

Pollution Incident Response Management Plan



Dunmore Sand and Soil

Version 15: 24 April 2024

1. DOCUMENT CONTROL SHEET

Version	Date	Prepared By	Approved By	Revision Details
01	20 Aug 2012	Rod Johnson	Rod Johnson	Document Created
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03	12 Apr 2013	Nathan Jeffery	Rod Johnson	Format Changes Added additional maps Updated ABN No
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12	20 May 2021	Ben Williams	Shoanne Labowitch	Contacts and PIRMP Drill update
13	23 May 2022	Ben Williams	Brodie Bolton	Contacts and PIRMP Drill update
14	23 May 2023	Matt Bray	Brodie Bolton	Contacts and PIRMP Drill Update
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Current Revision	Date Implemented	PIRMP Test Schedule	Date for Next Review
13	24 April 2024	12 months	24 April 2025



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PART A: COMPLIANCE REQUIREMENTS, POLLUTION INVENTORIES AND RISK ASSESSMENTS

2. PURPOSE

The purpose of the Dunmore Sand and Soil (DSS) Pollution Incident Response Plan is to:

- Provide direction to the staff in responding to pollution incidents at the Dunmore operations;
- Ensure timely communication about a pollution incident is provided to staff at the premises, the Environment Protection Authority (EPA), other relevant authorities specified in the Protection of the Environment Legislation Amendment Act (POELA Act) (including Shellharbour City Council, NSW Ministry of Health, Safework NSW, and Fire and Rescue NSW) and persons outside the operations who may be affected by the impacts of a pollution incident **that is not trivial**;
- Minimise and control the risk of a pollution incident by identifying key risks and planned actions to minimise and manage those risks;
- Detail the training requirements for this plan, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.
- A hard copy of the PIRMP is to be kept on the site environmental board in the DSS Main Office. A soft copy of the PIRMP and EPL 11147 is made available online <https://www.boral.com.au/our-commitment/environmental-reporting>.

This document is split into two sections:

Part A details the relevant legislative and regulatory requirements for PIRMP's based on NSW EPA Guidelines for Pollution Incident Response Management Plans (March 2020).

Part B details the specific incident response actions, maps and notification logs for site personnel to use in the case of an incident.

3. LEGISLATIVE REQUIREMENTS

The specific requirements for a Pollution Incident Response Management Plan (PIRMP) are set out in Part 5.7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO(G) Regulation). Part 3A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO(G) Regulation) describes specific components and requirements of a PIRMP.

Table 1 summarises the location of these requirements within the document.

Table 1 Summary of Legislative Requirements of a PIRMP

Section/Clause	Requirement	Location in PIRMP
	Part 5.7A POEO Act 1997	

147	<p>(1) For the purposes of this Part—</p> <p>(a) harm to the environment is material if—</p> <p>(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or</p> <p>(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</p> <p>(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.</p> <p>(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.</p>	Section 4
153A	The holder of an environment protection licence must prepare a pollution incident response management plan that complies with this Part in relation to the activity to which the licence relates.	EPL 11147 and this document
153C	<p>A pollution incident response management plan must be in the form required by the regulations and must include the following—</p> <p>(a) the procedures to be followed by the holder of the relevant environment protection licence, or the occupier of the relevant premises, in notifying a pollution incident to—</p> <p>(i) the owners or occupiers of premises in the vicinity of the premises to which the environment protection licence or the direction under section 153B relates, and</p> <p>(ii) the local authority for the area in which the premises to which the environment protection licence or the direction under section 153B relates are located and any area affected, or potentially affected, by the pollution, and</p> <p>(iii) any persons or authorities required to be notified by Part 5.7,</p> <p>(b) a detailed description of the action to be taken, immediately after a pollution incident, by the holder of the relevant environment protection licence, or the occupier of the relevant premises, to reduce or control any pollution,</p> <p>(c) the procedures to be followed for co-ordinating, with the authorities or persons that have been notified, any action taken in combating the pollution caused by the incident and, in particular, the persons through whom all communications are to be made,</p> <p>(d) any other matter required by the regulations.</p>	<p>Section 9 and 10</p> <p>Section 5</p> <p>Section 8, 9, 10, 11 and 18, Figures 4-8.</p> <p>Table 9-11, Section 8, 9, 10,11 and 18 Table 9-11</p> <p>Section 8, 9, 10 ,11 and 18</p> <p>Section 10, 17</p>
153D	A person who is required to prepare a pollution incident response management plan under this Part must ensure that it is kept at the premises to which the relevant environment protection licence relates, or where the relevant activity takes place, and is made available in accordance with the regulations.	Section 2

153E	A person who is required to prepare a pollution incident response management plan under this Part must ensure that it is tested in accordance with the regulations	Section 12,13
153F	If a pollution incident occurs in the course of an activity so that material harm to the environment (within the meaning of section 147) is caused or threatened, the person carrying on the activity must immediately implement any pollution incident response management plan in relation to the activity required by this Part	Section 4, Table 9-11
<p>Part 3A POEO(G) Regulation 2009 Pollution Incident Response Management Plans note: See also 153C (a)-(c) of the POEO Act 1997</p>		
98C(1) (a)	A description of the hazards to human health or the environment associated with the activity to which the licence relates,	Table 2, Table 8
98C(1) (b)	The likelihood of any such hazards occurring, including details of any conditions or events that could, or would, increase that likelihood,	Table 8
98C(1) (c)	Details of the pre-emptive action to be taken to minimise or prevent any risk of harm to human health or the environment arising out of the relevant activity	Section 11, Table 2, 8, 9 -11
98C(1) (d)	An inventory of potential pollutants on the premises or used in carrying out the relevant activity	Table 2
98C(1) (f)	A description of the safety equipment or other devices that are used to minimise the risks to human health or the environment and to contain or control a pollution incident,	Table 2, Figure 4-8
98C(1) (g)	the names, positions and 24-hour contact details of those key individuals who: <ul style="list-style-type: none"> I. are responsible for activating the plan, and II. are authorised to notify relevant authorities under section 148 of the Act, and III. are responsible for managing the response to a pollution incident, 	Section 9, 18
98C(1) (h)	the contact details of each relevant authority referred to in section 148 of the Act,	Section 11, 18
98C(1) (i)	Details of the mechanisms for providing early warnings and regular updates to the owners and occupiers of premises in the vicinity of the premises to which the licence relates or where the scheduled activity is carried on	Section 11, Table 9-11
98C(1) (j)	The arrangements for minimising the risk of harm to any persons who are on the premises or who are present where the scheduled activity is being carried on	Section 11, Table 2, 8, 9-11
98C(1) (k)	A detailed map (or set of maps) showing the location of the premises to which the licence relates, the surrounding area that is likely to be affected by a pollution incident, the location of potential pollutants on the premises and the location of any stormwater drains on the premises	Figure 1, Figure 4-8
98C(1) (l)	A detailed description of how any identified risk of harm to human health will be reduced, including (as a minimum) by means of early warnings, updates and the action to be taken during or immediately after a pollution incident to reduce that risk,	Section 11, Table 8, 9-11
98C(1) (m)	The nature and objectives of any staff training program in relation to the plan	Section 12

98C(1) (n)	The dates on which the plan has been tested and the name of the person who carried out the test,	Table 7
98C(1) (o)	The dates on which the plan is updated,	Section 1
98C(1) (p)	The manner in which the plan is to be tested and maintained.	Section 12, 13, 14

4. DEFINITION OF A 'POLLUTION INCIDENT'

The definition of a pollution incident is:

“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’, which 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.

