



Ardmore Park Quarry

Intensification of Operations (Modification 3)

Section 75W Modification
Assessment
(MP 07_0155 Mod 3)



September 2020

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Cover photo

View from Ardmore Park Quarry looking north (Department of Planning, Industry and Environment, 2019)

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Glossary

Abbreviation	Definition
AHD	Australian Height Datum
BCD	Biodiversity and Conservation Division within the Department
Council	Goulburn Mulwaree Shire Council
Department	Department of Planning, Industry and Environment
EA	Environmental Assessment
ENM	Excavated Natural Material
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
INP	<i>Industrial Noise Policy 2000</i>
LEP	Local Environmental Plan
Minister	Minister for Planning and Public Spaces
NPfl	<i>Noise Policy for Industry 2017</i>
PBS	Performance Based Scheme
PM	Particulate Matter
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
RSA	Road Safety Audit
RTS	Response to Submissions
Secretary	Planning Secretary of the Department of Planning, Industry and Environment
SEPP	State Environmental Planning Policy
SSD	State Significant Development
VENM	Virgin Excavated Natural Material
VPA	Voluntary Planning Agreement
WMP	Water Management Plan
WSP	Water Sharing Plan



Executive Summary

The Ardmore Park Quarry is an existing sand and basalt quarry located 4 kilometres (km) south of Bungonia and 25 km south-east of Goulburn in the Goulburn Mulwaree local government area. A development application for the Ardmore Park Quarry was initially lodged in 2005. This application was refused on the basis of unacceptable environmental impacts associated with a proposed haulage route through the village of Bungonia.

Subsequently, Multiquip lodged a new development application that included an amendment to the proposed haulage route. On 20 September 2009, the Minister for Planning granted approval for the Ardmore Park Quarry (MP 07_0155) under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The quarry's haulage route has been an area of concern for the community as it poses a number of safety risks being a narrow and windy single carriageway, that is approximately 20 km long. The existing project approval contains a number of strict conditions requiring Multiquip to improve the condition and safety of the haulage route.

Proposed Modification

In January 2018, Multiquip submitted a modification application seeking to intensify operations at the Ardmore Park Quarry. Multiquip contend that the demand for sand and hard rock products is increasing and that the proposed modification would allow the company to meet the demand for more product and earlier deliver of materials to metropolitan work sites.

Firstly, Multiquip is seeking to generate additional products at the site by:

- extending the basalt extraction area by 3.5 hectares (ha) and extracting additional basalt resource;
- separating and selling clay material which occurs within the sand resource;
- importing excavated natural material (ENM) and treated drilling mud for product blending and sale; and
- constructing and operating a mobile bitumen pre-coating plant for road sealing products.

Secondly, to accommodate the additional product generated at the site, Multiquip is also seeking to:

- increase the quarry's annual production rate from 400,000 to 580,000 tonnes;
- extend the hours of operation for product loading and transportation into the early morning (5 am to 7 am) and evening periods (6 pm to 10 pm); and
- increase the maximum allowable daily truck movements from 88 to 124 per day.

Engagement

The Department publicly exhibited the modification application from 19 January to 26 February 2018. During the exhibition of the proposal, the Department received 46 objections from local residents. Key issues raised in submissions related to the proposed changes to product transport limits and hours and the associated amenity, sleep and road safety impacts. Additionally, submitters raised concerns regarding operational noise impacts and the quarry's potential contribution to declining spring flow and bore yields. The Department also consulted extensively with key NSW Government agencies and Goulburn Mulwaree Council (Council).

On 7 August 2020, the Department published its recommended Assessment Report and conditions of approval for the proposed modification on its website. The Department received two representations from members of the community. Issues raised in these representations were carefully considered and some amendments to the proposed conditions of approval were made.

Assessment

The Department has assessed the modification application in accordance with the relevant requirements of the EPA&A Act with a focus on traffic and transport, noise and water resources.

In regard to traffic and transport, the Department acknowledges the strategic and operational benefit associated with the proposed trucking during the early morning period (5:00 am to 7:00 am) to allow delivery of material to metropolitan worksites by 7:00 am. The Department considers it reasonable to allow limited trucking from the site during this period, so long as the most stringent 'Local Road' noise objectives can be achieved. To achieve this, the Department has recommended that truck movements during this period be restricted to 8 movements per hour.

Further, to preserve the amenity of the surrounding rural environmental setting and to limit safety risks associated with heavy vehicles on the haulage route during periods of diminishing light, the Department considers that product transport should not extend into the evening period. The Department considers that there is no clear operational or strategic benefit for extending truck movements through the evening period compared to early morning deliveries.

The Department has also considered community and Council concerns about road maintenance of the haulage route and is satisfied that this can be appropriately managed under the proposed Voluntary Planning Agreement (VPA) between Council and Multiquip. The VPA includes further pavement rehabilitation and resealing works prior to the proposed increase in trucking from the site as well as ongoing annual contributions and accepted and exhibited by Council.

In regards noise impacts, the Department notes that the operational noise impacts associated with the proposal would be consistent with existing operations with only a 1 dB(A) exceedance of the project noise trigger level (PNTL) of 35dB(A) at 2 rural residential receivers during the early morning (5:00 am to 7:00 am) period due to product loading and dispatch activities. This exceedance is considered negligible under the NSW Government's *Voluntary Land Acquisition and Mitigation Policy* (VLAMP) such that no mitigation is required at these receivers. The Department has recommended conditions to contemporise noise limits and conditions, consistent with the NSW Government's *Noise Policy for Industry*.

In regard to water resources, the Department considers that the proposal would be unlikely to significantly increase surface water and groundwater impacts beyond those already approved. Surface water impacts such as sediment runoff from disturbed areas are already managed through surface water management controls that would be extended to account for the proposed 7 per cent increase in the extraction area.

While impacts on groundwater resources were raised in public submissions, particularly in relation to springs in perched aquifers surrounding the site such as Phil's Spring, groundwater investigations conclude that the small increase in the quarry extraction area combined with the small increase in groundwater extraction (which would remain within the approved bore extraction limits) from the hard rock water source would be unlikely to contribute to the decline in spring flow.

The Department has recommended that the site's groundwater monitoring network be reviewed and extended in consultation with the Department's Water Group and that contemporary conditions are included for the preparation and implementation of the Water Management Plan.

The Department has also carefully considered other issues related to the modification application including air quality, rehabilitation, greenhouse gas emissions, visual amenity, biodiversity, heritage, social, economic and waste management.

Revisions to conditions are recommended including requirement for a Waste Management Plan, noting that the project includes importation of off-site excavated materials for blending, contemporary air quality limits and

monitoring requirements, and inclusion of standard conditions relating to audits, reviews and reporting requirements.

Evaluation

Subject to the recommended conditions, the Department considers that the proposal would meet increasing demand from the NSW construction market, whilst maintaining the amenity of the rural locality in which the quarry operates. The proposal would also result in the employment of the existing workforce for an additional 8 years and positive economic flow on benefits to the local and regional area. On this basis, the Department considers that the proposal is in the public interest and should be approved, subject to strict conditions.



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1. Introduction

1.1 Background

The Ardmore Park Quarry is an existing sand and basalt quarry located 4 kilometres (km) south of Bungonia and 25 km south-east of Goulburn in the Goulburn Mulwaree local government area (see **Figure 1**). The quarry is owned and operated by CEAL Limited, trading as Multiquip Quarries (Multiquip).

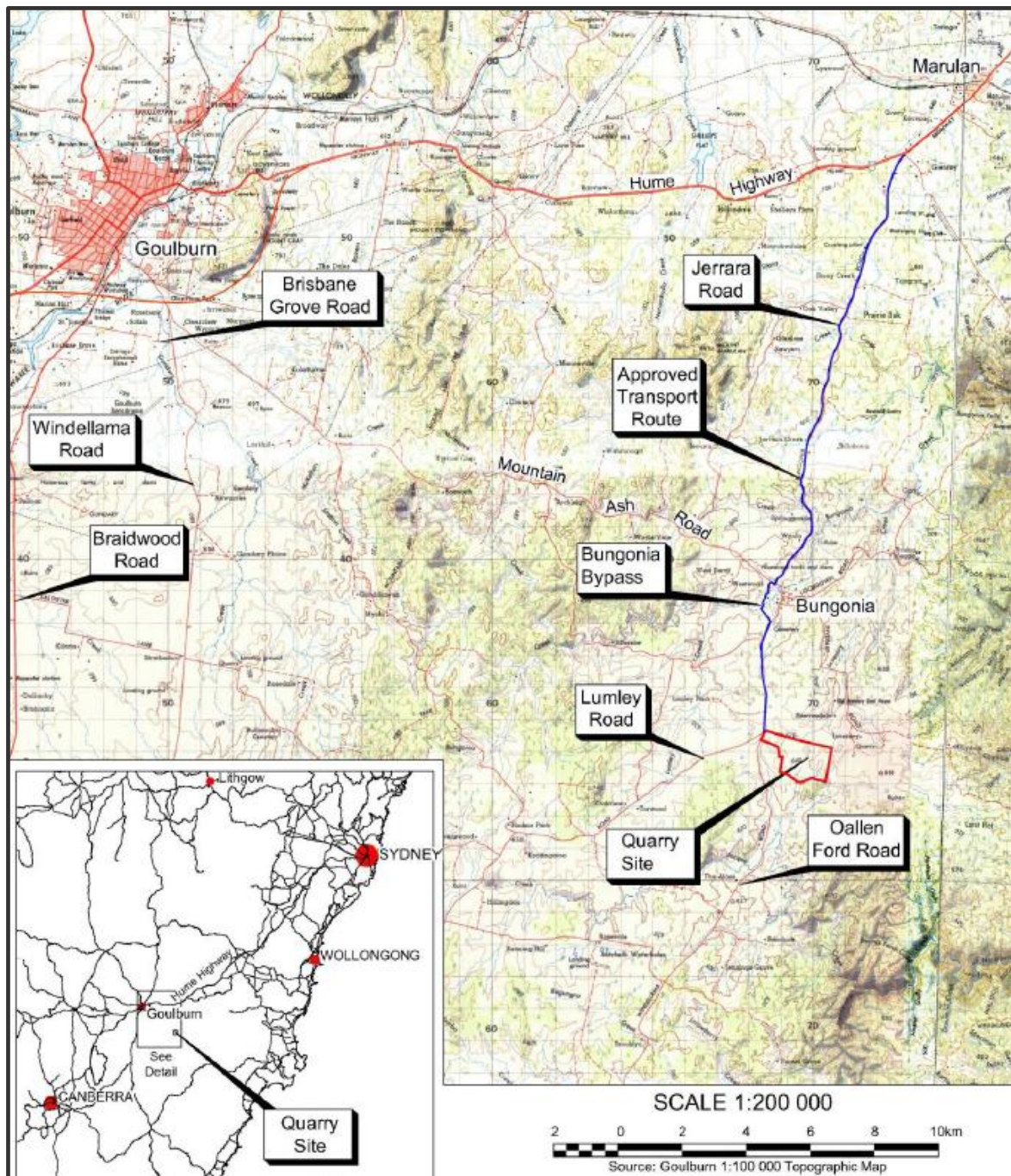


Figure 1 | Location of the Ardmore Park Quarry

1.2 Approval History

A development application for the Ardmore Park Quarry was initially lodged in 2005. This application was refused by the then Minister for Planning due to unacceptable environmental impacts associated with a proposed haulage route through the village of Bungonia. Multiquip appealed this decision in the Land and Environment Court in 2007, however, this appeal was dismissed.

