Jellinbah Group

LAKE VERMONT RESOURCES
ENVIRONMENTAL IMPACT STATEMENT

CHAPTER 20 TRANSPORT

arc
ENVIRONMENTAL SOLUTIONS

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20.1 Environmental objectives and outcomes

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 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, including those on the condition of transport infrastructure; and
- ensure any required works are compatible with existing infrastructure and future transport corridors.

20.2 Project transport tasks

Transport tasks will include the following:

- Haulage of inward and outward material and equipment will be by road between locations in Queensland (Mackay, Rockhampton *via* Mackay, Moranbah and Dysart) and the Project site including:
    - machinery and equipment will be sourced from the existing Lake Vermont Mine and new machinery will be hauled from Mackay;
    - buildings and equipment from Mackay;
    - building material from Moranbah and Mackay;
    - concrete from Mackay;
    - road base material will be hauled from Tay Glen borrow pit on Saraji Road near Dysart;
    - general freight from Moranbah and Mackay;
    - fuel from Mackay;
    - explosives from Moranbah and Mackay; and
    - waste materials that are not managed on site will be transported from the Project to receivers in Mackay, Rockhampton *via* Mackay, Moranbah and Dysart (refer Chapter 15, Waste).
- Water will be transported to and from the site *via* an infrastructure corridor pipeline between the existing Lake Vermont Mine and the Project.
- Personnel will be transported by road between:
    - the mine accommodation camp in Dysart and the Project site; and
    - the mine accommodation in Dysart and their place of residence.
- Product coal will be transported by rail from the Lake Vermont Mine loading facility to seaport coal terminals.
- Product coal will be shipped from seaport coal terminals to overseas customers.
- Anticipated traffic generated by the Project, as detailed in Table 20.2 will result in the intake of:
    - approximately 250 personnel during construction; and
    - approximately 410 personnel during operation.
- Once operational, the Project will produce approximately 5 Mtpa of product coal, thus extending the period over which the existing Lake Vermont Mine operation will be able to maintain production at 9 Mtpa. Consequently, existing coal transport arrangements by rail and sea will be maintained.

Temporary conveyors will be in operation to transport waste rock from the underground road header to the surface portal entrance. A drift conveyor will also be operated to transport coal from underground workings to the ROM stockpile within the MIA. Further description of the conveyors and mine production is provided through Chapter 3, Project Description.

20.3 Road transport

20.3.1 Description of existing infrastructure and values

A Transport Impact Assessment for the Project was undertaken by Stantec Australia Pty Ltd (2022) and is provided in Appendix R. The traffic assessment has been prepared in accordance with the requirements of the Department of Transport and Main Roads 'Guide to Traffic Impact Assessment' (DTMR 2017) and the 'EIS Guideline–Transport' (DES 2020j).

The existing road transport infrastructure and its values are presented in the following subsections.

20.3.1.1 Existing road network

The principal road network components that will be used by personnel and contractors delivering equipment and material to the Project includes:

- Peak Downs Highway;
- Peak Downs Mine Road;
- Saraji Road;
- Queen Elizabeth Drive;
- Dysart Bypass Road;
- Golden Mile Road (west of the intersection with Lake Vermont Mine Access Road); and
- Lake Vermont Mine Access Road.

Access to the Project may also be *via* an alternative route from Mackay, which is expected to be used by a minority of the Project traffic. This route includes:

- Golden Mile Road (east of the intersection with the Lake Vermont Mine Access Road); and
- Fitzroy Developmental Road.

The existing road network relevant to the Project is shown in Figure 20.1

The Peak Downs Highway is a state-controlled road that links Mackay and Moranbah before continuing further in a south-westerly direction, ultimately terminating just north of Clermont. It services several coal mines within the region and connects with the Peak Downs Mine Road. The Peak Downs Highway is a two-lane, sealed highway with a posted speed limit of 100 km/h.

Peak Downs Mine Road is a council-controlled road within the IRC that provides a link between the Peak Downs Highway and Saraji Road. It is a two-lane, sealed road with a posted speed limit of 80 km/h.

