

DUNMORE LAKES SAND PROJECT

NOISE MANAGEMENT PLAN INCORPORATING A NOISE MONITORING PROGRAM



DOCUMENT CONTROL

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| | | | | | | |

* Or following any substantial arising from monitoring results.

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1 INTRODUCTION

This Noise Management Plan (NMP) has been prepared for Dunmore Sand and Soil Pty Limited (DSS) and covers aspects of noise management for the Dunmore Lakes Sand Project (DLSP), hereafter referred to as the Project.

Environmental impact assessments were undertaken for the Project and its modifications (Modifications 1 to 3) prior to the granting of a ministerial Consent for DA 195-8-2004 and its consolidated versions. The conditions of the consolidated Development Consent are based on the information compiled during the various assessments, noting only the original environmental impact assessment conducted for the Project and that associated with Modification 2 include noise impact assessments.

It is recognised that the operation of the DSLP has the potential to impact on the noise environment beyond the boundaries of the site. The NMP has been developed to address matters relevant to the management of noise generated by the Project and development and implementation of the noise monitoring program.

1.1 Purpose and Scope

The scope of the NMP applies to all existing and future activities undertaken by DSS within the DLSP site and adjacent land owned or under control of DSS. The Project includes extractive activities at Stages 2, 3, 4, 5A and 5B of the Dunmore sand resource and processing and handling of extracted material.

The primary purpose of this NMP is to:

- a) describe the noise management system and measures to be implemented to ensure:
 - compliance with the noise criteria and operating conditions in the Consent;
 - leading practice management is being employed;
 - noise impacts of the development are minimised during noise-enhancing meteorological conditions;
- b) include a protocol for distinguishing noise emissions of the development from other nearby or neighbouring developments; and
- c) include a monitoring program that:
 - is capable of evaluating the performance of the development against the construction and operational noise criteria;
 - monitors noise at the nearest and/or most affected residences or other representative monitoring locations set out in the Noise Management Plan;
 - adequately supports the noise management system; and
 - includes a protocol for identifying any noise-related exceedance, incident or noncompliance and notifying the Department and relevant stakeholders of any such event.

1.2 Report Authors

This report was prepared by Roman Haverkamp from RWDI Australia (RWDI) in consultation with DSS, Department of Planning, Industry & Environment (DPIE) and NSW Environmental Protection Agency (EPA). Roman Haverkamp was endorsed by DPIE on June 17, 2021 (**Appendix C**). RWDI is an acoustic engineering firm member of the Association of Australian Acoustical Consultants (AAAC).

2 STATUTORY REQUIREMENTS

2.1 Project Approval

Table 1 includes the relevant conditions considered in the development of the NMP and indicates where each component of the relevant conditions requirements is addressed within this Plan.

Table 2 to 4 reproduce tables from the Consent relevant to the NMP.

Table 1: Relevant Conditions of Approval

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|---|--|----------------------------------|
| Operation of Plant and Equipment | | |
| Condition 10/ Schedule 2 | The Applicant must ensure that all plant and equipment at the site, or used in connection with the development, are: <ul style="list-style-type: none"> a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner. | Section 5.1 |
| Operational Noise Criteria | | |
| Condition 13/ Schedule 3 | Except for the carrying out of approved construction works, the Applicant must ensure that the noise generated by the development does not exceed the criteria specified in Table 1 of the Consent ¹ . | Sections 5 to 8 |
| Condition 13A/ Schedule 3 | Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the <i>NSW Noise Policy for Industry</i> (EPA, 2017). | Sections 4.1, 6.1, 6.2 and 6.3 |
| Condition 13B/ Schedule 3 | The noise criteria in Table 1 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement. | Section 4.1 |
| Operating Hours | | |
| Condition 14/ Schedule 3 | The Applicant must comply with the operating hours in Table 2 of the Consent. ² | Section 4.3 |
| Condition 15/ Schedule 3 | The following activities may be carried out at the premises outside the hours specified in Table 2 of the Consent ² : <ul style="list-style-type: none"> a) the delivery or dispatch of materials as requested by Police or other public authorities for safety reasons; and b) emergency work to avoid the loss of lives, property and/or to prevent environmental harm. In such circumstances the Applicant must notify the Department and affected residents prior to undertaking the works, or within a reasonable period in the case of emergency. | Section 4.3 |
| Construction Hours | | |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|-----------------------------------|---|----------------------------------|
| Condition 15A/ Schedule 3 | Approved construction works must be undertaken during standard construction hours (7 am to 6 pm, Monday to Friday and 8 am to 1 pm on Saturdays), unless the Planning Secretary agrees otherwise. | Section 4.4 |
| Noise Operating Conditions | | |
| Condition 16/ Schedule 3 | The Applicant must: a) take all reasonable steps to minimise noise from construction and operational activities, including low frequency noise and other audible characteristics, as well as road noise associated with the development; | Section 5.1 |
| | b) implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas; | Section 5.1 |
| | c) operate a noise management system to guide day to day planning of quarrying operations and implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent; | Section 7.2 |
| | d) take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions; | Section 5.1 |
| | e) carry out regular attended noise monitoring to determine whether the development is complying with the relevant conditions of this consent; and | Section 6 |
| | f) regularly assess the noise monitoring data and modify or stop operations on the site to ensure compliance with the relevant conditions of this consent. | Sections 6.4 and 7.2 |
| Noise Management Plan | | |
| Condition 17/ Schedule 3 | The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; | Section 1.2 |
| | b) describe the noise management system and measures to be implemented to ensure: <ul style="list-style-type: none"> • compliance with the noise criteria and operating conditions in this consent; • leading practice management is being employed; • noise impacts of the development are minimised during noise-enhancing meteorological conditions; | Section 5.1 |
| | c) include a protocol for distinguishing noise emissions of the development from other nearby or neighbouring developments; and | Section 6.2 |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|---|--|----------------------------------|
| | <p>d) include a monitoring program that:</p> <ul style="list-style-type: none"> • is capable of evaluating the performance of the development against the construction and operational noise criteria; • monitors noise at the nearest and/or most affected residences or other representative monitoring locations set out in the Noise Management Plan; • adequately supports the noise management system; and • includes a protocol for identifying any noise-related exceedance, incident or noncompliance and notifying the Department and relevant stakeholders of any such event. | Section 6 |
| Condition 18/ Schedule 3 | The Applicant must implement the Noise Management Plan as approved by the Planning Secretary. | Section 8.2 |
| Meteorological Monitoring | | |
| Condition 36/ Schedule 3 | <p>Prior to the commencement of construction within the Stage 5 areas and for the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in close proximity to the site that:</p> <ol style="list-style-type: none"> a) complies with the requirements in the <i>Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales</i> (DEC, 2007); and b) is capable of measuring meteorological conditions in accordance with the <i>NSW Noise Policy for Industry</i> (EPA, 2017), unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA. | Section 4.1.3 |
| Additional Mitigation Upon Request | | |
| Condition 1/ Schedule 4 | <p>Upon receiving a written request from the owner of any residence on the land listed in Table 7³ of the Consent, the Applicant must implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner.</p> <p>These measures must be reasonable and feasible, consistent with the measures outlined in the <i>Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Development</i> (NSW Government, 2014), proportionate to the level of predicted impact and directed towards reducing the noise impacts of the development.</p> | Section 5.2 |
| Condition 2/ Schedule 4 | If within 3 months of receiving this request from the owner of any residence on the land listed in Table 7 of the Consent, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution. | Section 5.2 |
| Notification of Landowners/Tenants | | |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|---|---|----------------------------------|
| Condition 3/ Schedule 4 | Within one month of the date of this consent, the Applicant must notify in writing the owner of the residences on the land listed in Table 7 of the Consent that they are entitled to ask the Applicant to install additional mitigation measures at the residence. | Section 5.2 |
| Condition 4/ Schedule 4 | <p>Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:</p> <ul style="list-style-type: none"> a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled "Mine Dust and You" (NSW Health, 2017); and b) advise the prospective tenants of the rights they would have under this consent, to the satisfaction of the Planning Secretary. | Section 8.5 |
| Notification of Exceedances | | |
| Condition 5/ Schedule 4 | As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise or air quality criterion in Schedule 3 of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC. | Section 7.2 |
| Independent Review | | |
| Condition 7/ Schedule 4 | If a landowner considers the development to be exceeding any relevant noise or air quality criterion in Schedule 3 of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land. | Section 7.4 and Appendix A |
| Condition 9/ Schedule 4 | <p>If the Planning Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary's decision, the Applicant must:</p> <ul style="list-style-type: none"> a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to: <ul style="list-style-type: none"> (i) consult with the landowner to determine their concerns; (ii) conduct monitoring to determine whether the development is complying with the relevant criterion in Schedule 3 of this consent; and (iii) if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and b) give the Planning Secretary and landowner a copy of the independent review; and c) comply with any written requests made by the Planning Secretary to implement any findings of the review. | Section 7.4 and Appendix A |
| Management Plan Requirements⁴ | | |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|---|---|----------------------------------|
| Condition 2/ Schedule 5 | <p>The Applicant must ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p> <p>a) detailed baseline data;</p> | Section 3 |
| | <p>b) a description of:</p> <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures/criteria; and • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; | Section 4 |
| | <p>c) any relevant commitments or recommendations identified in the EIS, EA Mod 1, SEE Mod 3 and EA Mod 2;</p> | Section 5.1 |
| | <p>d) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;</p> | Section 5.1 |
| | <p>e) a program to monitor and report on the:</p> <ul style="list-style-type: none"> • impacts and environmental performance of the development; and • effectiveness of any management measures (see (c) above); | Section 6 |
| | <p>f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;</p> | Section 7.2 and Appendix A |
| | <p>g) a program to investigate and implement ways to improve the environmental performance of the development over time;</p> | Section 8.7 |
| | <p>h) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> • incidents; • complaints; • non-compliances with statutory requirements; and • exceedances of the impact assessment criteria and/or performance criteria; and | Section 7, Appendices A and B |
| | <p>i) a protocol for periodic review of the plan.</p> | Section 8.7 |
| Revision of Strategies, Plans & Programs | | |
| Condition 3/ Schedule 5 | <p>Within 3 months of:</p> <p>a) the submission of an incident report under condition 7 below;</p> <p>b) the submission of an Annual Review under condition 9 below;</p> <p>c) the submission of an audit report under condition 10 below; and</p> <p>d) the approval of any modifications to this consent (unless the conditions require otherwise), the Applicant must review the suitability of existing strategies, plans, and programs required.</p> | Section 8.7 |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|------------------------------------|---|----------------------------------|
| Condition 4/ Schedule 5 | <p>If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans, and programs required under this consent must be revised, to the satisfaction of the Planning Secretary and submitted to the Planning Secretary for approval within six weeks of the review.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development</i></p> | Section 8.7 |
| Adaptive Management | | |
| Condition 5/ Schedule 5 | <p>The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.</p> <p>Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:</p> <ol style="list-style-type: none"> take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur; consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and implement remediation measures as directed by the Planning Secretary, to the satisfaction of the Planning Secretary. | Section 7.2 and Appendix A |
| Incident Notification | | |
| Condition 7/ Schedule 5 | <p>The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.</p> | Section 7.1 |
| Non-Compliance Notification | | |
| Condition 7A/ Schedule 5 | <p>Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the noncompliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance</i></p> | Section 7.2 and Appendix A |
| Regular Reporting | | |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|--|---|----------------------------------|
| Condition 8/ Schedule 5 | The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent. | Section 6.4 |
| Annual Review | | |
| Condition 9/ Schedule 5 | <p>By the end of September each year, or other timing as may be agreed by the Planning Secretary, the Applicant must review the environmental performance of the development to the satisfaction of the Planning Secretary. This review must:</p> <ol style="list-style-type: none"> a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year; b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against: <ul style="list-style-type: none"> • the relevant statutory requirements, limits or performance measures/criteria; • requirements of any plan or program required under this consent; • the monitoring results of previous years; and • the relevant predictions in the documents listed in condition 2(c) of Schedule 2; c) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence; d) evaluate and report on: <ul style="list-style-type: none"> • the effectiveness of the noise and air quality management systems; and • compliance with the performance measures, criteria and operating conditions of this consent; e) identify any trends in the monitoring data over the life of the development; f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and g) describe what measures will be implemented over the current financial year to improve the environmental performance of the development. <p>The Applicant must ensure that copies of the Annual Review are submitted to the Planning Secretary and Council and are available to the Community Consultative Committee (see condition 6 of Schedule 5) and any interested person upon request.</p> | Section 8.7 |
| Independent Environmental Audit | | |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|------------------------------|---|----------------------------------|
| Condition 10/ Schedule 5 | <p>By 30 September 2017, and every 3 years thereafter, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:</p> <ul style="list-style-type: none"> a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary; b) include consultation with the relevant agencies and the CCC; c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals); d) review the adequacy of any approved strategy, plan or program required under these approvals; and e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals. <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.</i></p> | Section 8.8 |
| Condition 11/ Schedule 5 | <p>Within 6 weeks of commissioning this audit, or as otherwise agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, Council, EPA and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.</p> | Section 8.8 |
| Access to Information | | |

