

# Noise Management Plan

GALES-KINGSCLIFF

PTY LTD  
ABN: 75 093 540 080

## Noise Management Plan

for the

## Cudgen Lakes Sand Quarry

Project Approval No. 05\_0103 (MOD2)

*Prepared by:*



**R.W. CORKERY & CO. PTY. LIMITED**

April 2020

- Notes:
1. References to the conditional requirements referred to throughout this report relate to the Project Approval issued on 16 June 2009 and subsequently modified on 19 February 2016 (MOD 1) and 22 January 2019 (MOD 2).
  2. This document makes reference to a range of government agencies which were in existence at the time of the document's approval. In recognition of the fact that the names of government agencies may change throughout the life of the Cudgen Lakes Sand Quarry, a reference should be made to the prevailing name of the respective agency at the relevant time.

**Approved by**  
the Secretary's nominee, xxxxxxxx,  
on xx xxxxx 2020



# GALES-KINGSCLIFF

PTY LTD  
ABN: 75 093 540 080

## Noise Management Plan

for the

## Cudgen Lakes Sand Quarry

---

**Prepared for:**

Gales-Kingscliff Pty Ltd  
ABN: 75 093 540 080

and

Kingscliff Sands Pty Ltd  
ACN: 636 837 646

20 Ginahgulla Road  
BELLEVUE HILL NSW 2023

Telephone: (02) 9327 2481  
Email: sdsegal@gmail.com

---

**Prepared by:**

R.W. Corkery & Co. Pty. Limited  
Geological & Environmental Consultants  
ABN: 31 002 033 712

**Brooklyn Office:**

1st Floor, 12 Dangar Road  
PO Box 239  
BROOKLYN NSW 2083

Telephone: (02) 9985 8511

Email: brooklyn@rwcorkery.com

Ref No. 617/37a

**Orange Office:**

62 Hill Street  
ORANGE NSW 2800

Telephone: (02) 6362 5411

Email: orange@rwcorkery.com

**Brisbane Office:**

Suite 5, Building 3  
Pine Rivers Office Park  
205 Leitchs Road  
BRENDAL QLD 4500

Telephone: (07) 3205 5400

Email: brisbane@rwcorkery.com

April 2020



R. W. CORKERY & CO. PTY. LIMITED

## Document Control

<b>Document Title</b>	Noise Management Plan				
<b>Document Number</b>	617/37a				
<b>Revision No. &amp; Reason for Revision</b>	<b>Issue Date</b>	<b>Originator</b>	<b>Reviewed</b>	<b>Approved</b>	
Version 1 – Original document	28/02/14	S. Hollamby (Senior Env Consultant)	NSW P&I	Comments 01/04/14	
Version 2 – Address NSW P&I Comments	03/04/14	S. Hollamby (Senior Env Consultant)	NSW P&I	Approved 14/05/14	
Version 3 – Update to reflect approved modification to Project Approval (MOD1)	27/04/17	S. Hollamby (Senior Env Consultant)	NSW DPE	Approved 28/04/17	
Version 4 – updated to reflect approved modification to Project Approval (MOD2)	22/04/19	S. Hollamby (Senior Env Consultant)	NSW DPE	Comments	
Version 5 – review triggered by Annual Review and Independent Audit. Updates to company details & address DPE comments.	24/04/20 30/04/20	S. Hollamby (Senior Env Consultant)	NSW EPA NSW DPIE	Nil Comment <b>xx</b>	

**This Copyright is included for the protection of this document**

### COPYRIGHT

© **R.W. Corkery & Co. Pty Limited 2020**  
and  
© **Gales-Kingscliff Pty Ltd 2020**  
and  
© **Kingscliff Sands Pty Ltd 2020**

All intellectual property and copyright reserved.

Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system or adapted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without written permission. Enquiries should be addressed to R.W. Corkery & Co. Pty Limited.

# CONTENTS

	Page
<b>1. INTRODUCTION.....</b>	<b>1</b>
<b>2. STATUTORY REQUIREMENTS .....</b>	<b>1</b>
2.1 PROJECT APPROVAL 05_0103 .....	1
2.2 OTHER APPROVALS, LEASES AND LICENCES .....	3
<b>3. NOISE MANAGEMENT MEASURES .....</b>	<b>4</b>
3.1 DESIGN AND ENGINEERING NOISE CONTROLS .....	4
3.2 PROCEDURAL NOISE CONTROLS .....	4
<b>4. MONITORING PROGRAM .....</b>	<b>5</b>
4.1 INTRODUCTION .....	5
4.2 PREVIOUS NOISE MONITORING RESULTS .....	5
4.2.1 Baseline Noise Monitoring Results .....	5
4.2.2 Compliance Noise Monitoring Results .....	6
4.3 NOISE CRITERIA .....	6
4.3.1 Operational Noise Criteria .....	6
4.3.2 Cumulative Noise Criteria .....	6
4.4 MONITORING LOCATIONS AND FREQUENCY .....	7
4.5 MONITORING PROCEDURES.....	7
<b>5. NOISE MANAGEMENT SYSTEM .....</b>	<b>9</b>
5.1 REVIEW AND REPORTING OF MONITORING RESULTS .....	9
5.2 NOISE MONITORING TRIGGERS AND RESPONSE MEASURES .....	10
<b>6. RESPONSIBILITIES AND ACCOUNTABILITIES .....</b>	<b>11</b>
<b>7. PLAN REVIEW .....</b>	<b>11</b>
 <b>APPENDICES</b>	
Appendix 1 Consultation and Response .....	13
 <b>FIGURES</b>	
Figure 1 Noise Monitoring Locations.....	8
 <b>TABLES</b>	
Table 1 Project Approval Requirements Relating to Noise.....	1
Table 2 Statement of Commitments Relating to Noise .....	3
Table 3 EPL 12385 Requirements Relating to Noise .....	3
Table 4 Rating Background Levels .....	5
Table 5 Noise Criteria for the Cudgen Lakes Sand Quarry .....	6
Table 6 Noise Monitoring Locations.....	7
Table 7 Accountable Positions and Tasks (Noise) .....	11