In 2008, Multiquip submitted a new development application for the quarry which proposed to construct a private haul road that would by-pass the village of Bungonia (referred to as the Bungonia By-pass). On 20 September 2009, the then Minister for Planning granted approval for the Ardmore Park Quarry (MP 07_0155) under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The project approval has been modified on two previous occasions, being:

- Mod 1 (2010) – to retain and upgrade the existing entrance to the site, rather than relocate the entrance and associated facilities to the south; and
- Mod 2 (2013) – to allow for the transportation of up to 20,000 tonnes per annum (tpa) of quarry products via local haulage routes (ie Windellama and Tarago roads).

Currently, Multiquip is permitted to:

- produce up to 400,000 tpa of quarry products (ie sand and/or basalt) until 2039;
- transport quarry products to market by road via designated haulage routes;
- dispatch and receive up to 88 truck movements per day Monday to Friday, between 7:00 am and 6:00 pm, and 42 truck movements on Saturday between 7:00 am and 1:00 pm;
- utilise larger Performance Based Scheme (PBS) trucks with a carrying capacity of up to 50 tonnes (authorised following the exhibition of Mod 3 under a Class 2 – Heavy Vehicle Authorisation Permit); and
- import 1.5 million tonnes of Virgin Excavated Natural Material (VENM) to the site to backfill completed extraction areas.

Multiquip also dispatches ‘wicket sand’ from the quarry site, however, this activity is regulated by Goulburn Mulwaree Council (Council) under a separate development consent.



2. Proposed Modification

On 10 January 2018, Multiquip lodged a modification application (Mod 3) under section 75W of the EP&A Act. The proposed modification seeks to intensify and extend the operations at the quarry in order to meet increasing market demand..

Firstly, Multiquip is seeking to generate additional products at the site by:

- extending the basalt extraction area by 3.5 hectares (ha) and extracting additional basalt resource;
- separating and selling clay material which occurs within the sand resource;
- importing excavated natural material (ENM) and treated drilling mud for product blending and sale; and
- constructing and operating a mobile bitumen pre-coating plant for road sealing products.

Multiquip advises that the production of these additional resources would extend the life of the quarry by 8 years (ie until 2047) and facilitate continued supply of hard rock and sand resources to the Sydney and Canberra construction markets.

Secondly, to accommodate the additional product generated at the site, Multiquip is also seeking to:

- increase the quarry's annual production rate from 400,000 to 580,000 tonnes;
- extend the hours of operation for product loading and transportation into the early morning (5 am to 7 am) and evening periods (6 pm to 10 pm); and
- increase the maximum allowable daily truck movements from 88 to 124 per day.

The distance between the quarry and its metropolitan markets, combined with current dispatch restrictions, means that deliveries typically arrive between 8:30 am and 9:00 am. Multiquip considers that the proposed hours of product transportation are necessary to allow the company to meet the demand from the construction market for earlier delivery of materials. Multiquip also considers that the use of its larger PBS trucks, in conjunction with its existing fleet, would allow sufficient flexibility for a greater tonnage of product to be transported without increasing the average monthly number of truck movements to and from the site.

The proposal is summarised in **Table 1** below and depicted in **Figure 2**. A detailed description of the modification is provided in Multiquip's Environmental Assessment (EA, see **Appendix A**).

Table 1 | Key components of the proposal

Aspect	Existing	Proposed
Annual Extraction Rate	• 400,000 tpa	• 580,000 tpa
Extraction Areas	• 'Southern Sand Extraction Area' • 'Basalt and Central Sand Extraction Area' • Total extraction area of approximately 47 ha	• Extending the 'Basalt and Central Sand Extraction Area' by 3.5 ha • Total extraction area of approximately 50.5 ha
Quarry Life	• 30 July 2039	• 30 July 2047 (an additional eight years)
Extraction Depth	• 605-615 metres (m) Australian Height Datum (AHD)	• No change
Resource	• Sand and basalt	• Sand, basalt and separated clay • Pre-coated aggregates
Truck Movements	• 88 per day Monday to Friday • 42 on Saturdays	• 124 per day Monday to Friday • 84 on Saturdays • An average of 88 truck movements per day, calculated monthly
Hours of Operation	• Construction work – 7:00 am to 6:00 pm Monday to Friday and 8:00 am to 1:00 pm on Saturday • Quarrying operations, including product load, dispatch and haulage – 7:00 am to 6:00 pm Monday to Friday and 7:00 am to 1:00 pm on Saturday	• Product load and dispatch – 5:00 am to 10:00 pm, Monday to Friday and 5:00 am to 5:00 pm on Saturday • All other quarrying operations – no change
Imported Material	• Approximately 1.5 million tonnes of VENM to use in rehabilitation over the life of the project	• Import of ENM for product blending, resale and for backfill in rehabilitation • Import of treated drilling mud for use in product blending • No upper limit for VENM/ENM importation
Infrastructure	• Construction and operation of surface facilities including a sand washing plant, hard rock processing plant, stockpile area and site administration area	• Relocation of the hard rock processing area • Construction and operation of a bitumen pre-coating plant

Aspect	Existing	Proposed
Rehabilitation	- Progressive rehabilitation to form a final landform with a moderately sloping free draining surface, similar to existing topography - Final landform returned to agricultural use with open areas of grassland and selective native vegetation	Final landform to include the extended extraction area
Contributions	Section 94 Developer Contributions in accordance with <i>Goulburn Mulwaree Section 94 Development Contributions Plan</i>	Replace the existing requirement to pay Section 94 Developer Contributions with a Voluntary Planning Agreement (VPA) with Goulburn Mulwaree Council



3. Statutory Context

3.1 Section 75W

MP 07_0155 was originally granted under Part 3A of the EP&A Act and remains a transitional Part 3A project under Schedule 2 of the *EP&A (Savings, Transitional and Other Provisions) Regulation 2017*. The power to modify transitional Part 3A projects under section 75W of the EP&A Act, as in force immediately before its repeal on 1 October 2011, has been discontinued. However, as the request for this modification was made before the 'cut-off date' of 1 March 2018, as required by clause 3BA of Schedule 2, the provisions of clause 3 of Schedule 2 continue to apply. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated Regulations and the Minister (or his delegate) may determine the modification request under section 75W of the EP&A Act.

The Department considers that the proposal is within the scope of section 75W and may be determined accordingly as:

- the proposal could be largely carried out using existing site and transport infrastructure;
- changes to surface area disturbance would be relatively minor; and
- the proposed modification would not substantially increase the environmental impacts of the approved project.

3.2 Consent Authority

The Minister for Planning and Public Spaces is the consent authority for the application. However, under the Minister's delegation of 9 March 2020, the Executive Director – Energy, Resources and Compliance of the Department can determine the application as there were less than 50 submissions in the nature of objections and Multiquip has not made any political donations.

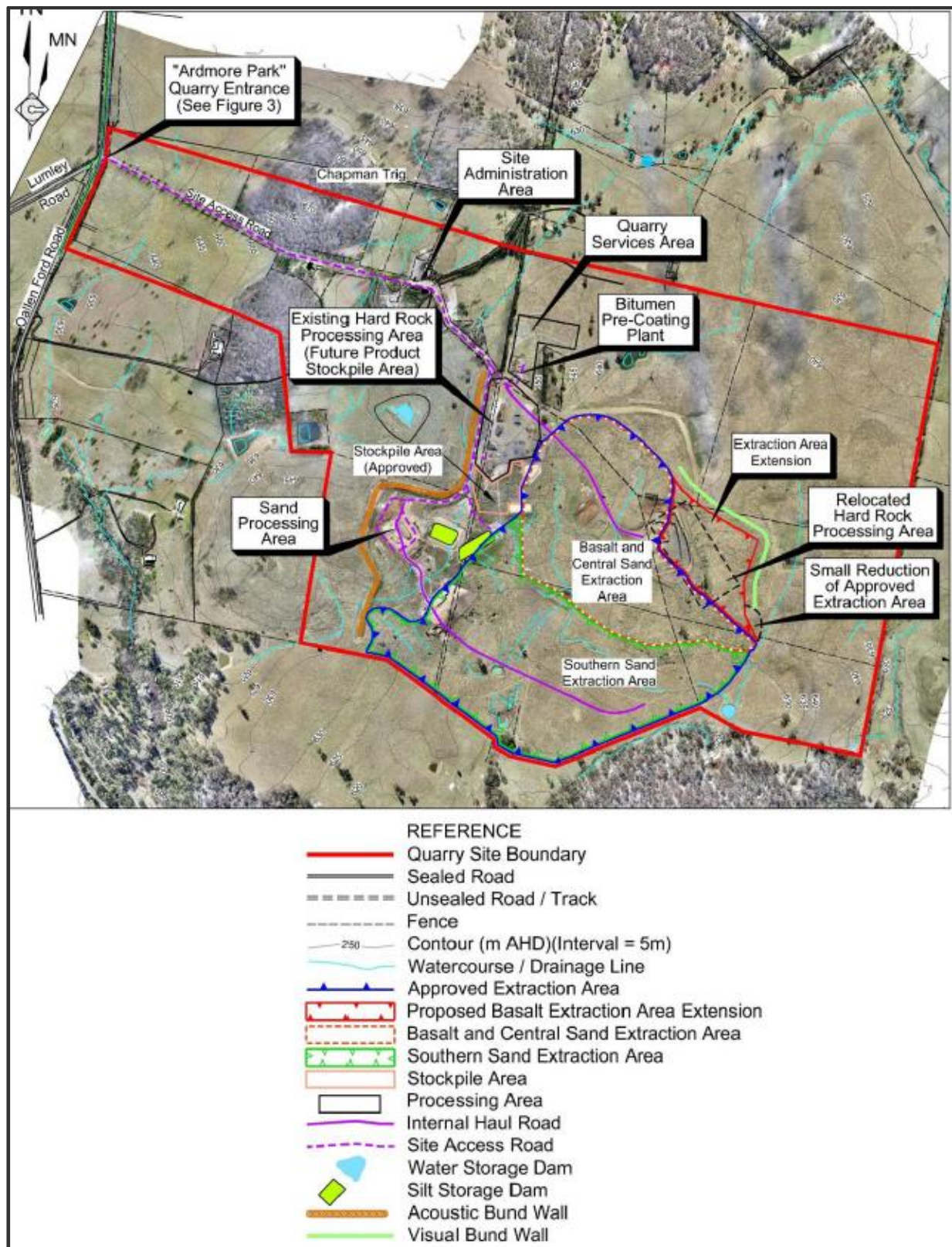


Figure 2 | Existing and proposed layout of the Ardmore Park Quarry

3.3 Objects of the EP&A Act

The Minister or delegate must consider the objects of the EP&A Act when making decisions under the Act. The Department has assessed the proposal against the objects set out in Section 1.3 of the Act. The objects of most relevance to the proposal are:

- (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;
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;
- (c) to promote the orderly and economic use and development of land;
- (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats;
- (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage);
- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State; and
- (j) to provide increased opportunity for community participation in environmental planning and assessment.

