

MORUYA QUARRY POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN



Department of
Primary Industries
Crown Lands

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1. Introduction

The Moruya Quarry is used infrequently to supply granite rock units for the maintenance and repair of coastal and riverine infrastructure. There has been no blasting or extraction of new material at the quarry for over a decade. The quarry is licensed under the *Protection of the Environment Operations (POEO) Act 1997*.

This Pollution Incident Response Management Plan (PIRMP) provides details of the processes which are in place in the event of a pollution incident at Moruya Quarry to:

- ensure comprehensive and timely communication about the pollution incident, is provided to;
 - relevant Crown Lands staff,
 - The Environment Protection Authority (EPA),
 - other relevant authorities specified in legislation (including the NSW Ministry of Health, WorkCover NSW, and Fire and Rescue NSW), and
 - people outside the facility who may be affected by the impacts of the pollution;
- minimise and control the risk of a pollution incident by identifying risks and developing planned actions to minimise and manage those risks;
- ensure the PIRMP is implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the PIRMP is regularly tested for accuracy, currency and suitability.

The operation of the Quarry must comply with the:

- Work Health and Safety Act 2011 (WHS Act)
- Work Health and Safety Regulations 2011 (WHS Regs)
- Protection of the Environment Operations Act 1997 (POEO Act)
- Environment Protection Licence No. 5199

Part 5.7A of the POEO Act requires that:

- All holders of Environment Protection Licences must prepare a PIRMP;
- Licensees must keep the plan, in hard copy format, at the premises to which the licence relates;
- Licensees must test the plan; and
- If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, licensees must immediately implement the plan.

PRINTED COPIES OF THIS PLAN MUST BE AVAILABLE AT:

- **OFFICE OF THE MANAGER COASTAL INFRASTRUCTURE; AND**
- **A STORAGE SHED OR WORK SHED AT THE QUARRY (WHILE IN OPERATION)**
OR
- **THE SUPERVISOR'S VEHICLE ON SITE WHILE THE QUARRY IS IN OPERATION**

Prior to commencing quarry operations, a copy of this Plan must be made available to the nearest neighbours (refer Section 8)

This document has been prepared in accordance with the *Environmental Guidelines: Preparation of Pollution Incident Response Management Plans* (EPA, 2012).

2. Location

Moruya Quarry (Lot 1&2 DP 595314, Lot 8 DP904847 Parish of Moruya) is located on North Head Drive, Moruya on the south coast of NSW. The entrance to the quarry is on the northern side of the North Head Drive, approximately 3 kilometres east of the Princes Highway. Access to the quarry is controlled by a locked gate.

Location of the quarry is shown Figure 1. Site map and other diagrams/photos are provided in Appendix A.

