Air Quality Management Plan

GALES–KINGSCLIFF

PTY LTD
ABN: 75 093 540 080

# Air Quality Management Plan

for the

# Cudgen Lakes Sand Quarry

Project Approval No. MP05_0103B (MOD2)

*Prepared by:*

RWCorkery&co

March 2025

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, Jarrod Blane,
on 6 June 2025

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# Air Quality Management Plan

## for the

# Cudgen Lakes Sand Quarry

**Prepared for:**


Gales-Kingscliff Pty Ltd
ABN: 75 093 540 080
ACN: 636 837 646

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

20 Ginahgulla Road
BELLEVUE HILL NSW 2023


**Prepared by:**


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

Telephone: (02) 9985 8511
Email: admin@rwcorkery.com
Postal: PO Box 1796
CHATSWOOD NSW 2057

**Sydney | Orange | Townsville**

**Sydney**
Suite 12.01, 1-5 Railway Street
CHATSWOOD NSW 2067

**Orange**
62 Hill Street
ORANGE NSW 2800



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RWCorkery&co

## Document Control

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# 1. INTRODUCTION

This Air Quality Management Plan (the AQMP) has been prepared by R W Corkery & Co Pty Limited (RWC) on behalf of Gales-Kingscliff Pty Ltd (Gales) and Kingscliff Sands Pty Ltd for the Cudgen Lakes Sand Quarry ("the Quarry"). The appointment of RWC to prepare this AQMP was endorsed by the (then) NSW Department of Planning and Environment (DPE) on 18 April 2019. It is noted that Kingscliff Sands Pty Ltd operates the Quarry under contract to Gales. All references in this document to Gales also be read to include Kingscliff Sands Pty Ltd where applicable.

This AQMP represents the sixth revision of the AQMP and applies for the life of the Quarry. However, the AQMP will be reviewed on an at least an annual basis (see Section 9) and, if required, updated to reflect any changes to air quality management practices. Consultation with the NSW Environment Protection Authority (EPA) and Department of Planning, Housing and Infrastructure (DPHI) was undertaken as part of the preparation of the AQMP with copies of relevant correspondence presented as **Appendix 1**.

# 2. STATUTORY REQUIREMENTS

## 2.1 PROJECT APPROVAL MP05_0103B

Gales operates the Quarry in accordance with Project Approval (PA) MP05_0103B originally granted by the (then) Minister for Planning on 16 June 2009 and last modified (MOD 2) 22 January 2019. Relevant air quality-related conditions in PA MP05_0103B are reproduced in **Tables 1** and **2** with a reference provided to the Section(s) of this AQMP where each condition is addressed.

**Table 1**
**Project Approval Requirements Relating to Air Quality**

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<table>
<tr><th>Cond No.</th><th>Requirement</th><th>Plan Section</th></tr>
<tr><td>3(5)</td><td>The Proponent must ensure that particulate matter emissions generated by the project do not cause exceedances of the criteria in Table 3 at any residence on privately-owned land.<br><br>Table 3: Air quality criteria
<table>
<tr><th>Pollutant</th><th>Averaging Period</th><th colspan="2">Criterion</th></tr>
<tr><td rowspan="2">Particulate matter <10µm ($PM_{10}$)</td><td>Annual</td><td colspan="2">a,c 25µg/m$^3$</td></tr>
<tr><td>24-hour</td><td colspan="2">b 50µg/m$^3$</td></tr>
<tr><td rowspan="2">Particulate matter <2.5 (PM2.5)</td><td>Annual</td><td colspan="2">a, c 8µg m$^3$</td></tr>
<tr><td>24-hour</td><td colspan="2">b 25µg/m$^3$</td></tr>
<tr><td>Total suspended particulates (TSP)</td><td>Annual</td><td colspan="2">a,c 90µg/m$^3$</td></tr>
<tr><td>d Deposited dust</td><td>Annual</td><td>b 2g/m$^2$/month</td><td>a 4g/m$^2$/month</td></tr>
</table>
Notes:<br>
a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources).<br>
b Incremental impact (i.e. incremental increase in concentrations due to the project on its own).<br>
c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.<br>
d Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter – Deposited Matter - Gravimetric Method.[1]</td><td>Section 5</td></tr>
</table>

