



**Civil & Earthmoving
Contractors**

Response to Submissions

for the

**Continued Operation and
Extension**

of

**Middle Creek Quarries,
via Oberon
(DA 10.2016.38.1)**



Prepared by:

R.W. CORKERY & CO. PTY. LIMITED

October 2016



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1. INTRODUCTION

Following the public exhibition of an *Environmental Impact Statement* (EIS) supporting an application made by Oberon Earthmoving Pty Limited for an extension to Middle Creek Quarries, four government agency and five public submissions were received by the Oberon Council (Council). The government agency submissions have been provided to full (see **Appendix 1**) with Council supplying a summary document of the key issues identified in the five public submissions (see **Appendix 2**).

Each of the government agency submissions has been reviewed and Section 2 addresses the issues raised by the Department of Primary Industries – Water, NSW Roads & Maritime Services (RMS) and the NSW Environment Protection Authority (EPA). Section 2 also addresses the issues raised with respect to the NSW Office of Environment & Heritage (OEH) submission on offsetting, Commonwealth Matters of National Environmental Significance and cultural heritage matters. The issues raised by OEH with respect to additional field survey, vegetation mapping and assessment of significance on threatened species have been referred to Environmental Assessments Pty Ltd (EAPL) with this information to be supplied (to Council and OEH) once available.

The summary of public submissions has also been comprehensively reviewed and specific objections categorised. Section 3 reviews these and provides responses to the specific issues raised.

2. GOVERNMENT AGENCY SUBMISSIONS

2.1 DEPARTMENT OF PRIMARY INDUSTRIES – WATER

2.1.1 OVERVIEW

The submission provided by the Department of Primary Industries – Water (DPI Water) has requested additional information on the Proposal as follows.

- Further assessment to clarify the potential for groundwater interception, and potential application of the NSW Aquifer Interference Policy.
- Clarification as to the proposed use and management of dams on the property with respect to the Maximum Harvestable Rights Dam Capacity of the landholding.
- Clarification on the source and volume of water to supply the potable and non-potable demands of the amenities is requested.

A copy of the information presented in Section 2.1 been provided to DPI – Water.

2.1.2 Groundwater

DPI Water refers to the standing water level of a neighbouring bore (GW803250) (at 22m below ground level) as potential evidence of groundwater levels at or above the proposed depth of extraction. As a point of note, the standing water level is recorded at 22m below surface, however, the water bearing zone at between 27m and 28m below surface. This places the groundwater table at between 1 120 and 1 125m AHD (as opposed to 1 128m AHD).



The EIS references the difference in the geology of the resource to be extracted as distinct to the geology of the water bearing zones of the bores surrounding the Project Site. **Figure A** further illustrates this by plotting the groundwater bore locations over the regional geology map (provided by the Oberon 1:100 000 geological map – Stewart-Smith & Wallace, 1997).

While providing information which may be used to assess groundwater occurrence, it is acknowledged that geology alone cannot be relied upon as the sole indicator of groundwater connectivity. The water bearing zones of the groundwater bores surrounding the Project Site have subsequently been analysed to identify the local geology in which groundwater has been recorded. This analysis identifies the water as predominantly within shale or basalt. This includes within GW804305 (at 1 075m AHD) which falls within the *Ocrc* geology common to the rock to be extracted (see **Figure A**).

Using the information sourced from the registered groundwater bores (to the south, east, north and west of the Project Site) local groundwater contours can be interpolated based on the identified water bearing zones (see **Figure B**). The interpolated groundwater contours for the area indicate a decreasing groundwater level from southeast to northwest. Based on these contours, a groundwater level between 1 075m and 1 090m AHD is projected for the Project Site. This is greater than 20m below the deepest proposed extraction level (which occurs at the northern end of the extraction area (Cell 2) where the interpolated contours indicate a groundwater level closer to 1 075m AHD).

The potential for a locally elevated groundwater level associated with the north-south oriented ridge targeted for extraction is also considered. However, it is noted that this ridge occurs between two drainage lines (captain Kings Creek to the south and a 1st / 2nd order tributary of Captain Kings Creek to the west) which carry ephemeral flows at elevations between 1 100m AHD and 1 140m AHD. If there was connectivity to the groundwater observed in GW803250 at elevation above 1 100m AHD, some discharge to these drainage lines would be expected. This is not observed with flow in these water courses occurring as runoff following rainfall. This provides further evidence to support the EIS assessment of groundwater occurring below the proposed extraction area (at or below 1 090m AHD as presented by the interpolated groundwater contours of **Figure B**).

In summary, the records of water bearing zones indicate that groundwater occurs within the shale / basalt geology of the local setting. Interpolation of recorded water bearing zones indicates that any groundwater will occur at least 20m below the maximum depth of proposed extraction. The potential for locally elevated groundwater associated with the ridge line to be extracted has also been considered, however, there is no evidence in the form of local discharge to watercourses above 1 100m AHD to support this. This additional assessment of local geology, groundwater records and topography/drainage therefore supports the assessment of the EIS with respect to local groundwater. On this basis, further assessment against the NSW Aquifer Interference Policy is not required.

The above notwithstanding, the Applicant plans to complete further resource definition prior to extracting below 1 120m. As part of this resource definition (aimed primarily at assessing the potential for rock which can produce aggregate for concrete), the Applicant will test for groundwater to confirm the assessment of the EIS and this response. The Applicant is aware of its legal requirements with respect to the intersection and access if groundwater resources and should groundwater be observed, no further work would be undertaken which could interfere with this until such time as the appropriate assessment is completed (in accordance with the Aquifer Interference Policy) and approval obtained (as required) in accordance with the Water management Act 2000.

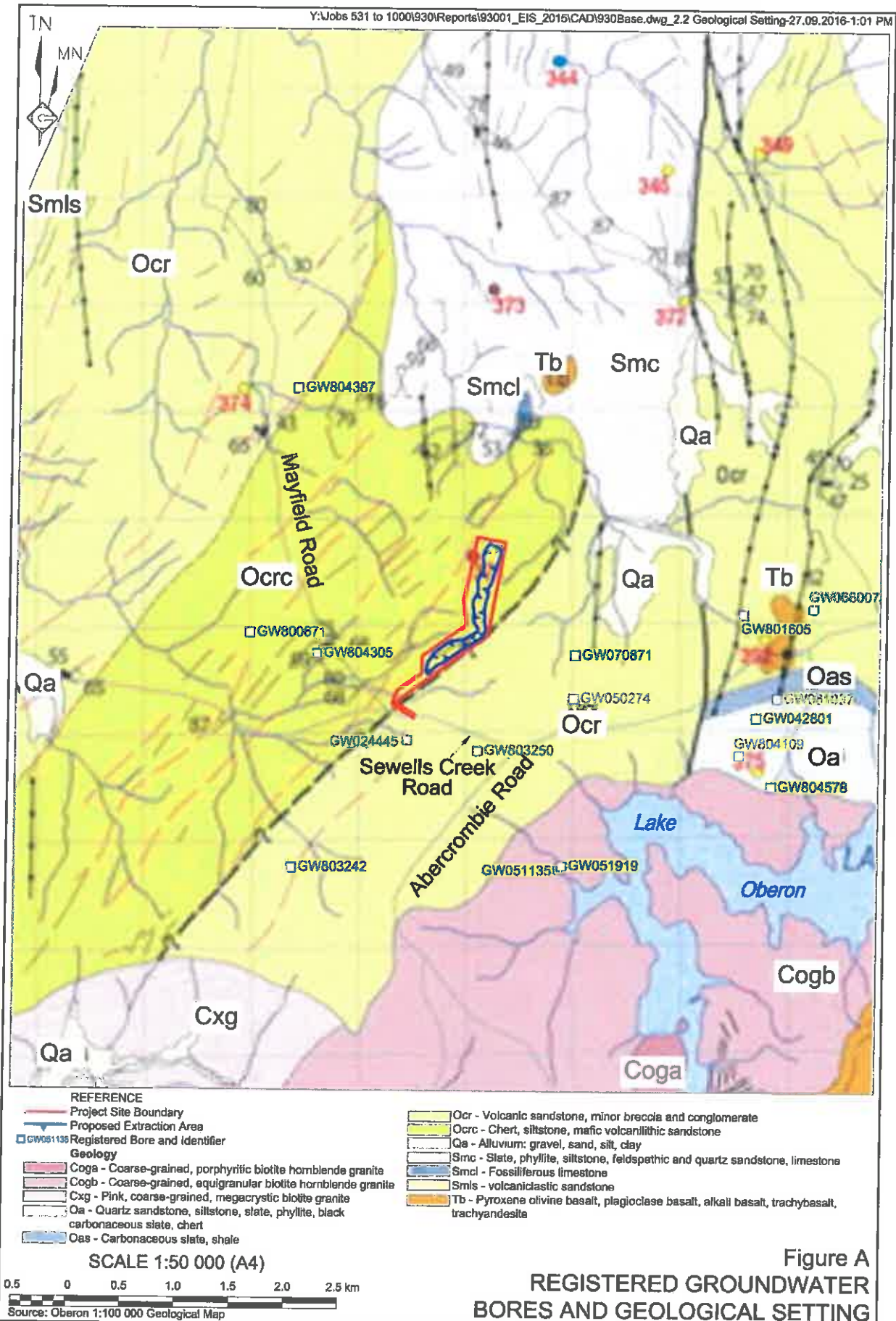


Figure A
REGISTERED GROUNDWATER
BORES AND GEOLOGICAL SETTING





2.1.3 Surface Water and Water Supply

Maximum Harvestable Right

DPI Water have identified that while an exemption for dam storage above the Maximum Harvestable Rights Dam Capacity (MHRDC) for the landholding applies while these dams are used for stock and domestic purposes, requirements for a Water Supply Work Approval and Water Access Licence apply if these are to be used for other purposes.

In order to avoid the requirement for a Water Supply Work Approval and Water Access Licence, the Applicant will decommission dams on the land holding such that the combined storage capacity remains at or below 11.9ML.

Additional Water Use

DPI Water has requested information on water use for the quarry office and amenities.

Given the limited number of employees for the Proposal, between two and five depending on activities being undertaken at the time, the requirement for water will be relatively minor. A conservative estimate of 50L per person per day would result in annual water usage of between 25kL and 40kL per year.

A rainwater tank would be included as part of the demountable office building and this water used preferentially for ablutions facilities. Potable water, for drinking and to supplement ablutions water if insufficient rainwater is available, would be purchased.

2.2 ENVIRONMENT PROTECTION AUTHORITY

The Environment Protection Authority (EPA) has issued General Terms of Approval (GTAs) for the Proposal, recommending these be incorporated into the development consent.

The Applicant accepts the GTAs as issued by the EPA.

Noting the EPA has deemed to restrict hours of operation to 7:00am to 6:00pm Monday to Saturday, it is requested that the development consent be conditioned such that an increase in these hours of operations, to those proposed in the EIS, are permitted subject to approval by the EPA.

2.3 NSW ROADS AND MARITIME SERVICES

Roads and Maritime Service (RMS) provides no objection to the Proposal, however, provides five recommendations for consideration by Council in issuing conditions of development consent. **Table 2.1** identifies each of these recommendations and confirms, with comments agreement to each of these.

Table 2.1
RMS Recommendations

Recommendation	Acceptance	Comment
The vehicular access servicing the development should be upgraded and maintained in accordance with <i>Austrroads Guide to Road Design: Part 4 Figure 7.4 'standard rural property access'</i> . The design of the vehicular access needs to ensure that vehicles exiting the site approach Sewells Creek Road at or very near to perpendicular.	Yes	The existing approach of the Quarry Access Road to Sewells Creek Road provides the requested perpendicular approach (refer to Figure 1.3 of the EIS)
A Basic Right (BAR) turn treatment constructed in accordance with <i>Austrroads Guide to Road Design: Part 4A (2010) Figure 7.5 'Type BAR'</i> should be provided adjoining the westbound travel lane in Sewells Creek Road opposite the proposed vehicular access.	Yes	As confirmed by <i>Section 2.9.1</i> of the EIS.
Safe Intersection Sight Distance (SISD) requirements outlined in the <i>Austrroads Guide to Road Design: Part 4A</i> are to be provided at the vehicular access to the development from Sewells Creek Road.	Yes	Sight distance was assessed in the EIS (<i>Section 4.6.2.2</i>) confirming sight distance of 280m to the east and 260m to the west. Both exceed the safe intersection site distance for the legal speed limit of 100km/hr (250m) (Austrroads, 2010).
The applicant is to arrange with Oberon Council for the installation of "Trucks Turning" signs (W5-205) on Sewell Road (sic) at each approach to the extractive industry/waste management facility vehicular access. The signs are to be within 230 – 280 metres either side of the access and removed upon closure of the development.	Yes	The Applicant will follow instruction of Council.
To provide suitable storage capacity for the largest class of vehicle access the extractive industry, any gate, grid or similar structure installed in the access needs to be setback appropriately (20m for rigid truck and dog trailer) from the edge of Sewells Creek Road.	Yes	Upgrades to the Quarry Access Road will be undertaken as required to comply with this recommendation.

2.4 NSW OFFICE OF ENVIRONMENT AND HERITAGE

2.4.1 OVERVIEW

The submission provided by the NSW Office of Environment & Heritage (OEH) has requested additional information in relation to the Biodiversity Impact Assessment of the Proposal. These requests have been referred to Environmental Assessment Pty Ltd (EAPL), who produced the Biodiversity Impact Assessment for the Proposal.

Section 2.4.2 addresses the requests for additional information with respect to offsetting, Commonwealth MNES and cultural heritage matters in sufficient detail to satisfy Section 79B(3) of the *Environmental Planning & Assessment Act 1979* (EP&A Act). Section 79B(3) states that the concurrence of the Chief Executive of the Office of Environment and Heritage for the granting of development consent is only required for development that is

likely to significantly affect a threatened species, population, or ecological community, or its habitat. Indeed, recent correspondence from Stephen Cox of the OEH in relation to a similar issue for another project is reproduced below.

“As a Part 4 project pursuant to the Environmental Planning and Assessment Act 1979, OEH does not have a statutory role in assessing the project unless the consent authority determines that:

- a) The activity is likely to significantly affect a threatened species, population, ecological community, or its habitat, as listed under the Threatened Species Conservation Act 1995 (TSC Act); or*
- b) An Aboriginal Heritage Impact Permit is required.”*

As noted in Section 1, further information with respect to additional field survey, vegetation mapping and assessment of significance on threatened species will be provided once supplementary assessed by EAPL is completed (expected by 10 October 2016). Section 2.4.3 identifies the specific requests of OEH and provides an overview as to how these are being addressed by EAPL, to be presented in a supplementary ecological assessment to follow.

2.4.2 OEH MATTERS ADDRESSED IN THIS RTS

2.4.2.1 Biodiversity Offsetting

OEH recommends that a biodiversity offset be established for the Proposal and that this include a management plan to ensure the offset is appropriately managed and funded.

The following responds to Recommendation 2.1.

3.1 An offset package be prepared that comprises like for like offset for the impacts to native vegetation.

Proposals assessed under Part 4 or 5 of the EP&A Act do not have compulsory offsetting requirements unless a council or government department has a biodiversity offsetting policy or a significant impact to a listed species, population or community has been determined. A Biodiversity Offset Policy has been established by OEH for ‘Major Projects’, i.e. those assessed and approved under Division 4.1 of the *Environmental Planning & Assessment Act 1979* (EP&A Act), however, this does not apply to development assessed under Part 4 of the EP&A Act. The Australian Local Government Association does not have an offsetting policy, nor does the Oberon Council.

An offset could be formally required where this is required to offset a significant impact to a threatened species, population or ecological community, or their habitat. However, assessment for potential impact of the Proposal on threatened species, populations or ecological communities, or their habitats, has been undertaken in accordance with Section 5A of the EP&A Act and Section 94 of the *Threatened Species Conservation Act 1995* (TSC Act), and no significant impact has been identified. As such, offsetting requirements are not triggered.

