

Tarrawonga Coal Mine Modification 8

State Significant Development Modification Assessment (11_0047 MOD 8)

Water haulage for contingency water supply

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Cover image: *Tarrawonga Coal Mine (Source: Whitehaven Coal website)*

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1 Introduction

1.1 Background

The Tarrawonga Coal Mine is an open cut coal mine located approximately 42 kilometres (km) north-west of Gunnedah in the Narrabri local government area (see **Figure 1**).

The mine is owned and operated by Tarrawonga Coal Pty Ltd, a wholly owned subsidiary of Whitehaven Coal Limited (Whitehaven).

The project approval was granted by the Planning Assessment Commission (now the Independent Planning Commission of NSW) on 22 January 2013. The approval has been modified on six occasions and currently allows Whitehaven to extract up to 3 million tonnes per annum (Mtpa) of Run of Mine (ROM) coal by open cut methods until December 2030.

ROM coal is transported via the Approved Road Transport Route (see **Figure 1**) to the Whitehaven Coal Handling and Preparation Plant (CHPP) near Gunnedah for processing. Product coal is then transported by rail to Newcastle Port for export.

The mine employs around 211 people and is a significant employer in the region with salaries and wages totalling \$32 million in the 2019 financial year.

Operations at the mine are dependent on a secure water supply for dust suppression, coal crushing and other minor uses that support continued production and employment at the mine.

The mine currently sources water from surface water and groundwater inflows to the open cut, sediment basins, storage dams and licensed groundwater extraction.

Due to the extended dry periods recently experienced across the region, particularly in the New England North West area, the mine is seeking to provide further drought proof contingency for its operations by securing access to an additional water supply when onsite water stores fall below optimum capacity.

Whitehaven has implemented several water reduction initiatives at the mine including the use of dust suppressant binders; improvements to water storage management such as enlarging on-site storage capacity and desilting existing dams; and improvements to water cart sprays and water application methods. Nonetheless, current water storage at the mine would only provide around 12 months of operations (as at 27 April 2020).

Without an alternative water supply, mine operations would be required to scale back in accordance with the conditions of approval, potentially impacting ongoing employment at the mine.

2 Proposed modification

Whitehaven is seeking a modification to its approval to allow the road haulage of water from the Vickery Coal Mine to the Tarrawonga Coal Mine.

The modification proposes to source water from the existing Vickery Coal Mine (SSD 5000) groundwater bore (Works Approval 90CA807002), pipeline and associated infrastructure, which includes water storage tanks and truck filling point standpipe (see **Figure 2**). Water would be trucked from the Vickery Coal Mine infrastructure area to the mine via the northern section of the Approved Road Transport Route, via an access route off Braymont Road (see **Figure 1** and **Figure 2**).

Water would be trucked on a periodic basis and only as a contingency when existing on-site water supplies reach sub-optimal levels and alternative options are unavailable. The modification would ensure that a secure contingency water supply is available to the mine and would provide an assurance for continued operations in periods of drought or significantly reduced rainfall.

