

Whitehaven Temporary Road Haulage Increase Modification



Environmental Assessment

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1 INTRODUCTION

This document is an Environmental Assessment (EA) for the Whitehaven Temporary Road Haulage Increase Modification (the Modification), and has been prepared to support an application to modify the Project Approvals for Tarrawonga Coal Mine (11_0047) and Rocglen Coal Mine (10_0015).

Project Approval (11_0047) currently allows up to 3 million tonnes per annum (Mtpa) of Tarrawonga run-of-mine (ROM) coal to be transported to the Whitehaven Coal Limited (Whitehaven) Coal Handling and Preparation Plant (CHPP) along the Approved Whitehaven ROM Coal Road Transport Route (Approved Road Transport Route) (Figure 1).

Project Approval (10_0015) currently allows for up to 1.5 Mtpa of Rocglen ROM coal to be transported to the Whitehaven CHPP along the Approved Road Transport Route.

Development Consent (SSD-5000) for the Vickery Coal Project permits haulage of up to 4.5 Mtpa to the Whitehaven CHPP along the Approved Road Transport Route.

The approvals for the Tarrawonga Coal Mine, Rocglen Coal Mine and Vickery Coal Project permit a combined total of 3.5 Mtpa to be transported on the Approved Road Transport Route prior to the Kamilaroi Highway overpass being built and 4.5 Mtpa following commissioning of the overpass.

The highway overpass is not proposed to be constructed at this stage.

1.1 MODIFICATION OVERVIEW

The Approved Road Transport Route is shown on Figure 1, and comprises:

- northern section (between the Tarrawonga Coal Mine and the intersection between Blue Vale Road and Shannon Harbour Road) – a combination of private roads (Tarrawonga Coal Mine Access Road) and public roads (Rangari Road, Hoad Lane and Blue Vale Road);
- eastern section (between the Rocglen Coal Mine and the intersection between Blue Vale Road and Shannon Harbour Road) – a combination of private roads (Rocglen Coal Mine Access Road) and public roads (Shannon Harbour Road); and

- southern section (between the intersection of Blue Vale Road and Shannon Harbour Road and the Kamilaroi Highway) – public roads.

This Modification would involve a temporary road haulage increase from 3.5 Mtpa to 4 Mtpa along the southern section of the Approved Road Transport Route for the calendar years 2016 and 2017, without construction of the Kamilaroi Highway overpass.

Whitehaven would manage the use of the Approved Road Transport Route such that the ROM coal transported from the Whitehaven coal mines (i.e. the Tarrawonga Coal Mine and Rocglen Coal Mine) to the Whitehaven CHPP would not exceed 4 Mtpa along the southern section of the Approved Road Transport Route.

Cumulative ROM coal haulage along the southern section of the Approved Road Transport Route would not exceed the maximum annual rate described and assessed in the Vickery Coal Project Environmental Impact Statement (EIS) (i.e. 4.5 Mtpa with the private haul road and Kamilaroi Highway overpass in place).

The increased haulage rate is required due to favourable mining conditions which are allowing increased coal recovery without material changes to other approved operations such as the mining rate, operating hours or number of employees.

The Modification would not change the currently approved rate of ROM coal transport from the Tarrawonga Coal Mine along the northern section of the Approved Road Transport Route or Rocglen Coal Mine along the eastern section of the Approved Road Transport Route.

1.2 CONSULTATION

1.2.1 Department of Planning and Environment

Whitehaven consults regularly with the Department of Planning & Environment (DP&E) regarding existing Whitehaven operations and modifications.

In August 2016 DP&E provided Whitehaven with Key Issues for Consideration to be addressed in the EA for this modification, which are provided in Table 1.