The Department considers that the proposal encourages the proper management and development of resources (Object (a)) and promotion of the orderly and economic use of land (Object (c)).

The Department has considered the principles of ecologically sustainable development (ESD, Object (b)) in its assessment of the proposal. The Department considers that the proposal could be carried out in a manner that is consistent with the principles of ESD. The Department's assessment has sought to integrate all significant environmental, social and economic considerations.

Consideration of the protection of the environment and the promotion of sustainable management of built and cultural heritage (Objects (e) and (f)) is provided in **Section 5** of this report. The Department considers that the proposal has been designed to minimise potential environmental impacts.

Lastly, the Department considers that the exhibition of the application and consultation undertaken with key stakeholders satisfies the objectives to enhance community participation and share responsibility between different levels of government (Objects (i) and (j)).

3.4 Environmental Planning Instruments

The following environmental planning instruments (EPIs) have also been considered by the Department:

- *State Environmental Planning Policy (State and Regional Development) 2011*;
- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP);
- *State Environmental Planning Policy No.33 (Hazardous and Offensive Development)*;
- *State Environmental Planning Policy No.55 (Remediation of Land)*;
- *State Environmental Planning Policy (Infrastructure) 2007*; and
- *Goulburn Mulwaree Local Environmental Plan 2013*.

The Department has assessed the proposal against the relevant provisions of these instruments. The Department has also considered Multiquip's assessment against the relevant instruments in its EA. Based on this assessment, the Department considers that the proposal can be undertaken in a manner that is generally consistent with the aims, objectives and provisions of these instruments.



4. Engagement

4.1 Department's Engagement

After accepting the EA for the proposal, the Department:

- publicly exhibited the EA from 19 January until 26 February 2018, on the Department's website and at:
 - NSW Service Centres;
 - Council's office; and
 - the Nature Conservation Council's office;
- advertised the exhibition of the EA in the *Goulburn Post Weekly*;
- notified 289 landowners in proximity to the quarry site and haulage route through letters mailed on 23 January 2018; and
- notified relevant government agencies, including Council.

Additionally, the Department hosted a community meeting on 12 March 2018 at the Bungonia Hall. At this meeting, the Department provided an overview of the assessment process and listened to community views on the proposal.

The Department is satisfied that the notification process met the requirements of the EP&A Act and the *Environmental Planning and Assessment Regulation 2000*.

In response to the exhibition of the application, the Department received:

- advice from nine government agencies, including Council, providing comments on the proposal; and
- 46 objections from members of the public and special interest groups.

The key issues raised in the submissions are outlined in **Sections 4.2** and **4.3**. Copies of the submissions and Multiquip's Response to Submissions (RTS) report are provided in **Appendix B** and **Appendix C**, respectively.

4.2 Agency Submissions

In its initial submission, **Council** expressed concern that impacts on residents along the haulage route had not been sufficiently identified and considered, particularly in relation to the proposed truck movements during the early morning period.

Council made a number of recommendations regarding the condition and structure of the haulage route, including that Multiquip increase the road shoulder and bridge culvert widths, provide appropriately sized clear zones and delineation features, and reseal the surface of the haulage route. Additionally, Council requested further investigation of the haulage routes' pavement life and turning path analysis for the proposed PBS vehicles.

In its RTS, Multiquip provided a range of additional road safety studies (including a road safety audit, pavement analysis and culvert engineering assessment) which addressed most of Council's recommendations. Additionally, Multiquip proposed to address some of the road upgrade requirements as part of the proposed VPA, which has been accepted by Council. These matters are discussed further in **Section 5.1.3**. The Department has also carefully considered the road noise and amenity impacts of the proposal in **Section 5.1.2**.

The **Environment Protection Authority** (EPA) raised concerns about the Noise Impact Assessment (NIA). This assessment was prepared in accordance with the *Industrial Noise Policy 2000* (INP). In its RTS, Multiquip revised the NIA to address these issues. However, Multiquip also updated the NIA to align with the newly released *Noise Policy for Industry 2017* (NPfI) (Revised NIA – NPfI).

The EPA was initially of the view that assessment of operational noise should continue under the INP, and Multiquip subsequently provided a further revised NIA in this format (Revised NIA – INP). However, following further discussion and careful consideration of the NPfI’s transitional arrangements, the Department considers that the Revised NIA – NPfI should apply to the project. This matter is further described and discussed in **Section 5.2**.

EPA also sought clarification regarding the use of ENM and treated drilling mud in product blending and noted that these activities would require consent under the waste processing provisions of the *Protection of the Environment Operations Act 1997* (POEO Act). In its RTS, Multiquip acknowledged these provisions and advised that an application for a Resource Recovery Order and Exemption would be made prior to any such blending to allow off-site sale and use of the blended product.

The **Water Group** within the Department (DPIE Water) sought additional information on a range of matters including site water demand, impacts on surrounding water users, groundwater take, conceptual hydrological cross sections, installation of additional monitoring bores and the proposed Trigger Action Response Plan. These matters were addressed in Multiquip’s RTS. DPIE Water did not raise any further concerns but recommended conditions, including the installation of an additional monitoring bore and preparation of an updated Water Management Plan. The Department has considered the water-related impacts of the proposal in **Section 5.3**.

The Department’s **Biodiversity Conservation Division** (BCD, formerly known as the Office of Environment and Heritage), initially advised that the biodiversity assessment had not been prepared in accordance with the Framework for Biodiversity Assessment (FBA) methodology. In its RTS, Multiquip provided a revised assessment prepared in accordance with the FBA and BCD subsequently agreed that the proposal would have no impact on biodiversity values at the quarry site.

BCD initially raised concerns that the findings of the Aboriginal Cultural Heritage Assessment (ACHA) were not supported by archaeological survey or investigation. In its RTS, Multiquip provided an Aboriginal Cultural Heritage Field Investigation Report prepared by OzArk Environmental and Heritage Management.

BCD subsequently noted that the assessment of cultural heritage impacts had not included consultation with the Aboriginal community. However, it was acknowledged that there would be limited impact to Aboriginal cultural heritage values in the proposed extension area. The Department has considered the proposal’s impacts on biodiversity and Aboriginal cultural heritage in **Section 5.4**.

During its review of the proposal, the **Crown Lands Group** of the Department (DPIE Crown Lands) identified that there was no record of approval under the *Crown Lands Act 1979* (now the *Crown Lands Management Act 2016*) for the Bungonia Creek bypass road crossing, which is a Crown-owned watercourse. DPIE Crown Lands subsequently advised Multiquip to apply for a general licence for the use and maintenance of the crossing. The Department understands the Multiquip has commenced this process.

Water NSW advised that the EA did not include an assessment of the performance of operations to date in managing impacts on water quality and sought more information as to how previous issues on the site are being (or are proposed to be) addressed. Multiquip acknowledged that there had been several water management incidents under the existing approval and advised that its Water Management Plan had been comprehensively updated. Multiquip advised that since this update, no water-related incidents have occurred. The Department has considered the water-related impacts of the proposal in **Section 5.3**.

The **Department of Education (DoE)** raised concerns regarding the proposed increase of heavy vehicle movements on the haulage route during school pick up and drop off periods. DoE requested that truck movements along Oallen Ford Road and Jerrara Road either be suspended or reduced during school bus periods. In its RTS, Multiquip provided an indicative product transport schedule to demonstrate the likely frequency of truck movements during these periods. The Department has considered this matter further in **Section 5.1.3**.

Road and Maritime Services (RMS) (now Transport for NSW) advised that it did not object to the proposal as it would not have a significant impact on the State road network. However, RMS requested that all quarry related transport to and from the Hume Highway occur via the Jerrara Road interchange. The Department notes that no other highway access is proposed.

Additionally, RMS advised that appropriate approvals relating to the use of heavy vehicles must be obtained prior to the use of these vehicles and recommended that the existing Driver's Code of Conduct and Transport Management Plan be updated to reflect the proposed modification. The Department notes that Multiquip has since received a Class 2 – Heavy Vehicle Authorisation Permit for the use of PBS vehicles on the haulage route. The Department has considered the transport impacts of the proposal in **Section 5.1**.

The **Heritage Council of NSW** advised that no items of heritage significance were identified on the project site and that no specific requirements relating to heritage matters needed to be addressed.

The **Department of Regional NSW – Mining, Exploration and Geoscience** (MEG) advised that it had no issues with the proposal and noted that an application for exemption under section 11A of the *Mining Act 1992* had been received in relation to the extraction and sale of structural clay.

4.3 Public Submissions

In response to the exhibition of the application, the Department received 46 submissions from members of the public and special interest groups objecting to the proposal. A further three representations objecting to the project were received following the Department's community meeting, after the formal exhibition period ended. The Department has considered all 46 submissions and additional representations in its assessment of the proposal.

Approximately 70 percent of objections were from residents of Bungonia and the remainder from residents within 20 km of the site. Key issues raised by submitters are summarised in **Figure 3**.

A majority of submitters objected to the proposed increase in daily truck movements and extended haulage hours, particularly due to potential road safety and amenity impacts. Many submitters emphasised the poor condition of the haulage route, particularly along Jerrara road, and noted that the road pavement had deteriorated in many places even after the Stage 1 and 2 upgrade works, undertaken for the approved project, had been completed by Multiquip.

Submitters identified a high presence of wildlife during the dawn and evening periods and poor visibility along the haulage route, particularly at night. As a result, submitters raised concern that additional product transport during these periods could pose additional safety risks for other road users. Submitters also reflected on experiences of poor truck driver behaviour such as 'tail-gating' and crossing double white lines.

Most submitters also raised concerns that additional truck movements, the larger-sized trucks and extended haulage hours would have significant noise impacts for residences along the haulage route. Submitters considered that truck movements in the early morning and late evening periods would result in sleep disturbance and would adversely affect local rural amenity.

Another key concern raised by submitters was Multiquip's compliance history and relationship with the community. Submitters expressed a lack of trust in the company to meet its conditions of approval by drawing on examples of previous non-compliances.