Licencees are now required to report **non-trivial** pollution incidents immediately to the EPA, NSW Health, Fire and Rescue NSW, Safework NSW and the local council.

5. SCOPE

This PIRMP must be followed by employees, contractors and visitors to assist in the early response to, and reporting of, a pollution incident. DSS is owned and occupied by Boral Resources NSW and is operated under Environmental Protection Licence 11147.

6. SITE LAYOUT

The overall site layout of is shown in Figure 1 below. Figure 2 and 3 shows the operational area and office and parking area respectively. Please note that Part B of this PIRMP contains detailed maps which describe the important details for each pollution incident scenario.

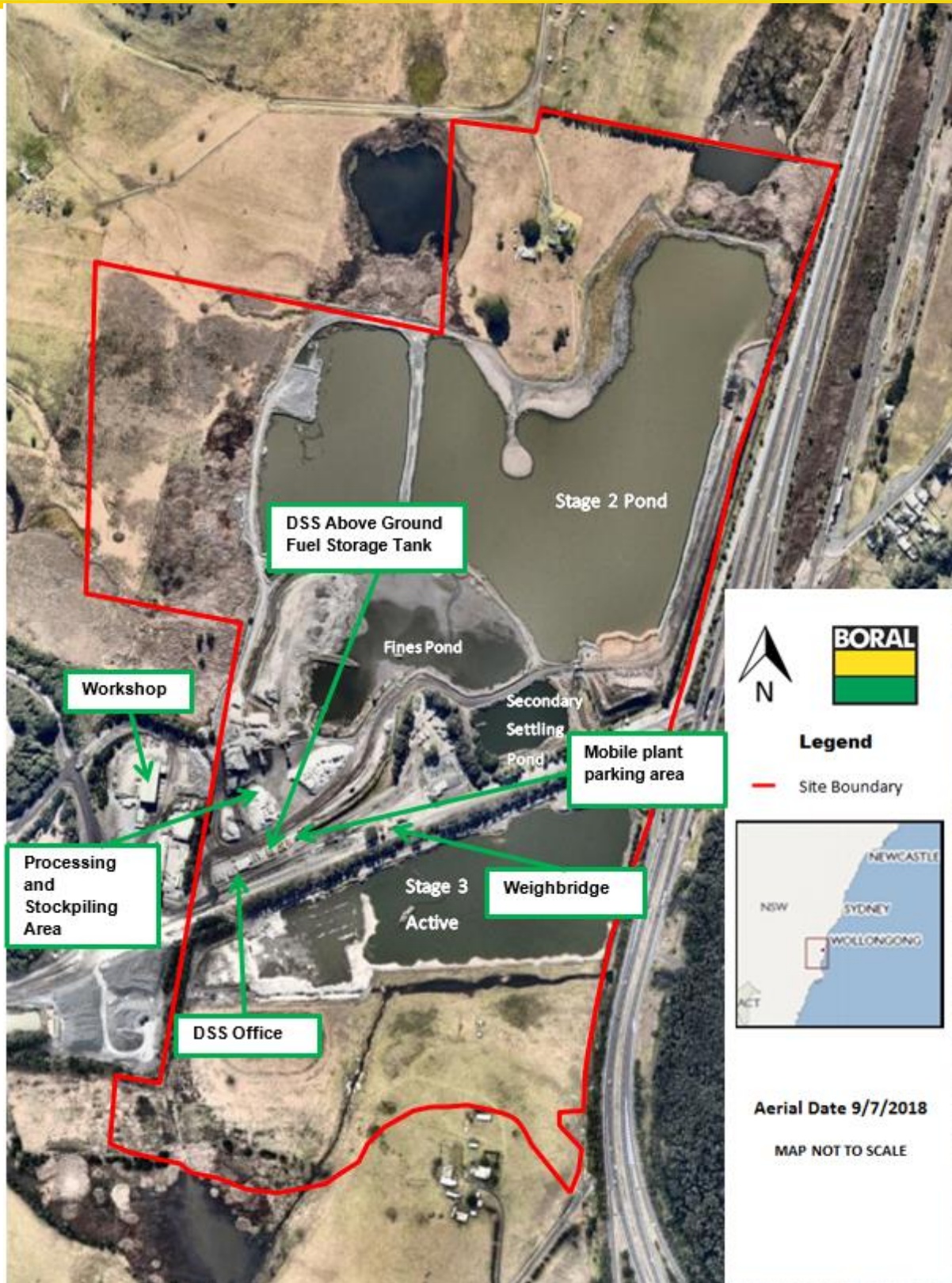


Figure 1 Dunmore Sand and Soil Site Layout

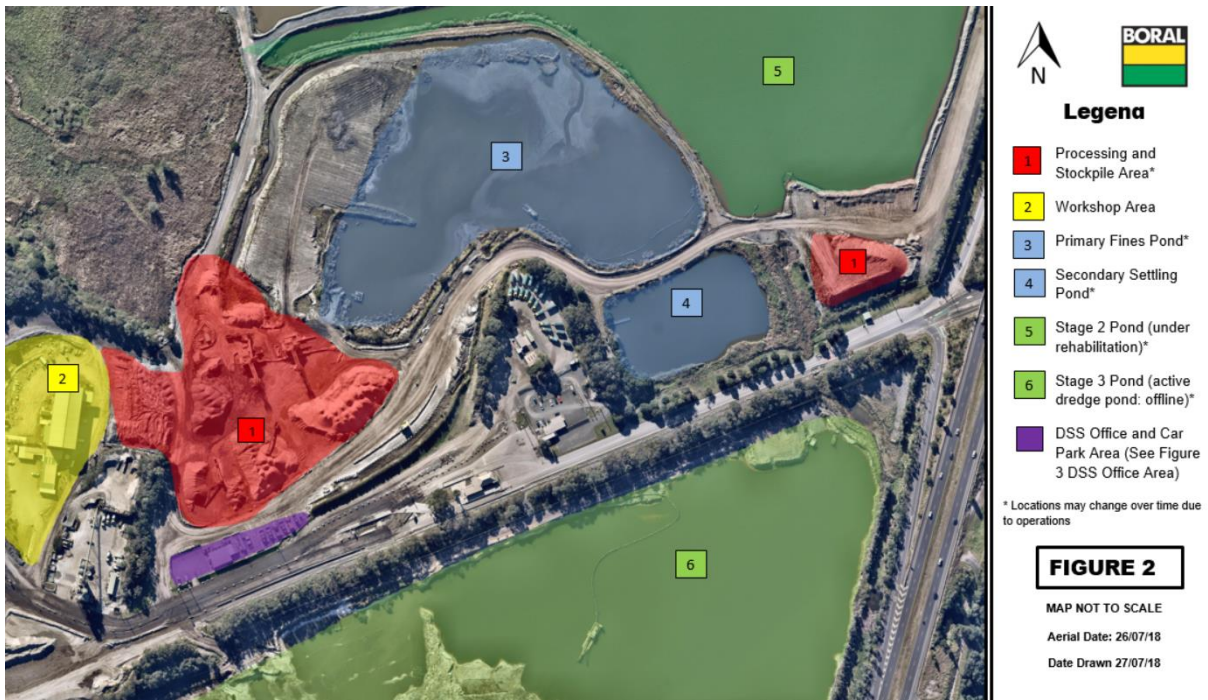


Figure 2 DSS Operational Area



Figure 3 DSS Office and Parking Area

Please note that the workshop area (denoted as 2 in Figure 2) is located outside the Dunmore Sand and Soil site boundary and within the Dunmore Quarry site boundary. Incidents relating to the workshop are described in the Dunmore Quarry PIRMP.

7. POTENTIAL POLLUTING SUBSTANCES

Table 1 below is an inventory of potential pollutants kept on the premises. This inventory provides a description of the main hazards to human health or the environment, an assessment of the likelihood of the hazards occurring and also includes the current controls and safety equipment and/or pre-emptive actions in place to minimise or prevent risk of harm to human health or the environment.

Table 2: Inventory of Potential Polluting Substances Initial Assessment

LIST OF POLLUTING SUBSTANCE STORAGES/USES AT SITE: INITIAL ASSESSMENT (all Chemicals listed in this sheet are to be subjected to a risk assessment located in Appendix A)							
Site Name: Dunmore Sand and Soil					Responsible Person: Brodie Bolton		Date: 20/05/22
Description of Hazard	Covered under Haz Chemicals /MSDS?	Estimated Amount stored (amounts vary depending on operations)	Location of storage	Map reference	Likelihood of Impact on neighbours	Current controls/safety equipment (Pre-emptive Actions)	See Risk Ass & PIRMP Response Action (see Below)
CHEMICALS/FUELS/LUBRICANTS (diesel, Oils, lubricants etc)							
Uncontrolled loss of Diesel or other hydrocarbon products that could result in material harm to the environment or human health	Class 3 & Class 2	<u>Diesel Storage tanks</u> 10 000L (Stationary Diesel Tank) 1 000L (Fuel trailer) 5 000L (Fuel barge MH 2108) Excavator (500L) Loader (480L) Water Cart (450L) Precision Screen (250L) Stacker (100L) Sand Dredge MH2079 (8 000L Diesel and 500L Hydraulic Fuel) Sand Dredge MH2075 (1500L Diesel) <u>Packaged Hydrocarbons</u> 1 100kg oil/solvents and fuels	Diesel Storage Tank Within tanks of Mobile Plant (location variable however parked up at the same location at the end of every day) Fuel Barge and Dredge Hydrocarbon Storage Container	