| Condition of Approval | Condition Requirement | Where Addressed in this Document |
|-----------------------------|--|----------------------------------|
| Condition 12/ Schedule 5 | <p>By 30 November 2016, unless otherwise agreed by the Planning Secretary, the Applicant must:</p> <p>a) make the following information publicly available on its website:</p> <ul style="list-style-type: none"> the documents listed in condition 2(c) of Schedule 2; current statutory approvals for the development; approved strategies, plans or programs; a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; minutes of CCC meetings; a summary of the current phase and progress of the development; contact details to enquire about the development or to make a complaint; a complaints register, which is to be updated on a monthly basis; the Annual Reviews of the development; reports prepared as part of any independent environmental audit, and the Applicant's response to the recommendations in any audit report; any other matter required by the Planning Secretary; and <p>b) keep this information up-to-date, to the satisfaction of the Planning Secretary.</p> | Section 8.9 |

Notes:

Table 1 of Consent is reproduced in Table 2 of the Plan.

Table 2 of Consent is reproduced in Table 3 of the Plan.

Table 7 of Consent is reproduced in Table 4 of the Plan.

The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for the Noise Management Plan.

Table 2: Noise Impact Assessment Criteria (dBA)

| Residential Location | Shoulder L _{Aeq,15min} | Day L _{Aeq,15min} | Evening L _{Aeq,15min} | Night L _{Aeq,15min} |
|---|------------------------------------|-------------------------------|-----------------------------------|---------------------------------|
| Dunmore Village residences - 31 Shellharbour Road | 47 | 49 | 44 | 41 |
| R20 | 47 | 49 | 44 | 38 |
| R3, R11, R12, R13, R14, R15, R16, R17, R18, 79 Fig Hill Lane | 48 | 48 | 43 | 38 |
| R19 | 46 | 47 | 43 | 38 |
| R4, R5, R6, R7, R8, R9, R10 | 43 | 47 | 43 | 38 |
| Renton (183 James Road Dunmore) | 46 | 46 | 43 | 37 |
| All other residences | 35 | 40 | 35 | 35 |

Table 3: Operating Hours

| Activity | Day | Time |
|--|----------------------------|--------------------|
| Dredging and processing | Monday – Saturday | 6:00am to 6:00pm |
| | Sunday and Public Holidays | 8:00am to 4:00pm |
| Excavator extraction | Monday – Saturday | 6:30am to 6:00pm |
| | Sunday and Public Holidays | Nil |
| Delivery, distribution and maintenance | Monday – Friday | 5:00am to Midnight |
| | Saturday | 6:00am to 6:00pm |
| | Sunday and Public Holidays | 8:00am to 4:00pm |
| Delivery and distribution via Shellharbour Road and Riverside Drive | Monday – Friday | 7:00am to 10:00pm |
| | Saturday | 7:00am to 6:00pm |
| | Sunday and Public Holidays | 8:00am to 4:00pm |
| Maintenance (if inaudible at neighbouring residences) | Anytime | Anytime |

Table 4: Land Subject to Additional Mitigation Upon Request

| Mitigation Basis | Land |
|------------------|---------------------------|
| Noise | 79 Fig Hill Lane, Dunmore |

2.2 Relevant Legislation

Legislation applicable to noise management includes but is not limited to:

- Protection of the Environment Operations Act 1997 (POEO Act); and
- Environmental Planning and Assessment Act 1979 (EP&A Act).

This NMP has been developed to be consistent with the principles of the following guidelines and standards for noise management:

- *Noise Policy for Industry (NPfi)* (EPA, 2017);
- *Interim Construction Noise Guidelines (ICNG)* (NSW Department of Environment and Climate Change [DECC], July 2009);
- *Voluntary Land Acquisition and Mitigation Policy (VLAMP)* (NSW State Government, 2018);
- Standards Australia AS 1055:2018 - *Acoustics - Description and Measurement of Environmental Noise*;
- Standards Australia AS 61672.1:2004 - *Electro Acoustics - Sound Level Meters Specifications*;
- Standards Australia AS 2436:2010 - *Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites*; and
- International Organisation for Standardisation ISO 9613-2:1996 - *Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation*.

3 BASELINE DATA

Baseline data for the NMP was obtained from the original environmental assessment undertaken for the Project (Stages 2-4 operations) and that associated with Modification 2 (Stages 5A and 5B operations), namely:

- Dunmore Lakes Sand Extraction Proposal Stage 2,3 and 4 Specialists Consultant Studies Compendium (R.W Corkery & Co, 2004);
- Dunmore Lakes Sand Extraction Proposal Stages 2,3 and 4 Environmental Impact Statement (R.W Corkery & Co, 2004); and
- Dunmore Lakes Sand Extraction Project – Modification 2 – Environmental Assessment (Element Environment, 2019).

