



# Baseline Capacity Assessment Report | Public Release 2016 Aurizon Network





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### Document Information

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## Introduction

### Purpose

This document, the 2016 Baseline Capacity Assessment Report (**BCAR**) contains the outcomes of the Baseline Capacity Assessment undertaken by Aurizon Network.

Capitalised terms, unless otherwise defined in this BCAR, have the meanings given to those terms in Aurizon Network's 2016 Access Undertaking (**UT4**).

It is intended that this report is read in conjunction with the 2016 System Operating Parameters (**SOP**), which describes the methodology and the input parameters used to undertake the Capacity Assessment.

The purpose of these documents is to

- increase understanding of how capacity is measured to determine if there is sufficient capacity available when access requests are submitted;
- provide information to supply chain participants on the input parameters and outcomes of Capacity Assessments; and
- comply with Aurizon Network's obligation under clause 7A.4.1(a) of UT4.

### Context

The SOP and Baseline Capacity Assessment Report are part of a suite of assessments and reports that are prepared by Aurizon Network.

The relationship between these documents is provided overleaf and aim to provide context between the different assessments and outputs produced.

## Document structure

The BCAR contains the following sections:

- **Explanatory notes**  
Additional information supporting the approach and key assumptions
- **How to read this report**  
Useful guide on how to read and interpret results presented for each system

For each coal system (**System**) in the Central Queensland Coal Network, the BCAR contains the following sections:

- **Key operational information**  
A description and key characteristics of the system and information relating to the contracted capacity and historic throughput
- **System capacity**  
Waterfall chart of system capacity in TSEs and Tonnes
- **Branch line capacity**  
Heat map of the available capacity in each section of each branch line
- **System monthly variance**  
A breakdown on a month by month basis of the variation of TSEs achieved when undertaking multiple simulations

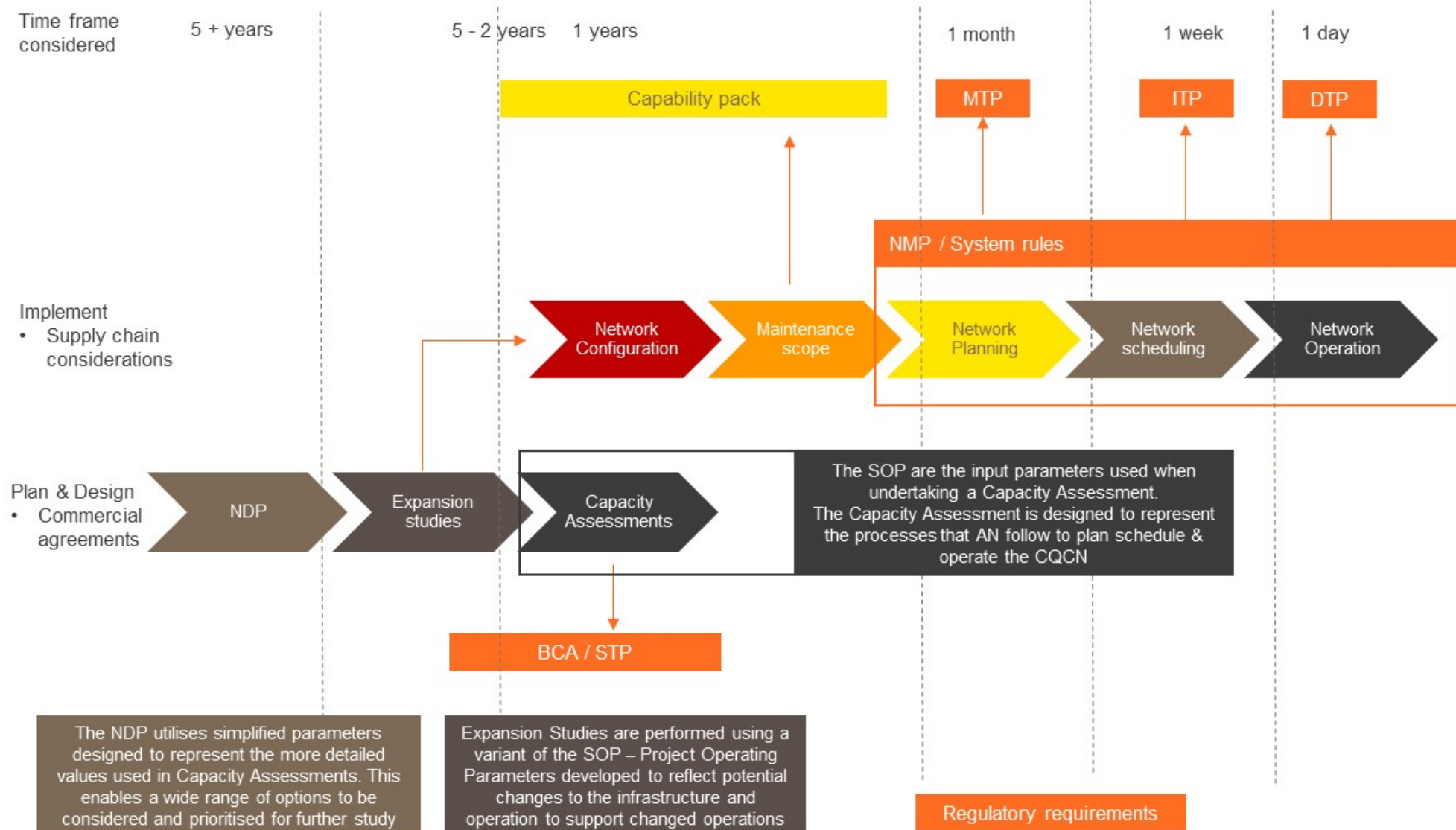


Figure 1: Capacity assessments and reports

## Explanatory notes

### Time period for capacity assessment

The Capacity Assessment covers FY18 and FY19. There are some small differences in the demand inputs for two years in the Blackwater system with a demand difference of 0.1%.

### Modelling approach

When undertaking a Capacity Assessment the simulation is performed to just achieve the demand requirements. This methodology provides a balance between capacity and performance and will produce a very low variation when the simulation is performed over multiple runs.

To establish the system monthly variance (confidence intervals) the simulation is performed to meet a higher demand (120%) which provides a bigger variation between simulations but at a reduced performance.

### TSE scaling and rounding

TSEs are contracted based on a nominal 30 day month. Assessed TSEs are scaled for the days in a given month. The result is rounded according to Section 7.2 of the SOP. These may differ from the contracted TSEs.

For this reason Committed Capacity (and TSE Requirement) may be up to 2% higher than contracted on an annual system basis.

Access Holder, Operator and Customer assessed throughput (TSE Requirement) are contained in the relevant Strategic Train Plan (**STP**) in the Appendices.

### Demand assumptions

In performing the Capacity Assessment, assumptions have been made regarding the demand profile to reflect:

- Extension of contracts ending between this BCAR and the end of the period included in the Draft BCAR

- Inclusion of WIRP demand to reflect the provision of the WIRP infrastructure
- Exclusion of demand where the Access Holder is no longer solvent

This results in the assessed capacity deviating from the contracted capacity shown for some Systems.

### Available Capacity

Available Capacity is provided for each system in accordance with the requirements of UT4. Aurizon Network wish to clarify that the provision of a value for Available Capacity is not a declaration that an Access Seeker will have their access granted.

When undertaking a Capacity Assessment Aurizon Network will consider all factors that may impact on the ability or otherwise to provide capacity including

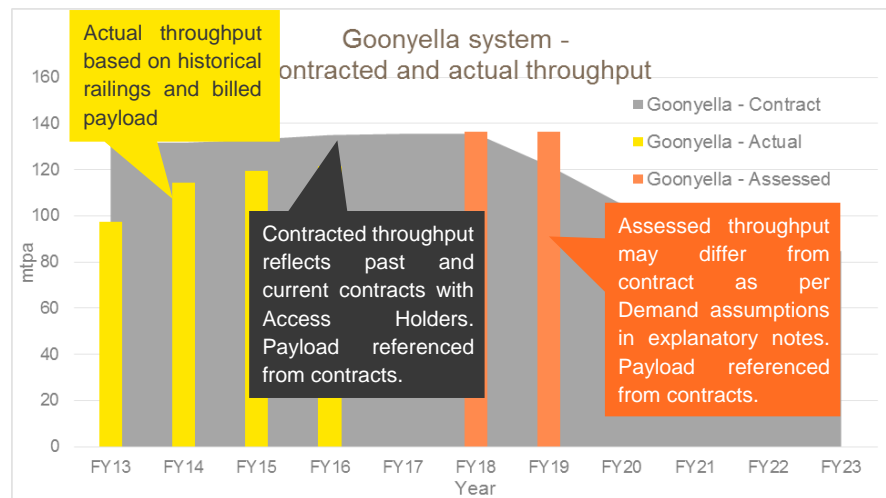
- Mine and Port capacity
- Impact of additional GTKs or maintenance and renewals requirements
- Interaction with other traffic in each System

## How to read this report

This section provides additional information on how to read this report.

### Demand profile

Demand profiles are provided for each system (example below). The purpose is to illustrate Assessed throughput in the context of historical railings (Actual) and contracted throughput. Differences between Assessed and Contracted throughput are explained in more detail in the Demand assumptions of the previous section.