Figure 3 and 4 shows location of mobile plant and storage areas 3: MH2075 Dredge in Fines Pond 6: Fuel Barge and MH2079 Dredge in Stage 3 Pond 7: Stationary diesel tank and waste oil capture 8: Refueling Area 9: Parking Bay Refueling Area 10: Hydrocarbon Storage Container	Rare (1) Only if substances enter waterways and is transported off-site	<ul style="list-style-type: none"> Bunded storage tanks Bunded and lined re-fueling area Designated mobile plant parking areas PMP Spill kits Waste oil capture Dangerous goods/flammable material storage cabinets SWMS and SOP's Inductions and Training Fire Fighting Equipment Security Alarm system on dredge 	<u>Incident 1</u> Figure 4 and 5 shows potential scope of Incident. Risk Assessment is located in Table 8. Response actions in Table 9.



LIST OF POLLUTING SUBSTANCE STORAGES/USES AT SITE: INITIAL ASSESSMENT

(all Chemicals listed in this sheet are to be subjected to a risk assessment located in Appendix A)

Site Name: Dunmore Sand and Soil					Responsible Person: Brodie Bolton		Date: 20/05/22
Description of Hazard	Covered under Haz Chemicals /MSDS?	Estimated Amount stored (amounts vary depending on operations)	Location of storage	Map reference	Likelihood of Impact on neighbours	Current controls/safety equipment (Pre-emptive Actions)	See Risk Ass & PIRMP Response Action (see Below)
AIRBOURNE DUST (eg stockpiles, silos, Haul Roads etc)							
Excessive airborne dust from stockpiled material, mobile plant or traffic areas causing material harm to the environment or significant impact to community	N/A	Dust and sand Stockpile and haul roads	Dedicated on site stockpile areas	Figure 5 details potential dust sources	Rare (1) Only if excessive dust is spread off-site during high winds	<ul style="list-style-type: none"> Water sprays Water Cart PMP Maintain manageable stock levels Security Reduced speed on haul roads Haul roads maintained Progressive stripping 	Incident 2 Figure 6 and 7 shows potential scope of incident. Risk Assessment is located in Table 8. Response actions detailed in Table 10.
AQUEOUS (eg dams, wastewater tanks, other water storage area)							
Uncontrolled release of sediment laden water from storage dams causing material harm to the environment	Suspended solids and salinity	Fines Pond: 350ML Secondary Settling Pond: 70ML Stage 2 Pond:1800ML Stage 3 Pond: 1200ML Pond volumes variable depending on operations. Values are indicative only.	Stage 2 and Stage 3	Figure 6	Rare (1) Only if excessive sediment enters waterways and is transported off-site during significant rain events	<ul style="list-style-type: none"> Continued use from plant and dust suppression Valved transfer points Water level monitoring Dredging/backfilling halts 12 hours before overflow Discharge monitoring Earthen bund to 1 in 100yr flood level (3.7m) Audits and Inspections 	Incident 3 Figure 8 shows potential scope of incident. Risk Assessment is located in Table 8. Response actions detailed in Table 11.

