

**Bettergrow
Frazer Park Quarry
Pollution and Incident Response
Management Plan
EPA Licence Number 1246**



Revision Table

Date	Version	Author	Reviewed	Approved
21/11/2018	D0	VGT		
22/11/2018	F0	VGT		
13/01/2021	F1	Bettergrow	J Blomberg	V Bendeviski
24/08/2021	F2	Bettergrow	J Blomberg	J Blomberg
6/10/2022	F3	Bettergrow	J Blomberg	J Blomberg
23/10/2023	F4	Bettergrow	J Blomberg	J Blomberg

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1 Introduction

1.1 The Project Site

Frazer Park Quarry is described as Lots 1 and 2 DP 549905 and Portion 465 DP 755266 within the Parish of Wallarah in the local government area of Lake Macquarie City Council. The quarry is located at 800-900 Pacific Highway Moonee, near Catherine Hill Bay as presented in *Figure One*. The site is bounded by the Pacific Highway to the west, and Munmorah State Recreation Park area to the south.

1.2 Changes to the Legislation

A number of requirements to improve the way pollution incidents are reported and managed have been established in NSW legislation from 2011. These provisions include a requirement for holders of environmental protection licences under the ***Protection of the Environment Operation Act 1997*** (POEO Act) to prepare, keep, test and implement a ***Pollution Incident Response Management Plan (PIRMP)***. The ***Protection of the Environment Operations (General) Regulation 2009*** has been amended to prescribe further details for these plans.

1.3 Scope

This plan was developed in accordance with:

- Protection of the Environment Operation Act 1997;
- Protection of the Environment Operations (General) Regulation 2009;
- The site Environmental Management Plan; and
- Bettergrow Safety & Environment Induction Manual.

This document will describe activities to be undertaken in response to a pollution incident and controls, training and testing that will be maintained over the life of the quarry. It forms part of the Environmental Management Plan (EMP) developed for the Frazer Park site.

1.4 When to Implement this Plan

If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, the site must immediately implement the plan (Section 153F, POEO Act).

If an incident or emergency occurs that does not include pollution, for example a bushfire or an unexpected find of heritage or environmental significance the site must immediately implement the plan.

1.4.1 Definition of a Pollution Incident (POEO Act)

Pollution Incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

1.4.2 Definition of Material Harm (POEO Act)

Notification is required if a pollution incident causes or threatens to cause 'material harm to the environment'. Material harm is defined in section 147 of the POEO Act as:

(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.*

Notification is required even where '*harm to the environment is caused only in the premises where the pollution incident occurs*', as specified in section 147(2).

2 Risk Assessment

2.1 Hazards

Refer to the *Bettergrow Work, Health and Safety Management System* for procedures on how to identify hazards.

Table 1. EPA Compliance Audit Risk Analysis Matrix

		Likelihood of Environmental Harm Occurring		
		Certain	Likely	Unlikely
Level of potential Environmental Impact	High	Code Red	Code Red	Code Orange
	Moderate	Code Red	Code Orange	Code Yellow
	Low	Code Orange	Code Yellow	Code Yellow

Any non-compliance assessed as ‘code red’ suggests that the non-compliance is of considerable environmental significance and therefore must be addressed as a matter of priority.

A non-compliance assessed as ‘code orange’, while still considered to pose a significant risk of harm to the environment, can be given a lower priority than a code red non-compliance.

A non-compliance assessed as ‘code yellow’ suggests that the non-compliance could receive a lower priority but must still be addressed.

The following Hazard and Likelihood Risk Assessment and Corrective Control Measures table identifies hazards and the potential for material harm.

2.2 Emergency Plans

2.2.1 Bushfire

If a bushfire is sighted in the vicinity of the quarry, call 000 to report it immediately. Follow the directions of the Fire Brigade. If Fire Brigade attends the site, ensure they are aware of the location of the pollutants as located on Figure 3.

If evacuation is required, it is best to leave early. Ensure that the road is safe before travelling in that direction. If evacuation is not possible, take shelter inside the office or in the quarry pit.

The Lake Macquarie Fire Control Centre can be contacted on 1800 060 807 for fire updates.

2.2.2 Pollution Incidents

Table 2 identifies pollution incidents that require the engagement of the PIRMP.

Note that for fuel/diesel/oil, the risk assessment deems these as ‘low risk’. This is primarily due to the low volumes that will be on site.