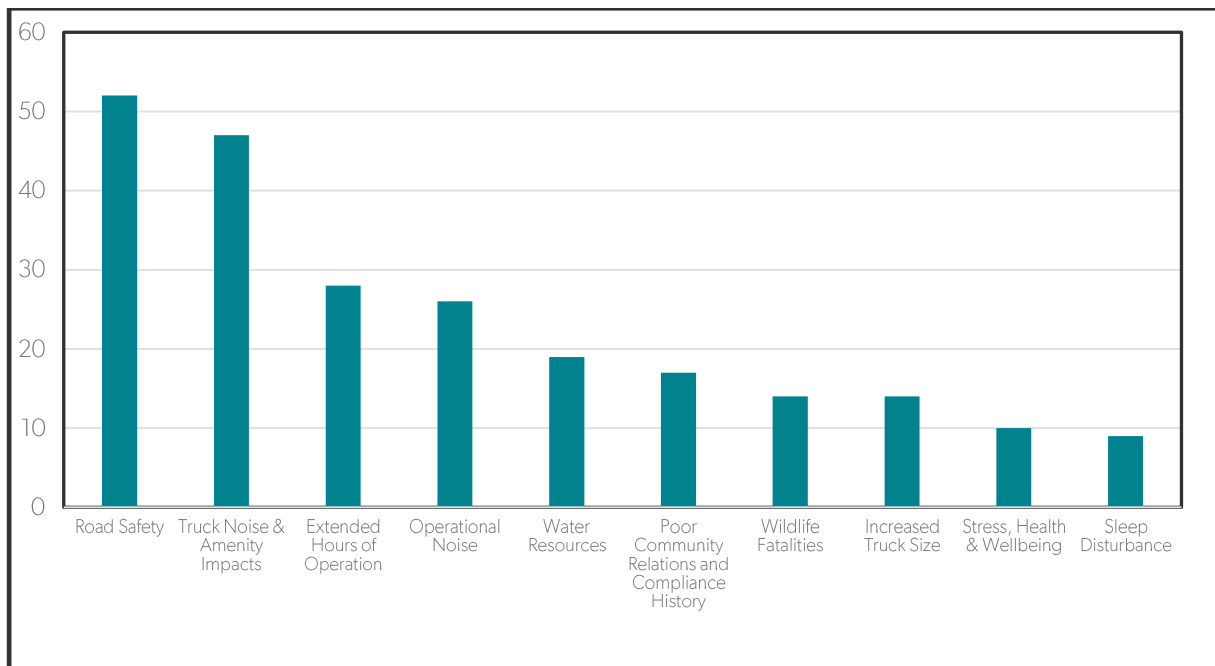


Figure 3 | – Key issues raised in public submissions

The Department notes that Multiquip has been subject to compliance action due to breaches of its current conditions of approval. These breaches have been in relation to inadequate erosion and sediment control during road upgrade works, inadequate reporting and record keeping, the location of the hard rock processing infrastructure on site and truck movement limitations.

These matters have been investigated by either the Department’s Compliance Branch or the Environment Protection Authority (EPA) and range of regulatory actions have been imposed, including official cautions, penalty notices, orders and warning letters.

The submissions also raised concerns regarding potential impacts on water resources, particularly due to additional extraction from the quarry’s production bore. Two neighbouring properties reported declining groundwater levels in spring flows and bore yields since the quarry began pumping from its production bore. The Department has further considered this matter in **Section 5.3.3**.

Other issues raised in submissions included potential air quality impacts, contamination issues associated with the pre-coating plant and importing waste material, impacts on property values and limited economic benefits.

Notification of Recommendations

On 7 August 2020, the Department published its recommendations on the Ardmore Park Quarry Modification 3 application. The Department advised that its recommendations would be available for a minimum of seven days prior to the application’s determination.

The Department received representations from two members of the public in response to its recommendations. The issues raised in these representations are further considered in **Section 6** and **Appendix G**.



5. Assessment

In assessing the merits of the proposal, the Department has considered the:

- modification application, Mod 3 EA and accompanying RTS;
- existing conditions of approval, as previously modified;
- additional information provided by Multiquip (see **Appendix D**);
- submissions from members of the public and special interest groups;
- agency advice on the proposal; and
- relevant EPIs, policies and guidelines.

The Department considers that the key impacts associated with the proposal relate to traffic and transport, noise and water. Consideration of these impacts is provided below, with consideration of other impacts provided in **Table 7**.

5.1 Traffic and Transport

5.1.1 Existing Setting

The quarry haulage route has been subject to significant community concerns about road noise and safety impacts. The quarry is located in a relatively isolated rural setting and the primary haulage route poses a number of safety risks being a narrow and windy single carriageway approximately 20 km long.

The original proposal to establish the quarry was refused by the then Minister for Planning (and upheld by the Land and Environment Court) on the grounds of unacceptable impacts on the amenity of the Bungonia village. As outlined above, following a new project application, the proposal was approved with a revised transport route bypassing Bungonia village.

Under the approval, Multiquip was required to undertake significant road upgrade works and product transport was limited to align with stages of road upgrades. These upgrades included carriageway widening, pavement rehabilitation and intersection and creek crossing upgrades.

Road noise and amenity impacts remain a significant concern for the community, as reflected in the majority of submissions received for the proposal, particularly in relation to the intensification of truck movements and extended hours of operations.

The Department acknowledges that potential road safety and amenity impacts associated with the quarry's haulage route have been central to previous planning decisions made by both the Land and Environment Court and the Minister, and the approved project is subject to strict conditions in relation to transport operations.

5.1.2 Road Noise

The Department accepts that there are benefits associated with early morning haulage, to allow delivery of material to metropolitan worksites by 7:00 am and to reduce the number of trucks travelling in peak hour. The Department notes that there is precedent for regional quarries to commence haulage in the early morning period and that these deliveries play an important role in facilitating the timely supply of resources to the metropolitan construction projects.

However, the Department considers that the same strategic benefit does not apply to product transport during the evening period, and is not necessary for Multiquip to meet market demand. For example, the recommended

standard hours for construction under the *NSW Interim Construction Noise Guideline* are 7:00 am to 6:00 pm, Monday to Friday, and 8:00 am to 1:00 pm on Saturday. These hours would commonly apply to metropolitan worksites, particularly those in densely populated areas. In this regard, the use of larger PBS vehicles provides Multiquip with flexibility to deliver more product to customers during the day, which would reduce and arguably avoid the need to extend road transport (and the associated road noise impacts) into the evening period to meet market demand. Given this, and the potential for additional disturbance to local residents, the Department considers that no product transport should occur after 6:00 pm. The Department also notes that there are only three quarries in NSW with a similar annual extraction rate that are allowed to transport material in the evening, and even then, they are typically subject to restrictions on movements and frequency.

The current project approval contains a daytime road traffic noise limit of 55 dB(A) $L_{Aeq}(1hour)$. This criterion is based on cumulative traffic noise and reflects a more stringent 'Local Road' noise classification. Road noise impacts on the Bungonia by-pass were originally assessed as an industrial noise source and are currently subject to operational noise criteria in the project approval. However, due to the physical separation of the Bungonia By-pass from the quarry premises and its use being solely a haulage route, the Department considers that noise impacts on the by-pass should be assessed as road traffic noise (rather than operational quarry noise).

Since the approval of the project, the applicable road noise policy has changed with the release of the *NSW Road Noise Policy* in 2011, and noise impacts on the haulage route could be assessed against a 'Sub-arterial Road' classification. However, due to the quiet rural nature of the area and approval history relating to the haulage route, the Department considers that the most stringent 'Local Road' noise classification should continue to apply.

The existing road noise limit was set assuming a maximum of 14 truck movements per hour. Multiquip has advised that under the proposal, no changes are proposed to the maximum number of hourly truck movements and that this existing noise limit could continue to be met. However, there is difficulty with regulating a cumulative road traffic noise criterion, and as such, the Department considers that a better way to achieve this noise limit is to control the number of truck movements to and from the quarry. The Department has therefore recommended the replacement of the cumulative road traffic noise criterion with hourly truck movement restrictions.

As outlined above, the Department recognises the strategic benefit associated with trucking during the early morning shoulder period (ie 5:00 am to 7:00 am). However, the Department considers there should be a balance between obtaining this benefit and preserving the rural amenity of the locality. By satisfying stringent 'Local Road' noise objectives, the Department considers that this balance could be achieved, and potential sleep disturbance events would be minimised. Multiquip has advised that it can meet stricter night time 'Local Road' noise objectives (ie 50 dB(A) $L_{Aeq}(1hour)$) so long as truck movements are limited to eight per hour.

On this basis, the Department has recommended that product transport can commence from 5:00 am on weekdays and from 6:00 am on Saturdays, so long as there are no more than eight truck movements per hour between 5:00 am and 7:00 am. The Department has also recommended that Multiquip:

- validate the noise levels of trucks used during this period to ensure road noise objectives are achieved and that potential sleep disturbance events are avoided;
- implement a protocol for the management of quarry vehicles on the Bungonia By-pass, including the prevention of trucks from queuing on Mountain Ash Road; and
- ensure that no trucks enter the site prior to 5:00 am on weekdays and 6:00 am on Saturdays, to avoid road noise impacts occurring prior to product transport commencement times.

5.1.3 Road Safety

Road Condition

Over 65 percent of public submissions raised concerns about potential impacts on road safety and the condition and geometry of the haulage route. Crash statistics between 2014 and 2018 (TfNSW – Centre for Road Safety)

indicate that whilst no heavy vehicle crashes occurred on the haulage route, there have been a number of accidents on the route involving cars and light trucks.

In response to these concerns, Multiquip commissioned a number of studies, including a road safety audit, intersection and turning path analysis, a Pavement Life Report and an engineering assessment of culverts and bridges. These studies concluded that:

- all intersections along the haulage route have the capacity to accommodate traffic changes under the proposal;
- all culverts and bridge crossings along the haulage route have suitable capacity to carry the required loads;
- most shoulder widths for the length of the transport route exceed the minimum requirement of 0.5m unsealed;
- there are localised areas of pavement deterioration (ie with a remaining life of less than 20 years); and
- a number of minor road work activities could be undertaken to remove potential roadside hazards and improve safety on the haulage route.

Council accepted these findings and Multiquip agreed to undertake road maintenance actions as part of the proposed VPA with Council, which would replace Multiquip's existing requirement to pay road maintenance contributions in accordance with Council's *Section 94 Development Contribution Plan*.

The terms for a VPA were accepted by Council in April 2019 with Multiquip committed to:

- contribute 3.85 cents per tonne per kilometre (indexed) travelled on the haulage route (ie Oallen Ford Road, Mountain Ash Road and Jerrara Road);
- rehabilitate the pavement on the haulage route where the pavement life is shown as less than ten years, prior to the commencement of transport operations under the modified project approval; and
- fund (through monetary or materials and in-kind contributions to same value) and complete the resealing of 50 percent of the transport route, prior to the commencement of transport operations under Mod 3.

The Department considers that the proposed VPA would sufficiently provide for the upgrade and ongoing maintenance requirements of the haulage route. A number of actions under the VPA would require completion prior to increased trucking from the site, including pavement rehabilitation works and resealing works. The Department has recommended conditions to reflect this agreement and to ensure that all findings of the road safety audit are implemented to the satisfaction of Council.