### Branch line capacity

Branch line capacity is provided for each system as heat maps (example right). Branch line capacity is the Available Capacity of each section of track. Sections align with those described by Section Run Times in the System Information Packs and Access Agreements.

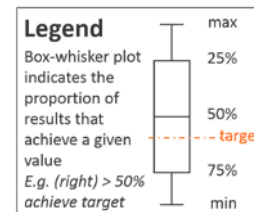
Results are presented in tonnes using the relevant system Nominal Payload. These are aggregated as discrete ranges described in the legend.



Moura and Blackwater Systems are presented together in the Blackwater System section of this report.

### System monthly variance – TSE target

Simulations for system monthly variance are performed at elevated demand to amplify variation between simulations. Box and whisker plots are used as an effective way to communicate variability of results.



The legend (left) describes the percentiles reported in the box and whisker plots. The target line represents the Committed Capacity in each system for each month.

## Newlands and GAPE Systems

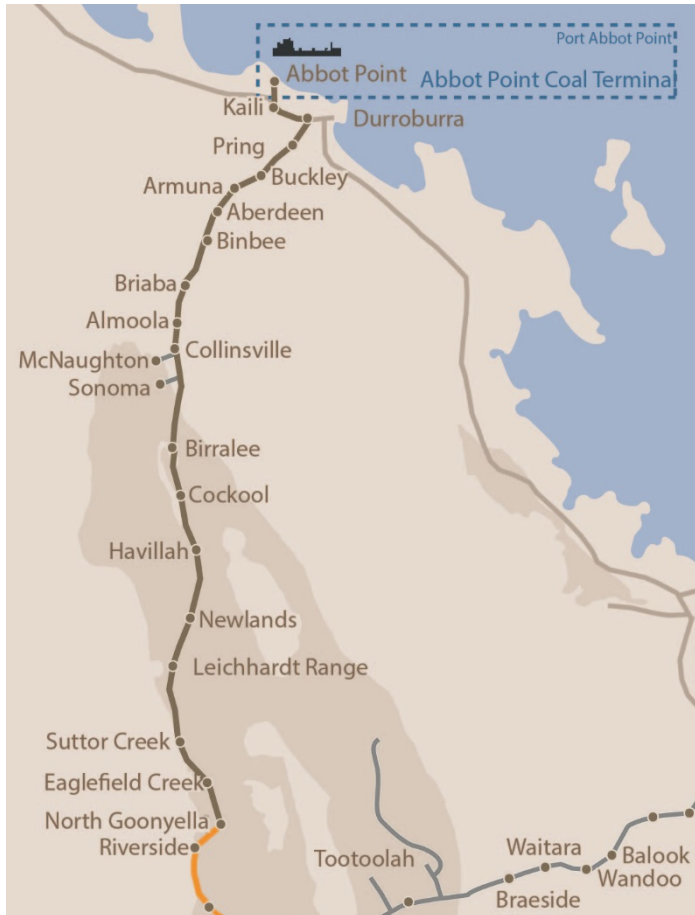


Figure 2: Newlands and GAPE systems

### Key operational information

The Newlands System is located at the northern end of the Bowen Basin in North Queensland. The GAPE system connects the Goonyella System and the Newlands System.

The Newlands and GAPE Systems are predominantly single line with passing loops. It is 1067 mm narrow gauge railway servicing loadout balloon loops and the unload facility at Abbot Point. It is not electrified. The track supports 26.5 tal operation,

Safeworking is provided with remote controlled signalling (RCS) and direct train control (DTC). Full RCS installation has been deferred while system demand is lower than contract. As this infrastructure will be in place prior to full contracted capacity being reached, the assessment assumes RCS to be installed across the entire Newlands System. This provides a better measure of whether full contract can be delivered.

The key parameters of the reference train for the system are:

Comparison train length	Nominal Train Payload
1,402 metres	6,871 tonnes

### Demand profile

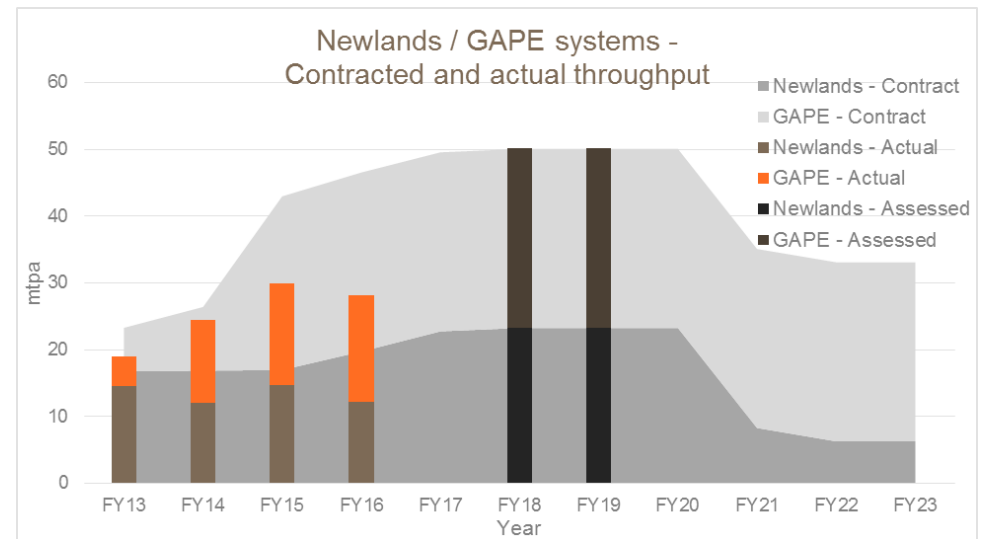


Figure 3: Newlands / GAPE systems contracted, actual and assessed throughput

# Capacity waterfall analysis – Newlands / GAPE

## Train Service Entitlements

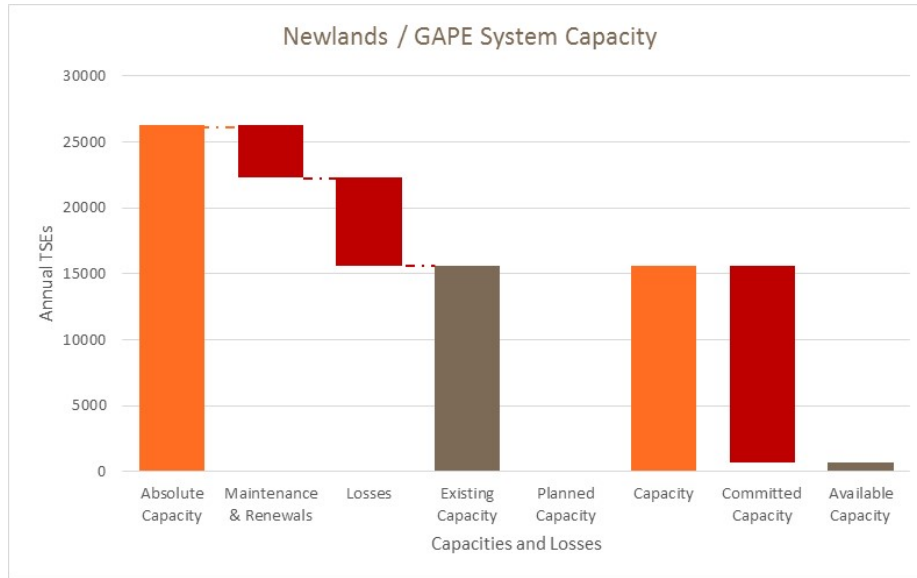


Figure 4: Newlands / GAPE systems capacity waterfall (TSE)

Table 1: Newlands / GAPE System waterfall analysis data table

	Absolute Capacity	Maintenance & Renewals	Losses	Existing Capacity	Planned Capacity	Capacity	Committed Capacity	Available Capacity
<b>TSEs</b>	26,280	3,942	6,701	15,637	-	15,637	14,964	673
<b>Mtpa</b>	90.3	13.5	23.0	53.7	-	53.7	51.4	2.31

## Tonnes

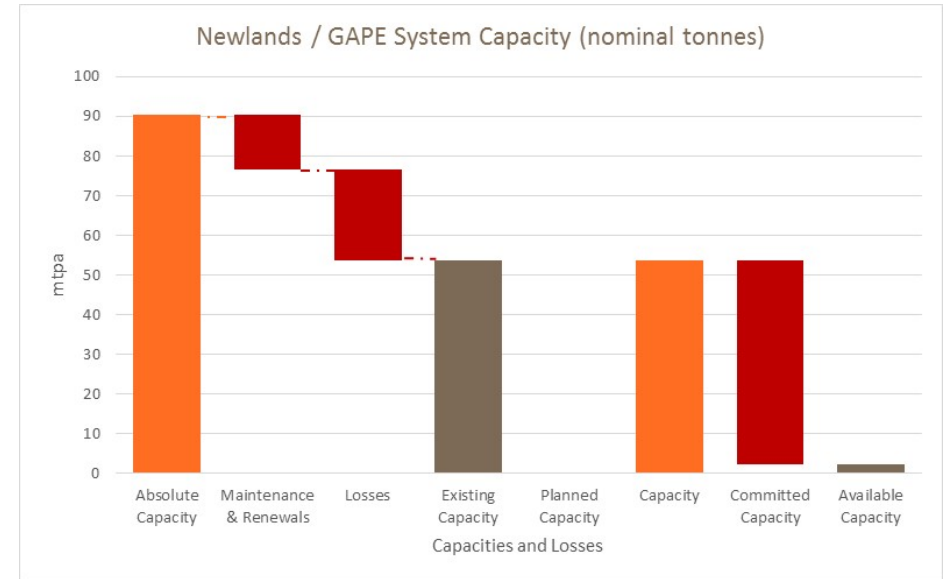


Figure 5: Newlands / GAPE systems capacity waterfall (Tonnes)