Saraji Road is a council-controlled road that connects Dysart to the Peak Downs Mine Road, which links to the Peak Downs Highway. Saraji Road is a two-lane, sealed, rural arterial road with a posted speed limit of 100 km/h.

Queen Elizabeth Drive is a council-controlled road that provides light vehicle access between Saraji Road and Golden Mile Road. It is a two-lane, sealed road with a posted speed limit of 60 km/h.

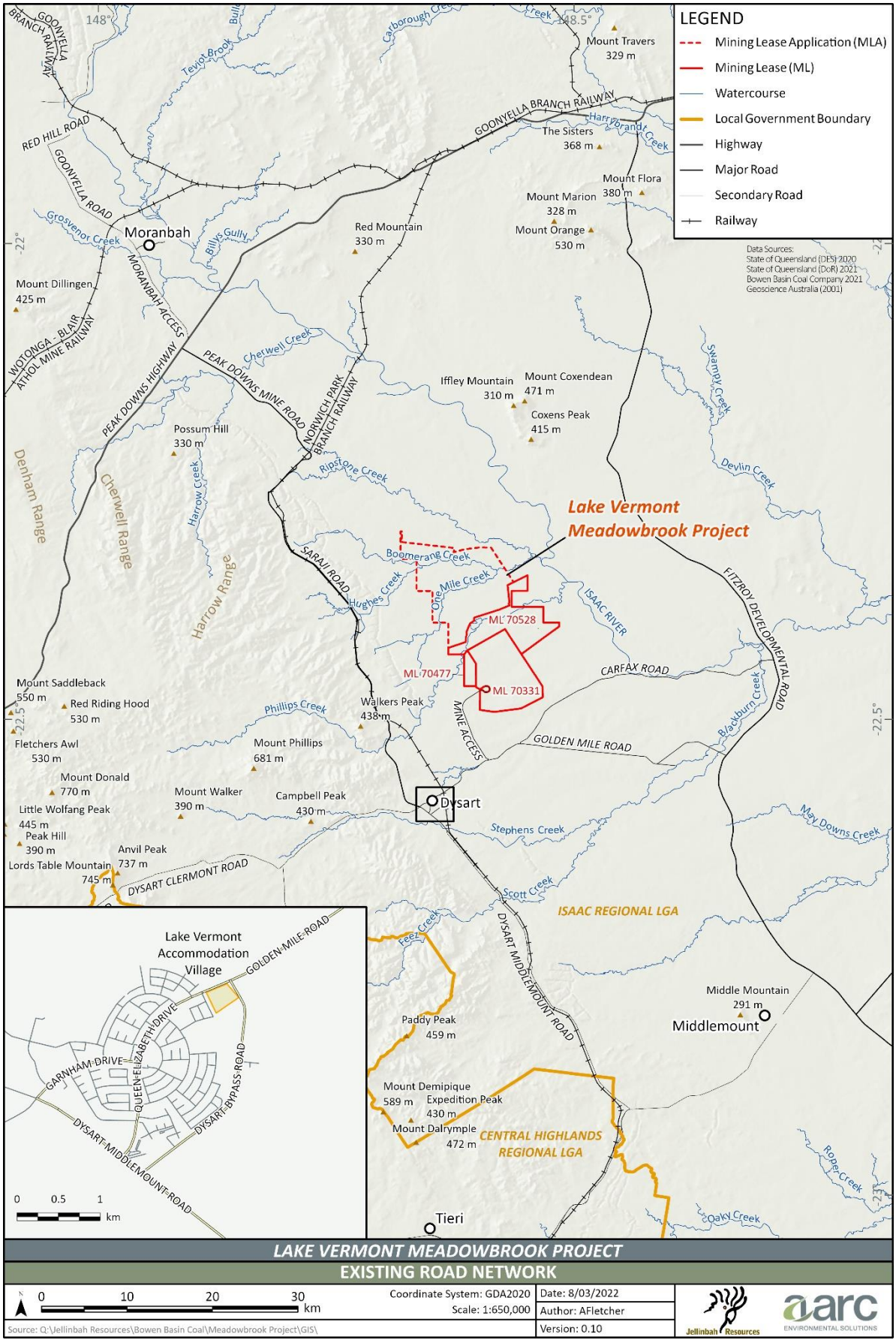

Figure 20.1: Existing road network

The Dysart Bypass Road is a council-controlled road that provides heavy vehicle access between Saraji Road and Golden Mile Road by bypassing Queen Elizabeth Drive. It is a two-lane, sealed road with a posted speed limit of 60 km/h.

