Pollution Incident Response Management Plan

Risk Statement: High

This document will be reviewed on a one yearly basis, unless a process change occurs earlier than or significant operational change or legislative amendments.

Revision Summary

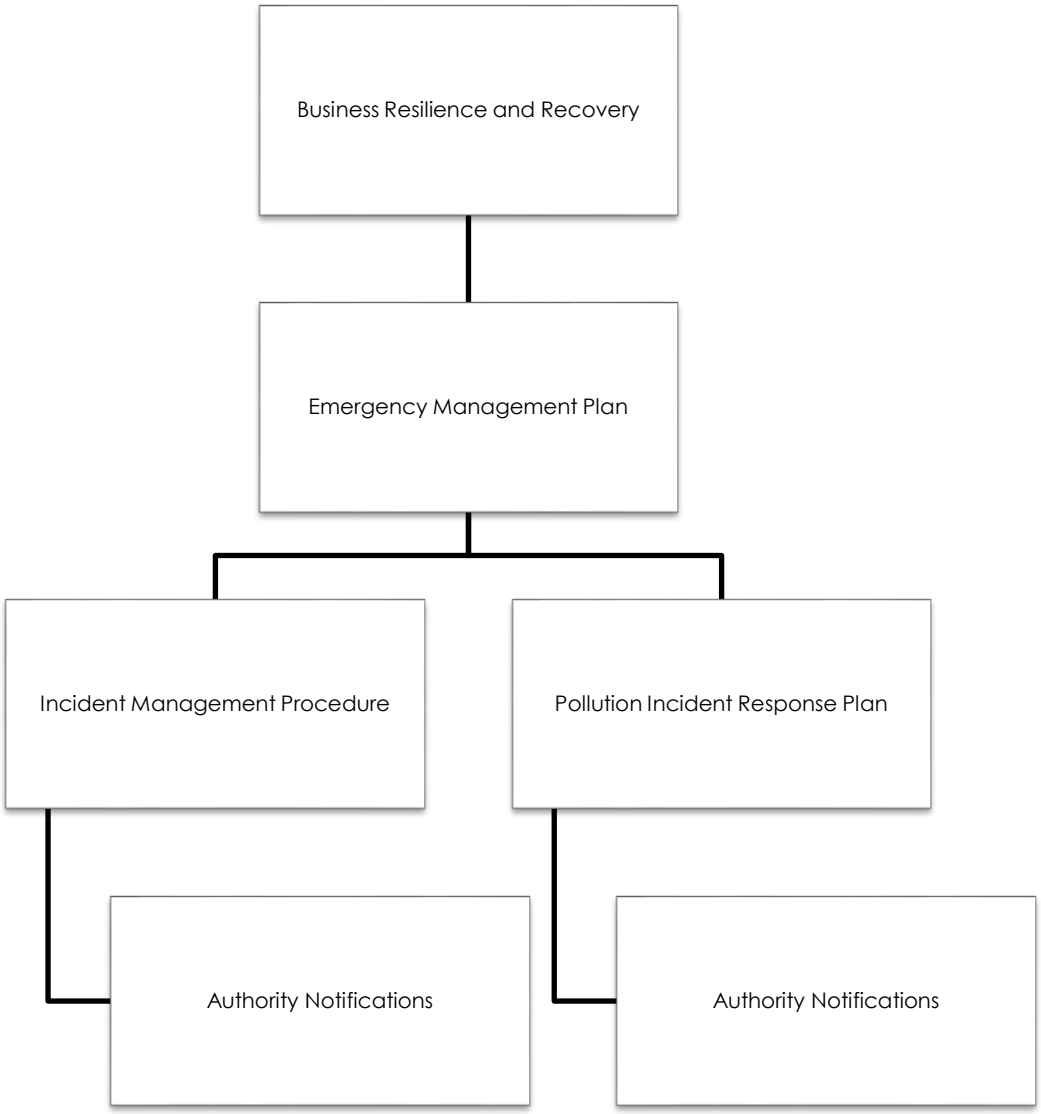
First Issue	Issue Date	Implementation Requirements	Approved By
0	Aug 2012	Prepared by Bharath Ram to comply with the new requirements introduced by the *Protection Legislation Amendment Act 2011 (POEO Act).*	M.D.

Version No.	Revision Date	Clause No.	Revision Details	Approved By
1.0	3 April 13		Review and minor changes in section 4 and section 6 by Bharath Ram	
2.0	31 Oct 14		Review and minor changes in sections 5, 7, 8, 9, 11 and 12 by Michael Thomas	
3.0	14 Jul 2015		Reviewed and major changes to the document by MP	
4.0	Jan 16		Reviewed and update the entire document.	
5.0	August 2016		Updated following aspects and impacts review. Included management of concentrate spill. Removed table indicating specific pollutants and referred to Chemalert and Dangerous Goods Licence on the DCS.	
6.0	May 2017		Update plan to include contact names and 24 contact numbers, update of Revisions Summary, updated map showing the surrounding area likely to be affected by a pollution incident and updated list of potential pollutants.	
7.0	Nov 2017		Update to document after annual test of PIRMP following test of Emergency Management Plan	C Dingle

Approval Position	Automatic Notifications
Environmental Superintendent	All NPM Employees

Hard Copy Locations	Associated Documents to be reviewed
PSE	

Document Hierarchy



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1. NOTIFICATION AND CONTACT DETAILS

In the event of a pollution incident the People, Safety and Environment Manager (or delegate) will assess the incident as per the Incident Management Procedure (DOCID-3- 3898). If the incident has potential to cause material environmental harm as per *Part 5.7, Section 147 of the Protection of the Environment Operations Act 1997* (POEO Act) appropriate external notification processes will be implemented.

Immediate notification can be verbal however written notification must be completed within 7 days of the incident occurring.

The following information must be provided as per *Part 5.7, Section 150 of POEO Act 1997*:

- The time, date, nature, duration and location of the incident,
- The location of the place where pollution is occurring or is likely to occur,
- The nature, the estimated quantity or volume and the concentration of any pollutants involved, if known,
- The circumstances in which the incident occurred (including the cause of the incident, if known),
- The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution if known,
- Other information prescribed by the regulations.

The notification list of all relevant regulatory authorities and project personnel to be notified of any pollution incident for Northparkes is provided in Table 1 Government notifications of incidents

Table 1 Government notifications of incidents

Contact	Phone Number
Emergency Services Parkes Rural fire Service	000 (only if fire or rescue services are required) 02 6851 1541
EPA (EPL4784)	EPA Hotline 131 555
Ministry of Health	02 4924 6477
Department of Industry (Resources & Energy)	02 4931 6666 (Mine Safety Operations) 02 4931 6401 (Environmental Sustainability Unit)
Parkes Shire Council Stephen Campbell	1800 648 585 02 6861 2373 0418 638 447
Office of Environment and Heritage	131 555
WorkCover	131 050
Department of Planning and Environment	02 9228 6111 02 9274 6333

Northparkes 24 hour contact details for notifying pollution incidents are listed in

Table 2 Northparkes 24 hours contact details.