3.1 Noise Sensitive Receivers

The nearest and most potentially affected receivers near Stages 2-4 are shown in **Figure 1** and comprise:

- 183 James Road, Dunmore (DN-6 in **Figure 1**);
- Dunmore Village residences (DN-7 in **Figure 1**); and
- 40 Swamp Road, Dunmore (DN-8 in **Figure 1**).

The nearest and most potentially affected receivers near Stages 5A and 5B comprise:

- isolated rural dwellings on and adjacent to Stages 5A and 5B;
- residential dwellings in Minnamurra to the south-east of Stages 5A and 5B;
- residential dwellings in Dunmore Lakes Estate to the west of Stages 5A and 5B; and
- two isolated rural dwellings to the north west of Stages 5A and 5B.

These receivers are described in **Table 5** and shown in **Figure 2**.

Table 5: Noise Sensitive Receivers – Stages 5A and 5B

| Receiver | Address | Lot/DP Number |
|----------|---------------------------------|--------------------|
| R1 | 471 Riverside Drive, Dunmore | Lot 501 DP 1174897 |
| R2 | 69 Fig Hill Lane, Dunmore | Lot 51 DP 1012246 |
| R3 | 431 Riverside Drive, Dunmore | Lot 1 DP 219199 |
| R4 | 2 The Village, Minnamurra | Lot 1 DP 225638 |
| R5 | 1 The Village, Minnamurra | Lot 2 DP 1196150 |
| R6 | 306 Riverside Drive, Minnamurra | Lot 2 DP 1192433 |
| R7 | 304 Riverside Drive, Minnamurra | Lot 4 DP 1192433 |
| R8 | 302 Riverside Drive, Minnamurra | Lot 1 DP 224542 |
| R9 | 300 Riverside Drive, Minnamurra | Lot 2 DP 224542 |
| R10 | 298 Riverside Drive, Minnamurra | Lot 3 DP 224542 |

| Receiver | Address | Lot/DP Number |
|----------|---------------------------|------------------|
| R11 | 17 Allawah Place, Dunmore | Lot 32 DP 285417 |
| R12 | 15 Allawah Place, Dunmore | Lot 33 DP 285417 |
| R13 | 13 Allawah Place, Dunmore | Lot 18 DP 285417 |
| R14 | 11 Allawah Place, Dunmore | Lot 19 DP 285417 |
| R15 | 9 Allawah Place, Dunmore | Lot 20 DP 285417 |
| R16 | 1 Allawah Place, Dunmore | Lot 21 DP 285417 |
| R17 | 16 Fuller Drive, Dunmore | Lot 22 DP 285417 |
| R18 | 18 Fuller Drive, Dunmore | Lot 34 DP 285417 |
| R19 | 63 Swamp Road, Dunmore | Lot 17 DP 607791 |
| R20 | 40 Swamp Road, Dunmore | Lot 1 DP 745632 |
| R21 | 71 Fig Hill Lane, Dunmore | Lot 3 DP 717776 |

The landowners at receivers R1 and R2 have entered into a negotiated noise agreement with Boral. In addition, as R21 is an uninhabited structure without DA approval, noise levels at this receiver have not been considered in the noise impact assessment for Stages 5A and 5B.

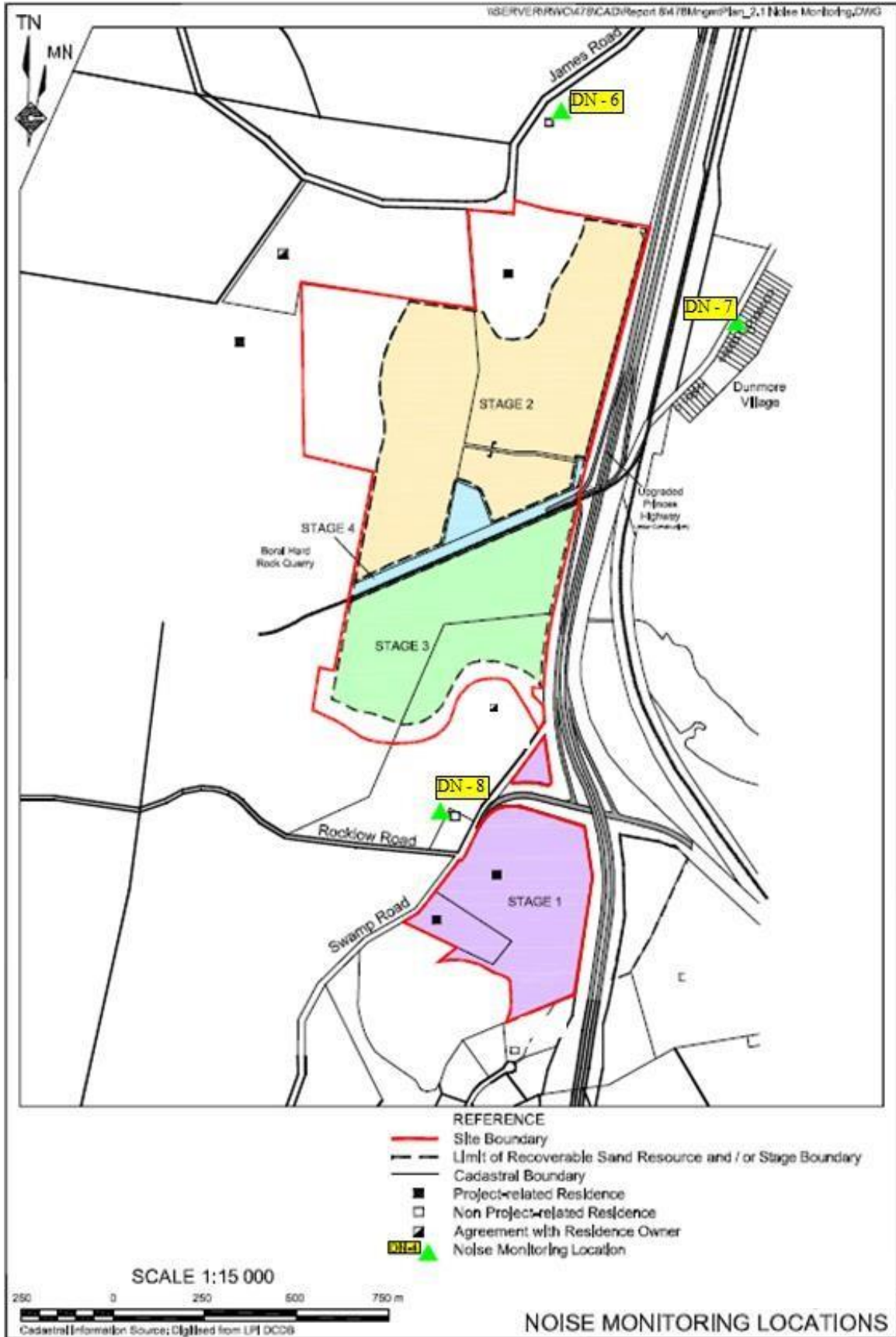


Figure 1: Noise Sensitive Receivers – Stages 2-4



Figure 2: Noise Sensitive Receivers – Stages 5A and 5B

3.2 Sound Power Levels

Table 6 summarises the operational noise sources associated with the Project and their respective sound power levels (SWLs).

Table 6: Sound Power Levels

| Equipment Description | SWL per Item (dBA) |
|-----------------------|--------------------|
| CAT D8 Dozer | 111 |
| 60-tonne Excavator | 113 |
| CAT740 Dump Truck | 110 |
| Truck and Dog | 103 |
| Dredge | 104 |
| Booster Pump* | 103 |

* Note:

The SWL for the booster pump reflects that of a diesel-powered pump (see **Section 3.3**).

3.3 Noise Predictions

Operational noise levels associated with daytime overburden removal and raw material extraction at Stages 5A and 5B were found to comply with the relevant PNTLs at all receivers surrounding the Project.

Noise predictions associated with the operation of the dredge at Stages 5A and 5B in the morning shoulder between 6.00 am and 7.00 am were also found to comply with the PNTLs under noise-enhancing conditions.

It should be noted that the project design has undergone slight changes since the Consent was granted, with diesel-powered pumps now replacing the electrically power booster pumps. Preliminary calculations have indicated no material changes of outcome in noise impacts (i.e. although the use of diesel-powered pumps may marginally increase noise predictions at some of the identified receivers, all noise levels would still comply with the PNTLs).

4 PERFORMANCE CRITERIA & OPERATING HOURS

4.1 Operational Noise Criteria

4.1.1 Noise Impact Assessment Criteria

Noise compliance criteria for the various stages and activities of the DLSP have been established using the *NPfl*. Condition 13/Schedule 3 of the Consent stipulates that except for the carrying out of approved construction works, the Applicant must ensure that the noise generated by the development does not exceed the criteria specified in **Table 7**. DSS will ensure the noise generated by the DLSP does not exceed these criteria.

