the Access Seeker be wound up or placed in liquidation voluntarily or that an administrator be appointed;
- (d) an application or order has been made for the winding up or dissolution of the Access Seeker (other than an application which is dismissed or withdrawn within ten Business Days after such proceedings were commenced);
- (e) a controller, administrator, receiver, liquidator or provisional liquidator has been appointed to the Access Seeker or in respect of any of its property;
- (f) the Access Seeker has entered into or taken any action to enter into (whether formally or informally) an arrangement (including a scheme of arrangement or deed of company arrangement), composition or compromise with, or assignment for the benefit of, all or any class of its creditors or members or a moratorium involving any of them;
- (g) a mortgagee has entered into possession of any of the Access Seeker's assets or undertakings; or
- (h) anything analogous to or of a similar effect to anything described above under the law of any relevant jurisdiction has occurred in respect of the Access Seeker,

provided that, for the purposes of this definition, a reference to the Access Seeker includes any Related Party of the Access Seeker;

**Interface Risk** means a risk to the safety of persons or property or to the environment<sup>6</sup>

arising from the interaction between the Access Seeker's proposed operations and any one or more of:

<sup>6</sup>Environmental risks include:¶

risks in relation to water quality, pollution, contaminated land, nature conservation, hazardous substances and Dangerous Goods, waste and noise; and¶ risks of serious environmental harm, material environmental harm and environmental nuisance as defined in the *Environmental Protection Act 1994* (Qld).

- (a) the Network;
- (b) operations on the Network (including those of other Network Participants and Queensland Rail); and
- (c) persons using the Network, persons on or near the Network or members of the public (including any activities on the Network that may affect those matters),

including risks of Environmental Harm arising out of the Rolling Stock Operator's proposed operations on the Network, provided that a reference to operations in this definition includes railway operations as defined in the RSNL;

**Interface Risk Assessment** means an assessment to:

- (a) identify all reasonably foreseeable Interface Risks;
- (b) evaluate the possibility of the Interface Risks occurring and the safety, commercial and other consequences of those Interface Risks;
- (c) identify appropriate controls and measures to adequately manage all Interface Risks (including any training required for the Access Seeker, any director, officer, employee, contractor, agent or consultant of the Access Seeker and any other person under the control or supervision of, or acting for or on behalf of, the Access Seeker);
- (d) identify the party (as between Queensland Rail and the Access Seeker) responsible for implementing such controls and measures and ensuring their on-going effectiveness;
- (e) identify the applicable Safeworking Procedures and Safety Standards to be adhered to including Queensland Rail's safety policies and procedures and the Operating Requirements Manual;
- (f) identify the minimum standards relating to the interface between Rolling Stock and the Network with which the Rolling Stock and Train Configurations must comply in order for them to be able to be operated on the relevant parts of the Network;
- (g) identify the environmental procedures and standards to be adhered to including relevant elements of Queensland Rail's environmental management system and the Operating Requirements Manual;
- (h) satisfy the requirements under the RSNL (including for an interface agreement (as defined in the RSNL)) or under any other relevant Laws relating to health or safety; and
- (i) satisfy the relevant requirements under the Operating Requirements Manual for such an assessment;

**Interface Standards** has the meaning given to that term in the Operating Requirements Manual;

**IRMP** means an interface risk management plan prepared jointly by the Access Seeker and Queensland Rail in accordance with the Operating Requirements

Manual which incorporates the outcomes of the relevant Interface Risk Assessment;

**Law** includes:

- (a) any statute, ordinance, code, law, by-law, proclamation, rule or regulation or any other subordinate legislation, whether State, Commonwealth or otherwise;
- (b) the terms of any Authorisation;
- (c) common law and equity; and
- (d) any order, circular, requirement, condition, notice, decree, decision, direction or guidelines of any Authority with which Queensland Rail, an Access Seeker, an Access Holder or other relevant person (as the case may be) is legally required to comply including any requirement to pay fees and charges,

whether now, or at any time in the future, in effect;

**Master Train Plan** or **MTP** means a plan detailing the scheduled times as advised by Queensland Rail from time to time for all Train Services and any Planned Possessions on a specified part of the Network, where such scheduled times remain unchanged from week to week;

**Material Default** means, in respect of any document referred to in clause ~~2.8.3(a)(ii)~~[2.8.3\(a\)\(ii\)](#):

- (a) any breach of a term of that document that could reasonably result or have resulted in the termination of that document; or
- (b) the repeated breach of the terms of that document;

**Metropolitan System** means that part of the Network bounded to the north by (and including) Nambour station and to the west by (and including) Rosewood and including all branch lines comprised in that part of the Network;

**Meeting** has the meaning given in clause ~~6.1.4(a)~~[6.1.4\(a\)](#);

**Mt Isa Line System** means that part of the Network bounded to the east by (and including) Stuart and to the west by (and including) Mt Isa and including all branch lines comprised in that part of the Network;

**Negotiation Cessation Notice** has the meaning given to that term in clause ~~2.8.1(a)~~[2.8.1\(a\)](#);

**Negotiation Period** has the meaning given to that term in clause ~~2.7.1(b)~~[2.7.1\(b\)](#);

**Network** means the rail transport infrastructure (as defined in the TIA) for which Queensland Rail is the Railway Manager and which is owned or leased by Queensland Rail or Queensland Rail's successor, assignor or subsidiary, but excluding rail transport infrastructure which is standard gauge track and

over which the transportation is effected by using standard gauge rolling stock;<sup>7</sup>

**Network Control** means the control, management and monitoring (including, as applicable, scheduling) of:

- (a) all Train Movements;
- (b) all other operations of Rolling Stock on the Network; and
- (c) any activities affecting or potentially affecting such Train Movements or Rolling Stock operation or the proper, efficient and safe operation and management of the Network;

**Network Control Directions** means instructions, directions and notifications from time to time issued by Queensland Rail for the purpose of Network Control (including, in relation to an Access Holder or an Access Agreement, preventing or minimising the effect of a material breach of the relevant Access Agreement);

**Network Controller** means a person appointed by Queensland Rail from time to time to perform Network Control for a relevant part of the Network;

**Network Management Principles** means the principles set out in **schedule**

**CC**; **Network Participant** means:

- (a) any person who holds, or uses any other person's, rights of access to any part of the Network in relation to Train Services; and
- (b) any Accredited rail transport operator (as defined in the RSNL) who uses the Network,

including:

- (c) the relevant Access Holder (and its Nominated Rolling Stock Operator); and
- (d) any person in control of, or operating, any Private Infrastructure that is connected to the Network;

**Nominated Rolling Stock Operator** means, for an Access Holder, a Rolling Stock Operator nominated or appointed by that Access Holder in accordance with an Access Agreement for the purpose of operating Train Services for that Access Holder for specified periods in accordance with that Access Holder's Access Rights;

**North Coast Line System** means those parts of the Network bounded to the south by (and including) Nambour station, to the north by (and including)

<sup>7</sup> Examples of rail transport infrastructure include, without limitation, railway tracks and works built for the railway (e.g. cuttings, drainage works, track support earthworks etc.); and other things associated with a railway's operation (e.g. bridges, marshalling yards, stations, overhead electrical power supply systems, tunnels, train operation control facilities etc.)

Cairns and to the west by (but excluding) Stuart and including all branch lines comprised in that part of the Network;

**Notice** has the meaning given to that term in **clause ~~6.3.1~~6.3.1**;

**Operating Plan** means an operating plan setting out how the proposed Train Services are to be operated and which either:

- (a) is consistent with the template published on Queensland Rail's website; or
- (b) where the Access Seeker already has a pre-existing operating plan, includes the same information as that referred to in the template published on Queensland Rail's website;

**Operating Requirements Manual** means the document published by Queensland Rail in accordance with **clause ~~4.3(a)~~4.3(a)**, as amended from time to time by Queensland Rail

**Operational Constraint** means any temporary or permanent constraint on the operation or use of any part of the Network imposed by Queensland Rail (acting reasonably) as it considers necessary in relation to the proper, efficient or safe operation or management of the Network (including speed restrictions, load restrictions, Planned Possessions, Urgent Possessions, Emergency Possessions and signalling or overhead restrictions);

**Operational Report** means the operational report referred to in **clause ~~5.25.2~~**;

**Passenger Priority Obligations** means the obligations of a Railway Manager pursuant to sections 265 and 266 of the TIA;

**Planned Possession** means a Possession (other than an Urgent Possession or an Emergency Possession) where such Possession is entered into the MTP or DTP and adversely affects the operation of Train Services;

**Possession** means a temporary closure or occupation by Queensland Rail of part of the Network (including closure of Track or isolation of any electrical overhead traction system) for the purpose of carrying out Rail Infrastructure Operations, other work or other activities on or in the proximity of the Network;

**Pre-feasibility Study** means a study that, in relation to the possible Extension solutions identified in a Concept Study for consideration in this stage of the study process (**Possible Extensions**):

- (a) confirms the project objectives in relation to the creation of additional Capacity;
- (b) assesses each of the Possible Extensions in respect of:
  - (i) the technical and operating requirements for that Possible Extension;
  - (ii) an indicative assessment of the additional Capacity that might reasonably be expected by implementing that Possible Extension; and

- (iii) a preliminary risk assessment for that Possible Extension;
- (c) includes preliminary survey and geotechnical investigation to support the level of design and cost accuracy required for the study;
- (d) identifies as the preferred Extension solution to be studied under a Feasibility Study, the Possible Extension that is fit-for-purpose and the most efficient and effective solution; and
- (e) provides:
  - (i) a high level engineering assessment of the preferred Extension solution in respect of the total cost of ownership, after allowing for risk, for the purpose of minimising that total cost of ownership;
  - (ii) analysis of the technical and economic feasibility of the preferred Extension solution and identifies why it is preferred;
  - (iii) a project budget, with a +/-20% level of accuracy (or such other accuracy where agreed with the funding Access Seekers (acting reasonably));
  - (iv) an indicative design and construct schedule for the preferred Extension solution that includes time tolerances; and
  - (v) potential benefits (including Capacity, maintenance and operating benefits) of the preferred Extension solution; and
- (f) includes a proposed scope, budget, duration and deliverables for a Feasibility Study,

and including the outcomes of any analysis and decisions made in relation to the above matters (with reasons, where applicable);

