



NEWCASTLE IRON RECOVERY PLANT

Environment and Hazard Management

POLLUTION INCIDENT RESPONSE

MANAGEMENT PLAN

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1.0 INTRODUCTION

1.1 Background and Scope

The *Protection of the Environment Legislation Amendment Act 2011 (POELA)* received assent on 16 November 2011 effecting changes to the *Protection of the Environment Operations Act 1997 (POEO)*. The intent of the POELA is to improve the way pollution incidents are reported and managed, the changes include the requirements for Environmental Protection Licence (EPL) holders to prepare, implement and test a Pollution Incident Response Management Plan (PIRMP). The specific requirements for PIRMPs are set out in Part 5.7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO (G) Regulation). In summary this legislation requires the following:

- All holders of EPLs must prepare a PIRMP (s. 153A, POEO Act)
- The PIRMP must include the information detailed in the POEO Act (s. 153C) and be in the form required by the POEO General Regulation (cl.98B)
- EPL Holders must keep the PIRMP at the premise to which the EPL relates. In the case of transporters of trackable waste the operators of mobile plant, the PIRMP must be kept at the location where the relevant activity is taking place (s. 153D, POEO Act).
- Holders of EPLs must test the PIRMP in accordance with the POEO General Regulation (cl.98E).
- If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened within the meaning of Part 5.7 of the POEO Act, licensees must immediately implement the plan (Section 153F, POEO Act).

A Pollution incident is defined as:

“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 does not include an incident or set of circumstances involving only the emission of noise”

This PIRMP document has been developed to satisfy requirements of the POEO Act and covers the EPL 12786

This document details the procedures for notification of pollution incidents resulting in or having the potential to cause material harm to the environment. The notification of environmental incidents under this PIRMP is only required for those incidents causing or

threatening to result in material environmental harm (a material harm incident) as defined in the POEO act (see Section 5.1)

1.2 Regulatory Requirements

The specific mandated content requirements for PIRMPs are detailed under Section 153C of the POEO Act and Clause 98C of the POEO (G) Regulation. Table 1-1 outlines the required information as well as where it can be found in this document.

Table 1-1: Outline of information required for PIRMP and associated section of the document.

Section 153c	Detailed Required	Location in PIRMP
(a)	<p>The procedures to be followed by the holder of the relevant EPL in notifying a pollution incident to:</p> <ul style="list-style-type: none"> (i) The owners or occupiers of premises in the vicinity of the premises to which the EPL relates, and (ii) The local authority for the area in which the premises to which the EPL 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 (Of the POEO Act) 	<p>Section 5.3</p> <p>Section 5.2</p> <p>Section 5.2</p>
(b)	A detailed description of the action to be taken, immediately after a pollution incident, by the holder of the relevant EPL to reduce or control any pollution	Section 4.0
(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.	Section 5.2
(d)	<p>Any other matter required by the POEO (General) Regulation 2009 (as set out below):</p> <p><i>98C (1)(a)</i> <i>A description of the hazards to human health or the environment associated with the activity to which the licence relates (the “relevant activity”).</i></p>	Section 2.2
	<p><i>98C (1)(b)</i> <i>The likelihood of any such hazards occurring, including details of any conditions or events that could, would, increase that likelihood</i></p>	Section 2.2
	<i>98C (1)(c)</i>	Section 0 & Section 4.0