Subject to the implementation of the VPA and recommended conditions of approval, the Department considers that the haulage route could safely accommodate the additional trucking impacts associated with the proposal.

School Bus Safety

Oallen Ford Road and Jerrara Road are part of a local school bus route. DoE recommended that heavy vehicle movements are either ceased or limited during school bus periods to ensure the safety of students. In response to DoE's concerns, Multiquip provided an indicative product transport schedule as part of its RTS. This schedule proposed to limit truck movements to:

- 8 movements between 7:00 am and 8:00 am; and
- 4 movements between 4:00 pm and 5:00 pm.

DoE subsequently requested that these limits are specified in conditions of approval in order to provide certainty of how transport impacts are managed during school bus periods.

The Department acknowledges that Multiquip is currently permitted 14 truck movements per hour during school bus periods. However, the Department also acknowledges that the haulage route contains a number of narrow sharp bends and varying shoulder widths, particularly on Jerrara Road. Additionally, there are limited areas where a bus would be able to completely pull off the road.

The existing conditions of approval require Multiquip to identify arrangements with school bus drivers, including any restrictions on activities during school bus pick up / drop off times or the provision of any other measures (ie bus bays). To date, the arrangement in place is for truck drivers to make radio contact with school bus drivers on approach. Multiquip has proposed to continue this practice.

However, with an increased frequency in the use of larger PBS trucks and ability for Multiquip to facilitate up to 124 truck movements per day, the Department considers that additional measures are warranted. The construction of bus bays may not be a practical solution considering the length of the haulage route and the variable location of bus stops. However, the Department considers that an agreed restriction on truck movements during school bus periods would ultimately reduce the interaction between trucks and school buses and therefore reduce safety risks for school students.

The Department considers that consistent limits should be applied for morning pick up and afternoon drop off periods as there is no notable difference in existing traffic volumes during these times. The Department has therefore recommended that product transport between 7:00 am to 8:00 am and 4:00pm to 5:00 pm is limited to 8 truck movements per hour. The Department has also recommended this limit to apply for the 5:00 pm to 6:00 pm period, so that there are fewer truck movements during the afternoon peak period when people are returning home from work. The Department notes that this limit is consistent with Multiquip's indicative product transport schedule and considers that it would not substantially limit product delivery to the construction market.

The Department has also recommended that Multiquip prepare and implement a contemporary Traffic Management Plan that specifies the procedural measures to be undertaken during school bus operating periods. This plan would also include a contemporary Driver's Code of Conduct that details the safe and quiet driving requirements for truck drivers travelling to and from the quarry, and the measures to be implemented if these requirements are not met. DoE considered these conditions to be acceptable.

Subject to the recommended conditions of approval, the Department considers that interactions with school buses on the haulage route could be safely managed.

Increased Low Light Risks

Many public submissions expressed their concerns with driving on the haulage route during dawn and dusk periods and reported a frequent occurrence of wildlife strikes.

The existing layout and configuration of the haulage route poses a number of safety hazards that cannot be readily changed, including winding and narrow bends, steep terrain and a high presence of wildlife. During periods of low light, these hazards have the potential to increase safety risks due to reduced visibility and wildlife strikes.

The Department acknowledges that periods of low light are present during both the morning and evening periods. However, product transport during the evening is not essential for Multiquip to meet market demand.

The Department considers that limiting truck movements in the early morning and avoiding truck movements at during the evening period, would provide some mitigation of safety risks associated with periods of low light, particularly around dusk.

5.1.4 Conclusion

Given the approval history of the quarry and the potential road noise and safety issues associated with the haulage route, the Department does not support the extension of product transport into the evening period. The Department acknowledges the strategic and operational benefit associated with trucking during the early morning period and considers that road noise and safety risks could be appropriately managed by restricting the number of truck movements to and from the site.

Overall, the Department considers that the proposal is acceptable subject to conditions, including:

- the implementation of the VPA (including road maintenance works), prior to any increase in truck movements;
- strict transport limits, including reduced movements during the early morning, school bus and afternoon peak periods;
- the implementation of a contemporary traffic management plan, including a Driver's Code of Conduct; and
- accurate record keeping of all truck movements to and from the site to be published on Multiquip's website every month.

The Department considers that these recommended conditions would meet the earlier dispatch needs of Multiquip whilst managing local amenity and safety risks for the community. Council considered the recommended conditions to be acceptable.

5.2 Operational Noise

5.2.1 Existing Setting

The quarry is surrounded by a mix of rural residential and agricultural land uses. The topography of the quarry site consists of elevated flat to gently undulating terrain. Prevailing winds are predominantly from the west and less frequently from the north-east and south-east. Wind analysis provided by Multiquip demonstrated that prevailing winds of less than or equal to 3 metres per second (m/s) occur less than 30 percent of the time. The area also experiences moderate to strong temperature inversions during the night period, particularly during the winter months.

Table 6 identifies the existing noise criteria for receivers surrounding the quarry and along the Bungonia By-pass. The location of all receivers is depicted in **Figure 4**. The Department has assessed noise impacts for receivers along the Bungonia By-pass as road traffic noise (see **Section 5.1.2**).

Table 6 | Existing Noise Criteria

Receiver Type	Noise Assessment Location	Existing Noise Criteria (Day only) LAeq(15 minute)
Quarry	Residence 1, 2, 3, 4, 5 and 8	35
Quarry	Residence 6 and 9	36
By-pass	Residence R1, R2 and R4	35
By-pass	Residence R3 and V2	36
By-pass	Residence V1	38

5.2.2 Policy Context

The NIA provided in the EA was prepared in accordance with the *Industrial Noise Policy 2000* (INP). The use of the INP was specified in the Secretary's Environmental Assessment Requirements (SEARs) for the proposal, which were issued prior to the release of the more contemporary *Noise Policy for Industry 2017* (NPfI).

In its initial submission, the EPA identified a number of issues with the NIA and sought a range of additional information. In its RTS, Multiquip provided a revised NIA to address EPA's concerns, and updated the assessment to align with the newly released NPfI (Revised NIA - NPfI). Although it was demonstrated that the site is subject to 'calm' meteorological conditions, the Revised NIA – NPfI conservatively predicted the project's noise impacts under 'adverse' meteorological conditions and adopted a day time noise criterion of 40 dB(A).

Subsequently, the EPA requested that the NIA be revised to continue under the INP, due to provisions of the *Implementation and transitional arrangements for the NPfI*. Multiquip provided a further revised NIA in this format (Revised NIA – INP). This assessment predicted the project's noise impacts under 'calm' meteorological conditions and adopted the existing day time criteria (ie 35 dB(A) and 36 dB(A)).

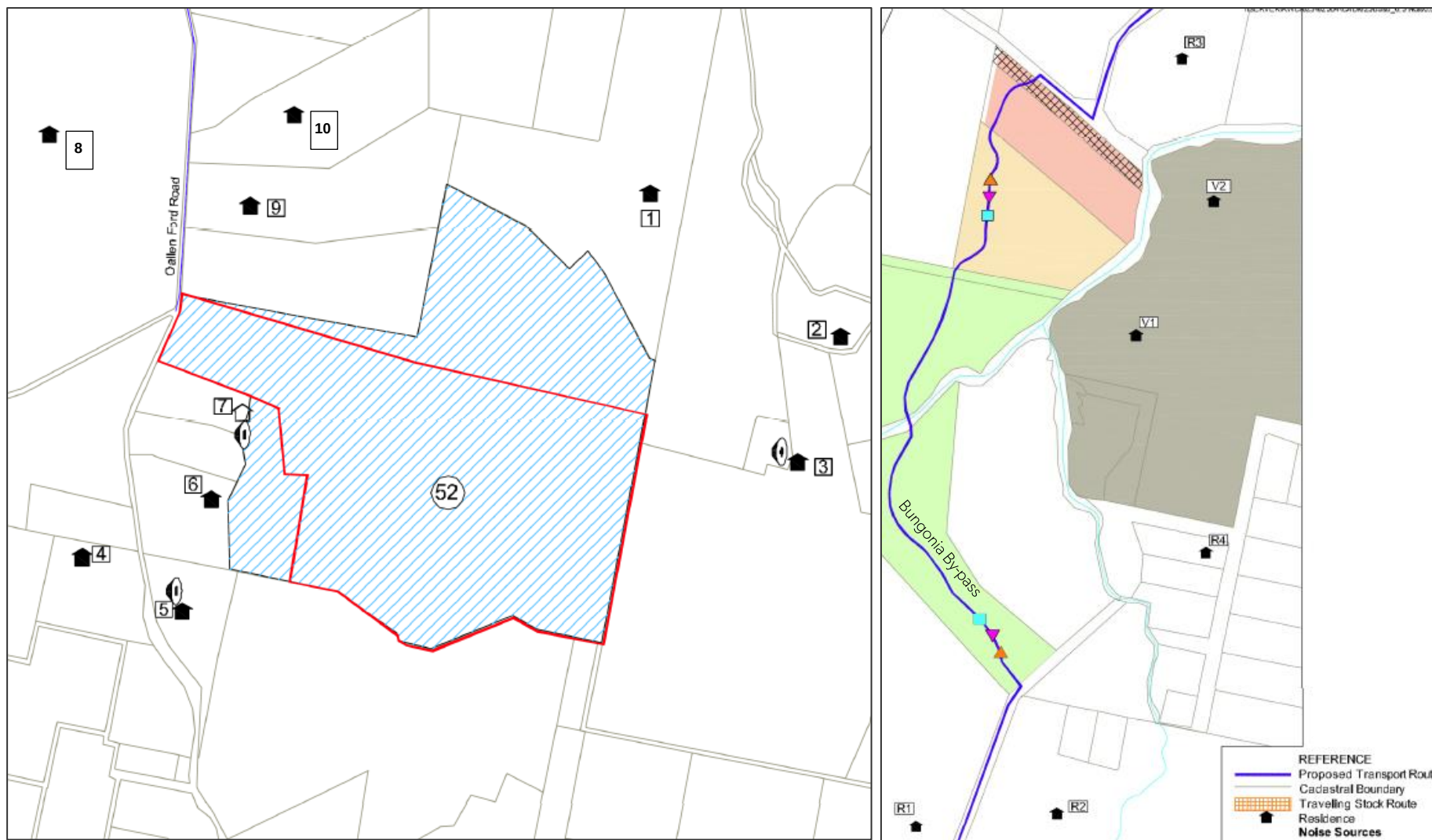


Figure 4 | Location of Sensitive Receivers

However, upon further consideration of the *implementation and transitional arrangements for the NPfl*, the Department considers the project should fall under the more contemporary NPfl because it is a modification application and not a new industrial development.

A key difference between the two policies, and the most relevant in relation to the assessment of this project, is the applicable minimum intrusiveness criteria that can be adopted when setting noise limits for an industrial site.