8. ROLES AND RESPONSIBILITIES

Table 3: Site Personnel Roles and Responsibilities

Position	Responsibility
<i>Employees and Contractors</i>	<p>Following the procedures outlined in the PIRMP and related documents</p> <p>Immediately alerting Supervisor or Team Leader of any environmental incidents or near-misses.</p>
<i>Team Leaders / Front Line Supervisors</i>	<p>Following the procedures outlined in the PIRMP and related documents (HSEQ MS 3-02)</p> <p>Immediately alerting Site/Quarry Manager or, in case of their unavailability, Environmental Representative or Environment Manager of any potentially material environmental incidents or near-misses.</p> <p>Assist in conducting incident investigations</p>
<i>Site / Operations Manager and/or Site Environment and Stakeholder Advisor</i>	<p>Authorisation of the PIRMP</p> <p>Administration, maintenance and implementation of the PIRMP</p> <p>Assessing whether the incident is non-trivial and has caused or threatens “material environmental harm” and communicate details to management</p> <p>Provide direction and advice on incident response</p> <p>Coordinate communication to neighbours through Stakeholder Relations Manager</p> <p>Ensuring that investigations are undertaken to a level corresponding to the level of risk and impact.</p>
<i>HSE Regional Manager and/or Regional Environment Manager</i>	<p>Make a determination as to whether the incident (as defined in section 147 of the POEO Act) is non-trivial and therefore reportable to external agencies</p> <p>Inform Executive General manager and Group management of Notification to External Agencies</p> <p>Undertake notifications as defined in PIRMP</p> <p>Authorise notifications to public and/or media following GRP-HSEQ-2-02</p>

9. INTERNAL POLLUTION INCIDENT REPORTING

Any pollution incident satisfying the **material harm** threshold must be immediately reported to relevant statutory authorities by either the HSE Regional Manager, or Regional Environment Manager.

In cases where “material harm” level cannot be immediately assessed or insufficient information comes to hand on the severity of the incident, the general advice is to err on the side of caution and notify the Relevant Authorities with a qualification that the situation could not yet be fully assessed.

Until further notice the following procedure needs to be followed:

1. When a pollution incident occurs, a person who has become aware of it must immediately bring it to the attention of his/her immediate Supervisor or Manager
2. If necessary, first ring “000” for Emergency Services
3. At least one of the following BCM personnel must be contacted **immediately**:

Table 4 Key Personnel Contact Information

Name	Function	Phone number	Mobile number

Whilst personal contact details for the following are available in the PIRMP Controlled Version they do not appear in this public document

4. The DSS Quarry Manager or in case of his unavailability one of the Senior Management personnel listed above, is to **immediately** notify the NSW HSE Regional Manager or Regional Environment Manager
5. NSW HSE Regional Manager to **immediately** notify all Appropriate Regulatory Authorities specified in Section 9.

6. In borderline situations, where the exceedance of the trigger level of “material harm” of a pollution incident may not be clear, a quick assessment including consultation with Boral environmental personnel should be undertaken to help the decision whether to notify or not.
7. Boral’s Senior Management must be informed promptly of the fact of immediate notification to the Authorities. This includes environmental personnel listed above, as well as James Collings, Angus Sheddon and Scott Carter.

10. EXTERNAL POLLUTION REPORTING

As the legislation requires that notification must be done immediately upon becoming aware of the pollution incident, it is unlikely that a detailed picture will be available for reporting. Notwithstanding, it seems that some of the Government Authorities prepared a detailed questionnaire which is being filled at the time of this initial notification. Under the stress of incident handling it could be easy to provide a hasty, inaccurate estimate of the situation when answering these questions.

Therefore, the notification should be restricted to the facts known and nothing should be assumed or guessed. The details will be provided to the asking Authority later when more information comes to hand.

The initial notification should include as much of the following information (if known) as possible:

- location and time of the pollution incident;
- type of the incident (spill, fire, unlicensed harmful discharge, etc);
- assessed level of incident gravity: “it seems to be...” (e.g. “a relatively minor spill”, “major fire”, “explosion limited to one building”, etc.);
- whether the Emergency Services have been required to attend.

Unless known for a fact, the answers to other questions should be politely deferred until a better assessment of the situation can be made.

The Boral person who is responsible for notifying the Authorities (NSW HSE Regional Manager or Regional Environment Manager) about the incident must prepare a Notification Log (a

suitable form is attached in Appendix C) with the details of time of notifications and the persons who took to the call. The Authorities will generally provide an Incident Notification Number.

Notification of all Appropriate Government Authorities (at least 5 entities) may take considerable time. Delays may be experienced connecting to the right person or no contact may be possible after hours. All such instances should be recorded in the Notification Log.

11. POLLUTION INCIDENT AUTHORITY CONTACT LIST

Table 5 Pollution Incident Authority Contact List

Government Authority - compulsory notifications	Emergency notification phone number
EPA – Environment Line	131 555
Fire and Rescue NSW (FRNSW)	1300 729 579
Shellharbour City Council	4221 6111
Public Health Unit (South East Sydney / Illawarra AHS)- Wollongong SESI PHU	HealthLink (24 hr)- 0- 1800 063 635 Head Office- Wollongong- 0- 4221 6700
Safework NSW	131050 Company ABN asked: 51 000 756 507
Government Authority - ring if relevant	Emergency notification phone number
Roads and Maritime Services (road spills)	132 701
Police & Ambulance	000
Natural Resources Access Regulator	1800 633 362
Bush Fire Control Officer	1800 049 933
Poisons Information Centre	131 126
Endeavour Energy (power line emergencies)	131 003

Communication with the local community may also be undertaken depending on the circumstances of the pollution incident. Part B describes in the response action tables the criteria whether an incident may require community notification. If deemed necessary,

Dunmore Sand and Soil would consider the following options for providing early warning and ongoing information to the community on pollution incidents:

- Direct phone contact with any local residents directly impacted by the pollution incident using the details in Table 6 below.
- Letter Box drops of incident information and site contacts to local residents impacted by the pollution incident.
- The inclusion of incident details through the routine Community Consultative Committee meetings.

The Stakeholder Relations Manager can assist in the process of communicating with the community, as per the Stakeholder Engagement Plan for the site.