Section 153c	Detailed Required	Location in PIRMP
	<i>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</i>	
	98C (1)(d) <i>An inventory of potential pollutants on the premises or used in carrying out the relevant activity</i>	Section 2.3
	98C (1)(e) <i>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.</i>	Section 2.3
	98C (1)(f) <i>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.</i>	Section 0
	98C (1)(g) <i>The names, positions and 24-hour contact details of those key individuals who:</i> <i>(i) Are responsible for activating the plan, and</i> <i>(ii) Are authorised to notify relevant authorities under section 148 of the POEO Act, and</i> <i>(iii) Are responsible for managing the response a pollution incident</i>	Section 3.2 & Section 5.2
	98C (1)(h) <i>The contact details of each relevant authority referred to in section 148 of the POEO Act.</i>	Section 5.2
	98C (1)(i) <i>Details of the mechanisms for providing early warning 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.</i>	Section 5.3
	98C (1)(j) <i>The arrangements for minimising the risk of harm to any persons who are on premises or who are present where the scheduled activity is being carried on.</i>	Section 0 & Section 4.0

	<p>98C (1)(k)</p> <p><i>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 storm water drains on the premises.</i></p>	<p>Section 2.1</p>
	<p>98C (1)(l)</p> <p><i>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, updated and the action to be taken during or immediately after a pollution incident to reduce that risk.</i></p>	<p>Section 0, Section 4.0, Section 5.3</p>
	<p>98C (1)(m)</p> <p><i>The nature and objectives of any staff training program in relation to the plan.</i></p>	<p>Section 6.1</p>
	<p>98C (1)(n)</p> <p><i>The dates on which the plan has been tested and the name of the person who carried out the test.</i></p>	<p>Section 6.2</p>
	<p>98C (1)(o)</p> <p><i>The dates on which the plan is updated.</i></p>	<p>Section 7</p>
	<p>98C (1)(p)</p> <p><i>The manner in which the plan is to be tested and maintained</i></p>	<p>Section 6.2</p>

2.0 PREMISE DETAILS

2.1 Site Details

Austpac's Newcastle Zinc & Iron Recovery Plant (NIRP) is located at 240 Cormorant Rd, Kooragang, NSW, 2304, within the LINX Cargo Care Group's Kooragang complex (See Figure 2-1). The development of the NIRP facility is covered by DA 09/1421 issued by Newcastle City Council covering the period from 30 March 2010 to 30 March 2015. The NZIRP facility is covered by EPL License 12786.

Tank storages of hydrochloric acid (HCL) and Ferrous Chloride Solutions (Spent Pickle Liquor: SPL) present the highest likelihood of potential hazards to human and environmental health and are discussed in Sections 2.2 and 2.3. The potential hazard associated with these materials is primarily associated with close contact WHS issues such as splashes on the skin or ingestion. Both of these substances due to their corrosive nature may cause burns, irritation to the respiratory system, irritation or damage to eyes and are harmful if swallowed. The storage tanks have never been filled and remain empty

There are no residential estates within the immediate area of the NZIRP, and the nearest residential area is 2 km away across the Hunter River. The surrounding area is predominantly industrial premises that are located away from built-up type public and residential estate living areas.

The surrounding land use is mainly used by industrial companies. The surrounding sites are occupied by a transport and stevedoring company, LINX Logistics, whose operations currently surround the NIRP. The Pacific Carbon Coke Plant located approximately 200 m north-west of Austpac's operations was decommissioned and closed in 2015 and is scheduled for demolition. Other industrial operations in the vicinity of the NZIRP are too far away for Austpac's operations to cause an impact.

The layout of the NZIRP facility, its relationship to other industries in the area and a layout of the bulk storage facilities can be seen in Figure 2-1, Figure 2-2 and Figure 2-3.

