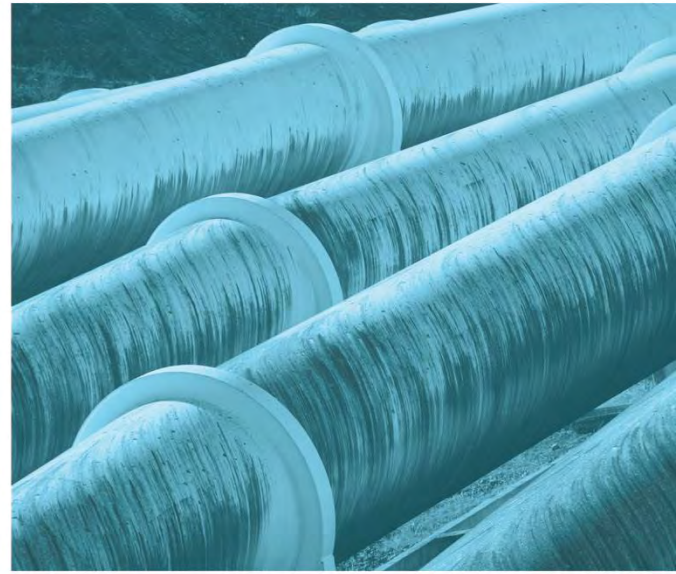




# Luddenham Quarry

## Environmental Management Strategy

Prepared for Luddenham Operations Pty Ltd  
September 2021





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# Luddenham Quarry

## Environmental Management Strategy

Prepared for Luddenham Operations Pty Ltd

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# Luddenham Quarry

## Environmental Management Strategy

### Report Number

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J190749 RP51

### Client

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Luddenham Operations Pty Ltd

### Date

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22 September 2021

### Version

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v3 Final

### Prepared by

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22/09/2021

### Approved by

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22/09/2021

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# 1 Introduction

## 1.1 Project Overview

Luddenham Quarry is located at 275 Adams Road, Luddenham NSW (Lot 3 in DP 623799, 'the site') within the Liverpool City Council municipality. The existing shale/clay quarry is approved by State significant development (SSD) consent DA 315-7-2003, issued by the NSW Minister for Planning under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The site is owned by CFT No 13 Pty Ltd, a member of the Coombes Property Group (CPG).

Luddenham Operations Pty Ltd (Luddenham Operations) will reactivate and operate the quarry in accordance with Modification 5 (MOD 5) of DA 315-7-2003 which was granted on 24 May 2021.

The location of the site in the regional context is presented Figure 1.1. The approved site layout is presented in Figure 1.2.

## 1.2 Purpose and scope

This Environmental Management Strategy (EMS) has been prepared to satisfy statutory and legislative requirements, in particular Schedule 6, Condition 1 of the approved Development Consent DA 315-7-2003 (as modified).

The purpose of this EMS is to provide a strategic framework for environmental management at Luddenham Quarry and describes in general how the environmental performance will be monitored and managed. The EMS:

- identifies the statutory approvals that apply to the development;
- sets out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
- sets out the procedures to be implemented to:
  - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
  - receive, record, handle and respond to complaints;
  - resolve any disputes that may arise during the course of the development;
  - respond to any non-compliance and any incident;
  - respond to emergencies;
- include reference to any strategies, plans and programs approved under the conditions of this consent; and
- include a clear plan depicting all the monitoring to be carried out under the conditions of this consent.

As required under Schedule 6 Condition 2 and Condition 11, Luddenham Quarry will implement this EMS and all strategies, plans and programs required under DA 315-7-2003 as approved by DPIE.

### 1.3 Objectives and targets of EMS

As a means of assessing environmental performance, environmental objectives and targets have been developed in consideration of the key issues identified through the approval process. The objectives and targets are consistent will assist in determining whether the commitments of the EMS are being met.

Environmental objectives for the quarrying activities are provided in Table 1.1.

**Table 1.1 Objectives and targets**

Objective	Target	How monitored and measured
Comply with all legislative requirements	<ul style="list-style-type: none"> <li>Full compliance with statutory approvals.</li> </ul>	Audits, compliance reporting and tracking, inspections, and monitoring.
Operate the quarry in accordance with the approval any other legal requirements	<ul style="list-style-type: none"> <li>No regulatory infringements (penalty infringement notices or prosecutions).</li> <li>No formal regulatory warning.</li> </ul>	Audits, compliance reports, inspections, and monitoring.
Engage with stakeholders and the broader community, minimise complaints and respond to any complaints within a suitable timeframe	<ul style="list-style-type: none"> <li>Record and respond to complaints within a timely manner.</li> <li>Provide access to quarry information and documents through the quarry's website.</li> </ul>	Review Complaints Register and timeliness of response, compliance reporting and tracking, audits.
Continuously improve environmental performance	<ul style="list-style-type: none"> <li>Develop and maintain a program of ongoing environmental training.</li> <li>Capture lessons learnt where required from environmental incidents to minimise repeat issues.</li> <li>Encourage and reward innovation and effort throughout the workforce.</li> </ul>	Compliance reporting and tracking, induction records, training delivered, lessons learnt disseminated.

### 1.4 Interaction with Management Plans

This EMS is the overarching document guiding environmental management and performance at Luddenham Quarry.

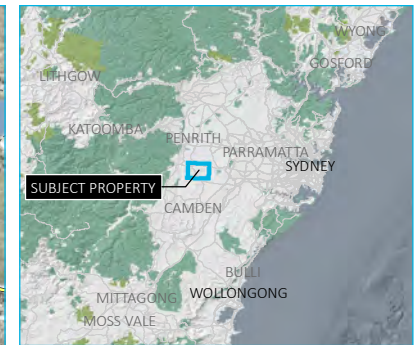
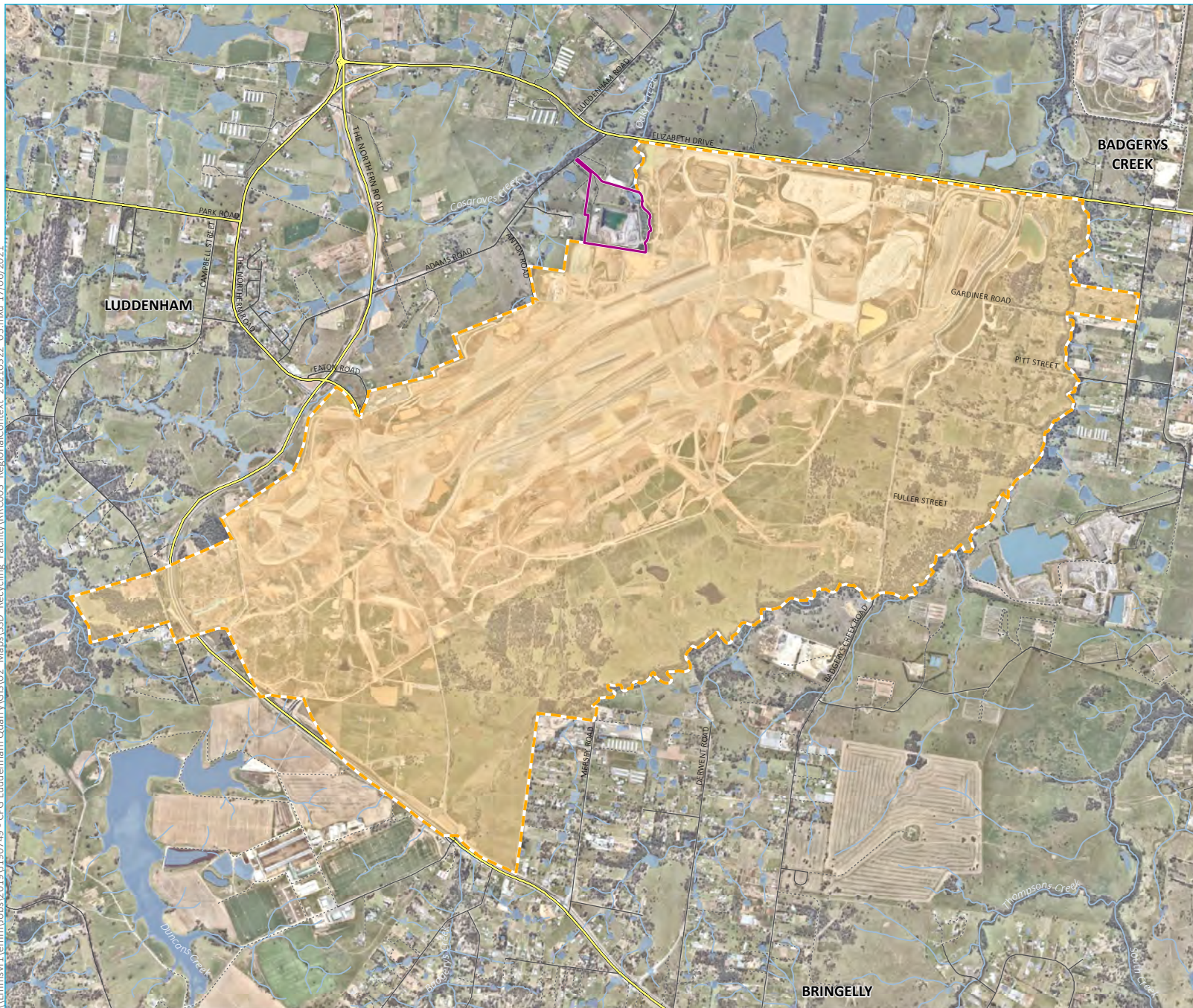
Environmental Management Strategies, Plans, Programs and Protocols required at Luddenham operations include:

- Air Quality Management Plan;
- Environmental Management Strategy;
- Noise Management Plan;
- Site Rehabilitation Plan including:

- Biodiversity Management Plan;
- Final Land Use Plan;
- Soil and Water Management Plan including;
  - Site Water Balance;
  - Erosion and Sediment Control Plan,.
  - Surface Water Management Plan;
  - Groundwater Monitoring Program; and
- Road Transport Protocol.



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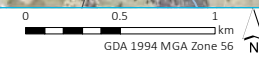
- KEY**
- Subject property
  - Western Sydney International (Nancy-Bird Walton) Airport
  - Major road
  - Minor road
  - Vehicular track
  - Watercourse/drainage line

Regional context

Luddenham Quarry  
Environmental Management Strategy  
Figure 1.1



Source: EMM (2021); DFSI (2017); Nearmap (2021)



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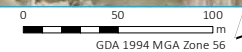
- KEY**
- Study area
  - Cadastral boundary
  - Proposed site modifications
  - Approved extraction footprint
  - Existing noise bunds
  - Existing stockpiling area
  - Extended stockpiling area
  - Internal road
  - Site entry infrastructure (incl. offices, amenities, weighbridge)
  - Equipment laydown area

Approved site layout

Luddenham Quarry  
Environmental Management Strategy  
Figure 1.2



Source: EMM (2021); DFSI (2017); GA (2011); Nearmap (2020)



## 2 Project Description

### 2.1 Site Context

The quarry site is approximately 19 hectares (ha) in size and is bordered to the east and south by the Commonwealth-owned Western Sydney Aerotropolis (WSA) (see Figure 1.1). Construction, including bulk earthworks and road infrastructure upgrades, is currently underway at the WSA. In addition to the WSA, surrounding land uses include a mix of agricultural, rural industrial and commercial, and residential development.

The site is relatively flat, sloping gently from the south-west to the north-east. Oaky Creek forms the eastern boundary of the site. Much of the site is disturbed by the quarry operations. There is a residence with agricultural sheds within the site, approximately 110 m north-west of the northern edge of the quarry void. The northern parts of the site are grassed, and there are small vegetation patches in the northern portion with more extensive vegetation along Oaky Creek on the eastern part of the site.