Table 6: Neighbour Notification List

Reference	Contact Name	Address	Contact Details

Whilst personal contact details for the following are available in the PIRMP Controlled Version they do not appear in this public document

12. INCIDENT REPOSENSE TRAINING

DSS will implement the Pollution Incident Response Management Plan by training or providing information to relevant employees and contractors in relevant areas of the Plan. The nature and objectives of staff training is to relate to site personnel the importance of early notification of any incidents and spills to site supervisors and key personnel.

Training or information will be provided on the following:

- The contents and intent of this PIRMP,
- The roles and responsibilities of site staff in relation to this PIRMP
- Spill response procedures;
- General environmental awareness; and / or
- Hazardous materials awareness.

Site inductions for visitors and sub-contractors also advise individuals to report any environmental incidents or spills to site supervisors and key personnel immediately. Key site personnel and supervisors participate in PIRMP Tests which are used as practical training and can also be used to identify any potential gaps or areas for improvement for the PIRMP. A summary of the PIRMP Drills undertaken at DSS is shown below in Table 6.

Table 7: PIRMP Drills Undertaken at Dunmore Quarry

Test Date	Version tested	Incident Drilled	Drill Team Lead
29/08/13	V3	Incident #2: Failure of portable fuel trailer	Mel Goodall (Dunmore HSE Advisor)
22/08/14	V3	Incident #2: Failure of ATV fuel tanks	Maz Shaban (HSE Advisor)
10/05/16	V7	Incident #9: Mobile Plant fuel tank failure	Ronnie Lawton (Dunmore Environmental Coordinator)
01/09/17	V8	Incident #1 Diesel spill	Ellie Randall (Dunmore Environmental Coordinator)
30/07/18	V9	Incident #10 Failure of septic system	Ben Williams (Dunmore Environmental Coordinator)
05/12/18	V9	Incident #10 Fuel tank failure after vehicle collision	Ben Williams (Dunmore Environmental Coordinator)
27/5/20	V11	Incident #3: Uncontrolled release of sediment laden water from storage dams causing material harm to the environment.	Ben Williams (Dunmore Environmental Coordinator)
19/5/21	V11	Incident #1 Uncontrolled release of hydrocarbons. (Location near VENM runway in Stage 2)	Ben Williams (Dunmore Environmental Coordinator)
4/8/21	V12	Incident #1 Uncontrolled release of hydrocarbons from FEL. (Location near train loading area)	Ben Williams (Dunmore Environmental Coordinator) and Russel Beard (Leading Hand)
22/04/23	V13	Incident #1 Uncontrolled release of hydrocarbons from FEL. (Location near train loading area)	Matt Bray (Dunmore Environment and Stakeholder Advisor)
24/04/24	V14	Blockage of tributary inflow leading to backup of water.	Matt Bray (Dunmore Environment and Stakeholder Advisor) and Brodie Bolton (Quarry Manager)

Please note that V10 of the PIRMP consolidated the incident list. Incident numbers may be reflective of old versions of the PIRMP.

A sign-off sheet is kept of the personnel present for the undertaking of a PIRMP Drill and a record is kept on when and how the PIRMP is communicated to employees. This information forms a section of the PIRMP Drill document. For more information regarding each of the PIRMP Drills, refer to the specific drill document.

13. PIRMP TESTING

Plans must be tested routinely at least once every 12 months. The 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 each plan is capable of being implemented in a workable and effective manner.

Routine testing of the PIRMP will be conducted annually, and can be completed through the following methods:

- Simulated environmental emergency drills/exercises, or
- Desktop simulations.

14. PIRMP REVIEW

Revisions are to be coordinated by the Site Manager and Environmental Representative. The objectives of a review are:

- To maintain compliance with the statutory requirements, and
- To identify opportunities for improvement in the Plan, and reduce the risk to human health and the environment.

14.1. EVENT BASED

Events which may trigger a review of this Plan or its associated documents include:

- Within 1 month of reporting to the nominated parties in accordance with the plan, after a pollution incident, or
- Modification/Improvement to the system

14.2. TIME BASED

Dunmore Quarry will review this management plan routinely every 12 months. The Plan review will include:

- This Document, and
- Legislation, Approval and Licence changes.

15. APPENDIX A: RISK ASSESSMENT ON POTENTIAL IMPACTS

Table 8 Risk Assessment on Potential Impacts

Hazard and Likelihood Risk Assessment and Corrective Control Measures								
Site: Dunmore Sand and Soil						Responsible Person: Chris Brown	Review Date: 27/5/20	
Name / ref of pollutant/chemicals	Description of Hazard / Incident leading to hazard	Consequence	Likelihood	Initial Risk	Factors which could increase risk	Residual Risk after implementation of controls. (See Table 1 for list of current controls).	Responsible person	Action date
Diesel	Incident #1 Uncontrolled loss of Diesel or other hydrocarbon products that could result in material harm to the environment or human health <u>Risk to environment:</u> hydrocarbons smothering aquatic and plant life, decreases in water quality <u>Risk to human health:</u> contamination of waterbodies	Moderate (3)	Unlikely (2)	M6	<u>Weather:</u> Dry, windy conditions (increase fire danger) or heavy rain/flood conditions (will increase potential for spill to spread to catchment drainage areas) <u>Location of spill:</u> spills near drainage lines or with equipment near waterbodies have higher risk of material harm. Spills near vegetation or rehabilitation areas have higher fire risk.	Consequence: (Moderate): Failure resulting in loss of all or substantial volume of tanks would be captured entirely by existing primary bund with no release to soil or water. Active dredge ponds are kept offline from the external river system (Rocklow Creek). Likelihood: (Unlikely): Diesel Tanks are self banded double walled fuel tanks. Due to location of tank, damage to tanks is unlikely to occur from external equipment. In addition tanks are maintained in good structural integrity with low risk of failure through corrosion. Drain valve, hoses and refuelling equipment are maintained in good structural integrity with low risk of failure. The drain valve is locked at all times. Residual Risk Assessment = Minor (2) Vs Rare (1) = LOW (2)	As per PIRMP action plan	When required
Airborne dust	Incident #2 Excessive airborne dust from stockpiled material, mobile plant or traffic areas causing material harm to the environment or significant impact to community. <u>Risk to environment:</u> dust smothering aquatic and plant life <u>Risk to human health:</u> risk of ingestion of fines via respiration. Site is rated as Tier 3 (lowest) site for respirable crystalline silica.	Minor (2)	Unlikely (2)	L4	<u>Weather:</u> Dry, windy conditions (increase wind erosion and dust transport). Summer months with long periods of extended dry conditions. Onsite prevailing winds are NNE during summer and WSW the rest of the year.	Consequence: (Minor): Excessive dust from stockpile during high winds causing nuisance to surrounding area. Material is not crushed reducing any risk of crystalline silica exposure. Likelihood: (Rare): Stockpiles are maintained to a manageable level on a monthly basis. Use of water cart onsite during windy periods. Extensive land reserves act as buffer land from surrounding communities. Surrounding land is rural with sparse distribution of neighbours. Sand extraction is via wet processes reducing likelihood of transport. Residual Risk Assessment = Minor (2) Vs Rare (1) = LOW (2)	As per PIRMP action plan	When required
Sediment laden stormwater	Incident #3 Uncontrolled release of sediment laden water from storage dams causing material harm to the environment <u>Risk to environment:</u> suspended solids smothering aquatic and plant life, decreases in water quality <u>Risk to human health:</u> rapidly increasing water levels could present safety risk for downstream receivers	Minor (2)	Unlikely (2)	L4	<u>Weather:</u> Extended periods of rain increase the risk. Late Summer/early Autumn is typically the wettest part of the year on site.	Consequence: (Minor): Failure of one or more sediment dams are likely to result in off-site impacts to water courses which would predominantly reduce water quality over a short period of time. As such, impact to the environment/human health is not considered to be significant. Likelihood: (Rare): Dams and bunds are frequently monitored and inspected for levels and integrity. Fines ponds are banded to 3.7m (1 in 100 year flood event) to drastically reduce likelihood. Residual Risk Assessment = Minor (2) Vs Rare (1) = LOW (2) Note: For PIRMP purposes overflow events during extreme wet weather will be reported under POEO Licence obligations and not Immediate Reporting.	As per PIRMP action plan	When required



