

OLD NORTHERN ROAD QUARRY NOISE MANAGEMENT PLAN

Dixon Sand Pty Ltd

FINAL

April 2020



OLD NORTHERN ROAD QUARRY NOISE MANAGEMENT PLAN

Dixon Sand Pty Ltd

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Dixon Sand Pty Ltd

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1.0 Introduction

1.1 Background

Dixon Sand Pty Ltd (Dixon Sand) operates the Old Northern Road Quarry (the quarry), a sand extraction and processing operation, located on Old Northern Road, Maroota in New South Wales.

The quarry has been in operation since the early 1980s with Dixon Sand operating the quarry since 1992.

The site covers approximately 58.4 hectares and includes Lot 29 DP752025, Lot 196 DP752025, Lot 1 DP547255 and Lot 2 DP547255 (refer to **Figure 1.1**). The quarry is located in the small rural community of Maroota which supports a number of other sand extraction operations. The quarry is a major supplier of mortar sands to the Sydney metropolitan market.

The quarry operates in accordance with Development Consent (DA) 250-09-01 issued by the Land and Environment Court in 2004. DA 250-09-01 has been subsequently modified on five occasions, most recently in 2017 under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

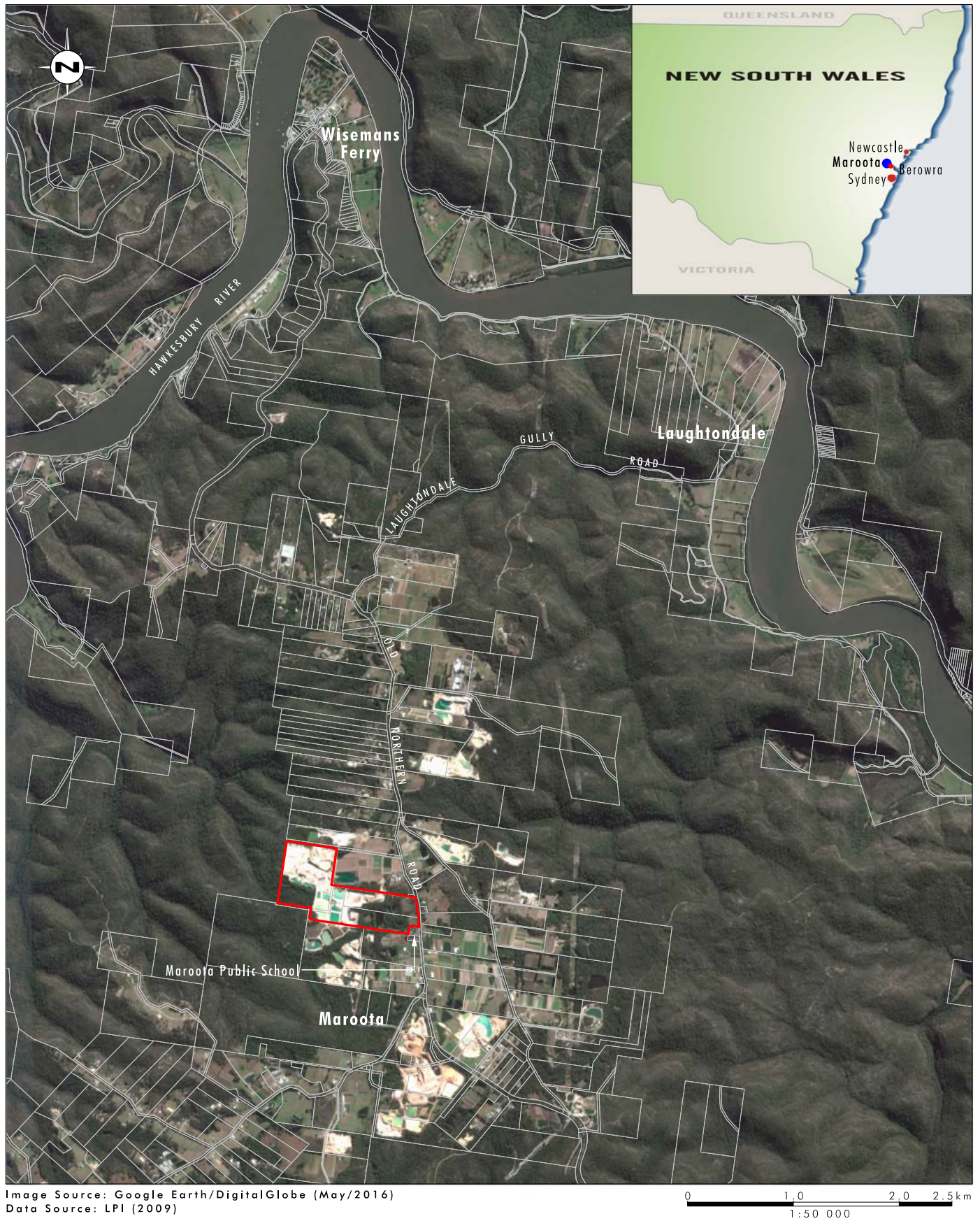
DA 250-09-01 permits the extraction and processing of up to 495,000 tonnes of quarry products per annum, including the processing of extractive material sourced from the Haerses Road Sand Quarry. The consent permits quarrying operations to be carried out on site until 24 May 2042, with continued receipt and processing of material from Haerses Road Sand Quarry permitted until 14 February 2046. The approved extraction areas are shown on **Figure 1.2**.

1.2 Purpose and Scope

The purpose of this Noise Management Plan (NMP) is to describe the noise management strategies, procedures, controls and monitoring programs to be implemented for the management of potential noise impacts arising from the operation of Old Northern Road Quarry. This NMP applies to Lot 29 DP752025, Lot 196 DP752025 and Lots 1 and 2 DP547255 as shown on **Figure 1.1**.

This NMP addresses the relevant requirements of the Development Consent and Environment Protection Licence (EPL) 3916. The DA conditions and Environmental Impact Statement (EIS) management commitments relevant to this plan are provided in **Section 2.1**. EPL 3916 licence conditions relevant to this plan are provided in **Section 2.2**. This plan also outlines the control measures to be implemented as part of the continued operations at the quarry to minimise the potential impacts on the local noise environment.

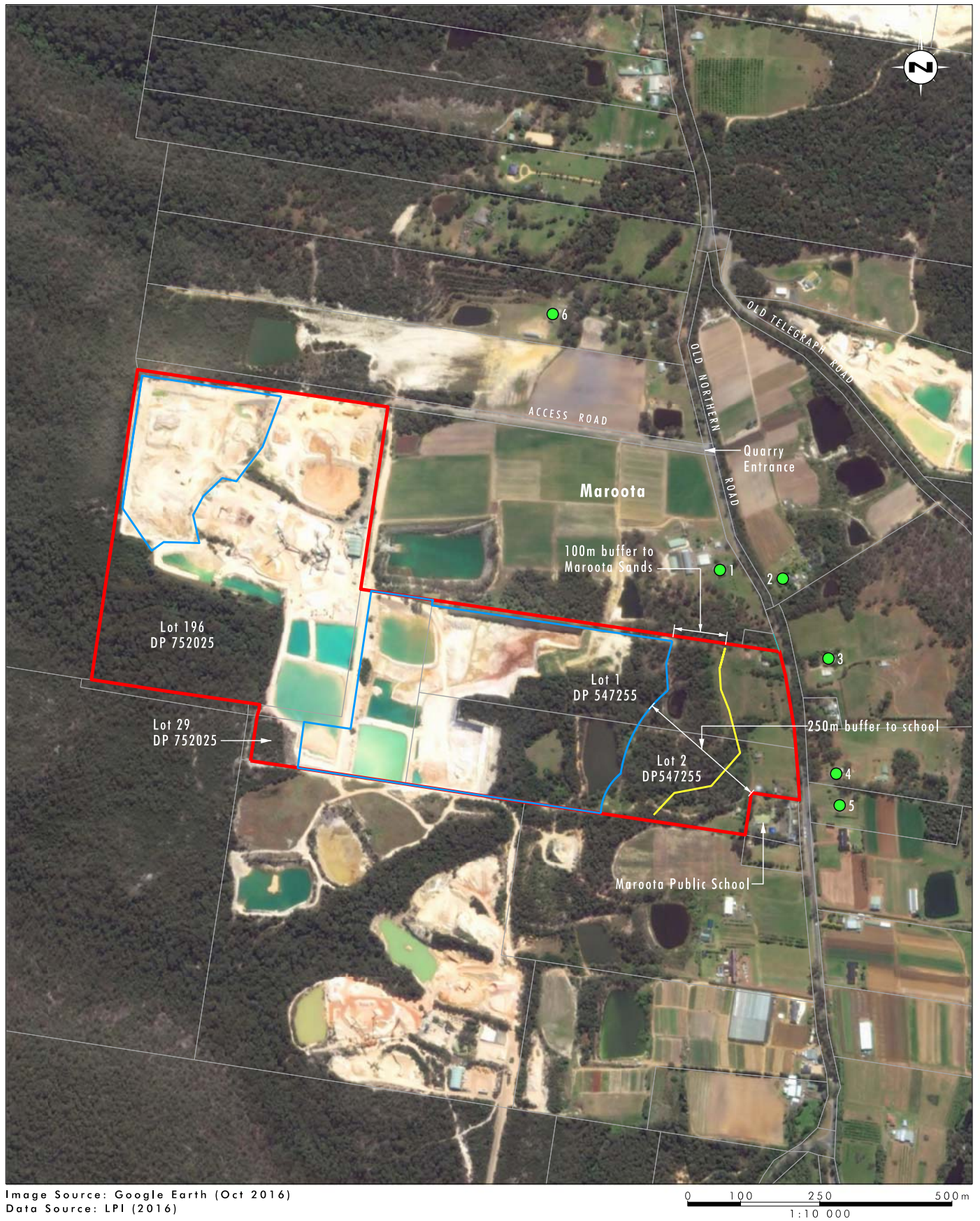
This NMP has also been developed in accordance with the requirements of the Department of Planning and Environment's (DPE) *Environment Management Plan Guidelines* (the guidelines). A checklist of where each condition has been addressed within this document is shown in **Appendix 1**.