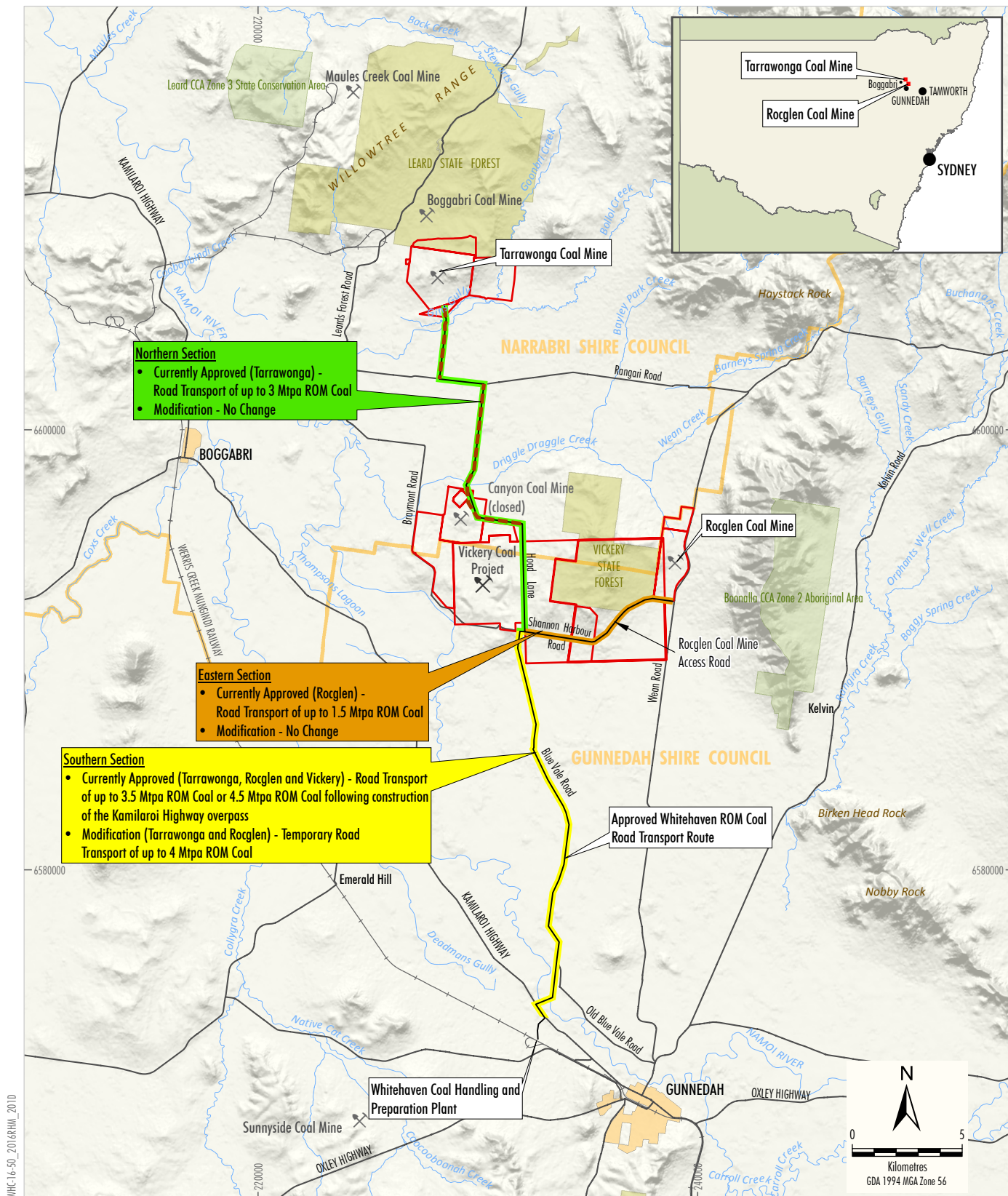


Table 1
Key Issues for Consideration

Key Issue	Section Addressing Requirement in EA
Project General	
• Provide a description of the existing coal/reject haulage commitments / requirements associated with Whitehaven Coal operations and how they relate to the current modification.	Section 2.5
• Provide a detailed description of the project justifications, including consideration of alternatives and committed timeframe for increased haulage.	Sections 1.1 and 5
• Describe the benefits of the proposed changes (if any).	Section 1.1
• Clearly identify and describe environmental and social risks associated with coal/reject haulage that are currently being managed.	Sections 2.5 and 3
• Provide a detailed description of the existing management system currently in place for coal/reject haulage.	Section 2.5
• Detail the outcomes of existing monitoring programs and describe changes (if any) implemented as part of annual review processes.	Section 2
Traffic / Haulage	
• Provide details of current and proposed haulage parameters on a like for like basis.	Sections 2.5 and 3.2
• Complete a traffic/safety audit to inform an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the haulage route, particularly interactions with public road networks.	Section 3.3
• Clearly identify existing controls implemented by each mine to manage coal/reject haulage, including spillage and tracking of materials from the mines sites/CHPP onto the public road network.	Sections 2.5 and 3.2.1
• Clearly identify further controls (where required).	Section 3.2.3
Noise	
• Complete a road traffic noise assessment for the proposed changes to determine scale of change from the existing operations.	Section 3.4
Other	
• Complete a risk based assessment for other impacts associated with the proposed changes.	Section 3.1

1.2.2 Roads and Maritime Services

Whitehaven met with Roads and Maritime Services (RMS) in August 2016. The following items were raised and are addressed in the indicated sections within this EA:

- Survey of existing traffic levels (Section 3.2.2).
- Driver safety (Sections 2.5.5 and 3.2):
 - Variable weather conditions.
 - Haulage truck safety systems.
- Road Safety Audit (Section 3.3 and Table 4):
 - Site inspection.
 - Intersection safety risk.
 - Road pavement maintenance.
 - Dust control.
 - Coal fines control.

1.2.3 Environment Protection Authority

A letter was sent to the Environment Protection Authority (EPA) in September 2016, providing an overview of the proposed Modification and the associated predicted minor road noise level increase.

1.2.4 Gunnedah Shire Council

Whitehaven met with the Gunnedah Shire Council (GSC) in August 2016. Issues raised include ongoing road maintenance and consultation with private landholders along the Approved Road Transport Route.

Road maintenance and assessment of the road pavement is addressed by the Road Safety Audit as described in Section 3.3.

Whitehaven has provided briefing packages with an overview of the proposed Modification to potentially affected landholders (Section 1.2.6).

1.2.5 Narrabri Shire Council

Whitehaven met with the Narrabri Shire Council (NSC) in September 2016 to discuss the Modification. As the increased haulage associated with the Modification would occur on the southern section of the Approved Road Transport Route, which is not within the NSC Local Government Area (LGA), NSC indicated no further discussions were considered necessary.

1.2.6 Public Consultation

Briefing packages providing an overview of the proposed Modification were sent to potentially affected landholders in August 2016.

1.3 STRUCTURE OF THIS DOCUMENT

This EA comprises a main text component and supporting studies. An overview of the main text sections is presented below:

Section 1	Provides an overview of the Modification and a summary of the consultation undertaken in relation to the Modification.
Section 2	Provides a description of the existing/approved Tarrawonga Coal Mine, Rocglen Coal Mine and the Approved Road Transport Route.
Section 3	Provides an assessment of the potential environmental impacts of the Modification on the Approved Road Transport Route and surrounding road network.
Section 4	Presents the legislative framework for the existing/approved Tarrawonga and Rocglen Coal Mines.
Section 5	Provides the conclusion and justification for the Modification.
Section 6	References.

2 BACKGROUND

2.1 TARRAWONGA COAL MINE

The Tarrawonga Coal Mine is located approximately 42 kilometres (km) north-northwest of Gunnedah in New South Wales (NSW) (Figure 1).