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PART B: INCIDENT RESPONSE ACTIONS AND NOTIFICATION LOGS

16. PIRMP RESPONSE ACTIONS AND MAPS

Table 9: Incident #1 Diesel/hydrocarbon Spill Response Actions

Incident #1	<p>Uncontrolled loss of Diesel or other hydrocarbon products that could result in material harm to the environment or human health. See Figure 4 and 5.</p> <p>Actions Required:</p> <ul style="list-style-type: none"> • Shutdown of processes and equipment associated with the spill if safe to do so • Activation of any associated storm water shut-off valves to isolate • Contact all relevant people/department (refer to Immediate Reporting Contact Sheet) • Ensure bund/liner are capturing full volume of diesel • Ensure bund integrity is sound throughout the entire period of incident (i.e. periodic inspections) • Contact service provider (Caltex No. 1800033111 or Transpacific 02 96007185) to pump-out bund contents • Area to be restricted to Incident Response Personnel • Ensure spill kit available for any release from bund/liner or mobile plant • If any release from bund/liner onto unsealed soil/surface water or spill relates to water based mobile plant - Environmental Consultants to be engaged to investigate and remediate contamination. • Repair/replace tanks • Inspect bund/mobile plant for ongoing serviceability
Alarm raising	Any personnel involved or witnessing incident to report to immediate supervisor and PIRMP actions to be implemented.
Emergency Controller	<ul style="list-style-type: none"> • Emergency Controller: Quarry Manager or delegate • Call service provider: Quarry Manager or delegate • Spill Kit manager: Onsite supervisor or delegate • Periodic inspections and update reporting of site and bund: Onsite supervisor or delegate
Scale of incident	Incident would be restricted to Diesel storage area with minimal external impact, however, potential for bund/liner overflow or failure may result in soil and surface water contamination that will require specialist investigation/remediation.
Evacuate	Only if fire or explosion potential exists. Quarry Manager and any advice provided by Fire Department as part of attendance after immediate notification.
Communications	<p>Internal:</p> <ul style="list-style-type: none"> • Quarry Manager or delegate to use contact sheet for all internal (Boral) contacts <p>External mandatory:</p> <ul style="list-style-type: none"> • Immediate Reporting Contact Sheet to be used <p>External non-mandatory:</p> <ul style="list-style-type: none"> • Contact Neighbours 5,6,7 and 8 only if diesel has escaped into storm-water drainage lines and will enter Rocklow Creek. See Table 5 Section 11 for the Neighbor Notification List.
Rescuer / respondent + safety checks	As per Site Emergency Plan or Fire Department as part of Immediate Reporting
Rescue + First Aid	As per Site Emergency Plan or Fire Department as part of Immediate Reporting
Clean up and Waste disposal	Service Provider to dispose of diesel and advise on required clean-up.
Reporting and re-preparedness	<p>See HSEQ MS:</p> <ul style="list-style-type: none"> • Incident Reporting, Investigation and Action Management Standard (GRP-HSEQ 3-02)

For more information relating to inventory of polluting substances and lists of hydrocarbon controls relating to Incident 1 please refer to Table 2 in Part A.