Golden Mile Road is a council-controlled road that provides a link between the Project site and Dysart. It is a two-lane, sealed, rural arterial road with a 60 km/h to 100 km/h posted speed limit.

Lake Vermont Mine Access Road is a private access road between Golden Mile Road and the Lake Vermont Mine site. It is a two-lane, sealed road with a posted speed limit of 80 km/h.

Fitzroy Developmental Road is a state-controlled road that accesses Golden Mile Road and Carfax Road that link to Saraji Road. The Fitzroy Developmental Road is a two-lane, sealed highway with a posted speed limit of 100 km/h.

Carfax Road is a council-controlled road that provides access to Golden Mile Road and the Fitzroy Development Road. It is a two-lane, sealed, rural arterial road with a posted speed limit of 100 km/h.

20.3.1.2 Existing traffic volumes

Existing traffic volumes for the road network were determined from state and local government sources. Background traffic volumes for state-controlled roads were sourced from the Department of Transport and Main Roads and Road Asset Data. The data was collected for the road segments Clermont to Nebo and Nebo to Mackay on the Peak Downs Highway in 2019. Background traffic volumes for council-controlled roads were sourced from a recent traffic survey by the IRC. The traffic survey was conducted on Golden Mile Road in 2020. All background traffic volumes are presented in Appendix R, Transport Impact Assessment (section 3.3.2).

The Transport Impact Assessment (Appendix R, section 3.3.1) identified the Peak Downs Highway as recording negative traffic volume growth for period 2009–2019 in some road sections, which is likely related to irregularities in the activities of mining projects in the area. Notwithstanding this, the Transport Impact Assessment has assumed a positive growth between 1% and 5% in traffic volumes (for traffic modelling purposes) to better represent likely future conditions.

20.3.1.3 Intersection turning movement

The intersections of the Peak Downs Highway, Golden Mile Road and Saraji Road were assessed from on-site observations. The performance of these intersections was determined to be within the capacities required for the traffic volumes present (Appendix R, Transport Impact Assessment, section 3.4).

20.3.1.4 Road network capacity

The threshold levels and rationale of the 'Guide to Traffic Impact Assessment' (DTMR 2017) for road link capacity have been considered by the Project Transport Impact Assessment (Appendix R, section 1.3).

The road link capacity can be described by the level of service of the road network for factors including:

- speed;
- flow rate;
- travel time;
- freedom to manoeuvre;
- interruptions;
- comfort; and
- safety and convenience.

The levels of service definitions for traffic flow are presented in Table 20.1. The current road network performance of the Peak Downs Highway and the local road network proximate to the Project is considered to be within capacity (Appendix R, Transport Impact Assessment, Section 3.4), and the level of service is considered to be Level A.

Table 20.1: Level of service definitions

Level of service	Description
A	Free-flow conditions—drivers are unaffected by the presence of others in the traffic stream.
B	Stable flow—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 manoeuvre.
F	Forced flow—traffic volumes are at capacity, and there is no freedom to select desired speeds or manoeuvre. Flow breakdown occurs.

20.3.1.5 Road safety and conditions

Road crash statistics for the Peak Downs Highway from 2016 to 2020 were obtained from the Department of Transport and Main Roads (Appendix R, Transport Impact Assessment, section 8.2). No incident clustering was observed around the access from the Peak Downs Highway to Peak Downs Mine Road /Saraji Road. The crash history has been considered typical for the use, type and function of the Highway; therefore, the Peak Downs Highway section likely to be used by the Project does not pose any atypical safety risks or hazards relevant to the use of the roadway.