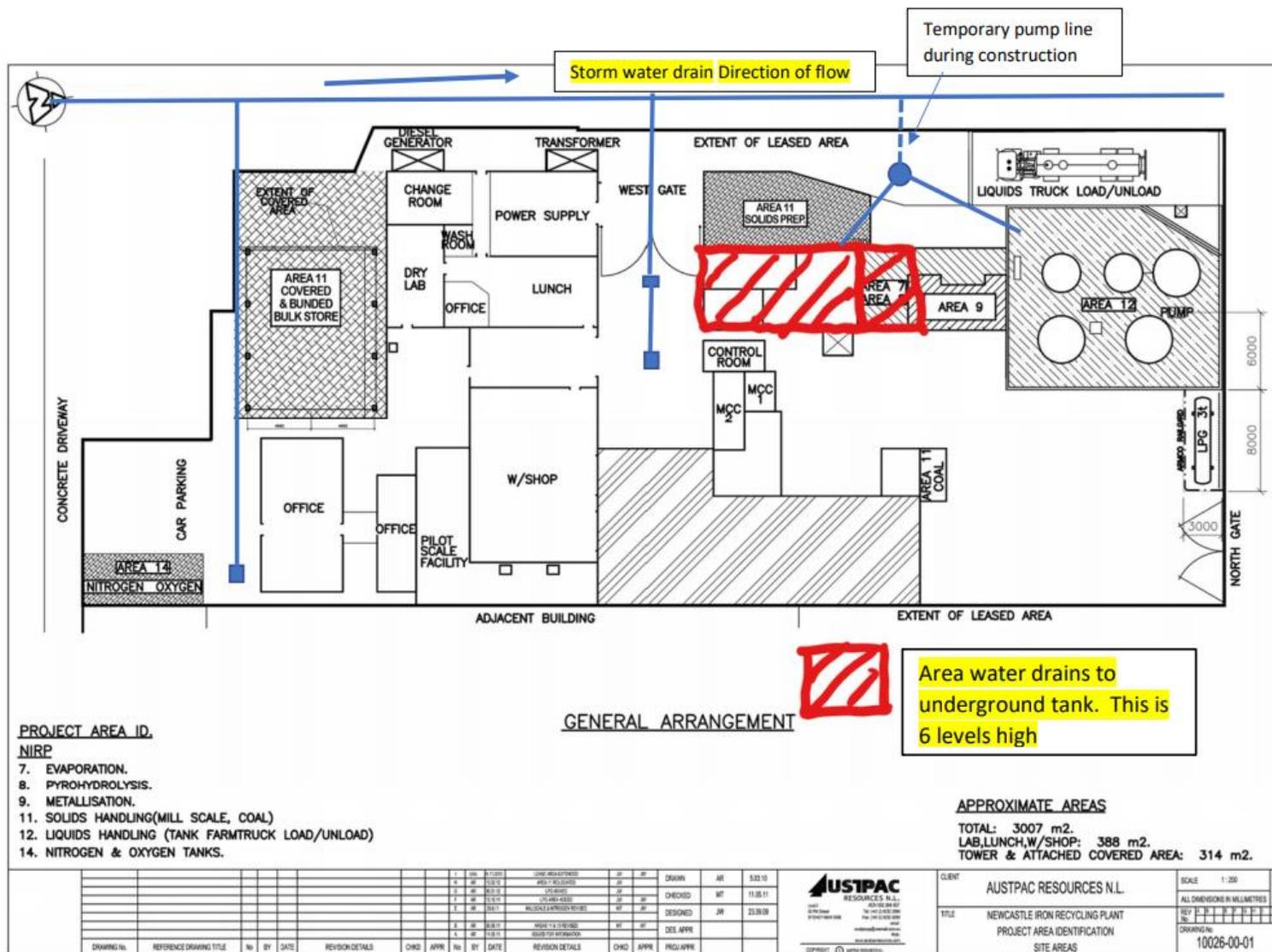


Figure 2-2: Layout of NZIRP Facility

2.2 Key Hazards

A risk review has been conducted for Austpac's NZIRP facility which identifies the potential hazards relevant to the site and this PIRMP. The potential hazards include the following:

- Spills (dangerous goods including: hydrochloric acid or ferrous chloride) resulting in potential land contamination
- Spills (dangerous goods including hydrochloric acid or ferrous chloride) resulting in potential contamination of water bodies (including groundwater)

The purpose of the risk review is to identify the potential environmental impacts that could result from operations. The risk review identifies potential hazards as well as any necessary control measures to manage the potential hazards.