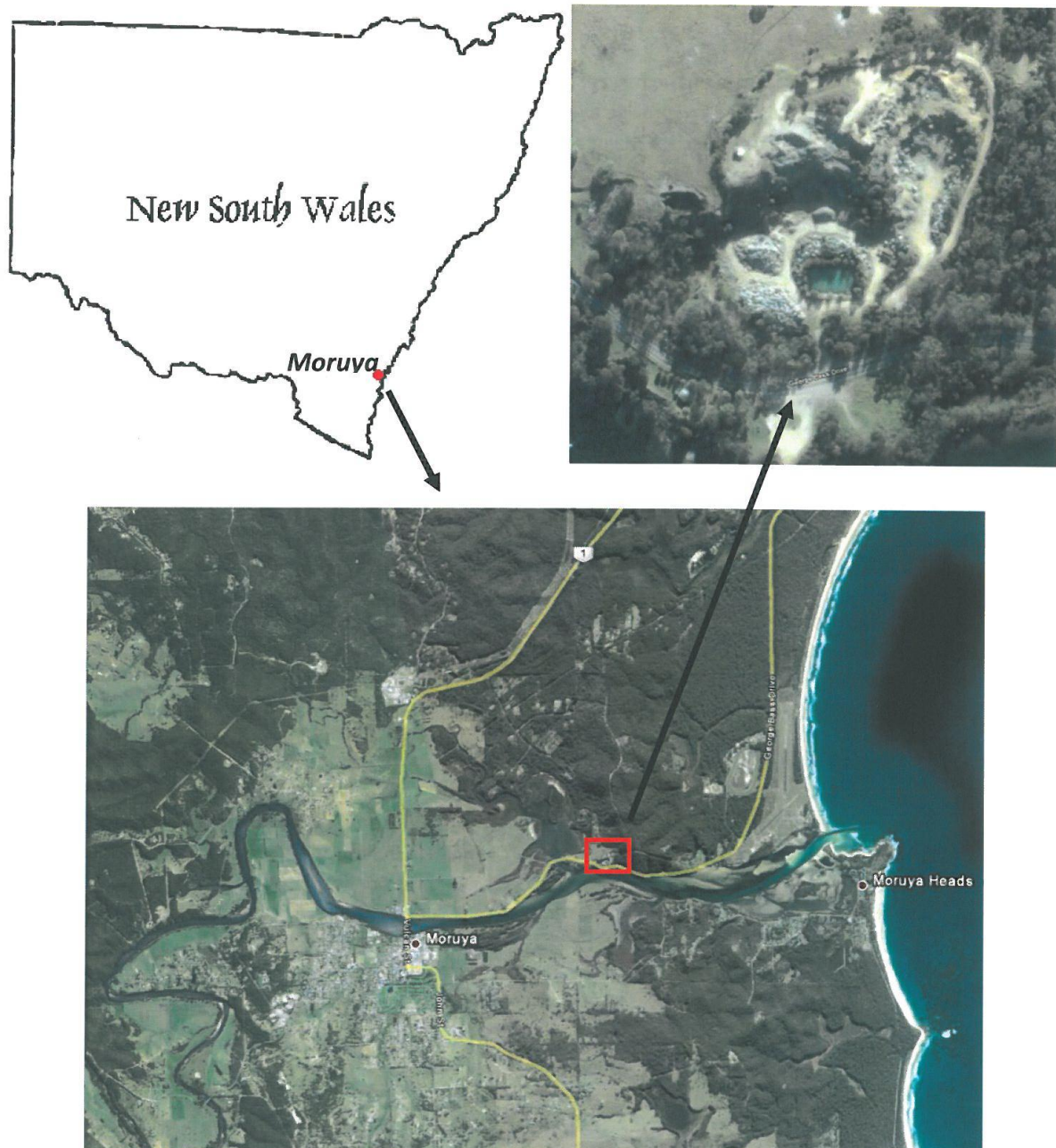


Figure 1. Location of Moruya Quarry

3. When Does This Plan Apply

This PIRMP must be implemented if a pollution incident occurs at Moruya Quarry. Elements of the PIRMP may also be applicable if a safety incident occurs at the quarry.

The definition of a pollution incident is:

A 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.

A pollution incident is required to be notified if there is a risk of 'material harm to the environment' (S 147 POEO Act) and is defined 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.

4. Identification and Likelihood of Hazards

The quarry is relatively remote and the surrounding site is covered by native forest. The adjoining property (west) is mostly clear of native vegetation and is likely to be used for grazing and/or agistment. The nearest building is a rural residence 100m to the west. The quarry is within the Moruya River catchment, which drains to the Pacific Ocean.

Sediment runoff from the quarry area is directed to a sediment pond. On the limited occasions when the pond is full, pond water is syphoned and discharged from the site (authorised discharge point No.1). Prior to discharge, pond water is corrected for suspended solids (i.e. <50mg/l) by the addition of a flocculant (e.g. gypsum) and pH (i.e. between 6.5 – 8.5) usually by the addition of lime.

The quarry is generally inactive with access restricted by locked gate. The main hazards associated with activities at the quarry (i.e. during inactive phase) that have the potential to affect human health or the environment, are set out in the following Table 1.

TABLE 1: Identification and Likelihood of Hazards at Moruya Quarry

Hazard	Likelihood	Factors increasing Likelihood
Injuries to persons from vehicles on site	Low	<ul style="list-style-type: none"> • Operations on site • Unauthorised access
Injuries to persons from falls on site, including falls into water	Low	<ul style="list-style-type: none"> • Operations on site • Unauthorised access
Discharge of sediment laden water	Very Low	<ul style="list-style-type: none"> • Operations on site • Unauthorised access • Pump out of sediment control ponds
Water pollution - general	Very Low	<ul style="list-style-type: none"> • Operations on site • Unauthorised access
Air pollution – dust	Very Low	<ul style="list-style-type: none"> • Operations on site • Windy conditions • Low soil moisture
Air pollution – fires in vehicles	Very Low	<ul style="list-style-type: none"> • Operations on site • Unauthorised access
Land pollution- illegal dumping of waste	Very Low	<ul style="list-style-type: none"> • unauthorised access
Noise	Very Low	<ul style="list-style-type: none"> • Operations on site • Unauthorised access