## Branch line capacity

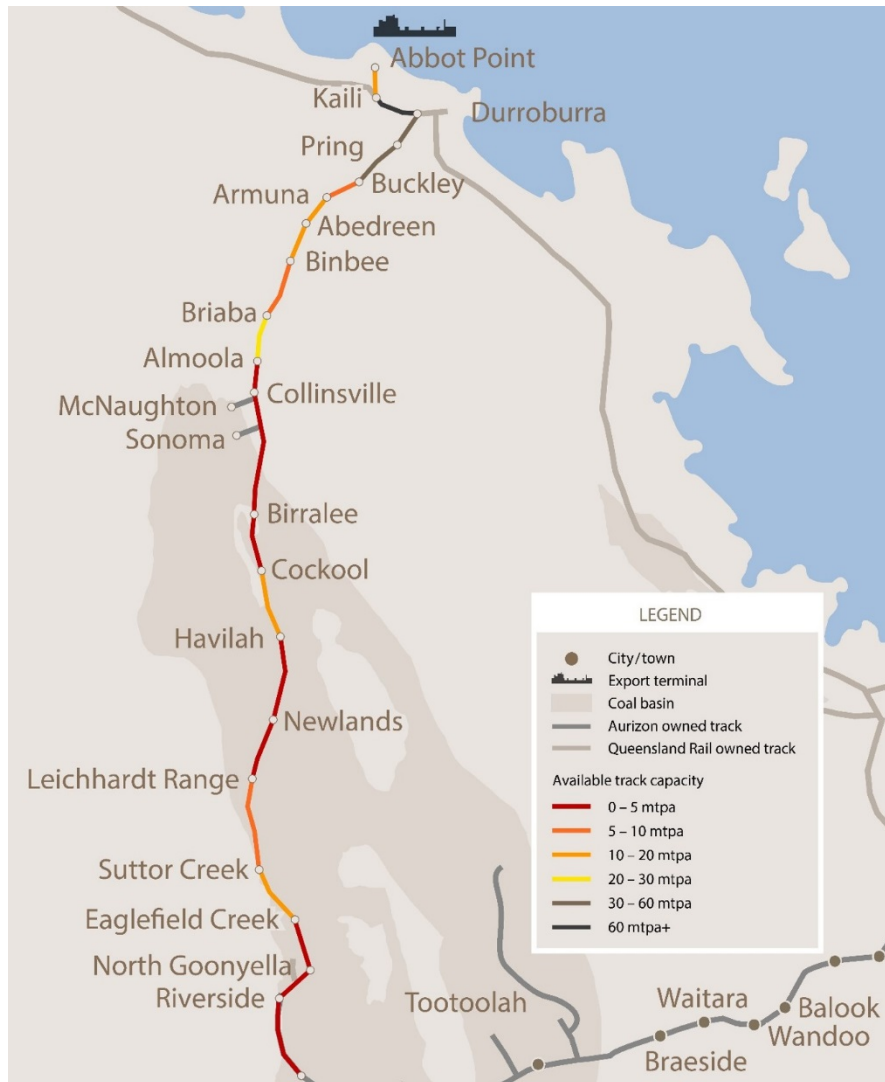


Figure 6: Heat map of Newlands System branch line capacity

## System monthly variance – Newlands / GAPE

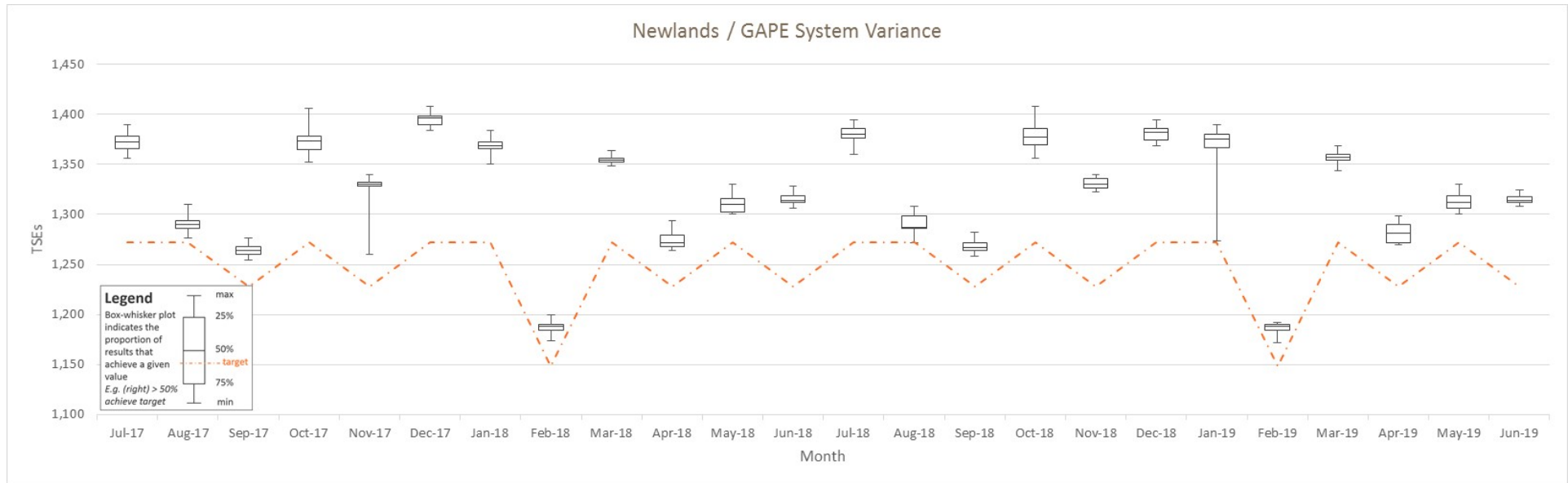


Figure 7: Newlands / GAPE systems monthly variance

Table 2: Newlands / GAPE systems monthly variance data table

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
Target	1,272	1,272	1,228	1,272	1,228	1,272	1,272	1,148	1,272	1,228	1,272	1,228	1,272	1,272	1,228	1,272	1,228	1,272	1,272	1,148	1,272	1,228	1,272	1,228
Maximum	1,390	1,310	1,276	1,406	1,340	1,408	1,384	1,200	1,364	1,294	1,330	1,328	1,394	1,308	1,282	1,408	1,340	1,394	1,390	1,192	1,368	1,298	1,330	1,324
75 <sup>th</sup> percentile	1,378	1,294	1,268	1,379	1,332	1,398	1,372	1,190	1,356	1,279	1,316	1,319	1,386	1,298	1,272	1,386	1,336	1,386	1,380	1,190	1,360	1,290	1,319	1,318
50 <sup>th</sup> percentile	1,372	1,290	1,264	1,373	1,330	1,396	1,368	1,188	1,354	1,272	1,310	1,314	1,380	1,287	1,267	1,377	1,330	1,382	1,375	1,188	1,357	1,281	1,312	1,314
25 <sup>th</sup> percentile	1,366	1,286	1,260	1,365	1,328	1,390	1,366	1,184	1,352	1,268	1,302	1,312	1,376	1,286	1,264	1,369	1,326	1,374	1,367	1,184	1,354	1,272	1,306	1,312
Minimum	1,356	1,276	1,254	1,352	1,260	1,384	1,350	1,174	1,348	1,264	1,300	1,306	1,360	1,272	1,258	1,356	1,322	1,368	1,274	1,172	1,344	1,270	1,300	1,308