2.3 Chemicals and Potential Pollutants

The NZIRP facility will use, store and produce the following chemicals and potential pollutants:

- **Ferrous Chloride Solution (Spent Pickle Liquor: SPL)**
 - Class 8, Packing Group III
 - UN3264
 - Storage Amount – 5,000 litres (5 m³) (Maximum Tank Capacity)
- Waste water (Tank Farm bunded area approx. 40,000 litres)

SPL will be stored at the NZIRP facility primarily within an undercover bunded storage area 11 on the east side of the site. Bunded areas are isolated from any storm water systems and have been designed to have suitable capacity for typical storage scenarios.

2.4 Safeguards

As Identified spillages represent the most likely avenue for potential environmental or health impacts. The following safeguards are in place to prevent an incident occurring:

- Fire protection systems to compliant with the BCA and AS3780 (The Storage and Handling of Corrosive Substances).
- Spill kits available on site prior to commissioning of plant
- Compliant separation distances from existing facilities to on-site and off-site works and buildings as per noted standards shown on Figure 2-3
- On-site personnel to be given detailed inductions and training in the handling of corrosive materials and appropriate PPE
- Future dangerous goods audits.
- Maintain storage levels at the minimum required for operation to minimise potential impacts should an incident occur.

3.0 MANAGEMENT AND RESPONSIBILITIES

3.1 Legal Duty to Notify

All employees and contractors are responsible for reporting to management all incidents or hazards which present the potential for environmental impact regardless, of nature or scale.

The POEO Act 1997 (section 148) details notification responsibilities, encompassing all site personnel, including contractors and sub-contractors. These are broadly categorised as:

- The duty of employee or any person undertaking an activity:
 - Any person engaged as an employee or undertaking an activity must, immediately after becoming aware of any potential incident that is believed to cause or threatens to cause material harm to the environment, notify the senior site engineer or shift supervisor of the incident and all relevant information about it. This is to be undertaken as per Section 5.0

- Duty of the employer or occupier of the premises to notify:
 - An employer or occupier of the premises on which the incident occurs, who is notified (or otherwise becomes aware of) a potential pollution incident must undertake notification to the appropriate regulatory authority of any material harm incidents

3.2 PIRMP Management

The specific responsibilities associated with the management and implementation of the PIRMP is outlined in Table 3-1

Table 3-1: PIRMP Responsibilities and Contact Details

Name	Contact Details	Position	Responsibility
John Winter	0407 892 343	General Manager, Process and Project Development (Senior Engineer)	<ul style="list-style-type: none"> • Determination and notification of material harm incidents to relevant authorities/stakeholders • Authorising the PIRMP and subsequent amendments • Providing information as requested from relevant government agencies • Undertaking testing of the PIRMP • Supervising relevant training in regards to the implementation of the PIRMP, as required
Colin ILES	0402790024	Chief executive officer	<ul style="list-style-type: none"> • Preparing of public releases regarding incidents • Authorising PIRMP and subsequent revisions

4.0 INCIDENT MANAGEMENT

In the case of an environmental incident, prior to any other action, the site must contact Fire and Rescue (000) if the incident presents any immediate threat to human health or property. Fire and Rescue New South Wales (NSW) are the first responders, as they are responsible for controlling and containing incidents. Where there is no threat to human health or services, Fire and Rescue NSW must still be contacted for information purposes, but as a last point of contact as detailed in Section 5.2.

All possible actions should be taken to control the pollution incident in order to minimise health, safety and environmental impacts. These actions, to the maximum extent possible aim to:

- Provide for the safety of people
- Contain the pollution incident

The following actions are to be undertaken in the event of an incident:

1. Secure the scene and contain the incident
2. Undertake notification of material harm incident (as required);
3. Gather information (i.e. environmental monitoring)
4. Undertake incident investigation into the cause of the incident
5. Review and classify information from investigation and identify any ongoing actions;
and
6. Implement those actions identified

With regards to the main hazards identified in Section 2.2, the following actions shall be carried out in the event of a spill (Acids, Hydrocarbons, greases, oils etc.) resulting in land or water contamination.