5. Pre-emptive Measures to be Taken

Pre-emptive actions to be taken to minimise or prevent any risk of harm to human health or the environment are identified in the following Table 2:

TABLE 2: Pre-emptive Measure to prevent Pollution Incidents

Hazard	Pre-emptive action to minimise risk
Injuries to persons from vehicles/plant on site	<p>Maintain fencing and access controls to prevent unauthorised access.</p> <p>Ensure adequate warning signage is maintained.</p> <p>Implement Moruya Quarry Safety Management Plan (DPI, 2011)</p> <p>If unauthorised persons are found on site, work should be stopped and persons escorted from the site.</p> <p>Ensure all personnel (including supervisor) are inducted onto the site by the Production Manager.</p> <p>High visibility clothing to be worn at all times.</p> <p>Hardhats to be worn when working within 3 metres of an excavating machine.</p> <p>Keep non-essential personnel clear of work area.</p> <p>Machinery to be equipped with reversing alarms, revolving flashing light and roll over protection system (if required).</p> <p>Personnel shall remain outside the working distance of plant when operating, and no less than 20m away.</p>

<p>Injuries to persons from falls on site, including falls into water</p>	<p>Maintain fencing and access controls to prevent unauthorised access. Ensure adequate warning signage is maintained. Implement Moruya Quarry Safety Management Plan (DPI, 2011). If unauthorised persons are found on site, work should be stopped and persons escorted from the site. Periodic site inspections when site unoccupied. Site to be kept clear of materials & debris. Personnel to wear approved footwear. Personnel shall be aware of uneven surfaces and proceed with care. Personnel shall keep clear of the water body and not enter the water. Personnel shall not stand close to edges where potential exists to fall into water.</p>
<p>Discharge of sediment laden water</p>	<p>Controls installed and maintained to minimise generation of sediment laden water. Install and maintain erosion and sediment controls. Sediment control ponds maintained. Undertake water quality testing and correct pH and Total Suspended Solids prior to discharge. Undertake periodic pump out of sediment ponds to minimise any possibility of uncontrolled discharge.</p>
<p>Water pollution - general</p>	<p>Refuelling shall be carried out in a designated area with a sand bag bund. Fuels and lubricants shall not be stored on site – to be delivered as required. Maintain clean and organised work areas to help prevent accidents. Maintain vehicles and plant in accordance with manufacturer’s specifications. Spill kit shall be located and maintained on site during all operations and regularly inspected and maintained. Personnel shall be trained in use of spill kits.</p>
<p>Air pollution – dust</p>	<p>Undertake blasting in accordance with relevant guidelines and implement appropriate blast suppression measures. Disturbed areas minimised. Limit drop heights when loading trucks from stockpile. Use water from sediment ponds when necessary to minimise generation of dust from stockpiles and trafficable areas. Cover all loads during transport. Implement Moruya Quarry Safety Management Plan (DPI, 2011).</p>
<p>Air pollution – fires in vehicles</p>	<p>Refuelling shall be carried out in a designated area with a plastic lined earthen bund. Fuels and lubricants shall not be stored on site – to be delivered as required. Maintain clean and organised work areas to help prevent accidents. Maintain vehicles and plant equipment in accordance with manufacturer’s specifications. Fire extinguishers shall be carried in plant.</p>

Land pollution- illegal dumping of waste	Maintain fencing and access controls to prevent unauthorised access. Ensure adequate warning signage is maintained. If unauthorised persons are found on site, work should be stopped and persons escorted from the site.
Noise and Vibration	Undertake blasting in accordance with relevant guidelines. Implement Moruya Quarry Safety Management Plan (DPI, 2011). Personnel shall be trained in hearing protection. Hearing protection to be worn when exposed to excessive noise. Visually inspect plant and equipment for defects.

6. Inventory of Pollutants

No potentially polluting chemicals are stored on site.