The recommendation for ‘offsetting’ impacts contained within the Biodiversity Impact Assessment is noted and acknowledged. However, as noted above, this does not require incorporation into a formal offset agreement as recommended by OEH. This

notwithstanding, the Applicant is committed to conserving and protecting the remnant vegetation which adjoins the proposed extraction area, as well as creating linkages between these through the inclusion of open woodland vegetation as part of the rehabilitation of the final landform (refer to *Section 2.14* and **Figure 2.5** of the EIS). **Figure C** provides further illustration as to native vegetation would be protected, enhanced and conserved on the Project Site.

3.2 A Biodiversity Offset Management Plan be developed to ensure the offsets are appropriately managed and funded. Management activities included in the management plan should result in an improvement of the offset area over time.

On the basis that a formal offset is not required, there is no requirement for a Biodiversity Offset Management Plan to be prepared. This notwithstanding, *Section 2.14.5* of the EIS documents how rehabilitation of the Quarry would be funded and identifies those responsible for the implementation of rehabilitation activities aimed at mitigating impacts on local biodiversity.

3.3 A stock proof fence be erected around the offset areas.

While no formal offset is required for the Proposal, the Applicant is committed to fencing the remnant native vegetation which adjoins the extraction area and which will be linked through rehabilitation of the final landform (see **Figure C**).

3.4 The offset be secured in perpetuity

As discussed above, no formal offset is required as no significant impact to a threatened species, population or ecological community, or their habitat is predicted.

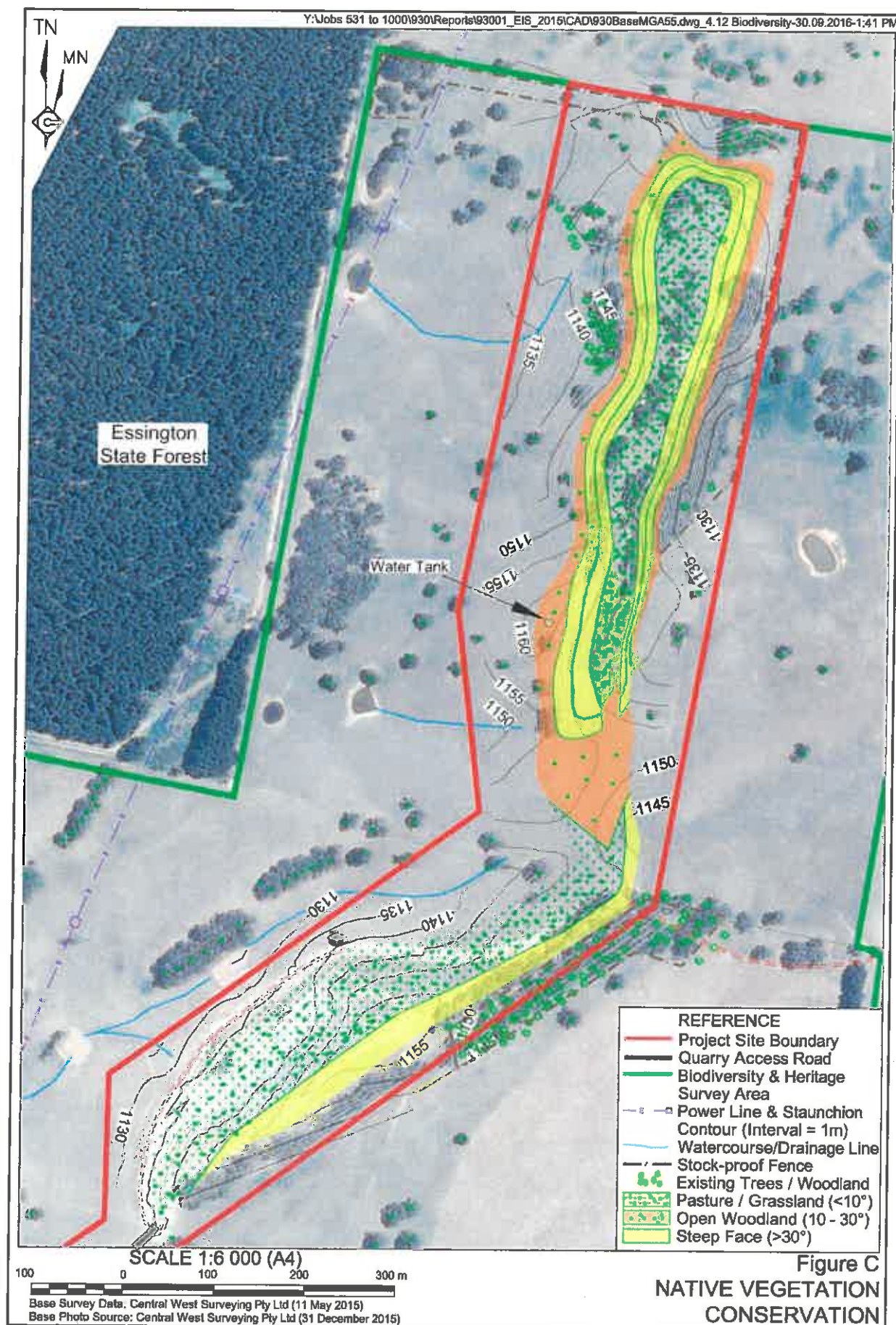
2.4.2.2 ASSESSMENT OF COMMONWEALTH MATTERS

OEH suggests that the Biodiversity Impact Assessment of the EIS lack appropriate assessment of Commonwealth Matters of National Environmental Significance (MNES) listed under the EPBC Act.

The following responds to Recommendation 5.1.

5.1 Significance assessments using the Commonwealth guidelines should be undertaken for MNES where potential habitat occurs.

The biodiversity assessment of EAPL considered the potential for species, population and communities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The assessment did not identify any listed species, population or community on the Project Site, nor consider the Proposal to be likely to impact on habitat for listed species such that a significant impact could occur. As such, the Proposal was not assessed as likely to impact on any MNES and therefore further assessment or referral under the EPBC Act was not deemed necessary.



2.4.2.3 ABORIGINAL CULTURAL HERITAGE

OEH supports the proposed approach of the Applicant to the management of the single Aboriginal site identified on the Project Site.

The following responds to Recommendation 6.1.

6.1 OEH supports the recommendation made in the Aboriginal Heritage Due Diligence Assessment that the area containing the lithic scatter be fenced (12m x 7m) with appropriate signage be implemented.

The Applicant has committed to fencing this site and erecting signage stating 'Conservation Area – Keep Out'.

2.4.3 MATTERS TO BE ADDRESSED BY SUPPLEMENTARY ECOLOGICAL ASSESSMENT BY EAPL

2.4.3.1 Timing of Surveys

OEH has requested further information on the locations of field survey conducted in March 2016, and recommended that additional targeted surveys are undertaken for a number of grasses, orchids and other cryptic species.

Recommendations 1.1 and 1.2 of OEH are reproduced below, followed by a discussion as to how these have been and will be addressed.

1.1 Update the EIS to include a map showing all survey locations.

1.2 Targeted seasonal surveys be conducted for the species listed above within the recommended survey periods.

The approach taken by EAPL to assessing the potential for threatened species to occur on the Project Site, namely an assessment of habitat availability and condition to determine the likelihood of threatened species occurring, is considered appropriate for the scale of the project proposed. Targeted surveys for cryptic species or species only observable during limited seasonal periods is appropriate where the habitat of sufficient quantity and quality is present to indicate a reasonable chance of occurrence. With respect to the species nominated by OEH (refer to **Appendix 1**, p. A1-5), the domination of the groundcover by exotic species, influenced by pasture improvement and grazing activities on the property, reduces the availability of suitable habitat and therefore it is highly unlikely that further surveys would result in any of the nominated species being identified.

Additional mapping of vegetation survey and discussion on potential occurrence of the nominated threatened species will be provided by EAPL in a supplementary Ecological Assessment to follow.

2.4.3.2 Area of Impact

OEH has requested that the description of vegetation of the Project Site be updated to reflect Plant Community Type (PCT) and define the area of clearing.

Recommendation 2.1 of OEH is reproduced below, followed by a discussion as to how this has been and will be addressed.

2.1 OEH recommend that the EIS be updated to identify the PCT of the Montane Woodland and any other native vegetation present on site and identify the total area of the PCT to be impacted by the development.

EAPL will provide an updated vegetation map and area of impacts as requested in a supplementary Ecological Assessment to follow.

2.4.3.3 Assessment of Significance

OEH has indicated that where potential habitat for a species is present, it should be considered as 'likely to occur' and therefore be subject to a Seven-Part Test assessment of significance. While this approach is considered overly conservative, as well as overly dismissive of the professional qualifications of the ecological consultants who have surveyed the Project Site and made the assessment as to likelihood of occurrence, additional assessment has been completed.

Recommendation 4.1 of OEH is reproduced below, followed by a discussion as to how this has been and will be addressed.

4.1 Assessments of Significance are required to determine if threatened ecological communities, endangered populations and threatened flora and fauna species may be significantly impacted by the project. Assessments of Significance should be conducted and documented in the EIS for threatened ecological communities, endangered populations and threatened flora and fauna species that have been identified with potential to occur within the site.

EAPL will provide an updated vegetation map and area of impacts as requested in a supplementary Ecological Assessment to follow. This notwithstanding, given the relatively limited area of native vegetation to be disturbed, conservation of equivalent vegetation surrounding this, rehabilitation of the Project Site to promote linkage of native vegetation / habitat corridors (see **Figure C**), and determination that the Proposal would not have a significant impact on those species considered as potentially occurring on the Project Site, the likelihood that these additional assessments will suggest a significant impact is very low.

3. PUBLIC SUBMISSIONS

3.1 OVERVIEW

Five public submissions objecting to the development application were received by Oberon Council. The content of these submissions was reviewed and summarised by Oberon Council to identify the key issues associated with the objections (see **Appendix 2**).

Many common or related issues were identified within the five submissions and **Table 3.1** provides a matrix listing the common issues raised in each submission, and occurrence within each of the individual submissions.

Table 3.1
Summary of Objections

Page 1 of 2

Issue Raised		Submission				
		1	2	3	4	5
Traffic	– Right turn from Abercrombie Road	✓				
	– Scale of activities (vehicle movements / hours of operation)		✓	✓	✓	
	– Entry point			✓		
	– Impacts on Mayfield Road				✓	
	– Road safety (general)		✓		✓	
	– Traffic Impact Statement				✓	
	– Volume / deterioration of road quality					✓
Noise	– Truck noise		✓		✓	
	– On-site noise	✓	✓		✓	✓
	– Cumulative impact				✓	
	– Impact on livestock					✓
Blasting	– Vibration damage to bores	✓				
	– Noise	✓			✓	
Air Quality	– Contaminated Dust emissions	✓				
	– Dust emissions		✓	✓	✓	
	– Health Impacts of Diesel emissions		✓	✓	✓	✓
	– Odour		✓			
Waste Processing	– Classification and management of Imported materials				✓	
Water Quality	– Runoff / pollution		✓	✓		
	– Groundwater contamination				✓	✓
Setting / Local Amenity	– Classification of the location as 'Relatively Isolated'		✓			
	– Appropriateness of setting		✓			
	– Rural amenity / visual amenity	✓	✓		✓	
	– Lighting impacts				✓	
Tourism	– Hours of operation - 24hr transport / 12hr on-site activities		✓			
	– Cumulative impact / development contrary to local tourism strategy				✓	
Cumulative Impacts					✓	
Socio-economic Balance	– Lack of quantification		✓			
Other Issues	– Not a modification		✓			
	– Weighbridge			✓		
	– Hours of Operation				✓	

The matrix provided by **Table 3.1** allows for individual objections raised, many of which are common across two or more of the submissions, to be considered under common categories.

Based on the identification of issues presented in **Table 3.1**, the following sub-sections:

- identify the number of submissions raising this particular issue or objection;
- provide a direct quote or quotes from relevant submissions referencing this issue; and
- provide a response to the issue raised, including reference back to the EIS or specialist assessments where relevant.

3.2 TRAFFIC AND TRANSPORT

3.2.1 Overview

All five submissions raised traffic as an issue within their objection. The following reviews the specific traffic-related concerns with respect to:

- safety concerns over the proposed right turn from Abercrombie Road into Sewells Creek Road (see Section 3.2.2);
- concerns over the scale of operations (both hours of operation and the number of trucks travelling to and from the Quarry) (see Section 3.2.3);
- the safety / appropriateness of the Quarry Entrance (see Section 3.2.4);
- a lack of consideration of Mayfield Road (see Section 3.2.5);
- potential impacts on road safety generally (see Section 3.2.6);
- the lack of a Traffic Impact Statement (see Section 3.2.7); and
- the impact of the increased volume of heavy vehicle traffic on the road condition (see Section 3.2.8).

3.2.2 Abercrombie Road – Sewells Creek Road Intersection

Submission 1 raised concerns over the configuration of the Sewells Creek Road - Abercrombie Road intersection and the potential for accident as a result of turning Quarry traffic.

Representative Comment(s)

“...an increase in truck movements to service the facility will impact our access from Sewells Creek Road. We are concerned about trucks turning right from Abercrombie Road onto Sewells Creek Road causing an accident with the current poor configuration of the intersection...”

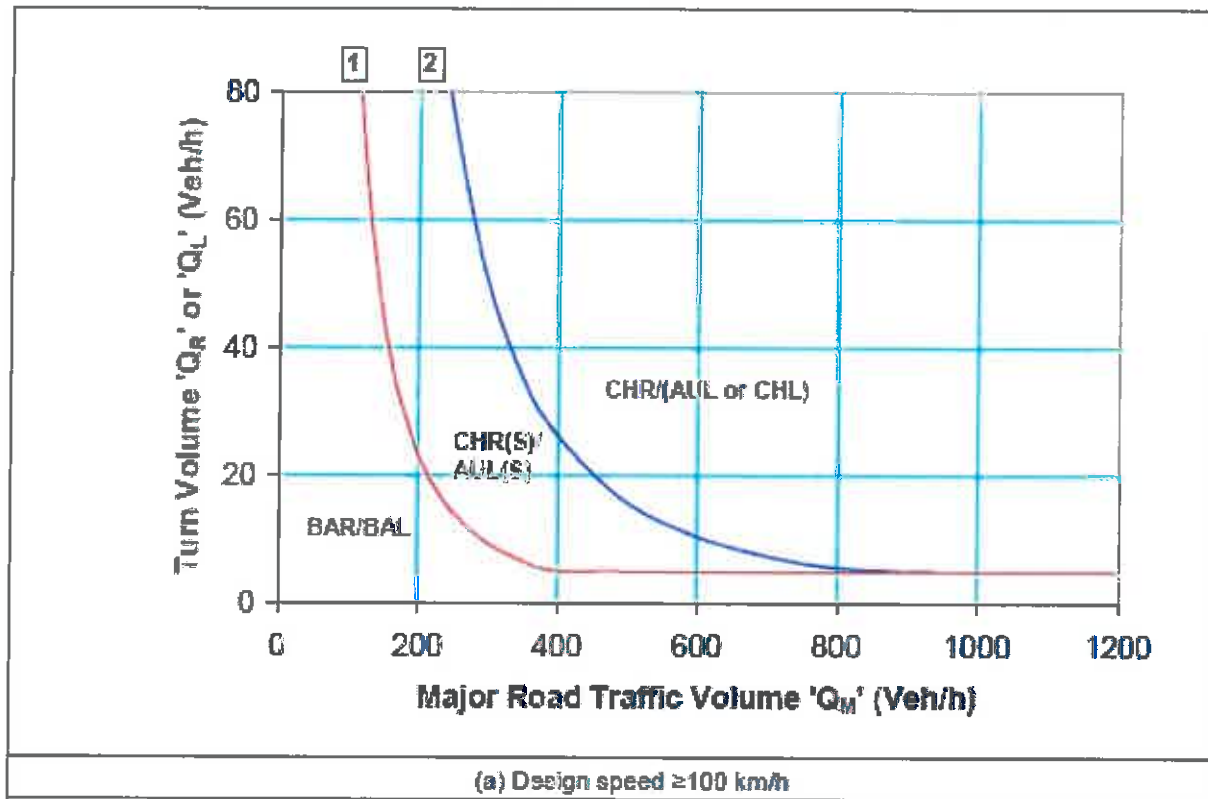
Submission 1

Response

Figure 4.10 of the EIS (p. 4-59) identifies the intersection of Sewells Creek Road and Abercrombie Road, which is described in *Section 4.6.2.2* (p. 4-60). This intersection forms a T with a sight screen provided for traffic entering from Sewells Creek Road. The configuration of this intersection conforms with a Basic Left / Basic Right treatment in accordance with *Figures 8.2 and 7.5 of the Guide to Road Design Part 4A: Unsignalised and Signalised*



Intersections (Austroads, 2010). This configuration is appropriate for the volume of traffic that currently use and are forecast to use the intersection over the life of the Proposal (refer to *Section 4.6.2.3* of the EIS) based on the warrants for turn treatments on major roads (*Figure 4.9* of Austroads, 2010) (reproduced below).