The approved site layout includes earth bunds along the northern and western sides of the quarry footprint. These bunds fulfil a dual purpose of noise attenuation and visually screening extraction and stockpiling operations within Lot 3 DP 623799. A lower and narrower bund wall is approved along the quarry void's eastern edge.

Access to site for quarry vehicles is via Adams Road. A site layout showing infrastructure areas, external and internal access road networks, laydown areas, operational areas and stockpiles is provided in Figure 1.2.

### 2.2 Extraction methodology, processing, and haulage

Quarrying operations at the site are approved until 31 December 2024, to a maximum of 300,000 tonnes per annum to a 30 m maximum depth.

The approved quarrying method involves extraction and stockpiling using a bulldozer, excavators, dump trucks and loading materials onto road trucks with a front-end loader.

Processing for the clay/shale is via a crusher and screen.

The quarry is approved to generate up to 100 daily truck movements (ie 50 in, 50 out). These trucks will access and exit the site via the northern section of Adams Road between the site access road and Elizabeth Drive.

### 2.3 Hours of operation and workforce numbers

The approved hours of operation for the development are as follows:

- 7.00 am – 6.00 pm Monday to Friday (no haulage vehicles may enter or leave the site between 6 pm and 7 am Monday to Friday and on public holidays); and
- 7.00 am – 1.00 pm on Saturdays for maintenance activities only (no other work is to be undertaken on Saturday, Sunday and public holidays).

The quarry site will support around 12 employees during normal operating conditions, with a maximum of 15 employees during peak operating times.

# 3 Statutory context

## 3.1 Conditions of consent

This EMS has been prepared to satisfy the conditions of Schedule 6, Condition 1 of DA 315-7-2003 (as modified). The conditions of DA 315-7-2003 will continue to apply in all other respects (other than the right to conduct quarrying operations) until the site has been properly rehabilitated.

Condition 1 (Schedule 6) of DA 315-7-2003 (as modified) requires the preparation of EMS in accordance with the requirements summarised in Table 3.1.

**Table 3.1** Schedule 6 Condition 1 - EMS requirements

Requirement	Relevant section of this EMS
Condition 1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:	
a) provide the strategic framework for environmental management of the development;	Sections 1.2 and 1.3
b) identify the statutory approvals that apply to the development;	Section 3.2
c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Sections 4.1 and 4.2
d) set out the procedures to be implemented to:	
i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Section 6.1
ii) receive record, handle and respond to complaints;	Section 6.4
iii) resolve any disputes that may arise during the course of the development;	Section 6.6
iv) respond to any non-compliance and any incident;	Sections 4.4 and 4.5
v) respond to emergencies;	Section 5.2
e) include:	
i) references to any strategies, plans and programs approved under the conditions of this consent; and	Sections 1.3 and 5.1
ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.	Appendix B

This EMS has also been prepared to satisfy the conditions of Schedule 6 Condition 4 Management Plan Requirements. These conditions and where they are addressed within the EMS, are summarised in Table 3.2.

**Table 3.2** Schedule 6 Condition 4 - EMS requirements

Requirement	Relevant section of this EMS
Condition 4. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	

**Table 3.2 Schedule 6 Condition 4 - EMS requirements**

<b>Requirement</b>	<b>Relevant section of this EMS</b>
a) a summary of relevant background or baseline data;	A summaries of baseline data are provided as relevant in the supporting environmental management plans and protocols (ie NMP, SWMP and AQMP).
b) details of:	
i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);	Section 3.2
ii) any relevant limits or performance measures and criteria; and	Limits, performance measures and criteria are provided as relevant in the supporting environmental management plans.
iii) 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;	Specific performance indicators are provided as relevant in the supporting environmental management plans.
c) any relevant commitments or recommendations identified in the document/s listed in condition 2 of Schedule 3;	This EMS (refer 5.2) and supporting management plans include relevant commitments and recommendations from the environmental assessment documentation.
d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Chapter 4 and 5 and supporting management plans describe the measures to be implemented
e) a program to monitor and report on the:	
i) impacts and environmental performance of the development; and	Chapter 7 and 8 and supporting management plans.
ii) effectiveness of the management measures set out pursuant to sub-condition (d) above;	Chapter 7 and 8 and supporting management plans.
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;	Section 4.4 and supporting management plans.
g) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 8.1.2 and supporting management plans.
h) a protocol for managing and reporting any:	
(i) incident, non-compliance or exceedance of the impact assessment criteria or performance criteria;	Section 4.3 and Section 4.4 and management plans
ii) complaint	Section 6.3 and management plans

**Table 3.2 Schedule 6 Condition 4 - EMS requirements**

Requirement	Relevant section of this EMS
iii) failure to comply with statutory requirements	Section 4.3 and Section 4.4 and management plans
i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and	Section 6.5
j) a protocol for periodic review of the plan.	Section 8.1.1 and management plans.

## 3.2 Legislation

This section describes the planning framework relevant to this EMS and relevant provisions of Commonwealth and State legislation and policy.

**Table 3.3 Legislation Summary**

Legislation	Relevance and requirements
Commonwealth <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Significant impact assessments have been conducted which found that no significant impacts are considered likely to Matters of Environmental Significance (MNES) at Luddenham operations.
Commonwealth Airports Act 1996 and Airports (Protection of Airspace) Regulations 1996	Airspace in the vicinity of the Western Sydney Airport is protected under the Airports Act and Airports regulations. Operations at Luddenham Quarry will not impact on the WSA Obstacle Limitation Surface or protected airspace and therefore does not require approval from the airport operator.
<i>Environmental Planning and Assessment Act 1979</i> (EP&A Act)	Operations at Luddenham operations must be carried out in accordance with State Significant Development Consent, DA 315-7-2003 (as modified).
Environmental Planning and Assessment Regulation 2000 (EP&A Regulation)	The EP&A Regulation outlines provisions related to developments located on strategic agricultural land. A Biophysical Strategic Agricultural Land (BSAL) assessment found that the quarry is not located on BSAL.
<i>Protection of the Environment Operations Act 1997</i> (POEO Act)	All extractive activities on site are be carried out in accordance with Environment Protection Licence (EPL) 21562.
<i>NSW Roads Act 1993</i>	Road upgrades on Adams Road associated with Luddenham Quarry, such as pavement upgrades, will be undertaken in accordance with the <i>NSW Roads Act</i> and consent obtained under Section 138 prior to the carrying out of works.
<i>NSW Mining Act 1992</i>	The quarry is defined as a 'mine' under the <i>NSW Mining Act 1992</i> (Mining Act). Extractive activities at Luddenham Quarry will be carried out in accordance with the Mining Operations Plan (MOP).

**Table 3.3 Legislation Summary**

Legislation	Relevance and requirements
<p><i>Biodiversity Conservation Act 2016</i> (BC Act)</p>	<p>Under <i>Biodiversity Conservation Act 2016</i> (BC Act), impacts to biodiversity are assessed and, if required, offset in accordance with the clearing thresholds prescribed by the Biodiversity Conservation Regulation 2017. Continued quarrying operations will not disturb any native vegetation outside of the previously approved quarry footprint and no biodiversity offsets are required.</p> <p>Refer to Biodiversity Management Plan.</p>
<p><i>Water Act 1912 and Water Management Act 2000</i></p>	<p>A water access licence (WAL) is required to dewater the quarry void. The necessary entitlement has been purchased on the open market.</p> <p>Refer Soil and Water Management Plan.</p>
<p><i>National Parks and Wildlife Act 1974</i> (NPW Act)</p>	<p>Aboriginal objects and places are protected in NSW under Part 6 of the NPW Act. The one registered Aboriginal heritage site identified at the Luddenham Quarry is fenced and is unlikely to be harmed by the operation. All employees and contractors will be made aware of their obligations for the protection of sites of Aboriginal heritage significance. Any new Aboriginal heritage sites that are identified during operations will be handled in accordance with the <i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW</i> (due diligence guidelines) and the Aboriginal cultural heritage unexpected fines protocol outlined in Section 5.2.1 of this EMS.</p>
<p>SEPP (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)</p>	<p>The Mining SEPP provides for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of NSW. It establishes appropriate planning controls to encourage ecological sustainable development.</p> <p>This EMS and associated management plans considers matters relevant to the Mining SEPP, including:</p> <ul style="list-style-type: none"> <li>• existing uses and approved uses of land in the vicinity of the development, and potential impacts and compatibility;</li> <li>• impacts on water resources and threatened species and biodiversity, and</li> <li>• consideration in regard to the transportation of product on public roads.</li> </ul> <p>Luddenham Quarry’s EMS and other management plans are consistent with the aims of this policy.</p>
<p>SEPP Sydney Regional Growth Centres 2006</p>	<p>This SEPP provides for the coordinated release of land for residential, employment and other urban developments in the North West and South West Growth Centres of Sydney Region. Luddenham Quarry will provide quarry product for these developing areas, employment opportunities and the means to achieve other urban developments.</p>
<p>SEPP (Koala Habitat Protection) 2019</p>	<p>The State Environmental Planning Policy (SEPP) Koala Habitat Protection replaces SEPP 44. This SEPP defines ‘core koala habitat’. This SEPP does not apply to SSD projects. Notwithstanding, the Luddenham Quarry will not impact on any koala habitat.</p>

**Table 3.3      Legislation Summary**

Legislation	Relevance and requirements
SEPP No. 55 – Remediation of land	<i>State Environmental Planning Policy No. 55 – Remediation of Land</i> (SEPP 55) requires a consent authority to consider potential contamination at a site when a change of land use is proposed. Ongoing quarry operations will not change the approved land use, accordingly consideration of this SEPP is not required for quarry operations.
Sydney Regional Environmental Plan No. 9 – Extractive Industries (No2) (SREP Extractive Industries)	Quarry operations will extract a regionally significant resource identified in the SREP Extractive Industries. The Site Rehabilitation Plan has also been prepared with consideration of the objective of this plan.
State Environmental Planning Policy (Western Sydney Aerotropolis) (Aerotropolis SEPP)	The Luddenham Quarry site is zoned predominantly Agribusiness with an area of Environment and Recreation zoned land associated with the Oak Creek riparian corridor (noting that the Environment and Recreation zoned portion extends further west than the riparian corridor). Pursuant to Clause 53(2) of the Aerotropolis SEPP, the quarry continues to be a permitted land use.
Liverpool Local Environmental Plan (LEP)	The quarry was a permissible land use under its former RU1 zoning under the Liverpool LEP, accordingly quarry operations align with the objectives of the Liverpool LEP RU1 zone .



# 4 Implementation

Luddenham Operations will employ a third party to carry out quarrying operations at the Luddenham Quarry. Responsibility for the implementation of this EMS will be shared between Luddenham Operations and the third party. Key personnel responsible for the implementation of this EMS will be the Operations Manager (from Luddenham Operations) and site supervisor and site environmental representative who will be employed by the third party.

## 4.1 Roles and responsibilities

The role, responsibility, authority, and accountability of all the key personnel involved in environmental management of Luddenham operations are outlined in Table 4.1.