The INP identifies a minimum daytime intrusiveness criterion of 35 dB(A), whereas the more contemporary NPfl increases this criterion to 40 dB(A) based on the best available science relating to intrusive amenity and health impacts. The 35 dB(A) minimum limits are retained for the more sensitive evening and night time periods.

The Revised NIA – INP predicted that during the day period, noise levels would remain at or below the existing noise criteria for Receivers 1 to 9, and at 35 dB(A) for one newly identified receiver (ie Receiver 10). However, these predictions are based on ‘calm’ meteorology (ie wind speeds up to 0.5 m/s) and noise limits set in the project approval would therefore only apply during these ‘calm’ conditions.

However, this results in the exclusion of noise limits during other meteorological conditions, including adverse winds (ie prevailing winds up to 3 m/s) that may be present for up to 30% of the time and very adverse winds (ie winds above 3 m/s). Setting noise limits under ‘calm’ conditions also makes it more difficult to undertake regular compliance measurements, particularly during temperature inversions in winter

The Department has determined that the project should be assessed under the NPfl. As such, the minimum daytime noise criteria that can be applied is 40 dB(A). Although this noise limit is higher than the existing limits, it would be applied under a wider range of wind conditions (ie up to 3m/s). Additionally, the NPfl provides an ‘upper level cap’ (noise limit + 5 dB) which would be applicable under all meteorological conditions outside of those defined in the NPfl (Table D1 of Fact Sheet D).

On this basis, setting noise limits under the NPfl provides a stricter and more transparent approach to regulating noise from the site. Multiquip advised that it could meet the proposed noise limits, which is supported by predictions made in the Revised NIA – NPfl under adverse meteorological conditions.

5.2.3 Night time operations

Multiquip are also seeking to undertake product loading and dispatch between 5:00 am to 7:00 am which is defined as night time under the NPfl and INP. Noise levels during this period were modelled under extraction scenarios assuming the presence of F-class temperature inversions.

Noise levels were predicted to remain at or below 35 dB(A) for all receivers during this period, except for Receivers 6 and 9 where a noise level of 36 dB(A) was predicted. The Department notes that these predictions provide a conservative representation of impacts as no extraction activities would be occurring during this period. A 1 dB(A) exceedance is considered a negligible impact under the *Voluntary Land Acquisition and Mitigation Policy (VLAMP)* such that no mitigation is required at the receiver.

The Department has recommended that during this period, the predicted noise levels apply (ie 35 dB(A) at all receivers and 36 dB(A) at Receivers 6 and 9), including under F-class temperature inversions and 2 m/s drainage flow winds. Although drainage winds are not expected to occur, the Department notes that these winds were modelled in the Revised NIA – NPfl and no exceedances were predicted.

Multiquip has also proposed to conduct product loading and dispatch during the evening period. However, as discussed in **Section 5.1.2**, the Department considers that the project should mainly remain a daytime operation due to the surrounding quiet rural setting. By limiting the operational noise of the quarry predominantly to the day period, the Department considers that rural amenity of the locality would continue to be preserved.

5.2.4 Management and Mitigation

The Department notes that the quarry has been subject to a number of noise complaints from surrounding residents. Multiquip recently undertook additional noise monitoring as part of a Pollution Reduction Program (PRP) issued by the EPA, in response to a series of noise complaints from an adjoining resident. Multiquip has advised that noise complaints have historically occurred during noise enhancing weather conditions (ie prevailing winds or temperature inversions). Monitoring conducted under the PRP did not report any exceedances of the existing noise criteria. However, the Department notes that the existing noise criteria does not apply under all types of meteorological conditions, including conditions of very strong prevailing winds and temperatures inversions. The Department notes that the adoption of noise limits under the NPfl would ensure noise limits are in place for the site under all types of meteorological conditions.

To further mitigate noise impacts from the site, Multiquip has committed to:

- only operate the mobile crusher within the basalt extraction area, below natural ground level;
- limit mobile plant activities before 11:00 am during the winter months; and
- pro-actively monitor noise levels, particularly during winter months to ensure compliance with the noise criteria.

The Department considers that these measures should be specified in an updated Noise Monitoring Program.

5.2.5 Conclusion

Overall, the Department recognises that the quarry is located in a sensitive rural environment and has carefully considered the potential noise impacts of the proposal. The Department notes that noise levels from the proposal can comply with the most stringent limits of the NPfl which would apply under all meteorological conditions. Although some of these limits are higher than existing limits in the consent, the Department notes that noise impacts under the proposal will remain similar to existing operations.

Subject to the implementation of the recommended noise limits, the Department considers the noise impacts of the proposal are acceptable.

5.3 Water Resources

5.3.1 Existing Setting

The quarry is located along an east-southeast ridge system in the Shoalhaven River Catchment. The top of the ridge is located in the central-western part of the site and has an elevation of approximately 640 m AHD. The site drains to Inverary Creek in the north and Jacqua Creek in the south. Both creeks drain to the Shoalhaven River and are within the Sydney Drinking Water Catchment.

Existing surface water management at the site includes the capture of dirty water runoff within a series of sediment basins and re-use ponds. There is one licensed discharge point located on the southern boundary of the site.

There are three groundwater springs located on adjacent landholdings to the west, south and south-east of the site. These springs are characterised as locally perched saturated zones atop a low permeability layer. To monitor groundwater impacts from the existing operation, Multiquip has established a monitoring bore network consisting of five hard rock bores and five sand bores (see **Figure 5**).

The quarry is located in the Goulburn Fractured Rock Groundwater Source within the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources* (the WSP). Multiquip currently holds a water access licence under this WSP for up to 110 Megalitres (ML) per annum.

5.3.2 Surface Water

The EA included a Surface Water Assessment (SWA) prepared by Strategic Environmental & Engineering Consulting Pty Ltd. The proposal would result in increased dirty water run-off associated with the enlarged extraction area. Multiquip proposes to extend and relocate sediment basins as extraction progresses. The existing discharge point would remain, supported by a larger sediment basin (CP3) designed for a five-day 95th percentile rainfall event. Multiquip advises that existing management measures prescribed in its current Water Management Plan (WMP) would continue to be implemented to ensure effective capture of run-off during operations.

The proposed production increase would result in greater water demands for the site, particularly for product processing and dust suppression. Under the worst-case production scenario (ie 400,000 tpa of sand and 180,000 tpa of basalt), Multiquip advised that up to 104.4 ML of water would be required per annum, which could be met by the existing water licence allocation. However, the SWA advises that in a year of average rainfall, up to 68 ML could be drawn from on-site water capture in sediment dams.

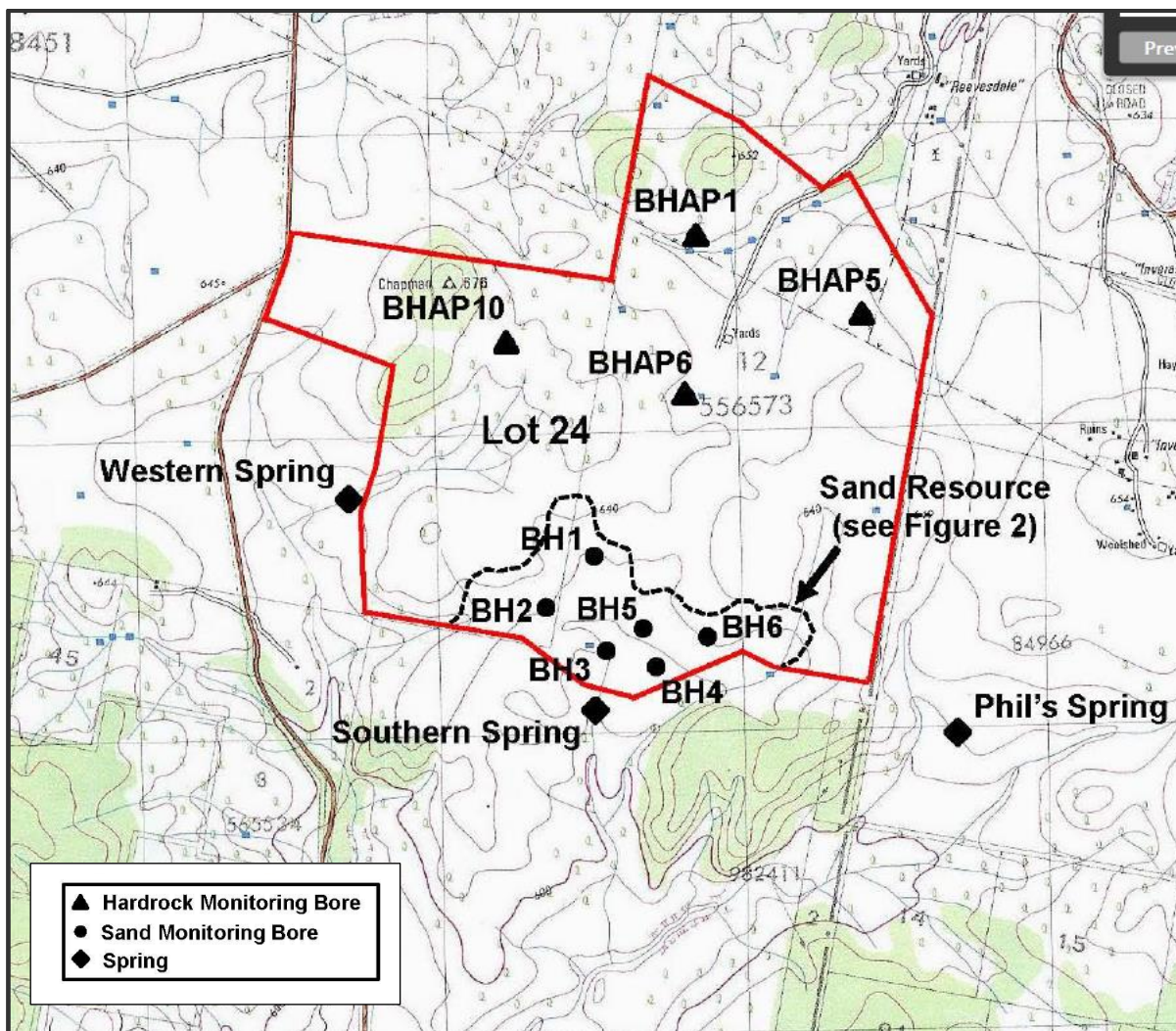


Figure 5 | Location of monitoring bores and springs

The Department notes that there has been surface water incidents at the site related to roadside erosion and sediment control measures. In its submission, WaterNSW sought further clarification as to how previous shortcomings are being, or are proposed to be, addressed. Multiquip advised that since the implementation of a revised Erosion and Sediment Control Plan in November 2017, no further incidents have occurred.

These incidents have been subject to investigation and various enforcement actions by the Department's Compliance Branch. The Department acknowledges that the proposal is a relatively minor extension to existing disturbance areas and considers that existing controls could continue to be implemented to manage off-site surface water impacts.