Fuels and lubricants for vehicles are not to be stored on site and are delivered as required.

Sediment laden runoff water from the quarry must be captured in the sediment ponds and tested/treated before discharge from the site.

7. Response to a pollution incident

If a pollution incident occurs, the following organisations shall be contacted in the order listed.

1. **Call 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.**
2. **Call the responsible Manager at Department of Primary Industries, or if unavailable the Crown Lands office at Nowra (0244 289 100):**
 - Manager Coastal Infrastructure – 0249 205006 or 0438 603 285**
 - Principal Environmental Officer - 0428 689 105**
3. **Environment Protection Authority – Pollution Line 131 555**
4. **NSW Ministry of Health – 0293 919 000 or Moruya Hospital – 0244 742 666**
5. **WorkCover NSW – 131 050**
6. **Eurobodalla Shire Council**

Calls 1 and 2 shall be made by the Site Supervisor or another responsible site representative immediately the pollution incident occurs.

The responsible Manager shall then assume responsibility for responding to the incident, including contacting other response agencies.

Note: the POEO Act requires that this contact process should be initiated immediately after a pollution incident occurs.

8. Communicating with Neighbours

In the event of a pollution incident occurring at the quarry, responsible Crown Lands Manager will arrange for direct contact with the owners and occupiers of nearby premises who may be affected by the incident.

If the pollution incident has implications for the wider community, relevant emergency service's standard communications procedures will be used to advise community members and the media. The responsible Crown Lands Manager shall contact Crown Lands Public Relations Section to initiate the development and implementation of a communications plan for the incident.

Advice to be provided to the community shall include:

- Air Pollution incident – persons in the affected area should close windows and doors and remain inside for the duration of the incident.
- Contaminated water runoff – persons should avoid using or entering water in the Moruya River

9. Minimising Harm to Persons on the Premises

The Manager Coastal Infrastructure (DPI – Crown Lands) is authorised to approve operations or associated activities at the quarry. The only persons authorised to be on the quarry site shall be Crown Land staff, authorised contractors engaged in quarry operations, or other persons under the immediate supervision of Crown Land staff.

The risk of harm to persons on the premises shall be minimised by implementing the pre-emptive measures to minimise risk as set out in Table 2.

Site Evacuation

As part of the site induction, the site Supervisor shall establish an evacuation and emergency assembly point at the site entrance in accordance with the Moruya Quarry Safety Management Plan (SMP). In case of an evacuation the Supervisor shall notify all persons on site to evacuate the site. Persons shall not leave the assembly point until instructed to do so by the Supervisor. Any need to evacuate and any incident/injury and First Aid treatment shall be recorded in accordance with the SMP.

10. Actions to be taken during or immediately after a Pollution Incident

- Address the immediate cause of the incident.
- Identify any injured persons, ensure their immediate safety and render first aid.
- Commence contact process set out above.
- Cooperate with emergency services attending the site.
- Responsible manager to assume control.
- Responsible manager to record incident and develop and implement incident response plan.
- Responsible manager to develop communications plan including consultation with Crown Lands Public Relations Section.

11. Staff Training

Site Induction

The Site Supervisor is responsible for ensuring that prior to work being undertaken at the quarry, all personnel entering the quarry receive an Induction in accordance with the Moruya Quarry Safety Management Plan (SMP). The purpose of the Induction is to ensure that all personnel entering the quarry are aware of the hazards and control measures within the quarry.

The Manager Coastal Infrastructure shall ensure all staff have received appropriate training including Work Health and Safety General Construction Induction Training course. This certificate is commonly referred to as a “green/white card”.

The Site Supervisor shall ensure that all contractors required to operate plant and equipment are appropriately qualified, competent, licensed or trained to operate the item of plant or equipment safely and competently. A record of appropriate qualifications, competencies and licences shall be made in the SMP.

12. Availability of Plan

Printed copies of the current version of this plan shall be available at:

- Office of the Manager Coastal Infrastructure and
- A storage shed or work shed at the quarry (if provided) or
- The Site Supervisor’s vehicle on site while the quarry is in operation.