**Preliminary Information** means the information referred to in **clause 4.1** of **schedule A-A** (as applicable) and, where that information is published on Queensland Rail's website, that information as published on that website from time to time;

**Preserved Train Path Obligations** means the obligations of a Railway Manager pursuant to section 266A of the TIA;

**Pricing Contravention** has the meaning given to that term in **clause 3.6(a)** **3.6(a)**;

**Private Infrastructure** means rail transport infrastructure (as defined in the TIA), including but not limited to the track, signalling and electrical overhead traction system (if applicable) for which neither Queensland Rail nor Queensland Rail's successor, assignor or subsidiary is the Railway Manager;

**Prudent Practices** means the exercise of that degree of diligence, care, foresight, prudence and skill that would reasonably be expected from a competent, skilled and experienced person in the same type of undertaking in the same or similar circumstances;

**Queensland Rail** means Queensland Rail Limited ACN 132 181 090;

**Queensland Rail Cause** means, subject to the exceptions set out below, Queensland Rail's inability to make the Network available for the operation of Train Services in accordance with a Train Service Entitlement as a result of:

- (g) an Operational Constraint;
- (h) a Force Majeure Event (to the extent that the Force Majeure Event prevents Queensland Rail from providing Access to the Network);
- (i) the derailment of any Train caused primarily by an act or omission of Queensland Rail; or
- (j) any other action by Queensland Rail other than Queensland Rail complying with an obligation in accordance with any applicable Law or the relevant Access Agreement,

except where Queensland Rail's inability to make the Network available for the operation of Train Services in accordance with a Train Service Entitlement is primarily attributable to the Rolling Stock Operator, another Network Participant (other than Queensland Rail) or any other person;

**Rail Authority** means the authority established under section 6 of the Rail Authority Act;

**Rail Authority Act** means the *Queensland Rail Transit Authority Act 2013* (Qld);

**Rail Infrastructure Operations** means:

- (a) the construction of any rail transport infrastructure (as defined in the TIA) to improve, upgrade, expand, extend, replace or vary the whole or any part of the Network;
- (a) any management, maintenance or operational activities relating to the Network, including the improvement, maintenance, repair, modification, installation, removal, renewal or decommissioning of the whole or any part of the Network; and
- (b) any inspections or investigations of the Network;

**Railway Manager** means an Accredited rail infrastructure manager (as defined in the RSNL);

**Rail Safety Regulator** means the National Rail Safety Regulator or the Acting National Rail Safety Regulator appointed under Part 2 Division 2 of the RSNL;

**Rail User Group** means each of the rail user groups referred to in **clause 5.3(a)5.3(a)**;



**Recipient** means, in respect of Queensland Rail and an Access Seeker, either party to the extent that it receives information which is provided by or on behalf of the other party during the negotiation of Access (including, as applicable, in an Access Application or by the provision of information prior to an Access Application being made);

**Related Party** means a related body corporate as defined in the Corporations Act and, for Queensland Rail, includes the Rail Authority;

**Renewal** means, in relation to an Access Holder's Access Rights that are to expire, the Renewal Access Seeker entering into an Access Agreement to hold or continue to hold Access Rights for a further term commencing immediately after the expiry of the relevant Access Rights that have the same origin and destination, require the same or less Train Path requirements and otherwise are substantially equivalent to the relevant Access Holder's Access Rights immediately prior to their expiry;

**Renewal Access Seeker** means, in relation to an Access Holder's Access Rights that are to expire:

- (a) the Access Holder;<sup>8</sup>
- (b) an Access Holder's Rolling Stock Operator; or
- (c) another Rolling Stock Operator competing for the relevant Access Rights;

**Renewal Application** means an Access Application by a Renewal Access Seeker solely for a Renewal;

**Rolling Stock** means rolling stock (as defined under the RSNL) that operates on or uses Track;

**Rolling Stock Operator** means a rolling stock operator (as defined under the RSNL) who operates or will operate Rolling Stock on the Network;

**RSNL** means the Rail Safety National Law (Queensland) as defined in the *Rail Safety National Law (Queensland) Act 2017* (Qld);

**Safety Standards** has the meaning given to that term in the Operating Requirements Manual;

**Safeworking Procedures** has the meaning given to that term in the Operating Requirements Manual;

**Scheduled Train Path** means a Train Path that has been scheduled by Queensland Rail in a Train Schedule;

**Stand Alone provision of Access** means the provision of Access as if the relevant Train Service(s) was (were) the only Train Service(s) provided with Access by Queensland Rail; **Standard Access Agreement** means a pro forma Access Agreement set out in **schedule DD**;

**System** means:

- (a) the Metropolitan System;
- (b) the Mt Isa Line System;

<sup>8</sup>For example, the mine operator who uses the Access Rights to transport coal from its mine is the Access Holder.

(c) the North Coast Line System; and

(d) the West Moreton System; ;

~~(e) the Tablelands System; or any of them, as the context requires.~~

~~(f) the Western System;~~

~~(g) the South Western System; and~~

~~(h) the Central Western System;~~

**Sublease** has the meaning given to that term in the Standard Access Agreement;

**Take or Pay Charge** has the meaning given to that term in **clause ~~3.5.23.5.2~~**;

**Term** means the period beginning on the Effective Date and ending on the Terminating Date;

**Terminating Date** means the earlier of:

(a) the date which is ~~105~~ years from the Effective Date; ~~and~~

(b) the date on which use of all of the ~~Network Systems~~ is ~~taken to be~~ a service declared under Part 5, Division 2 of the *Queensland Competition Authority Act 1997* (Qld); and

(c) the date on which use of each of the Systems are services declared under Part 5, Division 2 of the Queensland Competition Authority Act 1997 (Qld).

**TIA** means the *Transport Infrastructure Act 1994* (Qld);

**Through-Running Train** means a Train that operates both on the Network (in accordance with a Train Service Entitlement) and Private Infrastructure over its journey from a specified origin to a specified destination;

**Track** means that part of the Network comprising the rail, ballast, sleepers and associated fittings;

**Train** means any self-propelled configuration of Rolling Stock operating as a unit on Track;

**Train Configuration** means the description of the combination of Rolling Stock comprising a Train including the identification number, gross mass and tare mass of individual items of Rolling Stock and the order in which those Rolling Stock items are placed in the Train;

**Train Movement** means the operation of a Train on the Network by a Network Participant;

**Train Path** means the use of a specified portion of the Network, which may include multiple sections in sequential order, at a specified time;

**Train Service** means a Train operating on the Network from a specified origin to a specified destination;

**Train Service Entitlement** means an Access Holder's entitlement under an Access Agreement to operate, in accordance with that Access Agreement, a specified number and type of Train Services over the Network within a specified time period and in accordance with specified scheduling constraints for the purpose of either carrying a specified commodity or providing a specified transport service;

**Train Schedule** means the train diagrams, yard schedules, terminal schedules and any other form of train timetable, plan or schedule prepared by Queensland Rail in accordance with the Network Management Principles showing the programmed times of arrival or departure for Train Movements at specified locations on the Network;

**Transfer** means the relinquishment by an Access Holder under an Access Agreement of all or part of its Access Rights in order to create Available Capacity that can be used to grant new Access Rights to that Access Holder (who will be an Access Seeker in relation to those new Access Rights) or to an Access Seeker nominated by that Access Holder;

**Transferee** means the relevant Access Seeker for a Transfer;

**Transport Service Payments** means payments to Queensland Rail from DTMR or any other Authority for specified Below Rail Services for nominated sections of the Network;

**Urgent Possession** means a Possession:

- (a) that is required to correct problems in relation to the Network that are considered by Queensland Rail to be potentially dangerous to persons or property; and
- (b) that Queensland Rail intends to carry out within less than three months after the detection of the problem,

other than an Emergency Possession;

**Useable Schedule Time** means a proposed Train Service that considers an Operator's ability to utilise Rolling Stock and crew (as contemplated by the Operating Plan) to operate on that proposed Train Service. Queensland Rail must also consider, as part of the development of the proposed Train Service, the Operator's ability to operate any connecting Train Services;

**WACC** means the allowable rate of return for the Network consistent with efficient financing costs of a benchmark efficient rail infrastructure owner with a similar degree of risk as that which applies to Queensland Rail;

**West Moreton System** means that part of the Network comprising the rail corridor from (and including) Rosewood to Miles, excluding all branch lines not directly connecting coal mine loading facilities to that rail corridor; and

**Year** means the period of 12 months commencing 1 July.

## 7.2 Interpretation

- (a) In this Framework, unless the context otherwise requires:
  - (i) words in the singular include the plural and vice versa;
  - (ii) any gender includes the other genders;
  - (iii) if a word or phrase is defined, its other grammatical forms have corresponding meanings;
  - (iv) "include", "includes" and "including" must be read as if followed by the words "without limitation";
  - (v) a reference to a person includes a partnership, joint

venture, unincorporated association, corporation, government or statutory body or authority and any other entity recognised by law;

(vi) where:

- (A) a group of persons are in a partnership, an unincorporated joint venture, an unincorporated association or other similar arrangement; and
- (B) that group of persons together execute or seek to execute an agreement (including an Access Agreement or a rail haulage agreement) or such an agreement is executed or is sought to be executed for or on behalf of that group of persons,

then that group of persons is deemed to constitute a single person, Customer, Access Seeker or Access Holder (as applicable);

(vii) a reference to:

- (A) “dollars” or “\$” is a reference to Australian currency;
- (B) a person includes the person’s legal personal representatives, successors, permitted assignees and persons substituted by novation;
- (C) employees includes secondees;
- (D) constructing includes all associated activities such as designing, installing, procuring and commissioning;
- (E) an Extension includes any part of that Extension;
- (F) conduct includes:
  - (1) a benefit, remedy, discretion, authority or power; and
  - (2) any omission and any representation, statement or undertaking, whether or not in writing;
- (G) time is to local time in Brisbane;
- (H) a month is a reference to a calendar month;
- (I) subject to **clause 7.2(a)(vii)(J)**, ~~7.2(a)(vii)(J)~~, a “Part”, “clause” or “schedule” is a reference to the corresponding Part or clause found in **Part 4** [Part 1](#) to **Part 7** [Part 7](#) of this Framework or “schedule” to this Framework as amended or replaced from time to time;
- (J) in a schedule to this Framework:
  - (1) a “Part” or “clause”, is a reference to