As noted in *Section 4.6.2.2* of the EIS, sight distance exceeds that recommended by *Section 3* of the *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (Austroads, 2010) as the Safe Intersection Sight Distance (SISD) for a 100km/hr zone.

The configuration of the intersection is not considered to be poor as it achieves the nominated Austroads recommendation for the volume of traffic through the intersection (see Warrants above) and provides excellent sight distances. As identified in the EIS, this intersection is suitable for the traffic that would be generated by the Proposal and on this basis, and subject to the implementation of the nominated operational safeguards and controls with respect to transport management and driver behaviour, that the traffic of the Proposal would increase the risk for traffic accident at this intersection (or elsewhere on the public road network).

3.2.3 Scale of Operations

Three of the submissions raised concerns over the volume of traffic to be generated by the Proposal, a perceived lack of quantification, potential for adverse impacts on local traffic and hours of operation.

Representative Comment(s)

"...there is to be an increase in traffic, particularly heavy vehicles. The developer states the increase in volume is "small" this is unquantified. No numbers are specified for B doubles and truck trailers...the entrance into the quarry and exit will cause challenges for local and tourist drivers..."

Submission 2

"...the development will operate receivals and dispatch of trucks on a 24 hour basis. The number of trucks is not specifically limited and as such the development has the potential to significantly increase heavy truck traffic..."

Submission 4

Response

Firstly, and in accordance with the GTAs issued by the EPA, it is noted that road transport will now be limited to the day time hours of operation proposed for extraction, processing and other activities on the Project Site (7:00am to 6:00pm Monday to Saturday).

With respect to concerns over limitations on truck movements, *Section 2.9.3* and *Table 2.2* of the EIS provide the anticipated volume of traffic to be generated by operations. As nominated by *Table 2.2* of the EIS, an average of 16 truck movements per day (8 truck loads) is expected for production of 130 000tpa of Quarry products. This could increase to an average of 26 truck movements should production achieve the maximum 250 000tpa. *Table 2.2* also provides an estimate of maximum truck movements (daily and weekly) during high volume campaigns. While noting that the exact proportion of B-Doubles / truck and dog has not been nominated, the estimated average and maximum truck movements are based on the smaller capacity truck and dog arrangement, i.e. the use of B-Doubles would reduce the number of these movements.

As discussed in *Section 4.6.4* of the EIS (pp. 4-63 and 4-64), the additional traffic generated by the Proposal would increase the volume of traffic on local roads (refer to *Table 4.14* of the EIS). However, the existing volumes are low and so the forecast increase, incorporating Proposal traffic, would remain within the capacity of the existing road network.

Finally, the Quarry entrance has been proposed to accommodate the vehicle types to deliver Quarry products. It is noted that the RMS has determined the proposed intersection as appropriate for the type and volume of traffic to be generated. This supports the assessment of the EIS as to the acceptability of the intersection and low potential for adverse affect on local traffic.

3.2.4 Quarry Entrance

Submission 3 raised concerns over the safety of the proposed Quarry entrance onto Sewells Creek Road and the potentials for traffic incident.

Representative Comment(s)

“...the entry road to Sewells Creek Road is in a dangerous position especially when travelling on Sewells Creek Road from a westerly direction. It is on a blind bend with no draw off lane and unbroken centre lines. As it enters Sewells Creek Road on an incline trucks are moving very slowly for a considerable distance...”

Submission 3

Response

The available sight distance provided by the existing and proposed Quarry entrance has been reviewed (280m to the east and 260m to the west) and as noted in Section 4.6.2.2 of the EIS exceeds that recommended by Section 3 of the *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (Austroads, 2010) as the Safe Intersection Sight Distance (SISD) for a 100km/hr zone. Sight distance to the west could be further increased by some minor tree clearing within the road easement.

The inclined road between the Quarry and Abercrombie Road is noted, and it is likely that east bound vehicles may approach the rear of trucks as they accelerate up this moderately inclined section. The available sight distance would, however, ensure that the risk of incident is minimised. The relatively short distance from the Quarry to Abercrombie Road (~1km) would reduce any inconvenience to traffic (noting that traffic volumes on Sewells Creek Road are very low (100 vehicles per day or less)).

It is further noted that the RMS supports the proposed treatment of the intersection, considering it appropriate for the type and volume of traffic to be generated

3.2.5 Mayfield Road

Submission 4 raised concerns over the use of and potential impact of Quarry traffic on Mayfield Road.

Representative Comment(s)

“Mayfield Road is accessed via Sewells Creek Road from the southern end. Mayfield Road is not discussed in the development submission. The use of Mayfield Road as a short cut to the North has the potential to reduce travel distances to and from the quarry site for projects located to the North of the quarry. Mayfield Road is a local, mostly single country lane road. It is not considered suitable for heavy vehicles.”

Submission 4

Response

The Applicant would prohibit the use of Mayfield Road by Quarry-related trucks (unless delivering to locations on Mayfield Road). This would be formalised within a Driver Code of Conduct which would be enforced,

3.2.6 Road Safety (General)

In addition to the concerns references in Section 3.2.2 to 3.2.5, two of the submissions identified road safety generally, both to road users and native fauna, as an issue of concern.

Representative Comment(s)

"Local road users would be exposed to road safety issues that has been identified by the current use of two-way communication between gravel truck operators and the local bus driver. The road safety issue is not presented in detail in the submission."

Submission 4

"This increase in traffic will also escalate the possibilities of serious high speed road accidents and potential fatalities and native animal road kill numbers."

Submission 5

Response

Section 4.6 of the EIS considers the existing and forecast road and traffic conditions, identifies potential impacts associated with the Proposal and provides management and mitigation measures to address these (to the extent practically feasible). On assessment of the potential impacts, including road safety consideration, the following assessment of impact on the road network and road users has been made.

- The existing Sewells Creek Road – Abercrombie Road, and proposed Quarry Site Access Road – Sewells Creek Road, are or would be appropriate for the type and volume of traffic. Sight distances exceed Austroads recommendations and the treatments provide for the entry and exit of the nominated vehicles. This is supported by the NSW RMS in their submission.
- Accident history for local roads does not indicate that heavy vehicles operating in on these local roads are creating a specific safety issue.
- The increase in vehicle movements would remain generally below that of peak traffic periods already experienced on the local road network and so remain within the capacity of these roads.
- A code of conduct will ensure appropriate driver behaviour and consideration of other road users, including school buses.

Overall, while any increase in vehicle numbers will incrementally increase the potential for accident, the EIS demonstrates that appropriate precautions will be taken to minimise this risk and there would be no additional road hazards created by the proposed Quarry traffic.

With respect to the potential for roadkill of native fauna, most such incidents occur at night. Given the proposed restriction in transport hours of operation, the potential for roadkill would be significantly reduced.

3.2.7 Traffic Impact Statement

Submission 4 suggests a Traffic Impact Statement has not been prepared for the Proposal.

Representative Comment(s)

"The development proposal submission does not include a Traffic Impact Statement which assesses these issues and more specific issues in relation to road use, road geometry and traffic conflict."

Submission 4

Response

Section 4.6 of the EIS was prepared to address the requirements of Traffic Impact Statement (in accordance with the requirements of the NSW RMS supplied as part of the Secretary's Environmental Assessment Requirements for the Proposal).

Notably, Section 4.6 of the EIS provides the referenced information on road use, road geometry and traffic conflict (refer also to Sections 3.2.2 to 3.2.6) to the satisfaction of the NSW RMS (refer also to Section 2.3).

3.2.8 Deterioration of Road Condition

Two submissions raised concerns over the potential for the Quarry-related traffic to result in a decrease in pavement / road quality.

Representative Comment(s)

"...the development will bring significant heavy vehicle traffic to Sewells Creek Road and the greater Oberon area. This will introduce deterioration in road quality, increasing the need for regular repairs, therefore increasing expense to Oberon Council..."

Submission 5

Response

Section 4.6.4 of the EIS recognises that *"the introduction of additional traffic could result in accelerated degradation of road pavement ..."*.

In acknowledging this, the Applicant has also committed to *"contribute to the increased maintenance requirements by way of a reasonable contributions plan or equivalent arrangement with Council."*

As identified in Section 3.5.2 of the EIS, this contribution would be developed in accordance with the *Development Contributions & Water Management Works Plan (Amendment) 2004*

requires contributions to be paid to Council for various development types. For the Proposal, contributions would be applicable as follows.

- A 'one off' contribution for services. This would include public open space, emergency services and community facilities.
- An ongoing contribution for rural roads charged at a contribution per tonne of product transported via public road.

3.3 NOISE

3.3.1 Overview

All five submissions raised noise as an issue within their objection. The following reviews the specific noise-related concerns with respect to:

- Road noise generated by heavy vehicle traffic (see Section 3.3.2);
- Impacts of noise generated by Quarry operations (see Section 3.3.3); and
- Impacts on livestock (see Section 3.3.4).

3.3.2 Traffic Noise

Two submissions raised concerns over the noise which would be generated by Quarry-related trucks on local roads, in particular inclined sections of Sewells Creek Road.

Representative Comment(s)

"The gradient at Sewells Creek Road will exacerbate the truck noise up and down the turn into Sewells Creek Road from Oberon."

Submission 2

Response

Muller Acoustic Consulting Pty Ltd (MAC) was commissioned to complete a Noise and Vibration Assessment for the Proposal. This included an assessment of road noise generated by trucks under maximum production campaigns, i.e. the maximum number of trucks traveling to and from the Project Site.

MAC used accepted US Environment Protection Authority methodology to predict road noise. Notably, this method, which uses the equation below, considers maximum noise levels generated by the vehicles, i.e. as might be expected from a vehicle accelerating up an inclined.

$$L_{eq,T} = L_b + 10 \log \left[1 + \frac{ND}{T} \left(\frac{10^{(L_{max} - L_b) / 10} - 1}{2.3} - \frac{(L_{max} - L_b)}{10} \right) \right]$$

Where:

- L_b is background noise level, dB(A);
- L_{MAX} is vehicle noise, dB(A);

- T is the time for each group of vehicles (min);
- N is number of vehicle trips; and
- D is duration of noise of each vehicle (min).

The predicted day time noise level, noting transport is now to be restricted to day time hours, of 45.6dB(A) is almost 15dB(A) below the relevant road noise criteria (see Section 4.4.5.1.3 of the EIS).

3.3.3 Quarry Generated Noise

Four submissions reference Quarry-generated noise, and the impacts this could have on local amenity, wellbeing and/or tourism, as a concern.

Representative Comment(s)

"Proximity to development will create additional ongoing noise and blasting will create periodic peaks in noise which will disturb our current ambience."

Submission 1

"The unusual and disruptive noise will be detrimental in the rural area especially in consideration of the proposed operating hours of 6.30 in the morning ... for the next 20 years."

Submission 2

"It is noted that noise generated by the quarry is predicted to meet the NSW guideline levels. However the averaging of these noise levels excludes noise peaks that would exceed background levels. The noise assessment should include current equipment used on site in addition to other new equipment to be introduced to the site."

The proposal outlines a staging for the quarrying activities which would include heavy equipment. It is unclear if the use of this equipment at the top of the ridge has been considered in the noise impact assessment. Noise disturbance resulting from quarry operations is considered a significant concern for Mayfield Gardens."

Submission 4

Response

MAC applied accepted methodologies in assessing the potential noise which could be received at residences surrounding the Project Site. Notably, and with specific reference to the concerns raised over specific peaks in noise or potential for 'averaging' of noise to mask the affects of periodic noisy periods, the noise modelling undertaken by MAC considered all noise generating equipment to be operating concurrently for an entire 15 minute period (the period over which noise is averaged, criteria established and compliance determined). Furthermore, MAC included an operating scenario where the equipment was operating at surface in exposed locations to neighbouring residences. The resultant predictions of the noise modelling (presented in Section 4.4.5.1.2 and Tables 4.11 and 4.12 of the EIS) account for any spikes in noise emissions and while generated as an average, effectively represent the noisiest 15 minute period likely to be experienced.

On approval of the Proposal, equipment at the Quarry is likely to be upgraded or replaced. In the interest of ensuring that the noise modelling was as accurate as possible, sound power levels for the equipment modelled was taken from MAC's database of noise emissions, based on the advice of the Applicant as to the specifications required of this equipment.

It is also noted that over the life of the Proposal, the noise levels received at locations surrounding the Project Site are likely to decrease as extraction moves below ground creating natural noise attenuation.

The impacts of blasting (including noise generated by airblast overpressure) are discussed in further detail in Section 3.4.2.

3.3.4 Impacts on Livestock

Submission 5 raised a concern over the potential impact on noise pollution on local livestock, potentially resulting in reduced production.

Representative Comment(s)

"There would be significant noise pollution impacting on residential areas. This will also affect farming animals causing high levels of stress and anxiety. This could result in a deterioration of quality produce."

Submission 5

Response

There are numerous examples of the coexistence of agricultural activities with surrounding noise generating activities across NSW. With respect to the Proposal, the noise levels predicted would comply with the noise criteria established in accordance with the NSW Industrial Noise Policy. Whilst these criteria are targeted at human perception of noise, the coexistence of numerous quarry operations across NSW with agricultural grazing operations suggests livestock are not particularly sensitive to quarry noise such that a detrimental effect on production may occur.

With respect to blasting, studies have been completed to demonstrate that livestock quickly habituate to short-term, loud noises as are associated with airblast overpressure. Bond (1974)¹, which reviewed the affects of sonic booms from aircraft on livestock, and Hunt (1999)², a report which assessed the impacts of noise, blasting and dust deposition on livestock and pastures, observed that after an initial startle to the first occurrence, responses quickly reduced and the noises eventually failed to elicit any noticeable reaction.

¹ Bond (1974). *Effects of simulated sonic booms on eating patterns, feed intake and behavioural activity of ponies and beef cattle, Proceedings of the 1st International Livestock Environment Symposium 1:170-175.*

² Hunt (1999). *Extension of Exeter Quarry- Livestock Issues, Prepared on behalf of Concrete Quarries Pty Limited.*



3.4 BLASTING

3.4.1 Overview

Three submissions identified blasting-related impacts within their objection. The following reviews the specific noise-related concerns with respect to:

- noise generated by blasting (see Section 3.4.2); and
- vibration damage to bores (see Section 3.4.3).

3.4.2 Blasting Noise

Two submissions identified noise generated by blasting as an issue of concern.

Representative Comment(s)

“Proximity to development will create additional ongoing noise and blasting will create periodic peaks in noise which will disturb our current ambience.”