[1] Superseded by *AS/NZS 3580.10.1 :2016 Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method.*

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



| Cond No. | Requirement | Plan Section |
|---|---|---|
| 3(6) | The Proponent must:<br>a) implement best management practice to minimise the dust emissions of the project, including routinely watering haul roads being used by heavy vehicles and equipment; | Section 3 |
| | b) regularly assess meteorological and air quality monitoring data to guide the day-to-day planning of operations and implementation of air quality mitigation measures to ensure compliance with the relevant conditions of this approval; | Section 3.4 |
| | (c) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note c to Table 3 above); | Section 3.4 |
| | (d) monitor and report on compliance with the relevant air quality conditions in this approval; and | Section 7.1 |
| | (e) minimise surface disturbance of the site, other than as permitted under this approval,<br>to the satisfaction of the Secretary. | Section 3.2 |
| 3(7) | The Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:<br>a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary; | Section 1 |
| | b) be prepared in consultation with the EPA; | Section 1 |
| | c) be submitted to the Secretary for approval within three months of the determination of Modification 2; | Document Control |
| | d) describe the measures to be implemented to ensure:<br>- compliance with the air quality criteria and operating conditions of this approval;<br>- best practice management is being employed; and<br>- the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events; | Section 3 |
| | e) describe the air quality management system in detail; and | Sections 3 and 7 |
| | f) include an air quality monitoring program that:<br>- is capable of evaluating the performance of the project against the air quality criteria;<br>- adequately supports the air quality management system; and<br>- includes a protocol for determining any exceedances of the air quality criteria.<br>The Proponent must implement the Air Quality Management Plan as approved from time to time by the Secretary. | Sections 6 and 7 |
| 5(2) | The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:<br>a) a summary of relevant background or baseline data; | Section 4 |
| | b) a description of:<br>- the relevant statutory requirements (including any relevant approval, licence or lease conditions);<br>- any relevant limits or performance measures/criteria; and<br>- 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; | 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:<br>- impacts and environmental performance of the project; and<br>- effectiveness of any management measures (see (c) above); | Section 6 |

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

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| Cond No. | Requirement | Plan Section |
|---|---|---|
| 5(2) Cont'd | 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 7.2 |
| | f) a program to investigate and implement ways to improve the environmental performance of the project over time; | Section 7.1 |
| | g) a protocol for managing and reporting any:<br>- incidents;<br>- complaints;<br>- non-compliances with statutory requirements; | Section 7 |
| | h) a protocol for periodic review of the plan; | Section 9 |
| | 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.<br>*Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.* | Document Control |

**Table 2**
**Statement of Commitments Relating to Air Quality**

| Desired Outcome | Action | Plan Section |
|---|---|---|
| Site activities are undertaken without exceeding DECC air quality criteria or adversely impacting on surrounding receivers. | 12.1 Install water sprays or other suitable controls to minimise dusts generated during screening and dry processing. | Section 3 |
| | 12.2 Undertake progressive rehabilitation / stabilisation of available areas of disturbance (e.g. finalised sections or backfilled areas of the extraction pond). | Section 3 |
| | 12.3 Clean accumulated tracked road mud, dry dusts, sand or spillages on Altona Road using a street sweeper. | Section 3 |
| | 12.4 Cover product trucks loads to prevent wind-borne losses and spillages. | Section 3 |
| | 12.5 Undertake monitoring in accordance with the Air Quality Monitoring Program | Section 6 |
| | 12.6 Annually review the dust monitoring program to ensure that the data being collected is meaningful. | Section 9 |
| | 12.7 Ensure the screening and blending plant does not exceed a daily average processing rate greater than 100tph. | Section 3 |

## 2.2 OTHER APPROVALS, LEASES AND LICENCES

The only other approval / lease / licence relevant to the Quarry and including criteria relevant to air quality 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 AQMP where each condition is addressed.