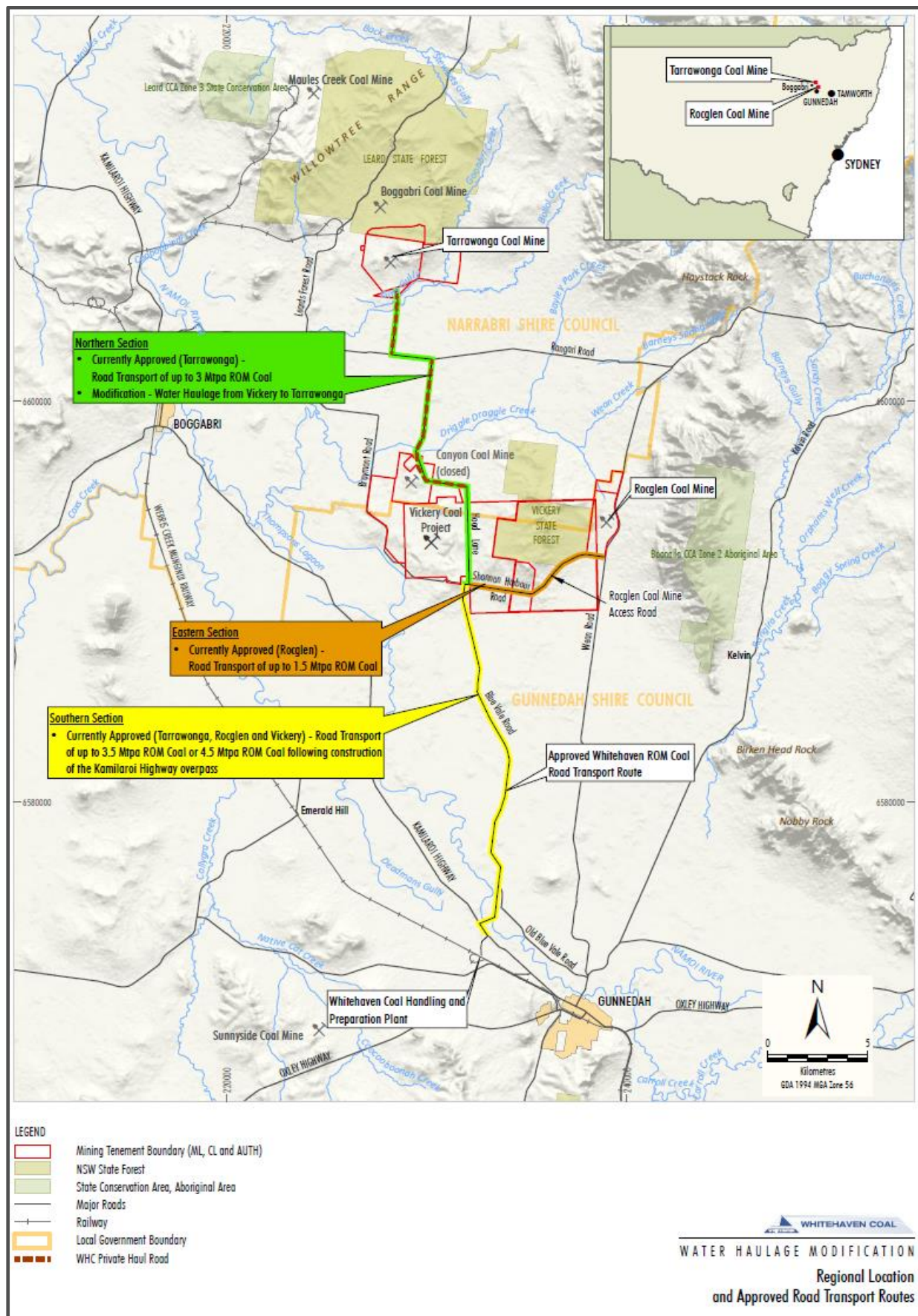


Figure 1 | Tarrawonga Coal Mine Regional Context

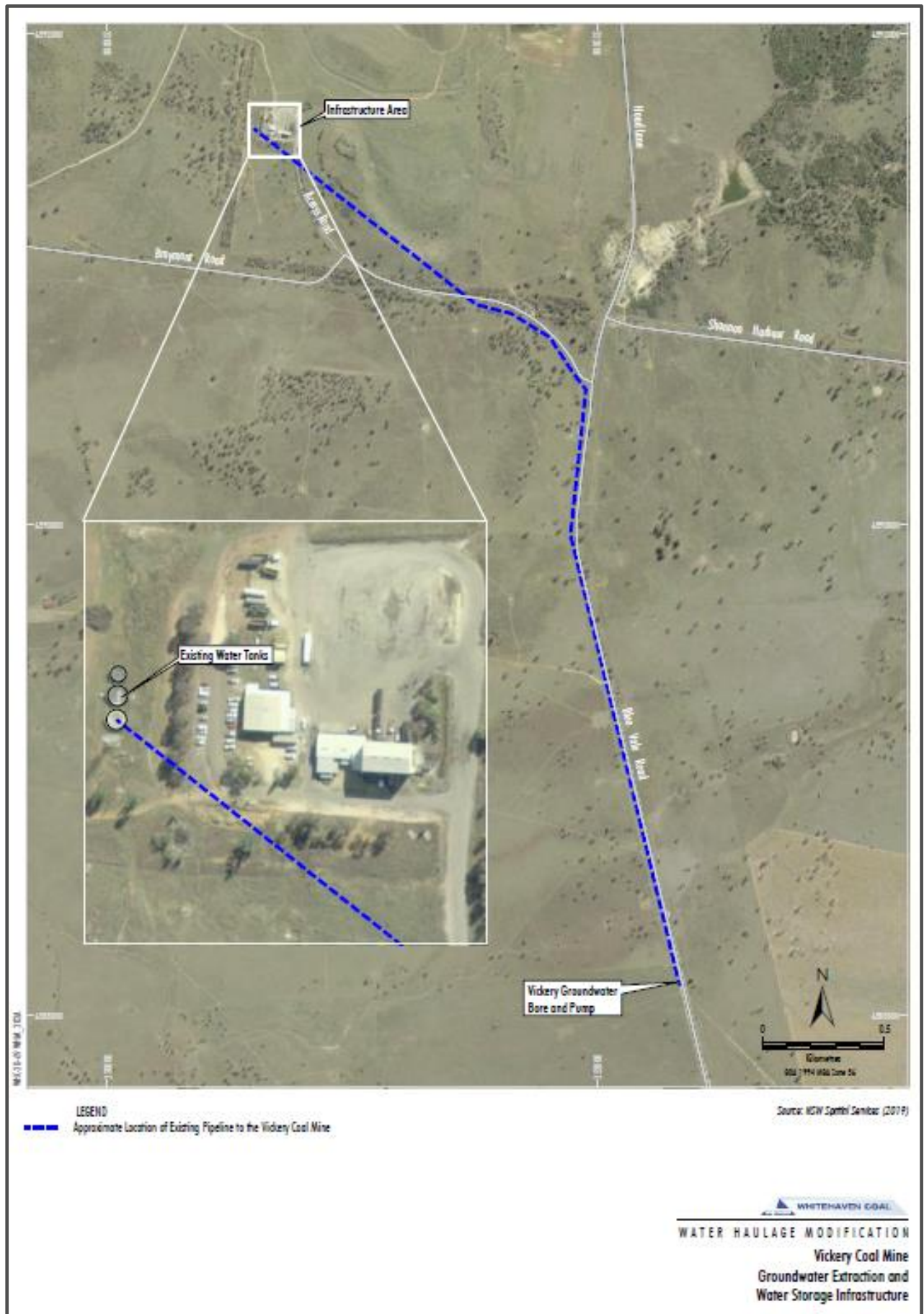


Figure 2 | Location of Vickery Coal Mine groundwater bore and infrastructure

3 Statutory context

3.1 Transition to State Significant Development

The Tarrawonga Coal Mine was approved under part 3A of the EP&A Act in January 2013.

Under clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the project was transitioned to State Significant Development (SSD) by order, which took effect by publication in the NSW Government Gazette on 17 August 2018.

3.2 Scope of Modification

The modification application and Modification Report were lodged under Section 4.55(1A) of the EP&A Act. The Department has reviewed the scope of the modification and considers that it:

- would not increase the environmental impacts of the project as approved (see Section 5);
- is substantially the same development as originally approved (see Section 3.3); and
- would not involve any further disturbance outside the already approved disturbance areas for the project.

Therefore, the Department is satisfied the proposed modification is within the scope of section 4.55(1A) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(1A) of the EP&A Act.

The Department also considered:

- advice provided concerning the proposed modification (see Section 4.3); and
- the relevant matters in Section 4.15(1) of the EP&A Act, including:
 - the provisions of any relevant environmental planning instrument (see Section 3.6);
 - the likely impacts of the proposed modification, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality (see Section 5);
 - the public interest, including any relevant objects of the EP&A Act (see Section 3.7); and
 - the reasons given by the approval authority for the grant of the original approval (see Section 3.6).