20.3.1.6 Public transport and active travel

There are no public or active transport provisions on Golden Mile Road proximate to the Project, with the exception of infrequent school bus services and long-distance coach services. The limited public transport and active travel provisions are likely a result of the adjacent land uses including mining and agriculture, with the exception of the residential and services land uses within the township of Dysart.

As there are no material public transport and active travel provisions proximate to the site, with no impacts to these provisions therefore expected to occur.

20.3.1.7 Stock routes

A stock route (identifier 405ISAA) exists adjacent to the Golden Mile Road between Dysart and the intersection with Lake Vermont Mine Access Road. This is the only stock route intersecting the principal road network components that will be used by personnel and contractors delivering equipment and material to the Project. This stock route is classed as minor and unused, no works or upgrades are proposed to the footprint of the stock route and the transport of workers and materials to and from the existing Lake Vermont Mine passes this stock route without impact.

There are some areas of stock routes adjacent to the Peak Downs Highway, which is within the proposed Project principal road network. The Project traffic will contribute a minor component of the traffic on the Peak Downs Highway and the stock routes are expected to maintain their current function, without additional impact arising from the Project.

As the transport task of the Project will not require works within any stock route and the proposed transport is not expected to substantially affect the usability of stock routes, no impacts to stock routes are expected to occur.

20.3.2 Potential impacts

The Transport Impact Assessment (Appendix R) has been undertaken in accordance with the requirements of the DTMR Guide to Traffic Impact Assessment, by way of the adoption of the following methodology:

- Review of existing road conditions and operations and establishment of a baseline conditions (i.e. the existing transport operation of the Lake Vermont Mine).
- Preparation of estimates for Project generated traffic, based on the intended haul routes of heavy vehicles and workforce requirements supplied by the Proponent.
- Preparation of scenarios for the transport assessment which consider baseline and Project traffic generation estimates at critical Project milestones (referred herein as design horizons).
- Determination of anticipated road impacts of the Project for each of the identified design horizons, in accordance with threshold levels and rationale provided within the GTIA. Specifically, the following has been considered:
    - Impact of Project related traffic on existing road link capacity for key haul routes.
    - Impact of Project related traffic on key intersections which are expected to carry the majority of Project generated traffic.
    - Impact of Project related heavy vehicle movements on existing pavement conditions.
- Where impacts were identified as exceeding GTIA defined threshold levels, recommendations to “avoid”, “manage” or “mitigate” these impacts have been provided in line with the methodology detailed in the GTIA.
- Review and assessment of road safety risks that might arise as a result of the Project and identification of mitigation measures to ensure no worsening of these risks.

It is noted that a conservative impact assessment has been undertaken, assuming that the existing baseline traffic volumes would be maintained for all future design horizons. Project traffic volumes have been overlaid on top of existing baseline traffic. This is considered conservative given that the existing Lake Vermont workforce and production (which drive the baseline traffic volumes) are forecast to reduce in the future as the Project traffic volumes increase. This reflects the expected shift in production and manning from the existing Lake Vermont Mine to the Project.

20.3.2.1 Project traffic generation

Vehicular access to the Project will be *via* the private Lake Vermont Mine Access Road, accessed by the council-controlled Golden Mile Road. The Project will not have frontage and will not require direct access from any state-controlled roads.

The expected traffic generation resulting from the Project is presented below.

Workforce transport vehicles

The potential impact of workforce generated traffic on the road network has been assessed for three stages of the Project:

- construction stage (Project Year -0, the year of maximum traffic generation);
- commencement of operations (Project Year 1); and
- the 10-year design horizon from operations commencement (Project Year 11).

The investigated stages represent the distinct stages of the Project; therefore, they capture the range of traffic movements expected throughout the lifetime of the Project.

It is estimated that up to 250 personnel will be required during peak construction and up to approximately 410 personnel during peak operations. Maximum traffic generation will nonetheless occur during the Project construction phase, due to the relationship with the baseline workforce of the existing Lake Vermont Mine (which is notably more variable than the Project workforce). Indicative workforce projections for the Project (in conjunction with the workforce of the existing Lake Vermont Mine) are provided through Table 20.2.