The Tarrawonga Coal Mine is owned and operated by Tarrawonga Coal Pty Ltd (TCPL), which is a joint venture between Whitehaven Coal Mining Pty Ltd (a wholly owned subsidiary of Whitehaven) (70 percent [%] interest) and Boggabri Coal Pty Ltd (BCPL) (30% interest).

Mining operations at the Tarrawonga Coal Mine are conducted in accordance with Project Approval (11_0047), which was granted by the NSW Planning Assessment Commission under delegation from the NSW Minister for Planning & Infrastructure pursuant to section 75J of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act) on 22 January 2013.

In accordance with Project Approval (11_0047) the Tarrawonga Coal Mine is approved to extract up to 3 Mtpa of ROM coal until the end of December 2030.

ROM coal from the Tarrawonga Coal Mine is transported to the Whitehaven CHPP along the Approved Road Transport Route for processing.

As described in the Tarrawonga Coal Project EA, Tarrawonga coal was to be processed at the Boggabri Coal Mine CHPP and loaded onto trains for off-site transport via the Boggabri rail spur (Figure 1). In accordance with Condition 10, Schedule 2 of the Tarrawonga Project Approval (11_0047):

10. *Within 6 months of the Boggabri rail spur line and Boggabri CHPP being commissioned, and every 2 years thereafter, the Proponent shall use all reasonable efforts to reach an agreement with the owners of the Boggabri coal mine to use this infrastructure to process and transport coal from the site, to the satisfaction of the Secretary.*

There is currently no agreement between BCPL and TCPL to transport and process Tarrawonga ROM coal at the Boggabri CHPP.

The Whitehaven ROM Coal Haulage Modification allowed for an increase in ROM coal haulage along the northern section of the Approved Road Transport Route from 2 Mtpa to 3 Mtpa for the life of the Tarrawonga Coal Mine. The Whitehaven ROM Coal Haulage Modification was approved on 6 November 2014 by the DP&E.

On 22 July 2016, the Tarrawonga Coal Mine Rejects Disposal Modification (Tarrawonga Modification 2) was lodged with the DP&E and is currently being assessed. The Tarrawonga Modification 2 proposes to modify the rejects disposal strategy at Tarrawonga Coal Mine to allow the disposal of various types of coal reject material.

2.2 ROCGLLEN COAL MINE

The Rocglen Coal Mine is located approximately 25 km north of Gunnedah (Figure 1), and is owned and operated by Whitehaven.

Mining operations at the Rocglen Coal Mine are conducted in accordance with Project Approval (10_0015), which was granted by the Minister for Planning & Infrastructure pursuant to section 75J of the EP&A Act on 27 September 2011.

In accordance with Project Approval (10_0015) the Rocglen Coal Mine is approved to extract up to 1.5 Mtpa of ROM coal until the end of December 2022.

ROM coal from the Rocglen Coal Mine is transported to the Whitehaven CHPP along the Approved Road Transport Route for processing.

The Rocglen Coal Mine Project Approval (10_0015) was also modified in November 2014 (due to the Whitehaven ROM Coal Haulage Modification) to reflect the commitment to manage the cumulative road haulage of ROM coal from the Tarrawonga and Rocglen Coal Mines and the Vickery Coal Project.

On 24 August 2015 the Gunnedah CHPP and Rocglen Rejects Management Modification (Rocglen Modification 2) was approved by the DP&E. The Rocglen Modification 2 modified the Rocglen Project Approval (10_0015) to allow disposal of fine rejects at the Rocglen Coal Mine.

2.3 VICKERY COAL PROJECT

The Vickery Coal Project is an approved, but yet to be developed open cut coal mining operation. It is located in the Gunnedah Coalfield (Figure 1), approximately 25 km north of Gunnedah, NSW, within the GSC and the NSC LGA. The Vickery Coal Project is owned by Whitehaven.

The NSW Minister for Planning granted Development Consent (SSD-5000) for the Vickery Coal Project under Part 4 of the EP&A Act on 19 September 2014.

The Vickery Coal Project will involve the development of an open cut coal mine producing up to 4.5 Mtpa ROM coal until the end of December 2044.

The Vickery Coal Project also includes construction of an approximately 1 km long section of private haul road (including an overpass over the Kamilaroi Highway) between Blue Vale Road and the Whitehaven CHPP.

Development Consent (SSD-5000) allows up to 3.5 Mtpa ROM coal to be transported from the Vickery Coal Project along the Approved Road Transport Route to the Whitehaven CHPP (i.e. the southern section of the Approved Road Transport Route). However, following the commissioning of the proposed private haul road and Kamilaroi Highway overpass, up to 4.5 Mtpa could be transported to the Whitehaven CHPP.

2.3.1 Vickery Extension Project

The Vickery Extension Project EIS is currently in preparation to accompany a Development Application, in accordance with Part 4 of the EP&A Act.

A Preliminary EA was lodged with the DP&E in January 2016. The Secretary's Environmental Assessment Requirements were issued by the DP&E on 19 February 2016. The EIS will address the potential environmental impacts of the Vickery Extension Project and is anticipated to be lodged in late 2016.

The Vickery Extension Project would involve mining the coal reserves associated with Vickery Coal Project, as well as accessing additional coal reserves. However, it is not anticipated to be constructed or become operational within the duration of this Modification (i.e. 2016 and 2017).

The Vickery Extension Project would also involve the construction and operation of an on-site CHPP, rail load out facility and rail loop and rail spur. This infrastructure would be used for the handling, processing and transport of coal from the Vickery Coal Project, as well as other existing Whitehaven mining operations (e.g. the Tarrawonga and Rocglen Coal Mines).