## Goonyella System

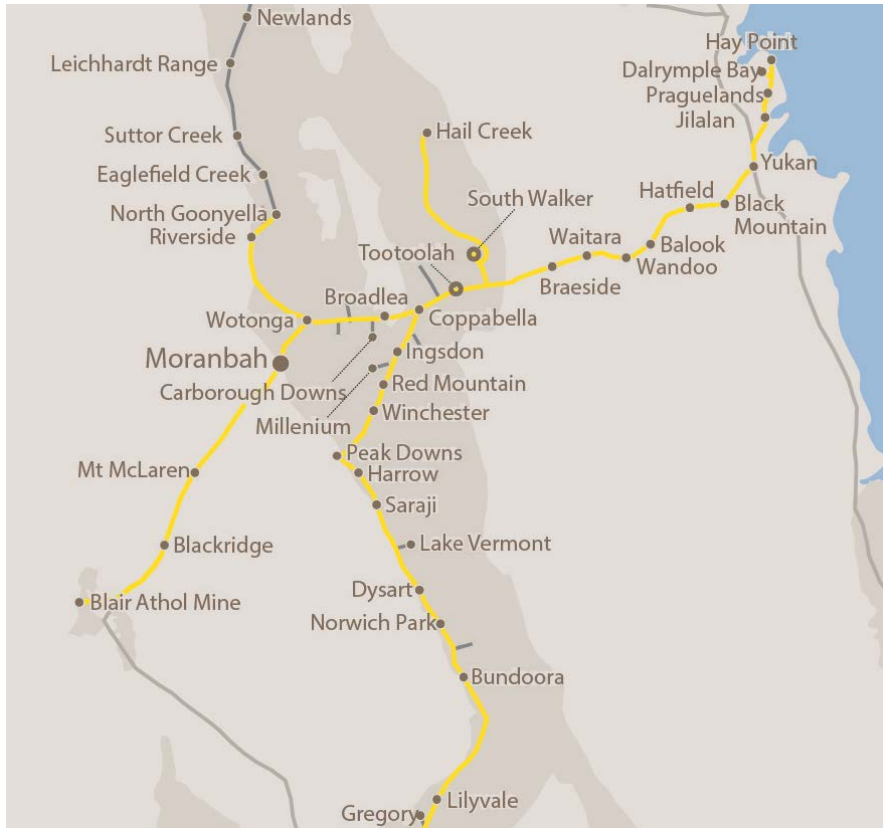


Figure 8: Goonyella System map

### Key operational information

The Goonyella System services the Bowen Basin in Central Queensland and carries product to the port of Hay Point.

Hay Point consists of two separate coal terminals, the Dalrymple Bay Coal Terminal (**DBCT**) and the Hay Point Services Coal Terminal (**HPSCT**). Dual unloading balloons are located at HPSCT and Triple unloading balloons at DBCT.

The Goonyella System is a combination of bi-directional duplicated track and single line track with passing loops. There is a single line connection from Oaky Creek to Gregory linking the Goonyella System with the Blackwater System and a connection to the GAPE system at North Goonyella.

The Goonyella System is completely electrified by an autotransformer system with the overhead line equipment operating at 25,000 volts at 50 Hertz alternating supply (25 kV, 50 Hz, ac). The maximum permissible axle loading is 26.5 tonnes with a maximum speed of 80 km/h. Safeworking is provided by remote controlled signalling (RCS).

The key parameters of the reference train for the system are:

Comparison train length	Payload
2,082 metres	10,055 tonnes

### Demand profile

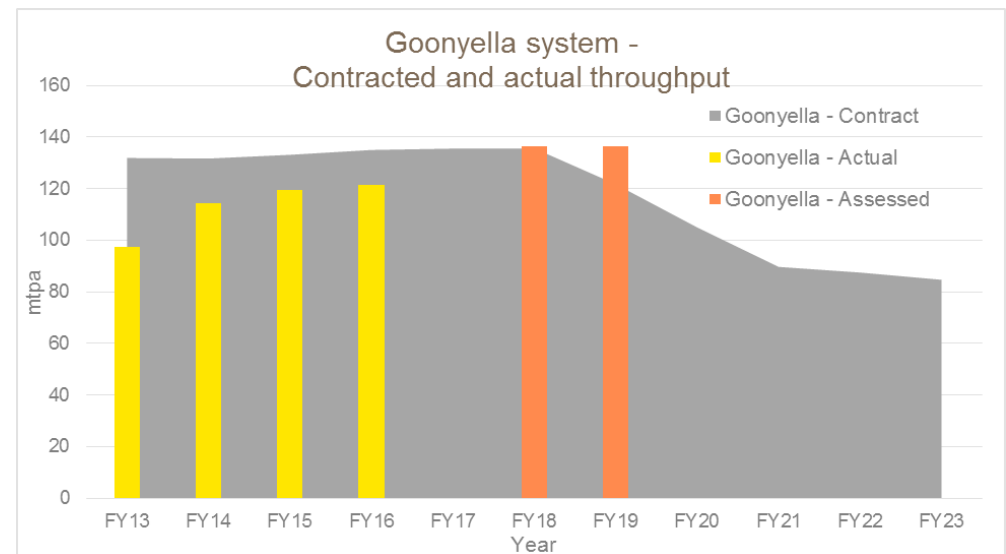


Figure 9: Goonyella System contracted, actual and assessed throughput

# Capacity waterfall analysis – Goonyella

## Train Service Entitlements

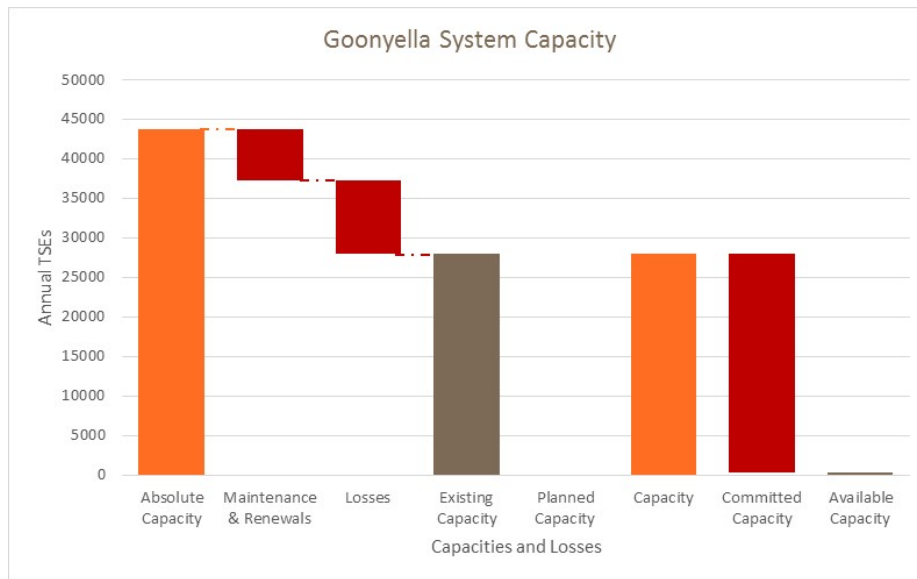


Figure 10: Goonyella System capacity waterfall (TSE)

Table 3: Goonyella System waterfall analysis data table

	Absolute Capacity	Maintenance & Renewals	Losses	Existing Capacity	Planned Capacity	Capacity	Committed Capacity	Available Capacity
TSEs	43,800	6,570	9,308	27,923	-	27,923	27,552	371
Mtpa	220	33.0	46.8	140	-	140	139	1.86

## Tonnes

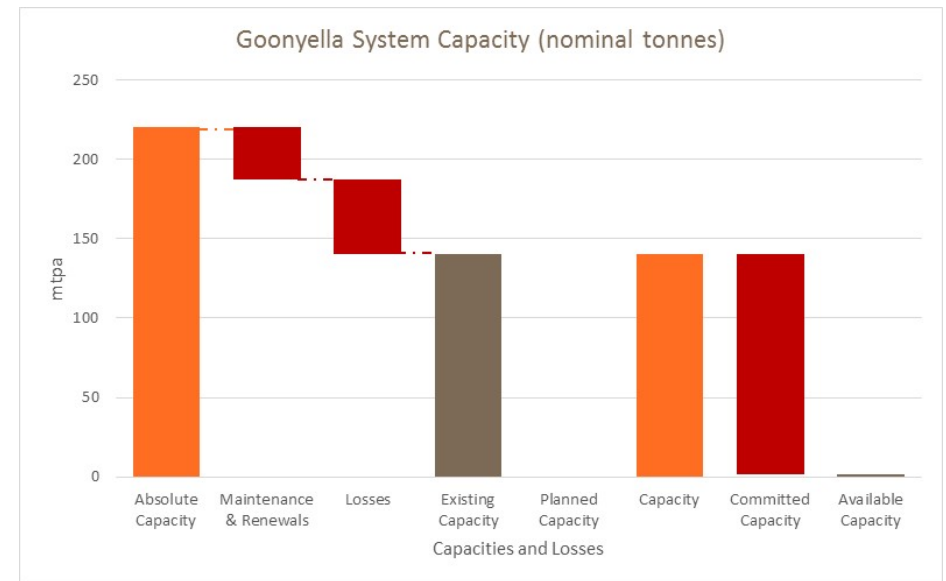


Figure 11: Goonyella System capacity waterfall (Tonnes)