Table 2. Hazard and Likelihood Risk Assessment

Pollutant/ Chemical	Description of Hazard/Incident	Pre- control Impact	Pre- control Likelihood	Pre- control Risk	Post- control Impact	Post- control Likelihood	Post- control Risk	Impact on Neighbours	Potential for Material Harm	Engage PIRMP
Sediment	Overtopping of Sediment Dams into downstream environment	Moderate	Likely		Low	Unlikely		Yes (see Figure Two)	Yes	Yes
	Pumping of untreated sediment dam water offsite	Moderate	Likely		Low	Unlikely		Yes (see Figure Two)	Yes	Yes
Fuel/Diesel	Spill of fuel contaminating groundwater or surface water from trucks and plant	Moderate	Likely		Low	Unlikely		Yes (see Figure Two)	Yes	Yes
Oils	Leaking oil contaminating groundwater or surface water from trucks and plant	Moderate	Likely		Low	Unlikely		Yes (see Figure Two)	Yes	Yes
Dust	Airborne dust blowing into neighbouring properties	Low	Likely		Low	Unlikely		Yes (see Figure Two)	No	No

2.2.3 Release of Pollutant

Table 3. Release Response Actions

Action	Comments	Responsibility	Reference
Contain release by creating earthen bund with excavator/FEL	Where safe to do so, contain the release then follow Actions listed	All	N/A
Notification of supervisor/manager of incident	Site Manager will commence completion of the External Communication PIRMP Summary Worksheet	Employees, contractors	Appendix B
Notification of relevant Authorities	Notify Authorities in order prescribed	Supervisor/Manager	Section 5
Notification of neighbours	Neighbours should be contacted as listed in Table 10	Supervisor/Manager	Table 10 and Table 4
Ensure the risk to staff is minimised	The risk of harm to staff from a release of sediment or diesel is minor. Staff are not required to evacuate the site, however staff should adhere to the site procedures at all times and wear appropriate PPE.	All	Site induction
Undertake steps to mitigate harm to the environment	Steps to minimise harm to environment may include: <ul style="list-style-type: none"> • Sample and test the water that has been released, including downstream samples, to determine the extent and concentration of the pollutant. • Treat remaining water if required prior to release. • Construct emergency bunding to prevent further releases where possible. 	Supervisor/Manager	Environmental Management Plan This PIRMP
Clean up and disposal of excess sediment	Steps may include: <ul style="list-style-type: none"> • Containing sediment washed down stream within existing dams or specifically constructed 		

Action	Comments	Responsibility	Reference
	<p>dams.</p> <ul style="list-style-type: none"> • Removal of sediment from water collected offsite (in dams) with addition of appropriate flocculants. • Release 'cleaned' water downstream and de-silt dams if required. • Continue monitoring of downstream environments to determine if clean-up efforts have been successful. 		
Clean up and disposal of impacted material	<ul style="list-style-type: none"> • Excavate and stockpile 'contaminated' material in an area away from any water course lines including those to on site sediment basins • Excavated to a depth 100mm below the impacted material • Dispose of material to appropriately licensed waste facility 		
Reporting and re-preparedness	<ul style="list-style-type: none"> • A post incident report will be prepared and submitted to the EPA within the time frame specified by the EPA. • The PIRMP shall be tested within one month of any pollution incident occurring and updated if required. 		

2.3 Early Warnings

The following table details the mechanisms for providing early warnings and regular updates to the owners and occupiers of premises' in the vicinity of the quarry.

Table 4. Impact on Neighbours Assessment - Early Warnings

Incident type/ Description	External Release	Neighbours Impacted/Extent of Impact	Communication Methods/Early Warnings	Pre-emptive Actions and Other Control Measures
Release of Sediment	Via waterways	See <i>Figure Two</i> For property affected and extent of impact Note that the residential area of Catherine Hill Bay to the north east of the site is over 700m from the quarry, therefore, the impact to these neighbours is considered negligible.	<ul style="list-style-type: none"> • Neighbours will be provided early warning of an incident via telephone (see <i>Table 10</i>) for contact details). • Regular updates will be provided either by phone or in person. 	<ul style="list-style-type: none"> • There is no risk of harm to the health of residents therefore no action to minimising their risk of harm are required to be undertaken. • Testing of the downstream environment will be undertaken to determine the concentration and extent of the sediment should a discharge occur. • The quarry has more than sufficient capacity to contain water from the sediment dams should they fail without discharging. • Staff are trained in the EMP procedures for Soil and Water Management.
Release of diesel/fuel/oil	Via waterways	See <i>Figure Two</i> For property affected and extent of impact	<ul style="list-style-type: none"> • Neighbours will be provided early warning of an incident via telephone (see <i>Table 10</i>) for contact details). 	<ul style="list-style-type: none"> • No large volumes/quantities to be stored on site • Any volumes on site that require storage will be held in the site