Legend

Old Northern Road Quarry

FIGURE 1.1
Locality Plan



Legend

- Old Northern Road Quarry
- Approved Extraction Limits
- Limit of Maroota Tertiary Sands Groundwater Source
- Residence

FIGURE 1.2

Old Northern Road Quarry

2.0 Regulatory Requirements

2.1 Development Consent Conditions

Table 2.1 identifies the relevant noise related Development Consent conditions under DA 250-09-01 and where they have been addressed within this NMP.

Table 2.1 Noise Related Development Consent Conditions

Condition	Description	Section/s Addressed															
Schedule 3 – Specific Environmental Conditions																	
Hours of Operation																	
1	<p>The Applicant must comply with the operating hours set out in Table 1.</p> <p><i>Table 1: Operating hours</i></p> <table><tr><th>Activity</th><th>Permissible Hours</th></tr><tr><td rowspan="2">Quarrying operations (excluding truck arrival, loading and dispatch)</td><td>7.00 am to 6.00 pm Monday to Saturday</td></tr><tr><td>At no time on Sundays or public holidays</td></tr><tr><td rowspan="2">Truck arrival (unladen)</td><td>5.45 am to 6.00 pm Monday to Saturday</td></tr><tr><td>At no time on Sundays or public holidays</td></tr><tr><td rowspan="2">Truck loading Truck dispatch Truck arrival (laden)</td><td>6.00 am to 6.00 pm Monday to Saturday</td></tr><tr><td>At no time on Sundays or public holidays</td></tr><tr><td>Bund construction or rehabilitation works within 250 m of Maroota Public School</td><td>7.00 am to 6.00 pm Monday to Friday during school holiday periods unless otherwise approved in writing by the EPA</td></tr><tr><td>Maintenance</td><td>May be conducted at any time, provided that these activities are not audible at any privately-owned residence</td></tr></table>	Activity	Permissible Hours	Quarrying operations (excluding truck arrival, loading and dispatch)	7.00 am to 6.00 pm Monday to Saturday	At no time on Sundays or public holidays	Truck arrival (unladen)	5.45 am to 6.00 pm Monday to Saturday	At no time on Sundays or public holidays	Truck loading Truck dispatch Truck arrival (laden)	6.00 am to 6.00 pm Monday to Saturday	At no time on Sundays or public holidays	Bund construction or rehabilitation works within 250 m of Maroota Public School	7.00 am to 6.00 pm Monday to Friday during school holiday periods unless otherwise approved in writing by the EPA	Maintenance	May be conducted at any time, provided that these activities are not audible at any privately-owned residence	Section 5.0
Activity	Permissible Hours																
Quarrying operations (excluding truck arrival, loading and dispatch)	7.00 am to 6.00 pm Monday to Saturday																
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	At no time on Sundays or public holidays																
Bund construction or rehabilitation works within 250 m of Maroota Public School	7.00 am to 6.00 pm Monday to Friday during school holiday periods unless otherwise approved in writing by the EPA																
Maintenance	May be conducted at any time, provided that these activities are not audible at any privately-owned residence																
2	<p>The following activities may be carried out outside the hours specified in condition 1 above:</p> <p>a) Delivery or dispatch of material as requested by the NSW Police Force or other public authorities; and</p> <p>b) Emergency work to avoid the loss of lives, property or to prevent environmental harm.</p> <p>In such circumstances, the Applicant must notify the Secretary and affected residents prior to undertaking the activities, or as soon as is practical thereafter.</p>	Section 5.0															
3	<p>The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence or privately-owned land or at the Maroota Public School.</p> <p><i>Table 2: Noise criteria dB(A)</i></p> <table><tr><th>Receiver</th><th>Averaging Period</th><th>Shoulder (6.00 am to 7.00 am)</th><th>Day (7.00 am to 6.00 pm)</th></tr><tr><td>Any residence on privately owned land</td><td>L_{Aeq} (15 minute)</td><td>37</td><td>44</td></tr><tr><td>Any classroom at Maroota Public School</td><td>L_{Aeq} (1 hour)</td><td>-</td><td>45</td></tr></table> <p>Noise generated by the development is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.</p>	Receiver	Averaging Period	Shoulder (6.00 am to 7.00 am)	Day (7.00 am to 6.00 pm)	Any residence on privately owned land	L_{Aeq} (15 minute)	37	44	Any classroom at Maroota Public School	L_{Aeq} (1 hour)	-	45	Section 5.0 and 6.0			
Receiver	Averaging Period	Shoulder (6.00 am to 7.00 am)	Day (7.00 am to 6.00 pm)														
Any residence on privately owned land	L_{Aeq} (15 minute)	37	44														
Any classroom at Maroota Public School	L_{Aeq} (1 hour)	-	45														

Condition	Description	Section/s Addressed
	<p>Appendix 6 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.</p> <p>However, the noise criteria in Table 2 do not apply if the Applicant has an agreement with the relevant landowner to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.</p> <p><i>Note: Should an agreement with a landowner be terminated for any reason, the Applicant must comply with the noise criteria in Table 2.</i></p>	
Operating Conditions		
4	<p>The Applicant must:</p> <ul style="list-style-type: none"> a) Construct all bunds on the eastern, south-eastern and northern sides of Lots 1 and 2 DP 547255 to at least 5 metres above the existing ground level; b) Not use the bulldozer concurrently with any other plant on strips 4, 5 and 5 of Lots 1 and 2 DP 547255 for any operations at quarry depths between existing ground level and 6 metres below the existing ground level; c) Only use the bulldozer for clearing, topsoil stripping and bund construction on Lots 1 and 2 DP 547255 in calm wind conditions; d) Implement best practice management to minimise the construction, operational and road transportation noise of the development; e) Minimise the noise impacts of the development during meteorological conditions when the noise criteria in this consent do not apply (Appendix 6); f) Engage an independent person/s to conduct noise monitoring at sensitive residential locations and Maroota Public School every 6 months, or as otherwise agreed by the Secretary, to determine whether the development is complying with the relevant conditions of this consent; and g) Regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent to the satisfaction of the Secretary. <p><i>Note: Required frequency of noise monitoring may be reduced if approval by the Secretary. Refer to the figure in Appendix 2 for the locations of the bunds and strips.</i></p>	Sections 5.0 and 6.0
5	<p>In the event that noise from the site exceeds the noise criteria in Table 2, or a negotiated agreement with landowner is terminated for any reason, then the Applicant must actively manage noise in excess of the criteria at the affected receptor. The Applicant must:</p> <ul style="list-style-type: none"> a) Implement a reactive management system where site operations are modified in adverse weather conditions identified through meteorological monitoring; b) Implement additional controls or treatments on individual sources on the site, or otherwise modify operations to ensure compliance; or c) Provide other forms of benefit or amelioration of noise impacts agreed between the Applicant and the affected party, as providing acceptable compensation for noise levels experienced; and d) Identify long term strategies to eliminate noise levels that exceed the noise criteria in Table 2. 	Whole Document