## Branch line capacity

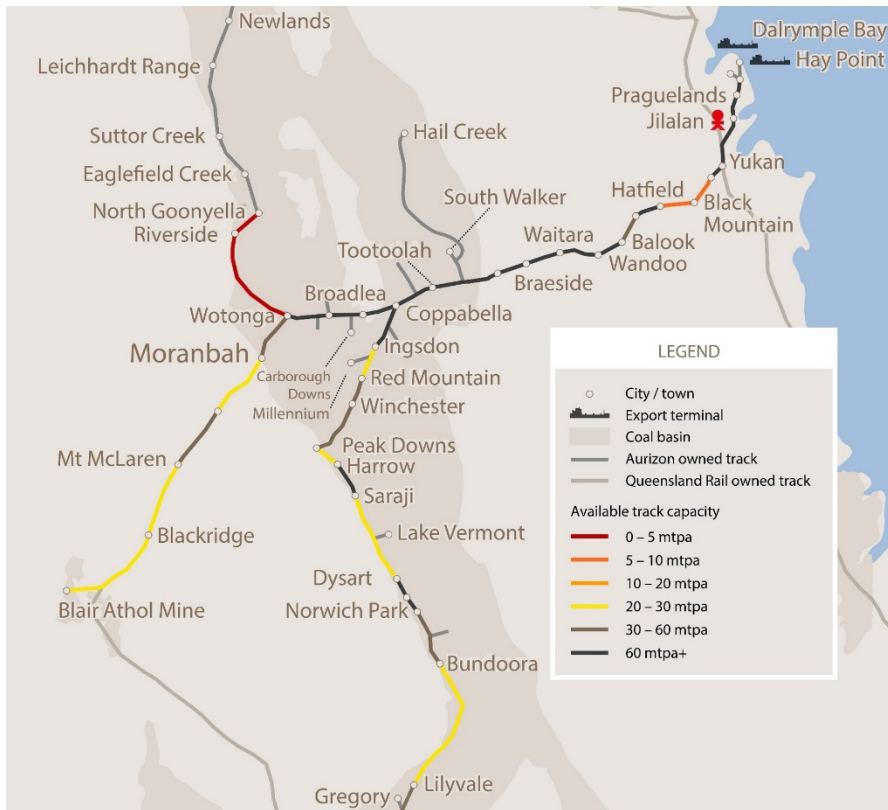


Figure 12: Heat map of Goonyella System branch line capacity

## System monthly variance – Goonyella

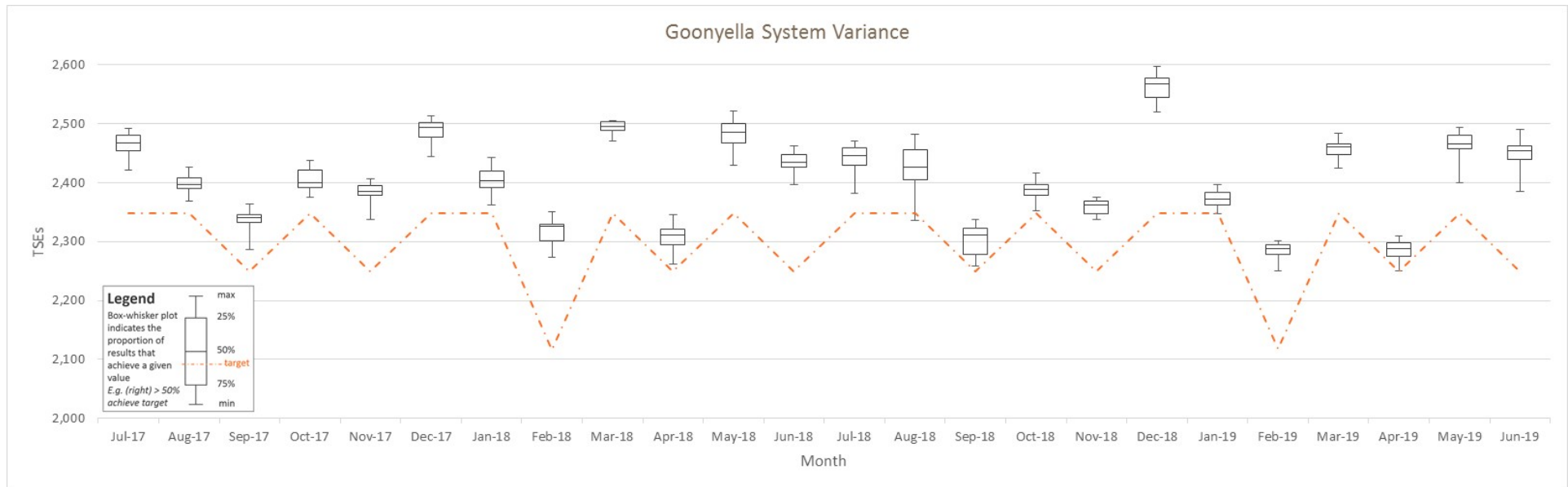


Figure 13: Goonyella System monthly variance

Table 4: Goonyella System monthly variance data table

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
Target	2,348	2,348	2,250	2,348	2,250	2,348	2,348	2,116	2,348	2,250	2,348	2,250	2,348	2,348	2,250	2,348	2,250	2,348	2,348	2,118	2,348	2,250	2,348	2,250
Maximum	2,492	2,426	2,364	2,438	2,406	2,514	2,442	2,350	2,506	2,346	2,522	2,462	2,470	2,482	2,338	2,416	2,376	2,598	2,396	2,302	2,484	2,310	2,494	2,490
75 <sup>th</sup> percentile	2,480	2,408	2,346	2,421	2,395	2,502	2,420	2,330	2,504	2,321	2,500	2,448	2,460	2,457	2,322	2,397	2,368	2,578	2,384	2,294	2,467	2,298	2,480	2,463
50 <sup>th</sup> percentile	2,468	2,396	2,340	2,400	2,385	2,494	2,404	2,326	2,496	2,311	2,486	2,434	2,446	2,426	2,311	2,388	2,362	2,568	2,372	2,288	2,461	2,289	2,466	2,455
25 <sup>th</sup> percentile	2,455	2,390	2,332	2,392	2,378	2,478	2,392	2,302	2,488	2,295	2,468	2,426	2,430	2,405	2,279	2,378	2,348	2,544	2,363	2,278	2,448	2,275	2,458	2,440
Minimum	2,422	2,368	2,286	2,376	2,338	2,444	2,362	2,274	2,470	2,262	2,430	2,396	2,382	2,336	2,258	2,352	2,338	2,520	2,348	2,250	2,424	2,250	2,400	2,386

## Blackwater System

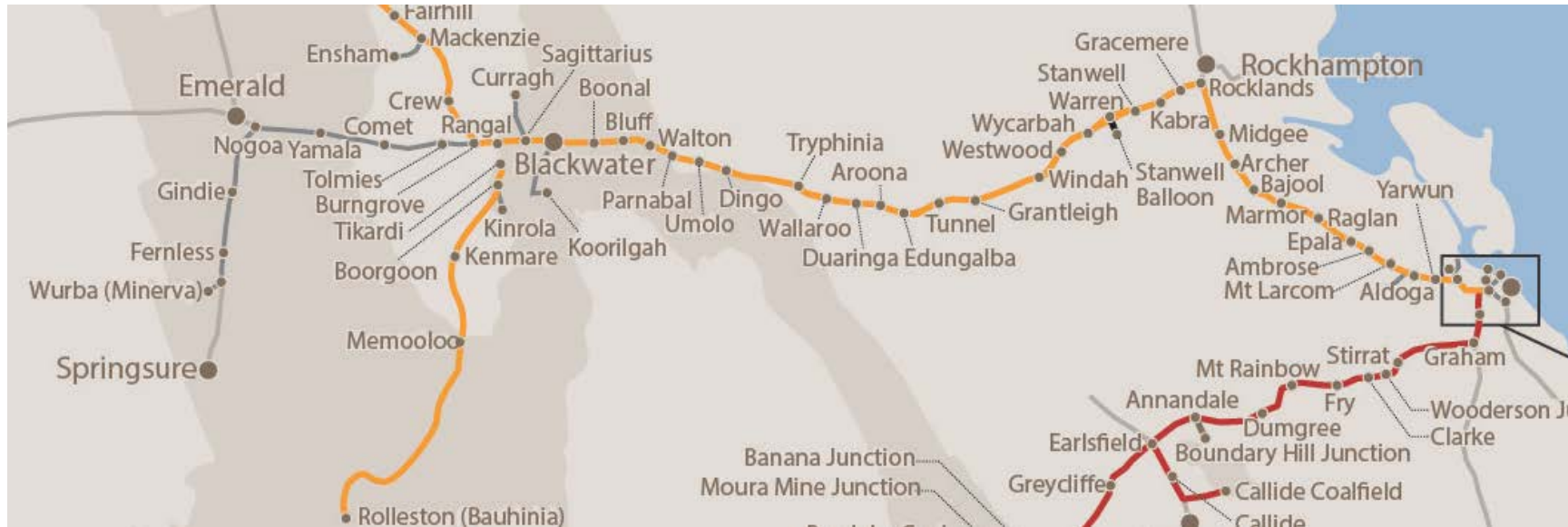


Figure 14: Blackwater System map

### Key operational information

The Blackwater System primarily services coal mines off the Central Line and carries the product to domestic customers and through to the Port of Gladstone via the North Coast Line. The Blackwater System is electrified with a combination of bi-directional duplicated track and single line track.

Track provides for 106 t (26.5 tal) wagons except Burngrove to Minerva which is suitable for a maximum of 20 tal at a maximum speed of 80 km/h

Safeworking is provided by remote control signalling (RCS) except the Bauhinia Branch which is provided by direction traffic control (DTC).