This page has intentionally been left blank

## 1. INTRODUCTION

This Noise Management Plan (the NMP) has been prepared by R W Corkery & Co Pty Limited (RWC) on behalf of Gales-Kingscliff Pty Ltd (Gales) for the Cudgen Lakes Sand Quarry (“the Quarry”). The appointment of RWC to prepare this NMP was endorsed by the (then) NSW Department of Planning and Environment (DPE) on 18 April 2019.

This NMP represents the fifth revision of the NMP and applies for the life of the Quarry. However, the NMP will be reviewed on an at least an annual basis (see Section 7) and, if required, updated to reflect any changes to noise management practices. Consultation with the NSW Environment Protection Authority (EPA) and the (then) DPE was undertaken as part of the preparation of the NMP with copies of relevant correspondence presented as **Appendix 1**.

## 2. STATUTORY REQUIREMENTS

### 2.1 PROJECT APPROVAL 05\_0103

Gales operates the Quarry in accordance with Project Approval (PA) 05\_0103 originally granted by the (then) Minister for Planning on 16 June 2009 and last modified (MOD 2) 22 January 2019. Relevant noise-related conditions in PA 05\_0103 are reproduced in **Tables 1** and **2** with a reference provided to the Section(s) of this NMP where each condition is addressed.

**Table 1**  
**Project Approval Requirements Relating to Noise**

Page 1 of 3

Page No. 10

Cond No.	Requirement	Plan Section					
3(1)	The Proponent must ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land. <i>Table 2: Noise criteria dB(A)</i>	Section 4.3.1					
	<table><tr><th>Receiver</th><th>Day and Evening <i>L<sub>Aeq</sub> (15 minute) dB(A)</i></th><th>Shoulder <i>L<sub>Aeq</sub> (15 minute) dB(A)</i></th></tr><tr><td>Residences on privately owned land</td><td>47</td><td>44</td></tr></table>		Receiver	Day and Evening <i>L<sub>Aeq</sub> (15 minute) dB(A)</i>	Shoulder <i>L<sub>Aeq</sub> (15 minute) dB(A)</i>	Residences on privately owned land	47
	Receiver	Day and Evening <i>L<sub>Aeq</sub> (15 minute) dB(A)</i>	Shoulder <i>L<sub>Aeq</sub> (15 minute) dB(A)</i>				
	Residences on privately owned land	47	44				
Noise generated by the project is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy. Appendix 3 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.	Section 4.3.1						
However, the noise criteria in Table 2 do not apply if the Proponent has an agreement with the relevant landowner to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of this agreement.	Not Applicable						
3(2)	The Proponent must take all reasonable and feasible measures to ensure that noise generated by the project combined with the noise generated by other industrial development does not exceed the following amenity criteria on any privately-owned land, to the satisfaction of the Secretary: (a) <i>L<sub>Aeq</sub></i> (11 hour) 50 dB(A) – Day; (b) <i>L<sub>Aeq</sub></i> (4 hour) 45 dB(A) – Evening and (c) <i>L<sub>Aeq</sub></i> (9 hour) 40 dB(A) – Night	Section 4.3.2					