1. Identify the substance and control the spill by isolating the source
2. Contain and clean up the spill utilising available spill kits. If the spill is too large to clean up immediately, a temporary bund will be constructed around the immediate area of the spill.
3. Dispose of waste in accordance with the MSDS and if required, organise for the waste to be removed by a licensed waste contractor.

5.0 NOTIFICATION PROCEDURES

5.1 Determination of Material Harm

Following the containment of an incident, immediate action must be taken to determine if a 'material harm incident' has occurred. Section 147 of the POEO act defines a material harm by the following criteria:

- 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 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

It is possible for a material harm incident to occur on land that is within the boundary of the EPL. The determination of a material incident will be made by the Senior Engineer at the time of the incident.

5.2 Internal and External Notification

As discussed in Section 3.1, notification of an environmental incident is the responsibility of all site and contractor personnel. In the event of a 'material harm incident', response and notification must be undertaken as per Table 5-1. The agencies listed in Table 5-1 must be contacted in the order listed.

Table 5-1: PIRMP Notification Requirements

Agency	Contact Details	Note
Fire and Rescue	000	To be contacted first if the incident presents and immediate threat to human health or property and emergency services are required. Fire and Rescue are to be contacted last if emergency response is not required
EPA	131 555	
Ministry of Health	02 4924 6477	Request Public Health Officer
Newcastle City Council	02 4974 2000	Work or after hours
Hazmat		

On the identification of an environmental incident or hazard, personnel will report the issue immediately to the Senior Engineer. 'Immediately' is to be taken to mean 'promptly and without delay'. The decision on whether to notify the incident in accordance with 5.7 of the POEO Act should not delay immediate actions to provide the safety of people or contain a pollution incident. However, incident notification will be made as soon as it is safe to do so.

After the initial notification of any 'material harm incident', it will be the responsibility of the Senior Engineer to liaise with any authority listed in Table 5-1 that requests additional information, or is providing directions for management of the 'material harm incident'. This may include incident investigation reports and ongoing environmental monitoring results.

5.3 Notification to Local Landholders and Community

Community notification shall be undertaken at the determination of the Senior Engineer or Fire and Rescue (as relevant) and may be based on environmental results.

The following notification methodology is proposed to be utilised as required:

- Early Warnings: same day telephone notification to landholders who may be affected by the incident over the subsequent 24-hour period; and
- Updates: follow up phone calls to all landholders who received an early warning notification or now require notification will be undertaken by relevant personnel. Updates are to be provided, as considered necessary, to the broader local community in affected areas via information sheets or newsletters, Community Consultative Committee meetings, Austpac's Website, media statements or any other strategy as determined appropriate by the Senior Engineer.

Information provided to the community will be relevant to the incident and may include the following details:

- Type of incident that has occurred;
- Potential impacts on the local landholders and the community;
- Site contact details; and
- Advice or recommendations based on the incident type and scale.

6.0 TRAINING, TESTING AND COMMUNICATION

6.1 Training

The contents of this document will be included in all site inductions. All site personnel and contractors will be made aware of their reporting requirements with regards to environmental incidents. Annual revision training will also be conducted in conjunction with the annual review to ensure that all personnel and contractors are aware of any amendments to the PIRMP and that responsibilities under the PIRMP are confirmed.

6.2 Testing, Review and Maintenance

Testing of the PIRMP will be undertaken to ensure that the information within the plan is up to accurate and up to date as well to confirm that the plan is capable of being implemented in a workable and effective manner. Testing shall be carried out in the following ways in accordance with the POEO(g) regulation.