	Comparison train length	Payload
Blackwater	1,709 metres	8,211 tonnes
Minerva	1,240 metres	5,831 tonnes

### Demand profile

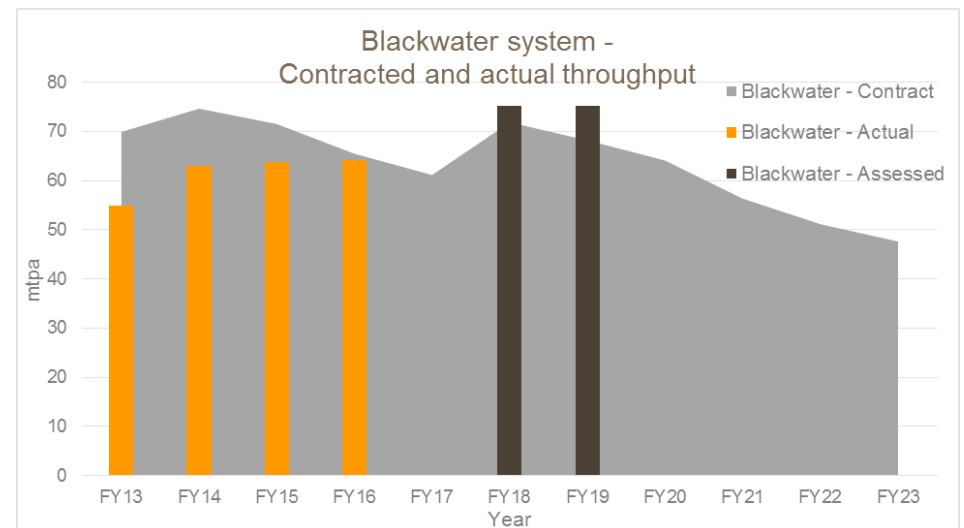


Figure 15: Blackwater System contracted, actual and assessed throughput

# Capacity waterfall analysis – Blackwater

## Train Service Entitlements

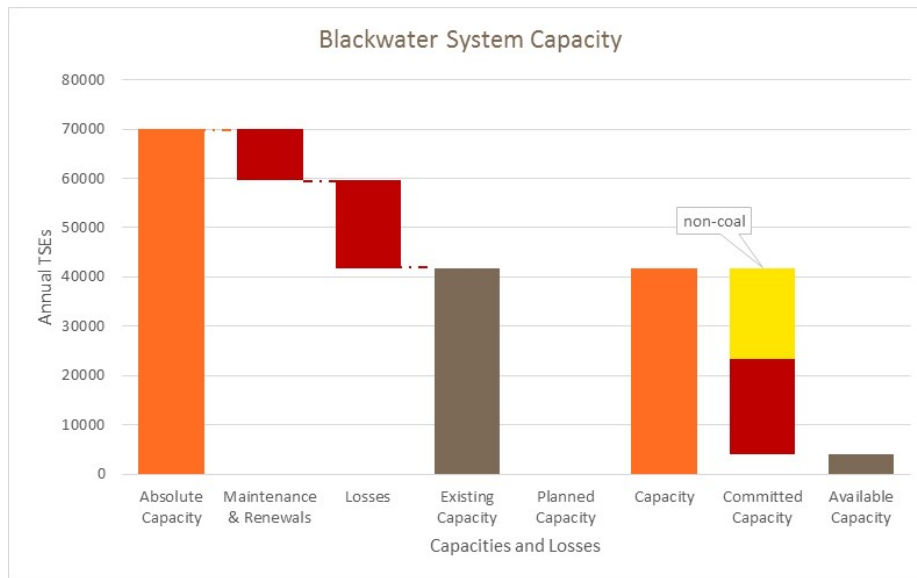


Figure 16: Blackwater System capacity waterfall (TSE)

Table 5: Blackwater System waterfall analysis data table

	Absolute Capacity	Maintenance & Renewals	Losses	Existing Capacity	Planned Capacity	Capacity	Committed Capacity (non-coal)	Available Capacity
<b>TSEs</b>	70,080	10,512	17,870	41,698	-	41,698	19,242 (18,301)	4,105
<b>Mtpa</b>	288	43.2	73.4	171	-	171	78.2 (75.1)	17.9

## Tonnes

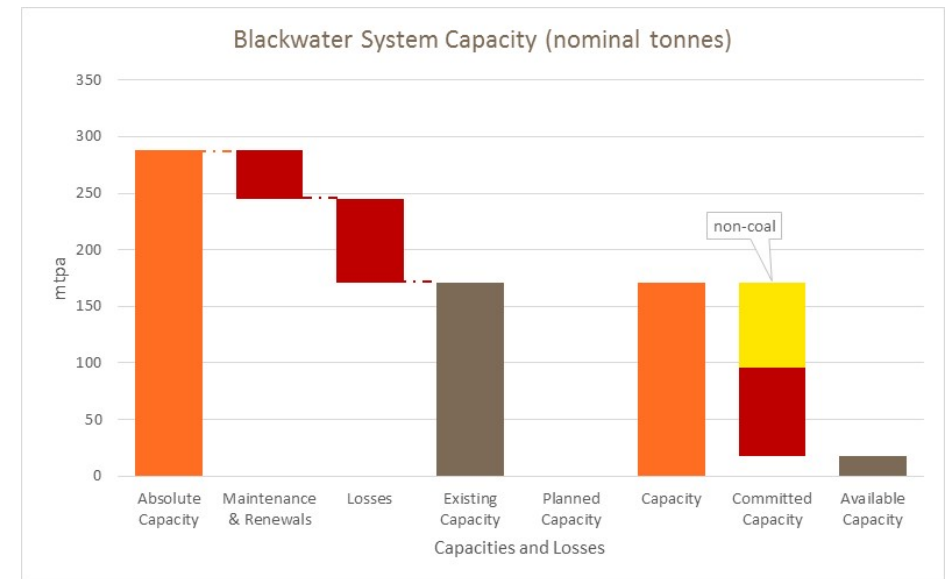


Figure 17: Blackwater System capacity waterfall (Tonnes)



## Branch line capacity



Figure 18: Heat map of Blackwater and Moura System branch line capacity

## System monthly variance – Blackwater

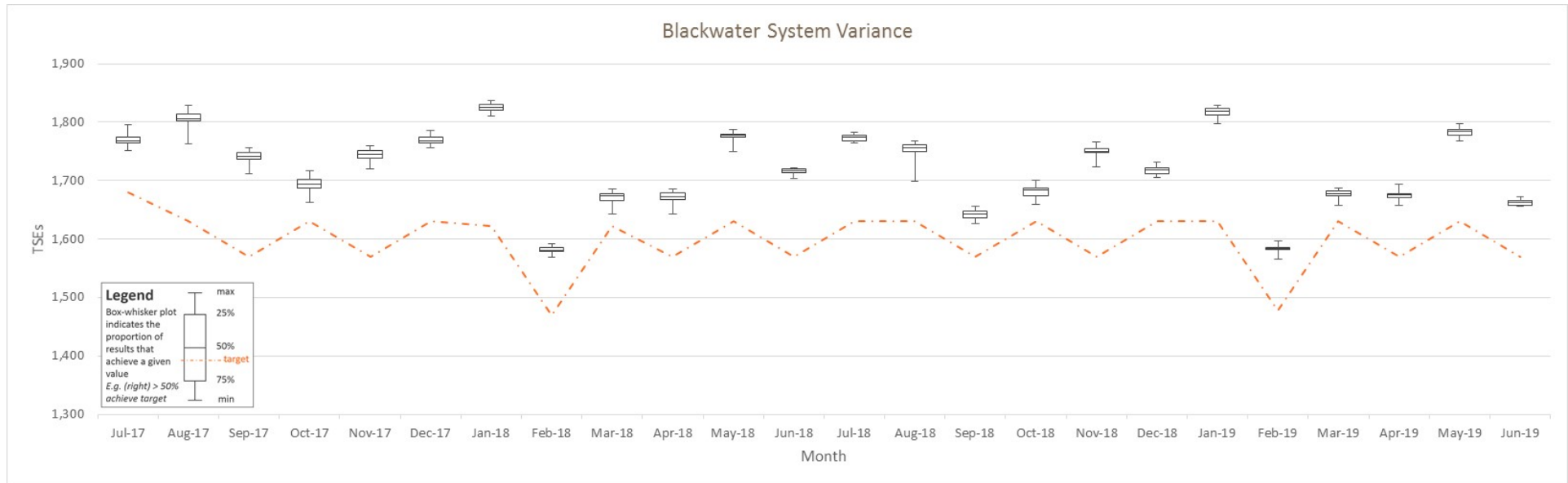


Figure 19: Blackwater System monthly variance

Table 6: Blackwater System monthly variance data table

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
Target	1,680	1,630	1,570	1,630	1,570	1,630	1,622	1,470	1,622	1,570	1,630	1,570	1,630	1,630	1,570	1,630	1,570	1,630	1,630	1,478	1,630	1,570	1,630	1,570
Maximum	1,796	1,828	1,756	1,716	1,760	1,786	1,836	1,592	1,686	1,686	1,788	1,722	1,782	1,768	1,656	1,700	1,766	1,732	1,828	1,596	1,688	1,694	1,798	1,672
75 <sup>th</sup> percentile	1,775	1,814	1,748	1,702	1,751	1,774	1,830	1,586	1,678	1,680	1,780	1,720	1,778	1,761	1,648	1,688	1,754	1,722	1,824	1,586	1,682	1,678	1,788	1,666
50 <sup>th</sup> percentile	1,768	1,806	1,742	1,694	1,745	1,768	1,826	1,580	1,674	1,672	1,778	1,716	1,774	1,757	1,643	1,684	1,750	1,718	1,818	1,584	1,677	1,676	1,784	1,663
25 <sup>th</sup> percentile	1,764	1,802	1,736	1,688	1,738	1,764	1,820	1,578	1,666	1,668	1,774	1,713	1,768	1,750	1,636	1,674	1,748	1,712	1,812	1,582	1,674	1,672	1,777	1,658
Minimum	1,752	1,762	1,712	1,662	1,720	1,756	1,810	1,568	1,642	1,642	1,750	1,704	1,764	1,698	1,626	1,660	1,724	1,706	1,798	1,566	1,658	1,658	1,768	1,656