3.3 Substantially the Same Development

The Department is satisfied that the project as modified would be substantially the same development as approved, and that the proposal should be characterised as a modification to the existing project approval, as the proposal would not:

- change the operations and components of the project;
- change the maximum daily off-site truck movements or hours of operation due to the haulage of water;
- change the regulation of groundwater taken from existing bores under the water access licences (WALs) held under the *Water Management Act 2000* (WM Act); and
- significantly change the impacts of the project, which as modified would be similar to the impacts of the approved project.

3.4 Consent Authority

The Minister for Planning and Public Spaces (Minister) is the consent authority for the modification application under Section 4.5(a) of the EP&A Act. However, under the Minister's delegation of the 9 March 2020, the Director – Resource Assessments, may determine the application.

3.5 Publication of Application

The Department is not required to formally exhibit or seek public submissions on the application because it involves minimal environmental impact.

Nevertheless, the Department made the application publicly available on its website.

3.6 Mandatory Matters for Consideration

In accordance with Section 4.55(3) and Section 4.15(1) of the EP&A Act, a consent authority must consider the following matters, to the extent they are relevant, when considering the merits of the application:

- environmental planning instruments or proposed instruments;
- any planning agreements;
- EP&A regulation;
- likely impacts of the modification application, including environmental impacts on both the natural and built environments, and social and economic impacts;
- suitability of the site;
- any submissions;
- the public interest; and
- the reasons for granting approval for the original application.

The Department has considered all these matters carefully and summarised the findings of this below and in Sections 4 and 5 of this report.

Environmental planning instruments or proposed instruments

Several environmental planning instruments apply to the modification, including:

- State Environmental Planning Policy (Mining Petroleum Production and Extractive Industries) 2007;
- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP);
- State Environmental Planning Policy 33 (SEPP No. 33) – Hazardous and Offensive Development;
- State Environmental Planning Policy 44 (SEPP No. 44) – Koala Habitat Protection;
- State Environmental Planning Policy 55 (SEPP No. 55) – Remediation of Land;
- Biodiversity Conservation Act 2016;
- Narrabri Local Environmental Plan 2012; and
- Gunnedah Local Environmental Plan 2012.

The Department has considered the proposed modification against the relevant provisions of these instruments. The Department considers that the proposed modification can be undertaken in a manner that is generally in accordance with the aims, objectives and provisions of these instruments.

Reasons for granting the approval for the original application

In determining the original Tarrawonga Coal Project application, the Planning Assessment Commission concluded that the benefits of the project outweighed the residual environmental impacts and imposed a range of strict conditions to appropriately manage the impacts. The Department has considered the proposed modification against the reasons the Commission gave for determining the project and is

satisfied that the proposed modification does not affect the decision that was previously made. The proposed modification would allow similar benefits to be realised at local, regional and State levels.

3.7 Objects of the EP&A Act

The Department has assessed the proposed modification against the current objects of the EP&A Act. The objects of the most relevance to the decision on whether or not to approve the proposed modification are found in section 1.3 of the EPA&A Act and are:

- Object 1.3(a): to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources;
- Object 1.3(b): to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;
- Object 1.3(c): to promote the orderly and economic use and development of land;
- Object 1.3(e): to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats;
- Object 1.3(f): to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage); and
- Object 1.3(j): to provide increased opportunity for community participation in environmental planning and assessment.

The Department is satisfied that the proposed modification encourages the proper management and development of resources, including facilitating the continued operation of the Tarrawonga Coal Mine (Object 1.3(a)), and the promotion of the orderly and economic use of land (Object 1.3(c)). The proposed modification would continue to support the optimisation of resource recovery while utilising the mine's established infrastructure and workforce.

The Department has considered the principles of ecologically sustainable development (ESD, Object 1.3(b)) in its assessment. The Department considers that the proposed modification may be carried out in a manner that is consistent with the principles of ESD.