**Table 1 (Cont'd)**  
**Project Approval Requirements Relating to Noise**

Page 2 of 3

Cond No.	Requirement	Plan Section
3(3)	The Proponent must:	
	(a) implement best practice management to minimise the construction, operational and road transportation noise of the project;	Section 3
	(b) minimise the noise impacts of the project during meteorological conditions when the noise criteria in this approval do not apply (see Appendix 3);	Section 3
	(c) carry out attended noise monitoring (at least every 3 months or as otherwise agreed by the Secretary) to determine whether the project is complying with the operational noise criteria in Table 2 (see Appendix 3); and	Section 4.4 and 4.5
	(d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this approval, to the satisfaction of the Secretary. <i>Note: Monitoring under this approval is not required at all residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria, if agreed to by the Secretary.</i>	Section 5
3(4)	The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:	
	(a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;	Section 1
	(b) be submitted to the Secretary for approval within three months of the determination of Modification 2;	Document Control
	(c) be prepared in consultation with the EPA;	Section 1
	(d) describe the measures to be implemented to ensure: <ul style="list-style-type: none"> <li>compliance with the noise criteria and operating conditions of this approval;</li> <li>best practice management is being employed; and</li> <li>the noise impacts of the project are minimised during meteorological conditions under which the noise criteria in this approval do not apply (see Appendix 3);</li> </ul>	Sections 3 and 4
	(e) describe the proposed noise management system; and	Section 5
	(f) include a monitoring program to be implemented to measure noise from the project against the noise criteria in Table 2, and which evaluates and reports on the effectiveness of the noise management system on site.	Section 4
5(2)	The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	
	(a) a summary of relevant background or baseline data;	Section 4.2
	(b) a description of: <ul style="list-style-type: none"> <li>the relevant statutory requirements (including any relevant approval, licence or lease conditions);</li> <li>any relevant limits or performance measures/criteria; and</li> <li>the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;</li> </ul>	Section 2
	(c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Section 3
	(d) a program to monitor and report on the: <ul style="list-style-type: none"> <li>impacts and environmental performance of the project; and</li> <li>effectiveness of any management measures (see (c) above);</li> </ul>	Section 4
	(e) 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;	Section 5.2
	(f) a program to investigate and implement ways to improve the environmental performance of the project over time;	Section 5.1
	(g) a protocol for managing and reporting any: <ul style="list-style-type: none"> <li>incidents;</li> <li>complaints;</li> <li>non-compliances with statutory requirements;</li> </ul>	Section 5
	(h) a protocol for periodic review of the plan;	Section 7

**Table 1 (Cont'd)**  
**Project Approval Requirements Relating to Noise**

Page 3 of 3

Cond No.	Requirement	Plan Section
5(2) Cont'd	(i) a document control table that includes version numbers, dates when the management plan was prepared and reviewed, names and positions of the person/s who prepared and reviewed the management plan, a description of any revisions made and the date of the Secretary's approval.  <i>Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i>	Document Control
App 3	The noise criteria in Table 2 are to apply under all meteorological conditions except the following: (a) wind speeds greater than 3 m/s at 10 m above ground level; or (b) temperature inversion conditions between 1.5°C and 3°C/100 m and wind speed greater than 2 m/s at 10 m above ground level; or (c) temperature inversion conditions greater than 3°C/100 m.	Section 4.3.1

**Table 2**  
**Statement of Commitments Relating to Noise**

Desired Outcome	Action	Plan Section
All activities are undertaken in such a manner as to reduce the noise level generated, minimise impacts on surrounding landholders and/or residents and ensure noise levels remain below relevant EPA criteria.	11.1 Fit all mobile earthmoving equipment on the site with broadband type reversing beepers or alternative safety devices such as strobe lights and / or cameras.	Section 3
	11.2 Regularly service all equipment on site.	Section 3
	11.3 Maintain the internal road network to an acceptable standard to limit body noise from empty trucks.	Section 3
	11.4 Undertake a monitoring program to demonstrate that noise emissions from the Quarry Site are within the Quarry specific noise limits at the surrounding assessment locations.	Section 4
	11.5 Regularly review the extent of noise monitoring throughout the life of the Quarry to ensure meaningful data is being collected.	Section 5

## 2.2 OTHER APPROVALS, LEASES AND LICENCES

The only other approval / lease / licence relevant to the Quarry and including criteria relevant to noise management is Environment Protection Licence (EPL) 12385 issued by the EPA. These conditions are summarised in **Table 3** with a reference provided to the Section(s) of this NMP where each condition is addressed.

**Table 3**  
**EPL 12385 Requirements Relating to Noise**

Cond No.	Requirement	Plan Section
L4.1	Noise from the premises where extraction is occurring (being Lot 2 DP 216705 and Lot 21 DP 1082482) must not exceed an LAeq (15 minute) noise emission criterion of 47 dB(A) between the hours of 7am to 10pm, and 44dB(A) between the hours of 630am to 7am, except as expressly provided by this licence.	Section 4.3.1
L4.2	Noise from the premises where extraction is occurring (being Lot 2 DP 216705 and Lot 21 DP 1082482) is to be measured at: residences on privately owned land; and, locations specified in Section 7(b) of Schedule 3 of Project Approval 75J Project Application 05_0103 dated 16 June 2009, to determine compliance with this condition.	Section 4.4

### 3. NOISE MANAGEMENT MEASURES

#### 3.1 DESIGN AND ENGINEERING NOISE CONTROLS

Specific design and engineering measures which will be implemented include the following.

- Acoustical treatment of the dredge including the enclosure of the engine with acoustic louvers and installation of a high-performance muffler (or other appropriate treatments).
- All mobile vehicles on the site will be fitted with broadband type reversing beepers or alternative safety devices such as strobe lights and / or cameras.
- Mobile plant will be fitted with standard mufflers. These will be maintained to manufacturer's specifications.
- The internal road network will be maintained to an acceptable standard to limit body noise from empty trucks. Maintenance will be undertaken on an ongoing and as needed basis.

These design and engineering measures apply at all times and under all meteorological conditions.

#### 3.2 PROCEDURAL NOISE CONTROLS

In addition to these specific design measures, the following procedural management measures will be implemented to reduce potential noise impacts.