			<ul style="list-style-type: none"> • Regular updates will be provided either by phone or in person. 	<p>workshop in the site compound</p> <ul style="list-style-type: none"> • Spill kits on site within site compound • Testing of the downstream environment will be undertaken to determine the concentration and extent of the sediment should a discharge occur. • Staff are trained in the EMP procedures for soil and water management and spill response
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3 Inventory and Maps

3.1 List of Potential Pollutants

Table 5. List of Potential Pollutants

Pollutant/ Chemical	DG Class	DG Sub Risks	UN Number	Packaging Group	Hazardous Substance	Max. Quantity	Where Located
Sediment	N/A	N/A	N/A	N/A	N/A	N/A	Quarry
Dust	N/A	N/A	N/A	N/A	N/A	N/A	Quarry
Diesel	N/A	N/A	N/A	N/A	Yes	200L	Trucks and Plant
						100L	Workshop
Oil/lubricants	N/A	N/A	N/A	N/A	Yes	<50L	Trucks and Plant
						50L	Workshop

All plant refuelling activities will be undertaken using a mobile refuelling truck. It is not anticipated that there will be any fuel stored on site. In the event storage is required, volumes will be minimal (approx. 100L) and will be stored in the site workshop at the site compound. Basic maintenance work will be undertaken to site plant within the workshop area located in the site compound (see Figure 3). Minimal volumes of lubricants and oils will be stored in the workshop (approx. 50L) where necessary.

3.2 Maps

See *Appendix A* for the following maps:

- Figure 1 – Site Location
- Figure 2 – Affected Areas & Neighbours
- Figure 3 – Site Environmental Plan

4 Controls and Testing

4.1 Pre-emptive Actions

Table 6. Pre-emptive Actions for Identified Risks of Harm to Environment

Pollutant/Chemical	Hazard/Incident leading to Hazard	Early Warning	Pre-emptive Control Measures	Safety Equipment /Devices Required for Pollution Incident
Sediment	Overtopping of sediment dams to downstream environment	Yes	<p>The Environmental Management Plan (EMP) has been developed and includes for management of sediment dams, surface water and erosion and sediment control. The EMP is reviewed regularly to ensure risk and control reflect site activities.</p> <p>Staff are inducted and trained in site Procedures and Plans via Bettergrow Work, Health and Safety Management System (WHSMS)</p>	<p>No PPE is required by staff or neighbours affected.</p> <p>Pumps, silt fencing, earth bunds</p>
	Pumping of untreated sediment dam water offsite	Yes		
Diesel Fuel	Spill/leak of fuel from trucks or plant contaminating groundwater or surface water.	No	<p>The EMP includes spill management and clean up procedure.</p> <p>No large volumes of diesel are stored on plant or trucks or on site.</p> <p>Staff are inducted and trained in site Procedures and Plans under the WHSMS.</p>	<p>Spill kits are held on site and by contractors.</p> <p>Re-fuelling is undertaken within the site compound.</p> <p>PPE: safety shoes, gloves, safety glasses</p>
Oils	Spill/leak of engine oil from trucks or plant contaminating ground or surface water	No	<p>The EMP includes spill management and clean up procedure.</p> <p>No large volumes of oil are held on plant or trucks or stored on site.</p> <p>Staff are inducted and trained in site Procedures and Plans under the WHSMS.</p>	<p>Spill kits are held on site and by contractors.</p> <p>Re-fuelling and maintenance is undertaken within the site compound.</p> <p>PPE: safety shoes, gloves, safety glasses</p>

4.2 Pre-emptive Procedures-Training

Regular practice is essential to maintain preparedness. Training and development will be conducted as required in site procedure which includes site inductions and emergency procedures and this PIRMP. Training records are kept detailing who was trained, the dates, and the nature of the training.

4.3 Testing of Plan

According to the POEO Regulation:

- (1) *The testing of a plan is to be carried out in such a manner as to ensure that the information included in the plan is accurate and up to date and the plan is capable of being implemented in a workable and effective manner.*
- (2) *Any such test is to be carried out:*
 - a. *at least once every 12 months, and*
 - b. *Within 1 month of any pollution incident occurring in the course of an activity to which the licence relates so as to assess, in the light of that incident, whether the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.*

As required above, testing records will also be maintained outlining the dates on which the plan has been tested, the name of the person who carried out the test, the dates in which the plan is updated, the manner in which the plan is to be tested and maintained (i.e. desktop simulations or practical exercise). Records will be held on site. The table below summarises this information.