Submission 1

Response

An assessment of airblast overpressure and ground vibration completed by MAC confirms that a sound wave would be generated by blasting and could be heard at locations surrounding the Project Site.

However, the Applicant proposes no more than 4 to 5 blasts per year to be completed by a qualified blasting contractor during the day time (between 9:00am and 5:00pm).

The potential for blasting to impact on local ambience is therefore restricted to a small number of occurrences annually. To further offset any disturbance blasting could have on surrounding property owners, the Applicant would offer to include any resident within 1.5km of the extraction area on a blast notification register. Those on the blast notification register would be notified by text message, email or telephone call on the day preceding each blast.

3.4.3 Vibration-related Damage to Buildings and other Structures

Submission 1 identified the potential impact of blasting on their residence and groundwater bore as being a concern.

Representative Comment(s)

“Our groundwater bore used for stock water is located approximately 50 metres from our Sewells Creek Road boundary and 500-600 metres from the development' site. The underground vibration may cause-permanent disruption to the water supply which will severely impact on our ongoing farming operation. Vibration from the blasting may also cause disturbance to the foundations of buildings.”

Submission 1

Response

The assessment of blasting impacts completed by MAC identified that ground vibration would not exceed 1mm/s at a distance of 500m from the blast. Experience at other quarry and mine site, where water supply bores (both Proponent and privately owned) are located at much closer proximity and subjected to larger blasts, indicates blasting may be undertaken without adverse affect on local bores.

It is further noted that in the absence of an Australian Standard for structural vibration damage threshold, the German Standard *DIN 4150: Part 3-1999 Structural Vibration Part 3: Effects of Vibration on Structures* of 10mm/s is adopted in NSW. As noted above, the predicted vibration would be less than 10% that considered as having the potential to cause structural damage to buildings or other structures.

3.5 AIR QUALITY

3.5.1 Overview

All five submissions raised noise as an issue within their objection. The following reviews the specific noise-related concerns with respect to:

- elevated dust emissions (see Section 3.5.2);
- contamination contained within dust (see Section 3.5.3);
- health impacts associated with diesel emissions (see Section 3.5.4); and
- impacts associated with odour (see Section 3.5.5).

3.5.2 Elevated Dust Emissions

Three submissions made general reference to concerns over the impact of dust emissions from the Proposal.

Representative Comment(s)

"...the report acknowledges there will be "dust generation". It will be close to several unspecified residences. Air quality is crucial to the amenity of our home. It is fundamental to our quiet enjoyment of our property and absolutely necessary for occupation. Dust generation cannot exceed GPA assessment criteria. The developers say this is "unlikely". This is again unquantified..."

Submission 2

"...the access road generates considerable dust in the drier months..."

Submission 3

"The submission identified 2mm water per day on internal roads to manage dust. Evaporation rates exceed this amount throughout the year and therefore the amount of water will dissipate under regular traffic. There is also potential for windblown dust when the water truck is not in use."



Dust emissions from the quarry and waste management operations on internal works are considerable. The crushing process is a dry process light misting of water during this process has a limited ability in dust suppression.

The quarry proposal does not incorporate any other proposals to conduct the process of primary and secondary processing of aggregate. This process does not incorporate a dust capture mechanism. The proposal requires modelling to indicate that the dust generated on site will disperse within a reasonable buffer. On this basis, the predictions of limited dust emissions from the site into the surrounding area are considered questionable."

Submission 3

Response

It is acknowledged that operations such as those proposed have the potential to increase emissions of dust within a locality. However, the approach to assessment presented in the EIS considered the fact that at the scale of operations proposed and proximity to receivers, compliance with dust criteria is achievable subject to the implementation of controls and safeguards such as those nominated in *Section 4.5.4.1* of the EIS.

We consider the approach to assessment of dust emissions presented in the EIS to be valid and note that quarries of equivalent size and much larger, implementing controls and safeguards the same as those presented in the EIS, generally do not result in dust levels exceeding $2\text{g}/\text{m}^2/\text{month}$ at distances of between 400m and 600m from the operations. We reiterate that the critical factor in the potential for impacts associated with dust emissions is not the prediction of emissions, but in the management of operations to minimise these emissions.

With reference to the submissions, the following additional information is provided.

- During hot, dry and/or windy periods, increased dust emissions are likely from internal roads and trafficked areas (as they are from cleared areas and tracks on neighbouring properties). The Applicant understands that under these weather conditions, operations may require modification and watering increased to reduce the potential for dust emissions.
- The crushing and screening of gravel is also likely to generated dust, in particular when the material is very dry. The Applicant recognises this and would ensure that feed stock is watered as required and mists / sprays are used to prevent excessive dust generation. For small scale operations such as the Proposal, dust capture mechanisms are impractical as the plant used for crushing is generally mobile and lacks the in-built components for attachment.
- Submission 3 correctly identifies that during the summer months, evaporation exceeds 2mm/day. It is noted, however, that the proposed watering rate of $2\text{L}/\text{m}^2$ is per application. During hot, dry and/or windy days, the number of applications would be determined in response to surface drying time and observed dust lift-off. An application ate of $2\text{L}/\text{m}^2$ per application is accepted as reducing dust emissions by at least 70% (Bounicore & Davis, 1992)³.

³ Buonicore, A.J & Davis, W.T (Air & Waste Management Association) (1992). *Air Pollution Engineering Manual, 1st Edition*. Van Nostrand Reinhold, New York.

Finally, it is noted that monitoring of dust deposition is proposed by the Applicant. This would allow for any issues associated with dust emissions to be identified (on measurement of deposition each month) and contingency measures developed to address these. The implementation of response / contingency measures would be formalised as part of a *Pollution Incident Response Management Plan* required as a condition of the Environment Protection Licence the Applicant must obtain for the Quarry.

3.5.3 Contaminated Dust

Submission 1 raises the issue of contaminated dust and suggests the EIS has not included measures for control of such emissions or monitoring.

Representative Comment(s)

"...with waste material being imported to the project site we remain concerned about potential contaminants contained in the waste material. Dust emissions from the site, including possible contaminated dust emissions are a major health concern. Plans do not detail control measures for dust emissions and ongoing monitoring of the site would be required..."

Submission 1

Response

Section 2.7.2 of the EIS provides significant detail on the type of waste to be accepted to the Quarry, the methods of classification and requirements of the supplier to confirm this waste does not contain any contaminants. Specifically, the Applicant would require confirmation from the supplier that sampling and quality requirements of the Excavated Natural Material Order 2014 and Treated Drilling Mud Order 2014 have been fulfilled.

This requirement would be controlled through the establishment and implementation of a chain of custody procedure. In summary, prior to acceptance, the supplier would be required to identify the source and volume of the material along with a confirmation that it conforms to the relevant resource recovery order and does not classify as a trackable waste. An inability to confirm this would prevent the Applicant from accepting the material.

On the basis of compliance with these requirements, and considering the level of dust emissions leaving the Project Site is likely to be low and well controlled by the dust management measures nominated in Section 4.5.4.1 of the EIS, the potential for contamination within dust which could be generated from stockpiles of these materials is low.

3.5.4 Diesel Emissions

Submission 5 identifies the potential health impacts of diesel emissions as an issue of concern.

Representative Comment(s)

"The international Agency for Research on Cancer identified diesel engine exhaust as 'carcinogenic to humans, based on sufficient evidence that exposure is associated with an increased risk for lung cancer'."

Submission 5

Response

The concern in relation to the carcinogenic potential of diesel emissions is accepted and it is noted that the International Agency for Research on Cancer (IARC) upgraded classification of diesel engine exhaust from probably carcinogenic to humans (Group 2A) to carcinogenic to humans (Group 1)⁴. It is noted, however, that the research on which this classification is based primarily considers workforces subject to high levels of emissions and/or confined spaces. The high dispersion of emissions generated by diesel emissions on the Project Site is such that a measureable impact on surrounding residents is highly unlikely.

3.5.5 Odour

Submission 2 identifies the odour impacts as an issue of concern.

Representative Comment(s)

"...there is acknowledged potential odours arising from the site. Our property is within 1 km of the site's boundary..."

Submission 2

Response

The potential for offensive odours and methods to control, measure and respond to these was address in detail in *Section 4.5* of the EIS. The level of detail provided in the EIS is considered sufficiently to demonstrate the odour is unlikely to be an issue impacting on residents surrounding the Project Site. In summary, the Applicant does not intend on accepting waste types likely to generate odours, composting would be managed to prevent uncontrolled anaerobic decomposition and monitoring would be undertaken to confirm any odour generated is restricted to the immediate surrounds of composting stockpiles. Contingency measures are nominated in *Section 4.5.4.3* of the EIS in the unlikely event that monitoring identifies odours at or near the Project Site boundary.

3.6 WASTE PROCESSING

Submission 4 raises a number of concerns regarding the classification and management of waste materials to be imported to the Project Site. Each of these concerns is identified and addressed below

Comment(s)

"Materials of concern that are referred to in the development proposal include "drillers mud". The lack of detail in the information presented in the report is of concern. The proposal provides some indication that the source may be construction project sites. But the documentation does not specifically state that this will be the only source. Therefore the drillers mud may come from other sources such as coal seam gas and a wide range of other materials

⁴ <http://www.cancercouncil.com.au/86083/cancer-information/general-information-cancer-information/cancer-questions-myths/environmental-and-occupational-carcinogens/diesel-fuel-emissions/#BLXCcvszdTLdeFT.99>

from investigative sites. The proposal suggests that a process of quality control would be introduced. The proposal does not refer to specific testing of each and every load on the basis of the type of drilling undertaken, the type of chemicals for example, prior to accepting the material."

Response

As noted in Section 3.5.3, Section 2.7.2 of the EIS provides significant detail on the type of waste to be accepted to the Quarry, the methods of classification and requirements of the supplier to confirm this waste does not contain any contaminants. Specifically, the Applicant would require confirmation from the supplier that sampling and quality requirements of the Treated Drilling Mud Order 2014 have been fulfilled.

The source of the treated drilling mud is somewhat irrelevant given the requirement of the supplier to meet the sampling and quality requirements of the Treated Drilling Mud Order 2014. As noted in Section 3.5.3, this requirement would be controlled through the establishment and implementation of a chain of custody procedure.

Comment(s)

"The proposal does not exclude materials from construction sites where demolition materials are being generated...On this basis, the project presents a potential high risk involving acceptance of storage waste soil and other material from a wide range of sites. The process of waste classification does not appear to be a vigorous component of the proposed development."

Response

As noted in response to the concern of treated drilling mud, Section 2.7.2 of the EIS provides significant detail on the type of waste to be accepted to the Quarry, the methods of classification and requirements of the supplier to confirm this waste does not contain any contaminants. Specifically, the Applicant would require confirmation from the supplier that sampling and quality requirements of the Excavated Natural Material Order 2014 have been fulfilled. As noted in Section 3.5.3, this requirement would be controlled through the establishment and implementation of a chain of custody procedure.

Comment(s)

"No certainty is provided that the development would not accept delivery of contaminated waste including asbestos"

Response

As noted previously, Section 2.7.2 of the EIS provides significant detail on the type of waste to be accepted to the Quarry, the methods of classification and requirements of the supplier to confirm this waste does not contain any contaminants. Compliance with the sampling and quality requirements of Excavated Natural Material Order 2014 and Treated Drilling Mud Order 2014 would be required and recorded as part of a chain of custody procedure.

Comment(s)

"Significant concerns are raised around the proponents intention to utilise the site for waste storage. The objection refers to the statement made regarding the applicants intention to make application (separate to the DA) to the EPA for a specific Resource Recovery Order Exemption for the gravel/fill product."

Response

Advice was sought from the EPA during the preparation of the EIS and it was unclear as to whether the Applicant could use the relevant resource recovery orders for treated drilling mud and excavated natural material for a combined gravel / waste product. This reflects the potential for the blended product to have different physical (and possibly chemical) characteristics which may require further assessment before these may be considered under a resource recovery order and exemption.

Until such time as the waste material is imported, in accordance with the relevant resource recovery order, blending and assessment of the final properties of the gravel fill product cannot be completed. Application for a Specific Resource Recovery Order and Exemption would therefore be made, following further advice from the EPA at the time, once the nature of waste and gravel to be blended is determined. This is an appropriate approach allowing for the EPA to regulate any proposed preparation and transport of products.

In the event that a Specific Resource Recovery Order is required but not obtained, the imported treated drilling mud or excavated natural material may be applied to land in accordance with the relevant resource recovery exemption.

Comment(s)

"The current proposal does not present a clear indication of the total tonnage limits of materials to be brought to site."

Response

The EPA nominates 130 000tpa. The Applicant accepts this limit.

Comment(s)

"The proposal incorporates the construction of a HDPE lined pond for surface water runoff, however the proposal does not address groundwater. There is no liner under the waste storage area and therefore this would leave a direct exposure pathway to the ground water table below the site."

Response

The area of storage of imported wastes would be compacted hardstand with any water falling on the stockpiled materials either evaporating or running off (to the HDPE lined pond). This approach is accepted by the EPA for catchments containing potentially contaminated water.

3.7 WATER QUALITY

3.7.1 Contaminated Runoff / Pollution of Surface Water

Two submissions raised concerns over the potential for contaminated / polluted surface runoff.

Representative Comment(s)

"...there is an acknowledged but unquantified risk of run off and consistently pollution of land or water "off the project site". Our property is immediately downhill from the site. Water quality is crucial to our breeding operations and our pastures and gardens..."

Submission 2

Response

Section 4.3.2.3 of the EIS documents the controls and safeguards to be implemented to prevent the discharge of polluted water from the Quarry. These controls have been developed with reference to leading practice environmental documentation such as *Managing Urban Stormwater: Soils and Construction* Volumes 1⁵, 2C⁶ and 2E⁷ and are assessed as likely to prevent any polluting discharge.

Notwithstanding the above, the Quarry will be regulated by the NSW EPA who will consider any discharge against the criteria of an EPL and Section 120 of the *Protection of the Environment Operations Act 1997* (which prohibits the discharge of pollution to receiving waters). The EPA has the power to prosecute, penalise and suspend or revoke the EPL of the Applicant in the event of contravention of conditions of the EPL or Section 120.

3.7.2 Groundwater Contamination

Two submissions raised concerns over the potential impact of the proposal on access to groundwater.

Representative Comment(s)

"No specific details have been provided regarding the rock base of the site and if this rock base is fractured and if it is a recharge area for the local aquifer system. Neighbouring landholders rely on groundwater for stock enterprises as well as for Mayfield Gardens."

Submission 4

Response

The potential sources of contamination of groundwater would be hydrocarbons and runoff from imported waste materials.

⁵ *Managing Urban Stormwater: Soils and Construction, Vol. 1 Second eds*, Landcom, NSW, Sydney.

⁶ *Managing Urban Stormwater: Soils and Construction. Volume 2C Unsealed Roads*. NSW Department of Environment and Climate Change, Sydney.

⁷ *Managing Urban Stormwater: Soils and Construction. Volume 2E Mines and Quarries*. NSW Department of Environment and Climate Change, Sydney.

Section 4.3.2.3.4 of the EIS identifies the controls to be implemented to prevent and (if required) remediate a leak or spill. The potential for contamination of groundwater by hydrocarbons is considered minimal.

As noted in Section 3.6, waste materials would be stored on compacted hardstand surfaces with runoff to a HDPE lined pond. This is in line with EPA recommendations for catchments containing potentially contaminated runoff. There is therefore limited potential for movement of contamination from surface to the rock below and ultimately aquifers from which local landholders draw water.

Finally, the potential for the Proposal to directly interfere with local groundwater is considered minor. Section 2.1.2 considers the potential for the Project Site to intercept groundwater, and therefore interfere with local groundwater supplies. As discussed in Section 2.1.2, the assessment of the EIS of the groundwater table occurring below the maximum depth of extraction is supported by local groundwater records and observations.