1. The PIRMP will be assessed and reviewed in a desktop environment as well as using simulated environmental emergency drills. These tests will confirm that all sections of the plan including training requirements are meeting the objectives of the plan.
2. A review of the PIRMP will occur every 12 months commencing from the date of authorisation by the senior process engineer. Testing dates of the plan will be recorded in Table 6-1.
3. The PIRMP will be tested and reviewed within one month of any pollution incident that occurs in the course of an activity relating to Austpac's EPL. The review will be undertaken in the light of the incident, to ensure that the information included in the plan is accurate and up to date and that the plan is still capable of being implemented in a workable and effective manner

Records of testing and review will be included in Table 6-1 of this plan, including:

- The manner in which the test was undertaken
- Dates when the plan has been tested
- The persons carrying out the testing; and
- The date and description of any update or amendment to the plan

Table 6-1: PIRMP testing and update register

Date of Test	Name of Person(s) undertaking test	Manner of Testing	Summary of Changes (include brief detail and section number)	Date of Document update
6 Sep 2016	John Winter Mike Turbott	Review and update PIRMP	Section 2.1 update site details Section 3.2 – update management contacts	21 Sep 2016
26 May 2017	John Winter Mike Turbott	Review and update PIRMP	Section 2.1 update site details and plans Section 6 update of project status	08 June 2017
22 May 2018	John Winter Mike Turbott	Review and update PRIMP	Section 6 update of project status	05 June 2018
6 June 2019	John Winter Mike Turbott	Review and update PRIMP	Section 6 update of project status	25 June 2019
20 August 2020	John Winter Colin ILES	Review and update PRIMP	Section 2.2, 2.3, 2.4 update permissible storage capabilities Section 3.2 update contact details	20 August 2020
3 August 2021	Colin ILES John Winter	Review and update PRIMP	Section 2.3 update waste water storage for tank farm bund	3 August 2021

The Newcastle Iron Recovery Plant was conceived in 2010 as a demonstration plant to recycle mill scale and spent pickle liquor and produce iron briquettes and hydrochloric acid for the steel industry. Construction commenced in 2011 and by 2014 was 85% complete. Personnel on site prepared the initial PIRMP on 30 July 2014. In August 2014 construction at the Plant was halted, employees were terminated, and the Plant was mothballed until funds are available for completion.

Since 2014 a number of changes have been made to the process flowsheet to enable the Plant to also process zinc-contaminated iron-rich filter cake produced by steel industry furnaces. Testing of this concept by management using pilot scale equipment at the plant commenced during the second half of 2017, but testwork was halted in 2018 due to insufficient funds. Meanwhile the only activity at the Plant has been equipment and site maintenance work undertaken as required by outside contractors.

Proof-of Concept testwork was completed in last quarter 2019 no further work is scheduled

As described in Table 6-1, the PIRMP was updated by management in August 2020.

Personnel training, and regular Testing, Review and Maintenance of the PIRMP will commence when the project is restarted and staff are permanently on site.

6.3 Availability of the PIRMP

This PIRMP shall be kept in written form at the NZIRP facility and shall be made available to all personnel responsible for implementing the plan, and to an authorised officer (as defined by the POEO Act) on request.

The PIRMP will also be made publicly available on Austpac’s website within 14 days of final approval by the Senior Engineer and following any subsequent revisions.

No personal information (within the meaning of the *Privacy and Personal Information Protection Act 1998*) will be made publicly available as part of the PIRMP.

7.0 REVIEW REGISTER

REV.	DATE	DESCRIPTION	AUTHOR	APPROVED
0.1	24 Jul 14	First Draft	AE	MJT
1	30 Jul 14	V1	AE	MJT
2	21 Sep 16	V2	JDW	MJT
3	08 June 17	V3	JDW	MJT
4	05 June 18	V4	JDW	MJT
5	25 June 19	V5	JDW	MJT
6	20 August 20	V6	JDW	CI
7	3 August 21	V7	JDW	CI

