Pollution Incident Response Management Plan (PIRMP)

Byron Resource Recovery Centre

Myocum Landfill

October 2022

POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN
LICENCE NUMBER: 6057 & 13127

Approved by: Danielle Hanigan
Position/Title: Manager, Resource Recovery

Signature: 
Date: October 2022

PURPOSE:

The purpose of this PIRMP is to provide:

1. a structure and appropriate response to a pollution incident at the BRRC;
2. a guide that ensures all relevant personnel, emergency services personnel, EPA, Ministry of Health (Public Health Unit) and WorkSafe understand and adopt a consistent approach in response to a pollution incident situation/s arising at the BRRC;
3. actions and procedures for personnel involved in managing an emergency response; and,
4. a document for planning, communication and training to be implemented and regularly reviewed.

OBJECTIVE:

The objectives of this PIRMP are to:

1. ensure comprehensive and timely communication about a pollution incident to staff at the premises, the EPA, other relevant authorities specified in the Act and people outside the facility who may be affected by the impacts of the pollution incident;
2. 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
3. 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.

Byron Shire Council holds two Environment Protection Licences with the NSW Environment Protection Authority (EPA) for Myocum Landfill & the Resource Recovery Facility. As per the *Protection of the Environment Operations Act 1997* (section 153A), the holder of an Environment Protection Licence must prepare, keep, test and implement a pollution incident response management plan (PIRMP) that complies with Part 5.7A of the POEO Act in relation to the activity to which the licence relates.

If a pollution incident occurs in the course of an activity so that material harm to the environment (within the meaning of section 147 of the POEO Act) is caused or threatened, the person carrying out the activity must **immediately** implement this plan in relation to the activity required by Part 5.7A of the POEO Act.

A copy of this plan must be kept at the licensed premises and be made available on request by an authorised EPA officer and to any person who is responsible for implementing this plan (section 153D). The plan must also be available on a publicly accessible website, or provide a copy of the plan to any person who makes a written request (section 153D). The sections of the plan that are required to be publicly available are set out in clause 98D of the Protection of the Environment Operations (General) Regulation 2009.

Environment Protection Licence (EPL) Details	
Name of licensee:	Byron Shire Council ABN: 14 472 131 473
EPL number:	Myocum Landfill EPL 6057 Resource Recovery EPL 13127
Premises name and address:	Byron Resource Recovery Centre, 115 The Manse Road, Myocum
Company or business contact details	**Name:** Luke Arnold **Position or title:** Team Leader Resource Recovery **Business hours contact number/s:** 02 6626 7000 **After hours contact number/s:** 0436 949 741 **Email:** larnold@byron.nsw.gov.au
Website address:	https://www.byron.nsw.gov.au/Services/Waste-recycling/Byron-Resource-Recovery-Centre
Scheduled activity/activities on EPL:	EPL 6057 – Waste disposal (application to land) EPL 13127 – Waste storage, resource recovery & composting
Fee-based activity/activities on EPL:	EPL 6057 – Waste disposal by land application EPL 13127 – Waste storage - other types of waste, recovery of general waste & composting

Pollution incident – person/s responsible	
Contact details must include the names, position titles and 24-hour contact details. Details are to include alternative person/s, should the primary contact be unavailable.	
PIRMP activation	**Name of person responsible:** Luke Arnold **Position or title:** Team Leader, Resource Recovery **Business hours contact number/s:** 02 6626 7000 **After hours contact number/s:** 0436 949 741 **Email:** larnold@byron.nsw.gov.au

Pollution incident – person/s responsible, continued	
Notifying relevant authorities Notification should be made by a person with an appropriate level of authority within the company.	**Name of person responsible:** Danielle Hanigan **Position or title:** Manager, Resource Recovery **Business hours contact number/s:** 02 6626 7000 **After hours contact number/s:** 0436 914 227 **Email:** dhanigan@byron.nsw.gov.au
Managing response to pollution incident	**Name of person responsible:** Ken Moore **Position or title:** Site Supervisor, Resource Recovery & Quarry **Business hours contact number/s:** 0437 402 447 **After hours contact number/s:** 0400 949 493 **Email:** kmoore@byron.nsw.gov.au

Notification of relevant authorities		
Relevant authorities include:		
Fire & Rescue NSW / Rural Fire Service / Ambulance / Police / HAZMAT	**Contact number/s:**	000
NSW EPA	**Contact number/s:**	131 555
Lismore Public Health Unit	**Contact number/s:**	02 6589 2120 0428 882 505 (after hours) 02 6685 6200 02 6684 2266 131 126
SafeWork NSW	**Contact number/s:**	131 050 02 6620 6900
Council Emergency (After Hours) **Council Safety Officer**	**Contact number/s:**	02 6622 7022 0427 593 661
Water NSW Department of Planning Industry and Environment NSW Health / Ministry of Health Environmental Health Byron Bay Hospital	**Contact number/s:**	1300 662 077 1300 305 695 1300 555 555 0417 244 966 02 6685 6200

Notification of neighbours and the local community

Neighbours will be informed by the BRRC Community Liaison Strategy (I2020/1082) and BRRC Neighbours Register (E2020/54167)

Description and likelihood of hazards

Air pollution is caused by natural, on-road and off-road sources like particle pollution (e.g. PM_{10} pollution or dust) from cars, vehicles and heavy machinery operating within the resource recovery facility. Air pollution can be caused by methane and volatile organics compound emissions from waste disposal by land application (e.g. landfilling).