- a Part or clause of that schedule unless otherwise stated; and
- (2) a “Part” or “clause” of this Framework, is a reference to a Part or clause found in ~~Part 1~~ [Part 1](#) to ~~Part 7~~ [Part 7](#) of this Framework;
- (K) this or any other document or agreement includes the document or agreement as varied, amended or replaced and despite any change in the identity of the parties to that document or agreement;
- (L) any legislation includes subordinate legislation under it and includes that legislation and subordinate legislation as modified or replaced; and
- (M) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes facsimile transmissions;
- (viii) if the date on or by which any act must be done under this Framework is not a Business Day, the act must be done on or by the next Business Day;
- (ix) where time is to be calculated by reference to a day or event, that day or the day of that event is excluded;
- (x) if a term used in this agreement has the meaning given, or as defined, under any legislation, then that term has the meaning:
  - (A) given, or as defined, under that legislation from time to time; and
  - (B) where that legislation ceases to define that term, last given, or as last defined, under that legislation; and
- (xi) if there is any inconsistency between matters contained in a Schedule or the Preamble and ~~Part 1~~ [Part 1](#) to ~~Part 7~~ [Part 7](#) of this Framework, the provisions in ~~Part 1~~ [Part 1](#) to ~~Part 7~~ [Part 7](#) of this Framework prevail.
- (b) Headings do not affect the interpretation of this Framework.
- (c) To the extent that Queensland Rail’s obligations under this Framework are or become inconsistent with Queensland Rail’s obligations under any Law, this Framework does not apply to the extent of that inconsistency.
- (d) If this Framework obliges Queensland Rail to provide any information, reports, documents or other material (in whatever form) (**Information**) to any person then, despite any other provision in this Framework, Queensland Rail is not required to comply with that obligation if Queensland Rail claims:

- (i) on the ground of self incrimination, a privilege Queensland Rail would be entitled to claim against providing the Information were Queensland Rail a witness in a prosecution for an offence in the Supreme Court; or
  - (ii) that legal professional privilege applies in respect of that Information.
- (e) Despite any other provision in this Framework, this Framework does not expressly or impliedly waive any claim that Queensland Rail may have to legal professional privilege in respect of any information, reports, documents or other material (in whatever form).
- (f) The preamble to this Framework does not affect the interpretation of this Framework and no reference may be made to that preamble to interpret this Framework.

## Schedule A – Preliminary Information and Capacity Information

### 1 Preliminary Information

The following preliminary information will be made available on Queensland Rail's website for Access Seekers:

- (a) **(Introduction)** The criteria for the use of data and the purpose of the preliminary information.
- (b) **(Civil Infrastructure)** A description of the railway and Track and any operational constraints, e.g. grades and curves.
- (c) **(Telecommunications)** A description of the communication system used.
- (d) **(Electric Traction)** A general system description.
- (e) **(Interface Requirements)** Information on track gauge, axle loads, train speeds, Rolling Stock gauge and noise limits.
- (f) **(Locality Information)** Terrain information and climatic conditions and resultant system disruptions.
- (g) **(Committed Corridor Upgrades)** Identification of any relevant committed corridor upgrades.
- (h) **(Maps and Drawings)** Corridor maps and Line Diagrams including plans specifying Track Segments and Mainline Paths.
- (i) **(Level Crossings)** The number of level crossings and the type of protection used.
- (j) **(Train Operations)** Sectional running times (calculated based on the projected average sectional running times), maximum Train lengths incident recovery times.
- (k) **(Systems)** A description of operational, safeworking and

signalling systems.

- (l) **(Interface Standards)** A copy of the relevant Interface Standards.
- (m) **(Commercial Information)** The Standard Access Agreement (if any).

## 2 Capacity Information

For the purpose of **clause 2.7.2-2.7.2** of this Framework, the Capacity Information is as follows:

- (a) Master Train Plan; and
- (b) the relevant current Daily Train Plan (being the current Daily Train Plan for the relevant day (or days) of the week) for the relevant part of the

Network<sup>9</sup> which, for clarity, will be complete and will not be redacted in any way.

## 3 Capacity Information for an Extension

- (a) For the purpose of **clause 2.7.2(a)(ii)-2.7.2(a)(ii)** of this Framework, the Capacity Information must identify if an Extension is required to the Network to provide the access rights sought in the Access Application.
- (b) If an Extension is required then Queensland Rail must during the Negotiation Period provide detailed information on the required Extension, including:
  - (i) the capacity analysis, capacity modelling assumptions, and the modelling simulation outputs that underpin Queensland Rail's decision to require an Extension;
  - (ii) either:
    - (A) an outline of the investigations and works in relation to identifying and undertaking the Extension and indicative estimate of the cost of, and timing for, such investigations and works; or
    - (B) the proposed scope, standard and cost of the rail transport infrastructure (as defined in the TIA) works that will comprise the required Extension;
  - (iii) any information on the Extension that Queensland Rail relied on in developing its response to ~~3(b)(ii)~~ 3(b)(ii) above; and
  - (iv) reasons why Queensland Rail has identified the proposed rail transport infrastructure works as comprising an Extension.
- (c) Queensland Rail will provide ancillary information for the Access Seeker, including:
  - (i) the operational integrity of the relevant corridor that is to

<sup>9</sup> The relevant current Daily Train Plan provided will not show the whole Network. However, Queensland Rail will provide sufficient information about all Train Services that potentially impact on Existing Capacity.

- be extended;
- (ii) minimum technical, engineering and Safety Standards required for the required Extension;
  - (iii) design specifications, infrastructure standards for the Network near to or adjoining the required Extension;
  - (iv) planning procedures developed and maintained by Queensland Rail which need to be taken into account in considering whether to proceed with an Extension;
- (v) all necessary authorisations reasonably required by Queensland Rail to proceed with the Extension;
- (vi) all rights and interests in land that, in Queensland Rail's opinion, are reasonably required and the acquisition terms that would be satisfactory to Queensland Rail, acting reasonably; and
- (vii) subject to the Access Seeker having entered into an applicable confidentiality agreement in accordance with ~~clause 2.2.2(b)~~ [2.2.2\(b\)](#) of the Framework with Queensland Rail, the protocols, standards and procedures an Access Seeker is required to comply with under the terms of the Standard Access Agreement.
- (d) Queensland Rail will also provide:
- (i) the indicative funding requirements for it to assist the Access Seeker to develop the required Extension through the relevant stage of the Access Seeker's investment process; and
  - (ii) a first draft funding agreement that is consistent with the Extension Access Principles in ~~schedule E-E~~ of this Framework.

## Schedule B – Access Application information requirements

### 1 Application

- (a) Without limiting the information requirements that an Access Application must satisfy in accordance with this Framework, an Access Application must satisfy the information requirements set out in this ~~schedule B-B~~.
- (b) This ~~schedule B-B~~ applies as follows:
  - (i) where the proposed Access Application is solely for a Transfer in respect of Transferred Access Rights, ~~clause 7-7~~ applies (and, except as expressly referred to in ~~clause 7-7~~, ~~clauses 2-2~~



- to **6-6** and **clause 8-8** do not apply);
- (ii) where the proposed Access Application is solely a Renewal Application, **clause 8-8** applies (and, except as expressly referred to in **clause 8-8**, **clauses 2-2** to **7-7** do not apply); and
  - (iii) subject to **clauses 4(b)(i)-1(b)(i)** and **(ii), (ii)** for all other proposed Access Applications, **clauses 2-2** to **6-6** apply with **clauses 7-7** and **8-8** only applying to the extent that (if it does at all) the Access Application also in part relates to a Transfer in respect of Transferred Access Rights or is in part a Renewal Application.
- (c) Access Applications must be sent to the address nominated in the application forms published on Queensland Rail's website.

## 2 Access Seeker and Customer details

Relevant identity and contact details including:

- (a) the Access Seeker's name and contact details;
- (b) if the Access Seeker has a Customer, that Customer's name and contact details; and
- (c) if the Access Seeker or its Customer is an unincorporated joint venture, the names and contact details for all of the joint venture participants.

## 3 Ability to use Access Rights

Information needed to assess matters referred to in **clause 2.8.1(a)** of this Framework including the following information about matters to be taken in account under **clause 2.8.1(a)** of this Framework:

- (a) where the Access Seeker seeks Access Rights that will be used for a person who is the Access Seeker's Customer, information evidencing that the Access Seeker is reasonably likely to have such a Customer at the commencement date of the Access Agreement.

- (b)
- (c) whether the Access Seeker has secured, or is reasonably likely to secure:
  - (i) the rights required to enter and leave the Network (for example, rights to unload at its destination); and
  - (ii) if applicable, a rail haulage agreement for the operation of Train Services referred to in its Access Application, including within timeframes consistent with the Access Application;
- (d) whether the Access Seeker or its Nominated Rolling Stock Operator has sufficient facilities (including Rolling Stock, provisioning facilities, maintenance facilities and storage facilities) to enable it to run Train Services to fully utilise the Access Rights sought; and
- (e) where the Access Rights are sought to transport the output of a mine, whether the anticipated output of the mine is sufficient to support full utilisation of the Access Rights sought.

## 4 Form of Access Agreement

Nominate whether the form of Access Agreement that the Access Seeker is seeking will be principally based on the form of the Standard Access Agreement or, where a different form is proposed, a description of (including the contractual outcomes being sought) and reasons for the proposed form.