# Moura System

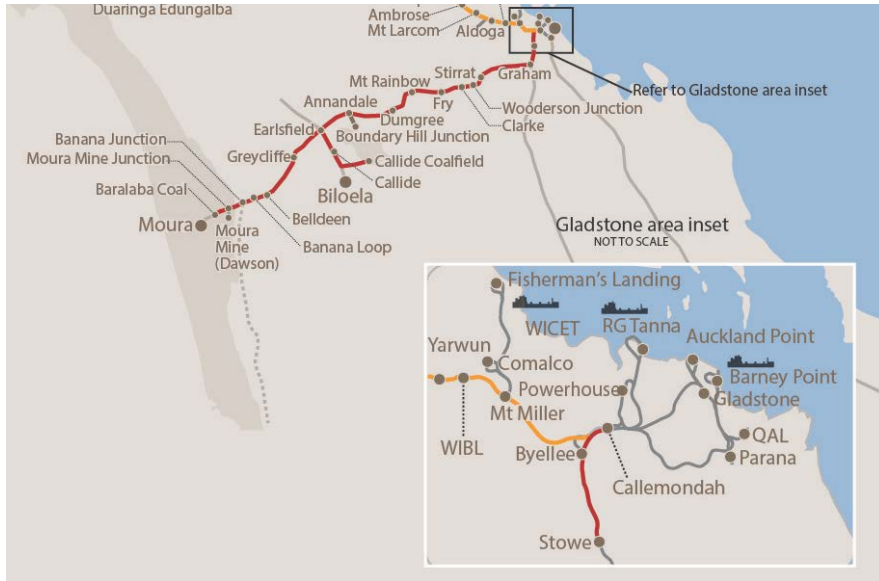


Figure 20: Moura System map

## Key operational information

The Moura System provides access between coal deposits in the southern Bowen and Callide Basins and the Gladstone port as well as domestic coal customers in the Gladstone area

The track (1067 mm gauge) supports a maximum permissible axle loading of 26.5 tonnes. The maximum speed for 26.5 tonne axle load traffic is 80 km/h. The System is not electrified.

Safeworking is provided by remote controlled signalling (RCS) except for the Callide branch which is provided by direct traffic control (DTC).

The key parameters of the reference train for the system are:

Comparison train length	Payload
1,000 metres	6,269 tonnes

## Demand profile

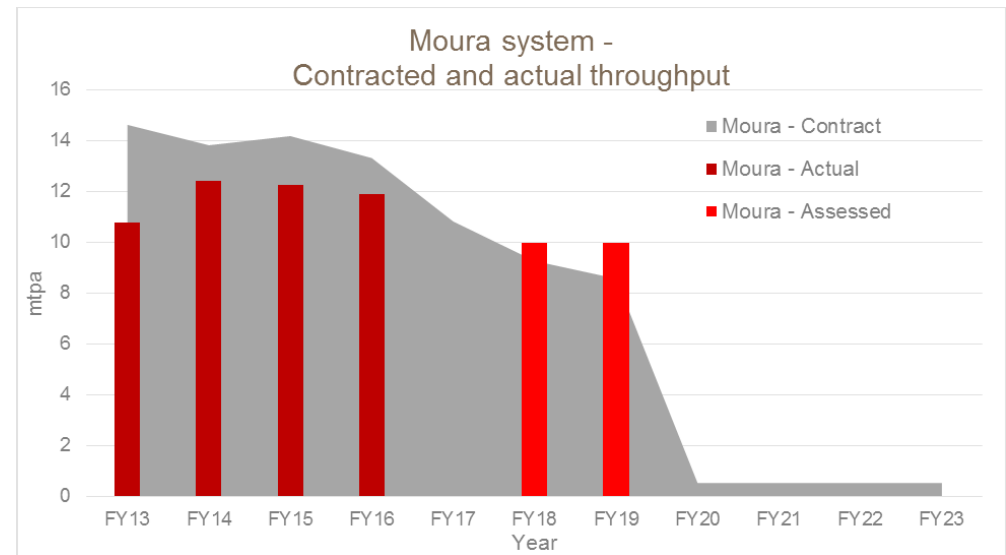


Figure 21: Moura System contracted and actual throughput

# Capacity waterfall analysis – Moura

## Train Service Entitlements

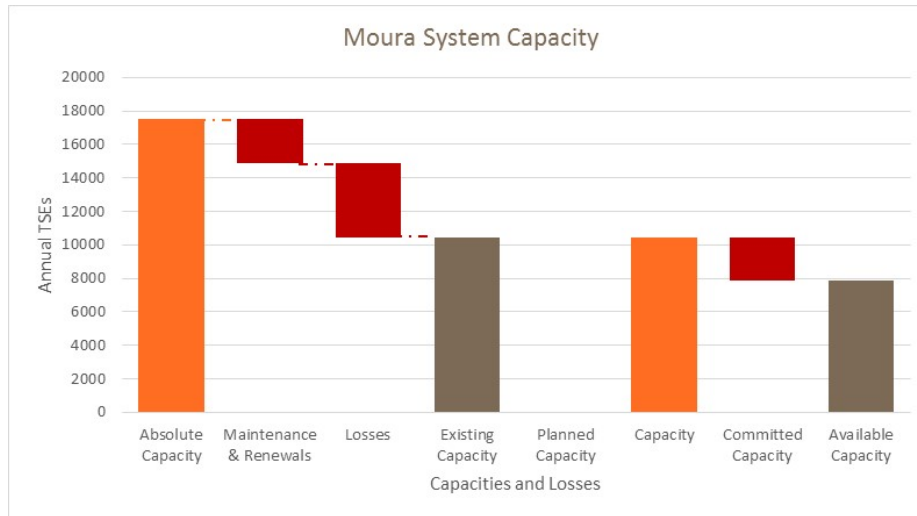


Figure 22: Moura system capacity waterfall (TSE)

Table 7: Moura System waterfall analysis data table

	Absolute Capacity	Maintenance & Renewals	Losses	Existing Capacity	Planned Capacity	Capacity	Committed Capacity	Available Capacity
TSEs	17,520	2,628	4,468	10,424	-	10,424	2,540	7,884
Mtpa	54.9	8.24	14.0	32.7	-	32.7	7.96	24.7

## Tonnes

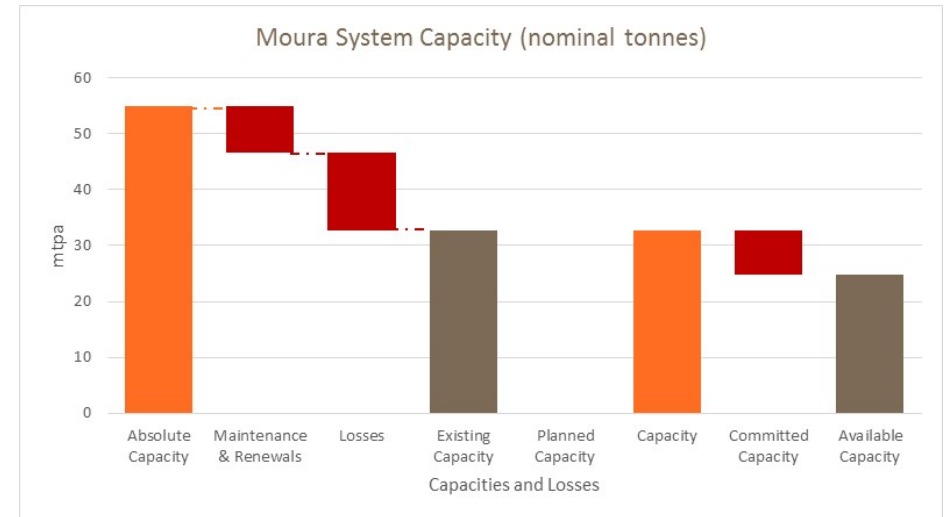


Figure 23: Moura system capacity waterfall (Tonnes)

## Branch line capacity

Please refer to the Blackwater System (Figure 18).