Condition	Description	Section/s Addressed
Noise Management Plan		
6	<p>The Applicant must prepare a NMP for the development to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> a) Be prepared in consultation with the EPA; b) Be submitted to the Secretary for approval within 3 months of the approval of Modification 5, unless otherwise agreed by the Secretary c) Describe the measure to be implemented to ensure: <ul style="list-style-type: none"> • Compliance with the noise criteria and operating conditions of this consent; • Best practice management is being employed; and • The noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 6); d) Describe the proposed noise management system; e) Include a noise monitoring program that: <ul style="list-style-type: none"> • Is capable of evaluating the performance of the development; • Includes a protocol for determining any exceedances of the relevant conditions of this consent; • Includes specific program to be implemented in the event that noise from the site exceeds the noise criteria in Table 2, including, as a minimum, the measure described in condition 5 above; and • Effectively supports the noise management system. <p>The Applicant must implement the NMP as approved by the Secretary.</p>	Whole Document
Appendix 6 – Noise Compliance Assessment		
3.	<p>A noise compliance assessment must be undertaken within 3 months of the approval of Modification 5. The assessment must be conducted by a suitably qualified and experienced acoustical practitioner and must assess compliance with the noise criteria in Table 2. A report must be provided to the Secretary and EPA within 1 month of the assessment.</p>	Section 6.4

2.1.1 EIS Environmental Management Commitments

In accordance with Condition 2 Schedule 2 of the Development Consent, the quarry must be developed and operated generally in accordance with the environmental impact assessment (EIA) reports prepared for the development and subsequent modifications. **Table 2.2** summarises the safeguards and management controls relating to noise management that have been identified in the EIA reports prepared for DA 250-09-01.

Table 2.2 Relevant EIS Noise Management Commitments

Source	Description	Section/s Addressed
EIS Section 5.1.2 (ERM 2001)	A 3 metre high noise bund is proposed along the northern boundary of Lot 1. The bund will be built progressively with each extraction stage	These requirements have been superseded by Schedule 3 Condition 4 of the Development Consent, which requires all bunds on the eastern, southern and northern sides of Lots 1 and 2 to be constructed to a height of at least 5 metres
	Construction of a 3 metre high bund to the east and north of each strip prior to its extraction	
	Annual monitoring of noise levels to check compliance with predicted levels and compliance with noise criteria	Section 6.0
	Monitoring of truck movements in accordance with the consent	Traffic Management Plan Section 6.0
EA MOD 3 Section 4.5 (Nexus Environmental Planning (NEP) 2011)	Dixon Sand will retain the existing noise attenuation wall located inside the eastern boundary of Lot 29. The wall will remain in place until extraction on Lot 29 has ceased.	This requirement has been completed. Extraction finished on Lot 29 and the bund has been removed.

2.2 Environment Protection Licence

Noise monitoring will be undertaken in accordance with the conditions of Environment Protection Licence (EPL) 3916. The EPL was issued by the Environment Protection Authority (EPA) under the *Protection of the Environment Operations (POEO) Act 1997* on 15 March 2001 for sand extraction operations at 4610 Old Northern Road, Maroota.

A list of the EPL conditions relating to noise monitoring and an indication of where they are addressed within this document are included in **Table 2.3**.

Table 2.3 Relevant Environment Protection Licence Conditions

Condition	Description	Section/s Addressed
L4.1	Noise from the premises must not exceed: a) An LAeq (15 minute) noise emission criterion of 44 dB(A) between 7.00 am to 6.00 pm Monday to Saturday; and b) An LAeq (15 minute) noise emission criterion of 37 dB(A) between 6.00 am to 7.00 am Monday to Saturday; At any nearby residence not owned by the licensee.	Sections 4.0, 5.0 and 6.0
L4.2	Noise from the premises must not exceed an LAeq (1 hour) noise emission criterion of 45dB(A) at the most affected classroom of Maroota Public School.	Sections 4.0, 5.0 and 6.0
L4.3	The noise limits identified in condition L4.1 & L4.2 apply under meteorological conditions of: a) Wind speeds up to 3 meters per second at 10 meters above ground level; and b) Temperature inversion conditions up to 30C per 100 metres	Sections 4.1 and 6.0

Condition	Description	Section/s Addressed
L4.4	For the purpose of assessment of noise levels specified in this licence, noise from the premises shall be measured at: a) The most affected point on or within the receptor site boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary to determine compliance with LAeq (15 minute) noise limits in condition L4.1; and b) 1 metre from the dwelling façade of the most affected classroom to determine compliance with LAeq (1 hour) noise limit in condition L4.2; Subject to the modification factors provided in Section 4 of the NSW Industrial Noise Policy (EPA,2000).	Section 6.0
L4.5	Notwithstanding condition L4.4, should direct noise measurement from the site be impractical, the licensee may employ alternative noise assessment methods deemed acceptable by the EPA (refer to Section 11 of the <i>NSW Industrial Noise Policy</i> (EPA, 2000)	Section 6.0
L4.6	Noise limits identified in condition L4.1 do not apply for residential premises where there is a negotiated agreement between the licensee and the landowner of the premises	Section 6.0
L5.1	Unless otherwise approved in writing by the EPA, construction of proposed earth bunds around the Maroota Public School setback perimeter, required for the mitigation of noise and dust, must only be carried out between 7.00 am and 6.00 pm Monday to Friday during school holiday periods	Section 5.0
L5.2	Loading of trucks and truck movements at the site must only be carried out between 6.00 am and 6.00 pm Monday to Saturday, and at no time on Sundays and Public Holidays. All other activities at the premises covered by this licence must only be carried out between the 7.00 am and 6.00 pm Monday to Saturday, and at no time on Sundays and Public Holidays.	Section 5.0

2.3 Guidelines, Policies and Standards

Dixon Sand will undertake environmental monitoring in accordance with the following guidelines, policies and standards applicable to noise management at the quarry:

- Noise Policy for Industry (EPA, 2017)
- NSW Industrial Noise Policy (EPA, 2000)
- NSW Road Noise Policy (DECCW, 2011) and associated Application Notes
- NSW Draft Construction Noise Guidelines (EPA 2017) and Interim Construction Noise Guidelines (2009)
- AS IEC 61672.1-2004 Electroacoustics – Sound level meters – Specifications
- AS1055.1:1997 Acoustics – Description and Measurement of Environment Noise – General Procedures.

2.4 Stakeholder Consultation

In accordance with Condition 6 of Schedule 3 of the Development Consent, this NMP has been prepared in consultation with the EPA and The Hills Shire Council. A copy of correspondence provided by the EPA and The Hills Shire Council is provided in **Appendix 2** and a summary of the issues raised and how these were addressed is provided in **Table 2.4**.

Table 2.4 Summary of Issues Raised During Agency Consultation

Issue	Response
The Hills Shire Council	
No objection	Noted
EPA	
As substantial noise conditions have been put in place under the DA and EPL, the EPA has not reviewed the Noise Management Plan, but encourages the proponent to implement the plan.	Noted

2.5 Further Studies

There are no requirements under the Development Consent to undertake any further studies relevant to the NMP.

2.6 Hold Points

No noise related hold points are applicable to the operation of the quarry.

3.0 Existing Noise Environment

The quarry is located within a primarily rural environment. Agricultural and extractive industry land uses are located to the north and south of the site, with Maroota Public School located to the east and large areas of forested land to the west. The dominant noise sources in the area are associated with traffic from Old Northern Road, agricultural activities and noise from surrounding extractive operations.

3.1 Sensitive Receivers

The locations of sensitive receivers surrounding the quarry are shown on **Figure 3.1**.

Maroota Public School is located adjacent to the eastern boundary of the quarry. In accordance with Schedule 2 Condition 15 of the Development Consent, a 250 metre buffer zone has been established between the approved extraction area and the school. In addition, any bund construction or rehabilitation works to be undertaken within the 250 metre buffer zone will be undertaken only during school holiday periods unless otherwise approved by the EPA.

Six (6) privately owned residences are located to the east and the north of the quarry along Old Northern Road. There is also one house associated with the development which is located in the north eastern corner of the site. This house is owned by Dixon Sand.

3.2 Ambient Noise Levels

Ambient noise levels were established in 1998 as part of an Environmental Impact Statement (EIS) undertaken for quarrying activities on Lots 29 and 196 (Southern Environmental 1999). These ambient noise levels were utilised in the 2001 EIS for DA 250-09-01 (ERM 2001 - Section 4.7). Rating background levels (RBLs) were calculated from the logged data in accordance with the EPAs Industrial Noise Policy (EPA 2000) and are presented in **Table 3.1**.