Odour pollution or exposure may range from no effect, to mild discomfort, to more serious eye, nose, throat or lung irritation (e.g. chemicals). Odour-emitting activities are notable for their nuisance value and the number of complaints they generate, those detected from biological processes may indicate contamination of the air by pathogens. Odour emissions are likely from landfill gas emissions, the smell of putrescible waste, but less likely from leachate storage and anoxic conditions in the organics windrows.

Noise pollution can be annoying; the impacts of noise depend on the noise level, its characteristics and how it is perceived by sensitive receivers. Noise is generated by heavy vehicles loading waste, during intermittent grinder operation for organics processing (e.g. composting), intermittent air compression for landfill gas lines, and intermittent pumps for the leachate management system.

Water pollution can be caused by point source (e.g. leachate discharges) and diffuse sources (e.g. stormwater runoff) from the landfill and the resource recovery facility.

Fire poses special firefighting problems with large amounts of combustible waste, separation distances and smoke hazard management. Chemical fires may contain **toxic fumes** which are gases given off by a substance as a result of a chemical transformation. Toxic fumes can irritate the airways, skin and eyes, and inhaling a substance can make your nose and throat sore or swollen. Fire may result in toxic fumes at the oil store, machinery shed and Community Recycling Centre.

Chemical spill can result in chemical exposures and contaminations, corrosive chemicals can cause severe burns when touched, damage eyesight, and cause harm to the respiratory tract. Hazardous substances are not accepted at the facility, but chemicals may be stored with problem wastes at the Community Recycling Centre.

Breathing in **Asbestos fibres** can cause asbestosis, lung cancer and mesothelioma. Asbestos fibres pose a higher risk if airborne.

Electrical hazards include shock, burns or death through electrocution. Faults can cause fires, fire or explosion can also be caused by high concentrations of landfill gas where electricity could be the source of ignition. Explosion from high methane concentrations are unlikely.

Waste or **litter** causes or threatens material harm to the environment. Litter is highly likely to be carried by wind from stockpiles to other parts of the facility.

Pre-emptive actions to be taken

An Aspects and Impacts Register (E2013/73789 v2) has been developed and has identified a number of potential pollution events and determined appropriate management tools to reduce risk of occurrence. This document will be reviewed and updated on an annual basis.

Dust is controlled by keeping road surfaces moist (not wet) during wind events. Stockpiles shall be stabilised with ground cover to prevent dust generation or sedimentation (e.g. tarps, vegetation). Street sweeper used regularly for routine maintenance of tracking of sediment across the facility.

Odour is controlled through combustion of the landfill gas using a methane gas flare, turning and aeration of the organics windrows using a mobile aeration floor, and masking odours from the putrescible waste using a perfume.

Noise pollution is controlled using consultation with sensitive noise receivers (e.g. letterbox drop, community consultation, and Resource Recovery Hotline).

Water pollution is controlled using infrastructure, equipment, and management processes to minimise impacts. Direct and diffuse discharges are controlled using wastewater treatment (e.g. Sewage Treatment Plant), containment structures (e.g. bunded areas), shut off valves, sediment basins, dosing using gypsum, irrigation or utilisation areas, and erosion and sediment controls. Regular maintenance of equipment, including daily monitoring, documented procedures, monitoring and alarm systems to alert operators and management to problems.

Leachate Management System installed at the BRRC has a designed capacity to store 1.5ML in storage tanks (LS1, LS2 & LSR). The disposal capacity of West Byron STP is four tankers a day or 90kL as per the West Byron STP licence conditions. Leachate is removed from the site on a regular basis. Overflow alarms are located on the leachate wells and sumps. Leachate tanks are inspected on a daily basis for volume and for tank integrity. Portable pumps are available on-site to enable pump outs of tank(s) or bund area(s) as required. Regular pump out of tanks occurs to ensure adequate storage capacity is available in the event of high rainfall(s).

Fire prevention is controlled by consideration of fire safety in all aspects of a waste facility operation. Fire safety systems are to be adequate for hazards identified. There will be safe storage and stockpiling of combustible waste. Regular toolbox talks about workplace fire safety and fire safety planning including procedures for the event of fire or emergency incident (see Emergency Response E2019/44894).

All workers at the BRRC are to be made aware of the relevant parts of:

1. Planning for Bush Fire Protection – A guide for councils, planners, fire authorities and developers
2. Fire safety in waste facilities – fire safety guidelines, and
3. AS 3745-2010 Emergency Control Organisation and procedures for buildings, structures and work places.

For **chemical spills**, assess the situation, contain the spill, use the appropriate PPE, apply absorbent material and dispose the waste absorbent into disposal bags, report the incident, and restock the spill kit (see Emergency Response E2019/44894).

Asbestos is controlled by inspection at the weighbridge and loads will be rejected if asbestos is found. If asbestos is discovered accidently dumped within the resource recovery facility, non-friable asbestos (less than 10m^2) will be removed as per documented procedures (see Asbestos Removal E2015/42855 [v2] and Asbestos Management Plan E2018/8076), otherwise a licenced asbestos removalist is required.

Inventory of pollutants

Provide an inventory of potential pollutants on the premises or used in carrying out the activity to which the licence relates:

Identify the maximum quantity of any pollutant/s likely to be stored or held at particular locations (including underground tanks) at or on the premises to which the licence relates.