Table 2 Northparkes 24 hours contact details

Name	Contact Name	Contact Number
Northparkes Hotline	Ali Creith	02 6861 3000
Mill Control(24 Hrs)	Thomas Trott	02 6861 3167
Access Control	Matt Flynn	02 6861 3211
PSE Manager	Stacey Kelly	0419 961 615
Emergency and Security Management Co-ordinator	Matt Flynn	02 6861 3140
Environment Superintendent	Chase Dingle	02 6861 3264 / 0467 963 379

2. LEGISLATIVE REQUIREMENTS

This Pollution Incident Response Management Plan (PIRMP) has been developed to describe Northparkes Mines response to a potential pollution incident and to meet requirements of the POEO Act.

2.1 Definition of Pollution Incident

A 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.

Notification of a pollution incident is required if there is a risk of 'material harm to the environment', which is defined in section 147 of the POEO Act as:

a) harm to the environment is material if:

   i. it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

   ii. it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and

b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

3. RESPONSIBILITIES

This management plan has been developed to describe Northparkes Mines response to a potential pollution incident and to meet requirements of the POEO Act.

Responsibilities for this plan are detailed in Table 3 Responsibilities.

Table 3 Responsibilities

Role	Responsibility
PSE Manager	Completing government notifications as required.
Environment and Farms Superintendent	Communicating this management plan as required to on site personnel. Coordinate incident investigations relating to pollution incidents. Complete external notifications required as a result of a pollution incident.
Training and Emergency Specialist	Maintain training programs and systems which assist in the response to a pollution event. Assist with emergency management procedures if required as per this procedure.

4. GENERAL REQUIREMENTS

4.1 Objectives of this Management Plan

This PIRMP has been developed to satisfy pollution reporting obligations under the POEO Act. This plan outlines the classification, testing, reporting and management requirements of an environmental pollution incident.

The objectives of this plan are, to:

- Ensure comprehensive and timely communication to relevant external authorities, the community and other stakeholders of pollution incidents;
- Minimise and control the risks of any potential pollution incident by development of planned actions; and
- Ensure this plan is appropriately implemented by trained staff and is available and understood within the business.

4.2 Relationships with other Plans

This management plan is linked to the DOCID-3-8619 Emergency Management Plan (EMP).

Figure 1 provides an overview of the management of a pollution incident as per this management plan. Figure 2 provides an overview of the general Emergency Management process in the event that the incident is major and triggers the activation of the Emergency Management Plan.

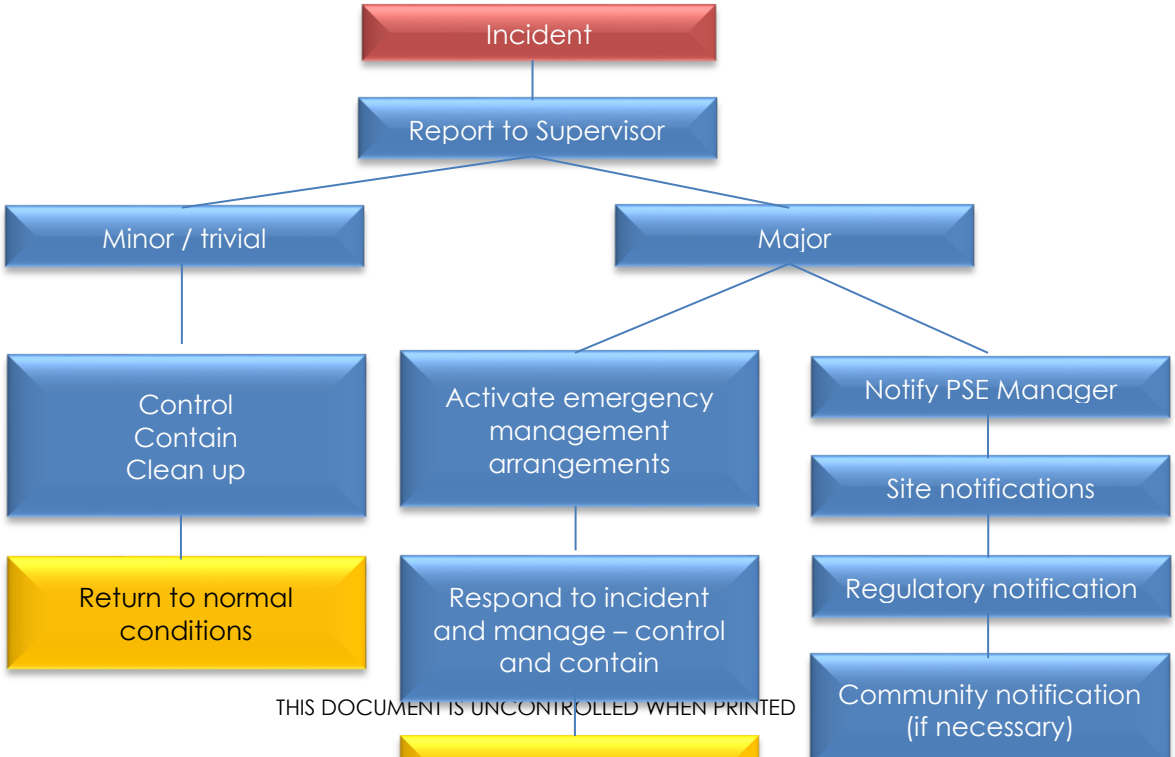


Figure 1 Pollution Incident Flow Chart

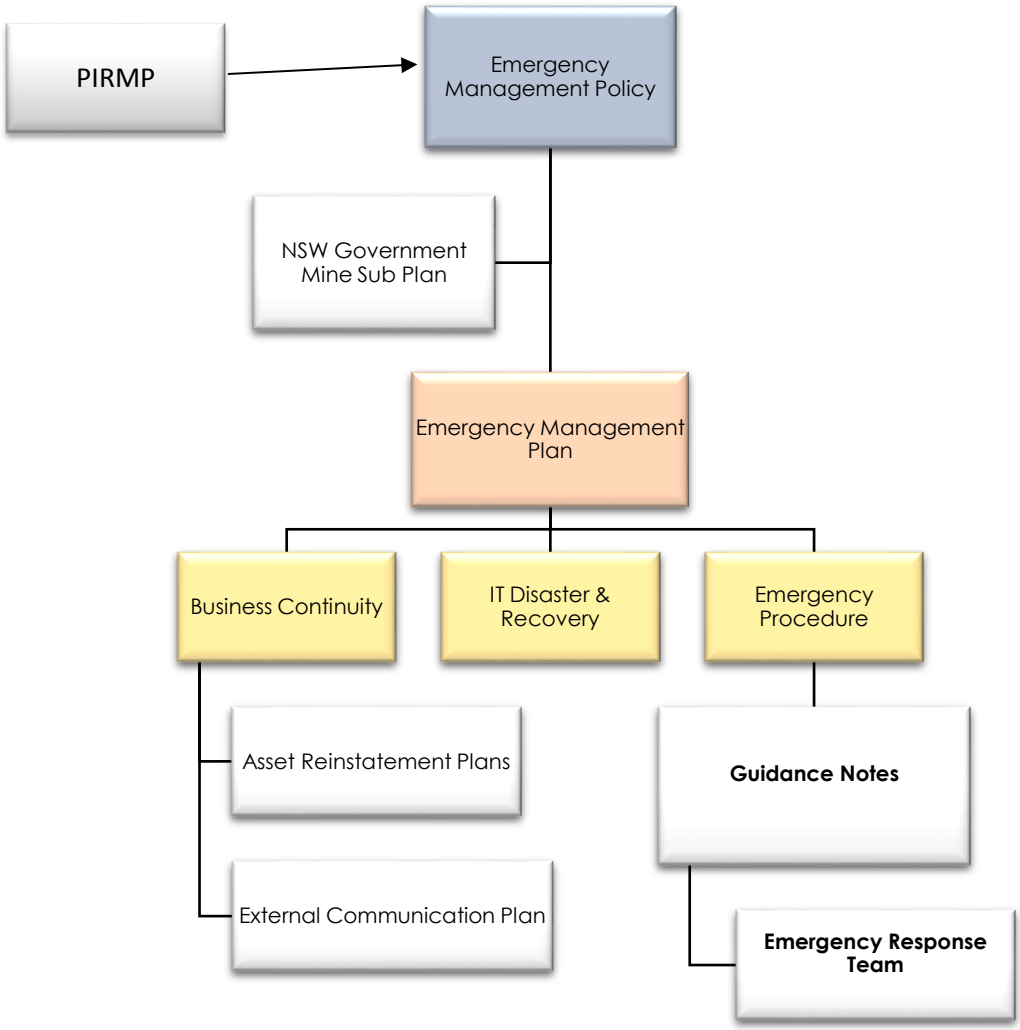


Figure 2 Emergency Management Flow Chart

4.3 Hazards and Risk Management

4.3.1 Semi Quantitative Risk Assessments (SQRA) Critical Risks

Northparkes Mines has identified critical risks (Principle Hazards) using the SQRA process. These critical risks have the potential to cause significant injury, fatality or multiple fatalities. The risks in order of criticality:

1. On site vehicle incident
2. Offsite vehicle incident
3. Underground rock fall incident
4. Electric shock / arc flash
5. Fixed plant – crush incident
6. Mobile plant crush incident
7. Fall from height Incident
8. Fire underground

9. High pressure release incident
10. Falling object incident
11. Explosive product incident
12. Shaft related incident
13. Tyre explosion
14. Chemical incident
15. Confined space incident
16. Air blast
17. Stockpile engulfment
18. Mine subsidence
19. Surface fire
20. Engulfment / inrush underground

Of the top 20 SQRA critical risks there are six identified risks with environmental implications. These are risk numbers 1, 2, 8, 11, 14, 17, 18 and 19.

The potential pollution incidents identified at Northparkes Mines include:

- Air Pollution Incident: escape of significant dust or smoke to atmosphere;
- Water Pollution incident: Significant sediment, leachate, copper concentrate, chemicals, hydrocarbons/fuel off site to a watercourse or groundwater;
- Noise pollution: Significant noise impacts on neighbouring residences and exceedance of Noise Criteria as required by the Development Consent; and
- Land Pollution incident: Escape of sediment, copper concentrate hydrocarbons, fuels or chemicals released off site to land.

Specific details of potential health and environmental hazards likely to be encountered at Northparkes are outlined in Table 4 Northparkes Health Hazards and Table 5 Northparkes Environmental Hazards respectively.

The Environmental Aspects and Impacts Register DOCID-3-8926 includes a list of these potential pollution incidents and their management practices.

Northparkes is located in an area which includes agricultural activities and activities associated with rail transport (from Goonumbla siding concentrate container loading activities). Pollution events have the potential to impact on surrounding agricultural properties and the residents at these locations.

Specific details of potential health and environmental hazards likely to be encountered at Northparkes are outlined in Table 4 and Table 5 respectively.

Table 4 Northparkes Health Hazards

Source/Pollutant	Impact	Events	Impact description	Likelihood	Controls
Substance	Dust - Inhalable	Dust generation from mobile plant and operations	Respiratory diseases, difficulty to breath	C-Possible	Mining operations(surface/underground (UG) dust controls, UG ventilation standards, Bogging procedures include dust suppression processes, PPE, dust monitoring, routine respiratory medical surveillance
	Dust- Respirable	Dust generation from mobile plant and operations	Respiratory diseases, difficulty to breath	C-Possible	Mining operations dust controls, UG ventilation standards, Bogging procedures include dust suppression processes, PPE, dust monitoring, routine respiratory medical surveillance
	Respirable Crystalline Silica	Dust generation from mobile plant and operations	Respiratory diseases, difficulty to breath	C-Possible	Mining operations dust controls, UG ventilation standards, Bogging procedures include dust suppression processes, Personnel Protective Equipment (PPE), dust monitoring, routine respiratory medical surveillance
	Arsenic	Dust generated from concentrate stock piles and load out operations, contact with concentrate area surfaces, laboratory processes	Chronic effects, skin irritation	C-Possible	As per dust control measures, pressure cleaning as preventative maintenance process, training on personal hygiene & crib room etiquette, boot cleaners, PPE, biological monitoring
Sound / Vibration	Noise (Continuous)	Noise generation from mobile plant and operations	Temporary / permanent hearing loss	C-Possible	Blasting- distance separated for safe blasting distance, personal protective equipment (PPEP, Mobile Plant - fit for purpose machinery, enclosed cabs, personal protective equipment (PPE), standard operating procedures (SOP), job safety analysis (JSA),, double hearing protection specific tasks, noise dosimetry, routine audiometry

Source/Pollutant	Impact	Events	Impact description	Likelihood	Controls
	Noise (Impact)	Noise generated from impact tools - rattle guns, needle guns, hammer drills. Noise generated from underground plant operation	Temporary / permanent hearing loss	C-Possible	SOP's, TRACKS, JSA's, hearing protection training, PPE, noise monitoring, routine audiometry
Radiation	Gamma / X-rays	Exposure to radiation from density gauges (slurry measurement), Amdel (on stream analyser), NDT via contractors	Acute/Chronic affects	D-Unlikely	Radiation management plan, specific training, dedicated Radiation Safety Officer, SOP's, signage, dosimetry for specific area operators, dedicated trained Amdel technicians, barricading of Amdel source to restrict exposure potential,
Substances	Diesel Exhaust Particulate (DP/DPM)	Diesel Fume & Particulate generation from mobile plant and operations		C-Possible	Fit for purpose machinery, Ventilation, Mobile Plant maintenance, particulate filters on some mobile plant, PPE, respirator fit testing, respirator protection training, Diesel Particulates Monitoring (DPM), routine medical surveillance

Table 5 Northparkes Environmental Hazards

Source/ Pollutant	Impact	Events	Impact description	Likelihood	Controls
Sewage	Water Pollution	Failure of plant causes sewage spill (i.e. pump/failure/tank rupture) Pipeline leakage	Bacteriological contamination of water bodies Groundwater pollution, bacteria and phosphate contamination	C-Possible	Planned maintenance (i.e. visual observations) Infrastructure designed to specifications Dosing system Control system with alarm Licensed contractor regularly inspects infrastructure / water quality Area drains to retention pond
	Land Contamination	Pipeline leakage	Sewage entering the soil, bacteria and phosphate contamination	C-Possible	Planned maintenance (i.e. visual inspections), pipeline designed to specifications
Hydrocarbon	Land contamination	Spill <100L	Hydrocarbons entering natural environment	C-Possible	Hazardous Materials and Contamination Control MP Spill Clean-up SOP and training in spill response Supply of spill kits, enretech

Source/ Pollutant	Impact	Events	Impact description	Likelihood	Controls
					Bunded waste hydrocarbon storage areas Oil water separators
		Spill >100L		B-Likely	Hazardous Materials and Contamination Control MP Spill Clean-up SOP and training in spill response Supply of spill kits, enretech Bunded waste hydrocarbon storage areas Oil water separators Emergency response procedures and dedicated ER team
Fire – Bushfire/Wildfire/Grassfire	Ecological degradation	Burning rubber	Damage to vegetation	D-Unlikely	Reclaim tunnels have smoke detection and sprinkler systems with communication system. Workshops have smoke alarms. Hot work permit procedures with trained personnel. Fans used to extract smoke from area. Emergency response procedures and dedicated ER team. Designated welding and cutting areas in workshop
Chemical Spill	Land / water	Accidental chemical spill – reagent handling, storage and disposal	Chemical spills onto soil causing contamination Chemical spills and substance enters the groundwater or surface water systems	B-Likely	Regular maintenance through plant shutdowns on all equipment, bunded lubrication storage area. Hazardous Materials and Contamination Control MP Spill Clean-up SOP and training in spill response Supply of spill kits, enretech Bunded storage areas

Source/ Pollutant	Impact	Events	Impact description	Likelihood	Controls
		Toxic chemicals	Toxic chemicals entering the natural environment	B-Likely	Dangerous goods signage and labelling, intrinsically safe radio batteries, separation of reagents, monthly planned area inspections. Dedicated ER team with chemical handling training. Emergency scenarios undertaken. Reagent yard in bunded area, SDS available, stainless tank, fume hood and scrubbers. Bunded transfer point. Hazardous substance approvals procedure for new substances. SOPs for reagent transfer and handling. Trained and competent operators and regular equipment maintenance. Registered and appropriately licenced vehicles and drivers for transport. Tank levels monitored via CITECT system. Sump operated automatically to control spills or major rainfall events.
Tailings	Land	TSF wall failure	Contamination of surrounding land	C-Possible	Piezometer monitoring for internal wall pressures Contracted TSF civil engineer oversees design and provides recommendation for operation. Annual surveillance audit conducted by contacted TSF civil engineer and submitted to DSC for approval. Two yearly independent audits of TSFs. Disaster Management and Recovery team for major failures and ER team for incident control / response. TSF to be managed by Northparkes with the support and reporting through contracted TSF civil engineer. TSF civil engineer contracted from Knight Piesold.
	Water	TSF wall failure	Contamination of nearby watercourse	C-Possible	Piezometer monitoring for internal wall pressures Contacted TSF civil engineer oversees design and provides recommendation for operation. Annual surveillance audit conducted by contracted TSF civil engineer and submitted to DSC for approval. Two yearly independent audits of TSFs.

Source/ Pollutant	Impact	Events	Impact description	Likelihood	Controls
					Disaster Management and Recovery team for major failures and ER team for incident control / response. Water management infrastructure designed to divert clean water around mining operations. TSF to be managed by Northparkes with the support and reporting through contracted TSF civil engineer. TSF civil engineer contracted from Knight Piesold.
	Land	TSF line failure	Contamination of surrounding land	C-Possible	Lines in bunded trench Regular inspections Dedicated TSF resource CITEC monitoring on flows Alarm set points. Run pumps in auto (>80 cube – pump shut down Standby line 2 yearly independent audit Ample bunding material readily available Machinery readily available to prepare a bund Trained and competent operators
	Wildlife	Habitat loss	Wildlife trapped /killed from exposure to tailings	C-Possible	Cyanide is no longer used on site Bare vegetation around TSF Regular TSF inspections
Water treatment plant (WTP)	Water	Failure of WTP	Water storage tank to overflow polluting surrounding environment Cause erosion of surrounding land	C-Possible	Citec alarm system External alarm system Tank level indicators Trained operators Daily inspections of WTP and regular maintenance Drainage around area directed to two sumps and overflow directed to RP13
Mineral Waste	Ground and surface water	Leachate	Groundwater and surface water contamination	B-Likely	Mineral Waste Management Plan, Mineral Waste Assessments and acid rock drainage assessment
Topsoil	Water/land/ecological	Incorrect topsoil placement may result in sediment loss	Water pollution (GW/SW) Land degradation (erosion/soil loss) Introduction of weed species through topsoil placement impacting on biodiversity	B-Likely	Site drainage and control ponds, specifications for topsoil stockpiles, Site Inspections, water quality monitoring, Site Disturbance SOP, training module; topsoil MP.

Source/ Pollutant	Impact	Events	Impact description	Likelihood	Controls
LPG Storage	Ecological	LP gas leakage from bulk container	Damage to vegetation due to explosion of bulk container	E-Rare	Area is weeded, sprayed for weed reduction, has a rock barrier to reduce chance of impact from machinery. Annual inspections on pressure vessel. Procedures in place for refilling. Outlet pipe braced with bollard to reduce risk of damage from ground movements.
Process water	Surface and groundwater	Discharge of material to water	Failure of water management infrastructure results in discharge of process water into surrounding watercourses	D-Unlikely	Process Water Dam has piezometer monitoring equipment installed and undertaken monthly by OPD crew members. Series of surface water monitoring locations around the plant and TSFs are monitored quarterly. TSF inspections include visual observations of ponds and drainage lines. Water management infrastructure designed for 1 in 100 yr 72hr rainfall event Ponds pumped after rainfall to maintain capacity
Discharge of water off-site	Retention and Sediment Ponds	Discharge of water off-site	Water pollution due to discharge of water from retention and sediment ponds	B- Likely	Water levels are checked on a weekly basis. Pump water where required to reduce the water level in the dams
Tailing Storage Facilities (TSF)	Dust from TSF	Dust emissions from the TSF	TSF dust emissions when windy conditions	B-Likely	Dust prevention trials ie cropping/vegetation . Air monitoring around TSF
Copper concentrate	Spillage as a result of train or truck accident when hauling product from site to rail siding and port.	Soil and water contamination	Soil and water pollution due to spillage during transport.	B- Likely	Contract management processes regarding appropriate competencies of contractors transporting concentrate to rail siding and port facilities. Water management controls at Goonumbla siding in event of spillage whilst unloading from the truck and loading to train. Concentrate logistics procedure. Containers are FFP (lids) Satellite monitoring of concentrate trucks. Time sheet monitoring for concentrate truck drives (management of fatigue). Site drug and alcohol testing includes concentrate truck drivers.

5. PRE-EMPTIVE ACTIONS TO BE TAKEN

Northparkes has taken several measures to reduce the pollution incidents on site. All the relevant environmental management plans incorporate pollution reduction measures while carrying out the mining activities. The pre-emptive actions at Northparkes, taken to minimise the likelihood of environmental hazards include the following:

- Inductions;
- Safety Management Plans;
- Standard Operating Procedures ;
- Risk frame work and assessment tools – SQRA;
- Hazard Identification tools – Pre Task Hazard Assessment (PTHA) and JHA;
- Regular inspections, monitoring and auditing of site environmental controls;
- Spill containment kits on site;
- Water carts utilised as necessary;
- Emergency response equipment – emergency response vehicles, trucks and gear;
- Emergency response team;
- Training – Spill Response, etc.; and
- Risk frameworks.

These processes are summarised in the Environmental Management Strategy DOCID-3-3544

Northparkes will implement appropriate measures to limit, as far as reasonably practicable, the risk of pollution due to mining activities. Such measures are set out in the management plans and Standard Operating Procedures including:

- Environmental Management Strategy;
- Noise Management Plan DOCID-3-3718;
- Non Mineral Waste Management Plan DOCID-3-3719;
- Water Management Plan DOCID-3-3713;
- Air Quality Management Plan DOCID-3-3714;
- Mine Safety Management Plan DOCID-3-3547;
- Incident Management Procedure DOCID-3-3898;
- Emergency Management Plan DOCID-3-8619;
- Pre Incident Plan - Diesel Bund DOCID-3-3864;
- Pre Incident Plan – Reagent Yard DOCID-3-3863
- Site Security Management Plan DOCID-3-4341;
- Site Wide Electrical Safety Management Plan DOCID-3-3778;
- Zero Harm Walk Procedure DOCID-3-8519;
- HSE Management System Reference Manual DOCID-3-3542; and
- Hydrocarbon and Spill Management Plan DOCID-3-3716.

6. INVENTORY OF POLLUTANTS

An inventory of all chemicals utilised on site is maintained via ChemAlert. If any new chemicals have to be brought to site other than the one already approved in ChemAlert, a 'Chemical Approval and Risk Assessment Form (DOCID-38-4575) form, chemical risk assessment of the new substance and SDS are submitted, then reviewed and approved by Environment, Health, Safety, Supply and Metallurgical teams.

Significant pollutants, their quantities, types of containment and storage locations can be found in ChemAlert) on the Northparkes Intranet. The Dangerous Goods Licence is also stored on the DCS which includes information on the approved Dangerous Goods and maximum quantities approved for site.

A summary of significant pollutants found at Northparkes is provided in the Table 6.

Table 6 Significant pollutants stored at Northparkes

Material Name	Solid/Liquid/ Gas or Powder	Maximum Amount	Type of containment	Relevant Health and Environmental Properties
Diesel	Liquid	120000 L	Bunded area	Flammable
Engine Oil	Liquid	6000 L	Bunded area	Flammable
Hydraulic Oil	Liquid	6000 L	Bunded area	Flammable
Flocculent	Powder	20000 Kg	Flocculent storage area	Irritant
DSP 701	Liquid	16000 L	Reagent yard	Corrosive
Sodium Hydrosulphide	Liquid	60000 L	Reagent yard	Corrosive
Frother DSF 11	Liquid	20000 L	Reagent yard	Irritant
PAX	Powder	900 Kg	Reagent yard in a shed	Irritant
Nitric Acid	Liquid	20000 L	Nitric acid bunded area	Corrosive
Oxalic Acid	Powder	1000 Kg	Storage shed in a bunded area	Corrosive
Tailings	Powder	-	Cropping, hay bales, surface ripping, wet tailings	Irritant
Copper Concentrate	Powder	-	Concentrate Shed/ containers on truck/train.	Irritant
Contaminated water	Liquid	1800 ML 27,000ML 70 ML	Process water pond E22 pit RP9	Contamination

7. SAFETY EQUIPMENT ON SITE

Some of the safety equipment at Northparkes include;

- Spill kits are available on site. The spill kits are provided with enretech, booms and socks to control, contain and clean any spills;
- Breathing apparatus;
- Pre-incident plans for site specific tasks;
- Chemical suits for handling any chemical/hydrocarbon spills;
- Plant and equipment are available to create additional bunding in the event of significant sediment runoff or a fuel spill using material available on site;
- HAZMAT Trailer is kept on site with the emergency response team;
- PPE – for different chemicals, storage areas and warehouse; and

- Gas monitoring meters.

The spill kits are located at various areas around site near chemical and hydrocarbons usage locations such as underground operating areas, underground offices, vehicle maintenance workshops, contractor yards, warehouse, ore processing areas, core shed, lab, chemical storage area, hydrocarbon storage area.

8. COMMUNICATION OF EMERGENCY SITUATIONS

8.1 On site / Internal Communication

During emergency situations all internal communications are managed as detailed in the Northparkes Emergency Management Plan.

8.2 Community Engagement

Northparkes will notify immediately via telephone of any major pollution incidents which may have direct impact to the surrounding neighbours. Other moderate incidents will be notified through community meetings. A record has been maintained on site with the names and contact details of the surrounding neighbours.

Preliminary notifications of major emergency pollution incidents will be include the following information:

- When a pollution incident occurs
- Time, date and location of the pollution incident
- What steps are being taken to address the incident, both immediately and in the longer term
- What it means to their health, safety, community and environment
- What precautions or actions they need to take

A secondary or final notification will be made when the incident is officially over to provide an update on the above.

Community notifications will be made by Manager – People, Safety and Environment or their delegate.

8.3 Stakeholder and Media Management

A nominated spokesperson is determined by the nature of the incident (e.g. business unit or site specific focus). Other employees may be nominated where a matter is of a technical or specialist nature.

Primary point of contact for stakeholder and media will be External Relations Advisor or their delegate for all incidents.

9. MINIMISING HARM TO PERSONS AND PREMISES

Refer to the Emergency Management Arrangements and emergency response plan for the site. At all times minimising harm to persons shall be a priority. Northparkes plans mock scenario's and has insurance in place for pollution events.

If there is a spill the Hydrocarbon and Spill Management Procedure (DOCID-3-3717). This procedure outlines the containment and remediation actions to be implemented following a spill.

10. TRAINING, TESTING AND REVIEW

10.1 Staff Training

All managers, supervisors and staff will be trained progressively. Tool box talks will be presented to educate workers of preventative actions, controls, PIRMP updates, site issues and environmental pollution incidents involved in the site. The tool box meetings will present the chance for employees to raise any concerns or issues with the projects and PIRMP.

All employees, subcontractors, suppliers and visitors to the site will be notified via a site induction of the requirements on site for pollution prevention.

Through tool box talks, site personnel and subcontractors will be educated on those aspects of environmental management as appropriate to the task assigned to them.

10.2 Testing

After preparation of the PIRMP, it is to be tested via a mock pollution incident to ensure personnel are aware of the processes and responsibilities on site. All testing of this management plan and any supplementary amendments that are made are to be documented and stored to make it available to EPA when requested.

The PIRMP will be reviewed and maintained to ensure information in the plan is accurate and up to date.

Northparkes emergency team at regular basis has undertaken emergency scenarios involving environmental pollution incidents.

10.3 Scenario test

The most recent scenario test was a desktop scenario held on 3 November 2017 and included Chase Dingle, Tim Bell, Jamie Pope, Nathan Jones and Donna Shaw.

Notes and actions taken during this meeting are found in the DCS DOCID-18-6622.

11. REVIEW

This Management Plan will be reviewed and updated annually or in the case of a significant operational change. The review will include an assessment of the effectiveness of control measures and performance against the Plan's objectives.

PIRMP will be made available via Northparkes website and will be updated in line with the legislative updates.

12. MAPS

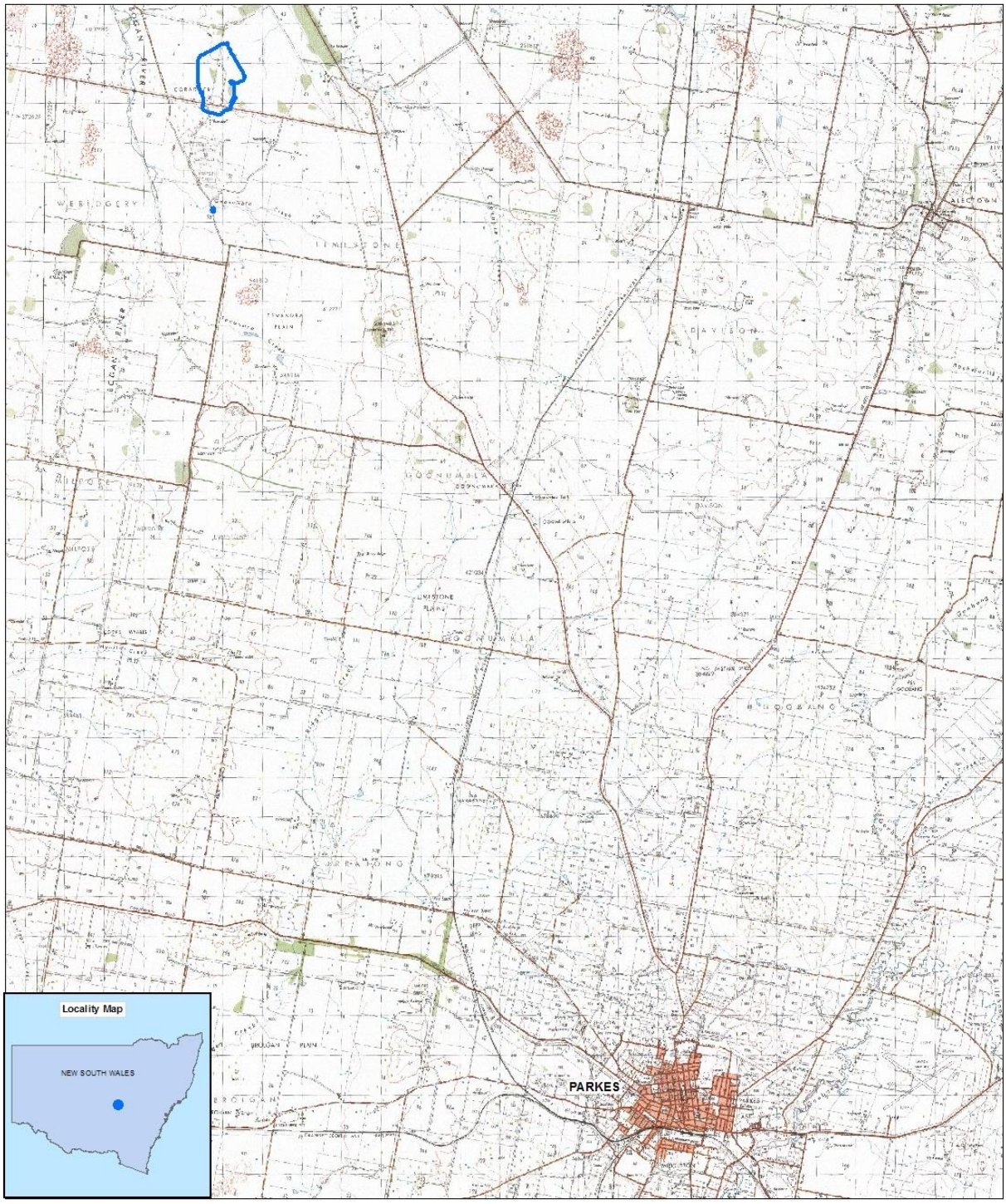
Northparkes Mines location map, dangerous goods storage area map and site drainage maps are attached in Appendix A, B and C.

13. RELATED DOCUMENTS

Document Title	Doc ID No.
Emergency Management Plan	DOCID-3-8619
Northparkes emergency Response Procedure	DOCID-3-8616
Environmental Guidelines – Preparation of Pollution Incident response Management Plan	
Environmental Aspects and Impacts Register	DOCID-3-8858

Document Title	Doc ID No.
Dangerous Goods Licence	TBA
Incident Management	DOCID-3-3898
Environmental Management Strategy	DOCID-3-3544
Water Management Plan	DOCID-3-3756
Air Quality Management Plan	DOCID-3-3714
Chemical Approval Risk Assessment	DOCID-3-4575
Hazardous Substances and Contamination Control	DOCID-3-3716
Non Mineral Waste Management Plan	DOCID-3-3719
Noise Management Plan	DOCID-3-3718
Site Security Management Plan	DOCID-34341
Hydrocarbon and Spill Response Plan	DOCID-3-3717
Site Wide Electrical Safety Management Plan	DOCID-3-3778
Pre Incident Plan - Diesel Bund Spill	DOCID-3-3864

APPENDIX 1 - NORTHPARKES LOCATION MAP



APPENDIX 2 - NORTHPARKES OPERATIONAL LAYOUT

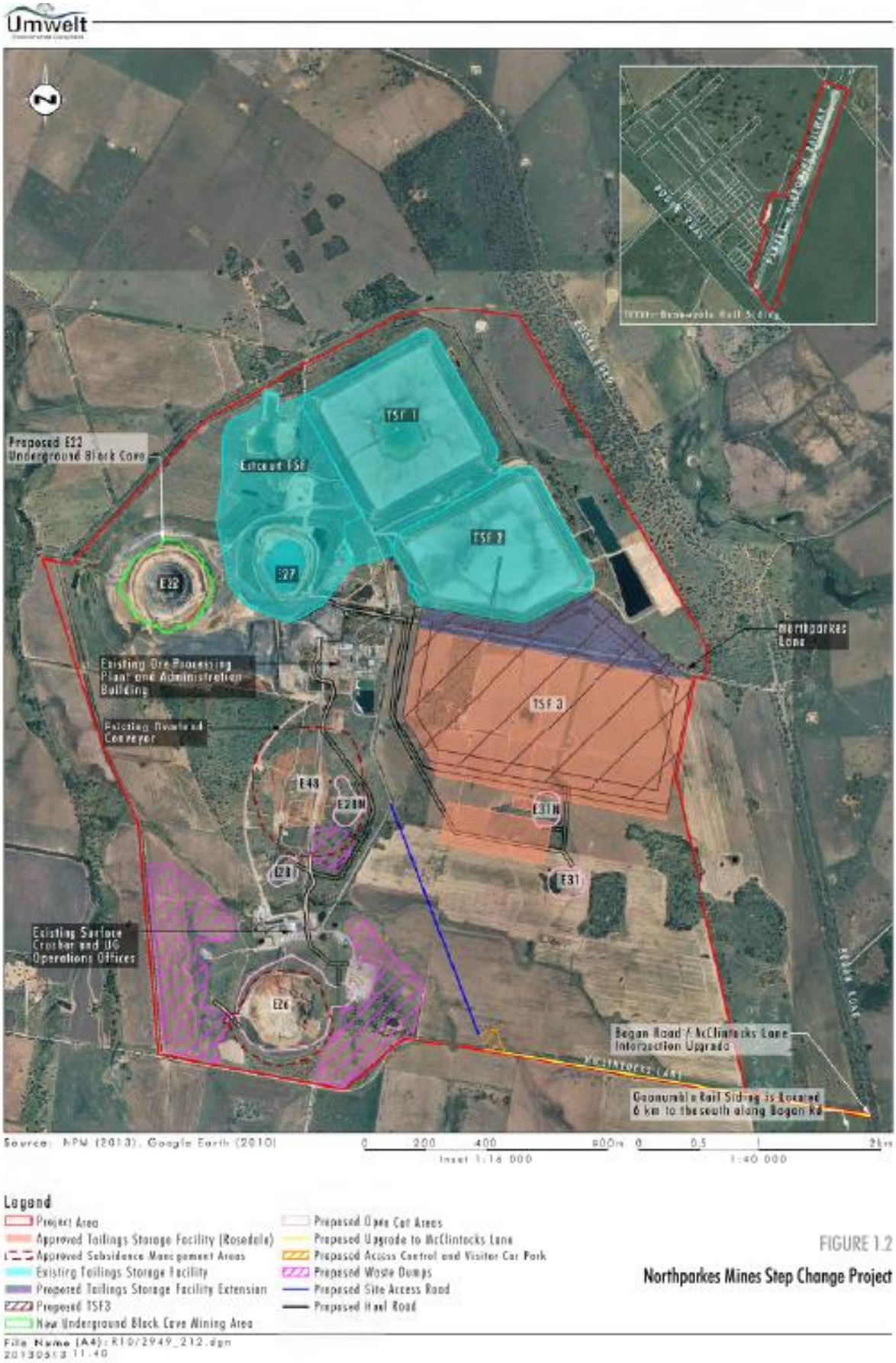
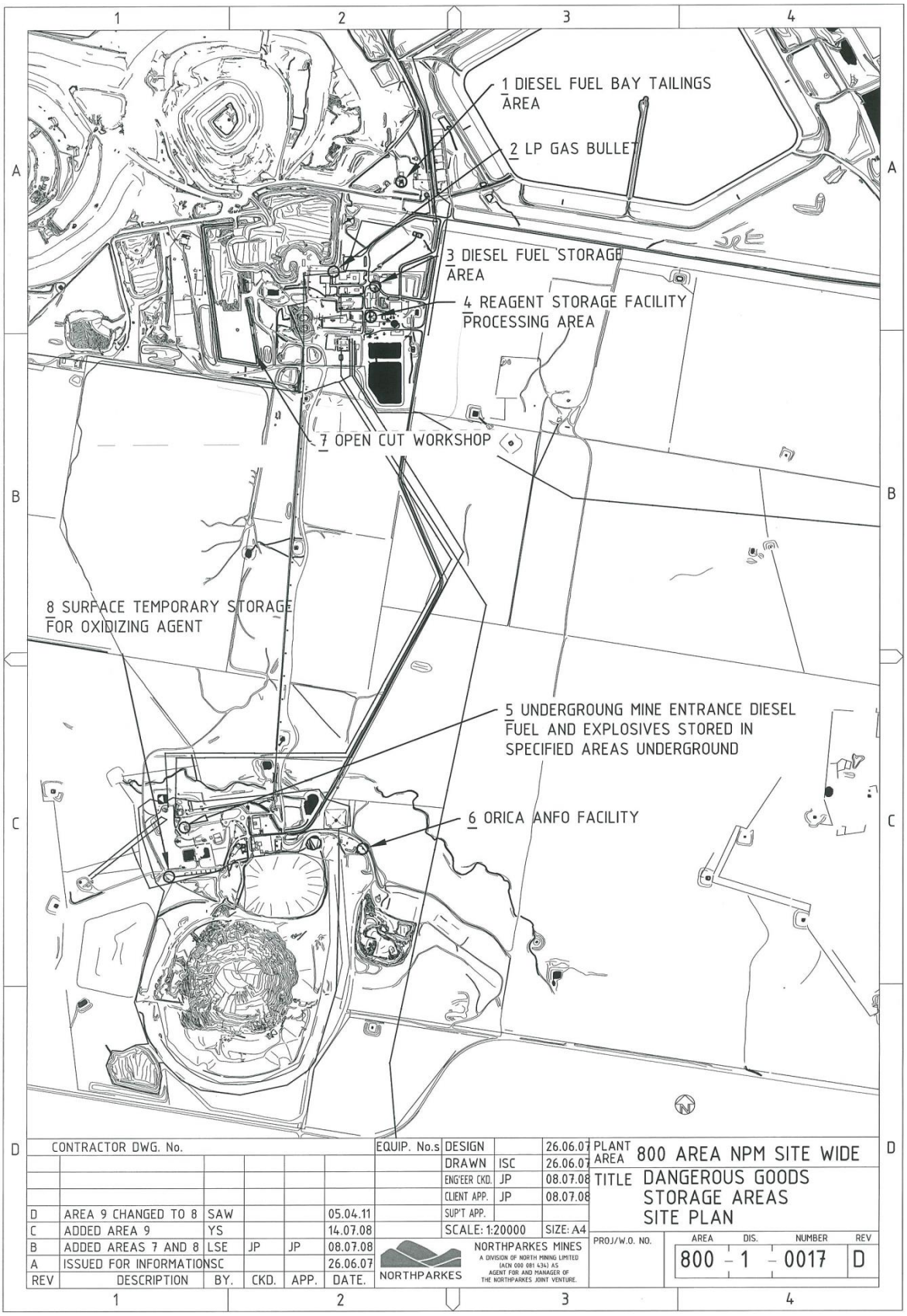
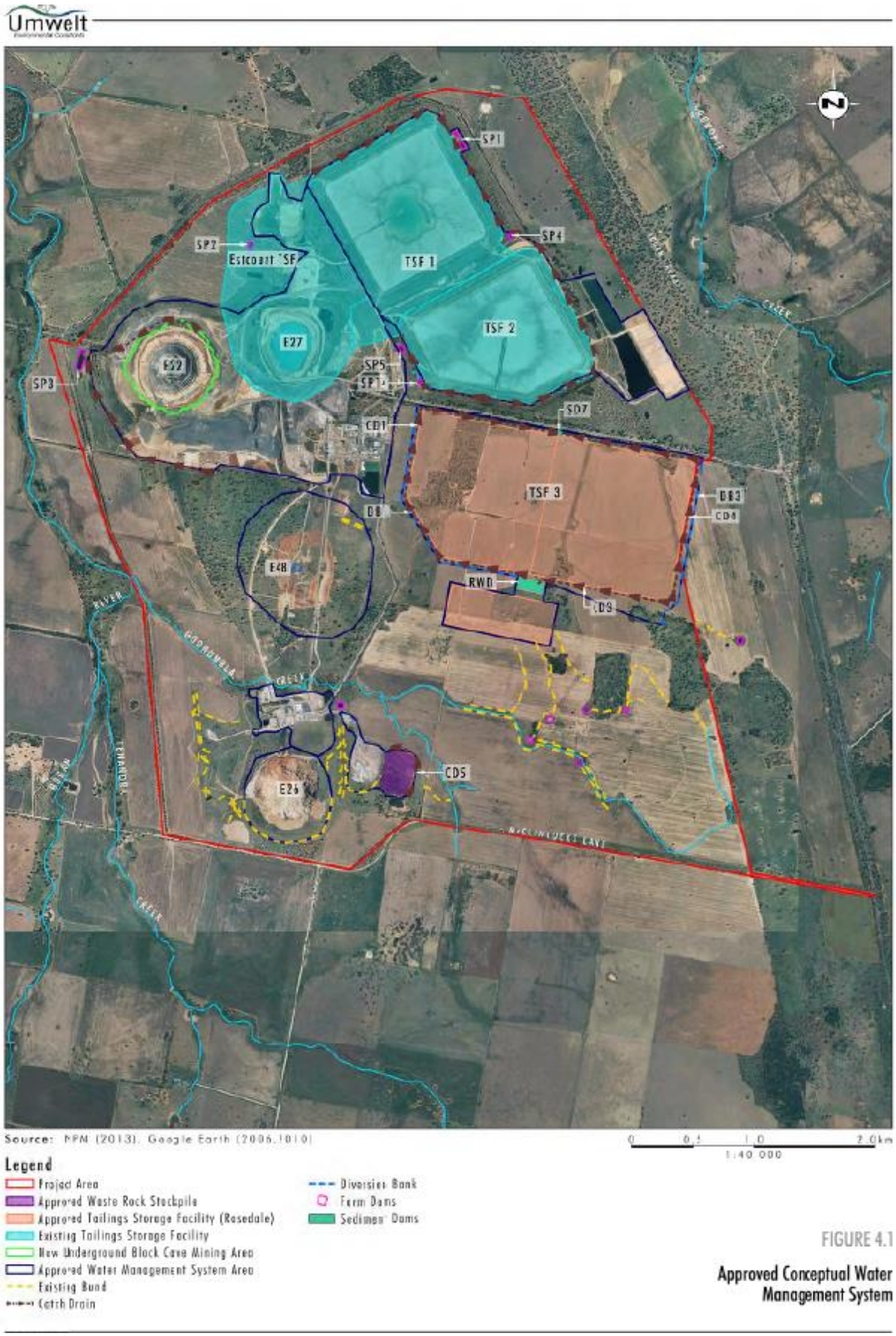


FIGURE 1.2

Northparkes Mines Step Change Project

APPENDIX 3 - DANGEROUS GOODS STORAGE AREA



APPENDIX 4 - SITE DRAINAGE MAP & MINE LEASE BOUNDARY

(Location of the premises to which the licence relates)