**Table 4.1 Roles and responsibilities for environmental management**

<b>Role</b>	<b>Responsibility</b>
Operations Manager	<p>Overall responsibility for the management of environmental aspects of the quarry including compliance with all regulatory and statutory requirements.</p> <p>Ensure compliance with this EMS and ensure adequate resources are available to support the requirements of this EMS.</p> <p>Ensure employees, contractors and visitors to Luddenham Quarry complete site inductions, including environmental and community relations responsibilities.</p> <p>Ensure all complaints are investigated, recorded and reported.</p> <p>Stop work immediately where there is an actual or potential risk of harm to the environment, including if a potential Aboriginal object or site is discovered.</p> <p>Report any activity that has caused or threatens to cause material harm to the environment immediately to DPIE.</p> <p>Oversee site environmental monitoring, inspections and internal audits.</p> <p>Liaise with government authorities as required.</p>
Site Supervisor	<p>Ensure compliance with this EMS.</p> <p>Plan and carry out operational works in a manner that avoids or mitigates harm to the environment.</p> <p>Report all complaints regarding Luddenham operations.</p> <p>Stop work immediately where there is an actual or potential risk of harm to the environment, including if an Aboriginal object or site is discovered. Report activity to operations manager.</p> <p>Complete all necessary environmental awareness training.</p> <p>Consider past environmental performance when engaging contractors at Luddenham operations.</p>

**Table 4.1 Roles and responsibilities for environmental management**

Role	Responsibility
Site environmental representative	Ensure compliance with this EMS and carry out periodic reviews of this EMS. Manage the implementation of EMPs, approvals, licences and permits. Ensure compliance with all regulatory approvals. Ensure operational works are conducted in a manner that avoids or mitigates harm to the environment. Report and record all complaints regarding Luddenham operations. Stop work immediately where there is an actual or potential risk of harm to the environment, including if an Aboriginal object or site is discovered. Report activity to operations manager. Conduct site environmental monitoring, inspections and internal audits. Implement corrective actions in the event of environmental incidents or non-compliances. Carry out community consultation as required including responding to complaints. Provide environmental awareness training to staff, contractors and visitors to Luddenham operations. Provide environmental support and advice to operational personnel.
Quarry operators and contractors	Ensure compliance with this EMS. Report and record all complaints regarding Luddenham operations. Carry out operational works in a manner that avoids or mitigates harm to the environment. Stop work immediately where there is an actual or potential risk of harm to the environment, including if an Aboriginal object or site is discovered. Report activity to operations manager. Complete all necessary environmental awareness training.

## 4.2 Risk assessment

Risk assessments of environmental and rehabilitation issues has been undertaken in accordance with standard risk assessment practices outlined in ISO 31000 Risk Management – Principles and Guidelines. The Consequence/ Likelihood Matrix has been used with the following scale definitions:

**Table 4.2 Consequence/Likelihood matrix**

			Consequence				
			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Severe
Likelihood	E	Almost certain	IV	III	II	I	I
	D	Likely	IV	III	III	II	I
	C	Possible	V	IV	III	II	II
	B	Unlikely	V	IV	III	III	II
	A	Rare	V	V	IV	III	II

## Likelihood Scale

E	Almost certain	Expected To occur within weeks
D	Likely	Will probably occur
C	Possible	Might occur at sometime within next 2-3 months
B	Unlikely	Could occur within 6-12 months although unlikely
A	Rare	Might occur at some time in exceptional circumstances

## Consequence

5	Severe	Irreversible long term environmental harm
4	Major	Prolonged environmental impact with significant remedial measures required
3	Moderate	Moderate environmental impacts with immediate remedial measures effective
2	Minor	Minimal environmental harm with minor remediation activities
1	Insignificant	Little or no environmental harm. Remediation not required.

Note: In this document if an issue has been assessed to have a Consequence/ Likelihood rating of V, management procedures have not been developed except where relevant.

### 4.2.1 Environmental risk assessment

**Table 4.3 Luddenham operations Environmental Risk Assessment**

Environmental risks	Description	Likelihood	Consequence	Risk
Erosion and sediment control	Risk of sediment leaving the site	Rare	Minor	V
Flora	Risk of harm to endangered ecological communities	Rare	Minor	V
Fauna	Risk of harm to endangered species	Rare	Minor	V
Air Quality	Risk of harm caused by nuisance dust emissions	Possible	Minor	IV
Surface Water Quality	Risk of harm caused by uncontrolled discharge	Unlikely	Minor	IV
Groundwater	Risk of impact on groundwater	Rare	Moderate	IV
Noise	Risk of noise impact on neighbours from operations on the site	Possible	Minor	IV
Trespassing	Risk of vandalism to site and rehabilitation	Rare	Minor	V
Visual Amenity	Risk of impact on local residences	Possible	Insignificant	V
Heritage	Risk of harm to items of aboriginal heritage	Rare	Minor	V
Waste	Risk of harm caused by waste	Rare	Minor	V
Hazards	Risk of harm due to fuel, oils cleaning products etc	Rare	Minor	V

## 4.2.2 Rehabilitation risk assessment

**Table 4.4 Luddenham operations rehabilitation risk assessment**

Environmental risks	Description	Likelihood	Consequence	Risk
Geology and geochemistry	Risk of low pH in growth medium	Possible	Minor	IV
Erosion and sediment control	Risk of soil loss due to erosion	Possible	Moderate	III
Soil and overburden types(s) suitability	Risk of growth media be unsuitable for growth of grasses	Possible	Moderate	III
Flora	Risk of weeds impacting on growth of grasses	Possible	Moderate	III
Fauna	Risk of endangered fauna habitat for foraging being impacted by the final landform	Rare	Minor	V
Fauna	Risk of feral animals impacting on ecological sustainability	Unlikely	Minor	IV
Slopes and Slope Management	Risk of unstable slopes impacting on final landform	Possible	Moderate	III
Surface Water Quantity	Risk of insufficient water for revegetation	Unlikely	Major	III
Bushfire	Risk of harm to vegetation, fauna and rehabilitation plantation	Rare	Moderate	IV
Trespassing	Risk of impact on rehabilitation areas by public	Unlikely	Minor	IV
Waste	Risk of harm caused by waste	Rare	Minor	V
Hazards	Risk of harm due ot fuel, oils, cleaning products etc	Rare	Minor	V

## 4.3 Environmental incidents

An incident is a set of circumstances that:

- causes, or threatens to cause, material harm to the environment; and/or
- breaches or exceeds the limits or performance measures/criteria of DA 315-7-2004 and the EPL.

In accordance with the POEO Act, the following persons have a duty to notify a pollution incident occurring in the course of an activity that causes or threatens material harm to the environment:

- a) the person carrying out the activity;
- b) the employee or agent carrying out the activity;
- c) the employer carrying out the activity; or
- d) the occupier of the premises where the incident occurs.

### 4.3.1 Incident notification

Any incident that occurs at Luddenham Quarry will be reported in accordance with Schedule 6, Condition 12 of DA 315-7-2003. Luddenham Operations will immediately notify the DPIE and any other relevant agencies after it becomes aware of an incident. The notification will be made in writing via the Major Projects website.

Within seven days of the incident, Luddenham Operations will submit a written incident notification via the major projects website. Notification will be sent to DPIE within this period days even if:

- Luddenham Quarry fails to notify DPIE immediately after it becomes aware of an incident; or
- having given such notification, subsequently forms the view that an incident has not occurred.

The written incident notification will:

- identify the development and application number;
- provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
- identify how the incident was detected;
- identify when the applicant became aware of the incident;
- identify any actual or potential non-compliance with conditions of consent;
- provide information on the reasons/causes for the non-compliance, if known;
- describe what immediate steps were taken in relation to the incident;
- identify further action(s) that will be taken in relation to the incident; and
- identify a project contact for further communication regarding the incident.

Luddenham Operations will comply with any written directions from DPIE relating to the incident. Incidents will also be recorded in the Environmental Incident and Action Register and reported in the Annual Review and those related to the EPL will be reported in the Annual Return.

### 4.3.2 Incident notification in accordance with the POEO Act

The POEO Act requires the occupier of premises, the employer or any person carrying out an activity which has caused a pollution incident to immediately notify each relevant authority when material harm to the environment is caused or threatened. Menangle Sand and Soil will notify EPA of incidents in or around the quarry site via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the POEO Act:

#### **147 Meaning of material harm to the environment**

(1) For the purposes of this Part—

(a) harm to the environment is material if—

(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

(ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

(2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

#### **148 Pollution incidents causing or threatening material harm to be notified**

(1) **Kinds of incidents to be notified** This Part applies where a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened.

(2) **Duty of person carrying on activity to notify** A person carrying on the activity must, immediately after the person becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.

(3) **Duty of employee engaged in carrying on activity to notify** A person engaged as an employee in carrying on an activity must, immediately after the person becomes aware of the incident, notify the employer of the incident and all relevant information about it. If the employer cannot be contacted, the person is required to notify each relevant authority.

(3A) **Duty of employer to notify** Without limiting subsection (2), an employer who is notified of an incident under subsection (3) or who otherwise becomes aware of a pollution incident which is related to an activity of the employer, must, immediately after being notified or otherwise becoming aware of the incident, notify each relevant authority of the incident and all relevant information about it.

(4) **Duty of occupier of premises to notify** The occupier of the premises on which the incident occurs must, immediately after the occupier becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.

(5) **Duty on employer and occupier to ensure notification** An employer or an occupier of premises must take all reasonable steps to ensure that, if a pollution incident occurs in carrying on the activity of the employer or occurs on the premises, as the case may be, the persons engaged by the employer or occupier will, immediately, notify the employer or occupier of the incident and all relevant information about it.

(6) **Extension of duty to agents and principals** This section extends to a person engaged in carrying on an activity as an agent for another. In that case, a reference in this section to an employee extends to such an agent and a reference to an employer extends to the principal.

## **4.4 Non-conformance and corrective actions**

### **4.4.1 Identification and corrective actions**

Environmental non-conformance will be identified through processes outlined in this EMS and supporting management plans such as monitoring, audits, regular inspections and complaints. Reporting on environmental non-conformance will be the responsibility of all Luddenham Operations employees and contractors. Tracking of environmental non-conformances and associated corrective actions will be the responsibility of the Site Environmental Representative.

Monitoring results will be used to identify existing or potential non-compliances. Where monitoring results exceed performance criteria or are outside of the expected range, the following process will be implemented:

- the results will be analysed with the view to determining possible causes for the result(s) including a review of the potential activities impacting the site of the exceedance;
- a site inspection will be undertaken;
- relevant personnel will be contacted and advised of the problem;
- action will be implemented immediately to rectify the problem where possible; or
- an action will be identified, agreed with the Operations Manager and implemented in a timely manner.

Performance measures provide indicators to potential non-compliance. Monitoring outcomes which exceed performance measures may be subject to the implementation of a trigger action response plan (TARP) which provides a hierarchy of alarms or trigger levels for each potential indicator, with appropriate responses and timing. Where relevant, TARPs have been provided within the applicable management plans to allow prompt identification of unpredicted impacts and to guide the implementation additional management measures and corrective actions.

#### 4.4.2 Non-compliance notification

The following procedure will be followed in relation to a non-compliance:

- Within seven days of becoming aware of a non-compliance, Luddenham Operations will notify DPIE of the non-compliance in writing via the Major Projects Website. The notification will:
  - identify the development (including the development application number and name);
  - set out the condition of this consent that the development is non-compliant with;
  - the nature of the non-compliance;
  - and the reasons for the non-compliance (if known); and
  - what actions have been, or will be, undertaken to address the non-compliance.

A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Non-compliances will be recorded in the Environmental Incident and Action Register and will also be reported in the Annual Review and those related to EPL 3991 in the Annual Return.

## 4.5 Training

All employees and contractors working at Luddenham operations have a responsibility to comply with this EMS. Training will be provided via inductions which outline the health and safety, and environmental obligations of those working at Luddenham operations.

All training documents will be recorded and maintained by Luddenham operations.

## 4.6 Records Management

Copies of all records or data mandated by DA 315-7-2003 and all other relevant approvals and licences will be held by Luddenham Operations. These records will be kept as evidence of compliance with legislation, approvals and management plans that govern the operations of the quarry.