Location/Tank	Max. quantity	Contents	Comments
Leachate Storage 1 (LS1)	204,000 litres	Organics processing leachate	Closed system for collection of organics processing pad leachate for reuse (e.g. irrigation) of pre-wet reserve organic windrows.
Leachate Storage 2 (LS2)	782,000 litres	Solid waste landfill leachate	Collated from the leachate collection system
Leachate Storage Reserve (LSR)	408,000 litres	Solid waste landfill leachate	Back up leachate storage
Green Storage Tank	35,000 litres	Pasteurised organics leachate	To be connected to LS1
Transfer Station – Fuel Tank	2,420 litres	Diesel	Hazardous, Hazchem Code 3Z, PG III, UN 3082

Storage Shed - Containers			
Transfer Station - Storage Shed	2 x 5 litres	Megapoxy H	Hazardous (B), Dangerous Good 8, Hazchem Code 2X, PG III, UN 2289
Office – BBQ Public Drop Off - LFG flare	3 x 9 litres	LP Gas	Hazardous, Hazchem Code 2YE, UN 1075
Transfer Station - Storage Shed	3 x 20 litres	Unleaded petrol	Hazardous, Dangerous Good 3, Hazchem Code 3YE, PG II, UN 1203
Transfer Station - Storage Shed	5 litres	GRAZON Extra Herbicide	Hazardous, Dangerous Good 9, Hazchem Code 2X, PG III, UN 3082
Transfer Station - Storage Shed	20 litres	Chemtech CT14 Engine & Bilge Degreaser	Hazardous, Dangerous Good 8, Hazchem Code 2X, PG III, UN 1760
Transfer Station - Storage Shed	1 litre	Mineral Turpentine	Hazardous, Dangerous Good 3, Hazchem Code 3Y, PG III, UN 1300
Transfer Station - Storage Shed	20 litres	Hydrochloric Acid	Hazardous, Dangerous Good 8, Hazchem Code 2R, PG II, UN 1789
Transfer Station - Storage Shed	20 litres	Liquid Chlorine	Hazardous, Dangerous Good 8, Hazchem Code 2X, PG III, UN 1791

Safety equipment

Describe the safety equipment or other devices used to minimise the risks to human health or the environment and to contain or control a pollution incident:

Safety equipment and devices used to minimise the risk and contain / control a pollution incident include:

Personal Protective Equipment (PPE): Staff will be issued with PPE based on their role. Back up PPE to be stored in the weighbridge and public drop-off area. PPE inventory stored in the lunchroom. PPE issued by the Site Supervisor and recorded in the PPE inventory register. PPE replenished via the Depot or ordered directly from the supplier.

Wet weather gear: Used during high rainfall events including water-proof jackets and pants and non-slip gumboots.

Shovels, rakes and brooms: Used for general clean-up. Located at all buildings.

Waders: Used to enter leachate and sediment ponds. Located in the lunchroom.

Masks, coveralls and mist spray bottles: Used for asbestos removal and issued by Site Supervisor in an incident.

Hazard cones and **mesh bunting** are available on-site to assist in delineating an incident area.

Asbestos bags, plastic wrap and tape: Used for asbestos removal. Kept in stores shed.

Portable hand eye-wash: Located in amenities and public drop-off area. Activated by hand.

Fixed eye wash and shower: Located at weighbridge and CRC shed. Activated by water pressure.

First aid kits: Supplies maintained by the Site Supervisor. Audit and full restock conducted by a First Aid supplier annually.

Fire extinguishers: Used for fire prevention only as an emergency response. Fire extinguishers located at all buildings

Water truck (hook-lift): Used for fire prevention and dust suppression. Water tank to be refilled after use (e.g. standby).

Spill kits: Absorb material stockpiled in stores shed. Absorb bag kept at CRC shed, public drop-off area and oil shed.

Pumps: Flex drive and sludge pumps kept in stored shed.

Water quality treatment: Gypsum stockpiled in stores shed.

Filtration socks: Coir logs and compost socks stocked in storage shed.

Clay/Soil/Compost: Bund material can be used for containing a spill or diverting flows.

Communicating with neighbours and the local community

Neighbours and the local community will be informed through the BRRC Community Liaison Strategy (I2020/1082). These are also the mechanisms for providing early warnings and regular updates to owners and occupiers of premises in the vicinity of the facility.

Resource Recovery will develop specific information that could be provided to the community to minimise the risk of harm in a Notification to Residents letter and undertake a door-knocking activity to those affected.

Minimising harm to persons on the premises

Evacuation Procedure 2020 (E2020/50600) includes the actions that will be in place to minimise risk of harm to any people who will be on the premises should an incident occur. The Emergency Evacuation Procedure will be followed if evacuation of the site is required. It should be reviewed every two years.

All workers and visitors at the BRRC undergo a site registration (BRRC Visitor Induction RegisterE2016/50086) and induction process (BRRC Site Safety Rules & Visitor Induction E2017/111835) to review of Safety Work Methods at the site. Workers receive training for high risk construction work practices and documentation is kept in the Integrated Management System (BRRC Training Register E2018/4861).

Workers are required to complete hazard forms or pre-task hazard assessments for un-scheduled work practices to identify workplace risks and hazards.

