

# Pollution Incident Response Management Plan

## Mount Thorley Warkworth

### DOCUMENT CONTROL

Version	Date	Revision Description	Reviewer	Approver
1	30 August 2012	Original Document	Environmental Specialist – Chris New	General Manager – Tom Lukeman
2	22 August 2013	Annual Review	Environmental Specialist – Chris New	Manager Environment – Andrew Speechly
3	30 December 2014	Annual Review Minor changes to internal response system. Addition of PIRMP testing record. Updates to Dangerous Goods inventories and locations to reflect audit findings in the Environmental Protection Authority (EPA) 2013 Compliance report.	Environmental Specialist – Chris New	Manager Environment – Andrew Speechly
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## TESTING HISTORY

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## Part 1 – General

### Introduction

As the holder of three environment protection licences (EPL 24, EPL 1976 and EPL 1376) Mount Thorley Warkworth Operations (MTW) is required to comply with Part 5.7A of the Protection of the Environment Operations Act 1997 (POEO Act) to prepare, keep, test and implement a pollution incident response management plan.

The PIRMP must include the information detailed in the POEO Act (section 153C) and be in the form required by the POEO (G) Regulation (clause 98B). Appendix I outlines where the required information can be found in this document.

### Objectives & Priorities

The Pollution Incident Response Management Plan (PIRMP) sets out actions that need to be taken in the event of an environmental incident at MTW.

The objectives of the PIRMP are to:

- ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority (EPA), other relevant authorities specified in the Protection of the Environment and Operations Act 1997 (such as local councils, 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 incident;
- minimise and control the risk of a pollution incident at the facility by requiring identification of risks and the development of planned actions to minimise and manage those risks and;
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

### Definitions

#### Emergency

An emergency is a situation that is developing, or has developed, that poses a threat to life, environment and property and which necessitates immediate action.

#### Pollution incident

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 where:

- (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.

MTW shall report pollution incidents immediately to the EPA, NSW Health, Fire and Rescue NSW, WorkCover NSW and the local council. 'Immediately' has its ordinary dictionary meaning of promptly and without delay. Notification to EPA follows an assessment of the severity of an incident and initial containment of any pollution.

### **Accountabilities**

The Environment Specialist is accountable for preparing, maintaining and implementing the PIRMP with assistance from the MTW site management team, as required.

### **Training**

All NSW personnel will receive training on their reporting obligations in respect of pollution incidents. Regular refresher instructions will be provided to personnel, with new starters to receive information as part of their induction process. Records are kept to demonstrate personnel which have undertaken training.

In addition, routine training exercises involving key personnel across each site may be used to test the PIRMP.

### **Document Maintenance**

This plan will be reviewed by the Environment Specialist annually and after any incident or test, which provides suggestions for improvements. Additionally, changes can be made as a result of:

- Practice reviews;
- Local regulatory or procedural changes; and
- Amendments to Mount Thorley Warkworth (MTW) policies and procedures.

The following documents will be reviewed in conjunction with any update of the PIRMP or before MTW personnel wish to undertake a testing exercise:

- MTW Dam Safety Emergency Plan (DSEP);
- MTW Emergency Response Plan (ERP);
- MTW Business Resilience Management Plan (BRMP).

All changes to this plan must be approved by the Manager Environment & Community.

The PIRMP will be made publicly available on Rio Tinto's website:

<https://insite.yancoal.com.au/asset/download/60/5de507/mtw-pollution-incident-response-management-plan.pdf>

The PIRMP is maintained as an internal controlled document. Electronic copies are managed within the site's Site Document Register (SDR) and hard copies can be found at:

- BRRP Cupboard - Warkworth Admin
- BRRP Cupboard - Thorley Admin Area
- Health Centre
- MAPS

## Part 2 - Incident Response

In the case of an incident that presents an immediate threat to the health and safety of people or threat to property, the following plans may be enacted:

- MTW Dam Safety Emergency Plan (DSEP);
- Emergency Response Plan (ERP);
- Business Resilience Management Plan (BRMP).

A summary of the emergency notification procedure has been provided below.

1. Ensure the immediate safety of everyone.
2. Notify:
  - a. **By radio** – Press **RED** button on radio, then press PTT Key (Push to Talk) to speak;
  - b. **By telephone** – 3222 or (02) 65701522

Say - EMERGENCY, EMERGENCY, EMERGENCY

3. Then state clearly:
  - Your name;
  - Nature of the emergency;
  - Location of emergency; and
  - What assistance is required.
4. MAPS/Control Room Operator will:
  - Notify Emergency Services Officer (ESO) on duty;
  - Notify Mining Shift Coordinator;
  - Await further instructions from the ESO and Mining Shift Coordinator.
5. If required, evacuate the area and assemble at your emergency muster point.