2.4 WHITEHAVEN CHPP

The Whitehaven CHPP and rail load out facility is located approximately 5 km west of Gunnedah and currently processes ROM coal from the surrounding Whitehaven coal mining operations (namely the Tarrawonga and Rocglen Coal Mines).

The Whitehaven CHPP is owned by Whitehaven and operates in accordance with Development Consent (DA 0079.2002). The consent is valid for a period of 20 years and expires in December 2022.

All sized ROM coal received is stockpiled in either ROM coal stockpiles for processing at the Whitehaven CHPP, or in product stockpiles for bypass loading at the rail loadout facility. Up to 3 Mtpa of sized ROM coal is approved to be processed in the CHPP and the rail loadout facility is approved to handle up to 4.1 Mtpa of product coal.

2.5 APPROVED ROAD TRANSPORT ROUTE

Whitehaven currently manages the use of the Approved Road Transport Route such that the cumulative ROM coal transported from all Whitehaven coal mines (i.e. the Tarrawonga Coal Mine, Rocglen Coal Mine and Vickery Coal Project) to the Whitehaven CHPP does not exceed:

- 3.5 Mtpa (i.e. the currently approved rate¹) prior to the commissioning of the proposed private haul road and Kamilaroi Highway overpass; and
- 4.5 Mtpa (i.e. the maximum annual rate described and assessed in the Vickery Coal Project EIS) following the commissioning of the proposed private haul road and Kamilaroi Highway overpass.

Whitehaven and BCPL have purchased, or entered into purchase agreements, with a number of properties adjacent to the Approved Road Transport Route (Figure 2).

All dwellings proximal to the northern section of the Approved Road Transport Route are currently owned by Whitehaven and/or BCPL, or are subject to a purchase agreement by Whitehaven (Figure 2).

2.5.1 Existing Road Maintenance Agreements

The Approved Road Transport Route lies within the Gunnedah and Narrabri LGAs (Figure 1).

In accordance with Condition 55, Schedule 3 of Project Approval (11_0047) and Condition 26, Schedule 3 of Project Approval (10_0015), Whitehaven has entered into road maintenance agreements with the GSC and NSC for the maintenance of public sections of the Approved Road Transport Route within respective LGAs.

The road maintenance agreement with the GSC requires Whitehaven to pay 95% of road maintenance costs incurred by the GSC for Hoad Lane and Blue Vale Road.

The road maintenance agreement with the NSC requires the roads and intersections along the Approved Road Transport Route within the Narrabri LGA to be maintained in good condition at all times at Whitehaven's cost.

A road maintenance agreement with GSC on the back of an agreement the council has with RMS requires Whitehaven to pay 100% of road maintenance costs incurred by the GSC for the section of the Kamilaroi Highway Whitehaven uses along the Approved Road Transport Route.

2.5.2 Approved ROM Coal Road Haulage Hours

ROM coal is currently approved to be transported from Tarrawonga Coal Mine and Rocglen Coal Mine along the Approved Road Transport Route, in accordance with the haulage hours outlined in the Project Approvals (11_0047) and (10_0015), respectively (Table 2).

Table 2
Approved ROM Coal Road Haulage Hours from the Tarrawonga and Rocglen Coal Mines

Day	Tarrawonga Coal Mine	Rocglen Coal Mine
Weekday	6.00 am to 9.15 pm	7.00 am to 9.15 pm
Saturday	7.00 am to 5.15 pm	7.00 am to 5.15 pm
Sunday	-	-
Public Holidays	-	-

Note: The last haul trucks leave the Tarrawonga or Rocglen Coal Mines at the specified end time.

¹ Comprising up to 3 Mtpa of Tarrawonga ROM coal and up to 1.5 Mtpa of Rocglen ROM coal.

2.5.3 Management of ROM Coal Road Haulage

ROM coal haulage is managed in accordance with the Tarrawonga Coal Mine and Rocglen Coal Mine Traffic Management Plan.

Dust associated with ROM coal haulage is managed by covering the haul trucks in accordance with the relevant Environment Protection Licences (EPL) for the Tarrawonga Coal Mine (12365), Rocglen Coal Mine (12870) and Whitehaven CHPP (3637).

2.5.4 Haulage during Potentially Hazardous Conditions

ROM coal haulage during potentially hazardous conditions such as night time, fog and wet weather is managed by Whitehaven and the ROM coal haulage contractors.

2.5.5 Complaints

Complaints are managed in accordance with the protocol described in the Tarrawonga Coal Mine and Rocglen Coal Mine Traffic Management Plan.

In order to receive, record and respond to complaints, Whitehaven maintains a publicly advertised telephone complaint lines for the purpose of receiving complaints from any member of the public in relation to their activities.

3 ENVIRONMENTAL REVIEW

3.1 IDENTIFICATION OF KEY ISSUES

The key potential impact of the Modification is the temporary increase of the ROM coal haulage rate, which would result in an increased number of haulage trucks using the southern section of the Approved Road Transport Route.

The Modification would not change the currently approved rate of ROM coal transported from the Tarrawonga Coal Mine along the northern section of the Approved Road Transport Route or Rocglen Coal Mine along the eastern section of the Approved Road Transport Route.

The Modification would not change any component of the currently approved Tarrawonga Coal Mine or Rocglen Coal Mine infrastructure, surface disturbance areas or operations. Therefore, there would be no impacts to surface water, groundwater, flora, fauna, heritage or other impacts from the Tarrawonga Coal Mine and Rocglen Coal Mine.

As no change to the approved workforce or mine life is proposed for the Modification, there would be no alteration to the community infrastructure effects of the Tarrawonga Coal Mine and Rocglen Coal Mine.