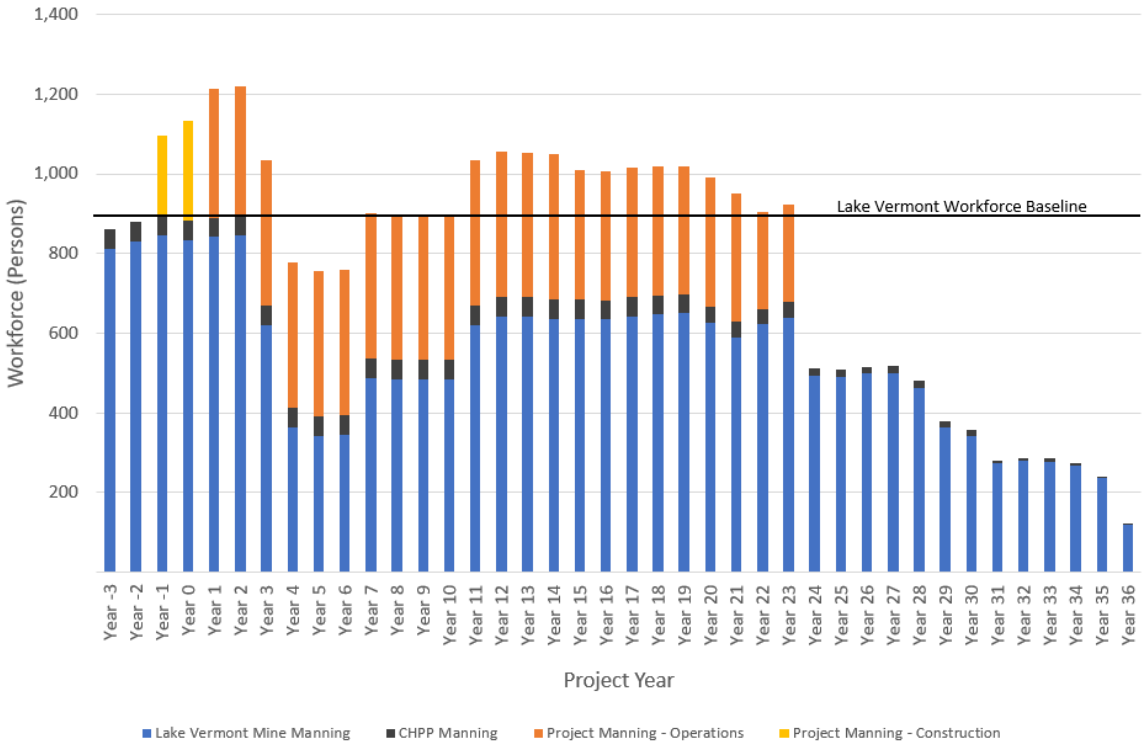

Figure 20.2: Indicative workforce projections

The Project workforce will primarily be sourced from the surrounding Isaac and Mackay regional areas, with the 'drive-in/drive-out' proportion of the workforce to reside at the Lake Vermont Accommodation Village facilities at Dysart (Figure 20.1).

Daily transport from the Lake Vermont Accommodation Village to the Project site will be *via* a shuttle bus (approximately 22 seat capacity). Residents who reside in Dysart will commute to the Lake Vermont Accommodation Village for transport *via* the shuttle bus. Notwithstanding this, some light vehicle commuting from Dysart to the Project is also anticipated.

While the Transport Impact Assessment modelled the continuation of existing Lake Vermont Mine personnel transport, a portion of the existing workforce will be assigned to work on the Project. This represents a beneficial double-up of personnel, so the impact assessment of personnel transport is considered conservative.

During the initial two-year construction phase, it is expected that 50% of the workforce will travel to and from the site in light vehicles (carrying 1.2 persons), and 50% will use buses (carrying 22 persons).

During the mine operations phase, it is expected that 5% of the workforce will travel to and from the site in light vehicles (carrying 1.2 persons), and 95% will use buses (carrying 22 persons). The percentage of light vehicle travellers is considered to be overestimated.

