



**Baralaba South Project
Environmental Impact Statement**

CHAPTER 13

Transport

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13 Transport

13.1 Environmental objectives

This chapter has been prepared in order to assist the DES in carrying out the environmental objective assessment in respect of the following environmental objectives as stated in the Project TOR:

The construction and operation of the Project should aim to:

- maintain the safety and efficiency of all affected transport modes for the Project workforce and other transport system users;
- avoid and mitigate impacts on the condition of transport infrastructure; and
- ensure any required works are compatible with existing infrastructure and future transport corridors.

13.2 Total transport task

The total transport task for the Project includes the:

- transport of material and equipment by road between estimated origin in Queensland (e.g. Rockhampton, Gladstone or Brisbane) and the Project site;
- transport of personnel by road between local towns and the Project site;
- transport of personnel by road between the mine accommodation camp in Baralaba and the Project site;
- transport of personnel by road between the mine accommodation camp in Baralaba and a hometown or airport;
- transport of personnel by air through Rockhampton, Gladstone and/or Thangool Airport terminals;
- transport of product coal by road via the realigned Moura-Baralaba Road approximately 40 km to the existing TLO facility located to the east of Moura;
- transport of product coal by rail (via the Moura Rail System) from the TLO facility to the Port of Gladstone; and
- export of product coal from Port of Gladstone coal terminals (Wiggins Island Coal Export Terminal, RG Tanna Coal Terminal and/or Barney Point Coal Terminal) to overseas customers.

It is estimated that up to approximately 268 personnel will be required during peak construction and up to a peak of approximately 710 personnel during operations. The anticipated traffic generated by the Project (i.e. the inputs and outputs of the Project) during construction and operation are detailed in Table 13.2 in section 13.3.2.2.

Currently, up to 3.5 Mtpa of product coal is authorised to be transported on the Moura-Baralaba Road to the TLO facility in accordance with the conditions of the Material Change of Use development approval dated 20 August 2014 (MCU Approval). For the cumulative maximum production scenario, approximately 2.5 Mtpa will be transported along the haul route, as such no amendment to the existing MCU Approval is required.

The existing transport infrastructure and product coal haulage route has been selected to ensure transport efficiency and minimise impacts on land uses and the community.

13.3 Road transport

13.3.1. Existing infrastructure and values

A Traffic Assessment for the Project has been undertaken by Stantec Australia Pty Ltd (previously Cardno (Qld) Pty Ltd) (2023) and is provided in Appendix P. The Traffic Assessment was prepared in accordance with the 'Guide to Traffic Impact Assessment' (DTMR, 2018).

The following subsections provide:

- a description of the existing road transport infrastructure;
- an assessment of the road transport impacts of the Project on the local and regional road network; and
- the mitigation and management measures for road transport.

13.3.1.1 Road network

The principal road network that will be used by personnel or for equipment and material deliveries for the Project are described below. The Project will be accessed from the east, west and south.

Leichhardt Highway is a state road and provides access to the local area from the east (Figure 13.1). The highway extends from Capricorn Highway in the north, near Westwood, to Goondiwindi in the south. Leichhardt Highway is a two-lane highway with a regulatory speed limit of 100 km/h reducing to appropriate speed limits through towns.

Baralaba-Rannes Road is a state road that connects Baralaba and surrounds to Leichhardt Highway (Figure 13.1). It is a two-lane, sealed road with a regulatory speed limit of 100 km/h, reducing to 80 km/h and 50 km/h in the Baralaba township (Appendix P, Traffic Assessment).

Wooroonah Road is a local road within the township of Baralaba which connects to Baralaba-Rannes Road and will be used by personnel accommodated at the Baralaba mine accommodation camp. Wooroonah Road is a two-lane road and has a regulatory speed limit of 60 km/hr.

Moura-Baralaba Road (also known as Theodore-Baralaba Road) is a local road that connects Baralaba-Rannes Road near Baralaba to Dawson Highway in the south (Figure 13.1). Moura-Baralaba Road traverses the MLA and development of the Project will require a section of Moura-Baralaba Road to be realigned (Figure 13.1).

Fitzroy Development Road is a state road which runs in a north–south direction and provides access to the Project from the west. The middle segment of Fitzroy Development Road extends from Capricorn Highway in the north, near Duaringa and connects with Dawson Highway in the south near Bauhinia. The middle segment is a two-lane, partially sealed road with a regulatory speed limit of 100 km/h.

Baralaba-Woorabinda Road is a two-lane, sealed road which connects the townships of Baralaba and Woorabinda and connects to Fitzroy Development Road. Baralaba-Woorabinda Road has a regulatory speed limit of 100 km/h reducing to 80 km/h and 60 km/h in the townships (Appendix P, Traffic Assessment).

Dawson Highway is a state road and provides access from the south. It connects Gladstone in the east to Springsure in the west. Dawson Highway is a two-lane highway with a regulatory speed limit of 100 km/h reducing to appropriate speed limits through towns.

Baralaba-Banana Road is a local road with a regulatory speed limit of 100 km/h and connects Moura-Baralaba Road to the township of Banana and Leichhardt Highway to the south (Figure 13.1).

13.3.1.2 Product coal transport

Product coal for the Project will be transported via the realigned Moura-Baralaba Road approximately 40 km to the existing TLO facility located to the east of Moura (Figure 13.1) along a portion of the existing Baralaba North Mine haul route. The Baralaba North Mine haul route is shown on Figure 13.2.

The transport of product coal for the Project (up to 1.8 Mtpa) has been assessed cumulatively with the product coal transport from the Baralaba North Mine (up to 2.5 Mtpa cumulative product coal).

13.3.1.3 Existing road traffic volumes

Traffic surveys were conducted by Austraffic during the morning and afternoon peak periods on 29 January 2019 at the intersections shown on Figure 13.2 to assess existing traffic volumes (Appendix P, Traffic Assessment).

The traffic count information is presented in Appendix P, Traffic Assessment, and the survey results indicate the existing traffic volumes are low.

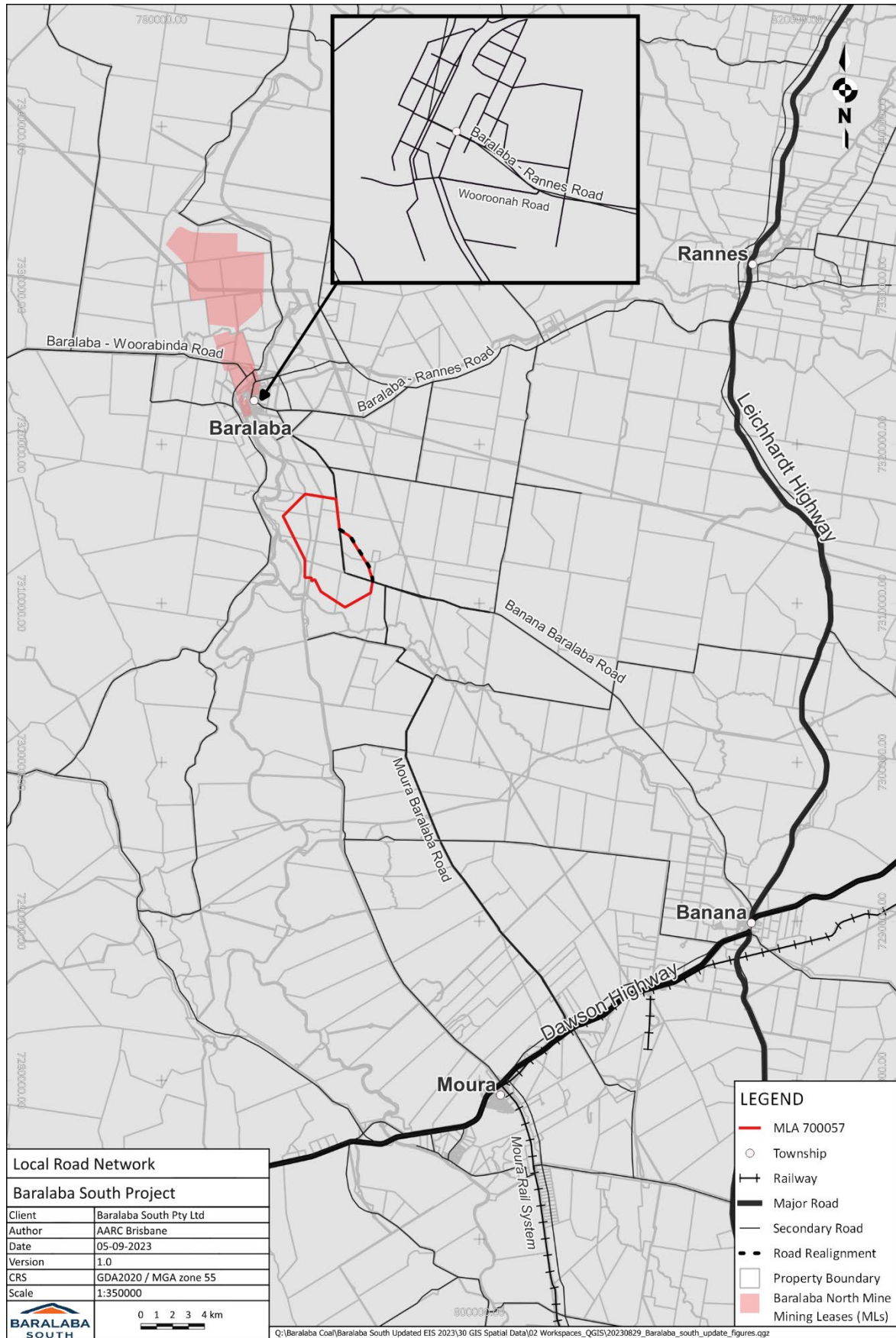


Figure 13.1: Road network

13.3.1.4 Road capacity

Level of service is a qualitative measure that describes operational conditions encountered by traffic which considers (Appendix P, Traffic Assessment):

- speed;
- travel time;
- interruptions;
- interference;
- freedom to overtake;
- ability to manoeuvre;
- safety;
- comfort;
- convenience; and
- vehicle operating costs.

Table 13.1 outlines level of service definitions for traffic flow. The existing level of service for the road network surrounding the Project is classified as 'A'.

Table 13.1: Level of service definitions

Level of service	Description
A	Free-flow conditions where drivers are unaffected by the presence of others in the traffic stream
B	Stable flow where drivers still have reasonable freedom to select their desired speed and manoeuvre within the traffic stream
C	Stable flow, but most drivers are restricted to some extent in their freedom to select their desired speed and manoeuvre
D	Close to the limit of stable flow and approaching unstable flow. Drivers are severely restricted to select their speed and manoeuvre
E	Traffic volumes are at or close to capacity and there is virtually no freedom to select desired speeds or to manoeuvre
F	Forced flow. Traffic approaching the point under consideration exceeds that which can pass it. Flow breakdown occurs

Source: DTMR (2004) Road Planning and Design Manual

13.3.1.5 Road safety and conditions

In order to determine incident trends in the vicinity of the Project, road accident data for a five-year-period for Moura-Baralaba Road was obtained from the Department of Transport and Main Roads (obtained August 2023). Road crash data for the five-year period between 1 January 2017 and 31 December 2021 was assessed (no data for 2022 was publicly available at the time of the assessment), (Appendix P, Traffic Assessment). The Proponent also advised of a further five crashes from 2021 – 2022 that were not listed on the public domain. Data acquired from DTMR for Moura-Baralaba Road (product haul route) and Baralaba-Banana Road (local workforce movement), as well as data provided by the proponent were analysed to assess current levels of road safety. A summary of the road accident data is provided as follows:

- three crashes were reported on Moura-Baralaba Road resulting from driver error in in January 2019, September 2019 and August 2019;
- three crashes were reported in Baralaba-Banana Road (Banana to Baralaba local workforce movement) in July 2018, March 2020 and January 2021 resulting from driver error;
- a single crash in February 2021 on the corner of Baralaba Road and Kooemba Road, resulting from driver error; and
- a single crash on the Baralaba North Mine site, on the anabranch haul road resulting from weather conditions.