## System monthly variance – Moura

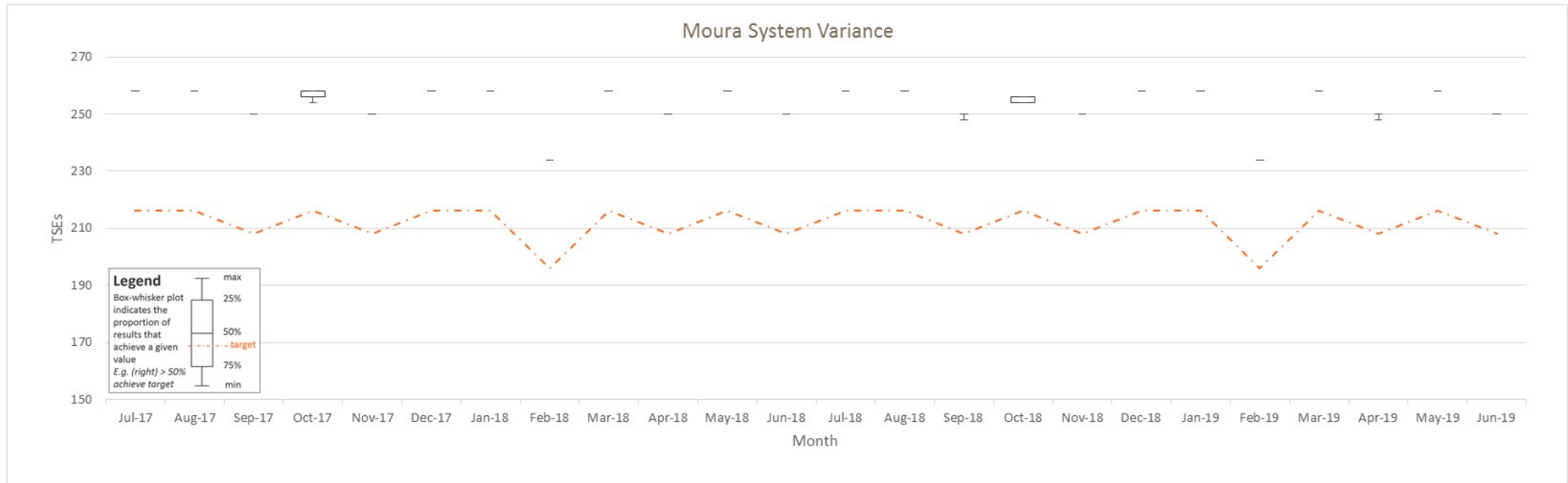


Figure 24: Moura System monthly variance

Table 8: Moura System monthly variance data table

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
Target	216	216	208	216	208	216	216	196	216	208	216	208	216	216	208	216	208	216	216	196	216	208	216	208
Maximum	258	258	250	258	250	258	258	234	258	250	258	250	258	258	250	256	250	258	258	234	258	250	258	250
75 <sup>th</sup> percentile	258	258	250	258	250	258	258	234	258	250	258	250	258	258	250	256	250	258	258	234	258	250	258	250
50 <sup>th</sup> percentile	258	258	250	258	250	258	258	234	258	250	258	250	258	258	250	256	250	258	258	234	258	250	258	250
25 <sup>th</sup> percentile	258	258	250	256	250	258	258	234	258	250	258	250	258	258	250	254	250	258	258	234	258	250	258	250
Minimum	258	258	250	254	250	258	258	234	258	250	258	250	258	258	248	254	250	258	258	234	258	248	258	250

## Appendix 1: Strategic Train Plan

### Newlands / GAPE Systems

Table 9: Newlands / GAPE FY18 STP

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	FY18
TSE Requirement	1,272	1,272	1,228	1,272	1,228	1,272	1,272	1,148	1,272	1,228	1,272	1,228	14,964
TSE Achieved	1,274	1,274	1,228	1,274	1,228	1,274	1,274	1,150	1,274	1,228	1,274	1,228	14,980
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	2	2	-	2	-	2	2	2	2	-	2	-	16
Tonnes Required (Mt)	4.37	4.37	4.22	4.37	4.22	4.37	4.37	3.94	4.37	4.22	4.37	4.22	51.4
Tonnes Achieved (Mt)	4.38	4.38	4.22	4.38	4.22	4.38	4.38	3.95	4.38	4.22	4.38	4.22	51.5
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	0.01	0.01	-	0.01	-	0.01	0.01	0.01	0.01	-	0.01	-	0.05

Table 10: Newlands / GAPE FY19 STP

Description	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	FY19
TSE Requirement	1,272	1,272	1,228	1,272	1,228	1,272	1,272	1,148	1,272	1,228	1,272	1,228	14,964
TSE Achieved	1,274	1,274	1,228	1,274	1,228	1,274	1,274	1,150	1,274	1,228	1,274	1,228	14,980
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	2	2	-	2	-	2	2	2	2	-	2	-	16
Tonnes Required (Mt)	4.37	4.37	4.22	4.37	4.22	4.37	4.37	3.94	4.37	4.22	4.37	4.22	51.4
Tonnes Achieved (Mt)	4.38	4.38	4.22	4.38	4.22	4.38	4.38	3.95	4.38	4.22	4.38	4.22	51.5
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	0.01	0.01	-	0.01	-	0.01	0.01	0.01	0.01	-	0.01	-	0.05

# Goonyella System

Table 11: Goonyella FY18 STP

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	FY18
TSE Requirement	2,348	2,348	2,250	2,348	2,250	2,348	2,348	2,116	2,348	2,250	2,348	2,250	27,552
TSE Achieved	2,348	2,348	2,250	2,348	2,250	2,348	2,348	2,116	2,348	2,250	2,348	2,250	27,552
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tonnes Required (Mt)	11.80	11.80	11.31	11.80	11.31	11.80	11.80	10.64	11.80	11.31	11.80	11.31	138.5
Tonnes Achieved (Mt)	11.80	11.80	11.31	11.80	11.31	11.80	11.80	10.64	11.80	11.31	11.80	11.31	138.5
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 12: Goonyella FY19 STP

Description	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	FY19
TSE Requirement	2,348	2,348	2,250	2,348	2,250	2,348	2,348	2,118	2,348	2,250	2,348	2,250	27,554
TSE Achieved	2,348	2,348	2,250	2,348	2,250	2,348	2,348	2,118	2,348	2,250	2,348	2,250	27,554
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tonnes Required (Mt)	11.80	11.80	11.31	11.80	11.31	11.80	11.80	10.65	11.80	11.31	11.80	11.31	138.5
Tonnes Achieved (Mt)	11.80	11.80	11.31	11.80	11.31	11.80	11.80	10.65	11.80	11.31	11.80	11.31	138.5
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-

# Blackwater System

Table 13: Blackwater FY18 STP

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	FY18
TSE Requirement	1,690	1,638	1,578	1,638	1,578	1,638	1,630	1,478	1,630	1,578	1,638	1,578	19,292
TSE Achieved	1,692	1,638	1,578	1,638	1,578	1,638	1,630	1,480	1,630	1,578	1,638	1,578	19,296
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	2	-	-	-	-	-	-	2	-	-	-	-	4
Tonnes Required (Mt)	6.85	6.64	6.39	6.64	6.39	6.64	6.60	5.99	6.60	6.39	6.64	6.39	78.2
Tonnes Achieved (Mt)	6.86	6.64	6.39	6.64	6.39	6.64	6.60	6.00	6.60	6.39	6.64	6.39	78.2
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	0.01	-	-	-	-	-	-	0.01	-	-	-	-	0.02

Table 14: Blackwater FY19 STP

Description	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	FY19
TSE Requirement	1,638	1,638	1,578	1,638	1,578	1,638	1,638	1,486	1,638	1,578	1,638	1,578	19,264
TSE Achieved	1,638	1,638	1,578	1,638	1,578	1,638	1,638	1,486	1,638	1,578	1,638	1,578	19,264
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tonnes Required (Mt)	6.64	6.64	6.39	6.64	6.39	6.64	6.64	6.02	6.64	6.39	6.64	6.39	78.0
Tonnes Achieved (Mt)	6.64	6.64	6.39	6.64	6.39	6.64	6.64	6.02	6.64	6.39	6.64	6.39	78.0
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-



# Moura System

Table 15: Moura FY18 STP

Description	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	FY18
TSE Requirement	216	216	208	216	208	216	216	196	216	208	216	208	2,540
TSE Achieved	216	216	208	216	208	216	216	196	216	208	216	208	2,540
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tonnes Required (Mt)	0.68	0.68	0.65	0.68	0.65	0.68	0.68	0.61	0.68	0.65	0.68	0.65	7.96
Tonnes Achieved (Mt)	0.68	0.68	0.65	0.68	0.65	0.68	0.68	0.61	0.68	0.65	0.68	0.65	7.96
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 16: Moura FY19 STP

Description	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	FY19
TSE Requirement	216	216	208	216	208	216	216	196	216	208	216	208	2,540
TSE Achieved	216	216	208	216	208	216	216	196	216	208	216	208	2,540
TSE Not Achieved	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (TSE)	-	-	-	-	-	-	-	-	-	-	-	-	-
Tonnes Required (Mt)	0.68	0.68	0.65	0.68	0.65	0.68	0.68	0.61	0.68	0.65	0.68	0.65	7.96
Tonnes Achieved (Mt)	0.68	0.68	0.65	0.68	0.65	0.68	0.68	0.61	0.68	0.65	0.68	0.65	7.96
Tonnes Not Achieved (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-
Available Capacity (Mt)	-	-	-	-	-	-	-	-	-	-	-	-	-