# 5 Monitoring and management

This section describes the environmental management plans which outline how the environmental performance of the development is monitored and managed at Luddenham Quarry.

## 5.1 Environmental Management Plans

Luddenham Operations has developed and implemented Environmental Management Plans (EMPs) to guide environmental monitoring and performance for specific environmental aspects and to ensure ongoing compliance with all approvals. These EMPs are described in brief in the following sub sections.

### 5.1.1 Air Quality Management Plan

The Air Quality Management Plan (AQMP) captures the sources of emissions to air, management measures for each dust generating activity, key performance indicators (KPIs) for each management measure, air quality monitoring requirements, meteorological monitoring, and greenhouse gas management.

### 5.1.2 Noise Management Plan

The Noise Management Plan (NMP) describes the noise assessment criteria, the noise monitoring methodology, responsibilities for noise management at Luddenham operations to achieve compliance associated with construction and operational activities and outlines reporting of noise data.

### 5.1.3 Final Land Use Plan

The Final Land Use Plan (FLUP) describes the envisaged final land use of the site and the method of treatment for the final void (pending future development consent).

### 5.1.4 Site Rehabilitation Plan

The Site Rehabilitation Plan (SRP) is contained within the Mining Operations Plan (MOP) and describes rehabilitation objectives, planning and management, rehabilitation risk assessment, progressive rehabilitation methodology, and an action plan to respond to threats to rehabilitation success. The SRP includes measures to minimise the short, medium and long term risks to the construction and operation of the Western Sydney Airport and other surrounding land users.

The MOP has been prepared on the basis of the current development consent which does not provide for the infilling of the quarry void. Accordingly the MOP outlines the methods to achieve a stable landform in the event future consent is not granted to infill the void.

Appended to the MOP is the Biodiversity Management Plan (BMP). The BMP details the revegetation plan including protection and maintenance of the riparian zone of Oaky Creek.

### 5.1.5 Road Transport Protocol

The Road Transport Protocol (RTP) describes the nature and extent of construction works proposed, the routes to be used by raw material haulage traffic, types and mass of traffic vehicles and periods of operation, the existing traffic use of the roads in the vicinity of the site and over-size vehicle movements of heavy earth moving machinery to and from the quarry. The RTP examines these issues and presents management protocols for each item.

### 5.1.6 Soil and Water Management Plan

The Soil and Water Management Plan (SWMP) encompasses the Site Water Balance, Erosion and Sediment Control Plan, Surface Water Management Plan and Groundwater Management Plan. The SWMP includes:

- baseline monitoring data on surface water and groundwater flows, levels and quality;
- description of all activities that may cause soil erosion and sedimentation;
- description of the surface water and groundwater management system, including erosion and sediment control structures;
- design objectives and assessment/performance criteria for surface water, groundwater and erosion and sediment controls;
- description of measures implemented to minimise soil erosion and sedimentation; and
- plans for the monitoring of surface water, groundwater and erosion and sediment controls, including reporting monitoring results.

## 5.2 Other Environmental Aspects

### 5.2.1 Aboriginal cultural heritage

There is one known Aboriginal site within the site – AHIMS site #45-5-2280. This site comprises a surface scatter of 22 flaked stone artefacts near Oaky Creek. The site has been fenced and no disturbance to the site is permitted.

#### i Unexpected finds protocol

Luddenham Operations will prevent unauthorised disturbance of any previously unrecorded sites that are identified during the life of the operation. In the event that Aboriginal objects and /or sites are identified during operations, the following procedure will be followed:

1. all works will cease immediately in the area to prevent any further impacts to the object(s) and/or site(s);
2. the operations manager will be immediately notified;
3. the DPIE will be notified as soon as practicable after the object(s) and/or site(s) are identified;
4. a qualified archaeologist will be engaged to determine the nature, extent and scientific significance of the object(s) and/or site(s). The archaeologist will advise whether works may recommence following fencing and implementation of an appropriate buffer in order to avoid further disturbance;
5. work will resume in the vicinity of the newly identified site, after the site has been demarcated;
6. an AHIMS site card will be completed and submitted to Heritage NSW.

#### ii Protocol for the discovery of human remains

In the event that known or suspected human skeletal remains are encountered, the following procedure will be implemented:

- the immediate vicinity will be secured to protect the find and the find will be immediately reported to the operations manager or other nominated senior staff member;
- the operations manager or other nominated senior staff member will notify the police and the state coroner on the same day of the find (as required for all human remains discoveries);
- the operations manager or other nominated senior staff member will contact DPIE for advice on identification of the skeletal material as Aboriginal and if so, management of the material;
- if it is determined that the skeletal material is ancestral Aboriginal remains, the Aboriginal community will be contacted, and consultative arrangements will be made to discuss ongoing care of the remains;
- the site will be recorded in accordance with the NPW Act and DPIE guidelines; and
- if the remains are historical and not of Aboriginal origin, the Heritage Division of DPIE will be notified for further instruction.

### 5.2.2 Waste management

Luddenham Operations will:

- not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal, or any waste generated at the site to be disposed of at the site, except as expressly permitted by an EPL and/or a separate development consent;
- manage onsite sewage to the satisfaction of Council;
- minimise the waste generated by the development;
- ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
- report on waste minimisation and management in the Annual Review.

General waste management measures on site include:

- working with suppliers to reduce overall packaging as much as possible;
- storing cardboard packaging and recyclable containers until collection by a licensed recycling contractor, or dispatch to an appropriately licensed facility; and
- storing general waste in vermin proof bins until a scheduled collection from a licensed contractor.

### 5.2.3 Visual amenity

Luddenham operations will:

- take all reasonable and feasible steps to minimise the visual and offsite lighting impacts of the development, including impacts on the Western Sydney Airport;
- take all reasonable steps to shield views of quarrying operations and associated equipment from users of public roads and privately-owned residences;

- ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure;
- ensure that all external lighting associated with the development complies with relevant Australian Standards including Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting;
- ensure that the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.

#### 5.2.4 Dangerous goods

Luddenham Operations will ensure that:

- all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards; and
- the storage, handling, and transport of all dangerous goods are undertaken in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the Dangerous Goods Code.

Site management processes will review on a quarterly basis, the quarry's conformance with the above standards.

#### 5.2.5 Emergency management

In the event of an emergency, emergency services will be alerted immediately on 000 and the Operations Manager and Site Supervisor will be notified.

A designated emergency evacuation point is located within the site entry infrastructure area. This is the location where the site supervisor will direct the emergency response and is also the point where Emergency Services will go when they arrive on site.

Equipment which will be onsite to assist with emergencies include:

- First aid equipment;
- Firefighting equipment (fire extinguishers and fire blankets); and
- Mobile plant.

#### i Bushfires

Luddenham Quarry will be managed in accordance with the relevant requirements in the Planning for Bushfire Protection (RFS, 2019) guideline. Luddenham Operations will assist the RFS and emergency services to the extent practicable if there is a bushfire in the vicinity of the site.

# 6 Engagement

The area surrounding the quarry is sparsely populated, with the closest residential area being Luddenham, located approximately 2.2 km to the south-west. The closest occupied residence is about 100 m west of the site. There are two unoccupied residences to the north of the site. Hubertus Country Club and pistol range is immediately west of the site. The closest agricultural property is a duck farm located approximately 300 m north-west of the site access intersection with Adams Road (approximately 650 m from the quarry excavation).

The general procedures to keep the local community and relevant agencies informed about the operation and environmental performance of the Luddenham Quarry are outlined in the following sections.

## 6.1 Community engagement

Engagement with the quarry site neighbours has been carried out throughout the Modification 5 approval process. This engagement will continue as part of the reactivation of the quarry and in relation to the further development of the site.

Information regarding the quarry, including approvals, management plans, monitoring results, Annual Reviews and Independent Environmental Audits will be provided on the quarry website (refer Section 7.3).

Letters regarding the approval of MOD 5 and the right to noise mitigation has been sent to the residences directly west and north of the site (noting the residences to the north of the site are unoccupied and expected to be redeveloped for commercial purposes).

Letters have also been sent to residences with property access via Adams Road north of the site access to advise them of the required pavement upgrades on Adams Road to facilitate quarry traffic and the lifting of the existing load limit on Adams Road for quarry vehicles between the site access and Elizabeth Drive.

Luddenham Operations will also regularly consult with adjoining property owners to ensure property management issues including maintenance of common fences, weed control measures, and bushfire management are coordinated. Details of this consultation will be reported in the Annual Review.

General enquiries from the local community will be recorded in a community engagement register, which will also include any copies of formal correspondence, and responded to by the site environmental representative or operations manager within 5 days of the enquiry.

Luddenham Operations will consult with the wider local community on an 'as needs' basis. The need for this wider consultation will be determined based on queries or complaints made to the quarry.

## 6.2 Government agency engagement

Engagement with a range of government agencies has been carried out with regard to reactivating the quarry and the further development of the site. Much of this consultation is focussed on the compatibility of the quarry, proposed Advanced Resource Recovery Centre (ARRC) to the north of the existing quarry extraction footprint (subject to a separate SSD application in progress) and the future infilling of the quarry (subject to future development application) with Western Sydney Airport operations and the future Aerotropolis.

Luddenham Operations will continue to maintain communication with relevant government agencies throughout the life of the quarry, including the rehabilitation phase as required by the conditions of Approval, EPL and other statutory requirements (see Chapter 3), and as part of ongoing quarry operations. This will include consultation on:

- government agency site inspections;

- management plans; and
- notification of incidents.

Regular compliance reporting to DPIE and EPA will occur in accordance with the reporting requirements detailed in Section 7.2. Incidents and non-compliances will be reported to DPIE, EPA and relevant agencies in accordance with the notification requirements detailed in Section 4.3 and Section 4.4.

Notes regarding government agency and council consultation will be maintained in the Consultation Register, which will also include copies of formal correspondence.

### 6.3 Complaints handling/management

During operating hours, a telephone complaints line will be available for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by vehicle or mobile plant connected with the operation. The telephone number will be made available on the Luddenham Operations website. Any complaint received will be acted on with 24-hours.

A complaints register will be made publicly available on the Luddenham Operations website, updated monthly.

A record must be kept of any complaints made to any employee or contractor in relation to activities conducted at the site. The record of complaint must be kept for at least four years after the date of the complaint, and include the following details:

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

### 6.4 Dispute resolution

All matters associated with quarry operations, or requirements associated with the conditions of consent will attempt to be rectified between Luddenham Operations and the complainant. The general procedure for resolving disputes will be as follows:

1. Operations Manager will liaise directly with the complainant to resolve dispute;
2. If Operations Manager is not successful in resolving the dispute, the matter will be elevated to the Directors of Luddenham Operations who will attempt to resolve the matter to the best of their ability which may include the engagement of mediators;
3. In the event that a dispute arises which cannot be rectified, the Secretary of the DPIE shall make final and binding determination on the matter.

The details of any dispute will be recorded by Luddenham Operations in the consultation register, including copies of formal correspondence.

# 7 Measurement and Evaluation

## 7.1 Auditing

### 7.1.1 Internal Audit

Internal compliance audits will be conducted to review the effectiveness of environmental protection measures at Luddenham operations. The frequency of internal audits will be determined on a case-by-case basis, dependent on the issues identified at preceding audits. The intent of internal audits is to ensure any non-compliances with approval documents, including this EMS are identified and rectified and to ensure that operations are conducted so as to avoid material harm to the environment.