Maps

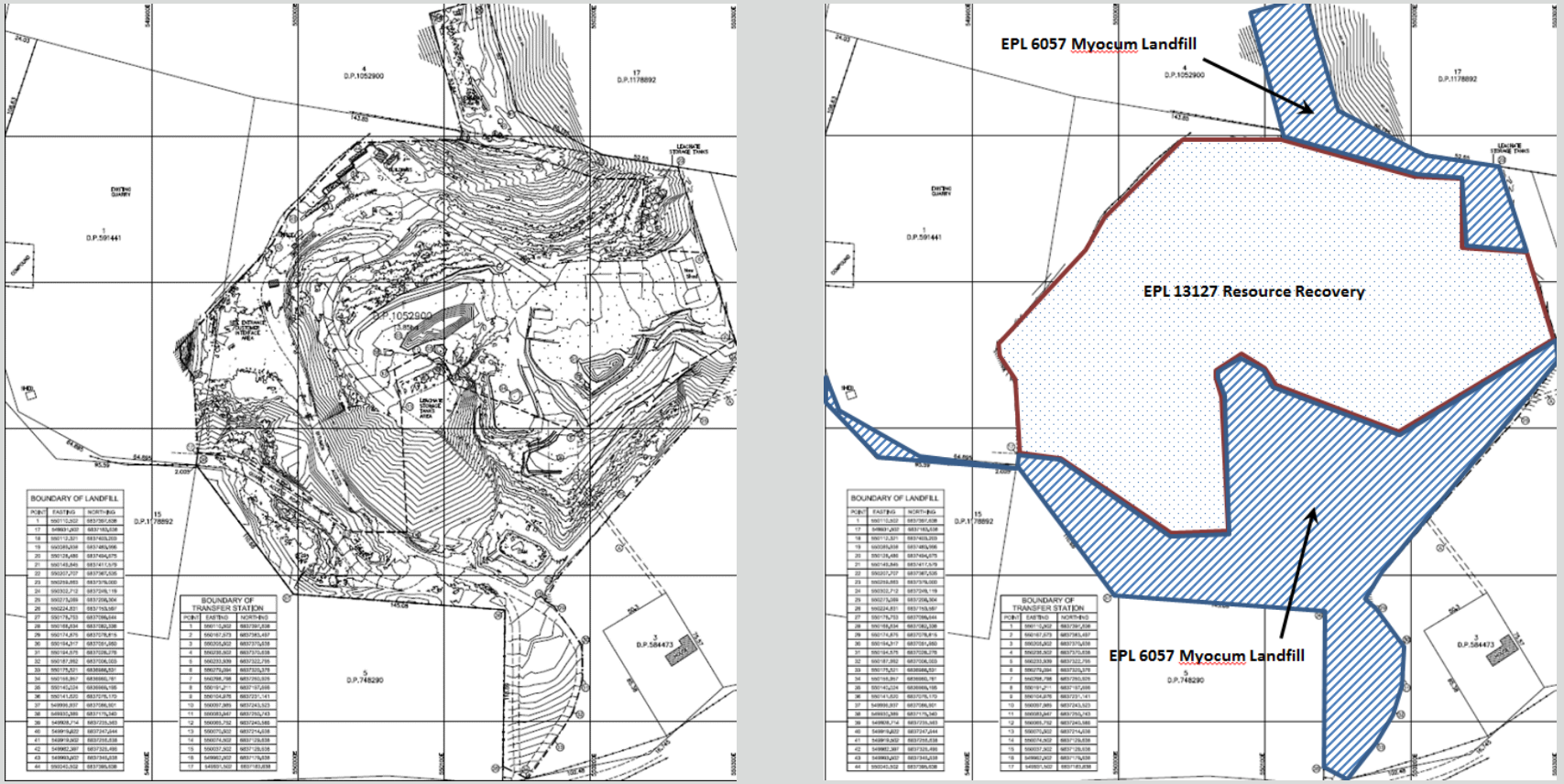

Figure 1. Detailed map showing the location of the premises to which the licence relates

Figure 2. Surrounding area likely to be affected by a pollution incident (1 kilometre radius)

Figure 3. Location of potential pollutants on the premises

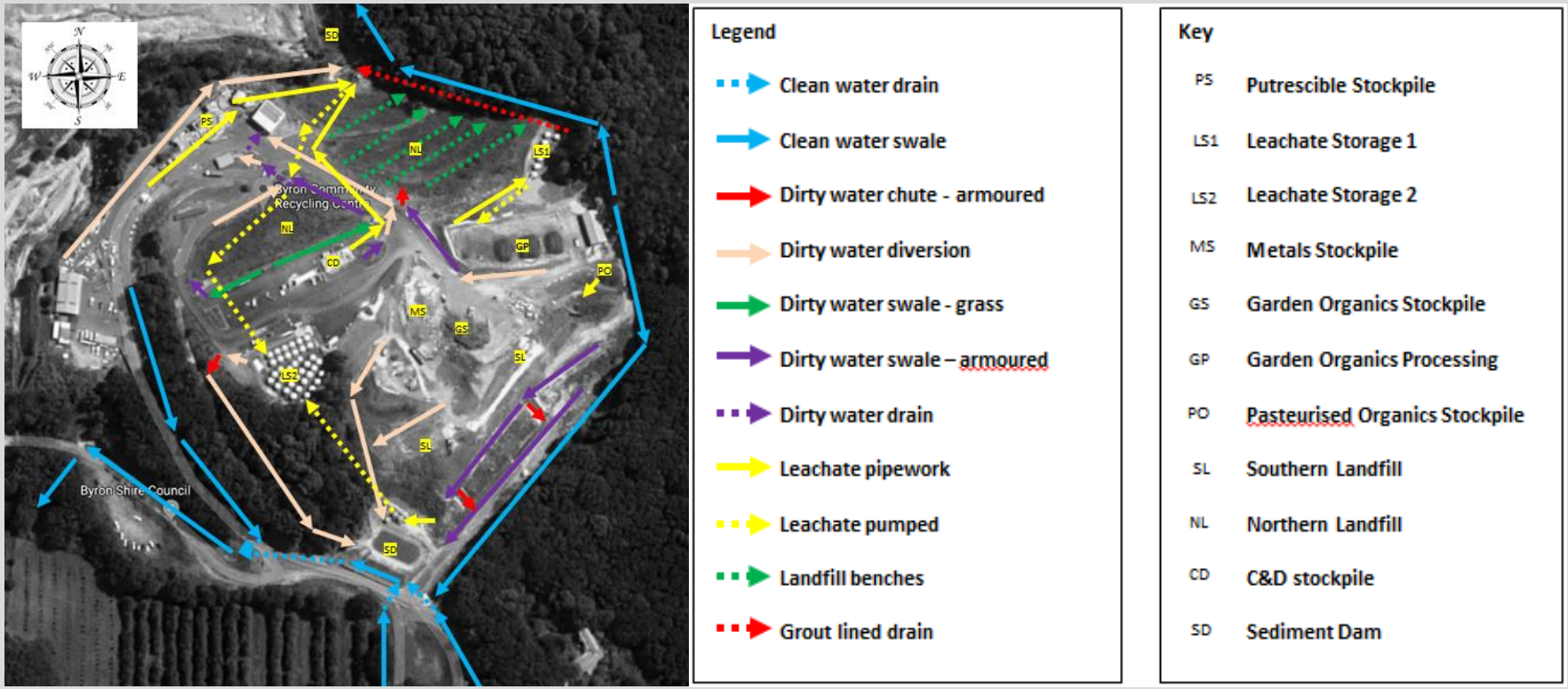

Figure 4. Location of any stormwater drains on the premises.

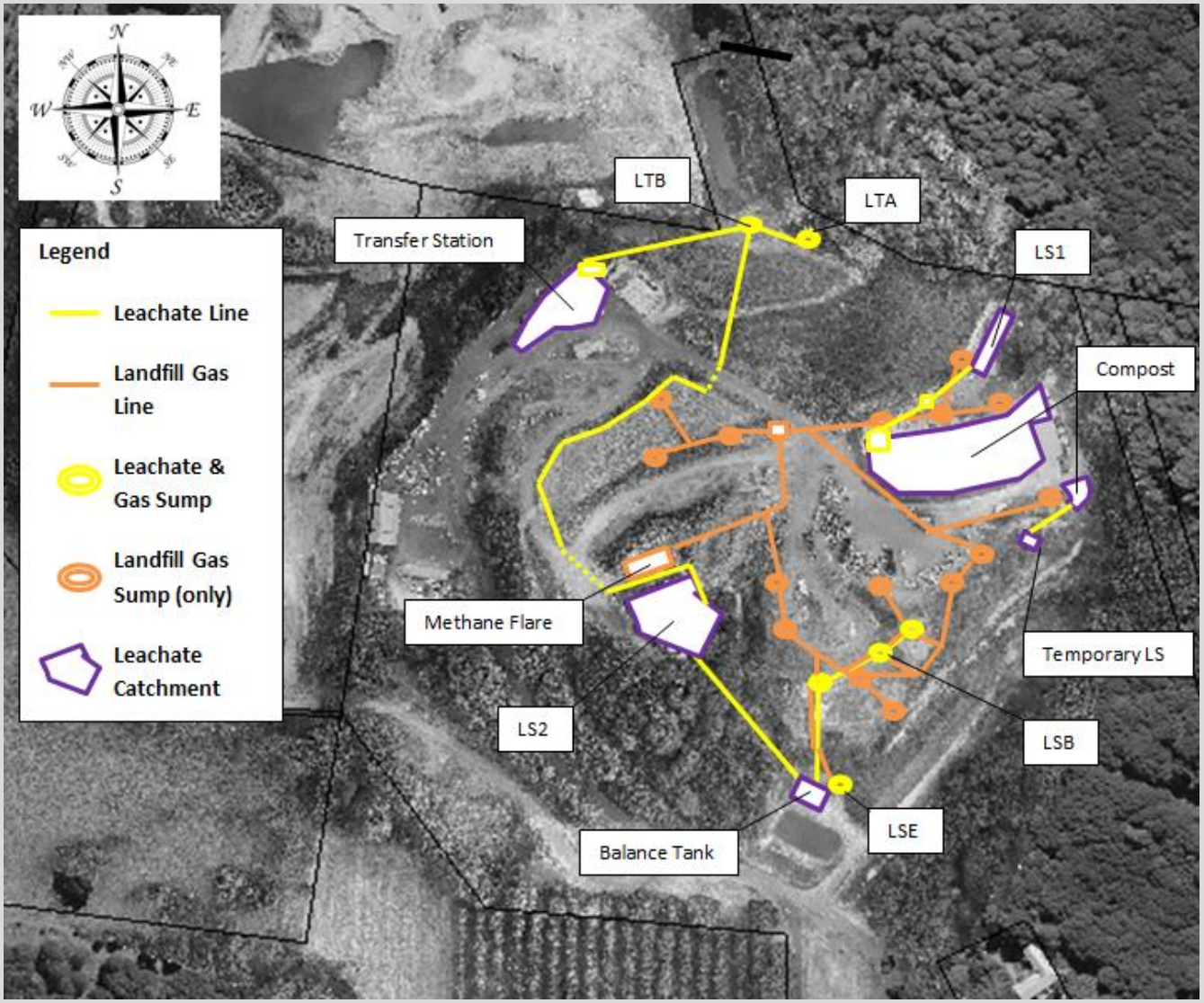

Figure 5. Likely location of leachate capture system and landfill gas lines / sumps

Actions to be taken during or immediately after a pollution incident

The **response actions** to a pollution incident at the BRRC are divided into various phases, namely:

1. Pre-emptive actions and provision of safety equipment at the site;
2. Initial Response Phase;
3. Containment or Control Phase;
4. Communication; and
5. Review and Maintenance.