13. Testing the Plan

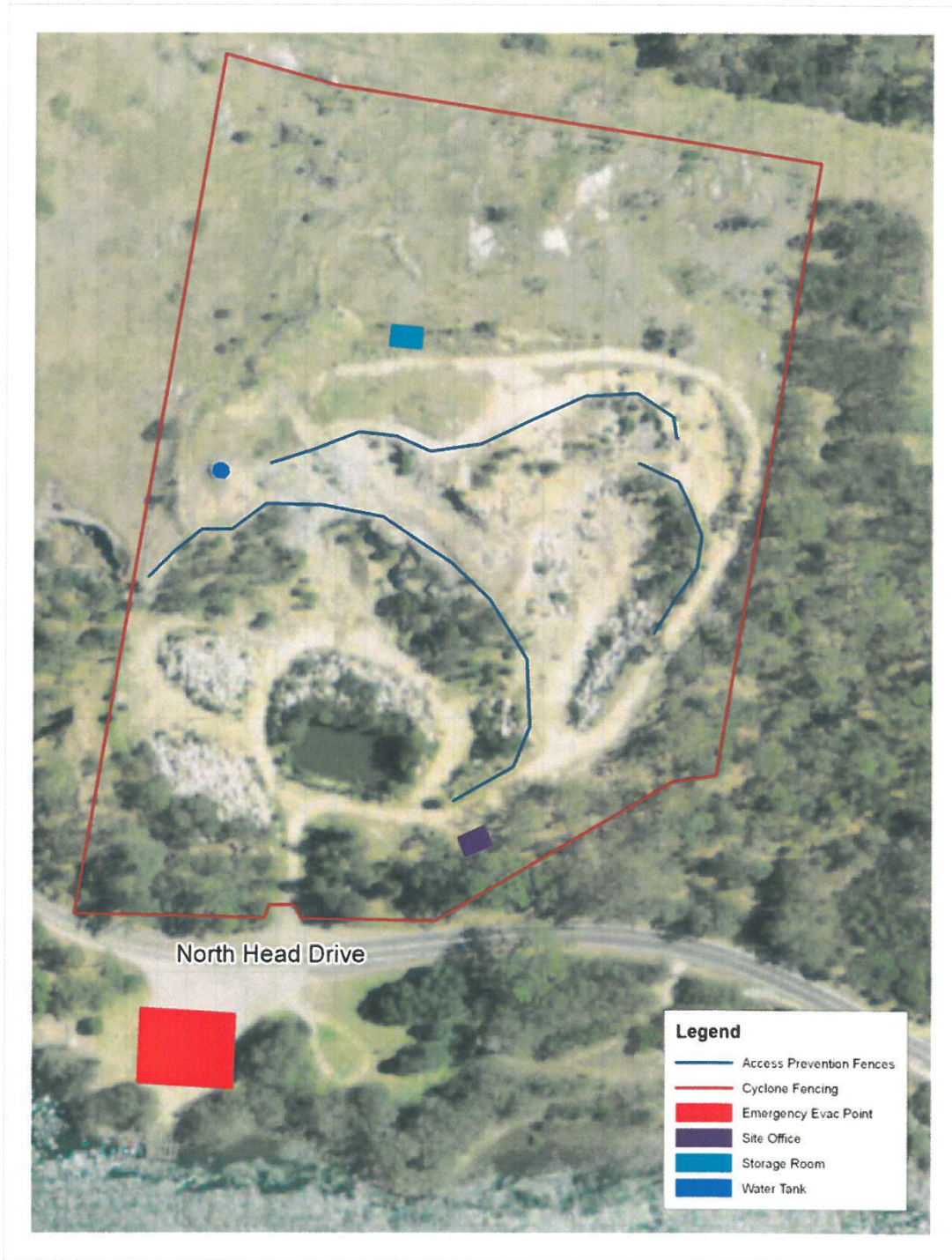
PIRMPs must be tested routinely at least once every 12 months. This testing is to be carried out in such a manner as to ensure that the information included in the plan is accurate and up to date, and that the plan is capable of being implemented in a workable and effective manner.

This plan shall be routinely tested by:

- Conducting an incident response and evacuation drill at the site based on a possible incident scenario.
- Simulating the communications process required as part of the incident response, including the roles of Crown Lands staff off site.

A written evaluation of these tests shall be undertaken, and records of these evaluations shall be retained by the Manager Coastal Infrastructure.

Appendix A: Maps/Photos of Quarry Area



Moruya Quarry Site Map





Aerial view of Quarry



Access gate