- All equipment on site will be regularly serviced to ensure sound power levels of each item remains at or below that nominated for noise modelling purposes. Servicing will be undertaken as required dependent on the frequency of use of each item of equipment.
- The approved hours of operation will be strictly adhered to at all times. The approved hours of operation limit activities with a greater potential for noise impacts to day-time hours.
- All Quarry personnel, contractors and their employees will be made aware of their obligations and responsibilities with regard to minimising noise emissions.
- Vehicle speeds on unsealed internal access roads would be restricted to 30km/hr.

These procedural measures will be implemented under all meteorological conditions, including during adverse conditions as specified under *Appendix 3 Condition 1* of PA 05\_0103 (see **Table 1**), to ensure noise impacts generated by Quarry operations are minimised. During adverse / noise enhancing conditions, the Quarry Manager will also assess the need to alter or cease noise generating activities, particularly in exposed locations.

These measures will also minimise the potential for cumulative noise impacts resulting from other non-Quarry noise generating activities in the area.

## 4. MONITORING PROGRAM

### 4.1 INTRODUCTION

*PA Conditions 3(3) and 3(4)*<sup>1</sup> requires that this NMP include a monitoring program that:

- provides for attended noise monitoring to determine whether the project is complying with the operational noise criteria; and
- evaluates and reports on the effectiveness of the noise management system on site.

Additionally, *PA Condition 5(2)* requires that this NMP include relevant baseline data.

This section has been prepared in satisfaction of those requirements.

### 4.2 PREVIOUS NOISE MONITORING RESULTS

#### 4.2.1 Baseline Noise Monitoring Results

Unattended baseline noise logging was carried out at four receptor locations surrounding the Quarry Site from 16 to 23 August 2005. The Rating Background Levels (RBL) derived from the measured ambient noise levels at each of the four receptors are summarised in **Table 4**.

**Table 4**  
**Rating Background Levels**

Receptor*	Rating Background Level L <sub>A90</sub> (dB(A))			Equivalent L <sub>Aeq</sub> (dB(A)) <sup>#</sup>		
	Day 7am – 6pm	Evening 6pm – 10pm	Night 10pm – 7am	Day 7am – 6pm	Evening 6pm – 10pm	Night 10pm – 7am
Receptor G	51	42	38	62	59	56
Receptor DD	42	41	35	55	49	45
Receptor F	42	40	35	58	58	47
Receptor B <sup>^</sup>	41	39	37	55	47	48
Source: Modified from Rumble (2008) – Tables 4 to 11.						
* See <b>Figure 1</b>						
<sup>#</sup> Logarithmic Average of all measurement data						
<sup>^</sup> Receptor B has been demolished due to construction of Pacific Views Estate						

A series of attended ambient noise level measurements were also carried out during the day on 23 August 2005 the results of which were generally within 1dB(A) to 2dB(A) of the unattended levels.

Baseline L<sub>Aeq</sub> noise levels at Receptors G, DD and F were almost entirely dominated by traffic noise from Tweed Coast Road.

<sup>1</sup> All conditions in Project Approval 05\_0103 are referred to as the schedule number followed by the condition number in brackets, e.g. *PA Condition 3(4)* refers to Schedule 3 Condition 4.

## 4.2.2 Compliance Noise Monitoring Results

To date, noise compliance monitoring has been undertaken on 10 July 2017 for the site establishment activities and on 30 January 2018 for the initial operational activities. During both monitoring events, total noise levels at most monitoring locations exceeded the project-specific criteria. However, noise from the Cudgen Lakes Sand Quarry could not be isolated and, in most cases, was not audible due to the continuous nature of the surrounding noise sources. As a result, Quarry specific noise levels could not be measured through direct monitoring at the specified monitoring locations. Therefore, during the January 2018 monitoring, near-field measurements were recorded for both the dredge and booster pump (the key operating equipment) in order to back calculate the contributions of these items at the surrounding monitoring locations. The calculated contributions were well below the 47dB(A) noise criteria with the highest Quarry contribution calculated at 42dB(A).

## 4.3 NOISE CRITERIA

### 4.3.1 Operational Noise Criteria

PA Condition 3(1) requires that the noise generated by the Quarry operations does not exceed the criteria in **Table 5**.

**Table 5**  
**Noise Criteria for the Cudgen Lakes Sand Quarry**

<b>Receiver</b>	<b>Day and Evening LAeq (15 minute) dB(A)</b>	<b>Shoulder LAeq (15 minute) dB(A)</b>
Residences on privately owned land	47	44
Day = 7:00am to 6:00pm Monday to Saturday and 8:00am to 6:00pm on Sundays. Evening = 6:00pm to 10:00pm Shoulder = 6:00am to 7:00am		

As specified in Appendix 3 of PA 05\_0103, these criteria apply under all but the following meteorological conditions.

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

Notwithstanding, potential noise impacts from the Quarry operations are still to be minimised during meteorological conditions under which the noise criteria do not apply.

### 4.3.2 Cumulative Noise Criteria

In addition to the Quarry specific noise levels, PA Condition 3(2) requires that all reasonable and feasible measures to ensure that noise generated by the Quarry combined with the noise generated by other industrial development does not exceed the following amenity criteria on any privately-owned land.

- LAeq (11 hour) 50dB(A) – Day.
- LAeq (4 hour) 45dB(A) – Evening.
- LAeq (9 hour) 40dB(A) – Night.