5.3.3 Groundwater

To assess the proposal's potential impacts on groundwater, Multiquip provided a Hydrogeological Assessment prepared by Larry Cook Consulting Pty Ltd. Additionally, Multiquip provided supplementary assessments within the RTS in response to concerns raised by landowners during the exhibition period. These documents are collectively referred to as the Hydrogeological Impact Assessment (HIA).

The proposals potential impact on groundwater relates to two components:

- extending the extraction area with potential for increased groundwater inflow; and
- additional groundwater take due to the increased production rate.

Extraction Area

Multiquip proposes to extend the basalt extraction area by 3.5 ha and extract basalt resource to a depth of approximately 615 m AHD (approximately 40 m below ground level). The HIA indicates that the basalt resource in this area is unsaturated and no groundwater inflows are expected. On this basis, no off-site drawdown impacts are predicted. The Department also notes that while there is a 7 per cent increase in the extraction area, the depth of extraction is not increasing.

DPIE Water was concerned about the lack of groundwater level monitoring data from the existing and proposed basalt extraction areas and requested that a nested monitoring bore be installed immediately north of the proposed extension area. Multiquip agreed to this request and has committed to install the bore following determination of the proposal.

The Department accepts that groundwater impacts from the proposed extension area are likely to be small and could be monitored and managed through the expansion of the site's monitoring bore network, as recommended by DPIE Water, and the preparation of an updated Groundwater Monitoring Program.

Production Bore

The proposal seeks to extend the life of quarrying operations for an additional eight years, which would result in an increase in the overall volume of water to be pumped from the production bore BHAP6. The proposal would also result in increased water demand associated with product processing and dust suppression. However, Multiquip has advised that the water demand of the proposal would remain within its current licensed water allocation (ie 110 ML per annum).

Nearby landowners have raised concerns regarding the quarry's production bore (BHAP6) and its potential association with declining spring flow and bore yields in the locality. In particular, the adjoining landowners at 'Inverary Park' have reported significant decline in Phil's Spring since the commencement of quarrying operations. This matter is currently subject to an Independent Review process under the existing project approval, and will be addressed through this process. However, the Department has received legal representations on behalf of the adjoining landowners, recommending conditions of approval relating to the recovery of costs associated with project-related impacts. It was also recommended that the determination of Mod 3 be delayed until this issue has been conclusively resolved.

Preliminary findings of the Independent Review and supplementary expert advice indicated that the primary cause of declining flow at Phil's Spring was unlikely to be related to sand and basalt extraction or pumping from BHAP6. This is because the area of basalt extraction is unsaturated and flow rates at Phil's Spring have been declining prior to the commencement of sand extraction on site and there is an absence in correlation between spring flow and the measured water in BHAP6.

In addition to climatic influences, it was identified through the independent review process (separate to the modification application) that there is a possibility that incorrect installation of bores in 2003 may be responsible for the declining flow.

The production bore was constructed in 2003 with limited pumping occurring until 2013. The bore is used for consumptive purposes and is therefore not an aquifer interference activity related to the carrying out of quarrying operations. The construction and extraction of water from the production bore are activities regulated under the *Water Management Act 2000* by the Natural Resources Access Regulator (NRAR).

Multiquip holds a water allocation that is subject to the rules of the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources*, including suspension rules that can be enforced to protect long-term water security. On this basis, the Department has referred the matter of declining flow at Phil's Spring to NRAR for investigation.

Multiquip has advised that it will continue to monitor groundwater in accordance with its WMP and implement make-good provisions should it be determined that off-site water losses are a result of the quarry extraction operations. DPIE Water has recommended that additional monitoring bores should be incorporated into the groundwater monitoring network which can be facilitated through updates to the site's WPM, in consultation with DPIE Water.

Any groundwater monitoring recommendations from NRAR following its investigations could also be considered in any revisions to the WMP, and the Department will continue to liaise with adjoining landowners and Multiquip to achieve a satisfactory outcome as part of the Independent Review process.

The Department also notes that in the event that the site's water allocation is reduced or suspended, the existing project approval requires Multiquip to adjust the scale of its operations to match its available water supply.

5.3.4 Conclusion

Overall, the Department considers that the proposal is unlikely to increase the approved groundwater and surface water impacts of the project, particularly as:

- there would be no increase in the existing bore extraction limit already approved for the project under a license issued under the WM Act;
- there is only a minor increase in extraction area compared to approved operations, with no proposed increase in extraction depth and therefore there would continue to be minimal take of groundwater from the extraction area, as already shown during existing operations; and
- surface water impacts can continue to be managed under existing management practices, in accordance with the site Water Management Plan and the EPA's EPL.

The Department considers that water-related impacts of the proposal should continue to be carefully monitored to ensure that impacts associated with quarrying operations are readily identified and managed. The Department has recommended a number of updates to the site's Water Management Plan, in consultation with DPIE Water and EPA.

The Department also notes that potential offsite impacts associated with the production bore are currently being investigated by NRAR under the provisions of the WM Act as a separate matter to the modification application.

Subject to the recommended conditions, the Department considers that the water-related impacts of the proposal are acceptable.

5.4 Other Issues

The Department is satisfied that the other impacts of the proposal are likely to be minor. **Table 7** summarises the Department's assessment of these impacts.

Table 7 | Assessment of other impacts

Issue	Impact and consideration	Recommendation
Air Quality	- The EA included an Air Quality Impact Assessment (AQIA) prepared by Ramboll Environ Australia Pty Ltd. - The proposal would increase dust emissions from the site as a result of the increased extraction area, additional product generation, truck loading, haulage and importation of ENM. - The AQIA included dispersion modelling to predict potential air quality impacts associated with the proposal. - The AQIA models air quality impacts at the eight closest receivers to the site, one of which is owned by Multiquip. - Receivers are predicted to experience very minor incremental increases of 24-hour and annual average PM₁₀ and PM_{2.5}, and no exceedances of the air quality criteria specified in <i>Approved Methods for the modelling and assessment of air pollutants in NSW 2016</i>. - On this basis, the Department considers that the air quality impacts associated with the proposal would be minor. - Air quality impacts were not a prominent concern raised in submissions, however, the Department acknowledges that some concerns have been raised local landowners over dust generation at the site, particularly during adverse weather conditions. - The existing conditions regulating air quality management practices on the site were drafted over ten years ago, and a number of contemporary revisions are recommended to ensure appropriate management and monitoring practices are in place. - EPA requested that the site's air quality monitoring program include a high-volume air sampler (HVAS), to be maintained for at least three years following the approval of Mod 3.	- The Department has recommended contemporary revisions to the existing air quality conditions including: - update of the annual average PM₁₀ criterion and the inclusion of 24 hour and annual average PM_{2.5} criteria in accordance with the EPA's <i>Approved Methods for the modelling and assessment of air pollutants in NSW 2016</i> - a requirement to monitor particulate matter using a HVAS for at least three years.
Rehabilitation	Rehabilitation methods would be largely unchanged by the proposal and the final landform would include the extended extraction area. The final landform would replicate the	- The Department has recommended contemporary updates to existing rehabilitation conditions including: - rehabilitation objectives;

Issue	Impact and consideration	Recommendation
	existing topography, although at slightly lower elevations than previously approved. • Multiquip proposes to import ENM (additional to approved VENM importation) for the purposes of backfilling. Multiquip also proposes to plant native trees around the edges of dams and drainage lines and apply topsoil and soil ameliorants to enable the area to return to agricultural use. • Multiquip advise that approximately 2.4 million m³ of backfill material would be required to be imported to the site to achieve the conceptual final landform. • The importation of this material would commence within approximately 1 to 3 years in line with the completion of quarrying areas, in which the required backfill quantities could be achieved within the proposed product transport limits. • Multiquip has advised that the final landform is dependent on the availability of backfill material. Therefore, Multiquip proposes to periodically update the final landform design to account for the volume of backfill material available. • The Department acknowledges the need for some flexibility in the final landform design, particularly when planning for long-term outcomes. However, the final landform must be generally consistent with the conceptual final landform and any substantial deviations from this design would likely require a modification of the approval.	- a requirement to progressively rehabilitate the site; - an updated rehabilitation bond condition; and - an indicative schedule for importing screened waste material in order to achieve the conceptual final landform.
Social	• In response to concerns raised during the exhibition period, Multiquip provided a Social Impact Assessment (SIA) prepared by R.W Corkery and Co. Pty Limited. This document was subsequently peer reviewed by Key Insights Pty Ltd. • The SIA identified that the key social impacts of the proposal related to way of life, community, health and wellbeing, and property rights. These impacts are predominantly linked to the proposal's potential impacts on amenity, road safety and water availability. • The Department has considered these matters in conjunction with the impact assessments in Sections 5.	• The Department has recommended a number of conditions to protect the amenity, health and wellbeing of residents. These conditions include: - restrictions on product transport during morning shoulder, evening and school bus periods; - the completion of road safety audit recommendations prior to the commencement of intensified operations under Mod 3; - a requirement to enter into a Voluntary Planning Agreement with Council, within six months of the determination of Mod 3; - a contemporary Traffic Management Plan, including the preparation of a Driver's Code of Conduct.

Issue	Impact and consideration	Recommendation
Biodiversity	- Following advice from BCD during the exhibition period, Multiquip provided a revised Biodiversity Assessment Report (BAR) in its RTS (see Section 4.2). - The BAR identified the vegetation type within the proposed extraction area as non-native grassland, dominated by introduced pasture species, exotic grasses and broad-leafed herbs. - The BAR advised that no native plant species or potential threatened species habitat were observed within the proposed extension area and no ecosystem or species credits are required to be retired. - The Department notes that existing conditions of approval require Multiquip to manage vegetation clearing and control pests and weeds. - BCD advised that the proposal would therefore have no impact on biodiversity values.	The Department has recommended updates to the Landscape Management Plan to reflect the modification and to align with current standards.
Visual Impacts	- The EA indicates that due to the existing topography of the site, the proposal could be undertaken with minimal additional visual impacts. - However, the extraction area would be extended approximately 75 m closer to receivers to the east and north of the site. - Multiquip advised that views from surrounding residences are screened by existing mature trees. However, the quarry may still be visible from paddocks adjacent to the quarry boundary. - To mitigate visual impacts, Multiquip has committed to minimise active areas of extraction at any one time and relocate the hard rock processing plant to within the extended extraction area. - To further mitigate visual impacts for receivers to the east and north, Multiquip proposes to construct a vegetated bund along the eastern edge of the proposed extension area. This bund would also further mitigate noise impacts from quarrying operations. - The proposed bund would be constructed from subsoil and overburden to a height of 2 to 3 m and would be stabilised by fast-growing groundcover. The bund would then be planted with native shrub and tree species, reaching a fully-grown height of 5 to 10 m.	The Department has recommended that the proposed visual bund is established and vegetated prior to the commencement of extraction under Mod 3.