A summary of the assessment of relevant potential impacts associated with the Modification is provided below.

3.2 ROAD TRANSPORT

A Road Transport Assessment was undertaken by GTA Consultants (2016) for the Modification and is presented as Appendix A to the EA.

3.2.1 Background

The following key roads are of relevance to the Modification (Figure 1):

- Kamilaroi Highway – provides the principal access route from Gunnedah to Narrabri, passing through Boggabri.
- Blue Vale Road – provides a local north-south connection from Kamilaroi Highway to the north-west of Gunnedah to the intersection of Hoad Lane and Braymont Road.

Existing Whitehaven Road Transport Plans and Procedures

The Tarrawonga Coal Mine and Rocglen Coal Mine approvals require the preparation and implementation of a Traffic Management Plan which contains traffic requirements and procedures, such as:

- requirements for operation of haul trucks during school bus hours;
- road dust minimisation;
- compliance with cumulative haulage limits; and
- vehicle movement audits.

Coal haulage contractors are required to manage behaviour of drivers and implement procedures to manage serious incidents, operational risks, environmental risks and compliance. The current primary contractor has a “Code of Conduct” to manage this risk.

The coal haulage contractor’s Emergency Management Plan describes the procedures in place in case of haul truck spillage, collision or other emergency events.

Table 3 describes examples of the safety management systems implemented to improve driver safety.

Road Safety

In the past five years (i.e. 1 January 2011 to 31 December 2015) there have been four crashes on the Approved Road Transport Route (i.e. two on the Kamilaroi Highway, one near the Kamilaroi Highway and Whitehaven CHPP Access Road intersection, and one on Blue Vale Road) (Appendix A). Only one of these crashes involved Whitehaven coal haulage operations.

Notwithstanding, the crashes which have occurred on the Approved Road Transport Route do not highlight any particular causation factors on the route or at its intersections with public roads (Appendix A).

Complaints

One complaint has been made about the Tarrawonga Coal Mine for the period January 2014 to August 2016 in relation to road transport issues.

On 6 January 2016 there was a complaint received regarding a mine vehicle driving carelessly along Rangari Road (not a haul truck). The complaint was noted and raised with the Operations Manager to include in any toolbox talks with operators (i.e. all personnel are expected to abide by relevant road rules, drive in a responsible manner and drive to road conditions).

There have been no road transport related complaints in regards to the Rocglen Coal Mine during the same period.

One complaint was received in relation to the Whitehaven CHPP which related to the tracking of coal fines.

Previous Road Transport Assessments – Whitehaven ROM Coal Haulage Modification

GTA Consultants conducted a Road Transport Assessment for the Whitehaven ROM Coal Haulage Modification (i.e. Tarrawonga Modification 1). This Modification assessed up to 3 Mtpa ROM coal to be transported from the Tarrawonga Coal Mine to the Whitehaven CHPP (Section 2.1).

GTA Consultants (2014) concluded the increased average weekday ROM coal haulage truck movements associated with the Tarrawonga Coal Mine and Rocglen Coal Mine for the Whitehaven ROM Coal Haulage Modification would result in no significant impacts on the performance, efficiency and safety of the road network.

There was no change to the Level of Service predicted for the Approved Road Transport Route, as the peak hourly volume of traffic associated with the Modification would remain significantly below the volume associated with a Level of Service A.

Table 3
Examples of Road Haulage Safety Management Systems Implemented

Management System	Key Aspects and Benefits
GPS tracking and engine management system.	<ul style="list-style-type: none"> • Data obtained allows supervisors, driver trainers and managers to observe the drivers behaviour (e.g. speed). • Able to monitor safety factors such as driver fatigue, incidents and accidents. • Managers are able to monitor where haulage trucks are located. • Alerts for speeding and harsh breaking can be implemented.
Haul truck cameras – out-of-vehicle and in-vehicle.	<ul style="list-style-type: none"> • Improve driver training by reviewing driving and providing feedback on their performance. • Assist in identifying the cause of incidents and accidents between haulage trucks and other vehicles.
Driver alertness (i.e. glasses detect eye movements associated with fatigue)	<ul style="list-style-type: none"> • Supports operators with real time information about levels of alertness.

Previous Road Transport Assessments – Vickery Coal Project

An assessment of potential road transport impacts was undertaken for the Vickery Coal Project EIS by GTA Consultants (2012) (Section 2.3).

The assessment considered the potential impacts of the haulage of up to 4.5 Mtpa of ROM coal along the southern section of the Approved Road Transport Route as well as other road traffic generated by the Vickery Coal Project.

In addition, the assessment considered the potential cumulative impacts associated with traffic expected to be generated by the following relevant sources:

- Tarrawonga Coal Mine;
- Rocglen Coal Mine;
- Boggabri Coal Mine;
- Maules Creek Coal Mine; and
- background traffic growth associated with other (non-mining) sources.

No significant impacts on the performance, capacity, efficiency and safety of the road network were expected by GTA Consultants (2012) to arise as a result of the Vickery Coal Project, including in consideration of expected cumulative impacts with other traffic sources. Therefore, no specific traffic monitoring or mitigation measures were considered to be warranted (GTA Consultants, 2012).

3.2.2 Environmental Review

A Road Transport Assessment for the Modification was undertaken by GTA Consultants (2016) and is presented as Appendix A.

The Road Transport Assessment reviews the potential implications associated with the temporary increase of ROM coal haulage along the southern section of the Approved Road Transport Route on the existing traffic levels.

Automatic traffic counts were undertaken at the traffic count locations shown on Figure 3 from 12 to 23 August 2016.

Intersection surveys were undertaken at traffic count locations B (i.e. Kamilaroi Highway and Blue Vale Road) and G (i.e. Kamilaroi Highway and Whitehaven CHPP Access Road) (Figure 3).