Table 7. Testing record

Plan Test Date	Person conducting the test	Form of testing	Date of Plan Update	Person Responsible for the Plan Management (including updates and testing)	Plan Update Authorisation
1/9/2012	Peter Walton	Desktop review of initial plan	N/A	Peter Walton	Peter Walton
30/08/2013	Peter Walton	Desktop review of initial plan	N/A	Peter Walton	Peter Walton
20/08/2014	Peter Walton	Desktop review of initial plan	N/A	Peter Walton	Peter Walton
24/06/2015	Peter Walton Tara O'Brian	Desktop review and onsite test/review	24/06/2015	Peter Walton	Peter Walton
20/06/2016	Lisa Morrall, VGT	Desktop	8/07/2016	Lisa Thomson	Peter Walton
13/01/2021	Jacqui Blomberg	Desktop	14/01/2021	Jacqui Blomberg	Jacqui Blomberg
24/08/2021	Jacqui Blomberg	Desktop	24/08/2021	Jacqui Blomberg	Jacqui Blomberg
6/10/2022	Jacqui Blomberg	Desktop	6/10/2022	Jacqui Blomberg	Jacqui Blomberg
23/10/2023	Jacqui Blomberg	Desktop	23/10/2023	Jacqui Blomberg	Jacqui Blomberg

5 Contact Details and Notification Protocol

Should an incident occur on the premises, staff or contractors are required to notify the Site Manager immediately. The person who discovers the incident is to take charge and activate the PIRMP until relieved by a more senior employee or emergency services personnel.

Table 8. Site Contacts

Name	Position	Mobile Phone Number
Dale Sharp	Site Manager	0421 919 375
Jacqui Blomberg	Environmental Manager	0436 609 556

Under Section 148 of the POEO Act all relevant authorities must be notified **immediately**. The Site Manager and Environmental Manager are authorised to notify the relevant authorities.

If the incident presents an immediate threat to human health or property call 000. Then the relevant authorities noted in Table 9 **MUST** be notified **immediately** in the following order:

Table 9. Relevant Authority Contacts

Name	Phone Number
EPA Environment Line	131 555
Ministry of Health	Central Coast Public Health Unit Ph: (02) 4320 9730 24 Hours Hospital Main Switch will put you through to the Environmental Officer on call
Safe Work NSW	13 10 50 A "notifiable incident" under the work health and safety legislation relates to: <ul style="list-style-type: none"> • the death of a person • a serious injury or illness of a person • a potentially dangerous incident
Lake Macquarie City Council	(02) 4921 0333 Monday to Friday 8:00am – 5:00pm 02 4921 0333 after hours
Fire and Rescue NSW (Doyalson)	4337 9792 (If the situation warranted calling 000 as a first point of notification, you do not need to ring Fire and Rescue NSW again)
Local Police	Tuggerah Lakes District Police 4390 1299 Open 24hrs

The following is a list of key neighbour contacts that may be required to be contacted regarding the incident by the Site Manager or his delegate.

Table 10. Key Neighbour Contacts

Name	Phone Number	Address	Map Reference
Parks and Wildlife (Lake Munmorah office)	4972 9000	Blue Wren Dr Munmorah State Conservation Area 8:30 – 16:00 Monday to Friday	See <i>Figure Two</i>