**Table 3**
**EPL 12385 Requirements Relating to Air Quality**

| Cond No. | Requirement | Plan Section |
|---|---|---|
| O3.1 | The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises. | Section 3 |

# 3. AIR QUALITY MANAGEMENT MEASURES

## 3.1 SITE ESTABLISHMENT

The following dust controls will be employed during site establishment and construction.

- In the event that the natural soil moisture is insufficient to avoid generation of excessive airborne dust, water will be applied using the on-site water cart prior to stripping.
- The area of stripping within the extraction area will be minimised to minimise the area of sand exposed above the water table.
- Fast growing grass species will be seeded or mulch cover added to all bunds and stockpiled topsoil which has not already established a groundcover within 3 months.
- The number of internal access roads created will be minimised and internal access roads no longer required will be cross ripped, topsoiled and seeded (if a groundcover has not established within 3 months).
- Vehicle speeds on unsealed internal access roads will be restricted to 30km/hr.
- Internal access roads will be watered at a rate of 2L/m² per application using the water cart during high vehicle activity and dry conditions.

## 3.2 SAND EXTRACTION, PROCESSING AND BLENDING OPERATIONS

The following dust controls will be employed during extraction, processing and blending.

- Stockpiled materials will be watered as necessary, particularly those containing materials with elevated silt content (e.g. stockpiled VENM, loamy sand and associated products).
- Shelters, enclosures or physical barriers will be used for the screening and conveying of loamy sands and VENM materials.
- Misting water sprays or similar controls will be used as required during screening and blending to control dusts.
- Progressive rehabilitation / stabilisation of available areas of disturbance (e.g. finalised sections or backfilled areas of the extraction pond) will be undertaken.

- Where adequate groundcover has not established within 3 months, stabilising grass species will be seeded on bunding created as the extraction stages progress.
- Control of blending and screening operations to achieve a daily average processing rate of 100tph.

It is also noted that the inherent moisture content of the loamy sand and VENM materials will result in the need for the addition of very little water, if any, during screening.

### 3.3 TRANSPORTATION

Accumulated tracked road mud, dry dusts, sand or spillages on Altona Road and on any sealed areas within the processing areas will be cleaned up, as required, using a street sweeper or other suitable method. Product trucks will have covered loads to prevent wind-borne losses and spillages.

### 3.4 ADVERSE METEOROLOGICAL CONDITIONS

In the event of adverse meteorological conditions, such as dry periods with high winds blowing excessive levels of visible dust (despite application of water) towards surrounding residences, the activities resulting in the generation of this dust will be suspended until conditions improve. It will be the responsibility of all employees to report these conditions to the Quarry Manager and for the Quarry Manager to monitor meteorological conditions and visually assess the levels of visible dust being generated and order the cessation activities.

## 4. BACKGROUND AIR QUALITY

Based on the suspended particulate monitoring carried out between 1998 and 2002 at the representative monitoring station located at Helensvale (Gold Coast, Qld) and the average of the deposited dust monitoring results undertaken surrounding the Quarry between September 2005 and September 2007, the adopted background particulate concentrations are as follows.

- $PM_{10}$ maximum 24-hour average of 31µg/$m^3$.
- $PM_{10}$ annual average of 17µg/$m^3$.
- TSP annual average of 34µg/$m^3$ (assumes $PM_{10}$ fraction comprises 50% of TSP).
- Deposited dust rate of 1.5g/$m^2$/month.

## 5. AIR QUALITY CRITERIA

*PA Condition 3(5)* requires that the Quarry particulate emissions do not exceed the air quality criteria outlined in **Table 4** at any residence on any privately-owned land.