Intersection surveys were conducted for one day in August 2016. The intersection survey period was considered adequate as the haulage route is mainly used by haulage trucks which have similar movement volumes each day and a fixed route (i.e. there is typically no significant variation of haulage day-to-day).

Existing Traffic Volumes and Distributions

The average weekday traffic volumes at the surveyed locations demonstrated a reasonably distinct morning peak hour (i.e. 6.00 am to 9.00 am), and well defined evening peak (i.e. 5.00 pm to 6.00 pm).

The level of service experienced by drivers along the southern section of the Approved Road Transport Route was identified to be good during the August 2016 survey period.

GTA Consultants (2016) also identified a good level of service for the existing traffic surveyed at intersections during August 2016 with low delays to vehicles experienced.

Potential Impacts

GTA Consultants (2016) assessed impacts on the Approved Road Transport Route and surrounding road network in 2017, assuming the approved maximum workforce, approved haulage hours and incorporating a growth in background traffic levels.

GTA Consultants (2016) concluded that with the current and forecasted traffic generation, the Approved Road Transport Route and surrounding road network would continue to operate at good levels of service, with spare capacity, and drivers able to select their desired travel speed.

The surveyed intersections would also continue to operate at good levels of service, negligible queuing of vehicles turning onto side roads and negligible delay for vehicles merging onto the Kamilaroi Highway (Appendix A).

GTA Consultants concluded that no significant impacts on the performance, efficiency and safety of the road network are expected to arise as a result of the Modification.

Interactions with School Buses

GTA Consultants consider that the existing interactions between haulage trucks and school buses on the Approved Road Transport Route are managed effectively, and no additional control measures are considered to be warranted as a result of the Modification.

3.2.3 Mitigation, Monitoring and Management

GTA Consultants (2016) concluded that, in consideration of the commitment to manage the temporary cumulative increase of ROM coal haulage from Whitehaven coal mines to the Whitehaven CHPP, the Modification would result in no significant impacts on the performance, efficiency and safety of the road network.

GTA Consultants (2016) identified that the existing road system would accommodate the expected future traffic generated by the Modification. Therefore, no additional specific traffic monitoring or mitigation measures are considered to be warranted (Appendix A).

Whitehaven Transport Protocols

Whitehaven would continue to implement the traffic management measures and protocols required by the Project Approvals for the Tarrawonga Coal Mine and Rocglen Coal Mine for the Modification.

The existing road maintenance agreements with the GSC and NSC would continue for the Modification.

3.3 ROAD SAFETY AUDIT

A Road Safety Audit was undertaken by GTA Consultants in accordance with the DP&E's key issues for consideration (Table 1).

The Road Safety Audit was conducted on 12 September 2016, in accordance with the *Guidelines for Road Safety Audit Practises* (Roads and Traffic Authority, 2011) and the *Austroads Guide to Road Safety Part 6: Road Safety Audit* (2009). The key observations identified during the Road Safety Audit and Whitehaven's response to each issue are presented in Table 4 (Appendix C of the Road Transport Assessment).

The detailed Road Safety Audit findings are presented in the Road Safety Audit.

Table 4
Road Safety Audit Observations and Whitehaven Response

Observation	Whitehaven Response
<i>During the night time audit it was observed that without high beam headlights on, the reflectivity of signage and guideposts along the haulage route at night is poor due to dust and dirt covering them.</i>	<i>Whitehaven will develop a protocol to clean and maintain the designated haulage route, including visibility of signage, guideposts, lane delineation and pavement.</i>
<i>During the night time audit it was observed that passing trucks caused a substantial amount of dust to circulate. Since the pavement is generally sealed along the haulage route, it is assumed that dust was caused by the loads carried by passing trucks.</i>	<i>See response above regarding protocol to clean and maintain the designated haulage route.</i>
<i>The right turn auxiliary lane at the intersection of Blue Vale Road and Shannon Harbour Road appears to be too short for deceleration from 100 km/h posted speed limit and storage of at least one truck. Trucks were observed to be decelerating within the northbound travel lane, which could potentially result in rear end collisions.</i>	<i>Whitehaven notes that the intersection of Blue Road and Shannon Harbour Road (part of the Rocglen designated haul route) has been in use for approximately eight years without incident.</i>
<i>The delineation along the haulage is poor in some locations, which could result in inadequate guidance for drivers.</i>	<i>See response above regarding protocol to clean and maintain the designated haulage route.</i>
<i>There was a substantial amount of potholing observed along the length of the haulage route in both directions, which could result in drivers performing hazardous manoeuvres to avoid pot holes or loss of control should the pot holes be hit.</i>	<i>See response above regarding protocol to clean and maintain the designated haulage route.</i> <i>Further Whitehaven notes that pavement maintenance is undertaken in consultation with the Gunnedah Shire Council.</i>
<i>There was rutting of the pavement observed within the painted median at the intersection of Blue Vale Road and Shannon Harbour Road.</i> <i>Rutting was also observed at other various locations along the haulage route.</i>	<i>See response above regarding protocol to clean and maintain the designated haulage route.</i>

Source: Appendix A.

3.4 ROAD TRAFFIC NOISE

A Road Traffic Noise Assessment Review was undertaken by Wilkinson Murray (2016) for the Modification and is presented as Appendix B.

3.4.1 Background

Approved Road Transport Route

An assessment of potential road traffic noise impacts on the Approved Road Transport Route and associated road network was conducted by Wilkinson Murray (2014) for the Whitehaven ROM Coal Haulage Modification.

Potential road traffic noise impacts were assessed against the criteria specified in the NSW *Road Noise Policy* (RNP) (Department of Environment, Climate Change and Water [DECCW], 2011).