#### 4.4 MONITORING LOCATIONS AND FREQUENCY

Attended noise monitoring will be undertaken at the monitoring locations listed in **Table 6** and shown on **Figure 1**.

**Table 6**  
**Noise Monitoring Locations**

Receiver*	Location
Residence G	216 Tweed Coast Road
Residence DD	34A Crescent Street
Residence F	64 John Robb Way
Pacific Views Estate	Via Lot 12 DP 1212919
Residence O	607 Cudgen Road
* See Figure 1	

Monitoring to demonstrate compliance with the applicable noise criteria will be undertaken on a quarterly basis for up to 2 years / up to eight occasions and then on an annual basis thereafter. As operations are likely to initially occur on a campaign basis, should no operations be occurring during that quarter, noise monitoring will be undertaken during the next period of operational activities. Monitoring will be undertaken at a time considered representative of higher intensity activities during that period (e.g. during extraction).

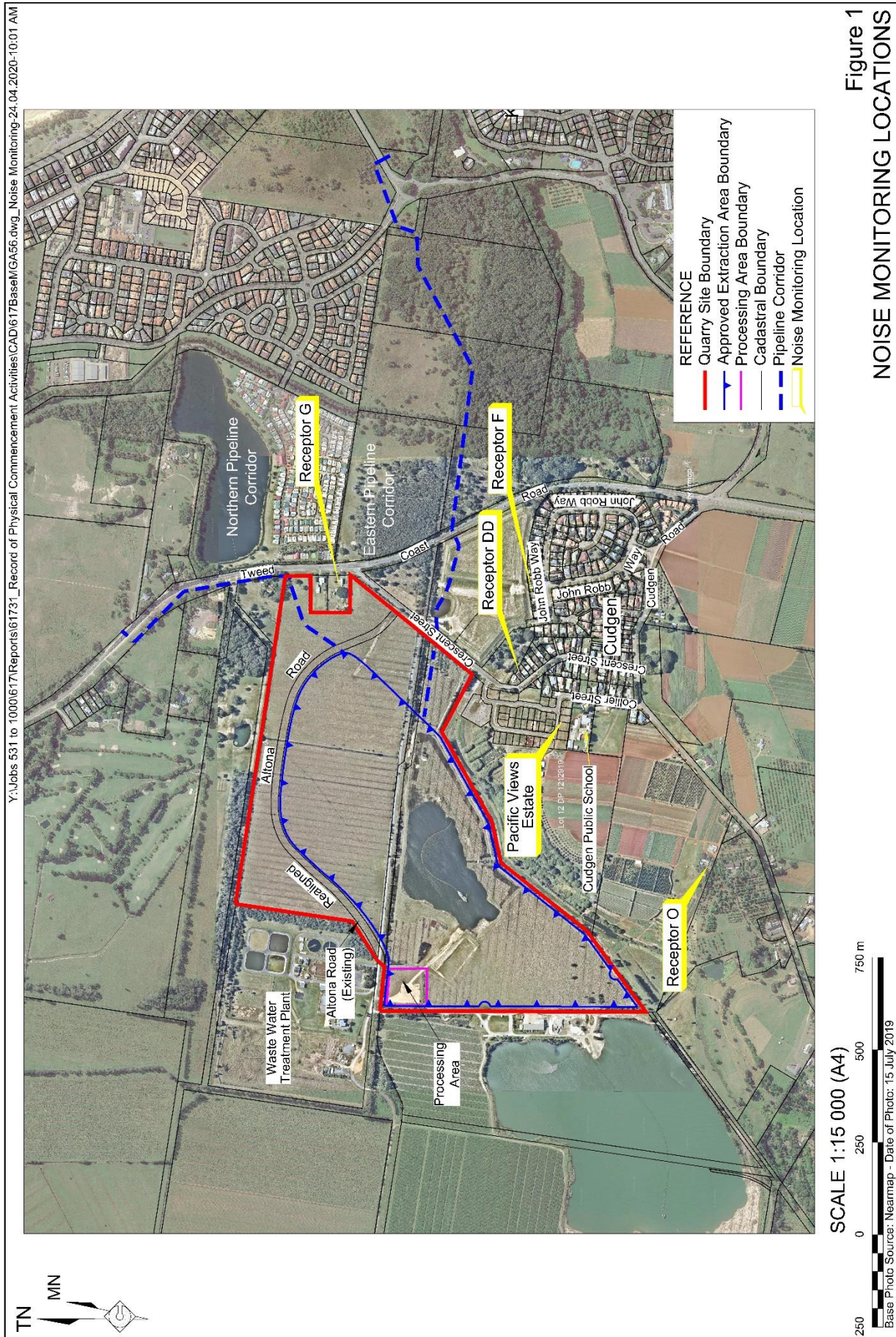
Previous compliance monitoring (see Section 4.2.2) has not been able to directly measure Quarry-related noise at surrounding noise locations due to consistently elevated background noise levels. Therefore, should only low intensity activities occur during the quarter, noise monitoring will not be undertaken as Quarry activities are unlikely to be measurable from background noise. Low intensity activities include the limited transportation of material (without concurrent extraction or processing) as per the rate in *PA Condition 2(11)* which limits trucks to 4 laden trucks per hour and a total of 10 laden trucks per day. Such transportation activities are very low intensity and unlikely to be distinguishable from existing traffic and background noise.