**Table 4**
**Air Quality Criteria**

| Pollutant | Averaging Period | Criterion | |
|---|---|---|---|
| Particulate matter <10µm ($PM_{10}$) | Annual | [a,c] 25µg/m$^3$ | |
| | 24-hour | [b] 50µg/m$^3$ | |
| Particulate matter <2.5 ($PM_{2.5}$) | Annual | [a,c] 8µg m$^3$ | |
| | 24-hour | [b] 25µg/m$^3$ | |
| Total suspended particulates (TSP) | Annual | [a,c] 90µg/m$^3$ | |
| Deposited dust [d] | Annual | [b] 2g/m$^2$/month | [a] 4g/m$^2$/month |

*Notes:*

*a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources).*

*b Incremental impact (i.e. incremental increase in concentrations due to the project on its own).*

*c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.*

*d Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter – Deposited Matter - Gravimetric Method**

** Superseded by AS/NZS 3580.10.1 :2016 Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method.*

# 6. MONITORING PROGRAM

## 6.1 MONITORING PARAMETERS

The most significant emission from the Quarry will be dust in various forms, namely total suspended particulate matter (TSP), particulate matter with aerodynamic diameter less than 10µm ($PM_{10}$), and deposited dust. To a lesser degree, particulate matter with aerodynamic diameter less than 2.5µm ($PM_{2.5}$) will also be emitted. The air quality monitoring program will therefore monitor $PM_{10}$ and deposited dust. It is noted that compliance with $PM_{10}$ goals will invariably indicate compliance with $PM_{2.5}$ and TSP goals. Hence, it is not proposed that $PM_{2.5}$ or TSP will be monitored.

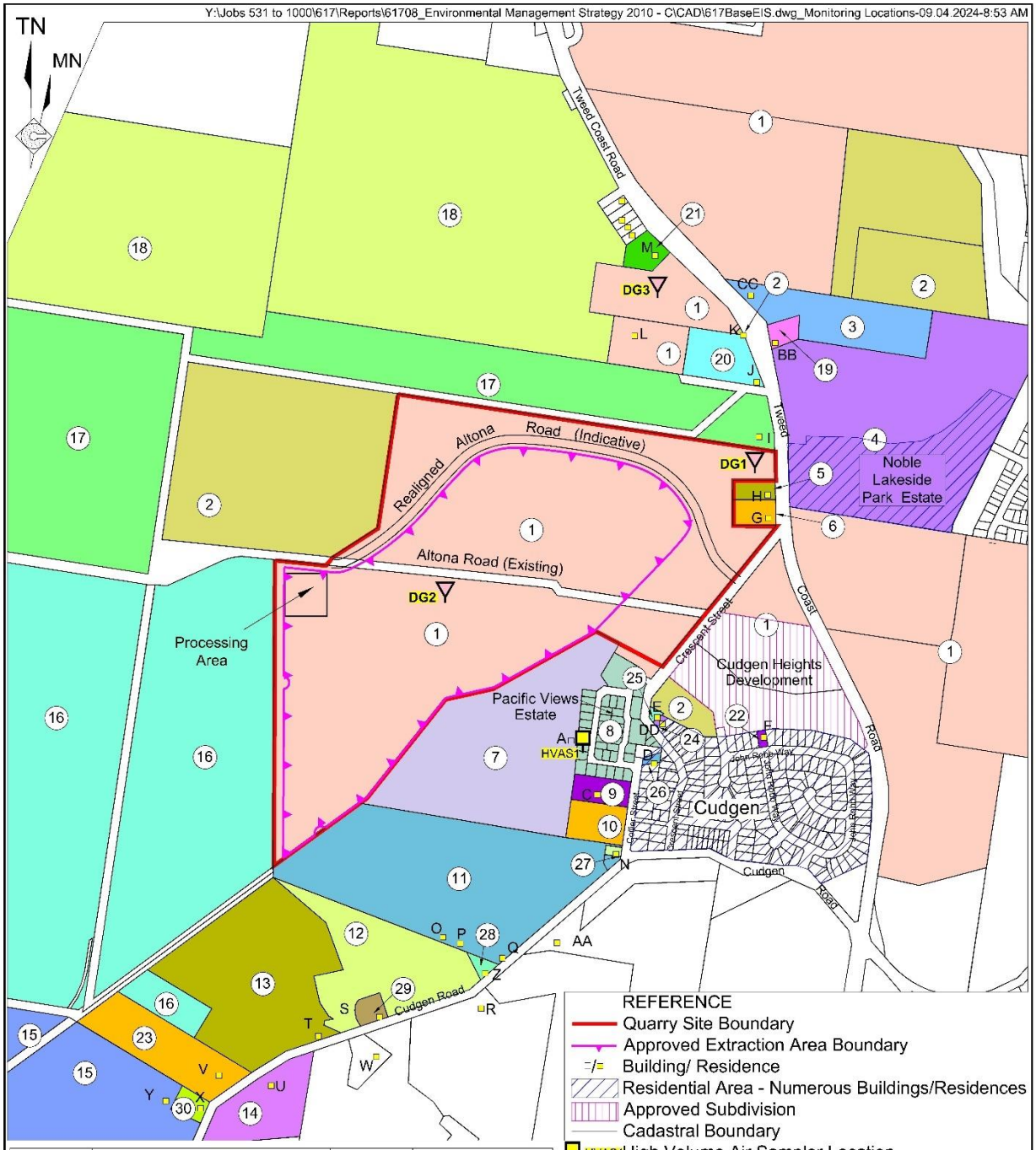
## 6.2 MONITORING LOCATIONS AND FREQUENCY