Workforce rosters for the construction phase have assumed 80% of workforce on day shift and 20% on night shift. Operation phase rosters have assumed 55% of workforce on day shift and 45% on night shift. The estimated workforce generated traffic is presented in Table 20.2. The combined workforce traffic generated by the Project and existing Lake Vermont Mine operations is predicted to exceed current Lake Vermont Mine traffic from the time of Project construction commencement until Project year 4. From Project year 4 to Project year 11, workforce traffic generation will be lower than the existing Lake Vermont Mine traffic. Subsequent to Project year 11 however, the total traffic generation (from the Project + the Lake Vermont Mine) will be more than existing traffic by an estimated 10 vehicles per day (Appendix R, Transport Impact Assessment, section 4.2.3). This minor increase is due to an increase in the workforce of the existing Lake Vermont Mine operations, which varies during different phases of the mine (refer Appendix R, Transport Impact Assessment, Figure 2.2).

Table 20.2: Predicted Project workforce generated traffic

Design year	Direction	AM Peak (vehicle/hour)		PM Peak (vehicle/hour)	
		In	Out	In	Out
Year-1	Dysart (west of site)	89	23	23	89
Year 1	Dysart (west of site)	20	17	17	20
Year 11	Dysart (west of site)	20	17	17	20

Heavy vehicles

Material, plant and equipment are intended to be delivered to the Project *via* road-based transport. The primary construction traffic will involve rigid trucks, articulated vehicles, B-doubles and some oversized loads.

Materials, plant and equipment will be sourced from Mackay, Rockhampton and Moranbah. The Transport Impact Assessment (Appendix R, section 4.3) has conservatively assumed that all heavy vehicle haulage, other than quarry material deliveries, will originate from Mackay. This is considered conservative, as a proportion of these deliveries are expected to come from Moranbah.

The estimated heavy vehicle traffic is presented in Table 20.3. The majority of heavy vehicles travelling from Mackay (70%) are expected to travel *via* Saraji Road and Dysart, and 30% are expected to travel *via* the Fitzroy Development Road and Golden Mile Road (to the east of the site) in line with current transport movements to and from the existing Lake Vermont Mine.

Quarry materials will be sourced from a local provider *via* a private haul road to the site. Heavy vehicle haulage on the Golden Mile Road (during all Project phases) will be less than one per hour.

Table 20.3: Predicted Project generated heavy vehicle traffic

Project year	AM Peak (vehicle/hour)		PM Peak (vehicle/hour)	
	In	Out	In	Out
Year -1 to 0	< 1	< 1	< 1	< 1
Year 1 to 2	< 1	< 1	< 1	< 1
Year 3+ (ongoing)	< 1	< 1	< 1	< 1

20.3.2.2 Road link capacity assessment

The Project impacts on the external road network capacity have been assessed. The entire road link assessment is presented in Appendix R, Transport Impact Assessment, section 5. Key findings are presented below.

State-controlled road network

State-controlled road network impacts have been assessed in accordance with the 'Guide to Traffic Impact Assessment' (DTMR 2017), which defines the impact assessment area as:

> *… road links where the development traffic exceeds 5% of the base traffic in either direction on the link's annual average daily traffic in the year of opening of the stage.*

The expected traffic increase on state-controlled roads is not expected to exceed 0.1% during any stage of the Project. Therefore, it is considered that the Project will not significantly impact the state-controlled road link capacity.

Council-controlled road network

The potential impacts on the council-controlled road network have been assessed. The maximum predicted impacts include traffic increases of up to 13% on the Golden Mile Road (west of the site access), during the construction phase. This represents the addition of approximately 100 vehicles per day (or 200 vehicle movements). In Project Year 1, which marks the commencement of the operations phase, an increase of up to 5% (or approximately 100 vehicle movements per day) is expected on the Golden Mile Road (west of the site access). Expected changes to traffic volumes are presented in Table 20.4.

The Transport Impact Assessment (Appendix R, section 7.4) concludes that the expected increases in traffic volumes on the council-controlled network can be catered for within the existing available capacity. This is notwithstanding the overestimation applied in respect of light vehicle movements.