Table 7: Noise Impact Assessment Criteria (dBA)¹

| Residential Location | Shoulder L _{Aeq} (15 min) | Day L _{Aeq} (15 min) | Evening L _{Aeq} (15 min) | Night L _{Aeq} (15 min) |
|---|---------------------------------------|----------------------------------|--------------------------------------|------------------------------------|
| Dunmore Village residences - 31 Shellharbour Road | 47 | 49 | 44 | 41 |
| R20 | 47 | 49 | 44 | 38 |
| R3, R11, R12, R13, R14, R15, R16, R17, R18, 79 Fig Hill Lane | 48 | 48 | 43 | 38 |
| R19 | 46 | 47 | 43 | 38 |
| R4, R5, R6, R7, R8, R9, R10 | 43 | 47 | 43 | 38 |
| Renton (183 James Road, Dunmore) | 46 | 46 | 43 | 37 |
| All other residences | 35 | 40 | 35 | 35 |

4.1.2 Maximum Noise Level Event Criteria

Noise sources at night and in the morning shoulder period occurring over a short duration have the potential to cause sleep disturbance despite complying with noise impact assessment criteria summarised in **Table 7**. The dredge(s) operate from 6.00 am, during the morning shoulder period and as such, maximum noise level events need to be considered for potential sleep disturbance.

¹ Noise from the development is to be measured at the most affected point or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the L_{Aeq(15 minute)} noise limits in the above table.

The noise criteria in **Table 7** do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

The *NPfl* recommends that, where the night-time L_{Amax} receiver noise levels from a development exceeds maximum noise trigger levels, then a more detailed assessment of potential sleep disturbance impacts is warranted. **Table 8** presents the maximum noise trigger levels for the receivers identified in the assessment. These noise levels are typically addressed at the façade of potentially affected dwellings and should consider multiple storey dwellings.

Table 8: Maximum Noise Trigger Levels (Night-Time & Morning Shoulder) – Stages 5A and 5B

| Receivers | Maximum Noise Trigger Levels |
|--------------------|------------------------------|
| | L_{Amax} |
| R1 – R3, R11 – R18 | 61 |
| R4 – R10 | 53 |
| R19 | 56 |

Additionally, in instances where night-time or morning shoulder $L_{Aeq,15min}$ noise levels exceed 40 dBA or the relevant noise impact assessment criteria summarised in **Table 7**, whichever is the greater, then a detailed assessment of potential sleep disturbance impacts is warranted.

4.1.3 Meteorological Conditions

In accordance with procedures and exemptions set in Fact Sheet D of the *NPfl*, the criteria in **Table 7** apply to noise emissions under the meteorological conditions summarised in **Table 9**. To determine the applicability of measured noise levels, data will be obtained from the existing on-site meteorological station, which shall continue to operate.

In accordance with Condition 36/Schedule 3 the on-site meteorological station should comply with requirements outlined in *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (NSW DEC, 2007) and be capable of continuous measurement of meteorological conditions in accordance with the *NPfl*. Stability Category is determined using the sigma-theta method outlined in Fact Sheet D of the *NPfl*.

Table 9: Meteorological Conditions Applicable for Compliance Assessment

| Assessment Period | <i>NPfl</i> Meteorological Condition | Description of Meteorological Parameters |
|--------------------------|---|---|
| Daytime | Standard meteorological conditions | 0-0.5 m/s winds (at a height of 10 m); stability categories A-D |
| Evening | Standard and wind-enhancing meteorological conditions | 0-3 m/s winds (at a height of 10 m); stability categories A-D |
| Night & Morning Shoulder | Standard and wind-enhancing meteorological conditions | 0-3 m/s winds (at a height of 10 m); stability categories A-D |
| | Weak to moderate temperature inversions | 0.5 m/s winds (at a height of 10 m); stability categories E-F |

According to Fact Sheet D of the *NPfl*, the applicable noise criteria for all meteorological conditions other than those listed in **Table 9** would be equivalent to the operational noise criteria nominated in **Table 7** plus 5 dB.

4.2 Construction Noise Criteria

Noise generated by the construction and site establishment works associated with the DLSP must be assessed against the recommended noise management levels provided by the *Interim Construction Noise Guideline (ICNG)*.

The recommended noise management levels described in the *ICNG* for residences are summarised in **Table 10**.

Table 10: Construction Noise Guideline Noise Management Levels - Residences

| Time of Day | Management Level $L_{Aeq,15min}$ | How to Apply |
|---|-------------------------------------|--|
| Recommended standard hours: Monday to Friday 7.00 am to 6.00 pm Saturday 8.00 am to 1.00 pm No work on Sundays or public holidays | Noise affected RBL + 10 dBA | The noise affected level represents the point above which there may be some community reaction to noise: <ul style="list-style-type: none"> Where the predicted or measured $L_{Aeq,15min}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details. |
| | Highly noise affected 75 dBA | The highly noise affected level represents the point above which there may be strong community reaction to noise: <ul style="list-style-type: none"> Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: <ol style="list-style-type: none"> Times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences). If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times. |
| Outside recommended standard hours | Noise affected RBL + 5 dBA | <ul style="list-style-type: none"> A strong justification would typically be required for works outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5 dBA above the noise affected level, the proponent should negotiate with the community. |

4.3 Operating Hours

DSS will ensure that the DLSP operates within the hours specified in **Table 11**.

Table 11: Operating Hours

| Activity | Day | Time |
|--|----------------------------|--------------------|
| Dredging and processing | Monday – Saturday | 6:00am to 6:00pm |
| | Sunday and Public Holidays | 8:00am to 4:00pm |
| Excavator extraction | Monday – Saturday | 6:30am to 6:00pm |
| | Sunday and Public Holidays | Nil |
| Delivery, distribution and maintenance | Monday – Friday | 5:00am to Midnight |
| | Saturday | 6:00am to 6:00pm |
| | Sunday and Public Holidays | 8:00am to 4:00pm |
| Delivery and distribution via Shellharbour Road and Riverside Drive | Monday – Friday | 7:00am to 10:00pm |
| | Saturday | 7:00am to 6:00pm |
| | Sunday and Public Holidays | 8:00am to 4:00pm |
| Maintenance (if inaudible at neighbouring residences) | Anytime | Anytime |

The following activities may be carried out at the premises outside the hours specified in **Table 11**:

- a) the delivery or dispatch of materials as requested by Police or other public authorities for safety reasons; and
- b) emergency work to avoid the loss of lives, property and/or to prevent environmental harm.

In such circumstances DSS would notify the Department and affected residents prior to undertaking the works, or within a reasonable period in the case of emergency.

4.4 Construction Hours

DSS will ensure approved construction and site establishment works will be undertaken during standard construction hours (7.00 am to 6.00 pm, Monday to Friday, and 8.00 am to 1.00 pm on Saturdays), unless the Planning Secretary agrees otherwise.

5 NOISE MITIGATION

5.1 Operational Mitigation & Management Measures

DSS will implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the construction and operational noise generated by the DLSP. The following noise management measures will be implemented for the life of the DLSP:

- Activities involving earthmoving equipment and trucks near the northern and north-western perimeter of Stage 2 will not commence until after 7.00 am to minimise effects of adverse meteorological conditions present at night;
- Activities involving earthmoving equipment and trucks near the southern perimeter of Stage 5A will not commence until after 7.00 am to minimise effects of adverse meteorological conditions present at night;
- DSS will install sound attenuation enclosures over booster pumps;
- All DSS-owned equipment will be regularly serviced to ensure it is in good working order and maintained in a proper and efficient condition;
- All equipment on site will be operated in a proper and efficient manner;
- The site access road and internal road network will be properly maintained;
- DSS will use less annoying alternatives to audible reversing alarms (such as broadband noise emitting models, i.e. 'quacker alarm' or 'squashed duck') that provide a safe system of work;
- DSS will reduce throttle settings and turn off equipment and plant when not being used;
- DSS will advise truck driver to minimise noise emissions when approaching and departing the site;
- DSS will encourage general environmental awareness for employees and contractors; and
- DSS must, during site inductions for all operators (e.g. truck drivers, mobile plant operators), identify the closest and potentially most affected noise sensitive receivers in the vicinity of current works and present the applicable noise criteria for the site.

5.2 Additional Mitigation Upon Request

Upon receiving a written request from the owner of any residence on the land located at 79 Fig Hill Lane, Dunmore, DSS will implement additional noise mitigation measures (such as double-glazing, insulation and/or air conditioning) at the residence in consultation with the landowner.

These measures must be reasonable and feasible, consistent with the measures outlined in the *VLAMP*, proportionate to the level of predicted impact and directed towards reducing the noise impacts of the development.