Where practicable, immediate actions should be taken to control and contain the pollution incident to mitigate any potential impact. The following equipment is available at MTW in order to minimise the risk to human health and the environment when containing a pollution incident:

- Personal Protective Equipment (long pants, long sleeved shirts, enclosed shoes, safety glasses, helmets, protective suits, gloves);
- Spill kits are located in high risk areas and can contain equipment such as additional PPE, shovels, rakes, absorbent material and containment devices;
- Vacuum trucks or pumps may be used by trained personnel.

Additional information regarding the availability and use of this equipment is provided in the Hazardous Substances and Dangerous Goods Procedure and Hydrocarbon Management Plan.

Incidents that happen at site will vary in the severity of the impact they create. Most can be handled as part of normal operational procedures and will not require escalation to an emergency.

Where there is no immediate threat to the health and safety of people or threat to property the event must be immediately communicated to the individual's supervisor. The supervisor or incident reporter must then immediately notify a member of the Environmental Services team, to ensure that any impact is appropriately managed and an assessment made as to whether the event is notifiable under the PIRMP.

Figure 1 outlines the process of responding to a pollution incident under emergency and non-emergency situations.

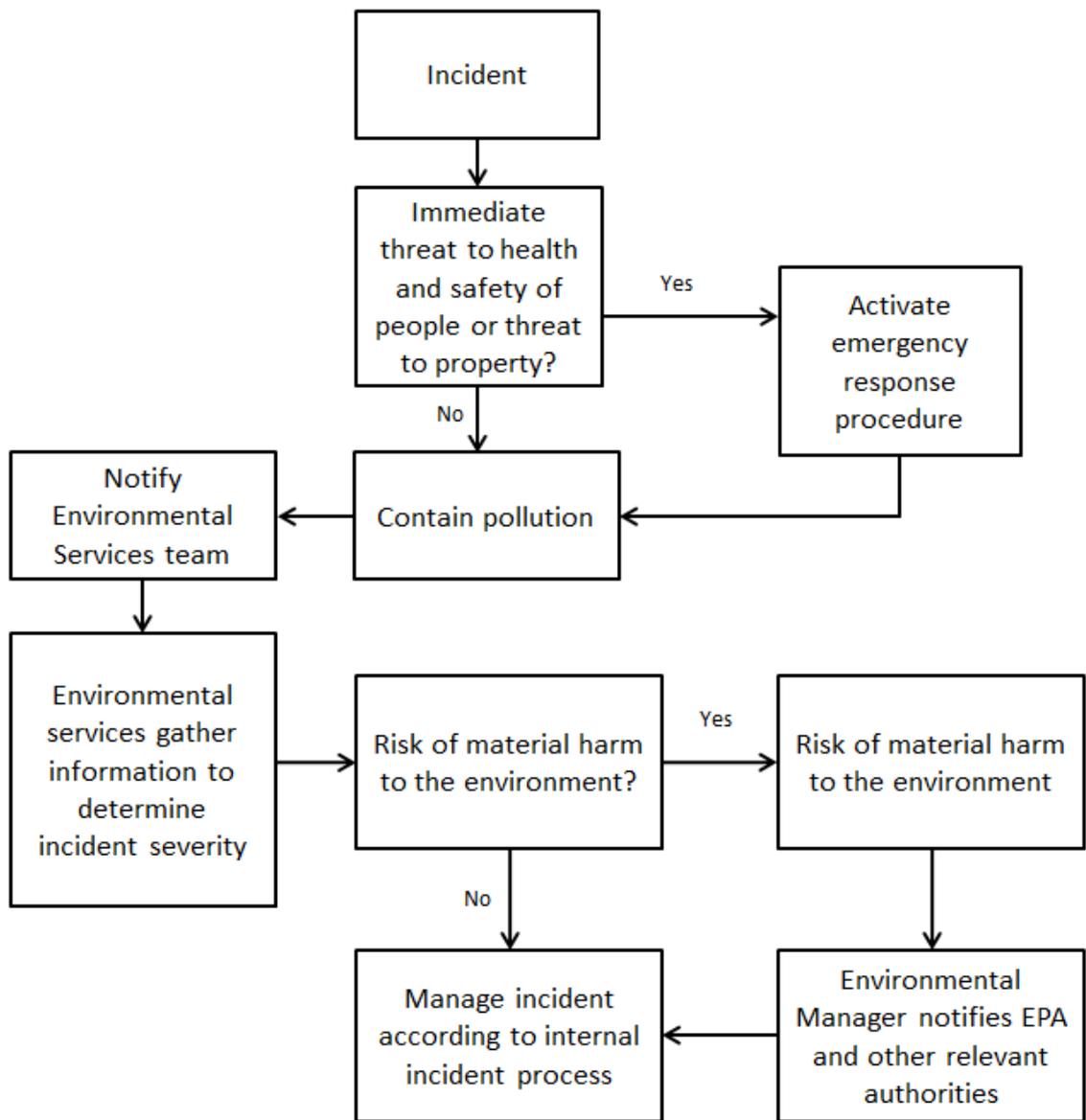


Figure 1 - Pollution incident response process

## Incident Response Scenarios

An incident causing offsite discharge of water pollutants is the most likely scenario to threaten risk of material harm to the environment requiring activation of the Pollution Incident Response Management Plan.

Discharge of water pollutants has the potential to occur via the following scenarios:

- Hazardous Substance Spills
- Failure of Tailings or Water Storage Facilities

### Hazardous Substances Spill

MTW stores and uses quantities of hazardous substances, as listed in WorkCover Notifications of Dangerous Goods on Premises. Substances include, but are not limited to, fuels and lubricants used for equipment or machinery, waste materials or wastewater and chemicals used in cleaning or production processes.

The potential for an unplanned hazardous substance spill to cause material harm is present only if the spill has occurred in close proximity to the site tributaries and could not be contained on site through the emergency response procedures.

### Failure of Tailings or Water Storage Facilities

Failure of major storage facilities containing tailings and poor quality water (including salinity, sediment or effluent) has the potential to result in offsite water pollution.

Major storage facilities include:

- Dams 6S (SOOP), 9S and 1N
- Active Tailings Dams

Failure of any of the dams leading to offsite flow may occur as a result of:

- Contents exceeding storage capacity and spilling from the dam
- Failure of water infrastructure linked to the dam (i.e. Pipes, valves, pumps, spillways)
- Major embankment failure

The potential for material harm offsite if a dam failure occurs is due to changes to the Flow Rate, Total Suspended Solids, Electrical Conductivity, or pH of the receiving waters.

### Part 3 – ERP Roles and Responsibilities

The roles and responsibilities related to an environmental incident under the PIRMP are detailed below.

**Table 1: Roles and Responsibilities**

<b>Role</b>	<b>Responsibilities</b>
All employees and contractors	<ul style="list-style-type: none"><li>• Contain pollution where possible</li><li>• Immediately notify Supervisor of an environmental pollution incident</li></ul>
Supervisors	<ul style="list-style-type: none"><li>• Immediately notify Environmental Services of the incident.</li></ul>
Environmental Specialist Operations	<ul style="list-style-type: none"><li>• Provide direction/advice on incident response.</li><li>• Assess incident severity.</li><li>• Arrange testing and review of the PIRMP as required.</li></ul>
Manager Environment & Community	<ul style="list-style-type: none"><li>• Make a determination as to whether the incident (as defined in section 147 of the POEO Act) is notifiable to external agencies.</li><li>• Inform MTW General Manager of incident.</li><li>• Undertake notifications to EPA and external agencies as defined in the PIRMP.</li></ul>
Communities Relations Team	<ul style="list-style-type: none"><li>• Undertake community notifications as defined in the PIRMP</li></ul>
MTW General Manager	<ul style="list-style-type: none"><li>• Authorise communications to public and media</li></ul>

## Part 4 - Notification to Neighbours And Community

### Communication of Environmental Incidents

NO EMERGENCY DETAILS TO BE RELEASED TO UNAUTHORISED PERSONS (e.g. MEDIA) WITHOUT GENERAL MANAGER'S PERMISSION.

Communicating with neighbours and the local community is an important element in managing the response to any incident. Early warnings and regular updates (during and post incident) are to be provided (after appropriate internal approval) to the owners and occupiers of premises who may be affected by an environmental incident occurring at Mount Thorley Warkworth. A current register of near neighbours and residents is kept internally and will be used to inform the necessary people of a pollution incident.

Communication mechanisms may include incident notifications placed on the Yancoal website; the use of telephone calls or SMS, as appropriate to the circumstances. The most appropriate communication mechanism will be employed based on the particular details of the incident, such as time of day, incident severity, available communication mechanisms and persons directly or immediately affected by the incident.

Examples of the notification advice for pollution incident scenarios are provided in Table 2.

**Table 2: Notification to Neighbours and Community: Examples of information that may need to be communicated**

Potential Pollution Emergency	Stakeholders to be notified	Key message	Possible Communication Mechanism During an Incident	Possible Communication Mechanism Post Incident
Hazardous Substance Spill	<ul style="list-style-type: none"> <li>Near neighbours</li> <li>If road closures are required – likely traffic such as emergency services and school buses.</li> </ul>	<ul style="list-style-type: none"> <li>Avoid incident zone</li> </ul>	<ul style="list-style-type: none"> <li>Phone call /SMS</li> </ul>	<ul style="list-style-type: none"> <li>Website notification</li> <li>Phone call/SMS</li> </ul>
Failure of Tailings or Discharge Dam	<ul style="list-style-type: none"> <li>Downstream neighbours</li> <li>If road closures are required – likely traffic such as emergency services and school buses</li> </ul>	<ul style="list-style-type: none"> <li>Relocate livestock and equipment</li> <li>Keep clear of creeks and waterways</li> <li>Do not use water from the local creeks until further notice</li> </ul>	<ul style="list-style-type: none"> <li>Phone call /SMS</li> </ul>	<ul style="list-style-type: none"> <li>Website notification</li> <li>Phone call/SMS</li> </ul>

## Dangerous Goods Inventory

Table 3: Hydrocarbon and on-site Explosives Inventory at Mount Thorley Warkworth

Facility	Class	Max. Storage Capacity per facility (L)	Number of Facilities
Facility Type	Class /Pollutant	Max. Storage Capacity (L)	Number of Facilities
Diesel tank	C1	550,000	1
Combustible liquids tank	C1	112,000	
Diesel tank	C1	2,160,000	1
Diesel Tank	C1	220,000	1
Combustible liquids tank	C1	140,000	1
Combustible liquids tank	C1	3,690	1
Combustible liquids tank	C1	24,000	1
Diesel tank	C1	16,000	1
Diesel tank	C1	2,000	1
Diesel tank	C1	135,000	1
Diesel tank	C1	47,000	1
Diesel tank	C1	97,000	4
Combustible liquids tank	C1	119,000	1
Combustible liquids tank	C1	33,000	1
Combustible liquids tank	C1	2,870	1
Combustible liquids tank	C1	89,410	1
Combustible liquids tank	C1	6,000	5
Ammonium Nitrate	5.1	165,000 (Kg)	1
Ammonium Nitrate Emulsion	5.1	160,000 (Kg)	1
Mine water dam (Dam 6S SOOP prescribed facility)	TSS, EC	2,255,000,000	1
Mine water dam (Dam 9S discharge dam)	TSS, EC	76,000,000	1
Mine water dam (Dam 1N discharge dam)	TSS, EC	171,000,000	1
Tailings Storage Facility (Abbey Green TSF prescribed facility)	TSS, EC	5,672,300 (m3)*	1
Tailings Storage Facility (Centre Ramp TSF prescribed facility)	TSS, EC	14,140,000 (m3)*	1

\* Data sourced from Operation and Maintenance Manuals

**Table 4: Total storage capacity for dangerous goods on-site at Hunter Valley Operations**

<b>Material Type</b>	<b>Total Quantity On Site</b>
Explosives	325,000 Kg
Hydrocarbons	4,071,970 L
Mine Water	2,584,000,000 L
Mine Tailings	19,812,300 m3

Maps

Figure 2 provides further reference for managing the likely impacts of environmental pollution incidents at MTW.



Figure 2: Offsite Water Flow – Possible Receptors



Figure 3: Hazardous Chemicals Bulk Storage Location

## Part 5 – Contact Information

### Centre of Expertise Database

There is a primary contact list of key personnel for all MRU's within MTW. This list will be referred to in order to establish contacts. Phone listings are maintained by MRU document controllers.

### MTW Contact Numbers

Table 5: MTW Contact Numbers

Role	Contact Name	Contact Number
Site Environmental Advisor	Hayley Frazer	0429 700 370
Environmental Specialist (acting)	Andrew Hodge	0428 853 426
Environment and Communities Manager	Andrew Speechly	0428 494 452
Site Emergency Response Team	Kevin Hall	0429 601 335

Part 5.7 of the Protection of the Environment Operations Act 1997 (POEO Act) requires the occupier of premises, the employer or any person carrying on the activity which causes a pollution incident to immediately notify relevant authorities when material harm to the environment is caused or threatened.