### 7.1.2 External audit

In accordance with DA 315-7-2003, Schedule 6, Condition 7 and 8 an Independent Environmental Audit (IEA) of the development will be conducted every 3 years by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary. The audit team will include experts in rehabilitation and any other field specified by the Planning Secretary. The IEA will be conducted in consultation with relevant government agencies in order to:

- assess the environmental performance of the development, and whether it is complying with the relevant requirements in this consent and any relevant EPL (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;

Within six weeks of the completion of the audit, or as otherwise agreed by the Planning Secretary, Luddenham operations will submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report.

## 7.2 Reporting

Luddenham operations reporting requirements are provided in Table 7.1. In accordance with DA 315-7-2003, Section 66(6) of the POEO Act, requirements issued by the EPA, and approved Management plans, regular reporting of environmental performance of the quarry site will be made publicly available on the Luddenham operations website.



**Table 7.1 Luddenham Quarry Reporting Requirements**

Report Name	Due Date	Due To	Submission Method	Responsibility
Annual Review	End of September annually	DPIE Council Any other relevant government agencies Any other interested person upon request	In writing via the Major Projects Website	Operations Manager
Annual Return	Annually	EPA	EPA website	Operations Manager
Environmental incident	Upon becoming aware of the incident	DPIE Any other relevant government agencies	In writing via the Major Projects Website	Operations Manager
Environmental Incident Report	Within 7 days following a reportable incident	DPIE EPA Any other relevant government agencies	In writing via the Major Projects Website	Operations Manager
Environmental non-compliance	Within 7 days of becoming aware of the non-compliance	DPIE Any other relevant government agencies	In writing via the Major Projects Website	Operations Manager

### 7.2.1 Annual review

Luddenham Quarry prepares an annual review (previously named an annual environmental management report) that reviews the performance of operations against the requirements of the WMP, provides an overview of environmental management actions taken and summarises the monitoring results over the 12 month reporting period. The annual review typically includes the following elements specific to water management:

- any amendments to licensing or statutory approvals;
- a summary of complaints or incidents relating to the performance of the water management system over the reporting period;
- a summary of the monitoring results collected over the reporting period and assessment against any relevant criteria;
- an evaluation of any trends in the monitoring results occurring over the life of the operation;
- any non-compliance recorded during the reporting period and the actions taken to ensure compliance;
- identification of any discrepancies between the predicted and actual impacts of operations and an analysis of the potential cause of any significant discrepancies; and
- a summary of management actions to be implemented over the next year to improve the environmental performance of the site.

As noted in Table 7.1 above, the Annual Review will be provide to Council and any interested person upon request.

## 7.2.2 Adaptive management

Luddenham Operations will assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in DA 315-7-2004. Any exceedance of the criteria or performance measures constitutes a breach of the consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria or performance measures has occurred, Luddenham Operations will, at the earliest opportunity, take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur. Luddenham Operations will also consider all reasonable and feasible options for remediation (where relevant) and submit a report to DPIE describing those options and any preferred remediation measures or other course of action, and implement reasonable remediation measures as directed by the Planning Secretary.

# 8 Review

## 8.1 EMS Review and improvement

### 8.1.1 EMS review

This EMS and the environmental plans, programs and protocols associated with this EMS will be reviewed, and if necessary revised to the satisfaction of the Secretary within 3 months of a modification to DA 315-7-2004 or following the submission of an:

- annual review;
- incident report; or
- audit report

Revisions to this EMS will be distributed to the relevant internal and external stakeholders.

As required under Schedule 6 Condition 10, if necessary, to either improve the environmental performance of the quarry, cater for a future modification or comply with a direction, this EMS and supporting management plans will be revised, and submitted to DPIE for approval within six weeks of the review.

### 8.1.2 Continuous improvement

Continuous improvement of this EMS will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- identify areas of opportunity for improvement of environmental management and performance;
- determine the cause or causes of non-conformances and deficiencies;
- develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies;
- document any changes in procedures resulting from process improvement; and
- make comparisons with objectives and targets.

## 9 Access to information

For the duration of the development Luddenham Operations will ensure the website keeps up-to-date information on the following:

- Environmental Impact Statement / Environmental Assessment and Modification reports;
- current statutory approvals for the development;
- approved strategies, plans and programs required under the conditions of the consent;
- a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
- a complaints register, which is to be updated monthly;
- the annual reviews of the development (from the recommencement of quarrying under MOD 5);
- any independent environmental audit of the development, and response to the recommendations in any audit;
- any other matter required by the Secretary.

Luddenham Operations will 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. Information on the website will be kept up to date to the satisfaction of the Planning Secretary.

Appendix A

# Development Consent DA 315-7-2003

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# Development Consent

## Section 80 of the *Environmental Planning & Assessment Act 1979*

I, the Minister for Infrastructure, Planning and Natural Resources, approve the Development Application referred to in Schedule 1, subject to the conditions in Schedules 2 to 5.

These conditions are required to:

- (i) prevent, minimise, and/or offset adverse environmental impacts;
- (ii) set standards and performance measures for acceptable environmental performance;
- (iii) require regular monitoring and reporting; and
- (iv) provide for the on-going environmental management of the development.

Craig Knowles, MP  
**Minister for Infrastructure, Planning and Natural Resources**

Sydney,

2004

File No. P91/02045

### SCHEDULE 1

<b>Development Application:</b>	DA No. 315-7-2003.
<b>Applicant:</b>	CFT No 13 Pty Ltd.
<b>Consent Authority:</b>	The Minister for Infrastructure, Planning and Natural Resources.
<b>Land:</b>	Lot 3, DP 623799.
<b>Proposed Development:</b>	The development and operation of a clay/shale quarry on Lot 3, DP 623799.
<b>State Significant Development</b>	The proposal is classified as State significant development under section 76A(7) of the <i>Environmental Planning and Assessment Act 1979</i> because it is a class of development listed in the schedule of the Minister's declaration of 3 August 1999.
<b>Integrated Development</b>	The proposal is classified as integrated development under section 91 of the <i>Environmental Planning and Assessment Act 1979</i> , because it requires approvals under the: <ul style="list-style-type: none"><li>• <i>Protection of the Environment Operations Act 1997</i>;</li><li>• <i>Rivers and Foreshores Improvement Act 1948</i>;</li><li>• <i>Water Act 1912</i>; and</li><li>• <i>Roads Act 1993</i>.</li></ul>
<b>Designated Development</b>	The proposal is classified as designated development under section 77A of the <i>Environmental Planning and Assessment Act 1979</i> , because it would disturb a total surface area of more than 2 hectares of land by clearing or excavating, and consequently meets the criteria in Schedule 3 of the <i>Environmental Planning and Assessment Regulation 2000</i> .

**BCA Classification:**

Class 10b

Bunded fuel storage  
Plant nursery  
Weighbridge  
Bridge  
Conveyor and hoppers

*Note:*

- 1) *To find out when this consent becomes effective, see Section 83 of the Environmental Planning and Assessment Act 1979 (EP&A Act);*
  - 2) *To find out when this consent is liable to lapse, see Section 95 of the EP&A Act; and*
  - 3) *To find out about appeal rights, see Section 97 of the EP&A Act.*
- 

Red Type represents the 4 January 2006 Modification (MOD 1)  
Blue Type represents the 28 January 2010 Modification (MOD 2)  
Green Type represents the April 2015 Modification (MOD 3)  
Purple type represents the May 2021 Modification (MOD 5)

## SCHEDULE 2 DEFINITIONS

Annual Review	Annual Review, as required under condition 5 of Schedule 6
Applicant	CFT No 13 Pty Ltd, or any other person who seeks to carry out development approved under this consent
BCA	Building Code of Australia
Calendar year	A period of 12 months from 1 January to 31 December
Conditions of this consent	Conditions contained in Schedules 2 to 6
Construction	All physical works to enable quarrying operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent
Council	Liverpool City Council
DA	Development Application
Day	Day is defined as the period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Decommission	The deconstruction or demolition and removal of works installed as part of the development
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Department	Department of Planning, Industry and Environment
Development	The development described in the documents listed in condition 2 of Schedule 3
Development layout plan	The plan in Appendix 1
DITRDC	Commonwealth Department of Infrastructure, Transport, Regional Development and Communities
DPIE Water	Water Group within the Department
Dust	Any solid material that may become suspended in air or deposited
EIS	Environmental Impact Statement
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under the <i>Protection of the Environment Operations Act 1997</i>
Extraction area	Approved extraction footprint shown in Appendix 1
Feasible	Means what is possible and practical in the circumstances
Incident	A set of circumstances that: <ul style="list-style-type: none"> <li>• causes, or threatens to cause, material harm to the environment; and/or</li> <li>• breaches or exceeds the limits or performance measures/criteria in this consent</li> </ul>
Laden truck	Trucks transporting materials or products to or from the site
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 4, 5 and 6 of this consent, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent.
Material harm	Is harm to the environment that: <ul style="list-style-type: none"> <li>• involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial; or</li> <li>• results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).</li> </ul>
MEG	Regional NSW – Mining, Exploration & Geoscience
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development
Minister	Minister for Planning and Public Spaces, or delegate



Mitigation	Activities associated with reducing the impacts of the development
Modification 5	Modification Application DA 315-7-2003 MOD 5
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
NPfl	NSW <i>Noise Policy for Industry</i>
PCC	Penrith City Council
Planning Secretary	Secretary of the Department, or nominee
Privately-owned land	Land that is not owned by a public agency, a quarrying company or its subsidiary; or where relevant, land that is not covered by a private agreement between the Applicant and the land owner that specifically allows for variances to criteria for environmental performance in this consent
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Public infrastructure	Linear and other infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal of vegetation, topsoil and overburden, and other land disturbance associated with the development
Quarry products	Extractive material which is extracted from and transported from the site
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Residence	Existing or approved dwelling at the date of determination of Modification 5
RFS	NSW Rural Fire Service
Riparian zone	A 40 metre-wide strip of land adjacent to a local watercourse, measured horizontally from the top of the bank of the watercourse
Site	The development land shown in Figure 1 of Appendix 1, with land Lot and DP number identified in Schedule 1
SEE	Statement of Environmental Effects
TfNSW	Transport for NSW
Vacant land	The whole of a lot in a current plan registered at the Land Titles office that does not have a dwelling situated on the lot and is permitted to have a dwelling on that lot at the date of this consent
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
WSA	The operator of the Western Sydney Airport

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## SCHEDULE 3 ADMINISTRATIVE CONDITIONS

### Obligation to Minimise Harm to the Environment

1. In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.

### Terms of Consent

2. The Applicant must carry out the development:
  - (a) in compliance with these conditions of consent;
  - (b) in accordance with all written directions of the Planning Secretary;
  - (c) generally in accordance with EIS titled *Proposed Clay/Shale Extraction Operation – Lot 3 – 275 Adams Road Luddenham*, dated May 2003, and prepared by Douglas Nicolaisen & Associates Pty Ltd;
  - (d) generally in accordance with correspondence from Douglas Nicolaisen & Associates Pty Ltd to the Department dated 16 March 2004 relating to operating hours, location of environmental bunds and reduction in the proposed extraction area;
  - (e) generally in accordance with information accompanying modification application DA 315-7-2003-MOD 1 for the relocation of the access bridge across Oaky Creek, lodged 16 November 2005, and prepared by Stuart J Castle Pty Ltd;
  - (f) generally in accordance with Modification Application DA 315-7-2003 MOD 2 and the accompanying SEE titled “*Section 96(1A) Modification Application, 275 Adams Road Luddenham*” produced by Planning Direction Pty Ltd and dated 3 November 2009 and “*Acoustic Report – Clay/Shale Quarry at 275 Adams Road Luddenham*” produced by Golders Associates Ltd and dated 15 December 2009;
  - (g) generally in accordance with Modification Application DA 315-7-2003 MOD 3 and the accompanying Environmental Assessment titled *Environmental Assessment Report for Epic Mining Pty Ltd: 275 Adams Road, Luddenham, NSW*, prepared by Benbow Environmental Pty Ltd and dated November 2014 relating to temporary stockpiling, extraction sequencing and other activities; and
  - (h) generally in accordance with Modification Application DA 315-7-2003 MOD 5 and the accompanying Modification Report titled *Luddenham Quarry Modification Report DA 315-7-2003 MOD 5 Prepared for Coombs Property Group & KLF Holdings*, prepared by EMM Consulting and dated August 2020; Submissions Report dated December 2020 and RFI Responses dated March 2021; as amended by the revised project description prepared by EMM Consulting and dated 16 April 2021.