## 5 Coal and freight Train Services

### 5.1 General Train Service details

Information describing the requested Train Services, including:

- (a) the route of operation (include diagram if necessary) including origin, destination, loading facility, unloading facility and depot;
- (b) the proposed commencement date for Train Services;
- (c) the proposed term of the Access Agreement;
- (d) the method of transporting freight (e.g. containers, louvered wagons, bulk wagons);
- (e) a description of freight/commodity;
- (f) the net tonnes of product per annum for each Year of operation, represented on a monthly basis or, where monthly railings are not even, the proposed distribution of net tonnes; and
- (g) the proposed non standard operating modes or methods (if applicable);

### 5.2 Timetable requirements

Information setting out the timetabling requirements, including:

- (a) whether the Access Rights sought are for a new Train Service or a variation to an existing Train Service for the Access Seeker;

- (b)
- (c) required frequency of Train Services, including weekly requirements, seasonality variations and any trends over the proposed Access Agreement term;
- (d) the preferred departure and arrival windows on preferred days of operation, separately for forward and return journeys, where relevant; and
- (e) the requirements for shunting or dwell times<sup>10</sup> enroute, separately for forward and return journeys.

### **5.3 Rolling Stock and above rail operational details**

For all Access Seekers other than an End User Access Seeker, information describing the Rolling Stock and Train Configurations, including:

- (a) the proposed number of locomotives per Train;
- (b) the proposed number of wagons per Train;
- (c) the type and class of locomotive;
- (d) the mass of each locomotive (includes full sand and fuel load);
- (e) the type and class of wagons;
- (f) the nominal gross mass of wagon;
- (g) the tare mass of each wagon;
- (h) if carrying containers:
  - (i) the tare mass per container; and
  - (ii) the average number of containers per wagon;
- (i) the average proposed load (of product) per wagon;
- (j) the maximum proposed gross tonnes per wagon;
- (k) the maximum axle load of locomotives and wagons;
- (l) the gross tonnes and the nominal payload per Train Service, separately for forward and return journeys;
- (m) the Comparison Train Length for the proposed Train;
- (n) the proposed sectional run times;
- (o) the proposed maximum dwell times, time at loading facility, time at unloading facility and time at depot; and
- (p) the proposed requirements (if any) for the short-term storage of Trains (excluding individual items of Rolling Stock) on the Network at

locations

(q)

specified by Queensland Rail during Possessions or during the operation of a Train Service.

#### **5.4 Infrastructure requirements**

Details of any Extensions and Private Infrastructure and any other rail transport infrastructure that may be necessary for operation of the Train Service, where known.

## **6 Passenger Train Services**

### **6.1 General Train Service details**

Information describing the Train Services, including:

- (a) the route of operation (including a diagram, if necessary);
- (b) the proposed term of the Access Agreement;
- (c) the type of passenger traffic (e.g. long distance, commuter, tourist);
- (d) the proposed sectional run times; and
- (e) the proposed requirements (if any) for the short-term storage of Trains (excluding individual items of Rolling Stock) on the Network at locations specified by Queensland Rail during Possessions or during the operation of a Train Service.

### **6.2 Timetable requirements**

Information setting out the timetabling requirements, including:

- (a) whether the Access Rights sought are for a new Train Service, or variation to an existing Train Service, for the Access Seeker;
- (b) whether the Access Rights sought are for a new Train Service, or a variation to an existing Train Service, for the Network;
- (c) the required frequency of Train Services, including weekly requirements, seasonality variations and any trends over the proposed Access Agreement term;
- (d) the preferred departure and arrival windows on preferred days of operation, separately for forward and return journeys; and
- (e) the requirements for shunting or dwell times<sup>11</sup> enroute, separately for forward and return journeys.

### **6.3 Rolling Stock details**

Information describing the Rolling Stock, including:

- (a) the total number of locomotives per Train;

- (b)
- (c) the total number of carriages per Train;
- (d) the total number of passenger multiple units (**PMU**) per Train;
- (e) the type and class of locomotive;
- (f) the mass of each locomotive (including full sand and fuel load);
- (g) the type and class of carriage;
- (h) the nominal gross mass of each carriage;
- (i) the type and class of PMU;
- (j) the average gross mass of PMU;
- (k) the maximum number of vehicles including locomotives, carriages or units within PMU;
- (l) the maximum axle load of locomotives and carriages;
- (m) the Comparison Train Length for the proposed Train;
- (n) the gross tonnes per Train Service, separately for forward and return journeys; and
- (o) the maximum operation speed separately for loaded and empty Trains.

#### **6.4 Infrastructure requirements**

Details of any Extensions and Private Infrastructure and any other rail transport infrastructure that may be necessary for operation of the Train Service, where known.

## **7 Transfers**

Information relating to the Transfer including:

- (a) relevant identity and contact details relating to the Transferee including:
  - (i) the Transferee's name and contact details;
  - (ii) if the Transferee has a Customer, that Customer's name and contact details; and
  - (iii) if the Transferee or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;
- (b) where the Transferee is not the current Access Holder (**Transferor**) who intends to undertake the relevant Transfer, relevant identity and contact details relating to the Transferor including:
  - (i) the Transferor's name and contact details;
  - (ii) if the Transferor has a Customer, that Customer's name and contact details; and
  - (iii) if the Transferor or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;

- (c) details identifying the Transferor's Access Agreement, and the Access Right under it (including by reference to origin and destination), to which the Transfer relates;
- (d) details referred to in **clauses 3.3** and **4.4** with reference to the proposed Transfer;
- (e) the proposed date and term for the Transfer;
- (f) the information referred to in **clause 5.1** to **5.3-5.3** or **clauses 6.1** to **6.3-6.3** (as applicable);
- (g) evidence that the Transferor's Customer and the Transferee's Customer have been notified of, and have agreed to, the Transfer (except where the Transferor's Customer initiated the Transfer by notice to Queensland Rail); and
- (h) any other information that:
  - (i) it is necessary to provide under this Framework; or
  - (ii) is otherwise necessary and has been notified to the Access Seeker by Queensland Rail.

Transferors and Transferees should note that where only part of the Transferor's Access Rights are to be relinquished as a part of the Transfer, that relinquishment will only occur based on whole Train Paths from origin to destination.

## 8 Renewals

Information relating to the Renewal including:

- (a) relevant identity and contact details in relation to the Renewing Access Seeker including:
  - (i) the Renewing Access Seeker's name and contact details;
  - (ii) if the Renewing Access Seeker has a Customer, that Customer's name and contact details; and
  - (iii) if the Renewing Access Seeker or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;
- (b) where the Renewing Access Seeker is not the current Access Holder, relevant contact details for the current Access Holder including:
  - (i) the current Access Holder's name and contact details;
  - (ii) if the current Access Holder has a Customer, that Customer's name and contact details; and
  - (iii) if the current Access Holder or its Customer is an unincorporated joint venture, the names and contact details for all joint venture participants;

(iv)

- (c) a description identifying the current Access Agreement to which the Renewal relates;
- (d) details referred to in **clauses 3-3** and **4-4** with reference to the proposed Renewal;
- (e) whether the Renewal is for all or part of the relevant existing Access Rights and, where for part only, details of the relevant part;
- (f) details of all changes (if any) in:
  - (i) the information referred to in **clause 5.1** to ~~5-3~~ **5.3** or **clauses 6.1** to ~~6.3~~ **6.3** (as applicable)<sup>12</sup>; and
  - (ii) the Operating Plan,from that relating to the relevant existing Access Agreement.<sup>13</sup>

~~5.4 6.4,~~

<sup>12</sup> A Renewal will not require any Extension therefore **clauses 5.4** and **6.4**, as applicable, are not relevant.

<sup>13</sup> It should be noted that a Renewal only arises where a Renewing Access Seeker wishes to hold or to continue to hold (as applicable) Access Rights equivalent to the relevant existing Access Rights. The greater the nature and degree of change the greater the risk that the relevant Access Application will not be a Renewal.



# Schedule C – Network Management Principles

## 1 Application

Unless otherwise required by any Law, the Network Management Principles set out in this **schedule C-C** will apply in relation to all Train Services.

## 2 Repairs, maintenance and upgrading of the Network

- (a) Subject to **clauses 2(b)-2(b) and 2(e)-2(c)** below, Queensland Rail may at any time, without notice to a Rolling Stock Operator, perform repairs, maintenance or upgrading of the Network, carry out any new work on the Network or take Possession.
- (b) If repairs, maintenance or upgrading of the Network, the carrying out of new work on the Network or taking of Possession are reasonably likely to materially affect Scheduled Train Paths, Queensland Rail will, prior to commencement of the works:
  - (i) take all reasonable steps to minimise any disruption to the Scheduled Train Paths;
  - (ii) notify the relevant Rolling Stock Operator of the works as soon as reasonably practicable; and
  - (iii) use reasonable endeavours to provide an alternative Train Path, but need not obtain the Rolling Stock Operator's consent to such repairs, maintenance, upgrading, new work or Possession.
- (c) Queensland Rail will consult with the relevant Rolling Stock Operator a reasonable time before taking Possession (except in the case of an emergency) with a view to efficient Possession planning and minimising disruption to Train Services.
- (d) Nothing in this **clause 2-2** obliges Queensland Rail to pay compensation to Access Holders whose Train Services are adversely affected.

## 3 Network Control Principles

### Objective

- (a) The prime objective of Network Control is to facilitate the safe running of Train Services, and the commencement and completion of Possessions, as scheduled in the DTPs.

(b)

### Access Holders

- (c) Access Holders must ensure that Above Rail issues, including Train crewing, locomotive and wagon availability and loading and unloading requirements, are appropriately managed to ensure that such issues do not adversely affect a DTP.

### Provision of Network Control information

- (d) Queensland Rail will provide an Access Holder with:
- (i) real time Network Control information that indicates actual running of that Access Holder's Train Services against the relevant DTP;
  - (ii) on request and subject to reasonable terms and conditions, access to Network Control diagrams that indicate actual running of that Access Holder's Train Services against the relevant DTP;
  - (iii) on request and subject to reasonable terms and conditions, information about the type of Train Services operated on the same network (including, for example, coal, freight, passenger and livestock Train Services) to assist Access Holders to determine whether the Network Controller is applying the principles in this **schedule C-C** in a consistent manner between Access Holders; and
  - (iv) on request, the Monthly Train Plan.