Firstly, call 000 if the incident presents an immediate threat to human health, life 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.

If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order:

- Environment Protection Authority
- Ministry of Health via the local Public Health Unit
- WorkCover Authority
- Singleton Shire Council
- Fire and Rescue NSW

## External Emergency Numbers

Table 6: External Emergency Numbers

Department	Contact Details
<b>The Office of Environment and Heritage (OEH) and the Environment Protection Authority (EPA):</b>	Phone Environment Line on 13 15 55 (NSW only)
<b>Ambulance - NSW</b>	1300 233 500
<b>Emergency Services</b>	000
<b>Fire Brigade - Muswellbrook</b>	(02) 6541 2846
<b>Fire Brigade - Singleton</b>	(02) 6572 1495
<b>Fire and Rescue NSW</b>	1300 729 579
<b>Hospital - Muswellbrook</b>	(02) 6542 2000
<b>Hospital - Singleton</b>	(02) 6571 9222
<b>Mines Rescue Emergency 24 hr. number - Singleton</b>	(02) 6573 9000
<b>Muswellbrook Shire Council</b>	(02) 6549 3700 Council After Hours: Ph. 6549 3700.
<b>Police - Muswellbrook</b>	(02) 6542 6999
<b>Police - Singleton</b>	(02) 6578 7499
<b>Singleton Shire Council</b>	(02) 6578 7290 Council After Hours Ph. 6572 1400
<b>State Emergency Services - Singleton</b>	(02) 6572 4669
<b>The Ministry of Health via the local Public Health Unit: Newcastle Office</b>	(02) 4924 6477 Fax (02) 4924 6048  <i>After Hours Contact:</i> (02) 4924 6477 (diverts to John Hunter Hospital) - ask for Public Health Officer on call
<b>The WorkCover Authority (NSW)</b>	13 10 50

## REFERENCED DOCUMENTS:

MTW Acknowledgement of Notification of Dangerous Goods on Premises 2014  
Chemicals Register- Chernalert  
MTW Dam Safety Emergency Plan (DSEP)  
MTW Business Resilience Management Plan (BRMP)  
Hydrocarbon Management Plan  
Hazardous Substances and Dangerous Goods Procedure

## Appendix 1. PIRMP Document Register

Section/ Clause	Requirement	Location within PIRMP
<b>POEO Act 1997 no 156</b>	A pollution incident response management plan must be in the form required by the regulations and must include the following:	
153C (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: (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 (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 (iii) any persons or authorities required to be notified by Part 5.7,	Part 5
153C (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,	Part 2
153C (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,	Part 5
153C (d)	Any other matter required by the regulations.	See below
<b>POEO (G) Regulation</b>		
98C (1) (a)	A description of the hazards to human health or the environment associated with the activity to which the licence relates (the relevant activity),	Part 2
98C (1) (b)	The likelihood of any such hazards occurring, including details of any conditions or events that could, or would, increase that likelihood,	➤ Site Risk Register ( <i>Site Document Register, Element 3</i> )
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,	➤ Site Risk Register ( <i>Site Document Register, Element 3</i> )
98C (1) (d)	An inventory of potential pollutants on the premises or used in carrying out the relevant activity,	➤ Chemicals Register (Chemalert)
98C (1) (e)	The maximum quantity of any pollutant that is likely to be stored or held at particular locations (including underground tanks) at or on the premises to which the licence relates,	➤ Chemicals Register (Chemalert)
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,	➤ Hazardous Substances and Dangerous Goods Procedure ( <i>Site Document Register, MTW-10-PROC-H1-221</i> ) ➤ Hydrocarbon Management Plan ( <i>Site Document Register, CNA-10-ENVMP-SITE-E15-078</i> )
98C (1) (g)	The names, positions and 24-hour contact details of those key individuals who: (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,	Part 5
98C (1) (h)	The contact details of each relevant authority referred to in section 148 of the Act,	Part 5
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,	Part 4
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,	Part 2
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,	Part 4
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,	Parts 1 & 2
98C (1) (m)	The nature and objectives of any staff training program in relation to the plan,	Part 1
98C (1) (n)	The dates on which the plan has been tested and the name of the person who carried out the test,	Part 1
98C (1) (o)	The dates on which the plan is updated,	Part 1
98C (1) (p)	The manner in which the plan is to be tested and maintained.	Part 1