Table 3.1 Adopted Rating Background Levels

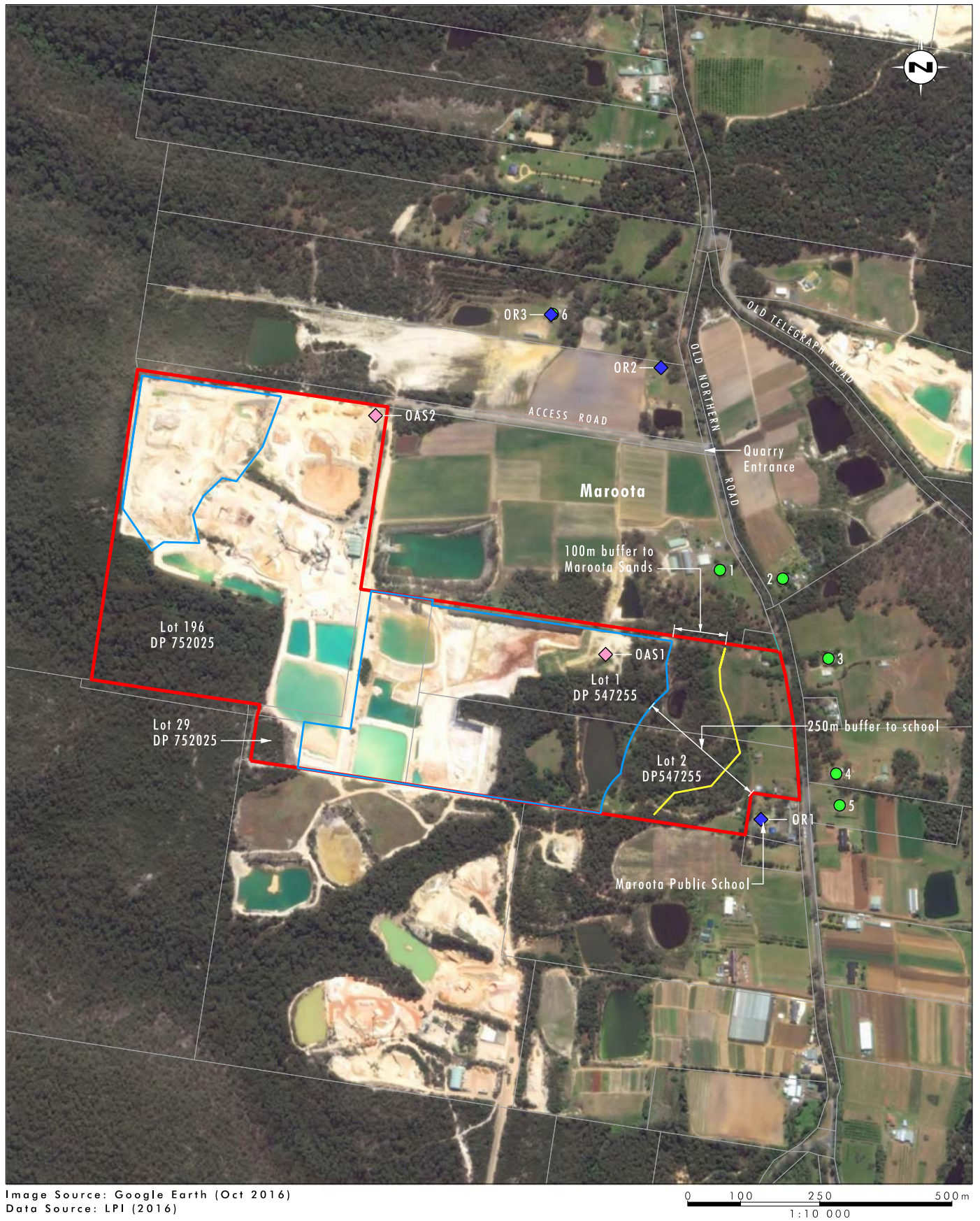
	Shoulder Period (6.00am – 7.00am)	Daytime Period (7.00am – 6.00pm)
RBL	37.5 dB(A)	39.2 dB(A)

3.3 Quarry Plant, Equipment and Vehicles

The following fixed and mobile plant generally operates on the Old Northern Road Quarry site:

- Main processing plant, stackers and feed-in bins located on Lot 196,
- Mobile screens and crushers,
- Excavators,
- Bull Dozers,
- Front End Loaders,
- Dump Trucks,

- Tele-handler,
- Forklift,
- Mobile fuel truck and trailer,
- Light vehicles, and
- Client's haulage trucks



Legend

- Old Northern Road Quarry
- Approved Extraction Limits
- Limit of Maroota Tertiary Sands Groundwater Source
- Residence
- ◆ At-source Noise Monitoring Location
- ◆ Attended Noise Monitoring Location

FIGURE 3.1

Noise Monitoring Locations

4.0 Noise Criteria

Noise criteria for the quarry are established by Schedule 3 Condition 3 of the Development Consent and conditions L4 of EPL 3916. The criteria are consistent between the Development Consent and EPL 3916 and are provided in **Table 4.1**.

Table 4.1 Noise Criteria dB(A)

Receiver	Averaging Period	Shoulder (6.00am to 7.00 am)	Day (7.00 am to 6.00 pm)
Any residence on privately owned land	L _{Aeq} (15 minute)	37	44
Any classroom at Maroota Public School	L _{Aeq} (1 hour)	-	45

Note: *Consent Conditions under Table 4.1 do not apply to landowners that have signed the private and/or noise agreements.*

4.1 Noise Criteria – Exemptions

In accordance with Schedule 3 Condition 3 of the Development Consent, noise generated by the development is to be measure in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy. Appendix 6 of the Development Consent sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with the criteria. In particular, the noise criteria do not apply under the following conditions:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- Temperature inversion conditions between 1.5°C and 3°C/100 m and wind speed greater than 2 metres/second at 10 metres above ground level; or
- Temperature inversion conditions greater than 3°C/100 metres.

Schedule 3 Condition 3 also confirms that the noise criteria outlined in **Table 4.1** do not apply if Dixon Sands has an agreement with the owner/s of the relevant residents to exceed the noise criteria, and the Department has been advised in writing of the terms of this agreement.

Table 4.2 Negotiated Agreements

Receiver	Address	Department Advised of Agreement
Mr G & Mrs M Accurso	Lot 117 DP 752025 (4590 Old Northern Road, Maroota NSW 2756)	The Letter of Agreement between Mr G & Mrs M Accurso and Dixon Sand (Penrith) Pty Ltd forms Annexure D to the DA250-09-01. Agreement dated 5 April 2004.

Should an agreement with a landowner be terminated for any reason, Dixon Sand will comply with the noise criteria outlined in **Table 4.1**.

5.0 Noise Management Measures

5.1 Proactive Management Measures

Dixon Sand is committed to implementing all reasonable and feasible measures to minimise the potential noise impacts of the operation on nearby sensitive receivers.

A range of noise management and mitigation measures are utilised at the quarry to limit the generation of noise and mitigate noise impacts. A summary of these measures is provided in **Table 5.1**.

Table 5.1 Noise Management Measures

Management or Mitigation Measure	Timing	Responsibility	Performance Indicator
Construction of noise bunds along the eastern, south-eastern and northern sides of Lots 1 and 2 to at least 5 metres above the existing ground level	Ongoing, prior to commencement of each stage	Quarry Manager/ Environmental Officer	Bund construction completed to at least 5 metres above ground level prior to commencement of extraction of each stage
Compliance with approved hours of operation	Ongoing	Quarry Manager/ Environmental Officer	Weighbridge dockets
Undertake noise monitoring in accordance with the noise monitoring program (Section 6.0)	Six monthly attended noise monitoring	Environmental Officer	Monitoring reports
Regular maintenance of road surfaces, vehicles and equipment to reduce noise emissions	Ongoing	Quarry Manager/ Environmental Officer	Maintenance records
Enforcement of speed limits for trucks and limited use of exhaust brakes in residential and school areas	Ongoing	Quarry Manager	Complaints register
Enforcement of 20km/hr speed limit on quarry access road and haul roads	Ongoing	Quarry Manager	Induction records
Switch off plant when not in use and use of automatic idle shutdown	Ongoing	Quarry Manager	Induction records
Bulldozer not to be used concurrently with any other plant on strips 4, 5 and 6 of Lots 1 and 2 DP547255 at depths between EGL and 6 metres below EGL	Ongoing	Quarry Manager	Site Condition Checklist records Complaints register
Bulldozer to only be used for clearing, topsoil stripping and bund construction on Lots 1 and 2 DP547255 during calm wind conditions	Ongoing	Quarry Manager	Site Condition Checklist records Complaints register

Management or Mitigation Measure	Timing	Responsibility	Performance Indicator
Between 0-6 metres depth below EGL, dozer-dump truck combination to be replaced by excavator-dump truck combination to strip overburden on Strips 2-6 inclusive	Ongoing	Quarry Manager	Site Condition Checklist records Complaints register
Quarrying at ground level on Lot 196 to cease during southwest to northwest winds	Ongoing	Quarry Manager/ Environmental Officer	Site Condition Checklist records Complaints register
Construction and rehabilitation of eastern highwall of quarry within 250 metres of Maroota Public School to occur in school holiday periods only	Ongoing	Quarry Manager/ Environmental Officer	Site Condition Checklist records Complaints register
Ensuring all new equipment is procured against a specification for noise emission to meet noise criteria at the nearest private residences for total operations	Ongoing	Quarry Manager/ Environmental Officer	Procurement records

5.1.1 Training and Awareness

All personnel and contractors working at the quarry will undergo an induction. This induction includes information on the management of noise while working on site.