3.8 LOCAL SETTING / AMENITY

3.8.1 Overview

Three of the five submissions referred directly to issues associated with the local amenity of the local setting and potential impact of the Proposal on these in their objections. Issues raised included:

- classification of the location as 'relatively isolated' (see Section 3.8.2);
- appropriateness of location for the purpose of extractive industry (see Section 3.8.3);
- impacts on rural / visual amenity (see Section 3.8.4); and
- impacts of lighting (see Section 3.8.5).

3.8.2 Classification of the Location as 'Relatively Isolated'

Submission 2 objected to reference to the site as 'relatively isolated' and considered this a reason to question the assessment contained within the EIS.

Representative Comment(s)

"...the application states that the site is in "relative isolation". We disagree. It is not isolated, not even "relatively"...."

Submission 2

Response

We accept that our consideration of what is relatively isolated differs from that of Submission 2. The reference to isolation refers to effectively to the density of population surrounding the Project Site. That is, activities undertaken at a residence or other location within a rural setting are unlikely to be noticed at a residence on a neighbouring property which may be several hundred to several kilometres away. These same activities if undertaken within an urban zone would be highly noticeable. In this context, the Project Site is relatively isolated from surrounding residences and landholdings.

3.8.3 Appropriateness of the Location

Submission 2 also questions the appropriateness of the location for Quarry and associated activities.

Representative Comment(s)

"We submit that the quarry should not operate there, nor have been approved in the first place. It is not capable now of avoiding being a nuisance and it should not be allowed to continue to operate, let alone expand."

Submission 2

Response

While the EIS considered past environmental performance in assessing potential impacts, the focus of the assessment must be on the development as proposed. This notwithstanding, we are not aware of any complaints being made of the current operations to the Applicant or Council.

With respect to the application as proposed, the EIS provides a comprehensive assessment of impacts related to noise, air, odour, vibration, traffic, water, visual, biodiversity and heritage. In each case, and with the implementation of specific design features, operational controls and safeguards, mitigation and management measures, the impact has been assessed as likely to comply with nominated criteria or reasonable community expectations.

Most critically, and as nominated in *Section 5.2.3.4*, the EIS concludes that the Proposal may proceed without unduly or adversely impacting on the land uses on properties surrounding the Project Site, i.e. satisfaction of Section 79C(1c) of the EP&A Act.

3.8.4 Local Amenity (Rural and Visual)

Three submissions raise the potential impact of the Proposal on local visual amenity as an issue of concern.

Representative Comment(s)

"...the proposed development is not in keeping with the rural outlook and will be a blight on the current landscape..."

Submission 1

Response

As noted in *Section 4.11.3* of the EIS, the Proposal would result in the extraction area extending further north, potentially exposing vantage points to the east (and north) which are currently screened by the north-south aligned ridge, to the extraction operations. In addition, by increasing the area of disturbance and production rate, the potential for increased emissions of dust, which may impact on local visual amenity, would be increased. *Section 3.5.2* reviews how the Applicant would manage and minimise dust emissions.

The location and design of the extraction area would ensure that it remains screened or obscured by topography or vegetation from most vantage points (refer to *Plates 4.3 to 4.6* of the

EIS). Cell 1 and the majority of Cell 2 would remain to the west of the north-south aligned ridge which would provide topographic screening of the extraction activities to the east. As the extraction area is developed to the south from Cell 2 to Cell 3, views of the extraction area may become visible from landholdings to the east of the Project Site and Abercrombie Road (see *Plate 4.6* of the EIS). These views would be minimised, however, by the sequencing of extraction in a west to east direction within each cell (thereby retaining elevated ground between the extraction area and vantage points to the east the majority of the time. Section 4.11.4.2 of the EIS documents further measures, including the progressive rehabilitation of disturbance, to be implemented by the Applicant to minimise visual impacts

The EIS recognises that the Proposal would result in disturbance to the landform, and this disturbance may be visible from some vantage points at different times over the life of the Quarry. Noting this, the critical factor in assessing the acceptability of the proposed change to the local visual amenity is not the scale of the modification, rather how this is likely to integrate with the surrounding landforms and land uses. On the basis that the activities would be screened or obscured from most vantage points the majority of the time, dust emissions would be minimised, and progressive rehabilitation would provide for the re-establishment of pasture and woodland vegetation, neither the operating Quarry nor rehabilitated final landform would prevent this successful integration. That is, the active and completed Quarry could be operated and rehabilitated so as not to be a 'blight' on the current or future landscape.

3.8.5 Lighting

Submission 4 objects to the impacts associated with lighting, which the submission believes in in an overly exposed location.

Representative Comment(s)

"Visual impacts of 24-hour operations would include industrial type lighting. The quarry is located on the top of a hill and lighting would be visible for an extensive distance. This would also be exacerbated by truck traffic lights."

Submission 4

Response

In accordance with the GTAs of the EPA, operations would be restricted to the hours of 7:00am to 6:00pm. Lighting will therefore not be required.

3.9 TOURISM

Two of the five submissions refer directly to the potential for the Proposal to impact on local tourism. The potential impacts which could contribute to a detrimental affect on local tourism are identified in Submission 4 as follows.

Representative Comment(s)

“Local scenic roads form an introduction to the landscape in the form of quiet country roads that lead to Mayfield Garden. The development proposal has identified several potential impacts on this landscape. These include but are not limited to:

- A large increase in heavy truck traffic on the local road network;*
- Visual impact resulting from the removal of a clearly visible ridge line;*
- Development of an industrial landscape within a scenic landscape vista;*
- Risks of noise emissions that may on occasions exceed acceptable criteria established in NSW;*
- Risks of dust emissions that may on occasions exceed acceptable criteria established in NSW;*
- Occasional blasting events that would be heard and felt over an extensive area;*
- Development of a proposal that accepts waste materials from the region with no guarantees that this waste does not include contaminants which may harm surface and groundwater resources in the valley.*

These issues are in direct completion (sic) with a successful tourism strategy for the region. The visual panorama available to tourists on their drive to Mayfield Gardens would be impacted by a potential industrial landscape with dust and noise that may on occasions run on a 24 hour seven day a week basis.”

The objection on the grounds of impacts on tourism effectively identifies the various objections with respect to traffic, visibility and visual amenity, noise, dust, blasting and waste management identified and responded to in previous sub-sections.

In the case of the Proposal, the EIS, supported by this Response to Submissions indicates that the proposed Quarry could operate in a way which:

- restricts noise and vibration to levels compliant with EPA accepted criteria;
- restricts dust emissions such that compliance with EPA accepted criteria is achieved;
- restricts the visibility of the operation from local roads by utilising the existing ridge line and local vegetation to screen and obscure the operations;
- generates traffic which is within the capacity of the local road network, will not significantly impact on road users, and which does not significantly increase the risk of traffic accident; and
- does not generate odours or unsightly stockpiles of imported waste materials.

The above notwithstanding, the Applicant is cognisant of the various industries, including tourism, which coexist within the Oberon LGA. However, it is relevant to note that active quarries operate within the Oberon LGA, as well as other LGAs which also have important tourism industries, e.g. Austen Quarry near Hartley (Lithgow City LGA), Shadforth Quarry (Orange City LGA), Dubbo Quarry (Dubbo Regional LGA), Cow Flat Quarry (Bathurst

Regional LGA). Each quarry presents issues both similar to and unique from those to be managed by the Proposal. However, in each case, these sites are operating without detrimental impact on the local tourism industry.

3.10 SOCIO-ECONOMIC BALANCE

Submission 2 objects on the basis that the socio-economic impact of the Proposal has not been adequately addressed.

Representative Comment(s)

“...the socio-economic balance is unconvincing. No actual job numbers, costings or case is put. The application acknowledges a number of problems presented to neighbours and the community by the proposal. All are effectively unquantified and un-researched...”

Submission 4

Response

Section 2.11 of the EIS identifies the projected employment of the Proposal and indication of economic contribution. Section

Assessing the socio-economic impact of a Proposal requires a comprehensive assessment of impacts and consideration of the positive effects likely to result. The contention of the submission that impacts are unquantified and unresearched is rejected. As discussed in the preceding sections of this Response to Submissions, all assessment contained within the EIS is based on review of the best available information, the input of specialist consultants where required, and in accordance with accepted assessment methodology.

With respect to consideration of positive socio-economic effects, it is noted that for a development of the scale proposed, in particular one which relies partly on campaign based production, quantifying economic impacts can be difficult. For this reason, the socio-economic assessment included in the EIS identified and described the benefits of the Proposal more qualitatively.

The EIS also justifies the Proposal through assessing the need for the development, the residual environmental impacts and consequences of not proceeding (Section 5.3).

3.11 CUMULATIVE IMPACTS

Submission 4 objects on the basis that cumulative impacts of the Proposal have not been addressed.

Representative Comment(s)

“Cumulative impacts of dust and noise emissions would result from the development proposal and potentially reduce the ambience of the local area. Cumulative pollution impacts have a direct socio economic impact on adjoining land owners.”

Submission 4

“The proponent has not identified the cumulative impacts associated to the operation of both industries on site and if these cumulative impacts have been considered.”

Submission 4

Response

The adequacy of the dust and noise assessment included in the EIS was discussed in Sections 3.3 and 3.5. On the basis that compliance with accepted criteria for noise and dust can be achieved, the potential cumulative effect on neighbouring landowners is minimal and assessed as acceptable.

The contention that the EIS does not consider the cumulative impacts of ‘both industries’ on site is incorrect. All assessments consider the concurrent operation of the extractive industry, crushing and screening and waste management activities.

3.12 OTHER ISSUES

The submissions also raised objections in relation to aspects of the Proposal not easily placed within environmental categories. These are considered as follows.

Not a Modification

Submission 2 objects on the basis that the scale of the proposed development exceeds that which should be considered a modification.

It is noted that the application has been made for a new development consent.

Weighbridge

Submission 3 queries whether a weighbridge or other method of weighing material brought onto or despatched from the Quarry should be included.

The GTAs supplied by the EPA require the Applicant to operate a calibrated weighbridge. The Applicant accepts this requirement.

Hours of Operation

Several of the submissions object on the basis of the proposed 24 hours operations.

The GTAs supplied by the EPA restrict operations to 7:00am to 6:00pm Monday to Saturday. The Applicant accepts this requirement.

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Appendices

(Total No. of pages including blank pages = 40)

- Appendix 1 Government Agency Submissions
- Appendix 2 Summary of Public Submissions



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Appendix 1

Government Agency Submissions

(Total No. of pages including blank pages = 25)



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DOC16/270078
DA10.2016.38.1

Ms Jaclyn Burns
Health and Building Manager
Oberon Council
137-139 Oberon Street
OBERON NSW 2787

Dear Ms Burns

Proposed Middle Creek Quarries (DA10.2016.38.1)

I refer to your request dated 9 June 2016 seeking comment from the Office of Environment and Heritage (OEH) on the exhibited Environmental Impact Statement (EIS) for the proposed Middle Creek Quarries expansion.

We have reviewed the information provided against our requirements sent to the Department of Planning and Environment on 6 July 2015. The EIS does not meet the requirements, specifically the EIS does not define the impacts to native vegetation. Additionally the EIS has given no consideration to an offset strategy for the impacts to native vegetation. At this stage OEH is unable to determine the adequacy of the EIS for this proposal. Our recommendations are provided in Attachment A and our detailed comments are provided in Attachment B.

If you have any questions regarding this matter please contact Michelle Howarth on 02 6883 5339 or email michelle.howarth@environment.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to read 'STEVEN COX', with a horizontal line extending to the right.

STEVEN COX
Senior Team Leader Planning North West
Regional Operations Group

27 July 2016

Contact officer: MICHELLE HOWARTH
02 6883 5339

PO Box 2111 Dubbo NSW 2830
Level 1, 48-52 Wingewarra Street Dubbo NSW 2830
Tel: (02) 6883 5330 Fax: (02) 6884 8675
ABN 30 841 387 271
www.environment.nsw.gov.au



ATTACHMENT A

OEH Review - Recommendations Middle Creek Quarries – Environmental Impact Statement

Acronyms

EIS	Environmental Impact Statement
OEH	NSW Office of Environment and Heritage
PVP	Property Vegetation Plan
BIA	Biodiversity Impact Assessment
PCT	Plant Community Type

Recommendations

1. OEH is unable to determine the impact of the project as some critical information is missing from the EIS. In order to complete our assessment, OEH requires the EIS to be updated as follows:
 - 1.1. Identify the PCT of the Montane Woodland and any other native vegetation present on site and identify the area (hectares) of the PCT to be impacted by the development.
 - 1.2. Include a figure/map showing all flora and fauna survey locations.
 - 1.3. Undertake targeted seasonal surveys for the species listed in Attachment B within the recommended survey periods.
 - 1.4. The flora species list should indicate which species were recorded in which quadrats, and along transects and random meanders.
 - 1.5. An offset package be prepared that comprises like for like offsets for the impacts to native vegetation.
2. A Biodiversity Offset Management Plan be developed to ensure the offsets are appropriately managed and funded. Management activities included in the management plan should result in an improvement of the offset area over time.
3. A stock proof fence be erected around the offset area(s).
4. The offset be secured in perpetuity under one of the following conservation mechanisms:
 - BioBanking agreement.
 - Dedication of land under the National Parks and Wildlife Act 1974 (NPW Act).
 - Trust Agreements under the Nature Conservation Trust Act 2001.
 - A PVP registered on title under the *Native Vegetation Act 2003*.
5. Assessments of Significance are required to determine if threatened ecological communities, endangered populations and threatened species may be significantly impacted by the project. Assessments of Significance should be conducted and documented in the EIS for threatened ecological communities, endangered populations and threatened species that have been identified as likely to occur within the site.
6. Significance assessments using Commonwealth guidelines should be undertaken for MNES where potential habitat occurs.
7. OEH recommends that the recommendation made in the Aboriginal Heritage Due Diligence Assessment that, the area containing the lithic scatter be fenced (12m x7m) with appropriate signage, be implemented.

ATTACHMENT B

OEH Review - Detailed Comments

Middle Creek Quarries – Environmental Impact Statement

1. Timing of Surveys

The BIA indicates that a detailed flora assessment of the study area was undertaken in March, 2016, however the EIS does not contain any information regarding the locations of the survey quadrats, transects or random meander paths. The EIS should include a map showing all survey locations.

A number of the flora species listed in table 2 of the BIA cannot be reliably surveyed in the month of March. It is recommended that targeted surveys for the following species be conducted within the recommended survey times.

Common Name	Scientific Name	Recommended Survey Period
Yass Daisy	<i>Ammobium craspedioides</i>	September – January
	<i>Hibbertia puberula</i>	September – February
Small Purple-pea	<i>Swainsona recta</i>	September – October
Silky Swainson-pea	<i>Swainsona sericea</i>	September – December
Swamp Everlasting	<i>Xerochrysum palustre</i>	August – December
Wingecarribee Gentian	<i>Gentiana wingecarribeensis</i>	August – September
	<i>Callistemon megalongensis</i>	November – December
	<i>Asterolaxis buxifolia</i>	September – November
Austral Toadflax	<i>Thesium austral</i>	September – February
Duramana Fingers	<i>Caladenia attenuate</i>	October – November
Crimson Spider Orchid	<i>Caladenia concolor</i>	August – October
Buttercup Doubletail	<i>Diuris aequalis</i>	October – December
Slaty Leek Orchid	<i>Prasophyllum fuscum</i>	September – December
Tarengo Leek Orchid	<i>Prasophyllum petilum</i>	October – December
Sydney Plains Orchid	<i>Pterostylis saxicolor</i>	September – November
A spear-grass	<i>Austrostipa wakoolica</i>	September – December

Recommendation:

- 1.1. Update the EIS to include a map showing all survey locations.
- 1.2. Targeted seasonal surveys be conducted for the species listed above within the recommended survey periods.

2. Area of Impact

The EIS states that the proposed works include clearing of vegetation described as Montane Woodland dominated by Narrow-leaved Peppermint *Eucalyptus radiata* and Mountain Gum *Eucalyptus dalrympleana* ssp *dalrympleana*. Montane Woodland is not a vegetation community type. All native vegetation should be identified to Plant Community Type (PCT) rather than vegetation class. The EIS should contain a vegetation map showing the extent of all native vegetation communities including any derived native grassland. There is no information regarding the total area or community type of the vegetation to be cleared.

Recommendation:

- 2.1. OEH recommend that the EIS be updated to identify the PCT of the Montane Woodland and any other native vegetation present on site and identify the total area of the PCT to be impacted by the development.

3. Offset

As discussed above it is unclear from the information provided how much native vegetation will be impacted as a result of the proposed activities. Impacts to native vegetation that cannot be avoided using prevention and mitigation measures should be offset. OEH recommends that an offset package is developed to adequately offset these impacts. Offsets must be targeted to offset on the basis of like-for-like or better conservation outcomes.

Recommendation no 2 of *Appendix 8 Biodiversity Impact Assessment* proposes that remnant vegetation outside the project site boundary be retained, expanded and connected for biodiversity offsetting purposes. OEH supports this measure but considers that the EIS should identify these areas spatially and demonstrate that they are of sufficient condition and type to offset the loss of vegetation caused by this project.

Offsets should be based on a quantitative assessment of the loss in biodiversity from the development and the gain in biodiversity from the offset. The methodology must be based on the best available science, be reliable and used for calculating both the loss from the development and the gain from the offset.

The offset package should include an appropriate management plan that has been developed as a key amelioration measure to ensure the offsets are appropriately managed and funded. Management activities included in the management plan should result in an improvement of the offset area over time.

The EIS states that the native vegetation in the study area is heavily impacted by grazing from domestic stock. Any offset should be fenced to exclude grazing animals to ensure these threats can be managed in the long-term.

For the biodiversity objectives of the offset to be met an appropriate legal mechanism needs to be used to secure the offset. This mechanism should secure the offset in perpetuity to ensure long term protection and management of the site. OEH's preferred mechanism for securing offsets is a BioBanking agreement however the following conservation mechanisms may also be acceptable:

- dedication of land under the *National Parks and Wildlife Act 1974* (NPW Act);
- trust Agreements under the *Nature Conservation Trust Act 2001*; or
- a PVP registered on title under the *Native Vegetation Act 2003*.

Recommendations:

- 3.1. An offset package be prepared that comprises like for like offsets for the impacts to native vegetation.
- 3.2. A Biodiversity Offset Management Plan be developed to ensure the offsets are appropriately managed and funded. Management activities included in the management plan should result in an improvement of the offset area over time.

3.3. A stock proof fence be erected around the offset area(s).

3.4. The offset be secured in perpetuity under one of the following conservation mechanisms:

- BioBanking agreement;
- Dedication of land under the NPW Act;
- Trust Agreements under the Nature Conservation Trust Act 2001; or
- A PVP registered on title under the *Native Vegetation Act 2003*.

4. Assessment of Significance (Seven-Part Test)

Table 3 in the BIA identifies species that have potential to occur on site based on the presence of habitat. OEH notes that Assessments of Significance (Seven-Part Test) have been undertaken for a number of species, however there is a number of species that have been identified as having potential habitat on site and an Assessment of Significance (Seven-Part Test) hasn't been undertaken for those species. If it is found that threatened species, endangered populations and/or threatened ecological communities occur or are likely to occur in the study area then an Assessment of Significance (Seven-Part Test) must be included in the EIS. Any species that has been identified as having potential habitat present on site would be considered to be likely to occur.

OEH also notes that there are no Assessments of Significance (Seven-Part Test) for threatened flora species in Appendix 2. In addition to targeted seasonal surveys that are required for threatened flora species, Assessments of Significance (Seven-Part Test) should be undertaken for those threatened flora species with potential to occur on the site.

Recommendation

- 4.1. Assessments of Significance are required to determine if threatened ecological communities, endangered populations and threatened flora and fauna species may be significantly impacted by the project. Assessments of Significance should be conducted and documented in the EIS for threatened ecological communities, endangered populations and threatened flora and fauna species that have been identified with potential to occur within the site.

5. Assessment of Commonwealth Matters

The EIS lacks appropriate assessment of Matters of National Environmental Significance (MNES) listed under the EPBC Act. Where potential habitat occurs for MNES significance assessments using the Commonwealth guidelines should be undertaken. An assessment of the projects potential to significantly impact on MNES is required to determine if the project should be referred to the Commonwealth for a decision on whether assessment and approval is required under the EPBC Act.

Recommendation:

- 5.1 Significance assessments using Commonwealth guidelines should be undertaken for MNES where potential habitat occurs.

6. Aboriginal Cultural Heritage

OEH notes that during field surveys a lithic scatter and an isolated find were located outside of the project site boundary in an exposed area near Sewells Creek Road. A recommendation has been made in the Aboriginal Heritage Due Diligence Assessment that the area containing the lithic scatter be fenced (12m x7m) to prevent vehicles from entering this area to protect the stone artefacts present. Appropriate signage should be placed on the fence stating 'Conservation Area – Keep Out'. No mention should be made to the presence of any Aboriginal sites or relics at the lithic scatter site. OEH supports this recommendation.

Recommendation:

6.1 OEH supports the recommendation made in the Aboriginal Heritage Due Diligence Assessment that the area containing the lithic scatter be fenced (12m x7m) with appropriate signage be implemented.



Contact: Rachel Daly
Phone: 02 6841 7429
Fax: 02 6884 0096
Email: rachel.daly@dpi.nsw.gov.au

The General Manager
Oberon Council
PO Box 84
Oberon NSW 2787

Our ref: 80 ERM2015/0717
Your Ref: PR11-50 LS-VM

Attention: Jaclyn Burns

28 June 2016

Dear Ms Burns

Re: Designated Development Application 10.2016.38.1 – Middle Creek Quarries, Oberon

DPI Water (formerly the NSW Office of Water) has reviewed documents associated with the above proposal and offers the following key points and detailed comments.

- Further assessment is requested to clarify the potential for groundwater interception at the site. This is to confirm the need for additional assessment against the NSW Aquifer Interference Policy and the need to obtain relevant approvals/licenses under the *Water Management Act 2000*.
- Clarification is requested on the proposed use and management of dams on the property to address issues relating to exceedance of the Maximum Harvestable Rights Dam Capacity and the potential need to obtain relevant approvals/licenses under the *Water Management Act 2000*.
- Clarification on the source and volume of water to supply the potable and non-potable demands of the amenities is requested.

Detailed Comments

Groundwater

The EIS indicates that the proposed quarry extension will not intercept groundwater. DPI Water, however, does not believe the proponent has sufficiently demonstrated that the water table will not be intercepted.

The EIS quotes the standing water level in a neighbouring bore (GW803250) at 22m (measured in 2006) below ground level. The elevation of GW803250 is approximately 1150m AHD, which establishes that groundwater levels could be as high as 1128m AHD. The estimated depth to the base of the quarry as a result of the proposed extension is between 1100 and 1130 m AHD meaning the water table could potentially be 28m above the base of the quarry. The quarry is located in the Lachlan Fold Belt where the geology can be highly variable. A regional aquifer in a fold belt could be connected between many different types of geology depending on the hydraulic properties of each rock type. A change in rock type may not be a barrier for groundwater occurrence.



To support the claim of not intercepting groundwater the proponent should clarify its assessment that the ridgeline on which the quarry is located is 'removed' from the geology where the neighbouring groundwater users are located and demonstrate that there is no hydraulic connection between the ridgeline and the surrounding geology.

If the quarry extension is found to have the potential to intercept groundwater the proponent will be required to:

- assess the proposal against the aquifer interference policy;
- provide a water management plan which includes dealing with any compost leachate or groundwater seepage which may result from quarrying operation; and
- provide a groundwater monitoring plan in consultation with DPI Water.

DPI Water advises interception of groundwater requires licensing under the *Water Management Act 2000* which would include a water supply work approval and sufficient entitlement held in a Water Access Licence to account for the water take. Assessment of this approval outside of the development application process (non-IDAS) may take up to 3 months therefore it is recommended the requirement for this approval be confirmed at the earliest stage to ensure no delays in operations.

Surface Water and Water Supply

The site water balance (Section 4.3.2.4.1) indicates that the on-site water requirement for this proposal (excluding potable water) would be 6.6ML and that this water would be sourced from the existing dams on Lot 2 DP 1112479. The EIS reports that on-site dams have a collective capacity of 20.05ML in an area where the Maximum Harvestable Rights Dam Capacity (MHRDC) has been assessed as being 11.9ML. An exemption from the need to licence these dams (all constructed prior to 1999) exists only while the dams are being used for the purpose of stock and domestic water supply. The use of water from these dams for any other purpose will require dams being used for a production purpose to be authorised by a Water Supply Work Approval, and the volume of water stored there-in to be accounted for on a Water Access Licence. Should the proponent wish to avoid the approval process they may decommission a number of dams across the wider property to bring the total storage capacity of dams on the property to below the MHRDC. Where the MHRDC has not been exceeded water captured in harvestable rights dams may be used for any purpose.

The EIS indicates the proposed quarry extension development will include a quarry office and amenities; however, the requirement for or source of a water supply is not discussed.

Upon receipt of a response to this submission DPI Water will be able to provide recommended conditions of consent to confirm the need for relevant management plans and any licenses or approvals under the *Water Management Act 2000*.

Please direct any questions or correspondence to Rachel Daly, rachel.daly@dpi.nsw.gov.au

Yours sincerely

Tim Baker
Senior Water Regulation Officer
Water Regulatory Operations, Water Regulatory Operations North
NSW Department of Primary Industries - Water



Transport
Roads & Maritime
Services

21 July 2016

SF2015/105895; WST10/00085/03

General Manager
Oberon Council
PO Box 84
OBERON NSW 2787

Dear Sir

**DA10.2016.38.1: Lot 2 DP 1112479; 50 Sewells Creek Road, Oberon
Extractive Industry and Waste Management Facility**

Thank you for your letter dated 9 June 2016 referring DA10.2016.38.1 to Roads and Maritime Services for comment.

Roads and Maritime notes the proposal is for extensions to an existing extractive industry and waste management facility. Vehicular access is proposed via an existing access from Sewells Creek Road.

Roads and Maritime will not object to the proposed development and, in accordance with Clause 16(2) of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, provides the following recommendations for Council's consideration:

- The vehicular access servicing the development should be upgraded and maintained in accordance with *Austroads Guide to Road Design: Part 4 Figure 7.4 'standard rural property access'* (copy enclosed). The design of the vehicular access needs to ensure that vehicles exiting the site approach Sewells Creek Road at or very near to perpendicular.
- A Basic Right (BAR) turn treatment constructed in accordance with *Austroads Guide to Road Design Part 4A (2010) Figure 7.5 'Type BAR'* (copy enclosed) should be provided adjoining the westbound travel lane in Sewells Creek Road opposite the proposed vehicular access.
- Safe Intersection Sight Distance (SISD) requirements outlined in the *Austroads Guide to Road Design Part 4A* are to be provided at the vehicular access to the development from Sewells Creek Road.
- The applicant is to arrange with Oberon Council for the installation of "Trucks Turning" signs (W5-205) on Sewell Road at each approach to the extractive industry/waste management facility vehicular access. The signs are to be within 230 - 280 metres either side of the access and removed upon closure of the development.
- To provide suitable storage capacity for the largest class of vehicle accessing the extractive industry, any gate, grid or similar structure installed in the access needs to be setback appropriately (20m for rigid truck and dog trailer) from the edge of Sewells Creek Road.

Roads and Maritime Services

51-55 Currajong Street Parkes NSW 2870 |
PO Box 334 Parkes NSW 2870 DX 20256 |

www.rms.nsw.gov.au | 13 22 13



Please forward a copy of Council's determination of the development application to Roads and Maritime at the same time it is sent to the applicant.

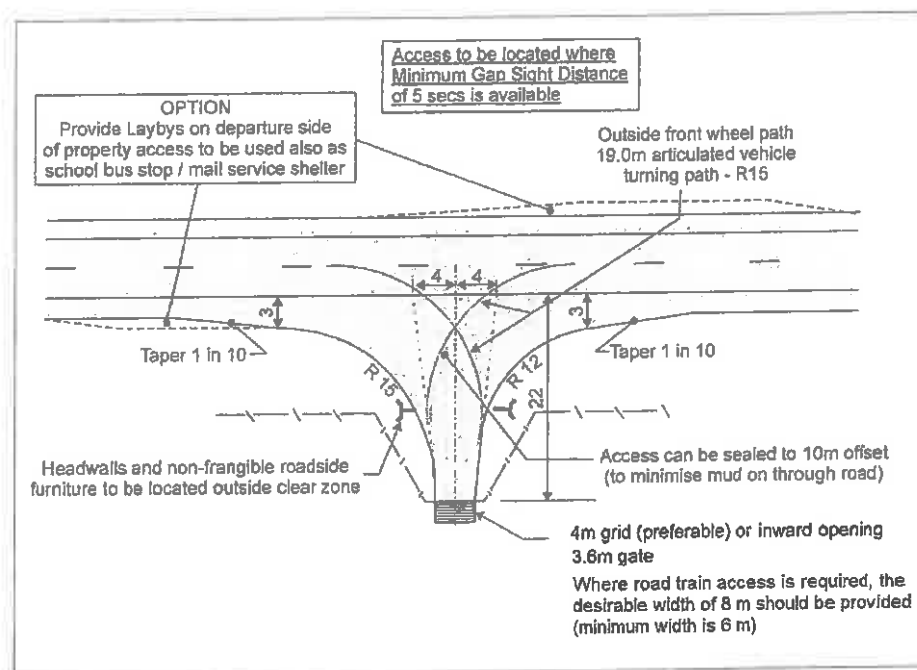
Should you require further information please contact the undersigned on 02 6861 1453.

Yours faithfully



Andrew McIntyre
Acting Network & Safety Manager
Western

GUIDE TO ROAD DESIGN PART 4: INTERSECTIONS AND CROSSINGS – GENERAL



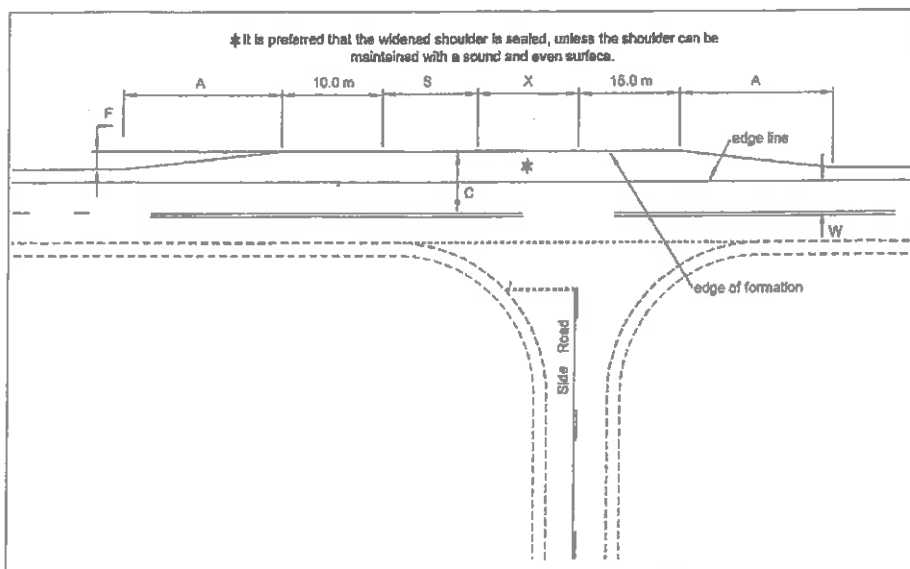
Note: Minimum requirement for a single carriageway with design AADT <2000 or minimum requirement for dual carriageway left-in – left-out access for single unit truck. Where AADT >1000 and access is required for a semi-trailer then use the layout.
Source: Based on Austroads (2009).

Figure 7.4: Example of a rural property access specifically designed for articulated vehicles on a two-lane two-way road

Austroads 2009

— 58 —

Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections



Notes:

1. This treatment applies to the right turn from a major road to a minor road

2. The dimensions of the treatment are defined thus:

W = Nominal through lane width (m) (including widening for curves). Width to be continuous through the intersection.

C = On straights – 6.5 m minimum

7.0 m minimum for Type 1 & Type 2 road trains

On curves – widths as above + curve widening (based on widening for the design turning vehicle plus widening for the design through vehicle).

A = $\frac{0.5VF}{3.6}$

Increase length A on tighter curves (e.g. those with a side friction demand greater than the maximum desirable). Where the design through vehicle is larger than or equal to a 19 m semi-trailer the minimum speed used to calculate A is 80 km/h.

V = Design speed of major road approach (km/h).

F = Formation/carrageway widening (m).

S = Storage length to cater for one design turning vehicle (m) (minimum length 12.5 m).

X = Distance based on design vehicle turning path, typically 10–15 m.

Source: QDMR (2006)

Figure 7.5: Basic right (BAR) turn treatment on a two-lane rural road

Protection of the Environment Operations Act 1997

General Terms of Approval - Issued



Notice No: 1543962

The General Manager

Oberon Council

PO Box 84

OBERON NSW 2787

Attention: Ms Jaclyn Burns

Notice Number 1543962

File Number EF13/4935: DOC16/412620-01

Date 07-Sep-2016

Dear Mr Wallace

OBERON EARTHMOVING PTY LIMITED - DEVELOPMENT APPLICATION 10.2016.38.1
Issued pursuant to Section 91A(2) Environmental Planning and Assessment Act 1979

I refer to the development application and the supporting documentation originally received by the Environment Protection Authority (EPA) on 16 June 2016 for the proposed extractive, crushing, waste storage and resource recovery operations at the Middle Creek Quarry located at 50 Sewells Creek Road, Oberon (the Proposal).

The EPA has reviewed the abovementioned information and the five (5) public submissions and has determined that it is able to issue an environment protection licence for the Proposal, subject to a number of conditions. The proponent will need to make a separate application to the EPA to obtain this environment protection licence should consent be granted by Oberon Council.

The EPA's General Terms of Approval (GTAs) for this Proposal are provided at **Attachment A**. If Oberon Council grants development consent for this proposal then these conditions should be incorporated into the consent.

It should be noted that the EPA's Central West Region has adopted more streamlined GTAs to avoid conflicts with development approvals, to limit the need for ongoing modifications to development approvals for small matters that are the responsibility of the EPA and to provide the EPA with greater flexibility regarding site specific environmental conditions to be placed on any environment protection licence.

The EPA has also provided at **Attachment B** for Oberon Council and the Proponent's reference, more specific conditions that would be present on the environment protection licence if consent is granted (noting that all environment protection licences contain general conditions for all licensees). However these conditions should not be included in the consent document, unless deemed necessary for Oberon Council's own specific purposes.

These GTAs relate to the Proposal as described in the development application and accompanying information currently held by the EPA. In the event that the Proposal is modified either by the proponent prior to the granting of consent or as a result of the conditions proposed to be attached to the consent

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and/or environment protection licence, it will be necessary to consult with the EPA about the changes before the consent is granted. This will enable the EPA to determine whether its GTAs need to be modified in light of the changes.

Please note that the EPA is yet to receive payment from the proponent of the \$320 integrated development fee for this project (clause 253, *Environmental Planning and Assessment Regulation 2000*). The EPA requests that Oberon Council pursue the Proponent for this fee.

Should you have any enquiries regarding this matter please contact Mr Andrew Helms at the Central West (Bathurst) Office of the EPA by telephoning (02) 6332 7604.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Darryl Clift'.

DARRYL CLIFT
Head Central West Unit
Environment Protection Authority
(by Delegation)

Attachment A: General Terms of Approval
Attachment B: EPA's specific licence conditions

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ATTACHMENT A EPA's GENERAL TERMS OF APPROVAL RECOMMENDED CONDITIONS OF DEVELOPMENT CONSENT

1. Except as expressly provided by these General Terms of Approval (GTAs) or by any conditions of consent granted by Oberon Council or the conditions of an in-force environment protection licence issued by the Environment Protection Authority, works and activities must be carried out in accordance with the proposal contained in:
 - the Development Application 10.2016.38.1 submitted to Oberon Council; and
 - any other additional information provided to Council.
2. Should any conflict exist between the abovementioned documents, the most recent document or revision supersedes the conflict, except where superseded by any conditions of approval issued by Council or the conditions of an in-force environment protection licence issued by the Environment Protection Authority.
3. The Proponent must apply for and hold an in-force environment protection licence issued by the Environment Protection Authority prior to the Proponent carrying out any scheduled activities under the *Protection of the Environment Operations Act 1997* as proposed.
4. Management plans:

The following management plans must be prepared and implemented within 3 months of development consent being granted and prior to the commencement of any surface disturbance:

 - i. Surface water and sediment management plan. This plan must be prepared in accordance with the requirements for such plans outlined in the document *"Managing Urban Stormwater: Soils and Construction (Landcom, 2004)"* and *"Managing Urban Stormwater: Soils and Construction - Volume 2E - Mines and Quarries (DECC, 2008)"*;
 - ii. Air quality management plan (including impacts and controls for dust and odour);
 - iii. Waste handling and compost management plan (incorporating all requirements contained within the EPA document - *"Environmental Guidelines: Composting and Related Organics Processing Facilities (DEC, July 2004)"*); and
 - iv. Blast management plan.
5. Hours of Operation:

Construction Activities: Construction activities related to the Proposal must only be undertaken during the following hours:

 - 7 am to 6 pm, Monday to Friday;
 - 8 am to 1 pm, Saturday; and
 - At no time on Sunday's or Public Holiday's.

Except where superseded by the condition above, construction activities must be undertaken in accordance with the "Interim Construction Noise Guidelines" (DECC, 2009) or any revision.

Operational Activities: Operational activities related to the Proposal may only be undertaken during the following hours:

- 7:00 am to 6:00 pm, Monday to Saturday; and
- at no time on Sundays or Public Holidays.

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6. Weighbridge:

The Proponent must have in place and operate a calibrated weighbridge to record the volume of all waste brought on to the premises.

7. Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.
8. The internal quarry access/haulage road must be maintained in a condition that prevents or minimises the emission into the air of air pollutants (which includes dust).
9. All trucks and mobile plant operating within the premises must be fitted (where there is a requirement for such devices to be fitted under the Work Health and Safety legislation) with broad-spectrum reversing alarms.

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ATTACHMENT B EPA's SPECIFIC LICENCE CONDITIONS

Limit conditions:

Hours of operation:

Hours of Operation (Construction Activities): Construction activities related to the Proposal must only be undertaken during the following hours:

- 7 am to 6 pm, Monday to Friday;
- 8 am to 1 pm, Saturday; and
- At no time on Sunday's or Public Holiday's.

Except where superseded by the condition above, construction activities must be undertaken in accordance with the "Interim Construction Noise Guidelines" (DECC, 2009) or any revision.

Hours of Operation (Operational Activities): Operational activities related to the Proposal may only be undertaken during the following hours:

- 7 am to 6 pm, Monday to Saturday; and
- At no time on Sunday's or Public Holidays.

Pollution of Waters:

Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation of the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with.

For each discharge point or utilisation area established under this license specified in the table/s below, the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentrations limits specified for that pollutant in the table.

Where a pH quality limit is specified in the Table, the specified percentage of samples must be within the specified ranges.

To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants.

Pollutant	Units of measure	50% concentration limit	90% concentration limit	100% concentration limit
Oil & grease	milligrams per litre			10
pH	pH			6.5-8.5
Total suspended solids	milligrams per litre			50

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Noise:

Noise generated by Operational Activities at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 5 of the table below for that point during the corresponding time periods specified in Column 2 when measured using the corresponding measurement parameters listed in Column 3.

Noise Monitoring Point	Time Period	Measurement Parameter	Measurement Frequency	Noise Level
Any sensitive receivers	Day	LAeq (15 minute)	-	39 dB(A)

Note: The above noise limits do not apply at any sensitive receivers where the licensee has a written agreement with the sensitive receiver to exceed the noise limits.

The noise limits set out above apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at ground level; or
- Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at ground level; or
- Stability category G temperature inversion conditions.

To determine compliance with the LAeq (15 minute) noise limits above, the noise measurement equipment must be located:

- approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
- within 30 metres of a dwelling façade, but not closer than 3 metres where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or
- where applicable, within approximately 50 metres of the boundary of a National Park or Nature reserve.

Blasting:

The overpressure level from blasting operations at the premises must not exceed 115 dB (Lin Peak) for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

The overpressure level from blasting operations at the premises must not exceed 120 dB (Lin Peak) at any noise sensitive location at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5 mm/sec for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10 mm/sec at any noise sensitive location at any time. Error margins associated with any monitoring

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equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

Note: "Noise Sensitive Locations" include buildings used as a residence, hospital, school, child care centre, place of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.

Blasting operations at the premises may only take place between 9:00am and 5:00pm Monday to Friday (excluding public holidays). Where compelling safety reasons exist, the Authority may permit a blast to occur outside the abovementioned hours. Prior written (or facsimile) notification of any such blast must be made to the Authority.

Waste:

The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	Treated drilling mud	As defined in the "Treated Drilling Mud Order 2014"	Waste storage Composting Resource recovery	NA
NA	Excavated natural material	As defined in Schedule 1 of the POEO Act as in force from time to time	Waste storage Composting Resource recovery	NA
NA	Wood waste	As defined in Schedule 1 of the POEO Act as in force from time to time	Waste storage Composting Resource recovery	NA

The authorised amount of waste permitted on the premises cannot exceed 135,000 tonnes per annum.

Operating conditions:

Licensed activities must be carried out in a competent manner. This includes:

- the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

All plant and equipment installed at the premises or used in connection with the licensed activity:

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- must be maintained in a proper and efficient condition; and
- must be operated in a proper and efficient manner.

Dust

Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission emissions of dust from the premises.

Trucks entering and leaving the premises that are carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading

Odour

No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

Waste

Composting activities must be undertaken in accordance with the EPA guideline document "*Environmental Guidelines: Composting and Related Organics Processing Facilities* (DEC, July 2004)".

All waste storage and composting areas must be isolated from the balance of the quarry premises to prevent both run-on and run-off of surface water.

All waste storage and composting areas must have a leachate barrier system that forms a secure barrier between the groundwater, soil and substrata and the composting or stored organics. Acceptable leachate barriers include those methods described in section 5.2 of the "*Environmental Guidelines: Composting and Related Organics Processing Facilities* (DEC, July 2004)".

Leachate collection ponds must be constructed in accordance with section 5.4 of the "*Environmental Guidelines: Composting and Related Organics Processing Facilities* (DEC, July 2004)" including the requirement to have a clay or modified soil liner consisting of at least 900 mm of recompacted clay with an in-situ permeability (K) of less than 10^{-9} ms^{-1} .

Monitoring and recording conditions:

For each monitoring/discharge point specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

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Water and/ or Land Monitoring Requirements

Pollutant	Units of measure	Frequency	Sampling method
Oil and Grease	Milligrams per litre	Monthly during discharge	Grab sample
pH	pH	Monthly during discharge	Grab sample
Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample
Total organic carbon	Milligrams per litre	Monthly during discharge	Grab sample
Nitrogen (ammonia)	Milligrams per litre	Monthly during discharge	Grab sample
Biochemical oxygen demand	Milligrams per litre	Monthly during discharge	Grab sample

Air monitoring requirements

Pollutant	Units of measure	Frequency	Sampling method
Particles - Deposited Matter	grams per meter squared per month	Monthly	AM-19

Monitoring for the concentration of a pollutant emitted to the air required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development must be done in accordance with:

- any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or
- if no such requirement is imposed by or under the POEO Act 1997, any methodology which the general terms of approval or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or
- if no such requirement is imposed by or under the POEO Act 1997 or by the general terms of approval or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Monitoring Records

The results of any monitoring required to be conducted by this licence must be recorded and retained as set out in this condition.

All records required to be kept by this licence must be:

- a) In legible form, or in a form that can readily be reduced to legible form;
- b) Be kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) Produced in a legible form to any authorized officer of the EPA who asks to see them.

The following records must be kept in respect of any samples required to be collected for the purposes of

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this licence:

- a) The date(s) on which the sample was taken;
- b) The time(s) at which the sample was collected;
- c) The point at which the sample was taken; and
- d) The name of the person who collected the sample.

Recording of pollution complaints

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

- the date and time of the complaint;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- the nature of the complaint;
- the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made.

The record must be produced to any authorised officer of the EPA who asks to see them.

Telephone complaints line

The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

The preceding two conditions do not apply until 3 months after the date of the issue of this licence.

Reporting conditions:

Annual Return documents

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- a Statement of Compliance; and
- a Monitoring and Complaints Summary.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

An Annual Return must be prepared in respect of each reporting period, except as provided below.

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Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Where this licence is transferred from the licensee to a new licensee:

- the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of their reporting period and ending on:

- in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- in relation to the revocation of the licence - the date from which notice revoking the licence operates.

The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA. Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- the licence holder; or
- by a person approved in writing by the EPA to sign on behalf of the licence holder.

Notification of environmental harm

Notifications (of environmental harm) must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the POEO Act.

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Written report

Where an authorised officer of the EPA suspects on reasonable grounds that:

- where this licence applies to premises, an event has occurred at the premises; or
- where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

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and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

The request may require a report which includes any or all of the following information:

- the cause, time and duration of the event;
- the type, volume and concentration of every pollutant discharged as a result of the event;
- the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- any other relevant matters.

The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

Other reporting conditions

Annual Waste Summary Reporting:

The licensee must complete and submit to the EPA an Annual Waste Summary Report each financial year.

The Annual Waste Summary Report must be submitted to the EPA via the Waste and Resource Reporting Portal (WARRP) within 60 days of the end of the financial year.

General conditions:

A copy of this licence must be kept at the premises to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Appendix 2

Summary of Public Submissions

(Total No. of pages including blank pages = 8)

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OBERON COUNCIL

137-139 Oberon Street
PO Box 84
OBERON NSW 2787



ABN 13 632 416 736

Telephone: (02) 6329 8100
Fax: (02) 6329 8142
email: council@oberon.nsw.gov.au
Website: www.oberon.nsw.gov.au

Contact: Jaclyn Burns
Your Ref:
Our Ref: PR11-50 JB:VM

12 August 2016

Oberon Earthmoving Pty Ltd
PO Box 105
OBERON NSW 2787

Dear Sir/Madam,

I refer to Designated Development Application 10.2016.38.1 for an extractive industry and waste management facility on Lot 2 in DP 1112479, being known as 50 Sewells Creek Road, Oberon.

The application was publicly exhibited from the 14 June 2016 to the 18 July 2016. All adjoining and adjacent landowners and occupiers were notified of the proposal, provided copies of the plans and supporting documentation and given an opportunity to make a submission. Five (5) written submissions were received in response raising objections to the proposal. A summary of the issues raised in the submissions are attached to enable your response and/or action.

Should you wish to discuss this matter further please don't hesitate in contacting me on (02) 6329 8100.

Yours Sincerely

Jaclyn Burns
Health and Building Manager

Attachment: Submissions report

DA 10.2016.38.1 – Designated Development - Extractive Industry and Waste Management Facility.