*Note: The general layout of the development, including quarrying extraction area and development sequence, is shown in Appendix 1.*

3. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and the document/s listed in condition 2. In the event of an inconsistency, ambiguity or conflict between any of the document/s listed in condition 2, the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.
4. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:
  - (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and
  - (b) the implementation of any actions or measures contained in any such document referred to in condition 4(a).

4A. *Deleted.*

### Limits on Approval

5. The Applicant may undertake quarrying operations on the site until 31 December 2024.

*Note: Under this consent, the Applicant is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Planning Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the site has been properly rehabilitated.*

### Limits on Production

6. The hours of operation for the development are limited to between 7 am and 6 pm Monday to Friday. The Applicant **must** ensure that no haulage vehicles enter or leave the site between 6 pm and 7 am Monday to Friday, and on public holidays. Maintenance activities may be conducted between 7 am and 1 pm on Saturday. No other work is to be undertaken on Saturday, Sunday and public holidays.
7. The production of quarry products from the quarry **must** not exceed 300,000 tonnes in any calendar year.
8. The Applicant **must** provide annual production data to the MEG, in the manner required, on the standard form supplied for that purpose. These data are also to be included in the **Annual Review**.

### Quarry Product Transport

- 8A. A maximum of 300,000 tonnes of quarry products may be transported from the site in any calendar year.
- 8B. A maximum of 50 laden trucks may be dispatched from the site on any calendar day.

*Note: Dispatch of laden trucks is also controlled by the operating hours specified in condition 6.*

### Protection of Public Infrastructure

9. The Applicant **must**:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

### Structural Adequacy

10. The Applicant **must** ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

*Notes:*

- (a) *Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.*
- (b) *Part 8 of the EP&A Regulation sets out the requirements for the certification of development.*

### Demolition

11. The Applicant **must** ensure that any demolition work is carried out in accordance with AS 2601-2001: *The Demolition of Structures*, or its latest version.

### Operation of Plant and Equipment

12. The Applicant **must** ensure that all plant and equipment at the site, or used in connection with the development, are:
- (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

### Compliance

13. Prior to commencement of development on Lot 3 DP 629799, the Applicant **must** commission an independent person(s) or organisation(s), approved by the **Planning Secretary**, to certify in writing to the satisfaction of the **Planning Secretary**, that the Applicant has complied with all relevant conditions of this consent applicable prior to that event.

### Applicability of Guidelines

14. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, standards or policies in the form they are in as at the date of this consent.

However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, standard or policy, or a replacement of them.

### Evidence of Consultation

15. Where conditions of this consent require consultation with an identified party, the Applicant **must**:
- (a) consult with the relevant party prior to submitting the subject document; and
  - (b) provide details of the consultation undertaken including:
    - (i) the outcome of that consultation, matters resolved and unresolved; and
    - (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

### Staging, Combining and Updating Strategies, Plans or Programs

16. With the approval of the Planning Secretary, the Applicant may:
- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
  - (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and
  - (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).

### **Application of Existing Strategies, Plans or Programs**

17. The Applicant must continue to apply all existing management strategies, plans or monitoring programs required and approved under this consent prior to the approval of any modification of this consent, until the approval of a similar plan, strategy or program required as a result of the modification.

**SCHEDULE 4  
ENVIRONMENTAL PERFORMANCE**

**AIR QUALITY**

**Air Quality Criteria**

1. The Applicant must ensure that the particulate matter emissions generated by the development do not exceed the criteria listed in Tables 1, 2, and 3 at any privately-owned land.

*Table 1: Long-term air quality criteria for particulate matter*

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m <sup>3</sup>
Particulate matter <10 µm (PM <sub>10</sub> )	Annual	<sup>a, c</sup> 25 µg/m <sup>3</sup>
Particulate matter <2.5 µm (PM <sub>2.5</sub> )	Annual	<sup>a, c</sup> 8 µg/m <sup>3</sup>

*Table 2: Short-term air quality criteria for particulate matter*

Pollutant	Averaging period	Criterion
Particulate matter <10 µm (PM <sub>10</sub> )	24 hour	<sup>b</sup> 50 µg/m <sup>3</sup>
Particulate matter <2.5 µm (PM <sub>2.5</sub> )	24 hour	<sup>b</sup> 25 µg/m <sup>3</sup>

*Table 3: Long-term air quality criteria for deposited dust*

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
<sup>d</sup> Deposited dust	Annual	<sup>b</sup> 2 g/m <sup>2</sup> /month	<sup>a</sup> 4 g/m <sup>2</sup> /month

**Notes:**

<sup>a</sup> Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

<sup>b</sup> Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

<sup>c</sup> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.

<sup>d</sup> 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.

2. The air quality criteria in Tables 1, 2, and 3 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

**Air Quality Operating Conditions**

3. The Applicant must:
  - (a) take all reasonable steps to:
    - (i) minimise odour, fume and particulate matter (including PM<sub>10</sub> and PM<sub>2.5</sub>) emissions of the development, paying particular attention to minimising wheel-generated haul road emissions;
    - (ii) improve energy efficiency and reduce greenhouse gas emissions of the development;
    - (iii) minimise any visible off-site air pollution generated by the development; and
    - (iv) minimise the extent of potential dust generating surfaces exposed on the site at any given point in time;
  - (b) ensure that all 'non-road' mobile diesel equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology;
  - (c) operate an air quality management system to guide the day to day planning of quarrying operations;
  - (d) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Tables 1 to 3);
  - (e) carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions in this consent; and

- (f) regularly assess meteorological and air quality monitoring data and relocate, modify or stop operations on the site to ensure compliance with the relevant conditions of this consent.

**Air Quality Management Plan**

4. Prior to recommencing quarrying operations under Modification 5, the Applicant must prepare an Air Quality 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;
  - (b) be prepared in consultation with the EPA;
  - (c) describe the measures to be implemented to ensure:
    - (i) compliance with the air quality criteria and operating conditions in this consent;
    - (ii) best practice management is being employed; and
    - (iii) air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
  - (d) describe the air quality management system; and
  - (e) include an air quality monitoring program, prepared in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007), that:
    - (i) is capable of evaluating the performance of the development against the air quality criteria;
    - (ii) adequately supports the air quality management system; and
    - (iii) includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.
5. Deleted
6. Deleted
7. Deleted
8. Deleted

**Soil and Land Management**

9. The Applicant **must** immediately utilise or stockpile, for use in the rehabilitation of the site, any topsoil removed during the development. Topsoil **must** not be mixed with other overburden products. The topsoil stockpile(s) **must** be protected from erosion. The topsoil stockpile(s) **must** be sown with appropriate vegetation to stabilise the soil if they are to be stored for longer than 6 weeks. The topsoil stockpile(s) **must** have a maximum height of 1.5 metres.
10. The Applicant **must** minimise the removal of trees and other vegetation from the **development** site, and restrict any clearance to the areas occupied by quarrying activities, noise attenuation bund, access roads and ancillary facilities.
11. The Applicant **must** regularly consult with adjoining property owners to ensure property management issues including maintenance of common fences, weed control measures, and bushfire management are coordinated. Details of this consultation are to be reported in the **Annual Review**.

**NOISE**

**Operational Noise Criteria**

12. Except for the carrying out of construction works, the Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 5 at any residence<sup>a</sup> on privately-owned land.

*Table 5: Operational noise criteria dB(A) L<sub>Aeq</sub>(15 min)*

Residences	Day Criteria
R3	53
R6	52
R4	46
R5	45
R2	43
R1, R7, R8	41

<sup>a</sup> The Residences referred to in Table 5 are shown in Appendix 2.

Noise generated by the development must be monitored and measured in accordance with the relevant procedures and modifications (including certain meteorological conditions) of the NPfl.

The noise criterion in Table 5 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.

#### Additional Mitigation Upon Request

- 12A. Upon receiving a written request from the owner of any land listed in Table 5A, the Applicant must implement additional noise mitigation measures at the residence in consultation with the landowner.

These measures must be reasonable and feasible, consistent with the measures outlined in the *Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments (2018)*, proportionate to the level of predicted impacts and directed towards reducing the noise impacts from the development.

*Table 5A: Land subject to additional mitigation upon request*

Mitigation basis	Land
Noise	R3 – 285 Adams Road, Luddenham
Noise	R6 – 225 Adams Road, Luddenham

- 12B. If within 3 months of receiving this request from the landowner, the Applicant and the landowner cannot agree on the measures to be implemented, or there is dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.

#### Noise Operating Conditions

13. The Applicant must:
- take all reasonable steps to minimise noise from construction, traffic and operational activities, including low frequency noise and other audible characteristics, associated with the development;
  - implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas;
  - operate a noise management system to guide the day to day planning of quarrying operations;
  - take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions when the noise criteria in this consent do not apply (see NPfl);
  - carry out regular noise monitoring to determine whether the development is complying with the relevant conditions of this consent; and
  - regularly assess the noise monitoring data and modify or stop operations on the site to ensure compliance with the relevant conditions of this consent.

#### Noise Management Plan

14. Prior to recommencing quarrying operations under Modification 5, the Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- be prepared by a suitably qualified and experienced person/s;
  - be prepared in consultation with the EPA;
  - describe the measures to be implemented to ensure:
    - compliance with the noise criteria and operating conditions in this consent;
    - best practice management is being employed;
    - noise impacts of the development are minimised during noise-enhancing meteorological conditions when the noise criteria in this consent do not apply (see NPfl);
  - describe the noise management system in detail; and
  - include a monitoring program that:
    - is capable of evaluating the performance of the development;
    - monitors noise at the nearest and/or most affected residences;
    - adequately supports the noise management system;
    - includes a protocol for distinguishing noise emissions of the development from any neighbouring developments; and
    - includes a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of any such event.

15. *Deleted.*

#### Construction of the Noise Attenuation Bund

*Note: The noise attenuation bund also functions as visual screen of the operations associated with the extraction of the clay/shale resource.*

16. The Applicant **must** minimise noise levels during the construction of the noise attenuation bund by the implementation of best available techniques economically achievable.

17. The Applicant **must** complete the construction of the noise attenuation bund in the minimum time, not to exceed 6 weeks from the commencement of its construction, unless otherwise approved by the **Planning Secretary**.
18. The Applicant **must** prepare a noise assessment of the construction of the noise attenuation bund within 3 weeks of the commencement of construction of the bund. The assessment **must** be carried out by a suitably qualified and experienced acoustical consultant, approved by the **Planning Secretary**, and submitted to the **EPA** and the Department.
19. The Applicant **must not** remove the northern noise bund unless the Applicant has demonstrated that a suitable alternative has been approved and that the alternative will achieve compliance with the consent noise criteria in this consent, to the satisfaction of the **Planning Secretary**.