The Department has carefully considered the environmental impacts of the proposed modification, including potential impacts on the natural, cultural and built environments (Object 1.3(e) and (f)). The extraction and transport of a contingency water supply from the existing groundwater bore would cause minimal environmental impact on cultural and built environments. Further discussion is provided in the Department's assessment (see Section 5).

4 Engagement

4.1 Public Engagement

Due to the minor nature of the proposed modification, the application was not placed on public exhibition. However, the modification application and accompanying Modification Report were made available on the Department's website. No public representations were received.

4.2 Consultation

The Department invited comment on the Modification Report from the Environment Protection Authority (EPA), Regional NSW – Mining, Exploration & Geosciences (MEG) (formerly the Department's Division of Resources and Geoscience), the Department's Water Group (DPIE Water), Narrabri Shire Council (NSC) and Gunnedah Shire Council (GSC).

The public authority advice is summarised in Section 4.3 (below) and provided in **Appendix B**.

Whitehaven provided additional information to address the comments and concerns raised in response to the public authority advice (see **Appendix C**).

4.3 Summary of Advice

The MEG advised that the project would allow for the continued efficient development and utilisation of mineral resources, which would continue to foster significant social and economic benefits through ensuring the security of mine water supply.

GSC advised that it did not object to the proposal.

NSC provided comments in relation to the timeframe proposed (approximately 18 months) for the implementation of the modification, potential impacts related to groundwater extraction, traffic generation, contributions to NSC and the use of local resources including tradespeople, contractors and employees.

DPIE Water did not object to the proposal and provided recommendations including that the relevant Water Access Licences (WAL) are obtained prior to the extraction of water from the groundwater bores, installation of a water metering device to groundwater bore 90CA807002 and that the Water Management Plan for the project approval is updated prior to commencement of operations.

The Department notes that Whitehaven did not formally consult with the EPA during the preparation of the modification application and Modification Report. The EPA originally raised concerns over the lack of justification presented in the Modification Report and noted that there are potential alternatives for an emergency water supply. On this basis, the EPA initially commented that it did not support to the modification and requested additional information.

Whitehaven has provided additional information to address these matters and the EPA has subsequently confirmed that it is satisfied with the supplementary information and justification provided for the proposed modification.

Whitehaven's response to the matters raised by NSC, DPIE Water and the EPA are provided in **Appendix C** and discussed further in Section 5 below.

5 Assessment

In assessing the merits of the modification application, the Department has considered the:

- previous environmental assessments for the project;
- modification applications and existing conditions of approval; and
- requirements of the EP&A Act.

5.1 Justification and Consideration of Alternatives

The EPA initially raised concerns over the lack of justification presented in the Modification Report, noting that there are potential alternatives for an emergency water supply which had not been adequately explained. As such, the EPA requested further information relating to onsite water efficiencies, alternative water sources, prioritisation of water supply options and current water availability.

In response to the EPA's concerns, Whitehaven provided an options analysis outlining a comparison of alternatives including reliance on rainfall and site supplies; water supply from Boggabri Coal Mine (under BTM Complex Water Management Strategy); additional advanced dewatering bores; Namoi River extraction; and haulage of water from the existing Vickery groundwater bore.

The options analysis concludes that water haulage from the Vickery groundwater bore would be the most reliable and secure supplementary water supply option during extended drought periods. The

extraction of water would be regulated under the WM Act and heavy vehicle movements between the mine and the groundwater bore would use the Approved Road Transport Route.

As at 27 April 2020, the on-site water storages at the mine would only support around 12 months of continued operations without significant rainfall. Whitehaven maintains that it would continue to prioritise the implementation of onsite water efficiencies at the mine and would pursue the negotiation of commercial terms consistent with the BTM Complex Water Management Strategy.

In its response to EPA concerns, Whitehaven committed that a contingency water supply from the Vickery Coal Mine groundwater bore would only be used when no other alternatives are available, and when the mine's on-site water storages reach about 20% capacity (approximately 3 months of water supply).