After completing the induction, workers will sign a statement of attendance and records of this are kept in the administration office.

Tool-box meetings are held to discuss whole-of-site production, management, safety and environmental issues. Matters relating to noise are raised during these meetings, when necessary.

5.2 Reactive Management Measures

In addition to the operational controls outlined in **Section 5.1**, specific reactive management measures will be implemented in response to identified triggers. Noise triggers and responses are outlined in **Table 5.2** below.

Table 5.2 Noise Triggers and Responses

Trigger	Response/Corrective Action
Receipt of noise complaint	<p>Following a complaint, appropriate action will be taken within 2 working days to determine the cause of the complaint and identify appropriate actions to remediate the complaint source. The following details will be recorded:</p> <ul style="list-style-type: none"> • The date and time of the complaint • Method by which the complaint was made • Personal details of the complainant which were provided by the complainant • Nature of the complaint • Action taken in relation to the complaint, including follow up with the complainant; and • If no action taken, the reasons why no action was taken.

Trigger	Response / Corrective Action
	<p>All complaints will be investigated and an appropriate response provided to the complainant. The investigation may include the following:</p> <ul style="list-style-type: none"> • A review of monitoring data (if available) relevant to the time of the complaint • A review of the activities and/or equipment being carried out or operated at the time of the complaint • A review of whether activities outside the normal 'day-to-day' operations were being carried out on site at the time of the complaint • A review of whether any activities or extraordinary events/conditions in the locality may have contributed to the complaint • Recommendation of any actions that may be carried out to resolve the complaint and/or minimise the likelihood of further complaints.
Noise criteria exceedance	<p>If noise monitoring indicates that noise exceeds the approved, the following responses and action plan will be implemented:</p> <ul style="list-style-type: none"> • After identifying an exceedance, the Environmental Officer (or delegated representative) will review meteorological conditions at the time of the exceedance to assess whether these represent conditions for which the noise criteria do not apply (as identified by the NSW Industrial Noise Policy) • The Environmental Officer, in consultation with the Quarry Manager, will immediately investigate the source of the noise, review the performance of equipment and if necessary make arrangements to alter the configuration of equipment, or stand down specific equipment, so that the noise levels are reduced to achieve compliance with the noise criteria. • If meteorological conditions were such that the noise criteria did not apply, the Environmental Officer will document the exceedance including the relevant meteorological conditions. • Following confirmation of an exceedance of noise criteria, the Quarry Manager (or delegated representative) will immediately notify DP&E and the EPA of the exceedance and actions being taken to remediate or reduce noise emissions. • Within 7 days of becoming aware of the exceedance occurring, the Quarry Manager will submit a detailed report to DP&E. • Notification of environmental harm will be made in the first instance by telephoning the EPA's Environment Line on 131 555. Dixon Sand will also provide written details of the incident to the EPA within 7 days of the date on which the incident occurred when requested. • Within 2 weeks of confirmation of an exceedance of noise criteria, the Quarry Manager will notify in writing any affected landowners or tenants. • Any exceedance of the noise criteria will be reported in the Annual Review. • In the event of ongoing or regular exceedances of the noise criteria, the Environmental Officer, in consultation with the Quarry Manager will investigate the feasibility of any reasonable additional controls or treatments on individual noise sources within the quarry, or other long term means of reducing noise levels to comply with the noise criteria. This could include additional attenuation of individual noise sources, replacement of items of plant or equipment with quieter models or construction of acoustic bunds. • Where reasonable additional controls or treatment are unfeasible or unable to reduce noise levels to comply with the noise criteria, the Quarry Manager will, in consultation with the affected sensitive receiver, investigate options for receiver based noise controls or treatments, and/or acceptable compensation for the noise impacts experienced.

Trigger	Response / Corrective Action
Emergency event requiring operations outside approved hours	<p>In the event that deliveries or despatch are requested outside approved hours of operation by Policy or other public authority, or emergency work is required to avoid the loss of lives, property or to prevent environmental harm, the Quarry Manager will act appropriately to ensure the safety of employees and the local community and to seeks to prevent environmental harm.</p>
Adverse or extraordinary metrological conditions	<p>As noted in Section 4.1, noise criteria do not apply under the meteorological conditions noted in Appendix 6 of the Development Consent. Despite, this, during periods when these meteorological conditions are forecast or observed, the Quarry Manager will modify operations to minimise potential noise impacts as much as practically possible. This may include but is not limited to:</p> <ul style="list-style-type: none"> • Turning off or limiting operation of mobile equipment or fixed plant, • Redirecting operations to more sheltered areas within the extraction area, and/or • Moving equipment to lower elevations.

6.0 Noise Monitoring

Noise monitoring requirements for the operation are provided in Condition 4(g) of Schedule 3 of the Development Consent. Noise generated by the quarry is to be measured in accordance with the relevant requirements and exemptions of the NSW *Industrial Noise Policy* (EPA 2000).

The quarry noise monitoring program will be used to:

- Evaluate the performance of the quarry and any noise management strategies implemented by the quarry
- determine compliance with the noise criteria for the quarry.

6.1 Meteorological Monitoring

Meteorological monitoring is required to be undertaken in accordance with Schedule 3 Condition 10 of the Development Consent and in accordance with the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* guideline.

Meteorological data is sourced from the Dixon Sands weather station located adjacent to Maroota Public School.

6.2 Attended Noise Monitoring

Dixon Sands will engage an independent person/s to conduct noise monitoring at sensitive residential locations and Maroota Public School every six months, or as otherwise agreed by the Secretary, to determine whether the development is complying with the noise criteria outlined in **Section 4.0**.

In addition to six-monthly noise monitoring, the following additional attended noise monitoring will be undertaken:

- During adverse weather conditions following the completion of noise bunds on strips 4, 5 and 6 of Lots 1 and 2 DP547255
- when new equipment is introduced; and
- ongoing community liaison and noise complaints monitoring as required.

6.3 Noise Monitoring Locations

Dixon Sands will undertake attended noise monitoring at the locations and receivers outlined in **Table 6.1** and shown in **Figure 3.1**.

Sensitive receiver monitoring at locations OR1, OR2 and OR3 is undertaken in both the day-time period (between 7.00 am and 6.00 pm) and during the shoulder period (between 6.00 am and 7.00 am). At-source noise monitoring is undertaken at OAS1 and OAS2.

Table 6.1 Noise Monitoring Locations

Receiver	Address	Location of Monitoring
OR1	Maroota Public School	Classroom closest to Quarry operations
OR2	4624 Old Northern Road, Maroota	Private Residence
OR3	4634 Old Northern Road, Maroota	Private Residence
OAS1	Lots 1 and 2	Operations
OAS2	Lot 196	Operation

Monitoring at the sensitive receiver locations specified in **Table 6.1** will consist of operator-attended noise measurements over 15 minute periods in accordance with the relevant requirements and exemptions of the NSW Industrial Noise Policy.

Sensitive receiver monitoring locations are subject to consultation and agreement with the occupant and may change subject to landholder agreement. In the event that access is not available to undertake sensitive receiver monitoring as described above, an alternative noise assessment method deemed acceptable by the EPA (refer to Section 11 of the *NSW Industrial Noise Policy* (EPA, 2000)) will be employed.

The results of the 6 monthly noise monitoring will be compared with the noise criteria defined in Condition 3 Schedule 3 of the Development Consent, taking into account the provisions of Appendix 6 of the Development Consent, to determine compliance. Attended monitoring will record:

- Operator's name
- Monitoring location
- Dates and times that monitoring began and ended at each location
- Distances to building facades or property boundaries
- Qualitative/quantitative meteorological data such as temperature, wind speed, wind direction, cloud cover, humidity, fog, and rainfall
- Instrument calibration details before and after the monitoring period
- Statistical noise level descriptors over the 15 minute interval
- Notes that identify the noise source that contribute to the peak noise levels (LA_{max}) and noise sources that contribute to the overall noise environment or for periods of time when a specific noise source is audible
- An estimate of the noise contribution from operations at the quarry or from other identifiable noise sources
- Data suitable for assessing the relative contribution of quarry-generated noise to the overall noise being measured

6.4 Noise Compliance Assessment

Appendix 6 of the Development Consent requires Dixon Sand to undertake a noise compliance assessment within 3 months of the approval of Modification 5. A noise compliance assessment was completed in December 2017 by a suitably qualified and experienced acoustical practitioner. The assessment demonstrated compliance with the noise criteria in **Section 4.0**. A Noise Compliance Assessment report was provided to the Secretary and EPA In December 2017.