The monitoring locations are shown on **Figure 1** whilst the frequencies and averaging periods are detailed in **Table 5**. It is noted that DG 2 is proposed to be moved to a new location to improve access and reduce organic matter contribution.

**Table 5**
**Air Quality Monitoring Frequencies**

| Monitoring Reference | Frequency | Averaging Period |
|---|---|---|
| Deposited Dust Gauge 1 (DG 1) | Continuous[1] during dry processing operations | Monthly, Annual |
| Deposited Dust Gauge 2 (DG 2) | Continuous[1] during dry processing operations | Monthly, Annual |
| Deposited Dust Gauge 3 (DG 3) | Continuous[1] during dry processing operations | Monthly, Annual |
| HVAS 1 | 1 day in 6 during dry processing operations | 24hr, Annual |

1. Deposited dust gauges would collect deposited dust continuously over a one month period before sample collection.




| Reference | Owner | Reference | Owner |
|---|---|---|---|
| 1 | Gales - Kingscliff Pty Ltd | 17 | Privately owned |
| 2 | Tweed Shire Council | 18 | Privately owned |
| 3 | Privately owned | 19 | Privately owned |
| 4 | Baglon Pty Ltd | 20 | Privately owned |
| 5 | Privately owned | 21 | Chinderah Golf Club |
| 6 | MFJ Family Investments Pty Ltd | 22 | Privately owned |
| 7 | Privately owned | 23 | Privately owned |
| 8 | Privately owned | 24 | Privately owned |
| 9* | NSW Dept. of Education & Training | 25 | Privately owned |
| 10 | Tweed Shire Council | 26 | Privately owned |
| 11 | Privately owned | 27 | Privately owned |
| 12 | MCM68 Pty Ltd | 28 | Privately owned |
| 13 | Privately owned | 29 | Country Energy |
| 14 | Privately owned | 30 | Privately owned |
| 15 | Privately owned | | |
| 16 | Hanson Construction Materials | | |

Figure 1
AIR QUALITY
MONITORING LOCATIONS

All deposited dust gauges (DDG) and the high volume air sampler (HVAS) will be installed in accordance with:

- AS/NZS 3580.10.1-2016: *Methods of Sampling and Analysis of Ambient Air – Determination of Particulates – Deposited Matter – Gravimetric method*; and
- AS/NZS 3580.9.6:2015: *Methods for sampling and analysis of ambient air Methods for sampling and analysis of ambient air -Determination of suspended particulate matter – $PM_{10}$ high volume sampler with size selective inlet - gravimetric method*.

It is noted that during wet processing operations, the results from the deposited dust gauges surrounding the Quarry have not provided any valuable insight into the dust contributions from the Quarry. Given the long history of deposited dust monitoring at the Quarry, the minimal dust produced by the Quarry during wet processing operations, and the lack of any valuable results from the deposited dust results including high levels of organic contaminants regularly impacting results, it is proposed that deposited dust monitoring is ceased during wet processing operations.