BRRC workers responding to the incident shall determine the type of incident (refer Figure 6).

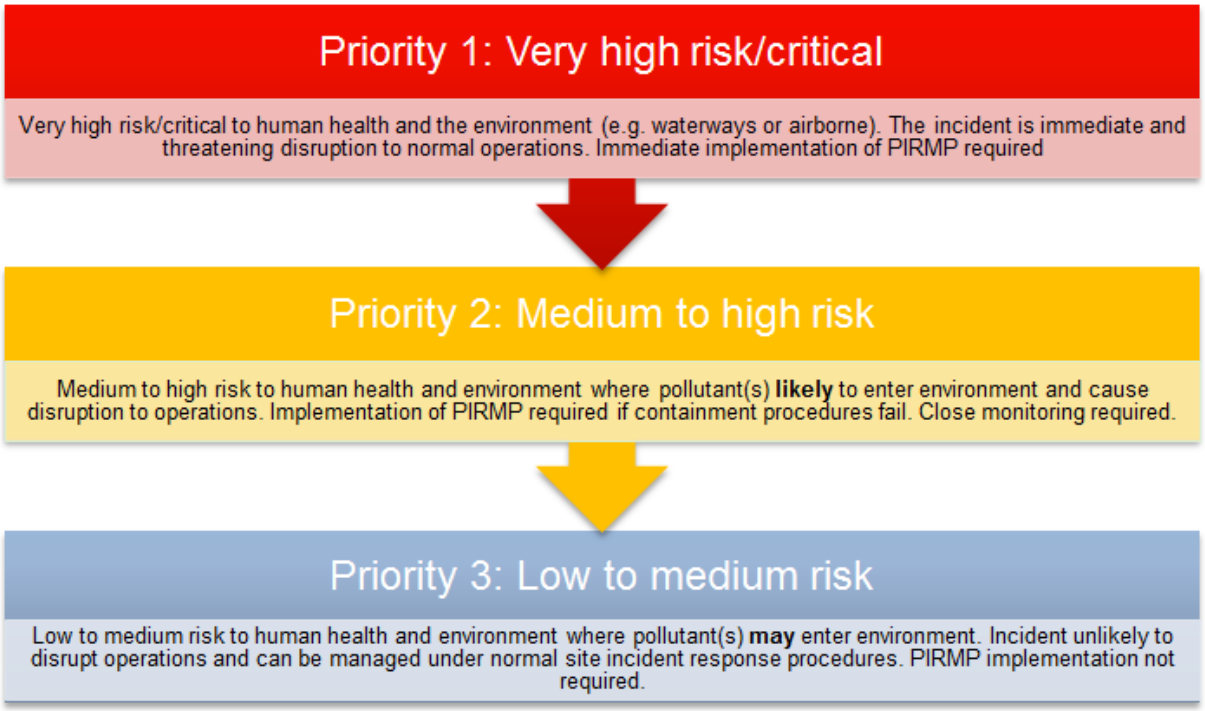

Figure 6. Initial Response Phase

Individuals first at the scene are to assess the incident for severity (Priority 1,2 or 3) and if a Priority 1 or 2 incident then will call out “Emergency, Emergency, Emergency” on their two-way radio followed by the location of the incident. They will then report the pollution incident to the BRRC Site Supervisor, Environmental Programs Officer or Team Leader Resource Recovery. For after-hours reports, the Team Leader Resource Recovery and/or Site Supervisor will be contacted. Either the Team Leader Resource Recovery or Site Supervisor (or, if required, an alternative) will attend the scene to make an immediate initial assessment (after ensuring all personnel are safe at all times putting in any containment actions required to prevent the pollution incident from spreading further) before calling for Emergency Services assistance.

An **initial visual assessment** of the incident scene will determine the actions to be implemented and be directed to:

1. Saving lives;
2. Attending to any injured persons;
3. Isolating the location;
4. Preventing or extinguishing fires;
5. Identifying additional hazards;
6. Determining the actions necessary to prevent further threat to human life, property or environment;
7. Calling for appropriate help (i.e. Emergency services, Council, EPA, NSW Health, WorkSafe, Fire and Rescue).