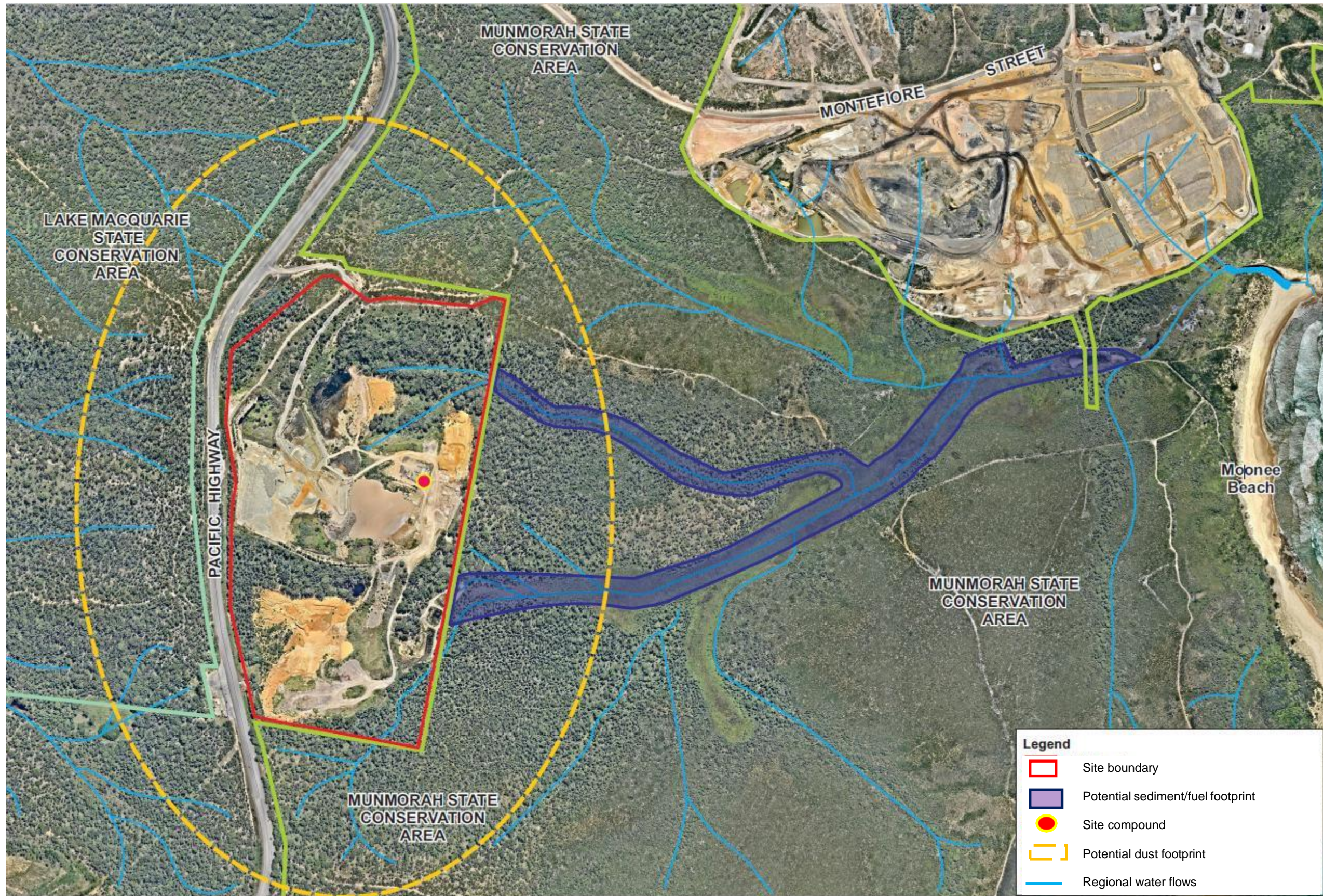


Appendix A: Figures

Figure 1 Site Location



Figure 2 Affected Areas & Neighbours



**Figure 3
Site Environmental Plan**



Legend

Access road/haul road	Sediment basin	Water transfer pipe	Geofabric lined rock swale
Geofabric rock lined spillway	Spill kit	Site compound	



Appendix B: External Communication Worksheet

COMMUNICATION PIRMP SUMMARY WORKSHEET

Site Details

Site Name	Site Address	Responsible person
Bettergrow Frazer Park Quarry	800-900 Pacific HWY Moonee, NSW 2259 Near Catherine Hill Bay	[INSERT NAME]

Government Agency Contact List

(Document date and time of contact and who was contacted)

(Police contact if required only if considered necessary)

<p>EPA: 131 555 Date & Time: Person making contact: Instructed Actions: Time of arrival:</p>	<p>NSW Fire & Rescue: 000 where hazmat required or where the incident presents an immediate threat to human health or property OR 4972 1040 Date & Time: Person making contact: Instructed Actions:</p>	<p>SafeWork NSW: 131 050 Date & Time: Person making contact: Instructed Action: Time of arrival:</p>
<p>LMC Council: 4921 0333 Date & Time: Person making contact: Instructed Actions:</p>	<p>Ministry of Health/Central Coast Public Health Unit: 4320 9730 Date & Time: Person making contact: Instructed Actions:</p>	<p>Tuggerah Lakes District Police: 4390 1299 Date & Time: Person making contact: Instructed Actions:</p>



Time of arrival:	Time of arrival:	Time of arrival:
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Incident Details		
Type & location of incident	Emission type (air, water, land etc.)	Scale of incident (litres, m³ etc.)
Date & Time of the incident	Employees/contractors involved	
Chemical/substance involved (fuel, oil, sediment)		
Process involved (excavation, filling etc.)		
Details of the incident (include diagram if necessary)		

Main areas/ sensitive areas of concern e.g. water course, vegetation (include diagram if necessary)

Other contact if required		
Parks and Wildlife (Lake Munmorah office): 4972 9000 Date & Time: Person making contact: Contact method:	Neighbour 1 Date & Time: Person making contact: Contact method:	Neighbour 2 Date & Time: Person making contact: Contact method: