




**ILUKA**

# **BALRANALD MINERAL SANDS PROJECT**

## **Pollution Incident Response Management Plan**

June 2023

DOCUMENT AUTHORISATION			
<b>Document:</b>	Pollution Incident Response Management Plan		
<b>Fusion reference:</b>	MWB00006-H-PLN-0013	<b>Version:</b>	1
<b>Document owner:</b>	Philip Lazzari	<b>Next review:</b>	3 June 2024
<b>Author:</b>	Brendan Isaacs		
<b>Authorised by:</b>	Philip Lazzari	<b>Date:</b>	28 June 2023
<b>Signature:</b>			
<b>Related documents:</b>	Balranald Mineral Sands Project - Environmental Management Strategy (MWB00006-H-PLN-0001) NSW EPA Environment Protection Licence 20795 Balranald EH&S Plan Balranald Emergency Control and Response Plan		
DOCUMENT REVISION HISTORY			
Date	Version	Description	Author
27/6/2023	1	Development of PIRMP for project execution phase	B.Isaacs

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# 1 Purpose of the Pollution incident response management plan

Licence number: 20795

Approved by: Philip Lazzari

Signature: 

Position/Title: Project Manager

Date: 02-Aug-2023

Iluka Resources Limited holds an Environment Protection Licence with the NSW Environment Protection Authority (EPA) for the Balranald Mineral Sands Mine. As per the *Protection of the Environment Operations Act 1997* (the POEO Act), 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, or where the activity takes place in the case of mobile plant licences, and be made available on request by an authorised EPA officer and to any person who is responsible for implementing this plan.

Parts of the plan must also be available either on a publicly accessible website, or if there is no such website, by providing a copy of the plan to any person who makes a written request. The sections of the plan that are required to be publicly available are set out in section 74 of the Protection of the Environment Operations (General) Regulation 2022.

**Note:** This plan must be developed in accordance with the *Protection of the Environment Operations Act 1997* and the Protection of the Environment Operations (General) Regulation 2022. Licensees should also refer to the EPA's Guideline: Pollution incident response management plans.

## 2 Environment Protection Licence (EPL) details

**Name of licensee:** Iluka Resources Limited  
ACN: 008675018

**EPL number:** 20795

**Premises name and address:** Balranald Mineral Sands Mine  
Karra Station  
Balranald NSW 2715

**Company or business contact details**  
**Name:** Brendan Isaacs  
**Position or title:** Senior Environmental Specialist  
**Business hours contact number/s:** 0455 470 233  
**After hours contact number/s:** 0455 470 233  
**Email:** [brendan.isaacs@iluka.com](mailto:brendan.isaacs@iluka.com)

**Website address:** [Http://www.iluka.com](http://www.iluka.com)

**Scheduled activity/activities on EPL:**  
Mineral processing  
Mining for minerals  
Road construction

**Fee-based activity/activities on EPL:** Mineral processing >500000-2000000 T annual processing capacity.

Mining for minerals >500000-2000000 T annual production capacity.

Road construction (>= 50,000T & road to be constructed >10km & <30km) >500000-2000000 Remaining extraction or processing.

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### 3 Pollution incident – person/s responsible

#### PIRMP activation

**Name of person responsible:** Dominik Garcia  
**Position or title:** Site Supervisor  
**Business hours contact number/s:** 0404 993 881  
**After hours contact number/s:** 0404 993 881  
**Email:** [dominik.garcia@iluka.com](mailto:dominik.garcia@iluka.com)

**Name of alternative person responsible:** Peter Mitchell  
**Position or title:** HSE & Risk Manager  
**Business hours contact number/s:** 0475 565 347  
**After hours contact number/s:** 0475 565 347  
**Email:** [peter.mitchell@worley.com](mailto:peter.mitchell@worley.com)

#### Notifying relevant authorities

**Name of person responsible:** Brendan Isaacs  
**Position or title:** Senior Environmental Specialist  
**Business hours contact number/s:** 0455 470 233  
**After hours contact number/s:** 0455 470 233  
**Email:** [brendan.isaacs@iluka.com](mailto:brendan.isaacs@iluka.com)

#### Managing response to pollution incident

**Name of person responsible:** Dominik Garcia  
**Position or title:** Site Supervisor  
**Business hours contact number/s:** 0404 993 881  
**After hours contact number/s:** 0404 993 881  
**Email:** [dominik.garcia@iluka.com](mailto:dominik.garcia@iluka.com)

**Name of alternative person responsible:** Peter Mitchell  
**Position or title:** HSE & Risk Manager  
**Business hours contact number/s:** 0475 565 347  
**After hours contact number/s:** 0475 565 347  
**Email:** [peter.mitchell@worley.com](mailto:peter.mitchell@worley.com)

### 4 Notification of relevant authorities

#### Fire and Rescue NSW / Rural Fire Service

**Contact number/s:** 03 5020 1577  
000 (Emergency)

#### NSW EPA

**Contact number/s:** 131 555

#### NSW/VIC Health

**Relevant Area Health Service:** Balranald NSW Multi-Purpose Health Service  
**Contact number/s:** 03 5071 9800

**Relevant Area Health Service:** Swan Hill District Hospital

**Contact number/s:** 03 5033 9300  
000 (Emergency)

**Relevant Area Health Service:** Mildura Base Hospital



	<b>Contact number/s:</b>	03 5022 3333 000 (Emergency)
<b>SafeWork NSW</b>	<b>Contact number/s:</b>	131 050
<b>Balranald Shire Council</b>	<b>Contact number/s:</b>	03 5020 1300
<b>NSW Resources Regulator</b>	<b>Contact number/s:</b>	1300 814 609
<b>NSW Department of Planning &amp; Environment</b>	<b>Contact number/s:</b>	1300 420 596

## 5 Notification of neighbours and the local community

In the event of an incident of actual or potential material harm the community will be notified by the following procedures:

- Information provided to the community will include the following details specific to the incident:
  - The type of incident that has occurred;
  - Potential impacts to the community;
  - Contact details for the site and relevant authorities; and
  - Advice or recommendations based on the incident.

Neighbouring properties near or on the activity site are private landholders primarily used for cropping and livestock. The Landholder contact details are maintained by the Senior Community Relations Advisor- Land & Stakeholder Management. All required landholder communications are through this position.

A local muster point is detailed on the site evacuation plan. The muster point on site is shown on Figure 2 and is signed posted and site personnel shall be made aware of the location during the site induction.

## 6 Description and likelihood of hazards

Iluka has undertaken risk assessment workshops to identify the risks for construction, mining operations, processes and rehabilitation and closure associated with the activity (including any risks during care and maintenance periods).

The risk assessments have been undertaken using Iluka's PRC6806: *Risk Assessment Procedure*, which is generally in accordance with the requirements of the AS/NZS ISO 3100:2009 *Risk Management - Principles and Guidelines*.

The potential environmental hazards identified for the activity site include:

- Naturally occurring radioactive material (NORM) from HMC stockpiles;
- Process water dam / fines dam release of saline water or sediments;
- Saline water leaks from bores and piping to soil;

- Acid Mine Drainage (AMD) generated from HMC and tails stockpiles
- Further subsidence above underground mined cavities resulting in loss of topsoil and erosion;
- Hydrocarbon spills from fixed or mobile storage tanks; and
- Raw sewage spills from treatment plants or storage tanks.

### Risk Matrix

	Likelihood					Consequence				
	1 Negligible	2 Minor	3 Moderate	4 Significant	5 Major					
5 Almost certain	Medium	High	Very High	Extreme	Extreme					
4 Likely	Medium	High	High	Very High	Extreme					
3 Possible	Low	Medium	High	High	Very High					
2 Unlikely	Low	Medium	Medium	High	High					
1 Rare	Low	Low	Low	Medium	Medium					

### Risk Assessment

Potential impact	Likelihood	Consequence	Risk Ranking
<b>NORM</b>			
Windblown movement of naturally occurring radioactive material (NORM) to sensitive areas.	2 (Unlikely)	2 (Minor)	(Medium)
<b>Saline water/sedimentation</b>			
Process water dam/fine tails dam leak or failure and release offsite.	2 (Unlikely)	2 (Minor)	(Medium)
Leaks from bores or pipes resulting in release of saline water to undisturbed ground or offsite.	3 (Possible)	2 (Minor)	(Medium)
<b>AMD</b>			
Acid generation from HMC or tails stockpiles	2 (Unlikely)	2 (Minor)	(Medium)
<b>Subsidence</b>			
Further subsidence above underground mined cavities resulting in loss of topsoil and erosion.	2 (Unlikely)	3 (Moderate)	(Medium)
<b>Hydrocarbons</b>			
Spill of hydrocarbons to soil from SME or storage tanks.	3 (Possible)	2 (Minor)	(Medium)
<b>Raw sewage</b>			



Release of raw sewage from sewage treatment plant or sewage storage tank.	3 (Possible)	2 (Minor)	(Medium)
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## 7 Pre-emptive actions to be taken

Iluka has developed and implemented the following pre-emptive actions and procedures for potential emergency and pollution incidents at the site:

- Monthly site inspections to ensure site infrastructure and stockpiles are maintained in a safe and stable condition.
- Provision of adequate safety and pollution control equipment onsite including spill kits, access to a water and firefighting equipment.
- Established clear evacuation routes, assembly points and procedures.
- Personal protective equipment (PPE) required for all personnel and visitors on the site.
- Pre-mobilisation inspection of plant and equipment prior to accessing site.
- Dangerous goods review in accordance with SafeWork NSW requirements.

## 8 Inventory of pollutants

Location/tank	Max. quantity	Contents	Comments
HMC Stockpile	3,000m3	Naturally Occurring Radioactive Material (NORM)	Potential for release of airborne particulates and transport of material into sensitive areas
		Metal sulphides	Oxidation of metal sulphides may lead to Acid Mine Drainage (AMD)
Tailings Stockpile	16,000m3	Metal sulphides	Oxidation of metal sulphides may lead to Acid Mine Drainage (AMD)
Fines dams (x2)	3,000m3 each	Metal sulphides	Oxidation of metal sulphides may lead to Acid Mine Drainage (AMD)
		Hyper saline water	Potential for release of hyper saline water to surface
Process water dam	5,000m3	Hyper saline water	Potential for release of hyper saline water to surface

Diesel bulk storage tank 1	110,000L	Hydrocarbons	Spills from fixed storage tanks.
Diesel bulk storage tank 2	4,500L	Hydrocarbons	Spills from fixed storage tanks.
Diesel bulk storage tank 3	4,500L	Hydrocarbons	Spills from fixed storage tanks.
Diesel bulk storage tank 4	1,000L	Hydrocarbons	Spills from fixed storage tanks.
Diesel bulk storage tank 5	1,000L	Hydrocarbons	Spills from fixed storage tanks.
Fuel service truck	1,400L	Hydrocarbons	Spills from fixed mobile tanks.
Lube service truck	2,000L	Hydrocarbons	Spills from fixed mobile tanks.
Sewage Treatment Plants (STP)	TBA	Raw sewage	Release of raw sewage from camp or office STPs.

## 9 Safety equipment

Safety equipment or other devices used to minimise risks to the environment and human health and to contain or control a pollution incident at the site is outlined below.

Safety equipment	Description	Location
<b>Communication systems</b>		
Site access	The access of all individuals to the project site shall be in accordance with the Balranald Project <i>Site Access Procedure</i> (PRC7414).  Visitors shall complete a visitor's induction and be accompanied by a fully inducted person at all times while on the project site.	To be completed by all personnel prior to accessing site.
UHF, mobile and satellite telephones	These will permit communications with outside emergency services.	All vehicles (satellite phones required where UHF or mobile service is out of range).
<b>Firefighting equipment</b>		
Fire extinguishers	These are to be used in combating minor fires.	Fire extinguishers of appropriate types and capacities are carried in all vehicles.
Firefighting trailer	1000L capacity mobile fire trailer.	At the premises
<b>First aid equipment</b>		
First aid	First aid kits shall be maintained in all vehicles.  Systems shall be in place to periodically check first aid equipment with a record of which must be maintained.	All vehicles.
<b>Pollution control equipment</b>		
Spill kit	Spill kit and absorbent matting to be used in the event of a mechanical failure resulting in a hydrocarbon spill.	Hydrocarbon storage areas.

## 10 Communicating with neighbours and the local community

Neighbouring properties near or on the activity site are private landholders primarily used for cropping and livestock. The Landholder contact details are maintained by the Senior Community Relations Advisor- Land & Stakeholder Management. All required landholder communications are through this position.

The Iluka website will be maintained as a tool for the provision of information to stakeholders and interested parties about the environmental and community performance of the Project.

Iluka will maintain an enquiries and community complaints hotline for the Balranald Project (Phone 1800 305 993 or email [balranald.community@iluka.com](mailto:balranald.community@iluka.com)). The community hotline will be publicly

advertised on the Iluka website Balranald engagement hub.

A complaints and inquiry register is available on the Iluka community engagement hub website <https://www.iluka.com/engage/balranald> and kept up to date on a monthly basis.

## 11 Minimising harm to persons on the premises

The following actions and arrangements are in place to minimise the risk of harm to persons on the premises should a pollution incident occur:

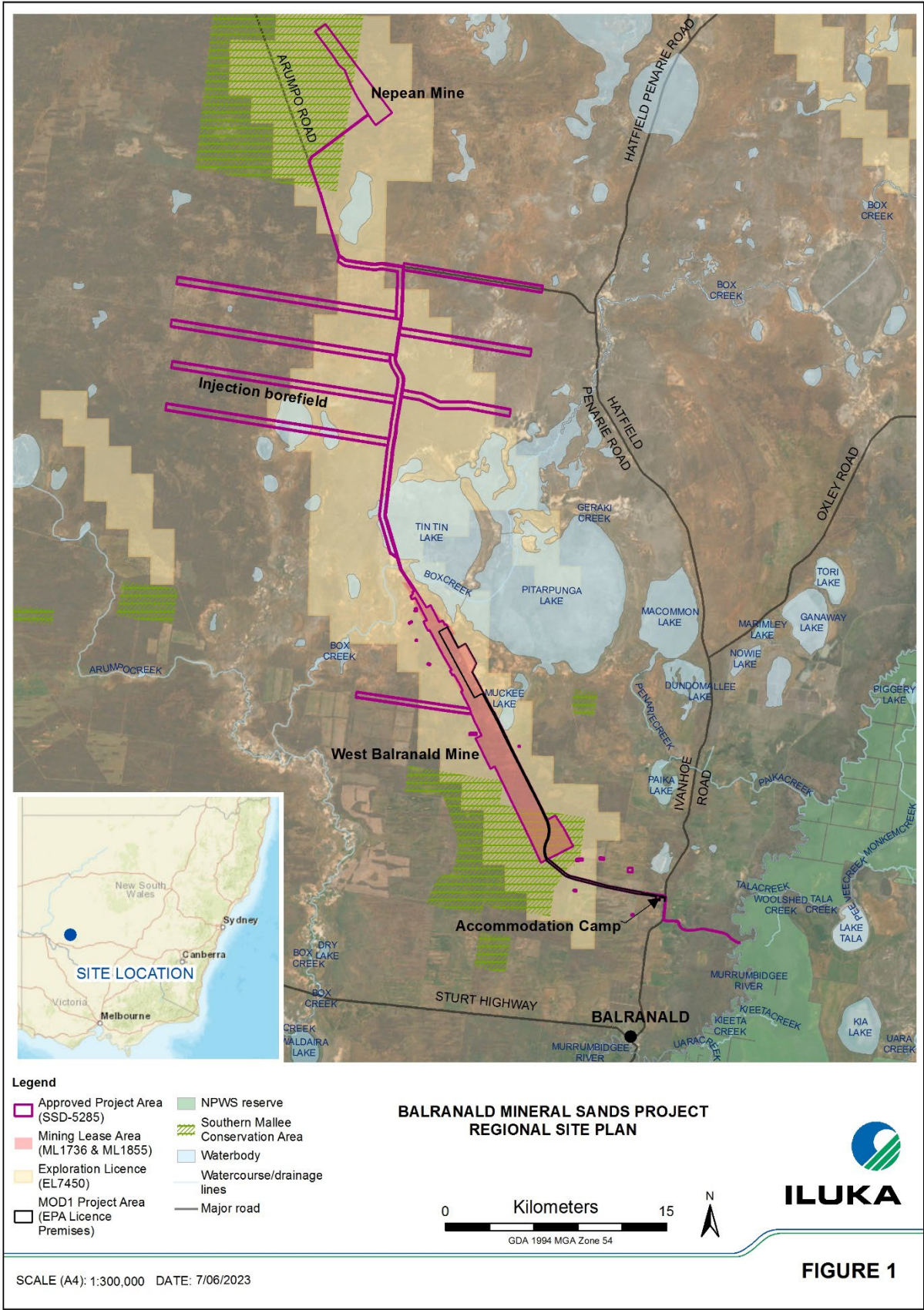
- Emergency evacuation procedure;
- Emergency isolation and shutdown systems for all plant machinery;
- Emergency Control and Response Plan;
- Clearly signposted emergency assembly point; and
- Training for staff in the event of an emergency.

## 12 Site maps

A regional site plan showing the extent covered by the EPA licence is presented on Figure 1. A detailed site plan showing the general site layout and potential pollutants is presented on Figure 2.

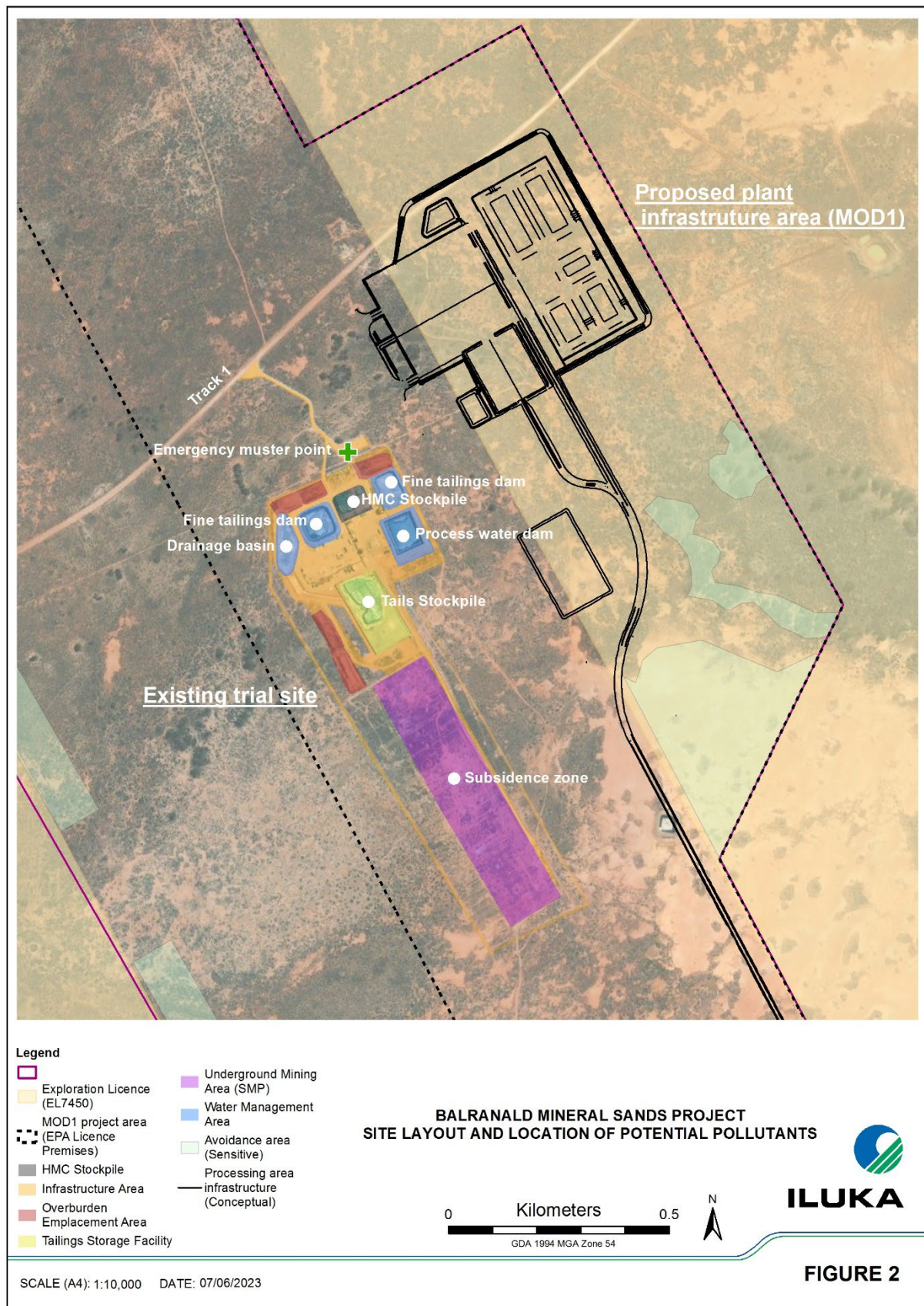
Construction of the processing plant infrastructure, mining infrastructure, camp and haul road are scheduled to commence in August 2023. These plans will be updated when any new infrastructure is constructed or new pollutant sources are identified.

Figure 1- Regional site plan and EPA licence area





**Figure 2- Site layout and potential location of pollutants**





## 13 Actions to be taken during or immediately after a pollution incident

### 13.1 Detection of a pollution incident

On detection of a pollution incident which may endanger personnel, property or the environment and cannot be immediately controlled by the observer, the observer shall:

- Alert Iluka Site Supervisor to the location and nature of the pollution incident; and
- Commence appropriate action as detailed in this PIRMP (without compromising their own safety).

### 13.2 Responding to a pollution incident

All pollution incident responses will be responded to as an emergency alert in accordance with the Balranald Project *HSEC Management Plan* and *Emergency Control and Response Plan*.

When an emergency alert is received, the person receiving the report shall:

- Assume the role and responsibilities of the Emergency Response Team Leader until relieved or instructed otherwise;
- Alert anyone in the affected area ;
- Proceed to the muster point if safe to do so;
- Ensure the incidents are managed in accordance with the Project Emergency Control and Response Plan;
- ;
- Notify the Emergency Services as required; and
- Handover control to Emergency Services on arrival and assist as directed.

Iluka's incident response flowchart is shown on Figure 3.

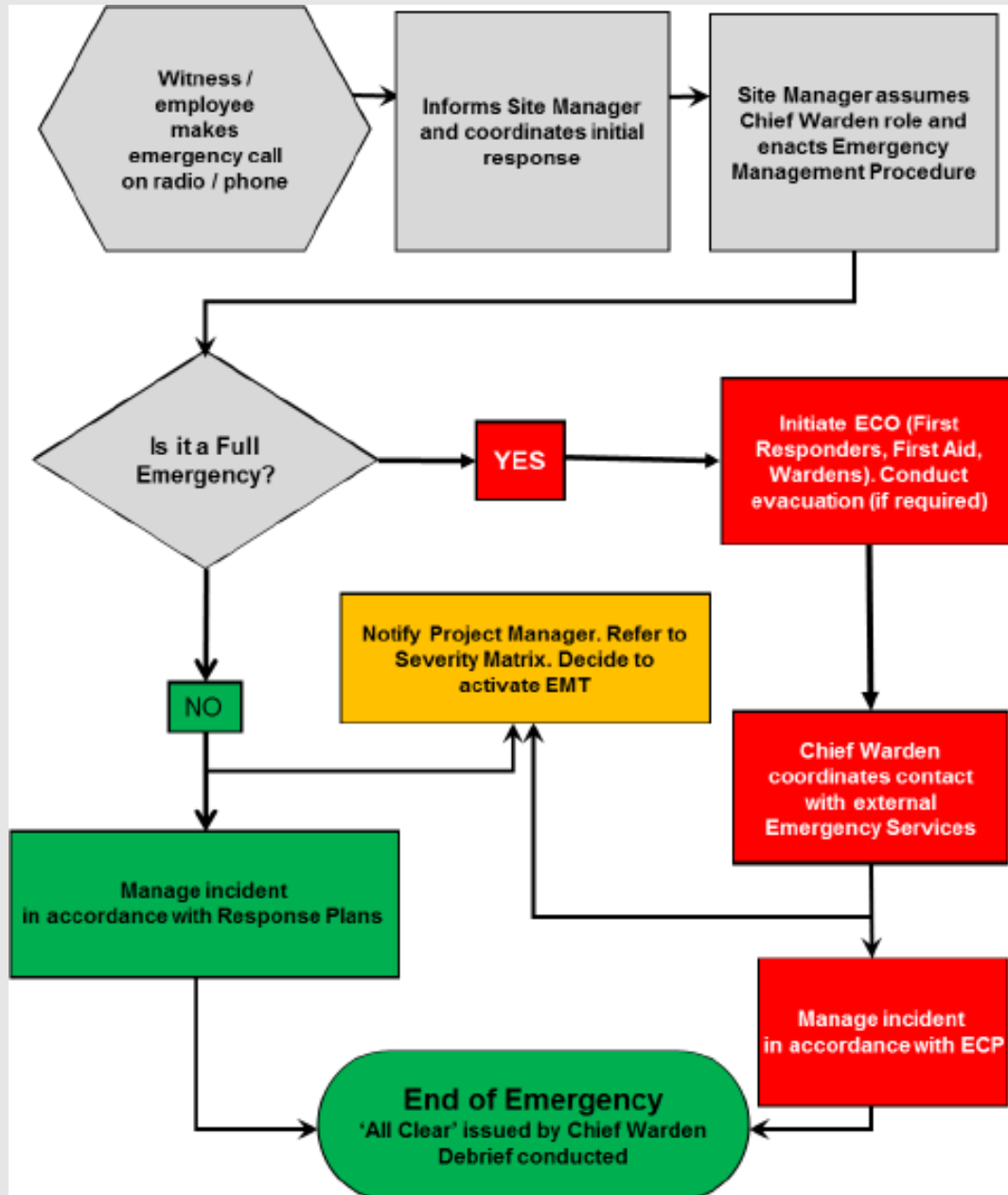
### 13.3 Post a pollution incident

The following steps will be taken following a pollution incident:

- A debrief is to be held by the site incident response team and others involved with the incident response;
- Identify what went well with the response and what could be improved;
- Ensure the wellbeing of personnel involved in the incident response;
- Clean up plan to be developed in consultation with the Project Manager, Senior Environmental Specialist and external agencies or consultants as required;
- An incident report is to be logged in the Iluka incident reporting system;
- Any actions for future prevention or remediation are to be logged and tracked until completed; and

- The PIRMP is to be tested and updated (if required) within one month of the incident occurring.

**Figure 3- Incident response flowchart**



## 14 Coordinating with persons

### 14.1 Crisis management team (CMT)

The role of the CMT is to provide support to Iluka's operations in the event of a major incident/issue that has the potential to affect the company's commercial position or shareholder value and to ensure the issues are managed in a way that protects Iluka's business. The CMT manages all corporate wide issues, outcomes and stakeholders to ensure good corporate citizenship and business continuity for Iluka Resources. The CMT is based in Perth, Western Australia.

The CMT will also establish an Emergency Management Team (EMT) and Site Incident Response Team (SIRT) with the authority to implement these emergency procedures.

In accordance with AS 3745-2010, *Planning for Emergencies in Facilities*, the Project Manager and Health & Safety Manager from the Balranald EMT shall be responsible for establishing and maintaining the *HSEC Management Plan* and the appointment of adequately trained SIRT personnel with the authority to override normal management during an emergency.

### 14.2 Site incident response team (SIRT)

The role of the Balranald SIRT is to be able to respond safely and effectively manage a range of emergency incidents that could reasonably be expected to occur on site. The SIRT is made up of functions including Chief Warden, Communications Officer, Wardens and Occupational First Aid trained personnel.

### 14.3 Emergency services

The Emergency Services (police, fire brigade, ambulance, State Emergency Service) should be contacted immediately by the Chief Warden when an emergency requires external support. In these circumstances, SIRT will act in a support role under the overall command of the Emergency Services Incident Controller. The Chief Warden will be the main contact with the responding Emergency Services Incident Controller.

### 14.4 Emergency management team (EMT)

The Balranald Emergency Management Team (EMT) are the site-based response team responsible for providing support to the Site Incident Response Team (SIRT), managing wider local response issues (other than the first response) and communicating with the Iluka CMT.

Where an event triggers the activation of the EMT, the event shall be recorded in EMQnet..

### 14.5 Internal emergency services

The remaining personnel on site shall constitute the Internal Emergency Services. They shall operate under the direction of the Chief Warden and shall be responsible for performing the following tasks- in accordance to everyone's training, skill, competency and qualification and

#### **ONLY IF SAFE TO DO SO:**

- Provide appropriate emergency services in accordance with the detailed emergency procedures outlined in Iluka's Balranald Project HSEC Mgt Plan and Emergency Control and Response Plan. This may include extinguishing fires, temporary repairs or spill containment as examples.
- Perform search and rescue and administer first aid to any person requiring assistance.

They shall continue to act in this capacity until the 'All Clear' is given or they are relieved by outside emergency services.

