

Revision 1 - August 2017

Pollution Incident Response Management Plan

Mt Zion Quarry

Prepared for:
Mount Zion Quarry
ABN: 24 400 616 547

Prepared by:
Rodney W. Holland
Earth & Environmental Scientist
ABN: 84 351 737 491
76 Taylor Street, Armidale, NSW 2350
Ph. 0422 014 767

Pollution Incident Response Management Plan

Mt Zion Quarry

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Revision	Date	Written By	Reviewed By
Rev 0 (Original)	11/11/2016	Rodney Holland EnviroAg Australia Pty Ltd	Peter Hatton EnviroAg Australia Pty Ltd
Rev 1 (This Version)	27/08/2017	Rodney W. Holland Independent Earth & Environmental Scientist	Rodney W. Holland Independent Earth & Environmental Scientist

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Introduction and Background

Greensill Bros Pty Ltd operate the Mt Zion Quarry which is located on Boundary Creek Road, Nymboida. A map is included as Figure 1. A more detailed site map is included in Appendix A - Site Layout.

The quarry is for 'hard rock' resources and requires blasting and crushing. However, explosives are not stored on site and fuel for crushers and other equipment is held in small quantities in bunded systems on vehicles or a portable self-bunded tank.

The operational area is situated in a controlled drainage area which collects all run-off at a sediment settling pond. A previous assessment of risk (Holland 2016) identified that the breach of the settling pond dam wall could be significant, and classed as having a residual 'Moderate Risk'. All other activities on site are of lesser residual risk.

Following review of the PRIMP in August 2017, three areas for improvement were identified. These areas are listed in the testing records (PIRMP Testing Records

Table 6). The structure of this PIRMP follows the EPA PIRMP guidelines (Environmental Protection Authority (EPA) 2012)

Site Location

A map of the site is provided in Appendix A - Site Layout.

Table 1 - Site Details

	Property Description
EPA Licence	20650
Site Address	Boundary Creek Forest Road Nymboida NSW 2460