A decrease in daily traffic volume resulting from the existing Lake Vermont Mine is also forecast during the operational phase of the Project due to the increased use of shuttle buses for workforce transport and decrease in construction workforce (refer section 20.3.2.1). Therefore, the predicted impacts of the Project during the operational phase are considered to be minimal.

Table 20.4: Council-controlled road network link assessment

Road section	Direction	Daily traffic volumes increase (%)	
		Project Year -1	Project Year 1
Golden Mile Road (west of site access)	Eastbound	12	5
	Westbound	13	5
Golden Mile Road (east of site access)	Eastbound	0.4	0.3
	Westbound	0.3	0.2
Saraji Road and Peak Downs Mine Road	Northbound	0.2	0.1
	Southbound	0.2	0.1

20.3.2.3 Road intersection performance

Intersection observations were undertaken for the key intersections of the road transport route, with turn warrant assessments undertaken for intersections likely to be impacted by traffic generated by the Project. These assessments included the following intersections:

- Lake Vermont Mine Road and Golden Mile Road;
- Peak Downs Mine Road and Peak Downs Highway;
- Lake Vermont Accommodation Village and Golden Mile Road;
- Dysart Middlemount Road and Queen Elizabeth Drive;
- Saraji Road and Garnham Drive; and
- Saraji Road and Peak Downs Mine Road.

All intersections assessed have been determined to exceed the required turn treatments for the expected traffic travelling through them (Appendix R, Transport Impact Assessment, Section 6.4). Therefore, no intersection upgrades are required to accommodate Project generated traffic.

20.3.2.4 Road safety and efficiency

The Department of Transport and Main Roads 'Guide to Traffic Impact Assessment' (DTMR 2017) requires that:

> *[A] development should ensure that a road's safety is not significantly worsened as a result of the development and that any pre-existing or development introduced unacceptable safety risk is addressed.*

A safety risk assessment has been conducted for state-controlled roads and council-controlled roads (Appendix R, Transport Impact Assessment, section 8.0). Traffic safety risks for the road network to be used by the Project have been identified and assessed according to a traffic safety risk scoring matrix. All identified risks associated with the Project are expected to have a low to medium risk rating.

The risk rating of the safety risk, *debris/construction material on roads during the construction and ongoing operations of the Project*, was determined to increase from low to medium. Measures to mitigate this risk (to reduce the risk to low) will include monitoring workforce hours and driver behaviours, and implementing standard operating procedures. All other traffic safety risks were determined to maintain their current risk rating.

The road safety risk assessment includes an analysis of road crash data from the Peak Downs Highway, which indicates there is no incident clustering around sections of roadways proposed to be used by the Project. Therefore, it is considered that the Peak Downs Highway (proximate to the Project) does not pose any atypical safety risks or hazards that need to be factored into vehicle movement considerations.

20.3.2.5 Railway level crossings

There are no rail level crossings in the vicinity of the Project or its frontage, and no new railway crossings are proposed for the Project. Therefore, no assessment is necessary in accordance with the 'Australian Level Crossing Assessment'.

20.3.2.6 Road conditions/pavement

A pavement impact assessment has been conducted in accordance with the 'Guide to Traffic Impact Assessment–Practical Note for Pavement Impact Assessments' (DTMR 2018). The assessment aims to identify when Project generated traffic exceeds existing standard axle repetitions by 5%. The complete pavement impact assessment is presented in Appendix R, Transport Impact Assessment, section 7; the conclusions are presented below.

State-controlled roads

Generated traffic is not identified to be above 5% of the standard axle repetition threshold on the state-controlled road network for any Project year, and it is considered that contributions to offset pavement impacts are not required.

Council-controlled roads

Pavement impacts on the council-controlled Golden Mile Road west of the site access road are anticipated to be approximately 3.8% above the baseline standard axle repetition in Project Year -1 (the Project construction phase), reducing to 1.3% by Project Year 3. An impact of less than 1% above the threshold is expected on the eastern side of the site access road. Therefore, pavement impacts on council-controlled roads are minimal, largely due to the private access road, which will be utilised to transport quarry material.

All other council-controlled road sections are not expected to experience pavement impacts exceeding 5% of standard axle repetitions.

However, it is acknowledged that the existing Lake Vermont Mine has a contribution agreement for the maintenance of a section of the council-controlled Golden Mile Road west of the site access road. Road maintenance contributions to the IRC are anticipated to be reviewed periodically, although no fundamental changes are anticipated in respect of the modelled pavement impacts of the Project.

20.3.3 Mitigation and management measures

The Transport Impact Assessment (Appendix R) has indicated that the potential impacts of the Project can be avoided through the application of mitigation measures.

While pavement impacts to both state- and local-controlled roads are below the identified 5% threshold, impacts from heavy vehicle movements may need to be monitored during the Project construction phase. This data will enable future review of the Lake Vermont Mine maintenance agreement with the IRC for the applicable section of the Golden Mile Road west of the Project access road.

The measures proposed to mitigate impacts on road safety from debris/construction material on roads and the risk of vehicle collision due to driver fatigue during the construction and ongoing operations of the Project include:

- monitoring workforce hours and driver behaviours through the completion of Job safety Analyses;
- implementing Safe Operation of Mobile Plant Standard Operating Procedures, Journey Management Systems and a Fatigue Management Policy; and
- educating the workforce through inductions on road safety.

The Transport Impact Assessment has proposed road safety measures to mitigate traffic risks that have not been identified as significant impacts of the Project, including:

- ensuring that the transport of hazardous and dangerous goods complies with the Australian Dangerous Goods Code.

These processes have been developed for the existing Lake Vermont Mine and have successfully managed the transport impacts of the mine. No complaints or incidents relating to traffic impacts of the existing Lake Vermont Mine have been recorded, indicating success in the existing mitigation and management measures. The existing mitigation and management measures will be implemented for the Project.

The effectiveness of the proposed measures and processes will be monitored by the site safety supervisor through the mine road safety and incident record and the successful performance of the proposed measures will be indicated by achieving no road safety near misses or vehicle collisions.

20.4 Rail transport

20.4.1 Description of existing infrastructure and values

The Project will access rail transport system via the existing Lake Vermont Mine rail loop along the Lake Vermont spur line. Rail transportation in the region is serviced by the Aurizon Goonyella Rail Corridor. The rail system provides connection for coal shipments to port facilities in Bowen, Gladstone, or Mackay. The existing rail network is presented in Figure 20.3.

20.4.2 Potential impacts

The Project will not increase production beyond the current output of the existing Lake Vermont Mine operation and the combined operation will operate within the current authorised production limit. Consequently, the demands on rail transport are expected to be maintained at or below current settings, with no additional impacts expected to occur as a result of the Project. Commercial agreements to access rail infrastructure currently exist and will be maintained.

20.4.3 Mitigation measures

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

20.5 Sea transport

20.5.1 Description of existing infrastructure and values

The Project will produce metallurgical coal for export markets, transported *via* port facilities connected to the Aurizon Goonyella Rail system. The rail system interconnects to port facilities, including Abbott Point Coal Terminal north of Bowen, RG Tanna Coal Terminal in Gladstone and the Dalrymple Bay Coal Terminal in Mackay. The existing Lake Vermont Mine product coal is transported to these port facilities for shipping to international markets.

20.5.2 Potential impacts

The Project will not increase production beyond the current output of the existing Lake Vermont Mine operation. The combined operation will produce product coal consistent with the existing Lake Vermont Mine output and be consistent with existing agreements with port operators. As such, impacts on port infrastructure are not expected to occur as a result of the Project.

20.5.3 Mitigation measures

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

Figure 20.3: Rail, sea and air transport facilities

20.6 Air transport

20.6.1 Description of existing infrastructure and values

Aircraft may be used to transport some Project workforce. Airports within the vicinity of the Project include Moranbah, Emerald, Mackay and Rockhampton. The Transport Impact Assessment has identified that these airports are operating at throughputs significantly under existing capacities.

20.6.2 Potential impacts

The Project workforce will be predominantly local to the region, so the number of staff using airport facilities will not impact airport operations. Therefore, airport facilities and operations are not expected to be affected as a result of the Project.

20.6.3 Mitigation measures

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