## 14.6 Site incident response team responsibilities

### 14.6.1 First responders

This role is filled by the first person onsite at the time of the pollution incident. Duties include:

- Being prepared to take on the role and responsibilities of a First Responder;
- Knowing the fire response procedure;
- Wearing the correct Personal Protective Equipment;
- Maintaining competency by participating in First Responder training and exercises;
- being familiar with the site layout, including exits, paths of travel and the location of any site hazards;
- Acting under the direction of the Chief Warden and emergency services;
- Being ready to take control of a designated incident scene (e.g. fire suppression);
- Prevent unauthorised access to nominated areas;
- Control access to nominated areas;
- Providing assistance and safeguard anyone in danger;
- Being able to operate the methods of communication used at the site;
- Referring all media comment to the Balranald Project Manager; and
- Participating in post-incident debriefs.

### 14.6.2 Chief Warden

The Site Supervisor will fulfil the role of Chief Warden. As the Chief Warden, the Site Supervisor shall:

- Pre-Incident:
  - Be fully conversant with the requirements of this PIRMP;
  - Communicate the requirements of the PIRMP to employees and contractors during pre-shift and toolbox meetings;
  - Ensure there is an adequate number of first respondents available; and
  - Ensure emergency response facilities such as fire response and first aid are available.
- During Incident:

- Ensure the emergency is responded to, commensurate with the skills and qualifications of the workgroup;
  - Ensure the appropriate persons are notified in the event of incident including the Project Emergency Management Team Leader, local neighbours and other workgroups working in the area;
  - Ensure incidents are managed in accordance with the Project Incident and Hazard Management Procedure;
  - Ensure all persons are evacuated to the designated muster point and accounted for;
  - Notify the Emergency Services as required; and
  - Handover control to Emergency Services on arrival and assist as directed.
- Post Incident:
    - Ensure a debrief if conducted and recorded.

## 15 Staff training

Iluka will hold personnel training to enable implementation and testing of this PIRMP. The objectives of the staff training will ensure:

- That staff have an adequate understanding of incident management and emergency procedures to enable effective implementation of this PIRMP;
- All staff are aware of their responsibilities in the event of a pollution incident; and
- All personnel have a full knowledge and understanding of instructions relating to relevant emergency and pollution incidents with reference to those covering firefighting, and procedures for dealing with spillage.

## 16 Testing and updating of the PIRMP

It is a legal requirement to test the plan every 12 months and within one month of any pollution incident that caused or threatened material harm to the environment.

### PIRMP testing details

Date tested	Tested by (to include the names of all people involved in testing)	Details of test (e.g. nature of the test, involvement of other agencies) Note: Testing must cover all components of the plan.	Finding of test, including issues identified	Next scheduled testing date (must be within 12 months from current test)
01.06.23	Brendan Isaacs, Senior Environmental Specialist	Desktop simulation – Dam wall breach resulting in hyper saline water release offsite.	Site personnel contact details incorrect. Maps outdated. PIRMP not in format of EPA guideline.	01.06.24

#### **PIRMP update details**

Date update occurred	Reason for update (e.g. address issues identified in testing, contact details/personnel have changed)	Details of updates (nature of changes to PIRMP)	Date the updated version uploaded to website (if applicable)	Date of completion
12.07.23	Outdated items identified in annual testing, commencement of new project	Contact details, map and pollutant inventory updated, new document format.	21.07.23	21.07.23










# Pollution Incident Response Management Plan\_Balranald Execute

Final Audit Report

2023-08-02

Created:	2023-07-28
By:	Brendan Isaacs (brendan.isaacs@iluka.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAekqj9m_cYQuu-4QTa3U7nBmohQdR1W8O

## "Pollution Incident Response Management Plan\_Balranald Execute" History

-  Document created by Brendan Isaacs (brendan.isaacs@iluka.com)  
2023-07-28 - 1:02:11 AM GMT
-  Document emailed to Philip Lazzari (philip.lazzari@iluka.com) for signature  
2023-07-28 - 1:03:33 AM GMT
-  Email viewed by Philip Lazzari (philip.lazzari@iluka.com)  
2023-07-28 - 1:48:47 AM GMT
-  Email viewed by Philip Lazzari (philip.lazzari@iluka.com)  
2023-07-31 - 5:26:47 AM GMT
-  Email viewed by Philip Lazzari (philip.lazzari@iluka.com)  
2023-08-02 - 2:21:11 AM GMT
-  Document e-signed by Philip Lazzari (philip.lazzari@iluka.com)  
Signature Date: 2023-08-02 - 3:31:40 AM GMT - Time Source: server
-  Agreement completed.  
2023-08-02 - 3:31:40 AM GMT