### Traffic Management Decision Making Matrix

- (e) Where the operation of a Train Service differs from a DTP, the Network Controller will apply the Traffic Management Decision Making Matrix in **clause 3(f)3(f)**, for the purposes of giving a Network Control Direction.
- (f) In the context of the Traffic Management Decision Making Matrix the meaning of "On Time", "Ahead" and "Late" are determined by the scheduling of paths in the relevant DTP. For example, if a Train Service is travelling in accordance with the path allocated to it in the relevant DTP, it is running "On Time".
- (g) The Traffic Management Decision Making Matrix is as follows:

|                          |  | Train Service A - Current Status           |                              |
|--------------------------|--|--|------------------------------|
|                          |  | Train Service Running "On Time" or "Ahead" | Train Service Running "Late" |
| Train Service B - Rule 1 | Train Service Running "On Time" or "Ahead" | Rule 2                                     | Rule 1                       |

|                 |   |        |        |
|-----------------|---|--------|--------|
| <b>t Status</b> |   |        |        |
|                 | <b>Train Service<br/>Running "Late"</b> | Rule 1 | Rule 3 |

Rule 1. The “Late” Train Service may be given priority provided that the other Train Service will still meet its “On Time” objective, subject to the principles for managing deviations from the DTP in **clause ~~3(g)~~3(g)**.

Rule 2. Both Train Services must meet their “On Time” objective.

Rule 3. Give priority to the Train Service that (in the Network Controller’s opinion), based on its performance, will lose the least time (or make up more time) and hold a greater gain, subject to the principles for managing deviations from the DTP in **clause ~~3(g)~~3(g)**.

### **Principles for managing deviations from a DTP**

(h) It is necessary for Network Controllers to have sufficient discretion to take into account the varying objectives of different traffic types, and the circumstances of a particular part of the Network, in assessing the priority to be given to Train Services and other activities on the Network. Network Controllers will apply the following principles in managing deviations from a DTP:

(i) a Train Service may be given priority over other Train Services if it is reasonably necessary to do so:

- (A) due to, or to avoid, an accident, emergency or incident relating to any part of the Network;
- (B) to remedy, or to mitigate or avoid, the operation of Train Services on any part of the Network being congested, prevented or otherwise materially adversely affected;
- (C) to remedy, or to mitigate or avoid, any Emergency Possession or Urgent Possession on any part of the Network being prevented or otherwise materially adversely affected; or
- (D) to ensure the safe operation of any part of the Network;

(ii) subject to **clause ~~3(g)(i)~~3(g)(i)**, passenger Train Services may be given priority over other Train Services if the Network Controller reasonably believes that this is necessary to seek:

- (A) to bring a “Late” passenger Train Service back to being “On Time” or closer to being “On Time”;
- (B) to prevent that “Late” passenger Train Service becoming “Later”; or
- (C) to avoid an “On Time” or “Ahead” passenger Train Service that is operating, is scheduled to operate, or will be scheduled to operate in the Metropolitan

(D)

Network during any peak period<sup>14</sup> from becoming a “Late” passenger Train Service;

- (iii) subject to **clause 3(g)(i) 3(g)(i)**, livestock Train Services may be given priority over other Train Services if the Network Controller believes that this is desirable taking into consideration the livestock being transported (including, for example, the welfare of the livestock);
- (iv) subject to **clauses 3(g)(i) 3(g)(i) to (iii), (iii)**, a Train Service may be given priority over other Train Services if it is necessary to do so to remedy, or to mitigate or avoid, any Planned Possession on any part of the Network being prevented or otherwise materially adversely affected; and
- (v) subject to **clauses 3(g)(i) 3(g)(i) to (iv), (iv)**, where a Train Service is running “Late” due to a Below Rail Delay, it may be given preference over other Train Services if the Network Controller believes that this is consistent with the critical objectives of the Train Services in question, and that it will result in less aggregated consequential delays to other Train Services than otherwise would be the case.

## ~~Schedule D – Standard Access Agreement~~

## ~~Schedule E – Extension Access Principles~~

### ~~1 Undertaking Premises~~

- ~~(a) Queensland Rail cannot be forced to fund an Extension other than in accordance with this Framework.~~
- ~~(b) Where Queensland Rail has elected, at their option, to not fund an Extension, an:~~
  - ~~(i) Access Seeker will have the right to fund an Extension to create the Additional Capacity required to accommodate its Access Application;~~

<sup>14</sup> The time periods: (a) from 6:00am to 9:00am; and (b) from 3:30pm to 6:30pm, on Business Days or as otherwise notified by Queensland Rail (acting reasonably) from time to time.

~~(ii) Access Holder will have the right to fund an Extension to create the Additional Capacity to remedy or replace sections of the network damaged or destroyed by a Force Majeure Event; and~~

~~(iii) Access Holder will have the right to fund an Extension to increase the Capacity in a System.~~

## ~~2 Framework Coverage~~

~~(a) Access Charges in respect of Access Rights which are able to be provided as a result of an Extension will be determined in accordance with the pricing rules incorporated in this Framework unless Queensland Rail and an Access Funder agree an alternative approach is appropriate in the circumstances.~~

## ~~3 Access Funder Rights and Responsibilities~~

~~(a) The Access Funder, at their option, can elect to~~

~~(i) undertake each Extension Stage with the assistance of Queensland Rail so that the Extension complies with **clause 1.4** of the Framework;~~

~~(ii) require Queensland Rail to undertake each Extension Stage so that the Extension complies with **clause 1.4** of the Framework; or~~

~~(iii) execute separate Funding Agreements with Queensland Rail for each Extension Stage.~~

~~(b) Unless otherwise agreed between the parties, the Access Funder is required to fund all of Queensland Rail's costs related to the Extension including, but not limited to:~~

~~(i) providing assistance to the Access Funder to develop the scope, standard and cost of the Extension at each stage of the Extension project;~~

~~(ii) undertaking an Extension study or investigation on behalf of the Access Funder at each stage of the Extension project; and~~

~~(iii) constructing and commissioning an Extension.~~

~~(c) Subject to **clause 6**, the Access Funder will absorb all costs incurred by the Access Funder that relate to~~

~~the Extension.~~

## ~~4 Queensland Rail Rights and Responsibilities~~

~~(a) Queensland Rail, at the request of an Access Funder, and in accordance with **clause** of the Framework, will promptly:~~

~~(i) provide the Access Funder with all reasonably required information on the Extension;~~

~~(ii) provide a first draft contract to underpin negotiations of a Funding Agreement; and~~

~~(iii) subject to executing a Funding Agreement in accordance with **clause 1.4.3(b)** of the Framework and as relevant to the Extension Stage being funded:~~

~~(A) provide all project assistance that is reasonably required by an Access Funder to develop an Extension to the required study standard;~~

~~(B) apply for any Authorisation, land tenure or land rights required for the Extension; and~~

~~(C) construct, commission and own the Extension.~~

~~(b) No additional fees or on costs may be charged by Queensland Rail in respect of the Extension unless there are additional costs or risks assumed by Queensland Rail which Queensland Rail would not have assumed but for the Extension. Queensland Rail must act reasonably in calculating any additional costs or risks and must provide reasonably satisfactory justification for the additional costs and/or risks.~~

## ~~5 Extension Stages~~

~~(a) Queensland Rail must collaborate with Access Funders in relation to key matters affecting the cost and timing of the Extension, including, but not limited to, project scope, standard, approvals, procurement strategy, cost, construction and timing.~~

~~(b) Prior to the execution of a study Funding Agreement in relation to a Concept Study, Pre-feasibility Study, or Feasibility Study (as applicable), the:~~

~~(i) Access Funder and Queensland Rail (each acting reasonably) must agree the scope of works to be delivered by Queensland Rail at the relevant~~

study stage; and

~~(ii) Queensland Rail must provide an Access Funder with:~~

~~(A) an estimate of the reasonable Extension Costs it expects to incur during the relevant Extension Stage;~~

~~(B) project controls to manage the timing and cost risks in the Funding Agreement; and~~

~~(C) a timetable for the completion of the scope of works.~~

~~(c) Following the execution of a study Funding Agreement for a Concept Study, Pre-feasibility Study, or Feasibility Study (as applicable), Queensland Rail must expeditiously assist, investigate and/or undertake the studies for that Extension Stage that are funded by an Access Funder and report variations to the agreed timetable.~~

~~(d) Prior to the execution of a Funding Agreement in relation to the construction and commissioning Extension Stage:~~

~~(i) the Access Funder should be given the opportunity to collaborate with Queensland Rail in relation to key matters affecting the cost and timing of the Extension, including but not limited, project scope, standard, cost, procurement strategy, construction, and timing; and~~

~~(ii) the Access Funder and Queensland Rail, both acting reasonably, must agree;~~

~~(A) the Extension project scope to be delivered by Queensland Rail in constructing and commissioning the Extension;~~

~~(B) the procurement strategy;~~

~~(C) the estimated cost of the construction project;~~

~~(D) the project timetable for the commissioning of the Extension;~~

~~(E) the inclusion of appropriate project controls and/or contract terms for the Access Funder to manage the timing and cost risks in constructing and commissioning the Extension;~~

~~(F) construction, operational, and other~~



~~material arrangements reasonably required for the construction of the Extension; and~~

~~(G) rights of inspection and audit in relation to each party's compliance with the Funding Agreement.~~

## ~~6 Full Economic Benefit Transfer~~

~~(a) The capitalised cost of an Extension will include all costs expended by the Access Funder on the Extension in accordance with the Framework.~~

~~(b) The capitalised cost of an Extension will be used to calculate the full economic benefit that is to be transferred from Queensland Rail to the~~

~~Access Funder over the economic life of the Extension, regardless of whether or not the Access Funder remains an Access Holder over that time period.~~

~~(c) The full economic benefit derived by Queensland Rail as a result of the capital contribution comprises:~~

~~(i) an amount equal to the return on and of the capital component of Access Charges from any Access Holders that utilise the Capacity created by an Access Funder's contributed asset (with Queensland Rail being entitled to receive an amount equal to the components of Access Charges based on managing, maintaining and operating the network and their contribution to the capital cost of the Extension); and~~