If within 3 months of receiving this request from the owner of any residence on the land located at 79 Fig Hill Lane, Dunmore, DSS and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.

Within one month of the date of the Consent, DSS will notify in writing the owner of the residences on the land located at 79 Fig Hill Lane, Dunmore, that they are entitled to ask DSS to install additional mitigation measures at the residence.

6 COMPLIANCE MONITORING & REPORTING

6.1 Operational Noise Compliance Monitoring

6.1.1 General

DSS will commission an independent acoustic consultant to undertake regular attended compliance noise monitoring surveys to determine compliance with the relevant performance criteria (**Section 4**) and report on the environmental performance of the DLSP. Additionally, the attended noise monitoring may, if required, confirm potential noise impacts and the effectiveness of any management measures.

It should be noted that since 2012, results from the annual compliance noise monitoring conducted for Stages 2-4 have indicated that compliance was achieved at all locations relevant to Stages 2-4 during all monitoring periods. No significant noise emissions from the premises have been identified, however ongoing controls, outlined in **Section 5**, will be applied to maintain compliance.

6.1.2 Attended Monitoring Locations

The following noise monitoring sites have been established for the measurement of operational noise at noise-sensitive residences surrounding the DLSP (see **Figures 1** and **2**). DSS must ensure attended monitoring includes all eight locations listed in **Table 12** and shown in **Figures 3** and **4**

Table 12: Attended Monitoring Locations

| Monitoring Site ID | Receiver ID (Address) | Monitoring Location | | |
|--------------------|--|---------------------|----------|--|
| | | Easting | Northing | Description |
| DN-6 | Renton (183 James Road, Dunmore) | 301673 | 6169204 | Adjacent to the south-east corner of the Renton residence. |
| DN-7 | Dunmore Village residences (31 Shellharbour Road, Dunmore) | 302138 | 6168662 | Adjacent to the Lee residence, 31 Shellharbour Road, Dunmore Village. |
| DN-8 | R20 (40 Swamp Road, Dunmore) | 301400 | 6167370 | Adjacent to the north side of the residence adjoining to the "Old Peterborough School House", located approximately 50m west of Swamp Road, Dunmore. |
| DN-9 | R18 (18 Fuller Drive, Dunmore) | 301549 | 6166681 | At end of Fuller Drive, next to driveway to 18 Fuller Drive residence. |
| DN-10 | R14 (11 Allawah Place, Dunmore) | 301521 | 6166404 | On Allawah Place, aligned with southern property boundary of 11 Allawah Place. |
| DN-11 | R11 (17 Allawah Place, Dunmore) | 301504 | 6166179 | On Allawah Place, next to driveway to 17 Allawah Place residence. |

| Monitoring Site ID | Receiver ID (Address) | Monitoring Location | | |
|--------------------|-----------------------------------|---------------------|----------|--|
| | | Easting | Northing | Description |
| DN-12 | R3 (431 Riverside Drive, Dunmore) | 302177 | 6166760 | Access via Fig Hill Lane. Monitoring on north-east corner of uninhabited property located at 71 Fig Hill Lane, directly adjacent R3 residence. |
| DN-13 | R4 (2 The Village, Minnamurra) | 302652 | 6166727 | Adjacent to the south-west corner of the 2 The Village property. |

6.1.3 Attended Monitoring Program

Attended compliance noise monitoring will continue to be undertaken on an annual basis. Additional monitoring will also be undertaken during the first month of operation of each new extraction stage (i.e. Stages 5A and 5B). Monitoring must be conducted for one 15-minute period at each of the eight nominated locations during the morning shoulder (6.00 am – 7.00 am) and for two consecutive 15-minute periods at each of the eight nominated locations during the day (7.00 am – 6.00 pm).

The monitoring program will be reviewed as required so that noise impacts on privately-owned properties are suitably assessed.

In circumstances where the attended monitoring was affected by adverse weather conditions (i.e. when wind at microphone height exceeds 5 m/s or during rain), an additional set of monitoring will be conducted at the earliest opportunity. The operator must use a hand-held anemometer to determine wind speed at microphone height during attended monitoring.

Monitoring will be carried out in response to any sustained complaint during the assessment period in which the complaints occur.

6.1.4 Attended Monitoring Regulatory Requirements

Attended monitoring must be carried out in accordance with the regulatory requirements for reviewing performance as documented in the *NPfl*. The requirements relating to the following will be observed:

- Monitoring locations for collection of representative data;
- Meteorological conditions during which noise monitoring shall be excluded (i.e. when wind at microphone height exceeds 5 m/s, or during rain);
- Instrumentation and conformity to International and Australian Standards; and
- Modifications to data, including penalties for modifying factors such as low-frequency noise.

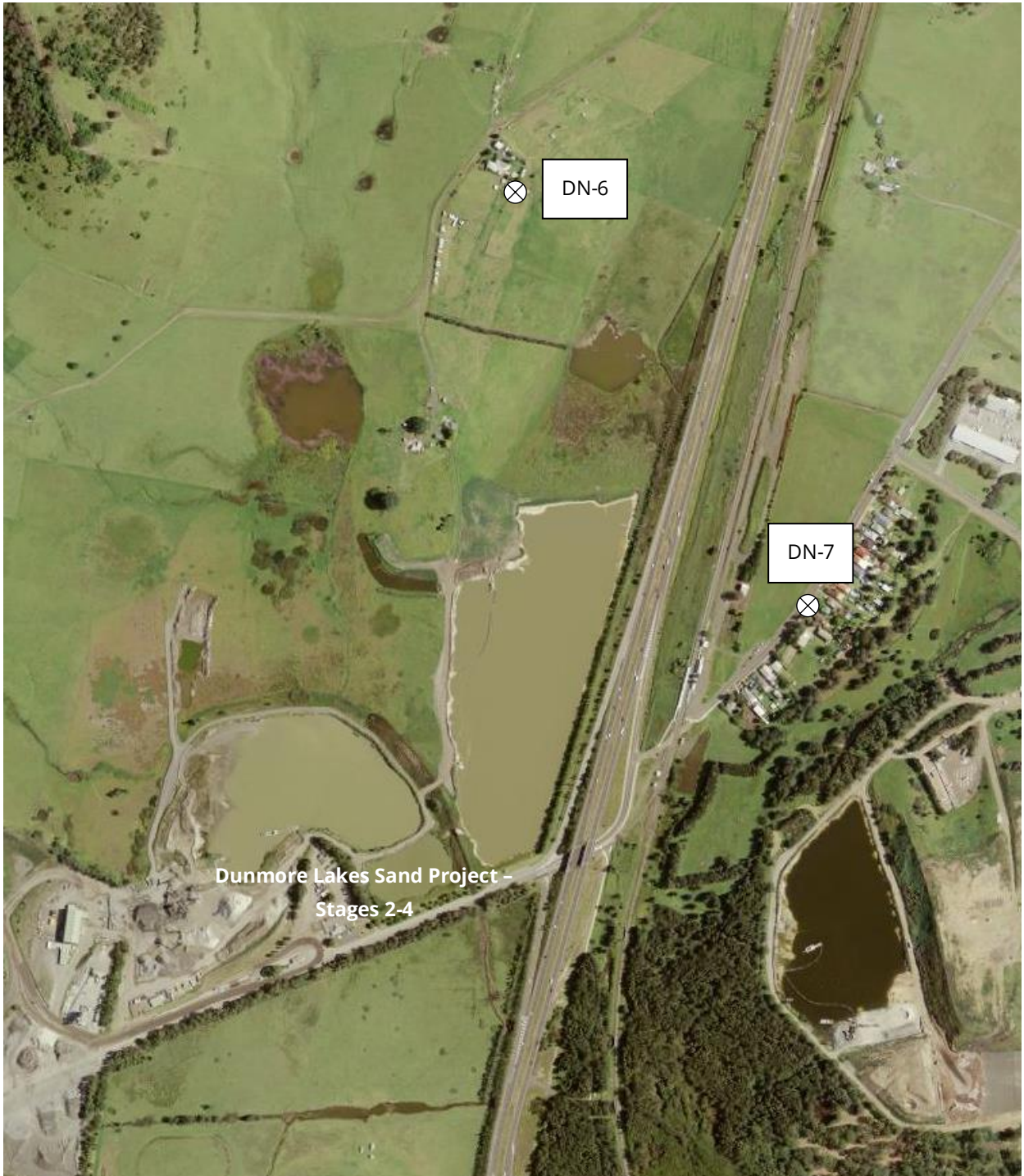


Figure 3: Attended Monitoring Sites (North)

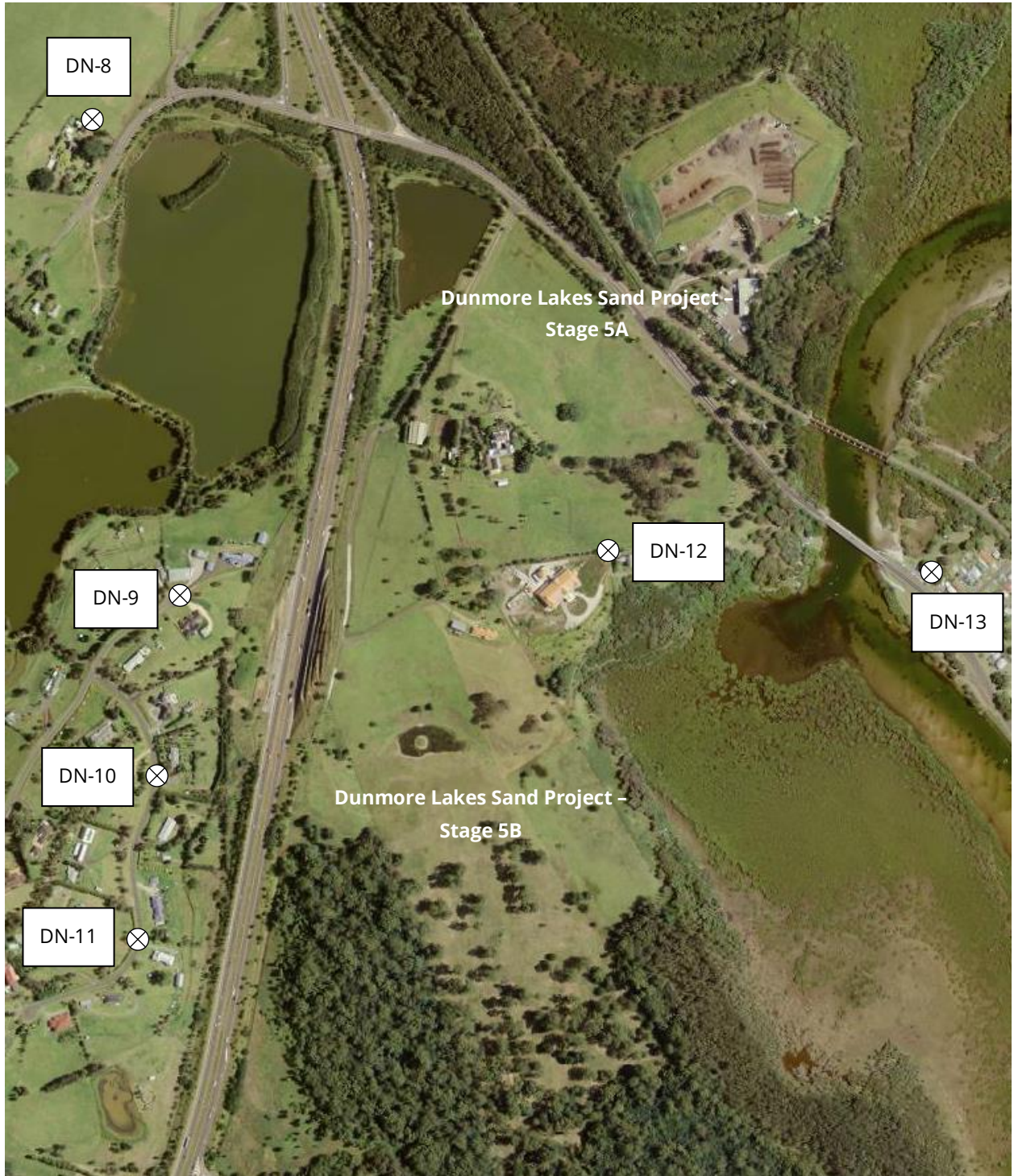


Figure 4: Attended Monitoring Sites (South)

6.2 Data Analysis & Compliance Evaluation Protocol

During the attended noise measurements, the operator will record any significant Project-related noise sources as well as other extraneous noise sources such as other industrial operations (e.g. Dunmore quarry) and/or local traffic.

The site noise level contribution ($L_{Aeq,15min}$ and $L_{AFmax,15min}$) for the DLSP will be estimated in the absence of any influential, extraneous or erroneous sound that is audibly distinguishable to that of the Project and compared to the performance noise criteria (**Section 4**) to determine compliance.

It should be noted that in instances where monitoring may not be conducted at the nominated locations due to unforeseen access limitations, noise levels may be measured at the nearest accessible point and extrapolated via calculation to the nominated receiver location for comparison to noise assessment criteria.

DSS will review meteorological conditions to determine which criteria are applicable (i.e. whether or not the applicable noise criteria should be equivalent to the noise impact assessment criteria nominated in **Table 7** plus 5 dB as described in **Section 4.1.3** of the Plan).

Additional noise measurement or monitoring methods such as near-field monitoring may be utilised to investigate noise emissions in relation to noise complaints, or to determine compliance with the performance criteria where exceedances have been measured or are difficult to quantify from operator-attended noise measurements. Compliance may be determined by:

- operator estimated Project-related noise contribution at nominated monitoring locations;
- extrapolation from near field measurements;
- post-analysis of audio recordings;
- extrapolation from measurement at an alternative representative location;
- predictions from a noise model of the current operating scenario; or
- a combination of any or all the above methods.

6.3 Data Recording

The following information will be recorded at each noise monitoring location:

- Noise level contribution ($L_{Aeq,15min}$ and $L_{AFmax,15min}$) from DLSP and identification of dominant DLSP noise sources (including range of noise levels for each source).
- Description of acoustic environment off-site with range of noise levels from dominant sources.
- Measured $L_{Aeq,15min}$, $L_{AFmax,15min}$, $L_{A90,15min}$, and $L_{A10,15min}$ noise levels from all noise sources (on and off-site).
- Date and time period over which measurements are taken.
- Identification of sound level meter used.
- Confirmation that sound level meter was calibrated before and after each 15-minute measurement.
- Name of person conducting measurements.
- Brief commentary on weather conditions during monitoring period (to be supplemented by data from hand-held anemometer and nearby weather station).
- Plan of the site showing the location/orientation of all noise-generating plant and equipment operating during the measurement period(s).

6.4 Data Reporting

The results of any noise monitoring commissioned by DSS will be made available to the DPIE and the EPA and presented in the relevant Annual Review and Annual Return Environmental Monitoring Report to be posted on the Project's website. DSS will ensure that copies of the Annual Review are submitted to the Planning Secretary and Council and are available to the Community Consultative Committee (CCC) and any interested person upon request.

The Annual Review and Annual Return Environmental Monitoring Report will include the following information:

- Summary of all attended noise monitoring results (including meteorological conditions);
- Contributed noise levels from the DLSP;
- Analysis of monitoring results against performance criteria (**Section 4**);
- Analysis of monitoring results against previous monitoring results to establish trends in the noise levels;
- Mitigation investigation and implementation and effectiveness of mitigation measures;
- Statement of compliance/non-compliance; and
- Details of any complaints relating to noise and their state of resolution.

The results of monitoring will be reviewed annually and any proposed change to frequency to be approved by the Secretary.

On identification of an exceedance of the noise impact assessment criteria presented in **Table 7**, the Response to Exceedance of Performance Criteria Protocol, located in **Appendix A** of this Plan, will be followed.

Should monitoring results and investigation (if necessary) show that the contributed noise level exceeds the relevant Consent noise criteria, the non-compliance will be reported to DPIE within seven days of becoming aware of the non-compliance.

7 INCIDENTS, NON-COMPLIANCE, NOISE COMPLAINTS & INDEPENDENT REVIEWS

7.1 Incidents

The Consent defines an 'incident' to be "an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance".

Incidents will be entered into the site incident tracking register SEQUENCE. An incident notification form will be completed and circulated to senior management to ensure incident notification procedures are completed as per consent requirements. In accordance with Condition 7/Schedule 5, DSS will immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

7.2 Non-Compliance

DSS will manage and report non-compliances relevant against statutory requirements in accordance with Schedule 4 Condition 5. Within seven days of becoming aware of a non-compliance, DSS will notify the Department (in writing through the Department's Major Projects Website), any affected landowners, tenants and the CCC of the non-compliance. The notification must identify the development (including the development application number and name), set out the condition of this Consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known), and what actions have been, or will be, undertaken to address the non-compliance.

Compliance with all approvals, plans and procedures will be the responsibility of all personnel (staff and contractors) employed on or in association with the DSLP, and will be promoted through direct consultation and direction of site management; namely the Site Manager and Environmental Site Representative. .

Regular inspections and/or internal audits will be undertaken as required under the direction of the Site Environmental Manager, to identify any remediation/rectification work required, and areas of actual or potential non-compliance.

The Environmental Permit Planner (EPP) will be updated to track the compliance commitments relating to the Noise Management Plan and will be audited monthly by site management; namely the Site Manager and Site Environmental Representative. A review of DSS's compliance with all conditions of the Consent, mining leases and all other approvals and licences will be undertaken prior to (and included within) each Annual Review. The Annual Review will be made publicly available on DSS's website.

On identification of an exceedance of the performance criteria presented in **Section 4**, the Response to Exceedance of Performance Criteria Protocol, located in **Appendix A** of this Plan, will be followed.

7.3 Noise Complaints

As part of the complaints handling procedure DSS will:

- ensure a publicly advertised telephone number for operational hours ((02) 4237 8414) and email address (feedback@boral.com.au) have been made available to receive complaints during operating hours and record complaints at other times;
- ensure all complaints are entered into a logbook; and
- ensure an initial response is provided within 24 hours of receipt of the complaint except in the event of complaints recorded when the mine is not operational.

The complaints record will include the following details for noise complaints:

- The date and time of complaint;
- The method through which the complaint was communicated e.g. Telephone, Email;
- The nature of the complaint;
- Any action taken by DSS in relation to the complaint, including any follow up contact with the complainant; and
- If no follow up action is taken by DSS, the reason why no action was taken.

The complaints register will be made publicly available on the website and updated on a quarterly basis. A summary of complaints received, and actions taken will be presented to the CCC as part of the operational performance review.

A summary of complaints received, and actions taken will also be included in the Annual Review and the Annual Return as will be available to regulatory authorities on request and provided in the Annual Environmental Management Reports (AEMRs).

To ensure an appropriate and consistent level of reporting, response and follow-up to any complaints is adopted by DSS, a Complaints Handling and Reporting Protocol will be followed as specified in **Appendix B**.

Based on the nature of the complaint, specific contingency measures will be implemented to the (reasonable) satisfaction of the complainant. The Quarry Manager retains ultimate responsibility to ensure that complaints received are properly recorded and addressed appropriately.

7.4 Independent Reviews

If a landowner considers the development to be exceeding any relevant noise criteria specified in **Table 7**, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land.

If the Planning Secretary is satisfied that an independent review is warranted, within three months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary's decision, DSS must:

- a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to:
 - (i) consult with the landowner to determine their concerns;

- (ii) conduct monitoring to determine whether the development is complying with the noise criteria specified in **Table 7**; and
 - (iii) if the development is not complying with the noise criteria specified in **Table 7**, identify measures that could be implemented to ensure compliance with the relevant criteria; and
- b) give the Planning Secretary and landowner a copy of the independent review; and
- c) comply with any written requests made by the Planning Secretary to implement any findings of the review.

8 PLAN ADMINISTRATION

8.1 Roles and Responsibilities

Environment and community management is regarded as part of the responsibilities of all DLSP personnel. The roles and function of the main personnel responsible for the implementation of environmental and community management including the Plan. Procedures and action plans contained in this Plan are outlined in DSS's Management Operating System.

8.2 Resources Required

Management will ensure that the appropriate resources are made available to achieve the implementation of the Plan, as approved by the Planning Secretary.

It is the role of the Group Environment Manager to ensure that these requirements are communicated to DSS Management.

8.3 Training

All training and inductions conducted must be undertaken as per the DSS training procedures.

8.3.1 Staff Training – Noise Management

Staff training will be undertaken as detailed in the PEMS. This consists of three levels of training applicable to different types of staff:

- Level 1 - High level training on environmental requirement – Management. This training would include the key compliance elements of this Plan and their implementation.
- Level 2 - Operational level training - Project Managers, Supervisors, Surface Personnel – detailed training on the implementation of the key compliance elements of this Plan and their implementation.
- Level 3 - Basic environmental awareness – All other site personnel Staff – induction level awareness.

8.3.2 Inductions – Noise Management

All new personnel, contractors and associated subcontractors will be required to participate in site induction prior to the commencement of work.

8.4 Record Keeping and Control

Environmental records will be managed in accordance with the Boral document and data control procedure.

All records of the PEMS and this Plan will be stored so that they are readily retrievable and suitably protected from deterioration or loss. Archiving will be managed in accordance with the data control procedure.

A current master copy of each Management Plan document including all appendices and supporting information will be held on the DSS Document management system.

Specifically, records of the monitoring associated with the environmental performance measures will be placed on the DSS website as available.

8.5 Consultation

Information on noise management and the results of noise monitoring is to be provided to external stakeholders. Communication can include:

- Written correspondence – through newsletters and fact sheets;
- Electronic correspondence (via the company website);
- Verbal correspondence (community meetings/information sessions); and
- DSLP CCC.

Prior to entering into any tenancy agreement for any land owned by DSS that is predicted to experience exceedances of the recommended noise criteria, DSS will:

- advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled “Mine Dust and You” (NSW Health, 2017); and
- advise the prospective tenants of the rights they would have under the Consent, to the satisfaction of the Planning Secretary.

8.6 Distribution

This Plan will be distributed to DPIE for comment prior to update and distribution to:

- EPA; and
- any other agency required by DPIE.

DSS will make this Plan publicly available on the DSS website and will be responsible for its maintenance. A hard copy will also be kept at the DSLP site.

Any revisions undertaken will be the responsibility of DSS and any notifications will be sent accordingly. DSS will not be responsible for maintaining uncontrolled copies beyond ensuring the most recent version is maintained on DSS’s computer system, website, and hard copy at the DSLP site.

8.7 Plan Revision

8.7.1 Annual Review

By the end of September each year, or other timing as may be agreed by the Planning Secretary, DSS will review the environmental performance of the development to the satisfaction of the Planning Secretary. The Annual Review will:

- a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;
- b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against:
 - relevant statutory requirements, limits or performance measures/criteria;

- requirements of any plan or program required under the Consent;
 - monitoring results of previous year(s); and
 - relevant predictions in the Stages 2-4 and Modification 2 environmental assessments.
- c) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
- d) evaluate and report on:
- the effectiveness of the noise and air quality management systems; and
 - compliance with the performance measures, criteria and operating conditions of this Consent;
- e) identify any trends in the monitoring data over the life of the development;
- f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- g) describe what measures will be implemented over the next financial year to improve the environmental performance of the development.

DSS will ensure that copies of the Annual Review are submitted to the Planning Secretary and Council and are available to the CCC and any interested person upon request.

8.7.2 Plan Revision

This Plan will be reviewed within three months of:

- The submission of an annual review.
- The submission of an incident report.
- The submission of an independent environmental audit.
- The approval of any modification of the conditions of the Consent (unless the conditions require otherwise).

If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the Plan must be revised, to the satisfaction of the Planning Secretary and submitted to the Planning Secretary for approval within six weeks of the review.

8.8 Auditing

An Independent Environmental Audit will be undertaken by a suitably qualified auditor and include experts in any field specified by the Secretary every three years.

This audit must:

- be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
- include consultation with the relevant agencies and the CCC;
- assess the environmental performance of the development and whether it is complying with the relevant requirements in the Consent and any relevant EPL and/or Water Licence (including any assessment, plan or program required under these approvals);
- review the adequacy of any approved strategy, plan or program required under these approvals; and
- recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals.

The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.

Within six weeks of commissioning an audit, or as otherwise agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, Council, EPA and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

8.9 Access to Information

Unless otherwise agreed by the Planning Secretary, DSS will continue to:

- a) make the following information publicly available on its website:
 - the documents listed in condition 2(c) of Schedule 2 of the Consent;
 - current statutory approvals for the development;
 - approved strategies, plans or programs;
 - a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this Consent;
 - minutes of CCC meetings;
 - a summary of the current phase and progress of the development;
 - contact details to enquire about the development or to make a complaint;
 - a complaints register, which is to be updated on a monthly basis;
 - the Annual Reviews of the development;
 - reports prepared as part of any independent environmental audit, and the Applicant's response to the recommendations in any audit report;
 - any other matter required by the Planning Secretary; and
- b) keep this information up-to-date,

to the satisfaction of the Planning Secretary.

APPENDIX A: RESPONSE TO EXCEEDANCE OF PERFORMANCE CRITERIA PROTOCOL

1. Confirmation of Exceedance

The analysing laboratory or consultant will be contacted to ensure no error has been made in storing, analysing or recording the sample or result. Should this investigation conclude the treatment, analysis and result recording for the sample are satisfactory; DSS will proceed to the notification step of the protocol (2).

2. Notification (of Exceedance)

In the case where the nominated criteria contained within Schedule 3 of DA195-8-2004 or EPL11147 is exceeded, the Environmental Coordinator or environmental representative will notify the Secretary, DPI&E and EPA (where appropriate) and affected land owners within seven days as to the nature of the exceedance. An exceedance of a compliance criteria value will require the preparation of a corrective action plan.

3. Corrective Action

- a) A sample from the monitoring site from which the exceedance was recorded will be re-sampled where possible and re-assessed to confirm an exceedance of criteria. A compliant result following reassessment will be considered a sufficient response; however, the monitoring point and parameter will be noted for reference in the event a future exceedance is recorded. A second non-compliant result will require further corrective actions (see 3(b)).
- b) DSS will prepare a corrective action plan to return the component of the overall operation to compliance. Preparation of the action plan may require the assistance of a specialist consultant in the relevant field. Details regarding the preparation of the corrective action plan will be included in the relevant Annual Review and Environment Protection Licence Annual Return and to the DPI&E prior to implementation, if requested.