7.0 Reporting

7.1 External Reporting

A summary of noise monitoring results and statements of compliance with Development Consent and EPL conditions will be provided in the quarry Annual Review and EPL Annual Return. The Annual Review will be prepared and submitted to the Secretary, in accordance with Condition 12, Schedule 5 of the Development Consent. The Annual Review will be made available to the public through the Community Consultative Committee (CCC) and the Dixon Sand web site (<http://www.dixonsand.com.au/>).

In addition, in accordance with Condition 15 Schedule 5 of the Development Consent, Dixon Sand will publish noise monitoring results on the Dixon Sand website.

A discussion of the effectiveness of the noise management measures utilised at the quarry will be reported to DPE in the Annual Review. The Annual Review will also identify whether any additional noise controls are required to be implemented at the quarry or whether there are any technological advancements in noise control which are suitable for implementation at the quarry.

Any investigations related to exceedances will be detailed in the Annual Review.

7.2 Noise Criteria Exceedance Reporting

Condition 9 Schedule 5 of the Development Consent requires any exceedances of limits/performance criteria within the approval to be reported to DPE immediately should the site record any exceedances of the criteria specified in **Section 4.0**.

Condition 10 Schedule 5 of the Development Consent requires Dixon Sand to prepare a written report of the exceedance within 7 days of the exceedance being reported. The written report must contain:

- a description of the date, time of the exceedance
- details of the nature (or likely cause) of the exceedance
- a description of actions taken to prevent re-occurrence
- identification of any non-compliance with the Development Consent.

In accordance with Condition 1 Schedule 4 of the Development Consent, in the event an exceedance of the noise criteria is identified and attributed to quarry activities, the quarry will notify DPE and any affected landowner(s) and provide regular monitoring results to each of these parties until results show the operation is complying with the relevant criteria.

7.3 Adaptive Management

In accordance with Condition 7 Schedule 5 of the Development Consent, the quarry will assess and manage noise related risks to ensure compliance with the criteria outlined in **Section 4.0**.

Where a non-compliance relating to noise criteria has occurred, Dixon Sand will, to the satisfaction of the secretary of the DPE:

- take all reasonable and feasible measures to ensure the exceedance ceases and does not recur

- consider all reasonable and feasible options for remediation (where relevant)
- submit a report to the DPE within 14 days of the exceedance describing those options and any preferred remediation measures or other course of action and
- implement remediation measures as directed by the Secretary of DPE.

7.4 Community Complaints

Complaints relating to noise from the quarry are to be managed in accordance with the requirements of the quarry EMS and the reactive management procedures outlined in **Section 5.2**. A register of complaints will be published on the Dixon Sand website and will be updated monthly. A summary of complaints will be provided in the Annual Review.

7.5 Independent Review

In the event a landowner considers the quarry is exceeding noise criteria at his or her property, the landowner may request an independent review of the noise impacts at the property. The independent review will be conducted in accordance with the procedure described in Condition 2 Schedule 4 of the Development Consent.

8.0 Review and Improvement

Ongoing monitoring and review on the performance and implementation of this NMP will be undertaken in accordance with the quarry EMS, which states that review of the plan will occur within 3 months of the submission of:

- incident report under Condition 10
- annual review under Condition 12
- Independent Environmental Audit report under Condition 14 and
- Any modifications to this consent.

The quarry will notify DPE in writing of any review of this NMP. Should a review lead to any revisions to this NMP, the revised document will be submitted to DPE within 6 weeks of the review. Updated versions of this NMP will be made publically available on the Dixon Sand website in accordance with Condition 15 Schedule 5 of the Development Consent.

9.0 Responsibilities

Environmental management at Dixon Sands will be the responsibility of all employees and contractors, with the Quarry Manager having overall responsibility for environmental management of the operations. Environmental roles and responsibilities for the project personnel are outlined below, with additional responsibilities contained within the respective environmental management plans. Environmental responsibilities are included in the position description of all employees.

General environmental responsibilities for key personnel at the quarry are outlined in **Table 9.1** below:

Table 9.1 Roles and Responsibilities

Role	Accountabilities for this document
Dixon Sands Managing Director	<ul style="list-style-type: none"> • Provide that sufficient resources are allocated for the implementation of this plan • Coordinate the review of this plan in accordance with the requirements of the Development Consent
Old Northern Road Quarry Manager	<ul style="list-style-type: none"> • Oversee the implementation of this plan • Have working knowledge of this plan • Ensure reviews of meteorological forecasts are undertaken on a daily basis prior to the commencement of operations • Coordinate the implementation of noise management measures and strategies in accordance with this plan (see Section 5.0) • Relocate or postpone relevant activities in the event of adverse weather conditions, where practical • Be aware of the environmental legislative requirements associated with the quarry and take measure to ensure compliance • Ensure employees are competent through training and awareness programs
Environmental Officer	<ul style="list-style-type: none"> • Coordinate the noise monitoring requirements of this plan • Evaluate and report monitoring results as required • Coordinate noise related incidents investigations and reporting as required by legislation and internal standards and guidelines • Provide primary contact for complaints and supply follow-up information to any complainant • Initiate investigations of complaints as received from the public or government agency • Prepare a report to government agencies or neighbours following a notifiable incident (see Section 7.0) • Inform the Quarry Manager of identified causes of elevated noise and any alterations to site operations that may or has influenced the noise • Undertaken regular review of this plan in accordance with the requirements of the Development Consent.
All employees and contractors	<ul style="list-style-type: none"> • Comply with all requirements in this Plan; • Report all potential environmental incidents to the Quarry Manager immediately • Operate in a manner that minimises risks of incidents to themselves, fellow workers or the surrounding environment • Seek approval from the Quarry Manager prior to making changes to infrastructure/processes which may result in increased noise risks. • Follow any instructions provided by the Quarry Manager • Follow all requirements relating to the management of noise within the Drivers Policy

10.0 Definitions

The terminology utilised within this NMP is defined in **Table 10.1** below.

Table 10.1 Definitions

Term	Definition
CCC	Community Consultative Committee
Development Consent	DA 250-09-01
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EPL	Environment Protection Licence
DA	Development Application
DPE	Department of Planning and Environment
Incident	An occurrence or set of circumstances that: <ul style="list-style-type: none"> Causes, or threatens to cause material harm to the environment; or results in non- compliance with the consent
OEH	Office of Environment and Heritage
RMS	Roads and Maritime Services
Secretary	The Secretary of the NSW Department of Planning and Environment, including any authorised delegate or nominee.
NMP	Noise Management Plan

11.0 References

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

Environmental Resources Management Australia Pty Ltd (ERM), 2001, *Proposed extension of sand extraction operations Lots 1 and 2 DP547255 Old Northern Road, Maroota, Environmental Impact Statement*, Report prepared for Dixon Sands (Penrith) Pty Ltd.