The HVAS will be installed and the DDGs will be re-installed immediately prior to the commencement of dry processing operations[2]. Sampling may be suspended during periods when only wet processing is undertaken. The need for both the HVAS and DDGs will also be reviewed annually following of the Annual Review process.

## 6.3 MONITORING PROCEDURES

**Tables 6** and **7** outline the monitoring procedures for $PM_{10}$ and deposited dust.

**Table 6**
**$PM_{10}$ Sampling Procedure**

Page 1 of 2

| **What:** | **$PM_{10}$** |
|---|---|
| When: | 1-day-in-6, on standard the EPA "run days" |
| Where: | Site HVAS 1 (see **Figure 1** – location to be confirmed). |
| Who: | Quarry Operator or approved consultant to swap pre-weighed filters and forward to laboratory for analysis. |
| How: | i) Using a paint brush or rag, clean the lid of the high volume air sampler, taking special care around the pop rivets since these areas are usually laden with dust.<br>ii) Clean the filter cassette including the rubber seal and the top of the high volume air sampler.<br>iii) Place new filter allocated squarely onto cassette and replace cassette lid.<br>iv) Place filter cassette into position and clamp cassette down firmly.<br>v) Switch the machine on and allow 5 minutes for the machine to stabilise and then note the flow reading from the flow controller (the reading must be between 60m$^3$/hr and 96m$^3$/hr).<br>vi) Record the flow reading and other information specified on the HVAS field sheet (see **Appendix 2**).<br>vii) Switch the machine off and ensure that the HVAS has been pre-programmed according to the manufacturer's specifications to sample 1-day-in-6, for a period of 24-hours (from midnight to midnight).<br>viii) Following each programmed sampling day repeat steps (v) and (vi). |

**Table 6 (Cont'd)**
**$PM_{10}$ Sampling Procedure**



| What: | $PM_{10}$ |
|---|---|
| How: | ix) Switch the machine off using the appropriate button on the electronic timer and unlock and lift up the HVAS lid. Loosen the clips that hold down the filter cassette.<br>x) Carefully remove the filter from the filter holder, touching only the outer edges. Reject the sample if there is evidence of filter misalignment, blockage or breakthrough.<br>xi) If large debris or insects are trapped on the filter paper, carefully remove with clean forceps.<br>xii) Fold the filter so that only the surfaces with collected particulate matter are in contact and place into a 'zip lock' plastic bag.<br>xiii) Ensure that all details specified on the HVAS field sheet have been recorded.<br>xiv) Verify that the indicated instrument time is correct to within 15 minutes of actual time (local standard time); and that the high volume sampler time clock was in the correct sample sequence.<br>xv) Repeat steps (i) to (xiv)<br>xvi) Ensure that a flow calibration is conducted on the unit at two monthly intervals by an appropriately qualified technician.<br>**Method to be confirmed depending on model of HVAS equipment utilised.** |

**Table 7**
**Deposited Dust Sampling Procedure**

| What: | Deposited Dust |
|---|---|
| When: | Monthly during dry processing |
| Where: | Sites DG1, DG2, DG3 (see **Figure 1**). |
| Who: | Quarry Operator or approved consultant to swap bottles monthly and forward to laboratory for analysis. |
| How: | i) Remove the sample flagon bottle and funnel from the sample holder.<br>ii) The inside surface of the funnel should be washed down with a limited (50mL) amount of distilled water into the sample flagon bottle.<br>iii) The stopper and funnel should be removed from the flagon bottle and a cap immediately placed on the sample flagon bottle.<br>iv) Complete the labelling of the bottle with the sampling period by placing the date of collection on the bottle, e.g. "Sampling Period 01/01/19 - 31/01/19" and the sample location, e.g. "DG1".<br>v) Note any additional information such as overflow of the flagon, extraneous matter such as bird droppings within the funnel or activities in the vicinity which may have impacts upon the results (see **Appendix 3**).<br>vi) Clean any insects / cobwebs or obstructions from within the neck of the funnel and wipe out the inside of the funnel.<br>vii) Replace the stopper and funnel on the new bottle.<br>viii) Ensure that the bottle is properly numbered and the first date of the sampling period is recorded on the new bottle.<br>ix) Replace the flagon bottle and funnel in the sample holder. |

All samples are to be sent to a NATA accredited laboratory for analysis.