~~(ii) any tax or other financial benefit accruing to Queensland Rail as legal owner of the Rail Transport Infrastructure covered by the Funding Agreement, where the risks have been transferred to the Access Funder as a result of the Funding Agreement.~~

~~(d) Unless otherwise agreed by the Access Funder, the Funding Agreement should be such that Queensland Rail receives no benefit (tax or cash flow) from the Access Funder's contributed asset, with Queensland Rail retaining only the portion of Access Charges related to its operating and maintenance costs.~~

~~(e) For clarity, where the Access Charges from the contributed asset are not sufficient to cover both the return to the Access Funder, and the operating and~~

~~maintenance costs, and any other necessary capital expenditure, for that section of the network, Queensland Rail should only be obliged to return the amount it has received from Access Charges net of the operating and maintenance costs and capital expenditure in any given year (with Access Holders that continue to use the relevant Rail Transport Infrastructure receiving priority over Access Holders that have ceased using it, where Access Charges are not sufficient to cover all returns of capital).~~

## ~~7 Multiple and Subsequent Access Funders~~

- ~~(a) If a number of Access Funders fund an Extension, the Access Funders should have the right to contract for Access Rights for the Additional Capacity up to the proportion of the funding that they provided at the commencement of the Extension. Any uncontracted Additional Capacity would then be available for contracting as per the terms of the Undertaking.~~
- ~~(b) Where an Extension has been, or is being, funded by an Access Funder (**First Party**) and a subsequent party lodges an Access Application for Access Rights that were, or are being, created as a result of that funding by the First Party (**Subsequent Party**), Queensland Rail will:~~
- ~~(i) take into account advice from the First Party to determine, acting reasonably, whether to apply similar funding requirements in its negotiations with the Subsequent Party;~~
  - ~~(ii) require the Subsequent Party to execute a Funding Agreement to share responsibility in respect of part of the funding originally borne by the First Party where it is reasonable for the Subsequent Party to do so; and~~
  - ~~(iii) re-negotiate the terms of the First Party's Funding Agreement to reflect the fact that the Subsequent Party is sharing the responsibility that was originally borne by the First Party, if paragraph (ii) above applies.~~
- ~~(c) For the purposes of determining whether this clause applies to a Subsequent Party, a Subsequent Party will be deemed to use the funded Extension, if the Subsequent Party's Train Service would have required Additional Capacity if the funded Extension had not been built.~~

## ~~8 Funding Agreement Terms and Conditions~~

### ~~8.1 Allocation of Contract Risks~~

- ~~(a) The identification, allocation and management of risks should be balanced and contract risks should be allocated to the party best placed to manage the risk.~~
- ~~(b) An appropriate balancing of risks in a Funding Agreement should recognise the following risk positions of the parties in an Extension undertaken:~~
- ~~(i) a Funding Agreement is only required if Queensland Rail elects, at its option, to not fund an Extension;~~
  - ~~(ii) apart from funding an Extension, an Access Funder has to comply with the Framework; and~~
  - ~~(iii) the Framework gives Queensland Rail responsibility for:
    - ~~(A) approving the efficient scope and standard of an Extension;~~
    - ~~(B) efficiently constructing and owning the Extension; and~~
    - ~~(C) operating and maintaining the Network, inclusive of the Extension; and~~~~
- ~~(c) A balancing of risks in a Funding Agreement should provide appropriate project controls for the Access Funder to manage the cost and timing risks that it has accepted in funding an Extension to accommodate its request for Access.~~

### ~~8.2 Security~~

- ~~(a) As per **clause 1.4.1(b)(ii)** of the Framework, Queensland Rail may require the Access Funder to provide a bank guarantee in support of its commitments under a Funding Agreement.~~
- ~~(b) Any required bank guarantee should reflect the cash flow risk that Queensland Rail has taken on in the Extension and may provide the ability for Queensland Rail to issue 3-6 month 'cash calls' in advance to cover Queensland Rail's costs during construction of the Extension.~~
- ~~(c) Where an Access Funder defaults on a cash call, Queensland Rail is entitled to:~~
- ~~(i) require some form of security deposit equivalent~~

~~to its financial exposure, where the default was not attributable to a legitimate Dispute; and~~

~~(ii) stop all construction activities until the default has been remedied.~~

~~(d) An Access Holder paying a cash security deposit should be credited with interest on the security at a market based rate for as long as it is held by Queensland Rail.~~

~~(e) The Access Funder shall not be entitled to commence Train Services specified in the Access Agreement unless and until all provisions of the Funding Agreement are completed or complied with. Queensland Rail will use all reasonable endeavours to facilitate the Access Funder's completion or compliance with such provisions.~~

### **8.3 Infrastructure Management**

~~Queensland Rail is responsible for the management, operation and control of the Extension during construction and commissioning, in accordance with the Undertaking.~~

### **8.4 Insurance**

~~Insurances are to be effected by the parties to appropriately provide for the relevant insurance risks in the construction of the Extension.~~

### **8.5 Indemnities and Liabilities**

~~Each party is liable for, and is required to release and indemnify each other for, all claims in respect of personal injury, death or property damage caused or contributed to (to the extent of the contribution) by the wilful default or negligent act or omission of that party or its staff.~~

### **8.6 Limitation of Liability**

~~(a) The liabilities of the parties for default shall be limited as agreed in the Funding Agreement.~~

~~(b) The Funding Agreement will specify the circumstances in which each party has a claim against the other party for delays in the Extension project caused by breach of the Funding Agreement or negligence by the other party.~~

~~(c) Claims by either party must be lodged within twelve months of the occurrence of the event or circumstance giving rise to the claim.~~

### **8.7 Default, suspension and termination**

~~The Funding Agreement will specify reasonable events of default and mutual rights of suspension and termination having regard to the commercial interests of both parties.~~

### **8.8 Force Majeure Event**

~~(a) The obligations of either party (other than an obligation to pay monies outstanding) will be suspended where by reason of a Force Majeure Event that party is delayed in, or prevented from, carrying out its obligations under the Funding Agreement.~~

~~(b) The Funding Agreement will provide for a process that might result in termination of the Funding Agreement if circumstances of a prolonged Force Majeure Event prevent the performance by a party of its obligations.~~

### **8.9 Assignment**

~~On commissioning of the Extension, the Access Funder may assign the whole of its Economic Benefit Transfer calculated in accordance with **clause 6**, under the Funding Agreement to another person, with the prior written consent of Queensland Rail (such consent not to be unreasonably withheld).~~

### **8.10 Representation and warranties**

~~The Funding Agreement may set out representations and warranties given by both the Access Funder to Queensland Rail and Queensland Rail to the Access Funder.~~

### **8.11 Material Change**

~~(a) Extension Costs may need to be adjusted to reflect the net impact of any material change where such material change results in a variation to the net cost of Queensland Rail performing its obligations under the Funding Agreement.~~

~~(b) A material change will be defined in the Funding Agreement and should be limited to changes in taxes, laws or approvals and are to be assessed on a case-by-case basis in consultation with the Access Funder.~~

Document comparison by Workshare 9.5 on Sunday, 10 March 2019  
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| Description   | QRAF submitted June 2018   |
| Document 2 ID | file:///C:/Users/Joe.Malcolm/Desktop/Queensland Rail Attachments/Actual 10 March/Attachment G - Access Framework (changes to June 2018 version marked up)\QRAF Execution Version pdf.pdf |
| Description   | QRAF Execution Version pdf   |
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| Deletions      | 556   |
| Moved from     | 0     |
| Moved to       | 0     |
| Style change   | 0     |
| Format changed | 0     |
| Total changes  | 966   |

# Attachment H:

Excerpts from Standard Access Agreement (changes to June 2018 version marked up)



Queensland Rail Submission Draft: 30 May 2018

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Queensland Rail Limited

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[Insert name of Operator]

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[Insert name of Access Holder]

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# Access Agreement

[Note: insert title of Agreement here]

[Note: This agreement is a standard access agreement and is based on the following assumptions, that:

- the grant of Access Rights only involves the allocation of Available Capacity;
- no provisions relating to the provision of Additional Capacity in respect of an Extension are required; and
- no conditions precedent are necessary.

Without limiting the ability of the parties to negotiate terms, if any of these assumptions are not true, then the Parties will need to seek to negotiate amendments.

This standard access agreement contains various notes in respect of alternative clauses (for example, in relation to Dangerous Goods) and in respect of adjustments that are needed where this agreement is in relation to a Subsequent Operator. For example, if this agreement relates to a Subsequent Operator it will be amended to incorporate a new Schedule 1 and Schedule 2 to reflect the Train Services to be operated by that Subsequent Operator.]

Version: 1

Date Approved: [insert date]



- (b) The Access Rights create a non-exclusive contractual right and do not give the Access Holder any right, title or interest of any proprietary nature in the Network.
- (c) The Access Holder unconditionally and irrevocably agrees to comply with the requirements, obligations and processes in:
  - (i) the Access Framework; and
  - (ii) the Deed Poll, including the conditions set out in clauses [6](#), [7-4](#), [8](#) ~~and~~, [9](#) ~~and 10~~ of the Deed Poll.

## 2.2 Exercise of Access Rights and Operator nomination

- (a) The Parties acknowledge and agree that:
  - (i) the grant of the Access Rights does not entitle the Access Holder to operate Train Services itself on the Network (unless it is also an Accredited Rolling Stock Operator and is nominated to operate all or some of the Train Services in accordance with this agreement);
  - (ii) the Access Holder can only utilise the Access Rights by nominating an Accredited Rolling Stock Operator from time to time in accordance with this agreement;
  - (iii) the Access Holder may nominate more than one Accredited Rolling Stock Operator.

# 3 Operational Rights

## 3.1 Grant of Operational Rights

On and from the Commitment Date for each Train Service until the End Date for that Train Service, Queensland Rail grants, and must provide, to the Operator the right to operate that Train Service in accordance with the Train Service Description on the terms and conditions of this agreement.