Figure 4: DSS Go-line Area Incident 1: Diesel/Hydrocarbon Spill

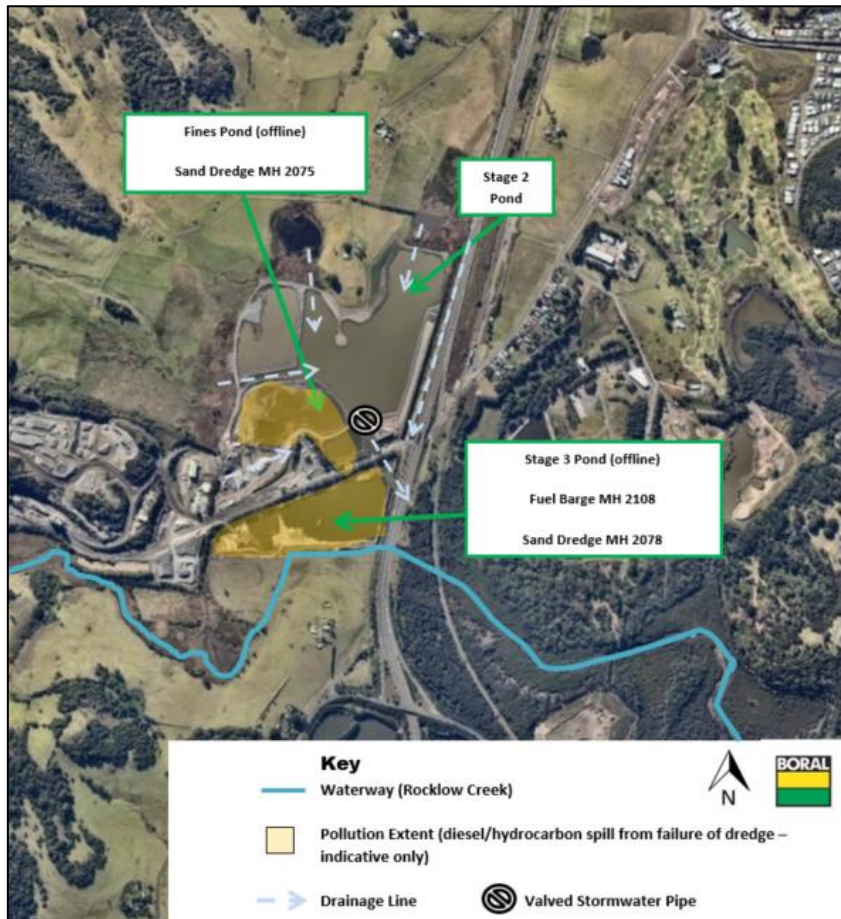


Figure 5: DSS Dredge Ponds Incident 1: Diesel/Hydrocarbon Spill

Please note spill kits and fire extinguishers are located on all barges and sand dredges. For more information relating to inventory of polluting substances and lists of hydrocarbon controls relating to Incident 1 please refer to Table 2 in Part A.

Table 10: Incident #2: Excessive Airborne Dust Response Actions

Incident #2	<p>Excessive airborne dust from stockpiled material, mobile plant or traffic areas causing material harm to the environment or significant impact to community. See Fig 6 & 7.</p> <p>Actions Required:</p> <ul style="list-style-type: none"> • Employees, Contractor/Visitor to notify site representative of issue immediately. • Dust suppression activity to commence immediately on stockpiles via water cart or other means. Any operations associated with disturbing the stockpiles, such as driving and dumping on, to be minimised or ceased. • Daily monitoring to be undertaken to assess weather and site conditions • Contact all relevant people/department (refer to Immediate Reporting Contact Sheet)
Alarm raising	Any personnel involved or witnessing incident to report to immediate supervisor and PIRMP actions to be implemented.
Emergency Controller	<ul style="list-style-type: none"> • Emergency Controller: Quarry Manager or delegate • Call service provider: Quarry Manager or delegate <p>Periodic inspections and update reporting of site and stockpiles: Onsite supervisor or delegate</p>
Scale of incident	Incident would be localised to the area surrounding stockpile area, with minimal external offsite impact.
Evacuate	Only if fire or explosion potential exists. Quarry Manager and any advice provided by Fire Department as part of attendance after immediate notification.
Communications	<p>Internal:</p> <ul style="list-style-type: none"> • Quarry Manager or delegate to use contact sheet for all internal (Boral) contacts <p>External mandatory:</p> <ul style="list-style-type: none"> • Immediate Reporting Contact Sheet to be used <p>External non-mandatory:</p> <ul style="list-style-type: none"> • Contact neighbors affected (will be dependent on wind direction). The environmental representative is to be consulted as to which neighbours will be affected by a particular wind direction. See Table 5 Section 11 for the Neighbour Notification List.
Rescuer / respondent + safety checks	As per Site Emergency Plan or Fire Department as part of Immediate Reporting
Rescue + First Aid	As per Site Emergency Plan or Fire Department as part of Immediate Reporting
Clean up and Waste disposal	All water carts to be placed on areas producing airborne dust. If necessary work must be ceased to control airborne dust. No disposal of waste required.
Reporting and re-preparedness	<p>See HSEQ MS:</p> <ul style="list-style-type: none"> • Incident Reporting, Investigation and Action Management Standard (GRP-HSEQ 3-02)

For more information relating to inventory of polluting substances and lists of controls relating to Incident 2 please refer to Table 2 in Part A.



Figure 6: Incident 2: Sources of Dust Pollution at Dunmore Sand and Soil

Please note that pollution controls include operational response which is not included on these maps. See Table 1 in Section 7 for more detail on pollution controls for Incident #2.



Figure 7: Incident 2: Potential Suburbs Affected by Dust Emissions under Adverse Conditions

Table 11: Incident #3: Uncontrolled Release of Stormwater Response Actions

<p>Incident #3</p>	<p>Uncontrolled release of sediment laden water from storage dams causing material harm to the environment. See Figure 8</p> <p>Actions Required:</p> <ul style="list-style-type: none"> • Shutdown of processes and equipment associated with the release if safe to do so • Activation of any associated storm water shut-off valves to isolate • Contact all relevant people/department (refer to Immediate Reporting Contact Sheet) • Ensure bund integrity is sound throughout the entire period of incident (i.e. periodic inspections) • Contact local neighbours if going to be in inundated by rise of water • Area to be restricted to Incident Response Personnel • If any release from site onto unsealed soil/surface water - Environmental Consultants to be engaged to investigate and remediate contamination, if any • Contact local contractor to rebuild dams immediately • Contract local contractor to install ESC as required around the site.
<p>Alarm raising</p>	<p>Any personnel involved or witnessing incident to report to immediate supervisor and PIRMP actions to be implemented.</p>
<p>Emergency Controller</p>	<ul style="list-style-type: none"> • Emergency Controller: Quarry Manager or delegate • Call service provider: Quarry Manager or delegate • Spill Kit manager: Onsite supervisor or delegate • Periodic inspections and update reporting of site and bund: Onsite supervisor or delegate
<p>Scale of incident</p>	<p>Catastrophic failure of one or more sediment dams are likely to result in off-site impacts to water courses which would predominantly reduce water quality over a short period of time. As such, impact to the environment/human health is not considered to be significant.</p>
<p>Evacuate</p>	<p>Only if flood potential exists. Quarry Manager and any advice provided by Fire Department as part of attendance after immediate notification.</p>
<p>Communications</p>	<p>Internal:</p> <ul style="list-style-type: none"> • Quarry Manager or delegate to use contact sheet for all internal (Boral) contacts <p>External mandatory:</p> <ul style="list-style-type: none"> • Immediate Reporting Contact Sheet to be used <p>External non-mandatory:</p> <ul style="list-style-type: none"> • Contact Neighbours 5,6,7 and 8 in the case of a sediment dam failure affecting water quality downstream over an extended period of time. See Table 5 Section 11 for the Neighbor Notification List.
<p>Rescuer / respondent + safety checks</p>	<p>As per Site Emergency Plan or Fire Department as part of Immediate Reporting</p>
<p>Rescue + First Aid</p>	<p>As per Site Emergency Plan or Fire Department as part of Immediate Reporting</p>
<p>Clean up and Waste disposal</p>	<p>Depending on severity of incident, consultants to be contacted to advise on required clean-up.</p>
<p>Reporting and re-preparedness</p>	<p>See HSEQ MS:</p> <ul style="list-style-type: none"> • Incident Reporting, Investigation and Action Management Standard (GRP-HSEQ 3-02)

For more information relating to inventory of polluting substances and lists of controls relating to Incident 3 please refer to Table 2 in Part A.