# 7. AIR QUALITY MANAGEMENT SYSTEM

## 7.1 REVIEW AND REPORTING OF MONITORING RESULTS

Following the receipt of the monitoring report from the NATA accredited laboratory, the Administration Officer or other delegated and trained employee will review and enter the results into an internal database. In addition to recording the individual monitoring events, the database will also calculate the rolling 12 month average of deposited dust and $PM_{10}$ levels.

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 air quality criteria (see Section 5) or the occurrence of an incident that causes (or may cause) harm to the environment, the DPHI, EPA and other relevant 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 DPHI 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 response measures would also be documented within the respective Annual Review and any non-compliance documented in the Annual Return for the Quarry's Environment Protection Licence.

## 7.2 AIR QUALITY MONITORING TRIGGERS AND RESPONSE MEASURES

The following responses would be triggered by the results of air quality monitoring. It is noted any air quality 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 Air Quality Criteria

- Operations and monitoring to continue as normal.

### Single Exceedance of Short Term Impact Assessment Criteria (24hr $PM_{10}$)

If the likely source is related to the Quarry operations:

- Step 1: actions will be formulated to reduce the emitting potential of the source of the elevated emissions and minimise the potential for future exceedances. Actions may include enclosure of plant or modification of the conduct of a particular activity. The type of actions and their timeframe for implementation will vary depending on the nature of the activity or source causing the exceedance;
- Step 2: a report will be prepared and submitted in accordance with *PA Condition 5(10)* to DPHI and EPA;
- Step 3: the nominated mitigation measures will be completed; and
- Step 4: 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 negotiated agreement is in place with the relevant landowner(s).

### Exceedance of Long Term Criteria

In the event of continuing (annual average) exceedance of deposited dust criteria or $PM_{10}$ as a result of the Quarry operations, the following actions will be implemented.

- The DPHI and EPA will be notified, nominating the type and magnitude of the exceedance and the number of affected landowners. The affected landowners will also be notified.
- Meteorological conditions for the period of monitoring will be reviewed and the likely source of the elevated particulate matter emissions identified.
- Completion of Steps 1 to 4 as for a short term exceedance.
- If further monitoring indicates that dust levels continue to exceed the relevant criteria, Gales-Kingscliff Pty Ltd would attempt to negotiate an appropriate arrangement with the landowner(s) to further mitigate or compensate for the impacts of the dust emissions.

In the event that a negotiated agreement cannot be reached or there is a failure to reach a resolution, DPHI 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)*[2].

## 8. RESPONSIBILITIES AND ACCOUNTABILITIES

The procedures contained within this AQMP 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 AQMP is the Quarry Operator. **Table 8** outlines the accountable positions and tasks.

**Table 8**
**Accountable Positions and Tasks (Air Quality)**

Page 1 of 2

| Position | Accountable Task |
|---|---|
| Quarry Operator (Quarry Manager) | • Ensure the nominated dust suppression and dust emission management controls are in place for the relevant aspects and activities being undertaken.<br>• Ensure air quality monitoring is undertaken in accordance with these procedures and relevant Australian Standards.<br>• Report any exceedances of relevant criteria to DPHI and EPA immediately, notify the affected landholder, and notify the Administration Officer.<br>• Coordinate and disseminate the required response to and development of management measures for any valid complaints received / exceedances recorded.<br>• Notify employees of any additional air quality response measures required to be implemented as a result of exceedances.<br>• Ensure air quality monitoring data is accurately recorded and supplied to the Administration Officer.<br>• Analyse air quality and relevant weather monitoring data to ensure compliance. |

[2] *PA Condition 4(2)* is worded such that only a landowner can request an independent review.