## 3.2 Nature and scope of Operational Rights

- (a) The right to operate granted under **clause 3.1** is a non-exclusive contractual right and does not give the Operator any right, title or interest of any proprietary nature in the Network.
- (b) The Operator must:
  - (i) only operate on, or use any part of, the Network that is specifically included in this agreement; and
  - (ii) not use the Network for:
    - (A) carrying out any provisioning, inspection, testing or maintenance of Rolling Stock;
    - (B) any marshalling, shunting or other relocation of Rolling Stock;

## 19 Disputes

### 19.1 Application of Dispute resolution process

- (a) **(Disputes under this agreement)** If any dispute, complaint or question arises between the Parties in relation to this agreement (**Dispute**), then:
  - (i) that Dispute must be resolved in accordance with this **clause 19**; and
  - (ii) a Party may give the other Parties a notice in writing (**Dispute Notice**) setting out details of the Dispute and requiring that it be dealt with in the manner set out in this **clause 19**.
- (b) **(Disputes under the Access Framework)** Disputes between Queensland Rail and an Access Seeker in relation to any provision of the Access Framework, a request for Access or the negotiation of an Access Agreement must be dealt with in accordance with the provisions of the Access Framework and must not be dealt with under this agreement. In this clause, the terms **Access Seeker**, **Access** and **Access Agreement** have the meaning given in the Access Framework.
- (c) **(Disputes under Deed Poll)** [Subject to clause 7.2.3 of the Deed Poll](#), the Parties agree that the courts of Queensland have exclusive jurisdiction to determine any disputes arising under the Deed Poll.

### 19.2 Resolution by escalation

- (a) Within five Business Days after the date on which a Party gives the other Parties a Dispute Notice (**Dispute Notice Date**), representatives of the Parties must meet and use reasonable endeavours to resolve the Dispute.
- (b) If the Dispute is not resolved under **clause 19.2(a)**, senior management representatives of the Parties (who, for a Party, are senior to that Party's representative(s) referred to in **clause 19.2(a)**) must, within ten Business Days after the Dispute Notice Date, meet and use reasonable endeavours to resolve the Dispute.
- (c) If the Dispute is not resolved under **clause 19.2(b)**, the Dispute must be referred to each Party's chief executive officer (or his or her nominee – who, for a Party, must be more senior than that Party's representative(s) referred to in **clauses 19.2(a) and (b)**) for resolution.
- (d) If the Dispute is not resolved under **clause 19.2(c)** within 20 Business Days after the Dispute Notice Date (or such other time as agreed between the Parties), the relevant Dispute:
  - (i) must, where this agreement requires referral to an Expert; and
  - (ii) may, by agreement of the Parties (in each Party's absolute discretion) in any other case,

# Attachment I:

**Consistency of Access Framework with Competition Principles Agreement Table**

# Consistency of Access Framework with Competition Principles Agreement

| NCC category                  | CPA principle(s)   | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles   |
|-------------------------------|--|--|
| <b>1. Scope of the regime</b> | 6(3)(a): services provided by means of significant infrastructure facilities | <p>Clause 6(3)(a) of the CPA sets out threshold principles for certification, which mean that the regimes that can be certified as effective access regimes are limited to a narrow range of services provided by means of significant infrastructure facilities.<sup>1</sup></p> <p>Access regimes must apply to services (which the NCC notes includes services provided by means of a railway line).<sup>2</sup> The Access Framework applies 'Access' (clause 1.2.1(d)), which is defined as the non-exclusive right to use a specified part of Queensland Rail's rail 'Network' (clause 7.1). 'Network' is clearly and precisely defined in the Access Framework (clause 7.1).</p> <p>The regimes that can be certified under the CCA as effective access regimes are also limited to regimes covering services provided using significant infrastructure facilities; broadly speaking, infrastructure that meets the access criteria.<sup>3</sup> The access criteria are not met in respect of Queensland Rail's services for the reasons outlined in Queensland Rail's submission. However, in the current context, this is not a relevant consideration for the QCA given its task is to assess whether declaration would promote a material increase in competition in any dependent markets, having regard to the Access Framework.</p> |

<sup>1</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [4.1].

<sup>2</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [4.3]-[4.5].

<sup>3</sup> While there are differences in the wording of the access criteria and the CPA clause 6(3)(a) principles, given certification of an access regime displaces the availability of declaration and noting that the clause 6 principles are guidelines rather than binding rules, the NCC considers it appropriate to interpret the clause 6(3)(a) principles as far as possible in a manner consistent with the declaration criteria while recognising the differences in wording: NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [4.12].

| NCC category                    | CPA principle(s)               | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles   |
|---------------------------------|--------------------------------|--|
|                                 | 6(4)(d): expiry                | <p>Clause 6(4)(d) states that any right to negotiate access should include a date after which the right would lapse unless reviewed and subsequently extended, but existing contractual rights and obligations should not be automatically revoked.</p> <p>The Access Framework will take effect until the earlier of 9 September 2025 (being the date which is five years from the 'Effective Date'), the date on which the use of all of the Systems is a service declared under Part 5 of the QCA Act and the date on which use of each of the Systems are services declared under Part 5 of the QCA Act (clauses 1.1 and 7.1, definitions of 'Term', 'Effective Date' and 'Terminating Date'). The expiry of the Access Framework will not affect the operation of an access agreement, or a right acquired, or liability incurred, under an access agreement, that was entered into before the expiry of the Access Framework.</p> <p>The Deed Poll provides that Queensland Rail will publish on its website, at least 12 months before 9 September 2025, notice of its intention to renew or not renew the operation of the Access Framework for a further term and where operation of the Access Framework is being renewed for a further term, details of the term and a copy of the Access Framework with any amendments (clause 6.1).</p> |
| <b>2. Interstate issues</b>     | 6(2), 6(4)(p)                  | <p>These clauses of the CPA establish principles for the treatment of services that are subject to multiple state and territory access regimes and facilities with an influence beyond a single jurisdiction.<sup>4</sup></p> <p>The Access Framework only applies to services are provided on railway lines that are situated wholly within Queensland and, upon expiry of the current declaration, will not be subject to another access regime. The principles are therefore not relevant in the current context.</p>   |
| <b>3. Negotiation framework</b> | 6(4)(a)-(c): negotiated access | <p>These CPA clauses seek to ensure that an access regime provides an incentive for parties to reach agreement by commercial negotiation with recourse to intervention only where negotiations are unsuccessful.<sup>5</sup> The NCC considers that an effective access regime should appropriately address information asymmetries to enable access seekers to enter into meaningful negotiations, striking a balance between requiring the service provider to disclose sufficient information, while ensuring that the requirements are not unduly onerous.<sup>6</sup></p> <p>The Access Framework provides a detailed process for the negotiation of access to Queensland Rail's services, which establishes an appropriate balance between the interests of Queensland Rail and access seekers (Part 2). The Access Framework includes:</p> <ul style="list-style-type: none"> <li>• a requirement that Queensland Rail and each access seeker negotiate in 'Good Faith' for reaching an access agreement (clause 1.3(b)), 'Good Faith' being defined as honestly, with fidelity to the objective of the Access Framework (clause 7.1);</li> </ul>   |

<sup>4</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [5.79].

<sup>5</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [5.1].

<sup>6</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [5.2].

| NCC category | CPA principle(s)   | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles   |
|--------------|--|--|
|              |  | <ul style="list-style-type: none"> <li>• a requirement that Queensland Rail acknowledge receipt of an access application within five business days after the receipt of the application (clause 2.3.2);</li> <li>• a requirement that Queensland Rail use reasonable endeavours to provide an indicative access proposal to the access seeker within 20 days of acknowledging receipt of the access application (clause 2.4.1);</li> <li>• a requirement that Queensland Rail and an access seeker commence negotiations towards an access agreement as soon as reasonably practicable after the access seeker gives notice of its intention to proceed with an application for access on the basis of the relevant indicative access proposal (clause 2.7.1(a));</li> <li>• requirements that Queensland Rail provide a range of information required by access seekers to ensure a meaningful negotiation, including information about the price at which Queensland Rail provides Access, including the way in which the price is calculated and details of the floor and ceiling, and an estimate of the spare capacity (clauses 2.1.2(b) and 2.7.2); and</li> <li>• an acknowledgement that unless agreed between Queensland Rail and the access seeker, an access agreement must be consistent with the Access Framework and the terms of the standard access agreement (clause 2.9.4(a)).</li> </ul> <p>The Access Framework includes a dispute resolution process where commercial agreement cannot be reached in relation to any provision of the Access Framework, a request for access or the negotiation of an access agreement (clause 6.1). Either party may refer a dispute to arbitration by a single arbitrator agreed upon between the parties or, in default of such agreement within 10 days, then by a single arbitrator selected by the Resolution Institute (clauses 6.1.3(a) and 6.1.5(c)). The arbitration must be conducted in accordance with, and subject to, the Resolution Institute Arbitration Rules (clause 6.1.5(b)) and in making a determination, the arbitrator must have regard to the matters set out in clause 6.1.5(e). These matters are to ensure certainty and consistency in the dispute resolution process and reflect the matters to which the QCA must have regard in making an access determination in respect of declared services, which are set out in section 120 of the QCA Act.</p> <p>The role of the independent arbitrator under the Access Framework means that commercial negotiations are supported by a credible dispute resolution mechanism.</p> |
|              | 6.4(e): reasonable endeavours to facilitate the requirements of access seekers | <p>As observed by the NCC, an access regime may incorporate clause 6(4)(e) through either an express provision or general provisions that have the effect (such as requirements in relation to information disclosure, availability for negotiation and response times).<sup>7</sup> The Access Framework includes requirements that Queensland Rail:</p> <ul style="list-style-type: none"> <li>• provide access seekers with information about the price at which it provides access and capacity information, including information the way in which this information is calculated (clause 2.7.2);</li> <li>• acknowledge receipt of an access application within five business days after the receipt of the application</li> </ul>   |

<sup>7</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [5.6].