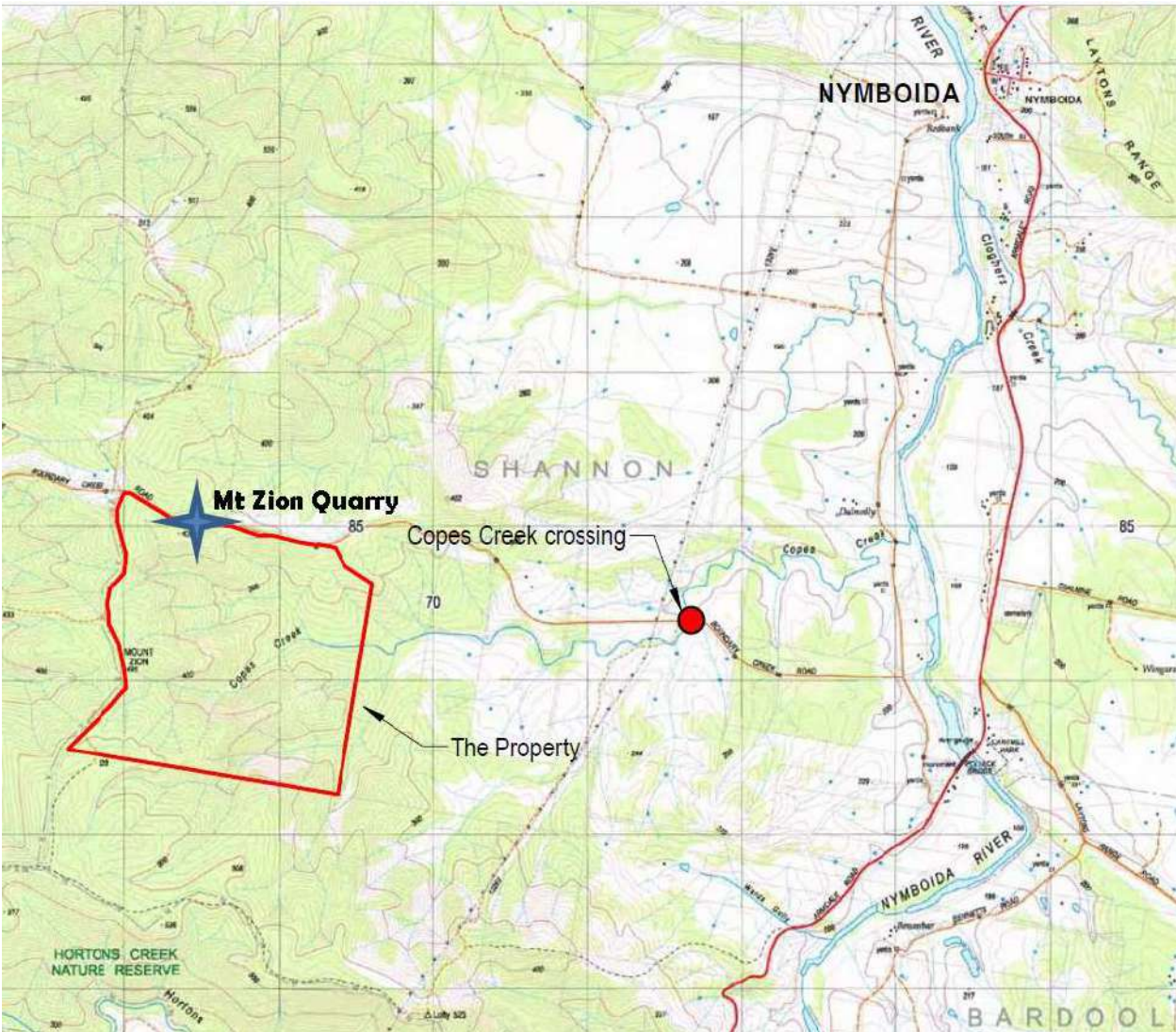


Figure 1 - Mt Zion Quarry local area context

Site Contacts

The General Manager or its delegate will be responsible for the implementation of this plan. The following are nominated as being responsible persons:

Table 2 - Persons responsible for activating the plan

Name	Role	Contacts
John Bartholomew; or	Quarry/Mine Manager	UHF Channel 20 (on-site) 0428 666 128
Jarrold Greensill	Quarry General Manager	UHF Channel 20 (on-site) 0427 898 606

Table 3 - Persons responsible to liaise with the 'relevant authority'

Name	Role	Contacts
John Bartholomew; or	Quarry/Mine Manager	UHF Channel 20 (on-site) 0428 666 128
Jarrold Greensill	Quarry General Manager	UHF Channel 20 (on-site) 0427 898 606

Table 4 - Person responsible for managing the response to a pollution incident

Name	Role	Contacts
John Bartholomew	Quarry/Mine Manager	UHF Channel 20 (on-site) 0427 666 128

Site Pollutant Inventory

Very little potentially contaminating material is stored on site:

- Explosives are not stored on site;
- Small, domestic quantities of herbicides and pesticides;
- Fuel and oil is transported to site as required and only stored during hours of operation; and
- Storm water is stored on site in the settling pond and some water can build up in the pit.

Environmental Risk

The operational area is situated in a controlled drainage area which collects all run-off at a sediment settling pond. A previous assessment of risk (Holland 2016) identified that the breach of the settling pond dam wall could be significant, and classed as having a residual 'Moderate Risk'. All other activities on site were of lesser residual risk.

This PIRMP has been developed through using the risk assessment undertaken by EnviroAg Australia Pty Ltd in November 2016 (Holland 2016). This risk assessment should be checked for any changes as part of the yearly PIRMP review.

Pre-emptive measures

The following pre-emptive protection measures are available to assist in mitigating against pollution incidents:

Table 5 - Pre-emptive measures

Type	Use	Location
Personal Protective Equipment (PPE)	Personal protection against hazards	Site Office and some site vehicles
Heavy Vehicles	Construction of emergency containment equipment	Excavators available on site during operational works
Spill Kits	Immediate clean-up of small spills (e.g. fuel, oil and chemicals)	Site Office and some vehicles
Fire Extinguishers	Control fires	Vehicles and site office

Emergency Procedure (PIRMP)

The following emergency response procedure shall be adopted if a pollution incident occurs which is likely to cause 'material harm' to the environment.

1. The Quarry/Mine Manager and Quarry General Manager, or if unavailable, the next in charge, to be notified as soon as possible;
 2. First aid, should be provided to injured persons;
 3. Immediate clean-up and containment to stop further harm to be implemented (e.g. spill kits);
 4. The Quarry/Mine Manager or Quarry General Manager to notify all of the relevant authorities:
 - a. Environmental Protection Authority Pollution Line (131 555)
 - b. Clarence Valley Council (Grafton - 02 6643 0200)
 - c. Fire & Rescue NSW (000)
 - d. NSW Public Health Unit (Lismore - 02 6620 7585 / 0428 882 805ah)
 - e. Safework NSW (131 050)
 - f. Police (Grafton - 6642 0222)
 5. All work is to stop until it is ascertained that it is safe to return to work;
 6. A suitably informed person is to be sent to meet emergency services at site;
 7. Neighbouring properties and potentially affected premises to be notified;
 8. Any water discharged from the settlement pond should be sampled if safe to do so;
 9. Suitable clean-up strategies to be assessed and implemented.
-
- All relevant authorities must be notified, although not all will need to act. Each body will deliver instructions on their requirements (if any) once they understand the nature of the incident.
 - Mobile reception is of variable quality on site. Communications with authorities and emergency services can be undertaken by mobile telephone in the vicinity of the site office where reception is the most reliable.
 - On site communications should be by UHF radio (Channel 20)
 - After the incident has passed a record of the incident must be made

Reporting, Records, Testing & Review

Following the incident updates are required and will need be given via email, telephone or in-person as requested by the party.