#### **METEOROLOGICAL MONITORING**

20. Prior to recommencing quarrying operations under Modification 5, the Applicant **must** ensure that there is a suitable meteorological station operating in close proximity to the site that:
  - (a) complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007); and
  - (b) is capable of measuring meteorological conditions in accordance with the NPfl,
 unless a suitable alternative is approved by the **Planning Secretary** following consultation with the **EPA**.

#### **BLASTING**

21. Blasting is not permitted on the site.

#### **SURFACE & GROUND WATER**

**Note:** *Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development.*

##### **Water Supply**

- 21A. The Applicant **must** ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.
- 21B. The Applicant **must** report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under any water licence.

##### **Pollution of Waters**

22. Except as may be expressly provided by an **EPL**, the Applicant **must** comply with section 120 of the *Protection of the Environment Operations Act 1997* during the carrying out of the development.
23. The Applicant **must not** discharge any water from the development to Oaky Creek, except as otherwise approved under an **EPL**, and following approval of a Discharge Characterisation and Water Pollution Impact Assessment in accordance with condition 25 below.

##### **Soil and Water Management Plan**

24. Prior to recommencing quarrying operations under Modification 5, the Applicant **must** prepare a Soil and Water Management Plan for the development to the satisfaction of the **Planning Secretary**. This plan **must**:
  - (a) be prepared by suitably qualified and experienced person/s;
  - (b) be prepared in consultation with **EPA** and **DPIE Water**; and
  - (c) include a:
    - (i) **Site Water Balance** that includes details of:
      - a. predicted annual inflows to and outflows from the site;
      - b. sources and security of water supply for the life of the development (including authorised entitlements and licences);
      - c. water storage capacity;
      - d. water use and management on the site, including any water transfers or sharing with neighbouring land users;
      - e. licensed discharges points and limits; and
      - f. reporting procedures, including the annual preparation of an updated site water balance;
    - (ii) **Erosion and Sediment Control Plan** that:
      - a. is consistent with the requirements of *Managing Urban Stormwater: Soils and Construction – Volume 1: Blue Book* (Landcom, 2004) and *Volume 2E: Mines and Quarries* (DECC, 2008);
      - b. identifies activities that could cause soil erosion, generate sediment or affect flooding;
      - c. describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;
      - d. describes the location, function, and capacity of erosion and sediment control structures and flood management structures; and
      - e. describes what measures would be implemented to maintain (and if necessary decommission) the structures over time;



- (iii) **Surface Water Management Plan**, that includes:
  - a. detailed baseline data on surface water flows and quality in water bodies within the site and in Oaky Creek;
  - b. surface water impact assessment criteria, including trigger levels for investigating any potentially adverse impacts, and surface water management performance measures;
  - c. a detailed description of the surface water management system on the site, including the:
    - clean water diversion system;
    - erosion and sediment controls;
    - dirty water management system;
    - water storages; and
    - measures to minimise the need for surface water discharges to Oaky Creek;
  - d. a program to monitor and evaluate:
    - any approved surface water discharges;
    - the effectiveness of the water management system;
    - impacts on water supply for other water users; and
    - surface water flows and quality in watercourses and/or waterbodies that could potentially be impacted by the development; and
  - e. a protocol for identifying and investigating any exceedances of the surface water impact assessment criteria and for notifying the Department and relevant stakeholders of these events; and
- (iv) **Groundwater Management Plan** that includes:
  - a. detailed baseline data on groundwater levels and quality across the site;
  - b. a program to monitor and report on:
    - groundwater levels and quality across the site and identify any unauthorised groundwater interference; and
    - impacts of the development on alluvium and associated surface water sources and groundwater dependent ecosystems;
  - c. a protocol for identifying and investigating any exceedances of the groundwater performance criteria and for notifying the Department and relevant stakeholders of these events; and
  - d. a protocol to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the extraction areas.

#### **Discharge Characterisation and Water Pollution Impact Assessment**

25. Prior to any discharges from the quarry water management system to Oaky Creek, the Applicant must prepare a Discharge Characterisation and Water Pollution Impact Assessment for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared by suitably qualified and experienced person/s;
  - (b) be prepared in consultation with EPA and DPIE Water; and
  - (c) include:
    - (i) measures to avoid the need for discharges as far as reasonable and feasible;
    - (ii) analysis of the frequency and volume of discharges during a range of weather conditions;
    - (iii) characterisation of the expected quality of proposed discharges;
    - (iv) assessment of the impacts of discharges to receiving waters; and
    - (v) measures to minimise pollution and potential impacts on receiving waters;

#### **Irrigation Management Plan**

26. Prior to the use of water from the quarry water management system for irrigation purposes, the Applicant must prepare an Irrigation Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) identify the specific areas of land to be irrigated;
  - (b) include baseline data on soil and water quality in the irrigation areas;
  - (c) determine sustainable water application rates and management requirements;
  - (d) describe measures to prevent any tailwater drainage from entering Oaky Creek;
  - (e) describe measures to ensure that soils subject to irrigation are not adversely affected by the concentration of salts; and
  - (f) include a monitoring program for the irrigation management system.

27. *Deleted.*

28. *Deleted.*

29. *Deleted.*

#### **WASTE MANAGEMENT**

30. The Applicant must:
- (a) not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal, or any waste generated at the site to be

- disposed of at the site, except as expressly permitted by an EPL and/or a separate development consent;
- (b) manage onsite sewage to the satisfaction of Council;
- (c) minimise the waste generated by the development;
- (d) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
- (e) report on waste minimisation and management in the Annual Review.

31. *Deleted.*

#### **ABORIGINAL HERITAGE**

32. The Applicant **must**:
- (a) protect from disturbance, by fencing, the Aboriginal site and relics (the site) located close to Oaky Creek shown in Figure 2 of Technical Document 8 of the EIS (*“Assessment and Management Recommendations for the Aboriginal Archaeological Site at 275 Adams Road Luddenham”* prepared by Umwelt (Australia) Pty Limited and dated September 2001) (ie. AIHMS site #45-5-2280);
  - (b) implement measures to protect the extant Aboriginal sites from direct and indirect damage, including in relation to erosion and sedimentation;
  - (c) provide training in the cultural values of Aboriginal sites to all permanent staff;
  - (d) prepare and implement an unexpected finds protocol to manage the discovery of any previously unidentified Aboriginal objects or human remains on the site; and
  - (e) allow reasonable access to the site by representatives of the Gandangara Local Aboriginal Land Council to allow educational and cultural activities and monitoring of the condition of the extant Aboriginal sites.

#### **REHABILITATION & BIODIVERSITY**

33. Prior to the carrying out of any development on the site, the Applicant **must** prepare a Site Rehabilitation Plan in accordance with the rehabilitation guidelines in the document titled *“Sydney Regional Environmental Plan No. 9 – Extractive Industry (No. 2) – Planning Report”*, to the satisfaction of the **Planning Secretary**. The Site Rehabilitation Plan **must** include a **Biodiversity Management Plan**.
34. The **Biodiversity Management Plan** **must** include:
- (a) revegetation of the riparian zone of Oaky Creek;
  - (b) protection, establishment and maintenance of the riparian zone;
  - (c) protection of remnant native vegetation;
  - (d) restoration of any areas within the riparian zone disturbed by the development;
  - (e) a program to vegetate the noise attenuation bund;
  - (f) a protocol for monitoring and relocating native fauna encountered during the recommissioning and dewatering of the quarry and storages;
  - (g) a protocol for pre-clearance surveys for vegetation clearing activities;
  - (h) salvage of resources during vegetation clearing activities for use in rehabilitation activities; and
  - (i) measures for minimising the attraction of wildlife, in consultation with DITRDC and WSA.
35. *Deleted.*
36. Prior to 5 years of the estimated completion of extractive activities at the site, the Applicant **must** submit a **Final Land Use Plan** to the Department identifying the final land use of the site and method of treatment for the final void.
- 36A. Prior to recommencing quarrying operations approved under Modification 5, or other timeframe agreed by the **Planning Secretary**, the Applicant **must** review and update the Site Rehabilitation Plan, Biodiversity Management Plan, and Final Land Use Plan in consultation with EPA, DITRDC and WSA, and to the satisfaction of the **Planning Secretary**. The updated plans **must**:
- (a) be consistent with any related approvals that provide for filling the final void, while also providing contingency rehabilitation activities in the event that such approvals are not obtained; and
  - (b) include measures to minimise the short, medium and long term risks to the construction and operation of the Western Sydney Airport and other surrounding land users.

#### **Rehabilitation Bond**

37. Prior to commencement of operations on Lot 3, DP 623799, the Applicant **must** provide a Rehabilitation Bond in the sum of \$166,750 in the form of an insurance bond or bank guarantee acceptable to the **Planning Secretary** from any bank licensed pursuant to the *Banking Act 1959 (Cth)*. The Rehabilitation Bond **must** be made in favour of the Minister administering the *Environmental Planning & Assessment Act 1979* to ensure completion of the rehabilitation and landscaping works at the site. The sum of the Rehabilitation Bond is calculated based on \$2.50 per square metre for a maximum exposed area of 6.67 hectares (ha).

The Department **may** review the adequacy of Rehabilitation Bond to provide for the completion of rehabilitation and landscaping works on the site at intervals of not less than three years. The Applicant **must** ensure that the Rehabilitation Bond is in accordance with the sum determined by the review.

Notes:

- (a) The **Planning Secretary** may at any time, and without notice to the Applicant, demand all or part of the monies available under the Rehabilitation Bond if, in the **Planning Secretary's** opinion, the Applicant has failed to make satisfactory progress on the rehabilitation and landscaping of the site.
- (b) The Secretary **may** apply the monies to ensure that the actions specified in the documents listed in condition 2 of Schedule 3 and/or any approved Site Rehabilitation Plan are achieved.
- (c) The Rehabilitation Bond will be released when the Applicant submits documentation prepared by a qualified rehabilitation consultant certifying that the final rehabilitation has been completed in accordance with the conditions of this consent and/or any approved Site Rehabilitation Plan, to the satisfaction of the **Planning Secretary**.

## **VISUAL AMENITY**

38. The Applicant must:

- (a) take all reasonable and feasible steps to minimise the visual and offsite lighting impacts of the development, including impacts on the Western Sydney Airport;
- (b) take all reasonable steps to shield views of quarrying operations and associated equipment from users of public roads and privately-owned residences;
- (c) ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure;
- (d) ensure that all external lighting associated with the development complies with relevant Australian Standards including *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*;
- (e) ensure that the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.

39. *Deleted.*

## **TRAFFIC & TRANSPORT**

### **Access and Heavy Vehicle Limits**

40. Unless otherwise agreed by the Planning Secretary, the Applicant must:

- (a) restrict all heavy vehicle access to the site to a maximum truck length of 19 metres;
- (b) restrict all quarry-related traffic to left-in, right-out movements at the intersection of Elizabeth Drive and Adams Road; and
- (c) not use the portion of Adams Road south of the site access road for any quarry-related heavy vehicle traffic.

### **Road Upgrades**

41. Prior to recommencing quarrying operations approved under Modification 5, the Applicant must:

- (a) upgrade (seal) the portion of Adams Road between Elizabeth Drive to approximately 40 metres south of the site access road, and obtain approval to lift the load limit on that section of the road, to the satisfaction of Council;
- (b) prepare and implement a signage and linemarking plan for the Elizabeth Drive/Adams Road intersection to restrict and manage truck access, to the satisfaction of TfNSW; and
- (c) upgrade (seal) the internal site access road between Adams Road and the proposed weighbridge.