| NCC category | CPA principle(s)   | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles   |
|--------------|--|--|
|              |  | <p>(clause 2.3.2), use reasonable endeavours to provide an indicative access proposal to the access seeker within 20 days of acknowledging receipt of the access application (clause 2.4.1) and to commence negotiations towards an access agreement as soon as reasonably practicable after the access seeker gives notice of its intention to proceed with an application for access (clause 2.7.1(a)); and</p> <ul style="list-style-type: none"> <li>notify an access seeker if it is not reasonably possible for Queensland Rail to fulfil the request for access rights made by two or more access seekers that have submitted access applications and the extent to which the access seeker's request cannot be fulfilled, and (where requested) provide reasonable assistance to an access seeker to identify whether its access application can be modified so that it can be accommodated (clauses 2.9.2(d) and (e)).</li> </ul> <p>The Access Framework thus incorporates provisions that have the effect of requiring Queensland Rail to use all reasonable endeavours to facilitate the requirements of access seekers.</p>   |
|              | <p>6.4(f): allows for access to be provided on different terms</p> | <p>Clause 3.3 of the Access Framework provides for price differentiation consistent with standard industry practice, as reflected in the Australian Rail Track Corporation Ltd (<b>ARTC</b>) Interstate Rail Network Undertaking dated 15 July 2008 (clauses 4.2 and 4.3) and ARTC Hunter Valley Coal Network Access Undertaking dated 23 June 2011 (clauses 4.15 and 4.16), each of which have been accepted by the ACCC.</p> <p>The ACCC accepts such undertakings if it thinks it appropriate to do so, having regard to specified matters that include the objects of Part IIIA of the CCA. In finding the limits on price discrimination appropriate, the ACCC stated in its Final Decision regarding the ARTC's Interstate Rail Network Undertaking that:<sup>8</sup></p> <p>1 ... ARTC cannot differentiate between applicants where the services are alike and the applicants are operating within the same end market. The ACCC considers that it is legitimate to apply different prices to services with different characteristics as such characteristics can have a significant impact on the cost of service delivery. In addition, as noted in the Draft Decision, there can be benefits from permitting some price differentiation, as it allows ARTC to maximise revenue while minimising the disruption to consumption.</p> <p>The same reasoning applies in respect of the price differentiation provisions in the Access Framework. The objects of Part IIIA are the same as those of Part 5 of the QCA Act in the relevant respects.</p> <p>The Access Framework also includes restrictions on Queensland Rail unfairly differentiating between:</p> <ul style="list-style-type: none"> <li>in negotiating access, access seekers; and</li> <li>in providing access, access holders,</li> </ul> <p>in a way that has a material adverse effect on the ability of one or more of the access seekers or holders to compete with other access seekers or holders (clauses 1.3(c)(i) and (ii)), subject to the clarification in clause 1.3(d). These restrictions are consistent with those in sections 100(2) (as clarified by section 100(3)) and 168C of</p> |

<sup>8</sup> ACCC, *Final Decision, Australian Rail Track Corporation, Access Undertaking - Interstate Rail Network*, July 2008, page 48.

| NCC category | CPA principle(s)               | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles   |
|--------------|--------------------------------|--|
|              |                                | the QCA Act.   |
|              | 6.4(g)-(i): dispute resolution | <p>These clauses of the CPA provide that an effective access regime should contain a mechanism to ensure parties have recourse to an independent dispute resolution body which can make binding decisions and which should take into account certain factors in making its decisions.</p> <p>The Access Framework provides that disputes in relation to any provision of the Access Framework, a request for access or the negotiation of an access agreement will be resolved in accordance with clause 6.1 of the Access Framework (clause 6.1.2(a)). The process provided for is negotiation and, if required, arbitration.</p> <p>The Access Framework provides for either party to refer a dispute to arbitration by a single arbitrator agreed upon between the parties or, in default of such agreement within 10 days, then by a single arbitrator by a single arbitrator agreed upon between the parties or, in default of such agreement within 10 days, then by a single arbitrator selected by the Resolution Institute (clauses 6.1.3(a) and 6.1.5(c)). This ensures the independence of the arbitrator.</p> <p>The arbitration must be conducted in accordance with, and subject to, the Resolution Institute Arbitration Rules (clause 6.1.5(b)). These are standard arrangements that will ensure that any disputes are effectively and fairly resolved.</p> <p>In making a determination, the arbitrator must have regard to the matters set out in clause 6.1.5(e). These matters reflect the matters to which the QCA must have regard in making an access determination in respect of declared services, which are set out in section 120 of the QCA Act, and reflect the matters set out in CPA clause 6.4(i). The specified matters ensure credible and consistent outcomes from the dispute resolution process.</p> |
|              | 6.4(m): hindering access       | <p>Clause 6.4(m) of the CPA provides that neither a party providing or seeking access to a service shall engage in conduct for the purpose of hindering access to that service by another person.</p> <p>The Access Framework states that Queensland Rail will not engage in conduct for the purposes of preventing or hindering an access holder's access under an access agreement unless the conduct is required under the Framework or is reasonable conduct done in and for an emergency (clause 1.3(c)(iii)). This reflects the obligations imposed on Queensland Rail in sections 104(1) and 125(1) of the QCA Act (as clarified by sections 104(6) and 125(6)).</p>  |
|              | 6.4(n): separate accounting    | <p>Clause 6.4(n) states that separate accounting arrangements should be required for the elements of a business which are covered by the access regime.</p> <p>Clause 5.1 of the Access Framework provides for the publication of annual financial reports, accompanied by an audit certificate specifying whether or not the report has been prepared in accordance with Queensland Rail's Costing Manual, which show revenue and expenses, a return on assets for each of the West Moreton System,</p>   |



| NCC category  | CPA principle(s)                             | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles   |
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|   | 6.4(o): access to financial information      | <p>North Coast System and Mount Isa System.</p> <p>Clause 6.4(o) provides that the dispute resolution body should have access to financial statements and other accounting information pertaining to a service.</p> <p>The Access Framework requires Queensland Rail to provide to access seekers a range of information required to ensure a meaningful negotiation (clauses 2.1.2(b) and 2.7.2). This information can be used for the purposes of arbitration. Under the Resolution Institute Arbitration Rules, the arbitrator may also require parties to produce documents, exhibits or other evidence (article 27). The arbitrator thus has access to financial statements and other accounting information pertaining to the services required for dispute resolution.</p>  |
| <b>4. Dispute resolution</b>                                  | 6(4)(a)-(c), (g)-(l), (o), 6(5)(c)           | <p>Clauses 6(4)(a)-(c) are discussed above. The negotiation framework requirements in these clauses are supported by the requirements for a dispute resolution procedure in clauses 6(4)(g)-(i) and 6(4)(o) (also discussed above), and clauses 6(4)(j)-(l) and 6(5)(c) (discussed below).</p> <p>Clause 6(4)(j) provides that the service provider may be required to extend or permit extension of the facility used to provide the service in certain circumstances. The Access Framework sets out a process whereby Queensland Rail notifies an access seeker if it is willing to fund an extension (clause 2.7.2(b)) and a process to be followed where an access seeker is willing to fund an extension or extension stage (clause 1.4). Where no funding agreement exists, the dispute resolution provisions apply (clause 1.4.5).</p> <p>Clause 6(4)(k) provides that if there has been a material change in circumstances, the parties should be able to apply for a revocation or modification of the access arrangement which was made at the conclusion of the dispute resolution process. There is nothing in the Access Framework or standard access agreement that would prevent a party seeking an amendment to an access arrangement if there is a material change in circumstances.</p> <p>Clause 6(4)(l) provides that the dispute resolution body should only impede the existing right of a person to use a facility where the dispute resolution body has considered whether there is a case for compensation of that person and, if appropriate, determined such compensation. The NCC states that this clause does not mean that an access regime need allow a dispute resolution body to impede existing rights but, where a dispute resolution body can do this, it must also be empowered to consider and determine compensation, if appropriate.<sup>9</sup> As the Access Framework does not permit the arbitrator to impede existing rights, this CPA principle is not relevant.</p> |
| <b>5. Efficiency promoting terms and conditions of access</b> | 6(4)(a)-(c), (e), (f), (i), (k), (n)<br>6(5) | <p>These clauses are discussed above.</p> <p>Clause 6(5)(a) provides that an access regime should incorporate an objects clause that promotes the economically efficient use of, operation and investment in, significant infrastructure thereby promoting effective competition in upstream or downstream markets. The objective of the Access Framework set out in clause 1.2.2 is</p>   |

<sup>9</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [5.67].

| NCC category | CPA principle(s) | Reasons the Deed Poll and Access Framework reasonably incorporate the CPA principles  |
|--------------|------------------|---|
|              |                  | <p>set out in the terms of section 69E of the QCA Act, which reflects the language used in clause 6(5)(a) and the corresponding objects clause in section 44AA(a) of the CCA.</p> <p>Clause 6(5)(b) sets out principles for setting regulated access prices. The NCC states that the principles, while providing considerable discretion and flexibility in setting prices, require that regulated access prices be set to cover costs and provide a return on investment that is commensurate with the risks involved.<sup>10</sup> The NCC goes on to highlight the comment by the Productivity Commission in recommending that pricing principles be incorporated in Part IIIA and clause 6 of the CPA that 'a key role of pricing principles is not so much to prescribe what should happen in a particular situation, but to rule out approaches and methodologies which would be inappropriate'.<sup>11</sup> The Access Framework incorporates the principles set out in clause 6(5)(b) as follows:</p> <ul style="list-style-type: none"> <li>• The Access Framework provides for revenues to meet the efficient costs of providing access and include a return on investment commensurate with the risks involved.</li> <li>• As the constraint on revenue is by reference to efficient (rather than actual) costs, this provides Queensland Rail with an incentive to achieve cost efficiencies.</li> <li>• Flexibility in pricing and efficient price discrimination are provided for in the Access Framework, as discussed above in relation to clause 6.4(f).</li> </ul> <p>Clause 6(5)(c) sets out relevant principles where merits review is provided for. As the Access Framework does not provide for merits review, this CPA principle is not relevant.</p> |

<sup>10</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [6.5].

<sup>11</sup> NCC, *Certification of State and Territory Access Regimes, A guide to Certification under Part IIIA of the Competition and Consumer Act 2010 (Cth)*, December 2017 at [6.6].