Should monitoring during other low intensity activities, such as dredging without concurrent earthmoving activities, demonstrate that received noise levels are well below the relevant criteria, approval will also be sought to remove the need to monitor during those circumstances.

#### 4.5 MONITORING PROCEDURES

Noise compliance monitoring will be operator attended in order to accurately determine the noise contribution from the Quarry-related activities compared to other noise sources. These attended noise surveys will be conducted as follows.

1. All noise investigations will be carried out in accordance with the NSW Industrial Noise Policy, and applicable Australian Standards - as required by *PA Condition 3(1)*.
2. Noise levels will be measured in one-third octave bands using an instrument with IEC Type 1 characteristics as defined in AS IEC 61672.1-2004 "Electroacoustics - Sound Level Meters". The instrument will have current calibration as per manufacturer's instructions and field calibration will be performed before and after measurements with a sound level calibrator.



3. The instrument will be set to A-weighting, “fast” response and measurements of  $L_{Aeq(15 \text{ minute})}$  will be taken at each location in **Table 6**. Each measurement will be stored for further analysis.
4. Attended surveys will be conducted during the approved hours of operation with measurements taken during at each location, so that noise levels during the full range of operating times (shoulder / day / evening) are monitored as applicable to the operations occurring.
5. Field notes will be taken during each measurement recording the time and duration of noise events, noise sources, instantaneous noise levels and the frequency range of identified site noise sources.
6. Extraneous noise sources will be filtered from the measured signal and the  $L_{Aeq(15 \text{ minute})}$  level attributable to quarry activities will be identified and compared with the relevant criteria in Section 4.3.
7. The noise data for all noise sources (cumulative) will be compared with the relevant criteria in Section 4.3.

Details regarding mobile plant locations/activities, weather conditions, extraneous noise sources, monitoring locations and times of measurement will be recorded for inclusion within a noise monitoring report.

In the event that Quarry operations are not audible at the surrounding monitoring locations due to other surrounding noise sources, a near-field measurement(s) will be taken and the project-specific noise contribution back-calculated to the monitoring locations.

## 5. NOISE MANAGEMENT SYSTEM

### 5.1 REVIEW AND REPORTING OF MONITORING RESULTS

A noise monitoring report will be prepared by the acoustic consultant following each monitoring event. The monitoring report will be reviewed by the Quarry Operator and Administration Officer and a copy included within the relevant Annual Review.

In accordance with *PA Condition 5(9)* and Section 148 of the *Protection of the Environment Operations Act 1997*, in the event of a recorded exceedance of the operational noise criteria (see Section 4.3.1) or the occurrence of an incident that causes (or may cause) harm to the environment, the Department of Planning, Industry and Environment (DPIE), EPA and other relevant government agencies would be notified immediately in accordance with the Pollution Incident Response Management Plan. The affected landowner would also be notified.

In accordance with *PA Condition 5(10)*, within 7 days of notifying DPIE and EPA of an exceedance / incident, a written report would also be provided that:

- a) identifies the time and date of the incident;
- b) describes the details of the incident;
- c) describes measures that were implemented to prevent reoccurrence; and
- d) identifies any non-compliance.



A summary of the exceedance / incident and noise response measures will also be documented within the respective Annual Review and any non-compliance documented in the Annual Return for the Quarry's Environment Protection Licence.

## 5.2 NOISE MONITORING TRIGGERS AND RESPONSE MEASURES

The following responses would be triggered by the results of noise monitoring. It is noted any noise complaints received would be handled in accordance with the Complaints Receipt and Response Procedures outlined in the Environmental Management Strategy.

### All Locations are Compliant with Operational Noise Criteria

- Operations and monitoring to continue as normal.

### Short-term Exceedance of Operational Noise Criteria

If the likely source is related to the Quarry operations:

- where possible, the activity causing the exceedance will cease immediately and actions will be formulated to reduce the emitting potential of the source of the elevated emissions such as addition of attenuation measures to plant and equipment or modification of the conduct of a particular activity. It is noted the actions formulated and their timeframe for implementation will be dependent on the type of activity and nature of the exceedance;
- a report will be prepared and submitted in accordance with *PA Condition 5(10)* to DPIE and EPA;
- the nominated mitigation measures will be completed; and
- quarterly monitoring will be undertaken and reported in accordance with *PA Condition 4(1)* until such time as it can be demonstrated that further exceedance of criteria is unlikely or a noise agreement is in place with the relevant landowner(s).

### Continued Exceedances or Landholder Dispute

In the event of continued exceedances of noise criteria as a result of the Quarry operations and following the implementation of all reasonable measures on site, Gales-Kingscliff Pty Ltd would attempt to negotiate an appropriate arrangement with the landowner(s) to further mitigate or compensate for the noise impacts.

In the event a negotiated agreement is reached, DPIE and EPA would be informed in writing of the terms of the agreement.

In the event that a negotiated agreement cannot be reached or there is a failure to reach a resolution, DPIE would be advised in writing and provided with all relevant information demonstrating the attempts to resolve the matter. It would also be suggested to the landholder that they may wish to refer the matter for an independent review process as outlined within *PA Condition 4(2)*<sup>2</sup>.