Reporting

The Mine Manager and Quarry General Manager are to be notified of all pollution incidents.

Incident Records

Where a pollution incident occurs the Mine Manager is to record the incident in an Environmental Incident Register, which should be kept at the premises. The Environmental Incident Register shall include the following:

- Date of the incident;
- Nature of the incident;
- The response made;
- Results of measures taken to rectify situation;
- Monitoring or other evidence that provides an indication of the nature and scale of the incident and the success of the rectification measures taken; and
- Processes adopted to ensure that the incident does not reoccur.

Testing and Training

The PIRMP requires testing once every twelve months and within one month after every pollution incident.

In reviewing the PRIMP, records obtained from incidents, complaints, changes to licence conditions, audit data and any monitoring data should be considered when reviewing the PIRMP. A testing register is provided in Table 6.

Staff induction and training forms should be updated to include reference to PIRMP training. All staff working on site will need to be trained in the requirements of the PIRMP and records of this training maintained with staff training records.

The Quarry General Manager is to ensure that appropriate corrective actions are implemented within an appropriate time frame to allow continued compliance with this PIRMP.

References

- Environmental Protection Authority (EPA). 2012. *Environmental Guidelines: Preparation of Pollution Incident Response Management Plans*. Sydney, New South Wales: State of NSW. doi:ISBN: 978 1 74293 555 3.
- Holland, Rodney. 2016. *Pollution Incident Response Management Plan: Mt Zion Quarry, NSW*. Armidale: EnviroAg Australia Pty Ltd.

PIRMP Testing Records

Table 6 - PIRMP test records

Test Date	Type of test (e.g. desktop/exercise)	Staff involved in test	Details, notes, notes, issues or improvements
21/8/2017	Desktop and site inspection	Jarrold Greensill, Bart Bartholomew, Rodney Holland	Actions in an incident need to be easily discerned from background information (The present PIRMP should be more concise). No up to date map available. PIRMP needs to be updateable (Presently the PRIMP is locked PDF).

Emergency Contact Details

Table 7 - Quarry personnel contact details

Role	Contact Person	Contact Details
Quarry General Manager	Jarrold Greensill	UHF Channel 20 (on-site) 0427 898 606
Mine Manager	Bart Bartholomew	UHF Channel 20 (on-site)
Safety Officer	Jarrold Greensill	UHF Channel 20 (on-site) 0427 898 606

Table 8 - Emergency services contact details

Emergency Contact	Division/Location	Contact Details
Environmental Protection Authority (EPA)	EPA Pollution phone line	131 555
Clarence Valley Council (Grafton)	Environmental Health & Town Water Supply	02 6643 0200
Fire and Rescue NSW	General emergency phone line	000
NSW Health (Lismore)	Public Health Unit	02 6620 7585 or 0428 882 805 (ah)
Safework NSW	Work safety	131 050
NSW Police Force (Grafton)	Local police	02 6642 0222

Appendix A - Site Layout

RESULTS OF WATER ANALYSIS

1 sample supplied by Greensill Bros on 22/02/18. Lab Job No.G7738

Samples submitted by Jarrod Greensill. Your Job: Quarry Water

22 Lillypool Rd SOUTH GRAFTON NSW 2460

Parameter	Methods reference	Sample 1 Quarry Water
	<i>Job No.</i>	<i>G7738/1</i>
pH	APHA 4500-H ⁺ -B	7.97
Total Suspended Solids (mg/L)	GFC equiv. filter - APHA 2540-D	13
Total Oils and Grease (mg/L)	APHA 5520-D (hexane extractable)	4

Notes:

1. Total metals - samples digested with nitric acid; Total available (acid soluble/ extractable) metals - samples acidified with nitric acid to pH <2
Dissolved metals - samples filtered through 0.45µm cellulose acetate and then acidified with nitric acid prior to analysis
2. Metals and salts analysed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).
3. 1 mg/L (milligram per litre) = 1 ppm (part per million) = 1000 µg/L (micrograms per litre) = 1000 ppb (part per billion).
4. For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm.
5. Analysis performed according to APHA (2017) 'Standard Methods for the Examination of Water & Wastewater', 23rd Edition, except where stated otherwise.
6. Analysis conducted between sample arrival date and reporting date.
7. ** NATA accreditation does not cover the performance of this service.
8. .. Denotes not requested.
9. This report is not to be reproduced except in full.



Environmental Analysis Laboratory, Southern Cross University,
Tel. 02 6620 3678, website: scu.edu.au/eal

checked:
Graham Lancaster
Laboratory Manager