No exceedances of the relevant road traffic noise criteria were predicted at the closest privately-owned receiver locations along the Approved Road Transport Route (Figure 2).

Project Approval (11_0047) and Project Approval (10_0045) contain road traffic noise criteria, which require that noise generated on public roads by the Tarrawonga Coal Mine and Rocglen Coal Mine, respectively do not exceed the following criteria at existing residences on privately-owned land:

- day and evening – 60 A-weighted decibels (dBA) $L_{Aeq(15 \text{ hour})}$; and
- night – 55 dBA $L_{Aeq(9 \text{ hour})}$.

Vickery Coal Project

An assessment of potential road traffic noise impacts on public roads was conducted by Wilkinson Murray (2012) for the Vickery EIS.

The assessment considered the potential impacts of the haulage of up to 4.5 Mtpa of ROM coal along the southern section of the Approved Road Transport Route (i.e. between Vickery and the Whitehaven CHPP), as well as other road traffic generated by the Vickery Coal Project and other sources (such as the Tarrawonga Coal Mine and Rocglen Coal Mine).

The predicted noise levels at the two privately-owned receivers closest to Blue Vale Road along the Approved Road Transport Route were predicted to be below the relevant RNP road traffic noise criteria.

Existing Compliance

Cumulative road traffic noise monitoring (i.e. Rocglen and Tarrawonga) is conducted in accordance with the existing Road Traffic Noise Management Plan for the Rocglen Coal Mine.

Based on monitoring conducted in 2014 and 2015 (i.e. since the Whitehaven ROM Coal Haulage Modification was approved), no exceedances of the Tarrawonga or Rocglen road traffic noise criteria have been reported (cumulative road traffic from Whitehaven haulage trucks on the southern section of the Approved Road Transport Route).

3.4.2 Environmental Review

Road Traffic Noise Criteria

For the Modification, ROM coal haulage would occur between the currently approved hours (Table 2).

The criteria for assessment of noise on public roads is described in the RNP. The Kamilaroi Highway and Blue Vale Road (which has been designated a "principal haulage route" [Appendix B]) are arterial/sub-arterial roads and relevant criteria for existing residences affected by addition traffic is consistent with the road noise criteria in the Tarrawonga Project Approval (11_0047) and Rocglen Project Approval (10_0045) (DECCW, 2011):

- Day (7.00 am – 10.00 pm) – 60 dBA $L_{Aeq(15 \text{ hour})}$.
- Night (10.00 pm – 7.00 am) – 55 dBA $L_{Aeq(15 \text{ hour})}$.

ROM coal haulage to the Whitehaven CHPP occurs only during the daytime at Rocglen Coal Mine and primarily occurs during the daytime at Tarrawonga Coal Mine with one hour of haulage at night-time (as defined by the RNP).

The additional traffic generated by the Modification would consist of 87 haulage (one way) trips during the day and one at night. Given the negligible change at night, daytime noise levels only are discussed below, with the night-time noise levels provided in Appendix B.

Southern Section of the Approved Road Transport Route

Wilkinson Murray (2016) predict potential road traffic noise impacts associated with the cumulative transport of 4 Mtpa of ROM coal along the southern section of the Approved Road Transport Route.

The closest privately-owned receivers to the southern section of the Approved Road Transport Route are the “Brooklyn”, “Weroona” and “Longlands” dwellings (Figure 2).

No exceedances are expected at any of the residential receivers located along Blue Vale Road as the predicted noise levels at the closest receivers (i.e. “Brooklyn” and “Weroona”) met the road noise criteria (Table 5) (Appendix B).

Along the Kamilaroi Highway one negligible 1 dB exceedance of the daytime base criterion is expected at the “Longlands” receiver (with or without the Modification). However, the increase in noise levels with the Modification would be less than the 2 dB threshold in the RNP (Appendix B) (i.e. the increase is 0.3 dB, which would not be perceptible).

3.4.3 Mitigation, Monitoring and Management

Road traffic noise monitoring would continue to be conducted in accordance with the existing Road Traffic Noise Management Plan, which would be reviewed and updated for the Modification.

3.5 AIR QUALITY

The Air Quality and Greenhouse Gas Assessment prepared for the Vickery Coal Project EIS (PAEHolmes, 2012) considered potential dust emissions associated with ROM coal transport along the southern section of the Approved Road Transport Route.

The existing dust control measures would continue for the Modification. Haul trucks transporting ROM coal to the Whitehaven CHPP would continue to be covered to minimise potential dust emissions, and the trucks would travel along sealed roads.

Therefore, the PAEHolmes (2012) conclusion that ROM coal transport along the Approved Road Transport Route would result in negligible dust emissions remains relevant for the Modification.

3.6 GREENHOUSE GAS EMISSIONS

The Air Quality and Greenhouse Gas Assessment prepared for the Vickery Coal Project EIS (PAEHolmes, 2012) also considered potential greenhouse gas emissions associated with ROM coal transport along the southern section of the Approved Road Transport Route.

The Modification would result in approximately 88 additional truck haulage trips per day on average which would give rise to additional scope 3 (indirect) greenhouse gas emissions (i.e. these emissions are considered to be scope 3 as they are associated with a third party haulage contractor). However, these emissions would be within the emissions assessed as part of the Vickery Coal Project.

4 LEGISLATIVE FRAMEWORK

The legislative framework relevant to the Modification is described below.

4.1 SECTION 75W OF THE ENVIRONMENT PLANNING AND ASSESSMENT ACT, 1979

The Tarrawonga Project Approval (11_0047) and Rocglen Project Approval (10_0015) were granted under Part 3A of the EP&A Act.