**Table 8 (Cont'd)**
**Accountable Positions and Tasks (Air Quality)**



| Position | Accountable Task |
|---|---|
| Administration Officer | • Ensure air quality monitoring data is accurately reported in the Annual Review and Annual Return.<br>• Conduct an annual review of the AQMP and update if necessary. |
| All Employees | • Report to the Quarry Manager any dust generating activities for which the dust mitigation measures prove ineffective. |

# 9. PLAN REVIEW

In accordance with *PA Condition 5(4)*, this AQMP 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 PA MP05_0103B.

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

# Appendices

Appendix 1 Consultation Records

Appendix 2 HVAS Field Sheet

Appendix 3 Deposited Dust Gauge Field Sheet

# Appendix 1

# Consultation and Response

No. of pages including blank pages = 3

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

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

| Agency | Comment | Coverage |
|---|---|---|
| EPA | Letter dated 10 March 2025 confirms no comments. | - |

DOC25/88388-2

Gales-Kingscliff Pty Ltd
Via NSW Planning Portal

10 March 2025

To whom it may concern,

**Planning Advice Request – Air Quality Management Plan for Cudgen Lakes Sand Quarry**

Thank you for the request for advice requesting input from the NSW Environment Protection Authority (EPA) on the revised Air Quality Management Plan (AQMP) for the Cudgen Lakes Sand Quarry– Stage Modification 2, as required by Project Approval MP05_0103B Schedule 3 Condition 7 (as provided to the EPA on 21 February 2025).

Being a regulatory authority, the EPA does not provide advice on, or endorsement of, any site management plans developed for planning assessments. Accordingly, the EPA will not be providing further comment to this request. We understand however that the Department of Planning, Housing and Infrastructure often require proponents to consult with the EPA in preparing the site management plans required by project approvals for developments like that at Cudgen Lakes Sand Quarry. I trust this response will provide the evidence you require to demonstrate that you have consulted with the EPA in preparing the revised site AQMP.

If you have any questions about this request, please contact Andrew Petroeschevsky on 02 6640 2555 or via email at info@epa.nsw.gov.au.

Yours sincerely

**Luke Davison**
**Unit Head - Operations**

**Phone** 131 555
**Phone** +61 2 9995 5555
(from outside NSW)

**TTY** 133 677
**ABN** 43 692 285 758

Locked Bag 5022
Parramatta
NSW 2124 Australia

4 Parramatta Square
12 Darcy St, Parramatta
NSW 2150 Australia

**info@epa.nsw.gov.au**
**www.epa.nsw.gov.au**

# Appendix 2

# HVAS Field Sheet

No. of pages including blank pages = 2

# HVAS Field Sheet

| HVAS FIELD SHEET | | | | | | |
|---|---|---|---|---|---|---|
| Location | HVAS 1 | HVAS 1 | HVAS 1 | HVAS 1 | HVAS 1 | HVAS 1 |
| Run Date | | | | | | |
| Blank No | | | | | | |
| Sample No | | | | | | |
| Calibration Date | | | | | | |
| Filter No | | | | | | |
| Time Filter On | | | | | | |
| Date Filter On | | | | | | |
| 'Technician' On | | | | | | |
| Hour Meter On | | | | | | |
| Flow Reading On | | | | | | |
| Time Filter Off | | | | | | |
| Date Filter Off | | | | | | |
| 'Technician' Off | | | | | | |
| Hour Meter Off | | | | | | |
| Flow Reading Off | | | | | | |
| Comments | | | | | | |

# Appendix 3

# Deposited Dust Gauge Field Sheet

No. of pages including blank pages = 2

# Deposited Dust Gauge: Field Sheet

**SAMPLED BY:** _____

**DATE ON:** _____

**DATE OFF:** _____

| Location | Time Serviced | Funnel Number (if replaced) | Approx. Volume | Notes & Comments |
|---|---|---|---|---|
| **DDG 1** | | | | |
| **DDG 2** | | | | |
| **DDG 3** | | | | |

Notes Interpretation: B = Bird Droppings, I = Insects (and spiders), T = Tree Litter (twigs, leaves, gumnuts), G = Grass (and seeds), F = Feathers, A = Animals (eg. frogs), O = Organic Matter (specify)