HERA MINE AND FEDERATION MINE

16/12/2024







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Author	Aurelia and IEMA		
Version	V0.1		
Site Name	Hera Mine and Federation Mine		
RMP Commencement Date	15 March 2024		
	Number	Expiry date	
Mining Lagood	ML 1686	16 May 2034	
mining Leases	ML 1746	7 December 2037	
	ML 1862	16 October 2044	
Mining Lease Holder	Hera Resources		

1. INTRODUCTION

Hera Mine and Federation Mine, collectively known as the Site, are underground metalliferous mines owned by Hera Resources Pty Ltd (Hera Resources), a wholly owned subsidiary of Aurelia Metals Limited (Aurelia). The Site is located approximately 100km southeast of Cobar and approximately 4km south of Nymagee in the central west of New South Wales (NSW) (see **Figure 1**). The Site consists of two underground mines, a run-of-mine (ROM) pad, temporary waste rock emplacement (WRE), processing plant, tailings storage facility (TSF), and associated infrastructure and ancillary activities.

This Rehabilitation Management Plan (RMP) has been prepared in accordance with the NSW Resources Regulator's (RR) Form and Way: Rehabilitation Management Plan for Large Mines (RR, 2024) and associated guidelines (refer Section 1.3). The Plan has also been prepared to satisfy Condition B87 of development consent SSD 24319456 which requires Hera Resources to prepare and implement a Rehabilitation Management Plan in accordance with the conditions imposed on mining leases associated with the mine under the Mining Act 1992.

1.1. History of Operations

Hera Resources commenced Hera Mine site earthworks in December 2011, including clearing of vegetation, construction of offices and workshops and development of a box cut to allow establishment of a portal and decline. These activities were approved as part of a Category 3 exploration activity assessed under Part 5 of the NSW Environment Planning and Assessment Act 1979 (EP&A Act) in 2007.

Hera Mine received development consent MP 10_0191 on 31 July 2012 by the Department of Planning, Housing and Infrastructure (DPHI) (formerly DPIE) under Part 3A of the EP&A Act. ML 1686 was issued under the Mining Act on 16 May 2013 and ML 1746 was subsequently issued on 7 December 2016.

Completion of the site access road in December 2011 triggered key construction and operational milestones for the site. In 2013, this included the development of the Hera Mine decline, waste rock emplacement area and processing plant. Activities carried out between January to September 2014 period saw the construction of the TSF and power plant and firing of the first stope. The production of the first zinc-concentrate and pouring of gold occurred in August and September 2014, with the processing plant officially accepted on 22 September 2014. Hera Mine transitioned into Care and Maintenance in March 2023.

The original Mine Operations Plan (MOP), commenced 16 May 2013, covered the first 4 years of mining between 16 May 2013 to 26 February 2017. Superseded, the MOP was extended on 27 February 2017 to 31 December 2022 and then for an additional 2 years commencing between 1 January 2020 to 31 December 2022. The MOP was replaced on 2 July 2021 on the introduction of the Mining Amendment (Standard Conditions of Mining Leases – Rehabilitation) Regulation 2021 under the Mining Act 1992.

There has been no rehabilitation on the Hera Mine site at the time of writing as the current disturbance footprint is required for current and future operations. Surface disturbance is generally limited to Life of Mine Infrastructure.

Federation Mine was approved on 2 March 2023. Mining of the Federation deposit allows for a transition of mining operations from Hera Mine to Federation, as ore from the Federation deposit replaces ore from the Hera Mine. As per Condition A7 of SSD 24319456 within 12 months of the date of commencement of the Federation Mine, Hera Resources must surrender development consent MP10_0191 for the Hera Mine. In accordance with Condition A8 of SSD 24319456, in the event of any inconsistencies with other approvals, the conditions of SSD 24319456 prevail.

Following the mineral discovery, an Exploration Decline Program was approved for a bulk sample and supporting infrastructure at the Federation Site in August 2021 by the Resources Regulator under Part 5 of the EP&A Act and section 23A(4) of the Mining Act 1992.

The Federation Project physically commenced under SSD 24319456 on 3 May 2024. Mining operations are approved at the Site until 31 December 2036.

SSD 24319456 was modified in November 2023 to shift the location of a vent rise and change the staging allocation of biodiversity offset credits. In October 2024, Hera Resources submitted a second modification to increase ore haulage to Peak Mine and modify approach to ore processing and tailings handling.

A summary of modification history for MP 10_0191 and SSD 24319456 is provided in the next section, in **Table 1**.

1.2. Current Development Consents, Leases and Licences

1.2.1. Development Consents

Table 1 below shows Development Consents held in relation to the Site.