Therefore, the Tarrawonga Coal Mine and Rocglen Coal Mine both constitute a “transitional Part 3A project” pursuant to the savings and transitional provisions in Schedule 6A of the EP&A Act.

Table 5
Maximum Daytime Predicted Road Traffic Noise Levels

Receiver	Approved Maximum Haulage (dBA $L_{Aeq(15hour)}$) ¹	Modification Haulage (dBA $L_{Aeq(15hour)}$)	Noise Level Increase (dBA $L_{Aeq(15hour)}$)	Criteria (dBA $L_{Aeq(15hour)}$)
Brooklyn	58.3	58.7	0.4	60
Weroona	48.8	49.3	0.5	60
Longlands	61.1	61.4	0.3	60

Source: After Appendix B.

Note: The road noise predictions are based on the year 2017.

¹ Includes road traffic noise associated with: cumulative haulage of 3.5 Mtpa of ROM coal from the Tarrawonga Coal Mine and Rocglen Coal Mine and other cumulative mine-related traffic and non-mining traffic.

Clause 3 of Schedule 6A provides that Part 3A of the EP&A Act continues to apply to and in respect of “transitional Part 3A projects” following its repeal. That is, Part 3A of the EP&A Act continues to apply, notwithstanding its repeal.²

Approval for the proposed changes is sought as modifications to the Tarrawonga Project Approval (11_0047) and Rocglen Project Approval (10_0015) under section 75W of the EP&A Act.

Section 75W of the EP&A Act relevantly provides:

75W Modification of Minister’s approval

(1) In this section:

Minister’s approval means an approval to carry out a project under this Part, and includes an approval of a concept plan.

modification of approval means changing the terms of a Minister’s approval, including:

- a) revoking or varying a condition of the approval or imposing an additional condition of the approval, and
- b) changing the terms of any determination made by the Minister under Division 3 in connection with the approval.

(2) The proponent may request the Minister to modify the Minister’s approval for a project. The Minister’s approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part.

(3) The request for the Minister’s approval is to be lodged with the Director-General. The Director-General may notify the proponent of environmental assessment requirements with respect to the proposed modification that the proponent must comply with before the matter will be considered by the Minister.

(4) The Minister may modify the approval (with or without conditions) or disapprove of the modification.

...

4.2 OTHER LEGISLATION

4.2.1 State Environmental Planning Policies

Under section 75R(2)(b) of the EP&A Act, State Environmental Planning Policies (SEPPs) apply to projects to which Part 3A applies.

Given this, various SEPPs potentially of relevance were described in the Tarrawonga EA, including:

- *State Environmental Planning Policy (State Significant Precincts) 2005;*
- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development;*
- *State Environmental Planning Policy No. 44 – Koala Habitat Protection;*
- *State Environmental Planning Policy No. 55 – Remediation of Land;*
- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007;* and
- *State Environmental Planning Policy (Infrastructure) 2007.*

No change is required to the location of the development, land uses, materials handled or the development of infrastructure at the Tarrawonga Coal Mine or Rocglen Coal Mine due to the Modification.

While there would be an increase in ROM coal transported to the Whitehaven CHPP due to the Modification, haulage of coal along the Approved Road Transport Route is an approved activity.

On this basis, consideration of additional SEPPs (i.e. in addition to those considered in the Tarrawonga EA) is not required for the Modification.

4.2.2 Local Environmental Plans

The Approved Road Transport Route lies within the GSC and NSC LGAs. Given this, the Tarrawonga EA considered the Gunnedah Local Environmental Plan (LEP) and Narrabri LEP.

Whitehaven implements road maintenance agreements with the GSC and NSC (Section 2.5.1), and these agreements would continue for the Modification.

On this basis, further consideration of LEPs is not required for the Modification.

² Part 3A of the EP&A Act (as in force immediately before its repeal) continues to apply for the Tarrawonga and Rocglen Coal Mines. The references to clauses of Part 3A in this document are, therefore, as if Part 3A of the EP&A Act is still in force.

5 CONCLUSION

Overall, the Modification is considered to be justified because:

- No changes are proposed to the mining operations conducted at the Tarrawonga Coal Mine and Rocglen Coal Mine.
- Haulage operations are conducted on the Approved Road Transport Route; generally during daytime hours.
- Only one complaint has been received in the last two years regarding haulage operations.
- No changes to the Levels of Service of the Kamilaroi Highway, Blue Vale Road and relevant intersections (i.e. the roads and intersections continue to operate with spare capacity).
- The Road Safety Audit identified a number of issues to be addressed along the Approved Road Haulage Route. Whitehaven will address these issues where practicable.
- No material road noise impacts were predicted, however a minor (1 dB) road noise exceedance at the “Longlands” residence is predicted during the daytime period only (although the contribution of the additional modification trucks is only 0.3 dB).
- There were no night-time road noise exceedances predicted.

6 REFERENCES

Austrroads (2009) *Guide to Road Safety Part 6: Road Safety Audit*.

Department of Environment, Climate Change and Water (2011) *NSW Road Noise Policy*.

GTA Consultants (2012) *Vickery Coal Project Gunnedah Basin, NSW, Road Transport Assessment*. Report prepared for Whitehaven Coal Limited.

GTA Consultants (2014) *Whitehaven ROM Coal Haulage Modification – Road Transport Assessment Review*. Letter prepared for Whitehaven Coal Limited.

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PAEHolmes (2012) *Vickery Coal Project Air Quality and Greenhouse Gas Assessment*. Report prepared for Whitehaven Coal Limited.

Roads and Traffic Authority (2011) *Guidelines for Road Safety Audit Practises*.

Wilkinson Murray (2012) *Vickery Coal Project Environmental Impact Statement Noise and Blasting Impact Assessment*. Report prepared for Whitehaven Coal Limited.

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