The EPA has confirmed in its letter dated 9 June 2020 that it is satisfied with the supplementary information and justification provided for the proposed modification. Furthermore, the EPA requested that records are maintained to demonstrate that onsite water efficiencies are being prioritised prior to the commencement of water haulage.

The Department notes that the EPA's recommendations are consistent with the existing conditions of approval, which includes the requirement for a Water Management Plan and Site Water Balance to detail among other things, the sources and security of water supply, including contingency for future reporting periods, water use and management on site, and reporting procedures including the preparation of a site water balance for each calendar year.

Prior to the commencement of water haulage, Whitehaven would be required to revise and update its Water Management Plan to include its commitment to only commence water haulage when onsite water capacity is at or below 20%, details of the additional of water supply source (groundwater bore and associated infrastructure), reporting procedures, and water use management. The Department has revised the Water Management Plan conditions to ensure the facilitation of this commitment.

5.2 Additional Assessment Issues

The environmental impacts are considered by the Department to be minimal.

The Department has considered the potential impacts of the proposed modification, which are summarised in **Table 1**.

Issue	Findings	Recommendations
Social and economic	• The mine is a major source of regional employment and investment. • The mine supports a workforce of about 211 people. • In the 2019 financial year, the mine paid salaries and wages totaling \$32 million and spent around \$7 million on locally based business. • The mine contributes to the broader NSW community through the contribution of royalties and taxes to the NSW Government. Royalties in the 2019 financial year amounted to \$25 million. • An approval to transport water from the groundwater bore to the mine would provide a secure and reliable contingency water supply to safeguard the mine during periods of drought or extended periods without rain. The proposed modification would subsequently allow for continued operations at the mine and the associated ongoing benefits to be realised, including: – ongoing direct employment of about 211 employees; – ongoing direct expenditure in the local economy and flow-on benefits to the local and regional communities; and – ongoing payments of royalties and taxes.	• No changes to conditions

Issue	Findings	Recommendations
	Furthermore, Whitehaven has confirmed in its response to NSC's comments, that local service providers and contractors would continue to be engaged and employed by the mine. The Department notes that Whitehaven is a major source of employment in the region with around 75% of its workforce living locally, indicating that local employment remains a key focus.	
Groundwater and surface water	- The extraction of water from the groundwater bore (90CA807002) is regulated under the WM Act as administered by the Natural Resources Access Regulator (NRAR). - A total of 218 ML is currently allocated to WALs linked to this groundwater bore. - In its submission, DPIE Water noted that additional water allocation (totaling 584 ML) would be required in order to attain the proposed 1.6 ML/day extraction rate. As such, DPIE Water recommended that an application is made to the NRAR for additional water allocation. - In its response, Whitehaven confirmed that it would apply to transfer additional WAL allocations to the groundwater bore, which would be assessed and regulated by NRAR under the WM Act.	No changes to conditions. However, prior to commencement of water haulage, Whitehaven would be required to revise and if necessary, update its Water Management Plan
Transport	- The Approved Road Transport Route between the mine and the CHPP allows for the transport of up to 3 Mtpa of coal per year. The traffic assessment along this route considered a maximum of 524 daily heavy vehicle movements, which equates to 262 return trips. - Whitehaven has introduced a new fleet of trucks that can transport an increased load (from 42 to 67 tonnes), which has subsequently reduced the number of truck movements (currently at around 440 daily movements) required to achieve the 3 Mtpa ROM coal production rate. - The reduction in truck movements has provided an opportunity for Whitehaven to utilise the residual approved truck movements (up to about 84 daily movements) for water haulage. - The proposed modification would only use the northern section of the Approved Road Transport Route and a small 1 km length of public road. The closest privately-owned receivers to this portion of the route are located more than 5.3 km away and haulage would only occur during the approved ROM coal dispatch hours. - Water haulage is proposed for up to 1.6 ML/day of water from the groundwater bore, equating to around 78 truck movements per day. - Consequently, the additional truck movements would remain within the daily peak movements assessed and approved for the Tarrawonga Coal Mine Environmental Assessment and would not impact on the Level of Service for the northern section of the Approved Road Transport Route. - In its submission, NSC requested consideration to extend the Voluntary Planning Agreement (VPA) to include water haulage and recommended a condition limiting the daily traffic associated with the mine. - The Department notes that proposed modification would not increase the total daily number of truck movements approved for the mine (524 movements) and that a	No changes to conditions. However, prior to commencement of water haulage, Whitehaven would be required to revise and if necessary, update its Traffic Management Plan.