4. Independent Review

- a) If a landowner (excluding quarry owned properties) considers that the operations of the quarry are exceeding the nominated criteria of Schedule 3 (DA195-8-2004), then he/she may request from the Secretary an independent review of the impacts of the development on his/her land. If the Secretary is satisfied that an independent review is warranted, DSS will, within 3 months of the Secretary advising that an independent review is warranted:
 - i. consult with the landowner to determine his/her concerns;
 - ii. commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to conduct monitoring on the land, to determine whether the development is complying with the relevant criteria in Schedule 3, and identify the source(s) and scale of any impact on the land, and the development's contribution to this impact; and
 - iii. give the Secretary and landowner a copy of the independent review.
- b) If the independent review determines that the quarrying operations are complying with the relevant criteria in Schedule 3, then DSS may discontinue the independent review with the approval of the Secretary.
- c) If the independent review determines that the quarrying operations are not complying with the relevant criteria in Schedule 3, then DSS will:

- i. prepare a corrective action plan (as described in 3(b)) which will take all practicable measures, in consultation with the landowner, to ensure that the development returns to compliance with the relevant criteria; and
- ii. conduct further monitoring to determine whether these measures ensure compliance; or
- iii. secure a written agreement with the landowner to allow exceedances of the relevant criteria in schedule 3, to the satisfaction of the Secretary.

If the additional monitoring referred to above (4(c)(ii)) determines that the operations are complying with the relevant criteria in Schedule 3, then the independent review will be discontinued with the approval of the Secretary.

If the monitoring determines the development as non-compliant with the relevant criteria of DA195- 8-2004 or EPL11147, and an agreement between DSS and the affected land owner is unable to be reached, the matter may be referred to the Secretary by either DSS or the affected landowner for resolution.

If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process.

- d) If the independent review determines that the operations are not complying with the relevant criteria in Schedule 3, but that another operation or operations are contributing to this non-compliance, then DSS will, with the agreement of the landowner and other quarry(s), prepare and implement a Cumulative Noise and/or Air Quality Impact Management Plan to the satisfaction of the Secretary. This Plan must provide details of the joint approach to be adopted by DSS and other operations to manage cumulative air quality and/or noise impacts at the landowner's dwelling.

If DSS is unable to finalise an agreement with the landowner and/or other quarry(s), and/or prepare a Cumulative Noise and/or Air Quality Impact Management Plan, then DSS or the affected landowner may refer the matter to the Secretary for resolution.

If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process.

- e) If the landowner disputes the results of the independent review, either DSS or the landowner may refer the matter to the Secretary for resolution.

If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process.

5. Reassessment

Non-compliance with environmental criteria will require re-assessment to demonstrate a return to compliance by re-sampling and re-analysing the particular parameter(s) from the offending site following the completion of the action plan. Should scheduled monitoring occur within 2 weeks of completion of the action list, the re-sampling can be delayed. A third exceedance will require a return to Step 2 of the protocol and automatic assistance of a specialist consultant in Step 3.

6. Notification (of Compliance)

DSS will notify the Secretary, DPI&E and other relevant government agency(ies) and local stakeholder(s) of the return to compliance following the successful completion of Step 4.

7. Reporting

The recorded exceedance, corrective actions and reassessment will be reported to the CCC and included in each relevant AEMR.

APPENDIX B: COMPLAINTS RECORDING AND HANDLING PROTOCOL

Introduction

The Complaints Recording and Handling Protocol was initially prepared in response to Condition No. 6 of the Development Consent issued for the Dunmore Lakes Sand Quarry – Stage 1. This document presents a protocol that is simple and well understood by Dunmore Sand & Soil (DS&S) and surrounding residents. This will ensure that, in the event a complaint is made in relation to an activity on the site or relating to approved activities, simple and consistent procedures can be followed in response to the complaint.

- Part A: An outline of Procedures to be followed by a Complainant.
- Part B: Documentation to be maintained by DS&S about each complaint.
- Part C: A complaints register.
- Part D: Complaints Reporting Procedures.

The format of this protocol was accepted at the initial meeting of the Community Consultative Committee on 17 May 2000. It was accepted with the recognition that improvements to the protocol could be suggested at any time in the future by DS&S or community representatives to ensure the protocol followed is appropriate

PART A: PROCEDURES TO LODGE A COMPLAINT

Complaints can be made in two ways:

1. Writing to Quarry Manager

Dunmore Sand & Soil Pty Ltd

38 Tabbitta Road, Dunmore 2529

2. Telephoning the Complaints Line on (02) 4237 8414 (landline) or via email feedback@boral.com.au. Both phone numbers will be operational during the approved working hours. A message bank will operate on the email at all times, particularly outside the approved working hours and all calls will be returned as soon as practical or in accordance with the preference of the complainant. The email will capture calls outside approved working hours and when the line is engaged during approved working hours. The recorded message requests the following information to be recorded by the complainant.

- The Complainant's name.
- Telephone number.
- Preferred time to contact.
- Nature of the complaint.

Details of each call to the Complaints Line will be recorded, together with the nature of the complaint. Each complaint will be passed on immediately to Company management to respond to the complaint. All complaints will be handled in an efficient and courteous manner

PART B: COMPLAINTS RECORD SHEET

| COMPLAINT RECEIVED BY | | | |
|---|---|--|------------------------------------|
| Name: | Date & Time: | <input type="checkbox"/> In Writing | <input type="checkbox"/> Via phone |
| DETAILS OF COMPLAINT | | | |
| Complainant Details | | | |
| Name: | Phone No: | | |
| Address: | | | |
| Nature of the Complaint: (Detail as much information as possible – Date/Time, weather, etc.) | | | |
| Entered into Complaints Register & SEquence | | Date: | |
| INVESTIGATION OF COMPLAINT | | | |
| Investigator Name: | | | |
| Investigation Results: (Details as much information as possible) | | | |
| Measures Required to Overcome Concern: | | | |
| Response / Commitment(s) to Complainant: | | | |
| Complainant Comments: | | | |
| Entered into Complaints Register & SIMS | | Date: | |
| Investigator Sign off: | | Date: | |
| Copy to: | <input type="checkbox"/> Complainant (if requested) | <input type="checkbox"/> Community Committee | <input type="checkbox"/> DSS File |



PART C: COMPLAINTS REGISTER

| No. | Date | Time | Shoulder 6am-7am | Day 7am-6pm | Evening 6pm-10pm | Night 10pm-6am | Complainant Details (Name, contact details) | Reason | Description of Complaint | Action Taken |
|-----|------|------|---------------------|----------------|---------------------|-------------------|--|--------|--------------------------------|--------------|
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* Note: All complaints, with associated corrective actions and responsibilities, need to be entered into the Boral Safety Information Management System (SIMS).

PART D: COMPLAINTS REPORTING PROCEDURES

DS&S will report all complaints received and acted upon in the following manner:

1. A copy of each completed Complaints Record Sheet (Part B) will be supplied to each complainant – if requested.
2. The EPA will be notified within 7 days of receiving the complaint - if the Boral NSW environment manager deems the complaint is notifiable.
3. Copies of any record sheets for the period since the previous meeting will be tabled at each meeting of the Community Consultative Committee.
4. A copy of the relevant section of the Complaints Register (Part C) will be incorporated into the following Annual Review together with appropriate commentary/evaluation.
5. A copy of the relevant section of the Complaints Register (Part C) will be uploaded onto the DLSP Website each quarter.

APPENDIX C: DPIE LETTER OF ENDORSEMENT



Planning,
Industry &
Environment

Kate Jackson
Regional Manager – NSW/ACT
Boral Land & Property Group
Boral Australia
Level 18, 15 Blue Street
North Sydney, NSW, 2059

17/06/2021

Dear Ms Jackson

**Dunmore Lakes Quarry Project (DA195-8-2004)
Endorsement of Experts – Noise and Air Quality**

I refer to your request (DA195-8-2004-PA-27) for the Planning Secretary's approval of suitably qualified persons to prepare the Noise Management Plan and Air Quality Management Plan for the Dunmore Lakes Quarry Project (DA195-8-2004).

The Department has reviewed the nominations and information you have provided and is satisfied that the experts are suitably qualified and experienced. Consequently, I can advise that the Planning Secretary approves the appointments of Mr Roman Haverkamp of RWDI to prepare the Noise Management Plan and Mr Nic Hall, also of RWDI, to prepare the Air Quality Management Plan.

If you wish to discuss the matter further, please contact Nagindar Singh on 8289 6873 or via email at nagindar.singh@planning.nsw.gov.au.

Yours sincerely

Matthew Sprott
Director
Resource Assessments (Coal & Quarries)

as nominee of the Planning Secretary