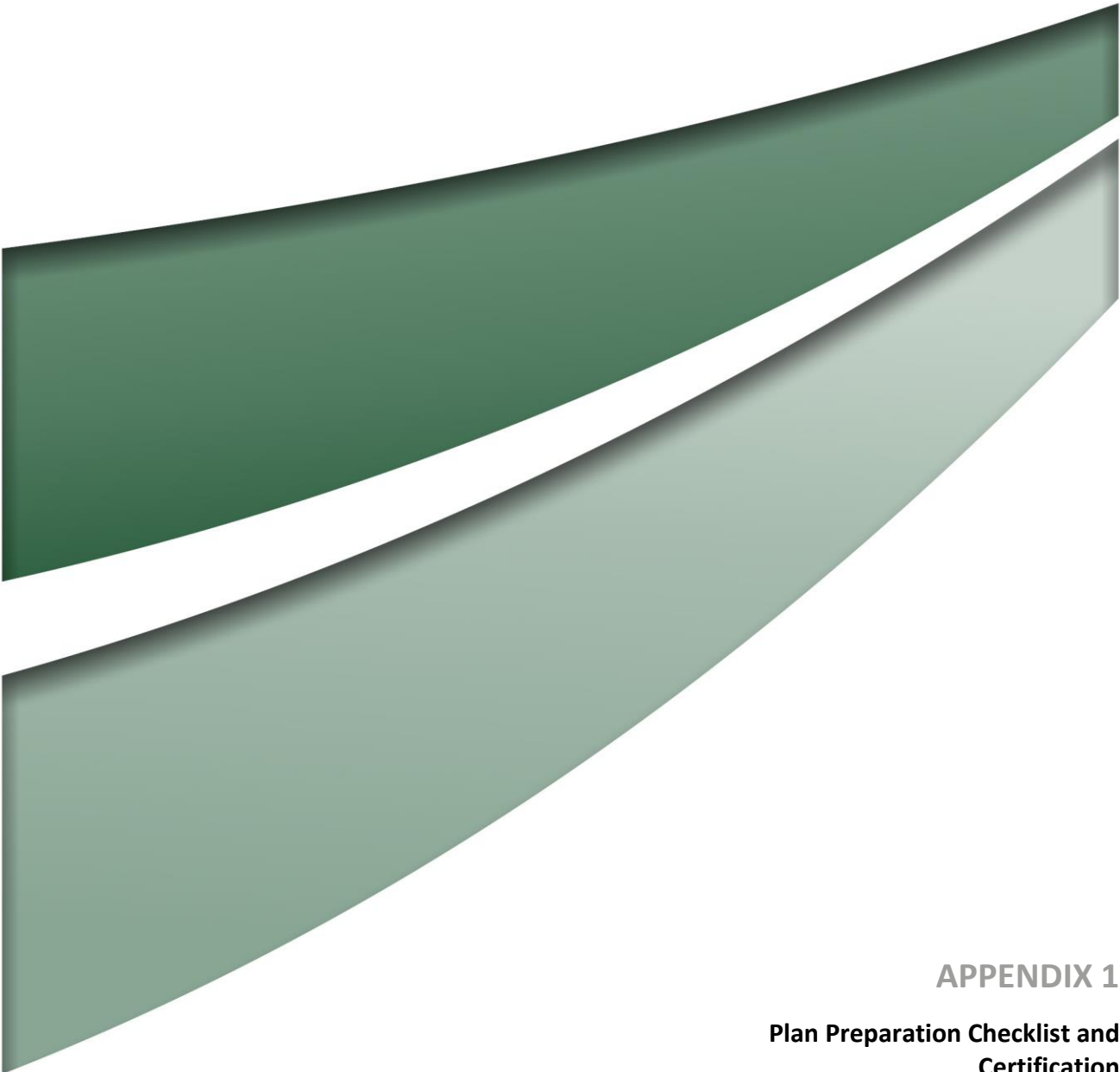
NSW EPA, 2015, *Environmental Protection Licence 3916*

NSW Environment Protection Authority, 1994. *Environmental Noise Control Manual*.

NSW Environment Protection Authority, 2000. *New South Wales Industrial Noise Policy*.

NSW Government Department of Planning and Environment, 2017, *Conditions of Consent DA No. 250-09-01*

Umwelt (Australia) Pty Ltd, 2017, *Environmental Assessment – Proposed Modification to DA 250-09-01 – Old Northern Road Quarry, Maroota*, Report prepared for Dixon Sands (Penrith) Pty Ltd



APPENDIX 1

Plan Preparation Checklist and Certification

Appendix 1 – Plan Preparation Checklist and Certification

The Environmental Management Plan Requirements guidelines state that the following checklist must be completed and supplied to the Department with an Environmental Management Plan (EMP) and Sub-plans.

Requirement	Plan Reference	Yes/No/NA
Document preparation and endorsement		
Has the Plan been prepared in consultation with all relevant stakeholders? (Section 3.1)	Section 2 and Appendix 2	Yes
Have the views of the relevant stakeholders been taken into consideration, have appropriate amendments been made to the Plan and does the Plan clearly identify the location of any changes? (Section 3.1)	Section 2 and Appendix 2	Yes
Has the Plan been certified on behalf of the proponent? (Section 3.2)	Appendix 1	Yes
Version content		
Does the Plan include the required version control information? (Section 2.3)	Doc Status	Yes
Does the Plan reference the project description as required in Section 2.4?	Section 1.0	Yes
Does the Plan identify the components of the project to which it applies (i.e. scope)? (Section 2.5).	Section 1.0	Yes
Does the Plan describe the proponent's Environmental Management System (EMS), and identify how the Plan relates to other documents required by the conditions of consent? (Section 2.6)		NA
Does the Plan identify continuous improvements processes from the EMS that will be adopted? (Section 2.6)	Section 8.0	Yes
Does the Plan include (unaltered) all the conditions of consent to be addressed by the Plan and identify where in the Plan each requirement has been addressed? (Section 2.7.1)	Section 2.1	Yes
Have all other additional approvals been identified? Has appropriate information been provided regarding how each additional approval is relevant? (Section 2.7.2)	Section 1.1 and 2.0	Yes
Have all relevant guidelines, policies and standards been identified, including details of how they are relevant? (Section 2.7.3)	Section 2.3	Yes
Has the project's organisational structure been included? (Section 2.8)		NA
Are the roles and responsibilities of key positions or personnel (including any specialists required by the conditions of consent) outlined? (Section 2.8)	Section 9.0	Yes
Is the process that will be adopted to identify and analyse the environmental risks included? (Section 2.9)		NA
Does the Sub-plan identify the relevant sections of the EIA documents that contain the assessment of the matter/s addressed by the Plan? (Section 2.10)	Section 2.1 and 3.2	Yes
Have all further studies required to support mitigating measures been identified and included? (Section 2.11)	Section 2.5	Yes

Requirement	Plan Reference	Yes/No/NA
Have project hold points been identified and included? (Sections 2.7.2 and 2.12)	Section 2.6	Yes
Have all mitigation measures from conditions of consent been included unaltered? (Section 2.13)	Section 2.0 and 5.0	Yes
Have any new mitigation measures been written in committed language and all relevant information included? (Section 2.13)	Section 5.0	Yes
Have the tools that will be used to communicate Plan requirements to project personnel been included? (Section 2.14)		NA
Is an environmental inspection program described as required? (Section 2.15.1)		NA
Are relevant details of environmental monitoring that will be carried out included? (Section 2.15.2)	Section 6.0	Yes
Is a compliance monitoring and reporting program (or similar) referenced? (Section 2.15.3)	Section 6.4	Yes
Is an independent auditing program referenced? (Section 2.16)		NA
Are project status notification protocols that comply with conditions included? (Section 2.17.1)		NA
Does the Plan reference a Community and Stakeholder Engagement Plan (or similar) or include community and stakeholder engagement actions (if required)? (Section 2.17.2)		NA
Does the document include the incident notification and reporting protocols that comply with the relevant conditions of consent? (Section 2.17.3)		NA
Does the document identify the project person or position that is responsible for deciding whether an occurrence is an incident? (Section 2.17.3)		NA
Does the document describe corrective and preventative action protocols that address the requirements? (Section 2.18)		NA
Does the document identify training and awareness programs as required? (Section 2.19)		NA
Does the document include details of a document review and revision process that complies with the requirements? (Section 2.20)		NA
Does the document include details of public availability requirements? (Section 2.21)		NA

Plan Preparation Certification

Document Certification Form

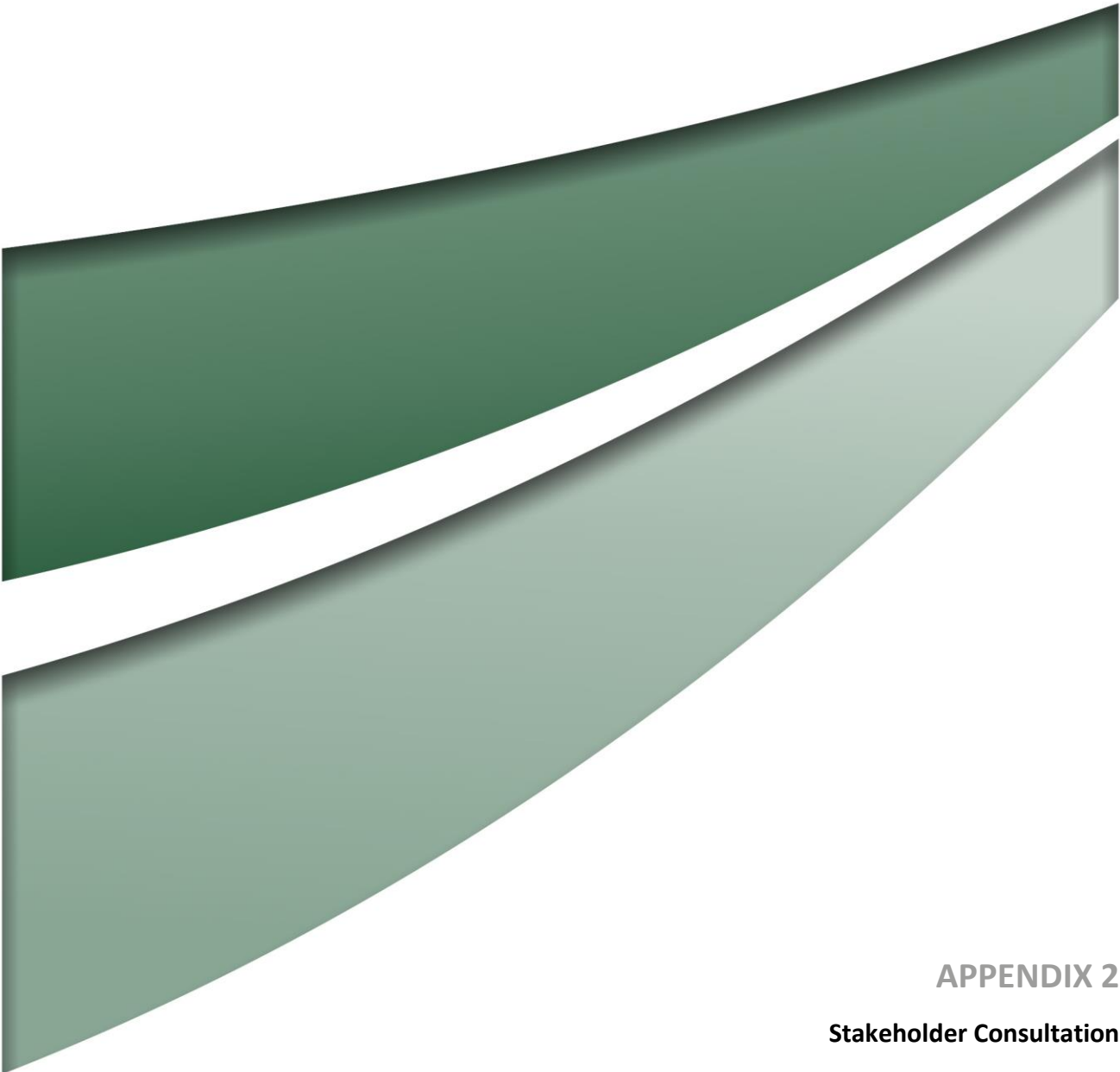
Project Name	Old Northern Road Quarry
Project Application Number	DA 250-09-01
Proponent	Dixon Sand Pty Ltd
Document Title	Old Northern Road Quarry Noise Management Plan
Document Version	V3
Date of Issue	13 April 2020

Old Northern Road Quarry Noise Management Plan has been prepared by Umwelt (Australia) Pty Ltd in response to conditions of consent Schedule 3 Condition 6 DA 250-09-01 for the Old Northern Road Quarry. I am authorised to and have reviewed the document on behalf of Dixon Sand (Penrith) Pty Ltd.

I certify that the Old Northern Road Quarry Noise Management Plan:

- has been prepared in accordance with the relevant condition/s and the Department's Environmental Management Plan
- adequately identifies and addresses all relevant conditions of consent
- has been prepared in accordance with relevant requirements of the conditions of consent regarding
- stakeholder consultation.

Name of Certifier	Hunny Churcher
Position	Environmental Consultant
Company	Dixon Sand Pty Ltd
Date	13 April 2020



APPENDIX 2

Stakeholder Consultation



Ms Hunny Churcher
Environmental Officer
Dixon Sand (Penrith) Pty Ltd
4610 Old Northern Road
Maroota NSW 2756

Dear Ms Churcher

**Old Northern Road Quarry (DA 250-09-01 MOD 5)
Submission of amended EMS and management plans**

I refer to your correspondence dated 11 December 2017 requesting an extension for the submission of the following amended management plans as required by modification 5 of DA 250-09-01:

- Environmental Management Strategy (EMS);
- Noise Management Plan;
- Air Quality Management Plan;
- Soil and Water Management Plan;
- Traffic Management Plan; and
- Biodiversity and Rehabilitation Management Plan

The EMS and management plans have to be submitted within three months of the date of determination of the modification, ie 17 November 2017. Therefore, the due date is currently 17 February 2018. I note that your consultant is currently undertaking the work. However, due to the number of documents and the work falling over the year end period, an extension of one month has been requested.

The Department is not able to grant your request for an extension for submission of the EMS, as there is no power in condition 1 of Schedule 5 to do so. On the other hand, the conditions that govern submission of the management plans do permit extensions. Accordingly, an extension for the submission of the management plans is granted until 17 March 2017. You are advised to finalise preparation of the EMS and submit it for the Secretary's approval as soon as possible, and in any case no later than 17 March 2018.

Should you have any questions about this letter, please contact Tertius Greyling at the details above.

Yours sincerely

J Evans 10/01/2018

Jessie Evans
A/Director
Resource Assessments
As nominee of the Secretary

Belinda McLeod

From: Kristine McKenzie <kmckenzie@thehills.nsw.gov.au>
Sent: Friday, 2 March 2018 1:30 PM
To: Gabrielle Allan

Hi Gabrielle,

In regard to your two emails with the Draft Traffic Management Plan, Draft Noise Plan and Draft Biodiversity and Rehabilitation Plan, the documents have been reviewed and no objection is raised to the draft plans.

Regards



Kristine McKenzie

Principal Executive Planner

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DOC18/140884-01

Your Ref.

Ms Gabrielle Allan
Principal Environmental Consultant
Umwelt Australia Pty Ltd
75 York Street
Teralba NSW 2284

Dear Ms Allan

**Consultation of Air Quality & Noise Draft Management Plans for Old Northern Road Quarry for
Dixon Sand Pty Ltd**

I refer to your request for consultation on the draft Air Quality Management Plan (AQMP) and Noise Management Plan (NMP) for Old Northern Road Quarry located at Old Northern Road, Maroota, NSW, which was received via email by the Environment Protection Authority (EPA) on 22 February 2018.

Based on the information provided in the draft AQMP, the EPA identifies the following information:

- Section 3.1 paragraph 5 stated that historic average PM₁₀ 24-hour air quality monitoring results recorded exceedances during the 2013-2014, 2015-2016 and 2016-2017 reporting periods which were found not to be attributable to quarry operations but due to bushfires, dust storms, hazard reduction burns and dry westerly winds blowing over the region. Please specify these exceedance days in a table identifying the date of exceedance, meteorological conditions on the day, the average PM₁₀ 24-hour concentration and the reason for each exceedance. Please note that in the National Environment Protection (Ambient Air Quality) Measure (NEPM) Standard defines “*exceptional event*” as:

“a fire or dust occurrence that adversely affects air quality at a particular location, and causes an exceedance of 1 day average standards in excess of normal historical fluctuations and background levels, and is directly related to: bushfire; jurisdiction authorised hazard reduction burning; or continental scale windblown dust.”

Any event that are not related to the above definition is not considered an exceptional event.

- Table 5.1 column 1 item 7 stated that one of the proactive management measures is to maintain the dust suppression equipment to all processing plant. Please provide a description of the dust suppression equipment currently in use for the facility. This can be done in a separate section.
- Please change Table 5.2, column 1 item 4 “Extraordinary Event or Conditions” to “exceptional event” to be consistent with the NEPM definition.

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- With the map proposed in Figure 6.1, please specify the site boundary, locations of the air quality monitoring points specified in Table 6.1 including the location of the weather station and the location of sensitive receivers.
- Section 6.3 states the monitoring standards used at the facility. Please revise these standards to the latest version. An example of this is the AS/NZS 3580.10.1:2003 Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method; the latest version of this standard is done in 2016.
- As the facility is using the TEOM instrument for the measurement of PM₁₀ particulates, please add the AS3580.9.8 to the list of standards in Section 6.3.
- In Section 7.1 it was stated that PM₁₀ monitoring results will be publish in the Dixon Sands website. Please specify the web address.

As the draft Noise Management Plan notes, there are noise conditions set under DA250-09-01 and environment protection licence (EPL) 3916. As substantial noise conditions have been put in place under the DA and EPL, the EPA has not reviewed the Noise Management Plan, but encourages the proponent to implement the plan. At any time in the future, the EPA may call on the proponent to provide relevant documentation demonstrating that all management plans in place are being applied to the premises.

If you have any questions relating to this matter, please contact Lilian De Torres on (02) 9995 5059 or Lilian.DeTorres@environment.nsw.gov.au.

Yours sincerely



Mark Carey
Acting Unit Head – Sydney Industry
Environment Protection Authority

9 March 2018



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