Lot 2 in DP: 1112479, 50 Sewells Creek Road, Oberon

SUBMISSIONS REPORT – WITHOUT PREJUDICE

The development application was publicly exhibited from 14 June 2016 to 18 July 2016. All adjoining and adjacent landowners and occupiers were notified of the proposal, provided copies of the plans and supporting documentation and given the opportunity to make a written submission. Five (5) written submissions were received in response raising objections to the proposal.

SUMMARY OF ISSUES RAISED

Submission Number	Issue
1	<u>Noise</u> : Proximity to development will create additional ongoing noise and blasting will create periodic peaks in noise which will disturb our current ambience.
	<u>Impact from blasting</u> : Our groundwater bore used for stock water is located approximately 50 metres from our Sewells Creek Road boundary and 500-600 metres from the development site. The underground vibration may cause permanent disruption to the water supply which will severely impact on our ongoing farming operation. Vibration from the blasting may also cause disturbance to the foundations of buildings.
	<u>Contamination</u> : with waste material being imported to the project site we remain concerned about potential contaminants contained in the waste material. Dust emissions from the site, including possible contaminated dust emissions are a major health concern. Plans do not detail control measures for dust emissions and ongoing monitoring of the site would be required.
	<u>Traffic</u> : an increase in truck movements to service the facility will impact our access from Sewells Creek Road. We are concerned about trucks turning right from Abercrombie Road onto Sewells Creek Road causing an accident with the current poor configuration of the intersection.
	<u>Visual Aesthetics</u> : the proposed development is not in keeping with the rural outlook and will be a blight on the current landscape.
2	<u>Initial Quarry</u> : The initial quarry was established without fanfare and with out notice or consultation with local residents. In the short operation it has imposed noise, dust and traffic on its neighbours. We submit that the quarry should not operate there, nor have been approved in the first place. It is not capable now of avoiding being a nuisance and it should not be allowed to continue to operate, let alone expand. The quarry activities that are currently operating are at odds with the rural amenity of the area.
	<u>Detail</u> : no reliable discussion is capable of being made about this application owing to the lack of detail therein. One evident limitation is the restriction of the field survey to the project site. There is nothing unique about the resource and consequently the quarry does not need to be located at this specific site.
	<u>Not a modification</u> : the proposal vastly expands the current operation including a completely new aspect (waste management) and increasing the land used from 2 to 15 hectares with an operation period of decades. It is incorrect to call the development a "proposed modification to the currently approved operations". It is clearly far more than that and incorporates a completely new unapproved enterprise.
	<u>Scale</u> : the development includes crushing and screening, and extraction and

	production of up to 150,000 tonnes per annum. There will be raw mulch and imported clay with treated drilling mud for "stockpiling and sale" or quarry rehabilitation. The waste materials are to be treated, blended, screened and composted. These activities can be expected to generate further noise, disturbance and traffic both within the site and to the site in trucks.
	<u>Noise</u> : the unusual and disruptive noise will be detrimental in the rural area especially in consideration of the proposed operating hours from 6.30 in the morning and continue throughout the day until early evening for 6 days per week for the next 20 years.
	<u>Odours and air borne particles</u> : there is acknowledged potential odours arising from the site. Our property is within 1 km of the site's boundary. The winds can be strong. During the dry lead up to Christmas dust generated at the site was noticeable.
	<u>Air quality</u> : the report acknowledges there will be "dust generation". It will be close to several unspecified residences. Air quality is crucial to the amenity of our home. It is fundamental to our quiet enjoyment of our property and absolutely necessary for occupation. Dust generation cannot exceed GPA assessment criteria. The developers say this is "unlikely". This is again unquantified.
	<u>Pollution and water quality</u> : there is an acknowledged but unquantified risk of run off and consistently pollution of land or water "off the project site". Our property is immediately downhill from the site. Water quality is crucial to our breeding operations and our pastures and gardens.
	<u>Aesthetics</u> : the application states that visibility is dominated by the MDF factory facility and the "dense vegetation of Essington State Forest". This statement is misleading the Oberon setting is rural. The Essington State Forest will be harvested. It is located between our property and the proposed expansion area. When the pines are removed the facility will become an eyesore. The effects of the forest harvesting have not been considered by the developer. Noise, air quality, rural amenity, erosion, run off these things that must individually or in combination risk being far worse for those on the other side of the forest when it is removed.
	<u>Traffic</u> : there is to be an increase in traffic, particularly heavy vehicles. The developer states the increase in volume is "small" this is unquantified. No numbers are specified for B doubles and truck trailers. The gradient at Sewells Creek Road will exacerbate the truck noise up and down the turn into Sewells Creek Road from Oberon, the entrance into the quarry and exit will cause challenges for local and tourist drivers.
	<u>Tourism</u> : tourist traffic along Mayfield Gardens or generally engaging in country Oberon can be expected to increase as it has in recent years. Haulage will be 24 hours a day. This is not consistent with rural ambience. The ripping, drilling and exploding is slated to start at 6.30 am and be ongoing for 12 hours a day for 6 days per week.
	<u>Isolation</u> : the application states that the site is in "relative isolation". We disagree. It is not isolated, not even "relatively".
	<u>Threatened Species</u> : there is an abundance of wildlife and a robust and varied bird population in the area.
	<u>Socio – economic balance</u> : the socio-economic balance is unconvincing. No actual job numbers, costings or case is put. The application acknowledges a number of problems presented to neighbours and the community by the proposal. All are effectively unquantified and un-researched.
3	<u>Access</u> : the entry road to Sewells Creek Road is in a dangerous position especially when travelling on Sewells Creek Road from a westerly direction. It is on a blind bend with no draw off lane and unbroken centre lines. As it enters Sewells Creek Road on an incline trucks are moving very slowly for a considerable distance.
	<u>Dust</u> : the access road generates considerable dust in the drier months and in the wetter times trucks bring mud onto the bitumen surface of Sewells Creek road. The EIS does not address noise or dust emissions or adequately address run off,

	especially after summer storms.
	<u>Weigh Bridge:</u> There appears no provision for a weigh bridge or weighing of the materials before they leave the site. The type of material indicated in the EIS will vary considerably in weight depending on weather conditions. A road levy should be considered by Council.
	<u>Visual Impact:</u> the EIS does not address the visual impact of the development when viewing it from the west where our property is situated.
4	<u>Detrimental impact on tourism:</u> Local scenic roads form an introduction to the landscape in the form of quiet country roads that lead to Mayfield Garden. The development proposal has identified several potential impacts on this landscape. These include but are not limited to: • A large increase in heavy truck traffic on the local road network; • Visual impact resulting from the removal of a clearly visible ridge line; • Development of an industrial landscape within a scenic landscape vista; • Risks of noise emissions that may on occasions exceed acceptable criteria established in NSW; • Risks of dust emissions that may on occasions exceed acceptable criteria established in NSW; • Occasional blasting events that would be heard and felt over an extensive area; • Development of a proposal that accepts waste materials from the region with no guarantees that this waste does not include contaminants which may harm surface and groundwater resources in the valley. These issues are in direct completion with a successful tourism strategy for the region. The visual panorama available to tourists on their drive to Mayfield Gardens would be impacted by a potential industrial landscape with dust and noise that may on occasions run on a 24 hour seven day a week basis. The need to widen roads leading to the quarry may involve removal of natural tree lined corridor which would reduce the scenic landscape quality. Tourists would not be attracted to an area which is accessed via roads which have significant heavy traffic on relatively narrow country roads.
	<u>Additional heavy traffic:</u> the development will operate receivals and dispatch of trucks on a 24 hour basis. The number of trucks is not specifically limited and as such the development has the potential to significantly increase heavy truck traffic. Local road users would be exposed to road safety issues that has been identified by the current use of two-way communication between gravel truck operators and the local bus driver. The road safety issue is not presented in detail in the submission. The proposal has predicted a 33 percent increase in heavy traffic on Abercrombie Road. This would involve a predicted increase of 40 trucks per day directly associated to the quarry operations. With the total number of heavy vehicles to be generated from the site to be 100 per day in addition to other service and staff vehicles. Sewells Creek Road is not discussed in detail in the report. An estimate of daily traffic is provided; however, this estimate is limited in its ability to provide an appropriate assessment of the impact of potentially an additional 40 heavy trucks per day more. Sewells Creek Road is a narrower road than Abercrombie Road. The development proposal submission does not include a Traffic Impact Statement which assesses these issues and more specific issues in relation to road use, road geometry and traffic conflict. The heavy vehicle use of the local road network by trucks carrying materials to and from the quarry throughout the night is of concern. Mayfield Road is accessed via Sewells Creek Road from the southern end. Mayfield Road is not discussed in the development submission. The use of Mayfield Road as a short cut to the North has the potential to reduce travel distances to and from the quarry site for projects located to the North of the quarry. Mayfield Road is a local, mostly single country lane road. It is not considered suitable for heavy vehicles.

	Grey nomads form a significant part of rural tourism the generation of significant heavy traffic from the quarry would soon deter these tourists in the region.
	<u>Dust and noise emissions:</u> the potential for significant dust and noise would impact upon the local region's landscape qualities. The quarry and waste management operation "predicts" that low dust levels will be generated; however, there is no guarantee that dust emissions will be controlled. The submission identified 2mm water per day on internal roads to manage dust. Evaporation rates exceed this amount throughout the year and therefore the amount of water will dissipate under regular traffic. There is also potential for windblown dust when the water truck is not in use. Dust emissions from the quarry and waste management operations on internal works are considerable. The crushing process is a dry process light misting of water during this process has a limited ability in dust suppression. The quarry proposal does not incorporate any other proposals to conduct the process of primary and secondary processing of aggregate. This process does not incorporate a dust capture mechanism. The proposal requires modelling to indicate that the dust generated on site will disperse within a reasonable buffer. On this basis, the predictions of limited dust emissions from the site into the surrounding area are considered questionable. It is suggested that if Council wish to approve the proposal, the quarrying and processing phases of the operation should incorporate appropriate dust collection mechanisms or alternatively be incorporated in an enclosed structure. The development submission has used assumptions and not specific data records. To suggest that it is acceptable to change the local regional dust deposition rates from a guideline figure of 2gm/square metre per month to a maximum of up to 4 gm/square metre per month is considered unacceptable when it is possibly the case the case that existing dust deposition rates are well below the acceptable state criteria. Such criteria may be acceptable for a metropolitan landscape but are not considered acceptable for a rural landscape with few other dust sources. The dust would potentially create layers of dirt over the entirety of Mayfield Garden which would significantly impact on the visual quality of the gardens and could impact on the vista. Background noise levels are low as there are no industrial sources in the vicinity. It is noted that noise generated by the quarry is predicted to meet the NSW guideline levels. However the averaging of these noise levels excludes noise peaks that would exceed background levels. The noise assessment should include current equipment used on site in addition to other new equipment to be introduced to the site. The proposal outlines a staging for the quarrying activities which would include heavy equipment. It is unclear if the use of this equipment at the top of the ridge has been considered in the noise impact assessment. Noise disturbance resulting from quarry operations is considered a significant concern for Mayfield Gardens.
	<u>Hours of operation:</u> the impacts associated to the operation of a 24 hour basis are considered significant in the local area. The significance is considered to generate both social and physical impacts. Impacts include traffic and peak or short term noise and intrusions within a landscape environment that has at present little or no activity other than light vehicles on local roads. Visual impacts of 24-hour operations would include industrial type lighting. The quarry is located on the top of a hill and lighting would be visible for an extensive distance. This would also be exacerbated by truck traffic lights. The 24 hour operation plan appears to include assumptions that truck drivers can work a 24 hour period and therefore no stoppages occur. On this basis it is indicated that 24 hour operations would not involve any truck traffic peaks for morning or evening periods where shift changeover would occur.
	<u>Impact of waste processing:</u> Materials of concern that are referred to in the development proposal include "drillers mud". The lack of detail in the information

	presented in the report is of concern. The proposal provides some indication that the source may be construction project sites. But the documentation does not specifically state that this will be the only source. Therefore the drillers mud may come from other sources such as coal seam gas and a wide range of other materials from investigative sites. The proposal suggests that a process of quality control would be introduced. The proposal does not refer to specific testing of each and every load on the basis of the type of drilling undertaken, the type of chemicals for example, prior to accepting the material. The proposal would also allow a wide range of spoil material from construction projects. The proposal does not exclude materials from construction sites where demolition materials are being generated. The proposal has an allowance of 30,000 tonnes per annum for construction waste which appears to be an excessive amount from the local area. On this basis, the project presents a potential high risk involving acceptance of storage waste soil and other material from a wide range of sites. The process of waste classification does not appear to be a vigorous component of the proposed development. No certainty is provided that the development would not accept delivery of contaminated waste including asbestos which may result in hazardous dust and fibre emissions during delivery and passive exposure of surrounding residents and visitors from these fibres. No specific details have been provided regarding the rock base of the site and if this rock base is fractured and if it is a recharge area for the local aquifer system. Neighbouring landholders rely on groundwater for stock enterprises as well as for Mayfield Gardens. Significant concerns are raised around the proponents intention to utilise the site for waste storage. The objection refers to the statement made regarding the applicants intention to make application (separate to the DA) to the EPA for a specific Resource Recovery Order Exemption for the gravel/fill product. On this basis the submission identifies that the long term plan for remediation or ongoing development on this site would involve a waste recycling component. The current proposal does not present a clear indication of the total tonnage limits of materials to be brought to site. The submission raises concerns regarding the scale of storage and handling of waste in addition to transportation and processing of material. It is unclear if these impacts have been incorporated in the assessment of the site in relation to noise, dust, odour, surface water, ground water pollution and transportation impacts. The proposal incorporates the construction of a HDPE lined pond for surface water runoff, however the proposal does not address groundwater. There is no liner under the waste storage area and therefore this would leave a direct exposure pathway to the ground water table below the site. This is considered as unsatisfactory when the applicant has clearly identified that the runoff from this material needs to be captured in a lined pond to prevent seepage.
	<u>Cumulative disturbance:</u> the submission identifies various major changes to the local environment that would result from the development including traffic impacts, traffic safety, road safety and general wear and tear on the road surfaces. The mitigation measures to resolve these impacts would result in road widening and improvements. It is unclear if the proponent will undertake these upgrades or will council cover the cost of works over the lifetime of the development. These road works may result in the loss of road side vegetation and a scenic loss to the landscape. Cumulative impacts of dust and noise emissions would result from the development proposal and potentially reduce the ambience of the local area. Cumulative pollution impacts have a direct socio economic impact on adjoining land owners. The proponent has not identified the cumulative impacts associated to the operation of both industries on site and if these cumulative impacts have been considered. The development will result in a 5,000,000 tonne hole in the ground off Sewells Creek Road. This is considered to be a significant visual blight on the current scenic landscape and significantly contrasts with the values of the land and surrounding

	farming community.
5	<u>Heavy Vehicle Traffic:</u> the development will bring significant heavy vehicle traffic to Sewells Creek Road and the greater Oberon area. This will introduce deterioration in road quality, increasing the need for regular repairs, therefore increasing expense to Oberon Council. This increase in traffic will also escalate the possibilities of serious high speed road accidents and potential fatalities and native animal road kill numbers.
	<u>Pollution:</u> this development would increase in pollution in the general, greater Oberon area. This has significant impact on the flora and fauna of the area and potentially Jenolan Caves and Mayfield which bring significant tourism to the area. This also impacts on the health and wellbeing of the residents of Oberon. The international Agency for Research on Cancer identified diesel engine exhaust as 'carcinogenic to humans, based on sufficient evidence that exposure is associated with an increased risk for lung cancer'. There would be significant noise pollution impacting on residential areas. This will also affect farming animals causing high levels of stress and anxiety. This could result in a deterioration of quality produce. The drilling and blasting will have momentous negative impact on both air and noise pollution as well as the extremely high possibility of affecting the bore water quality and supply to the surrounding, adjoining and adjacent land.

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