### **Road Transport Protocol**

42. Prior to recommencing quarrying operations approved under Modification 5, the Applicant must develop a Road Transport Protocol, in consultation with TfNSW and Council, and to the satisfaction of the **Planning Secretary**. This protocol **must**:

- (a) specify the haulage route(s) to be used, the maximum number of road movements and the haulage hours;
- (b) include a Traffic Management Plan which addresses:
  - procedures to ensure that drivers adhere to the designated haulage route(s) as required under this Protocol;
  - measures to achieve a low-frequency, regular trucking schedule rather than a high-frequency, campaign trucking schedule;
  - contingency plans where, for example, any designated transport route is disrupted. This **must** also address procedures for notifying relevant agencies and affected communities by the implementation of any such contingency plan;
  - procedures to ensure that all haulage vehicles associated with the quarry are clearly distinguishable as **being related to the development**;
  - procedures for monitoring of product transport, including keeping of accurate records of all laden truck movements to and from the site (including time of arrival and dispatch) and publishing a summary of these records in the Annual Review;

- procedures for covering of all loads and ensuring that trucks do not track material onto public roads;
  - details for procedures for receiving and addressing complaints from the community concerning traffic issues associated with haulage from the quarry or return of unladen trucks to the quarry; and
  - measures to ensure the provisions of the traffic management plan are implemented, for example, education of drivers and any contractual agreements with operators of heavy vehicles which serve the quarry.
- (c) include a Code of Conduct for drivers which addresses:
- travelling speeds;
  - staggering of truck departures to ensure a regular trucking schedule throughout the day;
  - instructions to drivers not to overtake each other on the haulage route(s), as far as practicable, and to maintain appropriate distances between vehicles;
  - instructions to drivers to adhere to the designated haulage route(s);
  - instructions to drivers to be especially safety conscious and to ensure that traffic regulations are obeyed strictly;
  - driver training in the Code to ensure that all drivers are made aware and adhere to the Code; and
  - procedures for ensuring compliance with and enforcement of the Code.

### **DANGEROUS GOODS**

43. The Applicant must ensure that:

- (a) all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards; and
- (b) the storage, handling, and transport of all dangerous goods are undertaken in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the Dangerous Goods Code.

### **BUSHFIRE MANAGEMENT**

44. The Applicant must:

- (a) ensure that the development provides:
  - (i) asset protection in accordance with the relevant requirements in *the Planning for Bushfire Protection* (RFS, 2019) guideline; and
  - (ii) is suitably equipped to respond to any fires on the site; and
- (b) assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.

**SCHEDULE 5  
ADDITIONAL PROCEDURES**

**NOTIFICATION OF LANDOWNERS/TENANTS**

1. Within one month of the approval of Modification 5, the Applicant must notify in writing the owners of the residences on the land listed in Table 5A of Schedule 4 that they are entitled to ask the Applicant to install additional mitigation measures at their residence.
2. Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended air quality criteria, the Applicant must:
  - (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.

**NOTIFICATION OF EXCEEDANCES**

3. 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 4 of this consent, the Applicant must provide the details of the exceedance to any affected landowners and/or tenants.
4. For any exceedance of the air quality criteria in Schedule 4 of this consent, the Applicant must also provide to any affected landowners and/or tenants a copy of the fact sheet entitled "Mine Dust and You" (NSW Health, 2017).

**INDEPENDENT REVIEW**

5. If a landowner considers the development to be exceeding any relevant noise or air quality criterion in Schedule 4 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.
6. If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.
7. 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:
  - (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 relevant criterion in Schedule 4 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;
  - (b) provide 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.

**SCHEDULE 6**  
**ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING & REPORTING**

**ENVIRONMENTAL MANAGEMENT**

**Environmental Management Strategy**

1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:
  - (a) provide the strategic framework for environmental management of the development;
  - (b) identify the statutory approvals that apply to the development;
  - (c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
  - (d) set out the procedures to be implemented to:
    - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
    - (ii) receive record, handle and respond to complaints;
    - (iii) resolve any disputes that may arise during the course of the development;
    - (iv) respond to any non-compliance and any incident;
    - (v) respond to emergencies; and
  - (e) include:
    - (i) references to any strategies, plans and programs approved under the conditions of this consent; and
    - (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.
2. The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.

**Adaptive Management**

3. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria 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.

Where any exceedance of these criteria or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) 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
- (c) implement reasonable remediation measures as directed by the Planning Secretary.

**Management Plan Requirements**

4. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
  - (a) a summary of relevant background or baseline data;
  - (b) details of:
    - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - (ii) any relevant limits or performance measures and criteria; and
    - (iii) 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;
  - (c) any relevant commitments or recommendations identified in the document/s listed in condition 2 of Schedule 3;
  - (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
  - (e) a program to monitor and report on the:
    - (i) impacts and environmental performance of the development; and
    - (ii) effectiveness of the management measures set out pursuant to sub-condition (d) above;
  - (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;
  - (g) a program to investigate and implement ways to improve the environmental performance of the development over time;
  - (h) a protocol for managing and reporting any:
    - (i) incident, non-compliance or exceedance of the impact assessment criteria or performance criteria;
    - (ii) complaint; or
    - (iii) failure to comply with statutory requirements;
  - (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and

- (j) a protocol for periodic review of the plan.

*Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

#### **ANNUAL REVIEW**

5. By the end of September 2016 and each year following, 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:
- describe the development (including rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
  - include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against:
    - the relevant statutory requirements, limits or performance measures/criteria;
    - the monitoring results of previous years; and
    - the relevant predictions in the document/s listed in condition 2 of Schedule 3;
  - identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
  - identify any trends in the monitoring data over the life of the development;
  - identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
  - describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.
6. Copies of the Annual Review must be made available to Council and any interested person upon request.

#### **INDEPENDENT ENVIRONMENTAL AUDIT**

7. Before 31 December 2010, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
- be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Planning Secretary;
  - include consultation with the relevant agencies;
  - assess the environmental performance of the development, and whether it is complying with the relevant requirements in this consent and any relevant EPL (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;
- Note: This audit team must be led by a suitably qualified auditor and include experts in rehabilitation and any other field specified by the Planning Secretary.*
8. Within six weeks of the completion of this audit, or as otherwise agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report.

#### **REVISION OF STRATEGIES, PLANS AND PROGRAMS**

9. Within three months of:
- the submission of an incident report under condition 12 below;
  - the submission of an Annual Review under condition 5 above;
  - the submission of an Independent Environmental Audit under condition 7 above; or
  - the approval of any modification of the conditions of this consent (unless the conditions require otherwise);
- the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.
10. 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.
- Note: This is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve the environmental performance of the development.*
11. The Applicant must implement all strategies, plans and programs required under this consent as approved by the Planning Secretary.

## REPORTING AND AUDITING

### Incident Reporting

12. The Applicant must immediately notify the Department and any other relevant agencies after it becomes aware of an incident. The notification must be in writing via the Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

### Non-Compliance Notification

13. 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 via the 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, the way in which 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.

**Note:** *A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.*

### Regular Reporting

14. 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.

## ACCESS TO INFORMATION

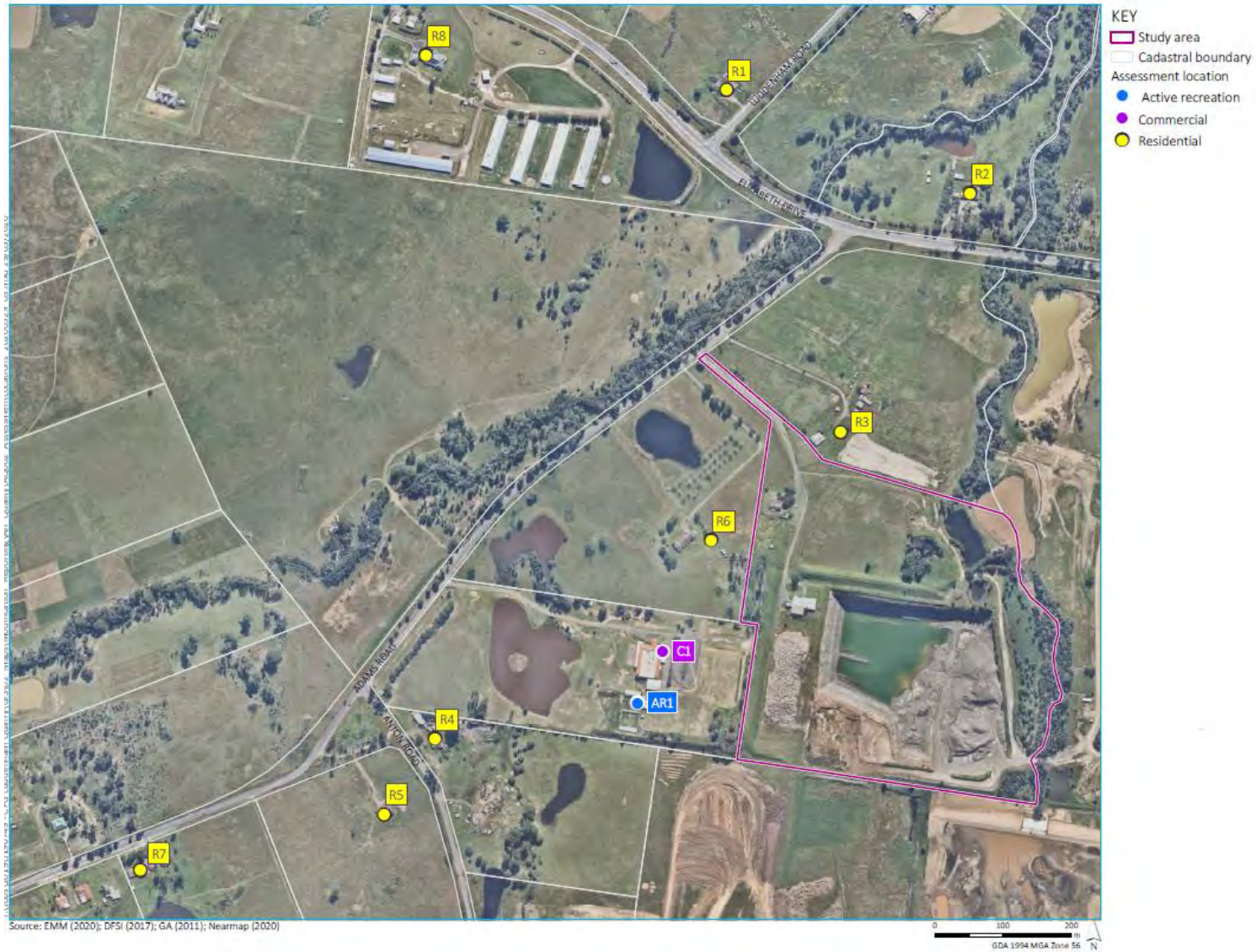
15. From 30 September 2016 and for the duration of the development, the Applicant must:
  - (a) make copies of the following publicly available on its website:
    - the document/s listed in condition 2 of Schedule 3;
    - current statutory approvals for the development;
    - approved strategies, plans and programs required under the conditions of this consent;
    - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
    - a complaints register, which is to be updated monthly;
    - the Annual Reviews of the development (for the last 5 years);
    - any Independent Environmental Audit of the development, and the Applicant's response to the recommendations in any audit;
    - any other matter required by the Planning Secretary; and
  - (b) keep this information up-to-date, to the satisfaction of the Planning Secretary.



## APPENDIX 1 DEVELOPMENT LAYOUT PLAN



## APPENDIX 2 LOCATION OF RESIDENCES



Appendix B

# Environmental Monitoring Plan

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- Study area
- Indicative air quality monitoring location
- Noise monitoring location
- Water quality monitoring location

Monitoring plan

Luddenham Quarry  
Environmental Management Strategy  
Figure B.1



Source: EMM (2021); DFSI (2017); GA (2011); Nearmap (2020)