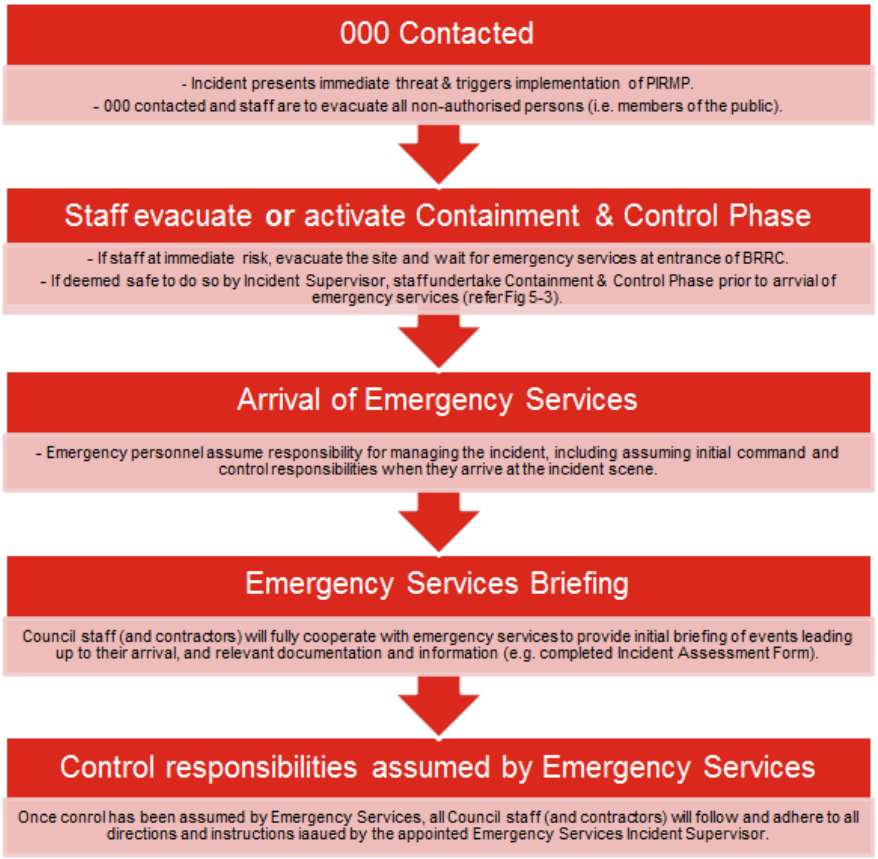

Figure 7. Emergency Services Response Phase

An Incident Assessment Checklist (E2014/65561) is to be used to assist in assessing the situation and to record necessary information. Record a detailed description of the actions undertaken immediately after a pollution incident to reduce or control any pollution. Note as a minimum, early warnings, updates and actions to be taken during and after an incident. If a pollution incident occurs at the premises so material harm to the environment is caused or threatened, the person carrying on the activity must immediately implement the PIRMP.

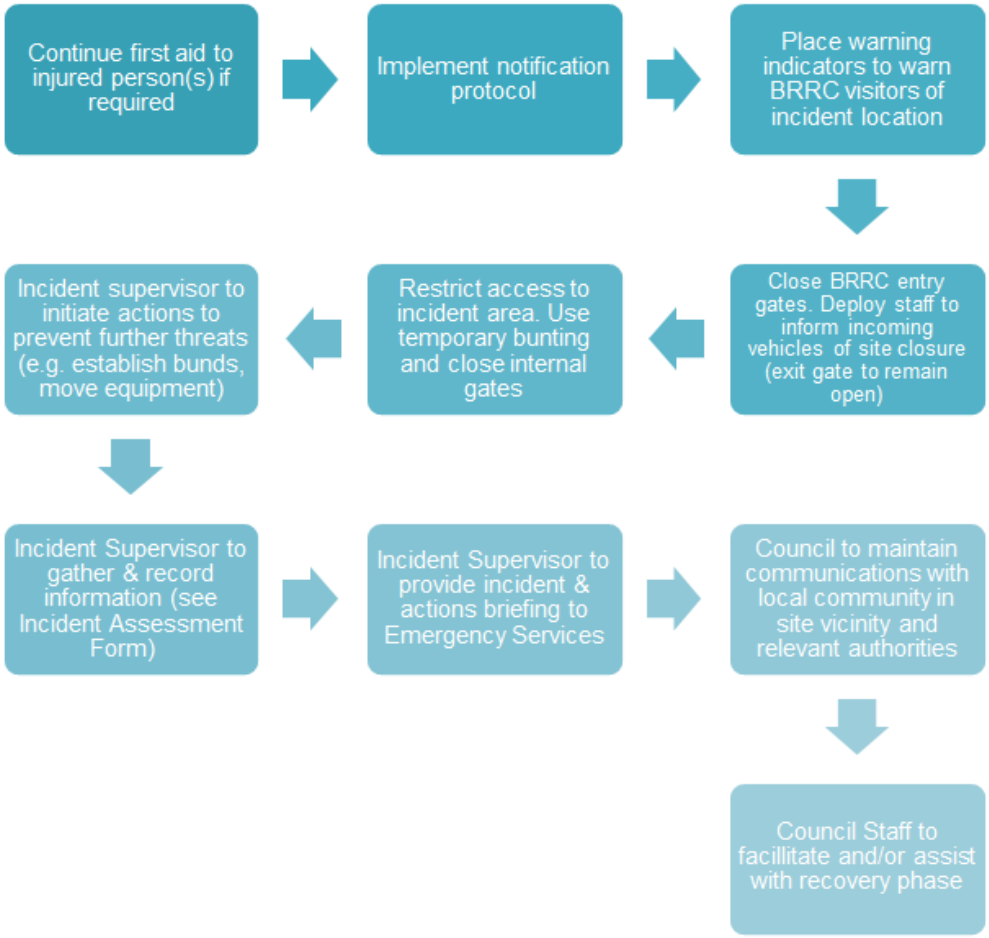

Figure 8. Containment & Control Phase

Figure 9. Recovery Phase

BRRC Operators will be trained in the following procedures and safe work methods statements to minimise risk of harm to human health:

- **BRRC Emergency Response SWMS** (fire prevention, spills/leaks) E2019/36515
- **BRRC Asbestos Removal SWMS** E2015/42855 [v2] (and BRRC Asbestos Management Plan E2018/8076)
- **Leachate Discharge Protocol** in the Landfill Environmental Management Plan DM1169161 or Draft Integrated Water Management System

Site Supervisor / Team Leader to use Water Outlook “Dashboards” by means of early warnings.