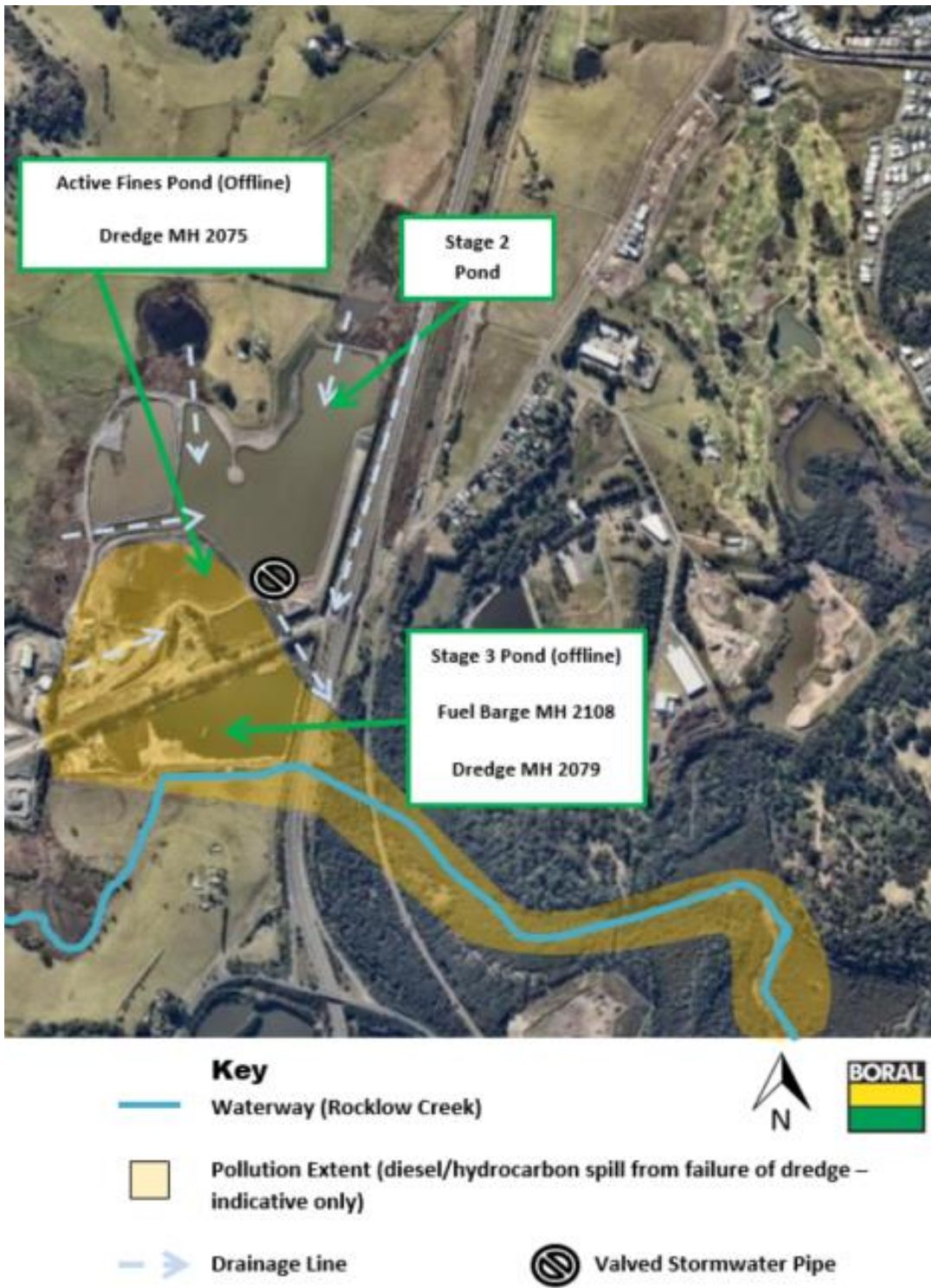


Figure 8: Incident 3: Overflow of Sediment Dams due to Flooding or Dam Failure

Please note that pollution controls include inspections and operational response which are not showed on these maps. See Table 2 in Section 7 for more details.

17. POLLUTION INCIDENT NOTIFICATION LOG

Person undertaking notification (Name/Function):		
Date and time when first become aware of the incident:		
Incident type:		
Comments:		

Initial immediate notification log				
Appropriate Regulatory Authority	Time of call	Respondent's name/function	Approximate call duration	Comments
EPA				
Public Health Unit				
Fire and Rescue NSW				
Local Council				
Safework NSW				
Other: (including neighbours)				
Other: (including neighbours)				
Other: (including neighbours)				
Other: (including neighbours)				
Other:				
Summary of initial communication:				
Person undertaking notification (Name/Function):				

Date and time when additional information become available:		
Comments:		

Immediate notification of further pertinent information (if applicable)				
Appropriate Regulatory Authority	Time of call	Respondent's name/function	Approximate call duration	Comments
EPA				
Public Health Unit				
Fire and Rescue NSW				
Local Council				
WorkCover				
Other:				
Other:				
Summary of additional communication				

18. IMMEDIATE NOTIFICATION SHEET SUMMARY

Table 10: Internal Reporting List

Name	Function	Phone Number	Mobile Number

Whilst personal contact details for the following are available in the PIRMP Controlled Version they do not appear in this public document

Table 11: External Reporting List

Government Authority – compulsory notifications	Emergency notification phone number
EPA – Environment Line	131 555
Fire and Rescue NSW (FRNSW)	1300 729 579
Shellharbour City Council	02 4221 6111
Public Health Unit (South East Sydney / Illawarra AHS) – Wollongong SESI PHU	HealthLink (24 hr) - 0 - 1800 063 635 Head Office – Wollongong - 0- 4221 6700
Safework NSW	131050 Company ABN asked: 51 000 756 507
Government Authority – contact if relevant	Emergency notification phone number
Roads and Maritime Services (road spills)	132 701
Police and Ambulance	000
Natural Access Resources Regulator	1800 633 362
Bushfire Control Officer	1800 049 933
Poisons Information Centre	131 126
Endeavour Energy (power line emergencies)	131 003

Table 12: Neighbour Notification List

Neighbour Notification List (contact if relevant)			
Reference	Contact Name	Address	Contact Details



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Whilst personal contact details for the following are available in the PIRMP Controlled Version they do not appear in this public document