A site inspection conducted by Cardno in January 2019 did not identify any existing road safety issues with the accident locations (Appendix P, Traffic Assessment). Subsequent to the site inspection and assessment of accident data, two further crashes occurred in the last 12 months within the Project study area. From local knowledge of road design and the 2019 road inspection Stantec concluded there is no underlying road safety issue for the haulage route (Appendix P, Traffic Assessment).

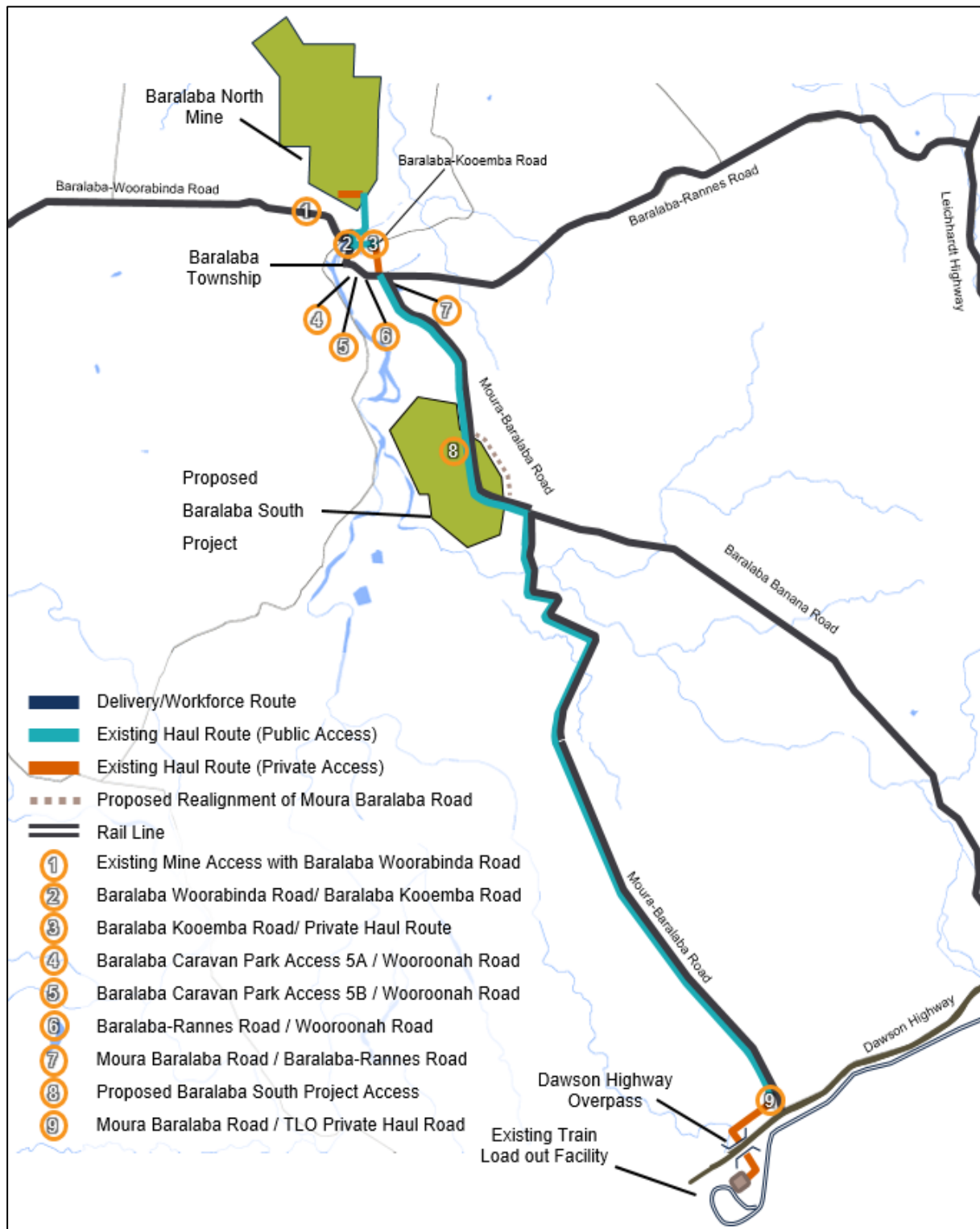


Figure 13.2: Study intersections

13.3.2. Potential impacts

Potential impacts of the Project on Moura-Baralaba Road, traffic generation, road capacity, safety and road condition are assessed in Appendix P, Traffic Assessment and summarised below.

13.3.2.1 Realignment of Moura-Baralaba Road and mine access road

The development of the Project will require the realignment of an approximate 4.5 km section of Moura-Baralaba Road which is located within the (MLA) area. This section of road will be relocated to the immediate east and outside of the MLA boundary. The realignment of Moura-Baralaba Road has the potential to disrupt vehicle movements while construction of the road realignment occurs.

The primary access to the Project will be via a proposed mine access road off the realigned Moura-Baralaba Road. This access will be used by personnel, equipment vehicles, material delivery vehicles and mine haulage vehicles.

13.3.2.2 Traffic generation

It is estimated that up to approximately 268 personnel will be required during peak construction and up to a peak of approximately 710 personnel during operations.

It is anticipated that 25% of the workforce will be local, living within 100 km of the Project and will drive-in and drive-out (DIDO) from the mine on a daily basis. The remainder of the workforce, 70% will DIDO from the accommodation camp. It is estimated that 72 light vehicle movements will result from a portion of the workforce accommodated at the accommodation camp who are FIFO or DIDO from within 5 hours of the Project.

Approximately 25% of the local workforce is anticipated to travel to the mine from the south (e.g. from Banana and Moura) and 40% is anticipated to travel to the mine from the north (i.e. from or through Baralaba).

It is assumed that all DIDO staff will travel via light vehicle to the accommodation. Of the FIFO staff, it is estimated that 80% will fly into Rockhampton Airport, 10% into Gladstone Airport and 10% into Thangool Airport at Biloela.

It is assumed that the Project workforce travelling from the mine accommodation camp would travel to and from the mine site each day by light vehicle.

The following assumptions have been used to calculate staff trips:

- light vehicles have been assumed to carry an average of 1.2 passengers;
- construction and operations are expected to operate generally 24 hours per day, 7 days per week for 335 days per year to account for inclement weather;
- construction and operations workforce will be based on two daily shifts, with 50% of the workforce allocated to each shift; and
- all vehicle movements associated with shift changeover has been conservatively assumed to occur during the background network peak hour.

It is estimated that the Project workforce will result in approximately 566 (return trips) light vehicles per day during construction and 1060 (return trips) light vehicles per day during operations.

Deliveries, such as fuel, heavy machinery parts, explosives and small goods, will arrive by truck, with 50% estimated to arrive from Rockhampton and 50% from other regional centres such as Brisbane or Gladstone. It is expected that different volumes of deliveries will be required for the construction/operation phase of the Project and the operation-only phase of the Project.

Product coal haulage for the Project of up to 1.8 Mtpa will be conducted using 105-tonne capacity AAB-Quad Type 2 vehicles, which equates to 16,415 truckloads per year with an average of 49 loaded trucks per day (one way). On average, there is anticipated to be approximately 30 days per year of no haulage due to the Christmas break, wet weather and other interruptions.

Table 13.2 summarises the predicted Project daily vehicle trips during the construction and operation phases.

Table 13.2: Anticipated traffic generation

Item	Origin	Destination	Typical vehicle	Peak trips per day (one way only)		Peak Hour % of daily volumes	Peak hour trips (one way only)	
				Construction	Operation		Construction	Operation
Deliveries: parts, explosives, waste	Gladstone and Rockhampton	Mine	Class 9 truck	2	3	20	1	1
Oversized loads	Gladstone and Rockhampton	Mine	Low loader	1	1		1	1
Other deliveries: small trucks	Gladstone and Rockhampton	Mine	Class 3 truck	5	5		1	1
Fuel	Gladstone and Rockhampton	Mine	B-double	1	2		1	1
Workforce shift change: local	Local from north (e.g. Baralaba)	Mine	Light vehicle	23	46	50	12	23
	Local from south (e.g. Banana and Moura)	Mine	Light vehicle	44	86		22	43
Workforce: accommodated by Baralaba Coal	Baralaba	Mine	Light vehicle	168	326		84	163
Workforce roster change: DIDO and FIFO	West of site	Baralaba	Light vehicle	4	6	50	1	2
	East of site (e.g. Rockhampton and Gladstone)	Baralaba	Light vehicle	44	66		11	17
Coal haulage: loaded	Mine	TLO	ABB-Quad	—	49	5	—	3
Total				315	587		130	255

13.3.2.3 Road capacity

Historic trends of annual traffic generation in Baralaba and surrounding towns have shown a decline in traffic growth (Appendix P, Traffic Assessment). Accordingly, a linear traffic growth of 2% per annum was adopted for the Traffic Assessment and applied to the background traffic. This growth rate is considered a conservative approach and allows for development within the region (Appendix P, Traffic Assessment).

Table 13.3 presents the anticipated traffic flows during the scheduled year of peak construction (2029) and the scheduled first year of operations (2030) on key roads, including estimated background traffic growth and additional traffic flows from the Project. It is expected that for the roads listed in Table 13.3 the level of service would predominately remain classified as 'A' (determined as per section 4.2.3 of 'Austroads Guide to Traffic Management Part 3' 2020) under the modelled future scenarios and no additional overtaking lanes are required.

For a short period, during 2030 – 2033 where mine production at Baralaba South overlaps with Baralaba North the level of service would just exceeds the threshold for an 'A' level of service (determined as per section 4.2.3 of 'Austroads Guide to Traffic Management Part 3' 2020) at Baralaba-Rannes Road (Wooroonah Road intersection) and Wooroonah Road due to workers leaving / returning to the accommodation camp.

Table 13.3: Predicted baseline and Project traffic volumes

Road	Section	Theoretical capacity (vph)	Baseline		Construction (2029)		Operations (2030)		Remaining road capacity	
			AM peak	PM peak	AM peak	PM peak	AM peak	PM peak	2029	2030
Wooroonah Road	Baralaba-Woorabinda Road to Baralaba-Rannes Road	900	46	39	247	239	420	412	73%	53-54%
Baralaba-Rannes Road	Woorabinda Road to Moura-Baralaba Road	1013	42	57	264	282	457	476	72-74%	53-55%
Baralaba-Rannes Road	Moura-Baralaba Road to Leichhardt Highway	648	16	16	47	59	60	60	91-93%	91%
Moura-Baralaba Road	Baralaba-Rannes Road to the Project	648	22	49	224	257	405	438	60-65%	32-38%
Moura-Baralaba Road	The Project to Baralaba-Banana Road	648	22	39	70	91	119	140	86-89%	78-82%
Moura-Baralaba Road	Baralaba-Banana Road to TLO	648	14	18	61	66	109	114	90-91%	82-83%

13.3.2.4 Road intersection performance

Traffic generation associated with the Project has the potential to increase delays at intersections along key roads used by-product coal haulage trucks, delivery trucks, workforce and visitors.

The Traffic Assessment (Appendix P) includes an assessment of the potential impact of the Project on the performance of key intersections. The intersection assessment was conducted in accordance with the 'Guide to Traffic Impact Assessment' (DTMR, 2018) and includes assessment of intersections that have the potential to be impacted by the traffic generated by the Project and the existing Baralaba North Mine traffic.

The intersection capacity has been assessed at each intersection and turn warrant assessments have been undertaken to ensure adequate protection is proposed for turning vehicles for the additional traffic generated by the Project.

The Traffic Assessment (Appendix P) concluded that intersections within the study area will all operate well within industry standard performance thresholds to the end of the Project life. From a safety perspective, the provision of turn treatments was deemed adequate to cater for both baseline and traffic generated by the Project to the end of life of the development both individually and cumulatively with the existing Baralaba North Mine.

No intersection upgrades or additional mitigation measures are considered necessary for the Project (Appendix P, Traffic Assessment).

13.3.2.5 Road safety and efficiency

No obvious trends were identified in the crash data that was reviewed as part of the Traffic Assessment, which could potentially be exacerbated by the increase in traffic generated by the Project (Appendix P, Traffic Assessment). Five additional crashes which occurred outside the TMR data were reviewed. The site inspection indicated that no underlying safety issues were present along the haulage route. Notwithstanding, mitigation measures will be provided for the Project through road use management and driver management procedures. The Project is not anticipated to have a significant impact on the safety and efficiency of the road network (Appendix P, Traffic Assessment).

13.3.2.6 Railway level crossings

No new railway level crossings are required for the Project.

The road transport of product coal to the TLO facility does not cross any railway level crossings, and therefore no assessment is required to be conducted in accordance with the 'Australian Level Crossing Assessment Model'.

13.3.2.7 Road condition

Traffic generation associated with the Project has the potential to impact the road pavement used by-product coal haulage trucks, workforce and deliveries.

A pavement assessment has been conducted as part of the Road Traffic Assessment in accordance with the methodology detailed in the 'Guide to Traffic Impact Assessment' (DTMR, 2018). The assessment found the Project would have an insignificant impact on the road pavement (Appendix P, Traffic Assessment), and as a result, an assessment of contributions has not been undertaken.

Potential impacts on road pavement are considered to be mitigated during the life of the Project by the existing Baralaba North Mine road use agreements which are described in section 13.3.3.

13.3.3. Mitigation and management measures

13.3.3.1 Realignment of Moura-Baralaba Road

As described in section 13.3.2.1, the development of the Project will require the realignment of an approximate 4.5 km section of the Moura-Baralaba Road which is located within the MLA area. This section of road will be relocated to the immediate east and outside of the MLA boundary.

The design of the new section of public road will be consistent with the upgraded sections of Moura-Baralaba Road to the north and south of the MLA for the Baralaba North Mine haul route. The sealed carriageway will be a minimum of 10 m wide, with two 3.5 m wide lanes, a 1 m wide median strip and two 1 m wide shoulders. The detailed designs for the road realignment will be prepared in consultation with Banana Shire Council and will include an intersection to maintain access to and from the MLA, as described in section 13.3.3.2.

The realignment of Moura-Baralaba Road will be subject to separate approval from Banana Shire Council under the *Planning Act 2016*. Mount Ramsay Coal Company will work with the required authorities to provide safe public traffic movement for road vehicles to ensure minimum disruption to existing patterns of movements while the road is being constructed.

13.3.3.2 Mine access road

There will be two main access roads to the MIA. The South Access intersection will accommodate the heavy vehicle demand associated with BSP (i.e. haulage vehicles and delivery vehicles) with all BSP workforce vehicles utilising the North Access.

The intersection of the two proposed mine access roads with the realigned Moura-Baralaba Road will be designed to meet rural conditions and cater for current and future traffic volumes. The intersections will be designed and constructed in accordance with 'Guide to Road Design Part 4A: Unsignalised and Signalised Intersections' (Austroads, 2010a).

The proposed turn treatments for the south access intersection are basic left and basic right turn provisions. This includes a short left-turn lane and a channelised right turn treatment (Appendix P, Traffic Assessment).

The proposed treatment of the north access intersection is a three-way priority-controlled arrangement that operates within the typical performance degree of separation thresholds ($DOS \leq 0.80m$). The proposed turn treatments for the north access intersection indicate that basic left and basic right turn provisions are required.

Figure 13.3 to 13.6 depict examples of the design requirements and layout of a rural auxiliary left and right treatments proposed for each access.

Roadside safety, including the potential location of barriers, road furniture and signage, utilities and lighting, will be designed and constructed with the guidance of:

- 'Guide to Road Design Part 5: Drainage—General and Hydrology Considerations' (Austroads, 2013a);
- 'Guide to Road Design Part 5A: Drainage—Road Surface, Networks, Basins and Subsurface' (Austroads, 2013b);
- 'Guide to Road Design Part 5B: Drainage—Open Channels, Culverts and Floodways' (Austroads, 2013c); and
- 'Guide to Road Design Part 6: Roadside Design, Safety and Barriers' (Austroads, 2010b).

The location of line marking, including stop lines, give way lines, lane lines, turning lines, pavement arrows and symbols, will be designed and constructed to 'AS 1742.2-2009 Manual of uniform traffic control devices—Part 2 Traffic control devices for general use' (Standards Australia, 2009) with the guidance of 'Guide to Traffic Management Part 10: Traffic Control and Communication Devices' (Austroads, 2019).

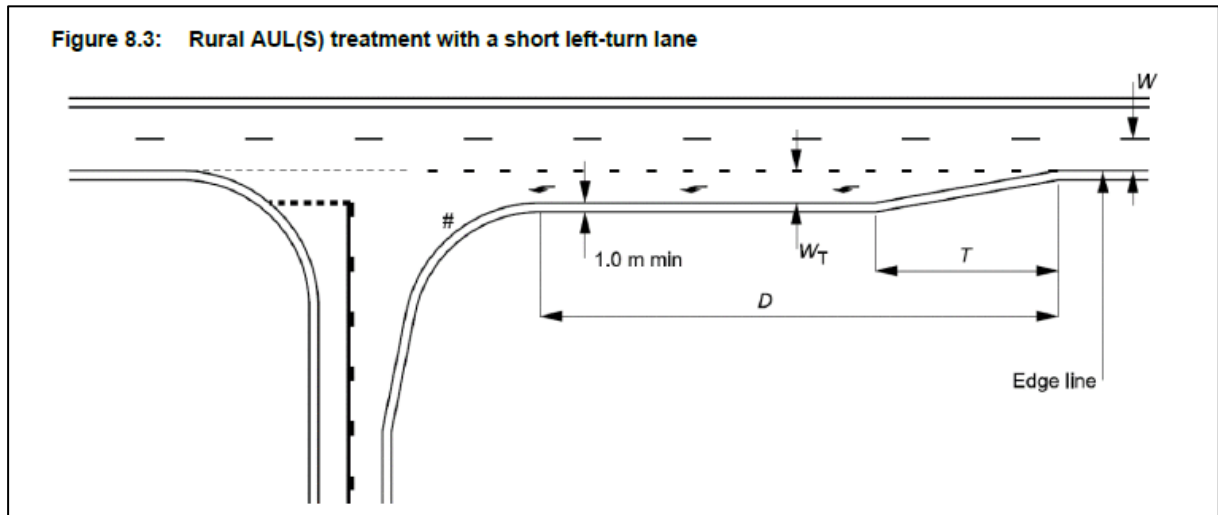


Figure 13.3: Rural left-turn treatment proposed for the south access (Austroads 2010a)

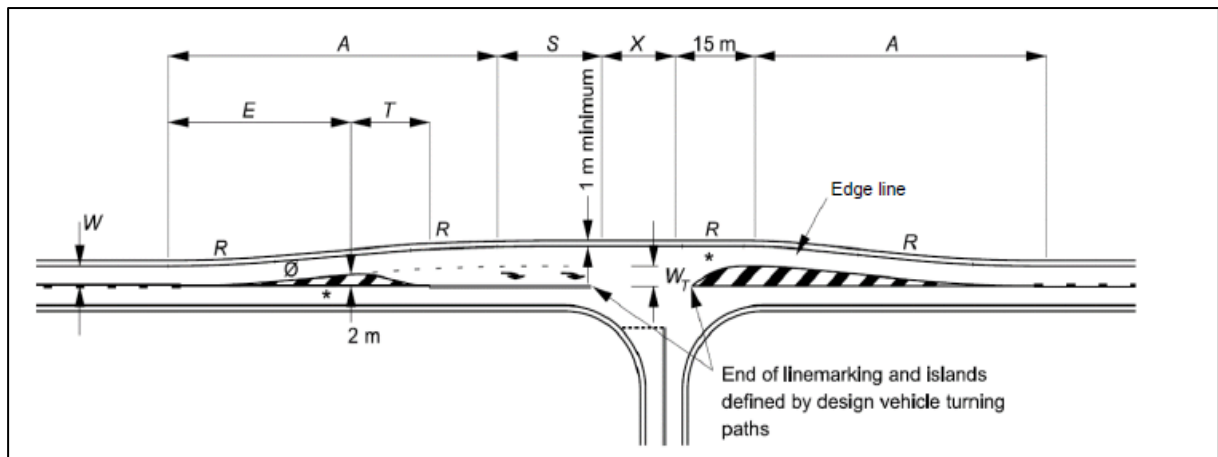


Figure 13.4: Channelised right turn treatment proposed for the south access (Austroads, 2010a)

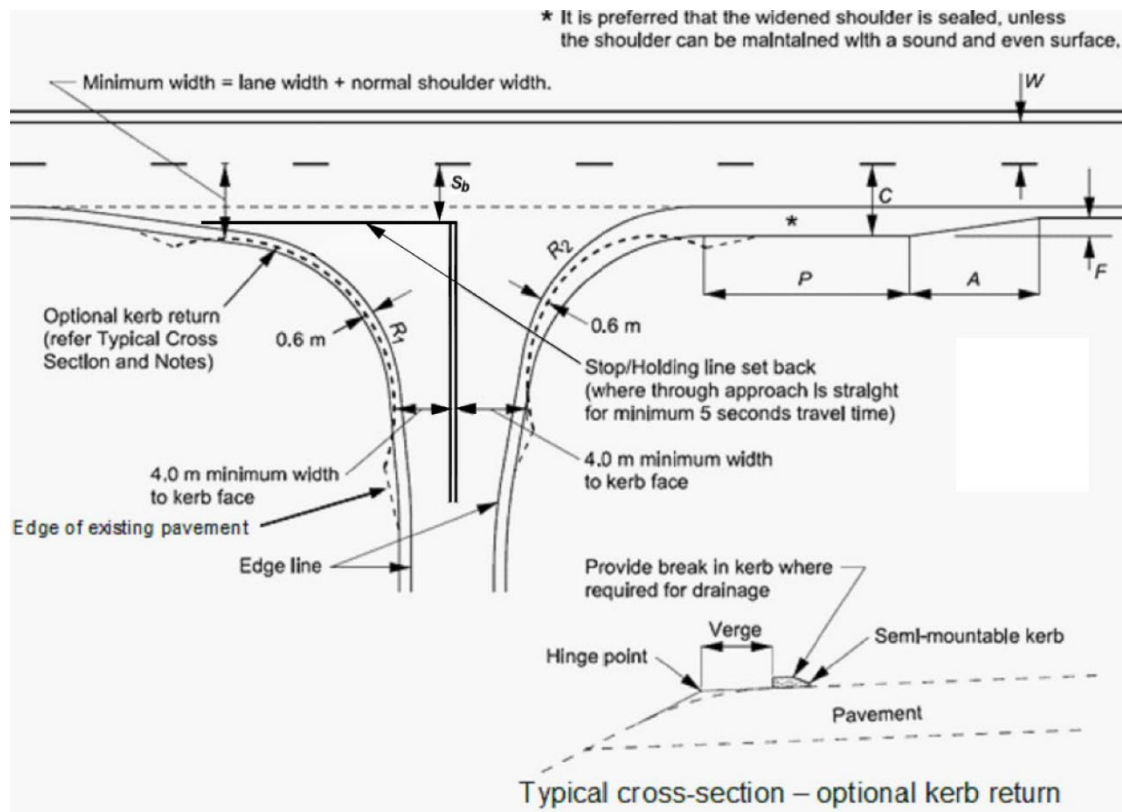


Figure 13.5: Rural basic left turn treatment proposed for the north access (Austroads, 2010a)

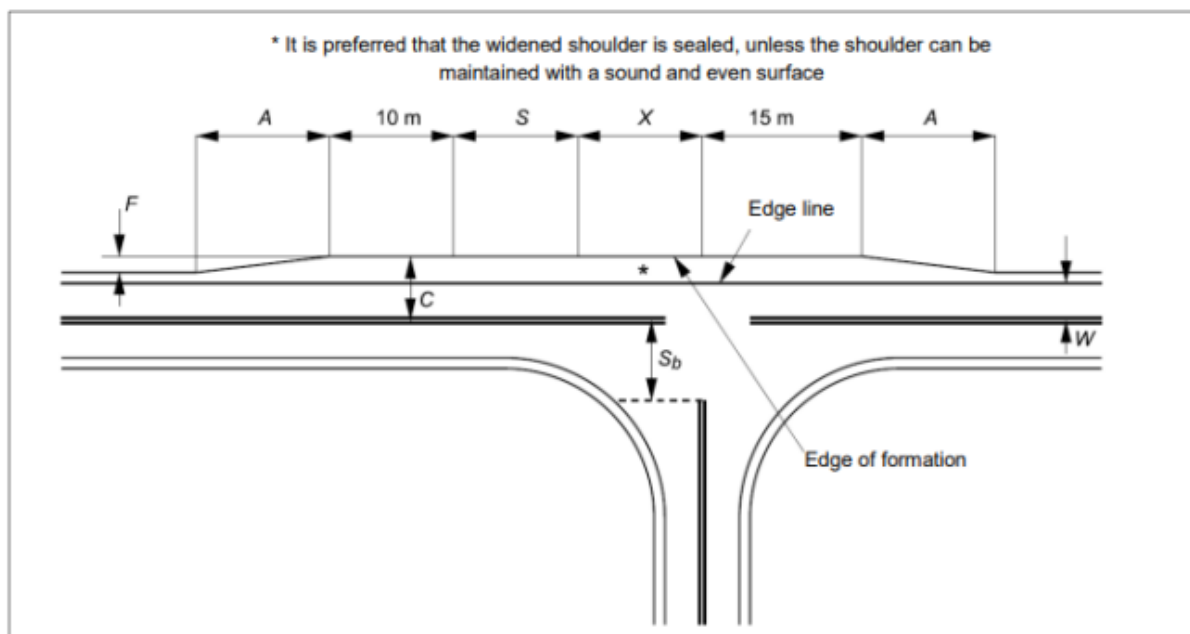


Figure 13.6: Channelised right turn treatment proposed for the north access (Austroads, 2010a)

13.3.3.3 Road maintenance

The existing commercial agreements for coal haulage activities on the Moura-Baralaba Road with road authorities establish the obligations and standards for road maintenance.

In addition, the conditions of the material change of use development approval dated 20 August 2014 (MCU Approval) authorise the development of activities conducted in the area of the TLO facility and regulate the coal haulage activities on the Moura-Baralaba Road.

Coal haulage activities on the Moura-Baralaba Road are limited by condition 59 of the MCU Approval to the sections of public road identified as the 'Proposed Middle Road Haulage Route' in section 2.2 of the Haulage Route Assessment provided by Cardno dated May 2013.

The following management plans were also developed and implemented under the MCU Approval:

- a School Bus Interaction Management Plan;
- a Stock Movement Interaction Management Plan;
- a Transport Management Plan; and
- a Road Asset Management Plan.

The proposed Project product coal road transport on the Moura-Baralaba Road will comply with the conditions of the MCU Approval. No amendment to the approval is required to cater for the combined maximum production scenarios from Baralaba North Mine and the Project.

13.3.3.4 Road upgrades

Road infrastructure upgrades were provided as part of Baralaba North Mine to support coal haulage operations in accordance with the MCU Approval. Specifically, conditions 62 to 82 of the MCU Approval required upgrades to the local road network for the Baralaba North Mine haul route, including upgrades to:

- the unsealed section of Moura-Baralaba Road which formed part of the approved haul route;
- the Banana Creek Bridge;
- each of the following intersections:
 - Baralaba-Rannes Road intersection;
 - Baralaba-Banana Road and Moura-Baralaba Road intersection;
 - Moura-Baralaba Road and Harcourt Road intersection; and
 - Moura-Baralaba Road and Brackens Road intersection;
- curve widening works at several locations on the Moura-Baralaba Road; and
- any necessary upgrade works to existing or proposed floodways located on roads forming part of the approved haul route to accommodate the appropriate design vehicle loadings for coal haulage.

These upgrades were designed to cater for future growth of haulage operations. Therefore, as the proposed Project will be utilising the southern portion of existing Baralaba North Mine roads, it is anticipated that existing road infrastructure is adequate to accommodate the proposed additional coal haulage.

13.3.3.5 Road use management plan

All product coal haulage vehicles for the Project will be appropriately covered.

The Project will operate under the existing 'Coal Haulage Road Use and Infrastructure Agreement' currently exists between Baralaba Coal Pty Ltd, Wonbindi Coal Pty Limited, and Banana Shire Council, establishing the allowable haulage activities, the obligations and standards for road maintenance, and any other relevant matters which are pertinent to the interest of the parties.

The haulage details within this agreement are guided by a 'Transport Management Plan' allowing the haulage of up to 3.5 Mtpa of coal with a predefined haulage route between BNM and the TLO facility. Specifically, haulage on public roads is limited to:

- Baralaba-Woorabinda Road;
- Baralaba-Kooemba Road;
- Theodore-Baralaba Road; and
- road reserve within the Dawson Highway (restricted access).

The following management plans developed and implemented under the existing agreement will be updated to address the Project activities:

- school bus interaction management plan;
- stock movement interaction management plan;
- transport management plan; and
- road asset management plan.

Management measures addressed in the abovementioned management plans include, but are not necessarily be limited to:

- interactions with school buses;
- interactions with stock movements;
- road safety risks;
- driver awareness and training; and
- fatigue management.

13.3.3.6 Hazardous material movement

The Project will include the deliveries of explosives, fuel and chemicals required for CHPP operations. These deliveries will travel along the same routes as the existing Baralaba North Mine haulage route or proposed Project haulage route.

The proponent will comply with all requirements for the transport of dangerous goods and hazardous materials by road, including requirements under the Transport Operations (Road Use Management–Dangerous Goods) Regulation 2008.

13.4 Rail transport

13.4.1. Existing infrastructure and values

The Moura Rail System (also known as the Moura Short Line), operated and managed by Aurizon, services multiple coal mines and runs from Moura to Gladstone where it connects to the two export terminals: RG Tanna Coal Terminal and Wiggins Island Coal Export Terminal at the Port of Gladstone. Existing customers of the Moura Rail System include Dawson Mine (near Moura) and Baralaba North Mine (to the north of Baralaba).

Product coal from the Project will be transferred to the Moura Rail System using the existing TLO facility at Moura that services Baralaba North Mine through agreement with Baralaba Coal Company. Product coal will be transported by rail to the Port of Gladstone for export (Figure 13.1).

Activities at the TLO facility are authorised under and controlled by the MCU Approval. The MCU Approval approves the following uses at the TLO facility:

- Bulk Store – coal stockpiling;
- Transport Terminal – coal train load out facility;
- Medium Impact Industry – vehicle and equipment storage; and
- High Impact Industry – diesel fuel storage (95,000 litres).

The TLO facility has sufficient surplus capacity to service the export of coal mined from the Project.

The Moura Rail System currently has additional capacity available (Aurizon, 2019).

13.4.2. Potential impacts

Rail movements on the Moura Rail System will increase during the operation of the Project to allow for the transport of up to approximately 1.8 Mtpa of product coal from the Project. It is expected that there will be a short-term increase in demand for coal transport along the Moura rail network in 2030-2033 due to the overlap in Baralaba North and South operations.

Based on a 'Blackwater-based' train configuration with approximately 100 wagons and a total payload of 8,500 t (Aurizon, 2019), as currently operating on the line, an average of five product coal trains would be loaded per week for the Project. However, to allow for cargo assembly for loading of ships to meet the required performance standards at the Port of Gladstone, a peak of up to three product coal trains per day may be required at times. This could result in increased traffic delays at railway crossings located along the Moura Rail System between Moura and the Port of Gladstone. However, since the number of coal trains associated with the Project will be minimal when compared to the number of trains that travel along the network on a daily basis, it is anticipated the Project would not have a significant impact on traffic at the crossings. The Annual Capacity Assessment Report 2023 (Coal Network Capacity Co, 2023) states that the FY2024 coal throughput of the Moura Rail System is predicted to reach 15.6 Mtpa. Up to 1.8 Mtpa of product coal will be transported on the Moura Rail System, which represents 12% of the predicted coal throughput along the rail network for the 2024 financial year.

13.4.3. Mitigation and management measures

No specific rail transport mitigation measures are proposed to be implemented for the Project.

13.5 Air transport

13.5.1. Existing infrastructure and values

Rockhampton and Gladstone Airports are the nearest major regional airports servicing the region. Rockhampton Airport is a commercial business unit of Rockhampton Regional Council which is responsible for the management and operations of the airport (Rockhampton Regional Council, 2019). Gladstone Airport is operated by Gladstone Airport Corporation (Gladstone Airport Corporation, 2022).

Other regional airports in the vicinity of the Project include Thangool Airport in Biloela, a smaller public airport operated by Banana Shire Council (Banana Shire Council, 2017) and Emerald Airport operated by Central Highlands Regional Council.

Brisbane Airport is the nearest major city airport and is operated by Brisbane Airport Corporation.

Commercial flights to Rockhampton and Gladstone Airports will be utilised for the small proportion of employees and contractors that will travel to site from Brisbane.

13.5.2. Potential impacts

It is estimated that only 5% of the Project workforce will be FIFO to the mine, comprised of predominantly management and technical roles that are not readily available locally. This equates to 13 personnel during peak construction and 26 personnel during peak operations. Of the FIFO personnel, it is estimated that 80% will fly into Rockhampton Airport, 10% into Gladstone Airport and 10% into Thangool Airport.

Existing capacity is available at these airports for the small amount of air travel required by the Project.

13.5.3. Mitigation and management measures

The Project will prioritise the recruitment of people from local and regional areas to minimise the requirement for FIFO personnel.

13.6 Sea transport

13.6.1. Existing infrastructure and values

The key export terminals at the Port of Gladstone that service the Moura Rail System include Wiggins Island Coal Export Terminal, RG Tanna Coal Terminal and Barney Point Coal Terminal.

13.6.2. Potential impacts

Based on a 180,000 t capacity ship (e.g. Cape size vessel), up to approximately ten ships will be loaded each year. Based on a 35,000 t capacity ship (e.g. Handymax size vessel), approximately 51 ships will be loaded each year.

The Project will access available capacity within existing port infrastructure at the Port of Gladstone.

13.6.3. Mitigation and management measures

No specific sea transport mitigation measures are proposed to be implemented for the Project.