---

<sup>2</sup> *PA Condition 4(2)* is worded such that only a landowner can request an independent review.

## 6. RESPONSIBILITIES AND ACCOUNTABILITIES

The procedures contained within this NMP are available to all members of the workforce and will be discussed, where necessary, through inductions or toolbox talks / meetings. The ultimate responsibility for the implementation of the NMP is the Quarry Operator.

**Table 7** outlines the accountable positions and tasks.

**Table 7**  
**Accountable Positions and Tasks (Noise)**

Position	Accountable Task
Quarry Operator (Quarry Manager)	<ul style="list-style-type: none"> <li>Coordinate noise monitoring and reporting.</li> <li>Review monitoring results upon receipt to confirm compliance.</li> <li>Report any exceedances of operational noise criteria to DPIE and EPA immediately, notify the affected landholder, and the Administration Officer.</li> <li>Coordinate and disseminate the required response to and development of management measures for any valid complaints received / exceedances recorded.</li> <li>Notify employees of any additional noise response measures required to be implemented as a result of exceedances.</li> </ul>
Administration Officer	<ul style="list-style-type: none"> <li>Ensure noise monitoring data is accurately reported in the Annual Review and Annual Return.</li> <li>Review this plan on an annual basis and revise where required.</li> </ul>
Plant Operator	<ul style="list-style-type: none"> <li>Ensure that any additional noise response measures are implemented as advised by the Quarry Manager.</li> </ul>
All employees	<ul style="list-style-type: none"> <li>Record all required information in the event a noise complaint is received (as outlined within the Environmental Management Strategy).</li> </ul>

## 7. PLAN REVIEW

In accordance with *PA Condition 5(4)*, this NMP will be reviewed and, if required, revised within 3 months of:

- the submission of an incident report under *PA Condition 5(10)*;
- the submission of an Annual Review under *PA Condition 5(13)*;
- the submission of an Independent Environmental Audit report under *PA Condition 5(14)*; and
- any modification to the conditions of PA05\_0103.

Where this review leads to revisions in any such document, then within 6 weeks of the review, the revised document will be submitted to DPIE for approval.

This page has intentionally been left blank

# **Appendix 1**

## **Consultation and Response**

(No. of pages including blank pages = 4)



This page has intentionally been left blank

**Scott Hollamby**

---

**From:** Gen Seed <genevieve.seed@planning.nsw.gov.au>  
**Sent:** Monday, 29 April 2019 1:13 PM  
**To:** Scott Hollamby  
**Subject:** RE: 617: Cudgen - Updated AQMP, NMP & EMS

Hi Scott

Hope you had a nice break.

Thanks for submitting the AQMP, NMP and EMS for the Cudgen Lakes Sand Project. I have a few comments on the Noise and AQ MPs below. I will review the EMS in conjunction with the remaining plans to be submitted. My comments are as follows:

Noise MP

- Please can you include discussion in the NMP on what actions will be taken during adverse weather conditions. The AQMP includes a section on this noting that dust generating activities will be minimised. This principle can also be applied to noise generating activities.
- The NMP states that noise monitoring won't be required on days where only the interim transport operations are occurring. I am confused by the inclusion of this statement. Should the quarry be dispatching any material from the site, I would assume that the quarry would have been extracting / processing material in times leading up to this transport, and that some sort of extraction campaign would be in progress. I would also assume that noise monitoring would be scheduled on days during the quarter where the noisier operations are occurring (ie extraction and processing), as opposed to days where the quarry was only transporting material from stockpiles. It makes sense that monitoring is not undertaken during periods where the site is not operational, however, monitoring for a quarter should not be skipped because the chosen day of monitoring is not ideal. Therefore, I'd like to request the removal of the third paragraph in Section 4.4.

Air Quality MP

- Similar to the point above, in the AQMP, please update section 6.2 to reflect that monitoring will only be ceased during times when the quarry is not in any sort of extraction campaign.
- In section 3.2, please remove the words "as applicable" in the first sentence.
- In dot point 3 of section 3.2, please provide further information about what conveyors would be partially enclosed and when this would occur. Has this already been done?
- In Section 6.2 of the AQMP, please define what activities are including in 'Dry Processing'.

Thanks

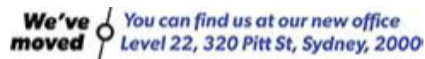
Gen

**Genevieve Seed**

Senior Planning Officer  
Resource Assessments  
320 Pitt Street | GPO Box 39 | Sydney NSW 2001  
T 02 9274 6489



Subscribe to our [newsletter](#)



---

**From:** Scott Hollamby <scott@rwcorkery.com>  
**Sent:** Monday, 22 April 2019 9:33 PM  
**To:** Gen Seed <genevieve.seed@planning.nsw.gov.au>  
**Cc:** sdsegal@gmail.com; Lisa Segal <lisasegals@gmail.com>  
**Subject:** 617: Cudgen - Updated AQMP, NMP & EMS

Dear Gen,

Please find attached submission letter and updated management plans for the Cudgen Lakes Sand Quarry.