Issue	Impact and consideration	Recommendation
	The Department considers the visual impacts of the proposal to be acceptable, subject to expedited construction and vegetation of the proposed bund.	
Aboriginal Cultural Heritage	- In response to BCD's concerns regarding the EA's ACHA, Multiquip provided an Aboriginal Cultural Heritage Field Inspection Report prepared by OzArk Environmental & Heritage Management Pty Ltd (OzArk). - This report advised that no Aboriginal sites or archaeological deposits had been identified within the study area and concluded that the proposed extension area has low archaeological potential. - BCD did not request any further information in relation to Aboriginal heritage but noted Multiquip's commitment to update its Aboriginal Cultural Heritage Management Plan (ACHMP) within three months of the determination of Mod 3. - The Department considers that the proposal would have negligible impacts on Aboriginal cultural heritage and that cultural heritage impacts could continue to be appropriately manage under the ACHMP.	The Department has recommended that the Aboriginal Cultural Heritage Management Plan be updated in consultation with the Aboriginal community and BCD, prior to any surface disturbance in the extended extraction area.
Waste Management	- Multiquip is seeking to import additional screened waste materials (ie ENM and treated drilling mud) for use in product blending. - Multiquip has advised that all imported material would meet the required quality characteristics of the relevant Resource Recovery Orders and Exemptions and that no product blending would occur until the appropriate licence has been obtained. - These materials would either be stockpiled within designated stockpile areas or directly applied to rehabilitation areas (VENM only). - The EA did not specify the quantity of screened waste material to be imported to site. However, the EPA advised that quantities of waste material that may be stockpiled and/or reprocessed on the site would be restricted by the site's EPL. The EPA provided recommended conditions regarding limitations for receiving screened waste material, consistent with the site's EPL. - The proposed pre-coating plant would be located with a bunded area and no pre-coated aggregates would be stockpiled as they would be loaded directly into outgoing vehicles.	- The Department has recommended contemporary revisions to waste management conditions as well as the preparation of a Waste Management Plan in consultation with the EPA that includes details of: - screened waste material quantities that would be imported to the site; - storage, handling and management procedures; and - an indicative schedule for importing screened waste material in order to achieve the conceptual final landform.

Issue	Impact and consideration	Recommendation
	• Multiquip has advised that appropriate erosion and sediment controls will be in place to manage any runoff from stockpiles and has committed to inspect the pre-coat plant area after each campaign and remove any residual bituminous material. • The Department considers that waste associated with the proposal can be managed under existing and/or recommended conditions of approval.	



6. Evaluation

The Department has assessed the modification application in accordance with the relevant requirements of the EP&A Act. The Department has carefully considered the potential impacts of the modification on the natural and cultural environments, and on nearby residents.

The Department acknowledges that the proposal would allow Multiquip to better cater for the supply demands of the Sydney construction market, but would result in additional heavy vehicles on the road network that may impact the rural amenity of the area.

The Department considers it reasonable to allow limited trucking from the site during the early morning period, so long as local road noise objectives can be achieved. However, to preserve the amenity of the surrounding rural environmental setting and to limit safety risks associated with heavy vehicles on the haulage route during periods of low light, the Department considers that the project should mainly remain a daytime operation, apart from limited dispatch of trucks between 5:00 am and 7:00 am. The Department considers that these conditions strike a reasonable balance between providing flexibility to Multiquip to meet market demand and protecting the amenity of the local community.

Additionally, the Department considers that the implementation of the VPA and road safety audit findings, in conjunction with the recommended product transport restrictions, will enable the haulage route to safely accommodate the additional trucking impacts associated with the proposal.

The Department notes that noise levels associated with the project would remain largely consistent with existing operations, with the exception of product loading and transport being undertaken during the 5:00 am to 7:00 am period. The Department notes that noise levels from the proposal can comply with the most stringent limits of the NPfl which would apply under all meteorological conditions, except for a 1 dBA exceedance at two residences during the 5 am to 7 am period when transport load dispatch is occurring. This exceedance is considered negligible under the VLAMP, and the recommended conditions require a range of measures to minimise and manage noise during operations.

The Department considers that the proposal is unlikely to significantly increase groundwater and surface water impacts compared to the approved project. Further, following a comprehensive independent review of declining

flow at Phil's Spring, undertaken under the provisions of the existing approval and a separate process to the modification application, this matter has been referred to NRAR for investigation in accordance with the provisions of the *Water Management Act 2000*. The Department also notes that it will continue to liaise with landowners and Multiquip to achieve a satisfactory outcome on this matter as part of the Independent Review process.

The Department has recommended revisions to existing conditions of approval which reflect advice from Government agencies and commitments made by Multiquip to mitigate the modification's impacts. The Department has also taken the opportunity to recommend other contemporary updates to conditions.

Lastly, in response to community representations made on the Department's recommended Assessment Report and conditions of approval, the Department made a number of amendments to the proposed conditions. The Department's consideration of the issues raised in these representations is provided in **Appendix G**.

The Department has drafted a revised Notice of Modification (**Appendix E**) for the proposal, as well as a consolidated version of the approval (**Appendix F**) as proposed to be modified.

Multiquip has generally agreed to the recommended conditions of approval.

On balance, the Department considers that the proposal would meet the increasing demands of the NSW construction market, prolong the employment of the existing workforce for an additional 8 years and result in positive economic flow on benefits to the local and regional area. On this basis, the Department considers that the proposal is in the public interest and should be approved, subject to strict conditions.



7. Recommendation

It is recommended that the Executive Director – Energy, Resources & Compliance, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **determines** that the application falls within the scope of section 75W 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 consent to the application; and
- **modifies** the approval MP 07_0155.

Endorsed by:

17/9/20

Genevieve Lucas

Team Leader
Resource Assessments

Endorsed by:

17/9/20

Steve O'Donoghue

Director
Resource Assessments



8. *Determination*

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

18/09/20

Mike Young

Executive Director – Energy, Resources and Compliance Division
as delegate of the Minister for Planning and Public Spaces



Appendices

Appendix A – Environmental Assessment

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9175

Appendix B – Submissions

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9175

Appendix C – Response to Submissions

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9175

Appendix D – Additional Information

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9175

Appendix E – Recommended Notice of Modification

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9175

Appendix F – Recommended Consolidated Consent

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9175

Appendix G – Representations on the Department’s report and conditions

On 7 August 2020, the Department published its recommendations on the Ardmore Park Quarry Modification 3 application. The Department advised that its recommendations would be available for a minimum of seven days prior to the application’s determination.

The Department received representations from two members of the public in response to its recommendations. The issues raised in these representations are considered below.

Issue	Consideration
<i>Water Resources</i> - Concerns regarding the quarry’s impact on domestic bores surrounding the site. - Clarification that only Basalt will be extracted from the ‘Extended Basalt Extraction Area’. - Request to delay the determination of Modification 3 until the Phil’s Spring Independent Review dispute resolution process is completed. - Requested changes to the site’s Water Management Plan.	<i>Assessment</i> - Initially, the Environmental Assessment identified that extraction in the ‘Extended Basalt Extraction Area’ would include sand underlying the basalt resource. This matter was raised by the Department’s Water Group and Multiquip subsequently advised that no sand extraction would occur within this area (refer to Multiquip’s Response to Submissions report – Section 4.34 – page 113). Nonetheless, an additional condition has been included to specify that only basalt can be extracted from the ‘Extended Basalt Extraction Area’. - The Phil’s Spring Independent Review and subsequent dispute resolution process is a matter related to the approved Project. The proposed modification is not expected to cause additional groundwater interference as the basalt rock within the ‘Extended Basalt Extraction Area’ is unsaturated. - Additionally, water usage would remain within the existing water licence allocation. The construction and use of the quarry’s production and monitoring bores are activities regulated under the <i>Water Management Act 2000</i> by NRAR. - NRAR is conducting a separate investigation into the potential offsite water impacts of existing bores. - The proposed modification is being considered separately to existing investigation processes associated with the approved project, and the landowner complaint and ongoing investigation is not a relevant consideration for this modification application. - Within three months of the determination of a modification, the project approval requires the review and revision of relevant management plans, strategies and programs. As such, Multiquip will be required to review and update the site’s Water Management Plan and resubmit to the Planning Secretary for review and approval. Feedback received on the Water Management Plan will be considered upon its next review. This process is separate from the assessment of the proposed modification. <i>Conditions</i> - An additional condition has been included to specify that only basalt can be extracted from the ‘Extended Basalt Extraction Area’.
<i>Existing amenity impacts</i> - Existing commitments regarding visual screening remain unfulfilled. - Concerns regarding non-compliance with existing noise limits, particularly during unfavourable weather conditions. - Noise and dust monitoring should be undertaken by an independent party.	<i>Assessment</i> - Issues with approved operations to be considered under the existing provisions of the project approval. These matters have been referred to the Department’s Compliance branch. - The predicted noise and air quality impacts of the proposed modification are acceptable, subject to the recommended conditions. <i>Conditions</i> - The Department has recommended contemporary noise and air monitoring requirements, including: - noise limits set in accordance with the <i>Noise Policy for Industry</i>;

Issue	Consideration
	contemporary updates to the site's Noise and Air Quality Management Plan, including the use of a high-volume air sampler for at least three years following the determination of the modification.
<i>Conditions</i> <i>Requested changes to Condition 3 of Schedule 2 regarding existing rights and liabilities.</i> <i>Requested updates to the Water Management Plan condition, including:</i> <i>separating the requirement to prepare and implement the plan to the satisfaction of the Planning Secretary; and</i> <i>updating the compensatory water supply conditions.</i> <i>Voluntary Land Acquisition rights to be afforded to the owners of the Inverary Park property for impacts associated with noise, dust and water loss.</i>	<i>Assessment</i> - The proposed modification will not inhibit existing processes in place under current conditions (ie Phil's Spring Independent Review dispute resolution process). - The Department has revised the Water Management Plan condition to clarify the preparation and implementation requirements. It is also agreed to replace the existing compensatory water provisions contained within the Water Management Plan condition with contemporary compensatory water supply conditions applied for mining and extractive industries. - In accordance with the Department's <i>Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Projects</i>, no acquisition or mitigation rights are required to be afforded to the Inverary Park property. - There is no NSW government policy that facilitates acquisition rights to be afforded to the Inverary Park property in relation to water loss. Compensation related to water loss is managed under compensatory water supply conditions. <i>Conditions</i> - Updates made to the Water Management Plan condition. - Insertion of contemporary compensatory water supply conditions
<i>Product Transport</i> <i>Impact of trucking on local infrastructure.</i>	<i>Assessment</i> - The proposed modification will allow for a greater number of daily truck movements (ie 124 movements per day). However, Multiquip has committed to retain the existing annual average number of truck movements (ie 88 movements per day). - Multiquip and Council have agreed to enter into a Voluntary Planning Agreement which would facilitate required upgrades to the haulage route and ongoing maintenance over the life of the Project. <i>Conditions</i> - Voluntary Planning Agreement commitments and Road Safety Audit findings to be implemented prior to any increase in trucking from the site. - Daily and hourly truck movement limitations.