Issue	Findings	Recommendations
	monitoring program is required as part of Traffic Management Plan, required under the project approval. This plan would be reviewed and, if necessary, updated to address the modification. The Department therefore considers the existing VPA and transport conditions to be adequate for the modification.	
Biodiversity	The Department considers there would be no increase in biodiversity impacts associated with the transport of water and proposed use of the groundwater bore and associated infrastructure.	No changes to the conditions.
Aboriginal Cultural Heritage	The Department considers there would be no additional impacts to Aboriginal and cultural heritage associated with the transport of water and proposed use of the groundwater bore and associated infrastructure.	No changes to the conditions.
Air Quality and Noise	The Department considers that the proposed modification is unlikely to result in any increase to air quality and noise impacts above those currently approved. As such, the existing conditions remain appropriate.	No changes to the conditions.

5.3 Recommended Conditions

Both the water and traffic management plans would be reviewed and updated to reflect the proposed water haulage arrangements, including any additional vehicle or traffic monitoring. These updates would be undertaken in accordance with the existing conditions of approval.

6 Evaluation

The Department has assessed the merits of the proposed modification and considered its potential environmental, social and economic impacts and the relevant requirements of the EP&A Act.

The Department recognises the mine's continued efforts to implement water reduction initiatives and its prioritisation of alternative water supply options prior to commencing water haulage.

The Department notes that the groundwater bore and related infrastructure have already been constructed. As such, the modification would enable the use of this infrastructure to provide a reliable supplementary water supply to the mine when required. The Department also notes that the extraction of the water from the bore would continue to be managed and regulated under the WM Act.

The proposed use of the groundwater bore does not affect the suitability of the site for the purpose of mining and therefore the Department considers that the modification application would not result in any significant changes that would alter the conclusions made as part of the original assessment.

If the proposed modification is not approved, the mine may be unable to obtain the essential water supply required for continued operations. Failure to secure a contingency water supply would subsequently affect mining operations, including:

- ongoing employment for about 211 people;
- direct expenditure in the local economy and flow-on benefits to the local regional communities; and
- contributions of royalties and taxes to the NSW Government.

Therefore, the Department considers that the proposed modification is in the public interest and should be approved.

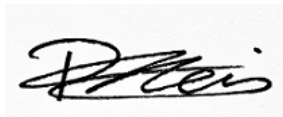
The Department has drafted a recommended Notice of Modification (see **Appendix D**) and consolidated version of the project approval, as modified (see **Appendix E**).

7 Recommendation

It is recommended that the Director, Resource Assessments, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **determines** that the modification application 11_0047 MOD 8 falls within the scope of section 4.55(1A) of the EP&A Act;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the modification application;
- **agrees to modify** the project approval for Tarrawonga Coal Project (11_0047); and
- **signs** the attached Notice of Modification (**Appendix D**).

Recommended by:



15/6/20

Philip Nevill

Senior Environmental Assessment Officer
Resource Assessments

8 Determination

The recommendation is **Adopted / Not adopted** by:



15/6/20

Stephen O'Donoghue

Director
Resource Assessments
as delegate of the Minister for Planning and Public Spaces

Appendices

See the Department's website at: <https://www.planningportal.nsw.gov.au/major-projects/project/26936>

Appendix A – Modification report

Appendix B – Agency Advice

Appendix C – Additional Information

Appendix D – Notice of Modification

Appendix E – Consolidated Consent