Team leader to manage updates and any action to be taken during or immediately after a pollution incident to reduce that risk.

Team Leader, Site Supervisor and Environmental Programs Officer to manage any actions to be taken in combating the pollution caused by the incident and how any clean-up and associated funding resulting from an incident will be undertaken. Clean-ups may need to consider outside contractors (e.g. licenced asbestos removalists, hygienist, etc.) and the use of clean-up equipment and appropriate waste disposal facilities (e.g. Tweed’s Stotts Creek Facility, Lismore RRC Facility). Cost for a clean-up can be significant, and appropriate insurances should be considered or contingency funds in the waste reserve made available, especially if the public authorities wish to recover costs from Council (whom may be responsible for the pollution incident).

Coordinating with persons

Coordinating with the authorities will be undertaken by:

- Team Leader, Resource Recovery - 0436 949 741
- Site Supervisor, Resource Recovery - 0437 402 447

If both of these staff are not available, authorities will be coordinated by: Manager, Resource Recovery - 0436 914 227
Coordination with the community and stakeholders will follow the BRRC Community Liaison Strategy (I2020/1082).

All communications are to be made in conjunction with:

- Team Leader, Resource Recovery
- Environmental Programs Officer, Resource Recovery
- Site Supervisor, Resource Recovery
- Manager, Open Spaces & Resource Recovery
- Director, Infrastructure Services
- Relevant authorities

Staff training

Identify the nature and objectives of any staff training program in relation to this plan:
The last staff training of the PIRMP was undertaken in July 2021.
PIRMP test scenarios and post-test debriefings have been conducted annually.
Toolbox meetings are used as refresher training and to identify any potential incidents on site.
Detailed PIRMP staff training should occur every five years or sooner if deemed necessary by management (e.g. personnel changes).

Testing and updating of the PIRMP

PIRMP tests will be conducted in accordance with the legal requirement to test the plan every 12 months and within one month of any pollution incident.
The PIRMP test method will either consist of a desktop exercise or scenario, and practical exercises or drills.

The type of testing should reflect the:

- nature of activities undertaken at the facility,
- risk level determined by the EPA’s risk-based licensing system, and
- the environmental context – location, sensitive waterways, air quality, land habitat, and sensitive receivers who are close by.

Any desktop exercise would include working through an incident scenario to ensure the PIRMP is effective.
Testing will cover all components of the PIRMP, including the effectiveness of training.

The dates for the PIRMP test will be determined by the Site Supervisor and Team Leader.
Testing of the PIRMP will be documented using the Incident Assessment Form (E2014/65561), including all the names of the staff members who carried out the testing.

A debrief with staff who participated in the test will be conducted at the following Toolbox Talk meeting. A debrief will address the following:

- What worked?
- What would we do the same next time?
- What would we do differently next time?
- What needs did we identify? (e.g. staff training, safety procedures, additional equipment)

The PIRMP will be updated at a minimum of every two years.

PIRMP testing details

Date	Tested by	Details of test	Finding of test, including issues identified	Next scheduled testing date
13/07/2021	James kirk Ken Moore Danielle Hanigan Jarrad Ruddock Clint Hilton Rex Grissell Clinton Wisse	Catastrophic failure of leachate tanker, resulting in leachate being spilled onto LS2 tanker fill bay.	Requirement for PPE and spill containment material to be placed near LS2 fill bay in case of minor spills of leachate. Requirement for Emergency signal for site. “Emergency, Emergency, Emergency” to be quoted on two-way radio for whole of site emergency response.	13/07/2022
7/07/2020	Kane Goldsworthy Ken Moore Danielle Hanigan Brian Cox Made Astawa Helen Bull Jarrad Ruddock Clint	Failure of the leachate storage system Threat of overflowing spill containment area / bund Alert relevant PIRMP coordinating persons Alert NSW EPA	Consider an outlet pipe extension to the dirty water drain using pvc pipe with elbows or something similar. Start to release liquid contained in the bund once it exceeds 25cm from the top of the bund wall. Point source discharge allowable when rainfall exceeds 300mm for leachate and 84 mm for the settlement basins Leachate discharge protocol to be reviewed.	31/07/2021

4/07/2019	Kane Goldsworthy Ken Moore Brian Cox Jarrad Ruddock David Weeks Made Astawa Tracey Kelley Helen Bull	Fire in the construction & demolition bay waste stockpile. Fire containment using fire fighting equipment – fire extinguisher, water tanker, fire fighting pumps/hoses, etc. Alerted NSW Fire Services	Water cart function and capability better understood by all staff participating. Speed of assembly considered adequate for a small fire. '000' to be called for any fires immediately Emergency Response SWMS to be reviewed	31/07/2020
1/08/2018	Kane Goldsworthy Ken Moore Lloyd Isaacson Brian Cox Rex Grissell Made Astawa Alex Dichera	Asbestos identified in public drop-off bay Asbestos removal and disposal Communicated internally	New Asbestos Removal SWMS tested. SMWS was successful and no changes were made to that procedure.	31/07/2019

PIRMP update details

Date update occurred	Reason for update	Details of updates	Date the updated version uploaded to website	Date of completion
July 2020	Adopting new NSW EPA template and guidelines, contact details/personnel have changed	Complete review, update contact details, maps and pollutant inventory updated	September 2020	31/07/2020
July 2018	Outdated items identified in PIRMP, contact details/personnel have changed	General review, new contact details	August 2018	31/07/2018
September 2016		Staff training	October 2016	31/09/2016

August 2014	September 2014	31/08/2014
July 2012	August 2012	31/07/2012