Kind regards

**Scott Hollamby**  
Senior Environmental Consultant  
Mobile: 0437 858 511

**RW Corkery & Co Pty Limited**  
Geological and Environmental Consultants



**Brooklyn**  
Level 1, 12 Dangar Road  
PO Box 239  
BROOKLYN NSW 2083

**Orange**  
62 Hill Street  
ORANGE NSW 2800

**Brisbane**  
Suite 5, Building 3,  
Pine Rivers Office Park  
205 Leitchs Road  
BRENDALD QLD 4500

Phone: (02) 9985 8511  
Email: [brooklyn@rwcorkery.com](mailto:brooklyn@rwcorkery.com)  
Website: [www.rwcorkery.com](http://www.rwcorkery.com)

Phone: (02) 6362 5411  
Email: [orange@rwcorkery.com](mailto:orange@rwcorkery.com)

Phone: (07) 3205 5400  
Email: [brisbane@rwcorkery.com](mailto:brisbane@rwcorkery.com)

This message is intended for the addressee named and may contain confidential/privileged information. If you are not the intended recipient, please delete it and notify the sender. Any confidentiality or privilege between R. W. Corkery & Co. Pty Limited and Client is not waived or lost because this email has been sent to you by mistake. You should scan any included files for viruses

**Scott Hollamby**

**From:** Geff Cramb <Geff.Cramb@epa.nsw.gov.au>  
**Sent:** Thursday, 30 April 2020 10:57 AM  
**To:** Scott Hollamby  
**Subject:** RE: 617: Cudgen Lakes - Updated Air & Noise Management Plans

Dear Scott

In relation to your email correspondence dated 24 April 2020, specifically the update of the Air Quality and Noise Management Plans for the Cudgen Lakes Sand Quarry.

The EPA do not intend to review and provide comment upon the updated management plan. However, the EPA will undertake compliance reviews against the requirements of Environment Protection Licence 12385 and the implementation of the management plans at their discretion.

Regards  
 Geff

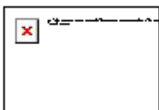
**Geff Cramb**

Operations Officer – Environment Management Unit  
 North Coast, NSW Environment Protection Authority  
 +61 2 6640 2510

Mon	Tues	Wed	Thurs	Fri
✓	✓	✓	✓	x

[geff.cramb@epa.nsw.gov.au](mailto:geff.cramb@epa.nsw.gov.au) [www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)  @EPA NSW

Report pollution and environmental incidents 131 555 (NSW only) or +61 2 9995 5555



I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect that you will read, respond to or action it outside of your own regular hours.

**From:** Scott Hollamby <scott@rwcorkery.com>  
**Sent:** Friday, 24 April 2020 4:23 PM  
**To:** Geff Cramb <Geff.Cramb@epa.nsw.gov.au>  
**Cc:** EPA RSD North Coast Region Mailbox <north.coast@epa.nsw.gov.au>; sdsegal@gmail.com; lisa Peled <lisasegals@gmail.com>  
**Subject:** 617: Cudgen Lakes - Updated Air & Noise Management Plans

Dear Geff,

As previously discussed, please find attached the updated Air Quality and Noise Management Plans for the Cudgen Lakes Sand Quarry. Changes since the version supplied in April 2019 have been tracked for ease of review.

If you could please confirm whether EPA wishes to provide any comments in relation to these plans.

Please don't hesitate to contact me if you would like discuss any aspect of the plans.

Many thanks

**Scott Hollamby**  
 Senior Environmental Consultant

A summary of how the above consultation comments have been addressed within the NMP is provided in **Table A1-1**.

**Table A1-1**  
**Coverage of Consultation Comments**

Agency	Comment	Coverage
DPE	Please can you include discussion in the NMP on what actions will be taken during adverse weather conditions. The AQMP includes a section on this noting that dust generating activities will be minimised. This principle can also be applied to noise generating activities.	Section 3.2 updated to confirm that all standard management measures continue to apply during adverse weather conditions AND that the need to alter or cease noise generating activities, particularly in exposed locations, will be assessed during adverse conditions.
	The NMP states that noise monitoring won't be required on days where only the interim transport operations are occurring. I am confused by the inclusion of this statement. Should the quarry be dispatching any material from the site, I would assume that the quarry would have been extracting / processing material in times leading up to this transport, and that some sort of extraction campaign would be in progress. I would also assume that noise monitoring would be scheduled on days during the quarter where the noisier operations are occurring (i.e. extraction and processing), as opposed to days where the quarry was only transporting material from stockpiles. It makes sense that monitoring is not undertaken during periods where the site is not operational, however, monitoring for a quarter should not be skipped because the chosen day of monitoring is not ideal. Therefore, I'd like to request the removal of the third paragraph in Section 4.4.	As discussed with DPE, due to the campaign nature, particularly during the initial years of road transportation, an extraction campaign may provide a product stockpile suitable for a number of months of low level transportation. Provision is therefore made for the event that only low level transportation activities occurring during any given quarter.  Section 4.4 has been updated to clarify that noise monitoring would not be undertaken if ONLY low intensity activities (i.e. low level transportation) occur during that period.  Section 4.4 has also been updated to clarify that monitoring will be undertaken at a time considered representative of higher intensity activities during that period (e.g. during extraction).
EPA	No comment.	-