Table 1: Development Consents

lssuing / Responsible Authority	Development Consent	Details	Date of Issue	Expiry
Cobar Shire Council	2012/LD- 00004	Construction and use of a mine camp, including accommodation facilities, ablution facilities, a water treatment facility, communal facilities and a communal car park.	14 March 2012	N/A
	2019/LD- 00027	Construction of the Nymagee pipeline. The Nymagee pipeline is connected to the historic Nymagee Copper Mine and water is transferred to Hera for use in operations.	13 December 2019	N/A
	MP 10_0191	Project Approval for Hera Gold Mine	31 July 2012	
	MP 10_0191	Extension of on-site powerlines from the	11 1.1.1.2012	31 December 2020
	(MOD1)	surface ventilation fan to the mine camp		
	MP 10_0191	Modification to the approved haulage route	21 November	
	(MOD2)	along Nymagee-Hermidale Road	2014	
	MP 10_0191	Increase to the ore production rate and	25 February	
	(MOD3)	construction of supporting infrastructure	2016	
Department of Planning, Housing and Infrastructure	MP 10_0191 (MOD4)	Extension to the approved project boundary to extract and process an additional 62,000 t of gold-zinc-lead ore	21 September 2016	31 December 2022
(DPHI)	MP 10_0191	Increasing transportation rate of	3 December	
	(MOD5)	concentrate and water management storage	2019	
	MP 10_0191 (MOD6)*	Increasing transportation rate, establishment of surface extraction area and relocation of the existing magazine, amendment of Weak Acid Dissociable cyanide limit, extension of Mine life to December 2025, extension of the project approval boundary, and relinquishment of Northern Waste Rock Emplacement	18 June 2021	31 December 2025
Department		The project involves the establishment and operation of an underground gold and metalliferous mine at the Federation Mine site, including:		
of Planning, Housing and	SSD 24319456	Mining approximately 6.95 million tonnes of ore over a period of 12 to 14 years;	2 March 2023	31 December 2036
(DPHI)		Establishment of supporting surface infrastructure;		
		Modifications to the existing Hera Mine to facilitate mining and processing ore;		

lssuing / Responsible Authority	Development Consent	Details	Date of Issue	Expiry
		Establishment of a services corridor between the Federation site and Hera Mine; and		
		Consolidation and surrender of the existing approval for the Hera Mine.		
	SSD 24319456 (MOD 1)	Modify the location of a vent rise and change the staging allocation of biodiversity offset credits	27 November 2023	
	SSD 24319456 (MOD 2)	Increase ore haulage to Peak Mine and modify approach to ore processing and tailings handling.	Currently on exhibition	

*: In accordance with SSD 24319456, MP 10_0191 must be surrendered within 12 months of commencement of the Federation Project.

1.2.2. Authorisations

Hera Resources currently holds ML 1686, ML 1746, and ML 1862 as well as Mining Exploration Licence (EL) 6162 and EL 7447. Hera Resources also holds Western Lands Leases (WLL) 2455 and WLL 5379. These authorisations are outlined in Table 2.

Table 2: Authorisations

lssuing/Responsible Authority	Licence	Grant Date	Expiry Date	Status
RR	EL 6162	26 November 2003	26 November 2030	Current
RR	EL 7447	2 February 2010	2 February 2026	Current
RR	ML 1686	16 May 2013	16 May 2034	Current
RR	ML 1746	7 Dec 2016	7 Dec 2037	Current
RR	ML 1862	16 October 2023	16 October 2044	Current
Crown Lands, within DPHI	WLL 2455	April 1911	Perpetual	Current
Crown Lands, within DPHI	WLL 5379	8 November 1943	Perpetual	Current

1.2.3. Licences

A summary of all licences held by Hera Resources for the mining operations are included in **Table 3**.

Table 3: Licences

lssuing/Responsible Authority	Licence	Licence Type	Grant Date	Expiry Date
Environment Protection Authority (EPA)	EPL 20179	Environment Protection Licence	31 October 2023	Anniversary date 18 March
Department of Planning and Environment – Water	WAL 43173	Water Access Licence	6 March 2020	N/A

1.3. Land Ownership and Land Use

1.3.1. Land Ownership

Details of landownership within the Site boundary are provided in **Table 4**.

Table 4: Ownership Details

Lot	Deposited Plan	Ownership	Lease
3129	765224	Crown Land	Perpetual Lease
5127	103334		Westen Lands Lease 5379
3586	769242	Crown Land	Perpetual Lease
3300			Westen Lands Lease 6089
664	761702	Crown Land	Perpetual Lease
004			Westen Lands Lease 2455

The surrounding land ownership and vegetation communities within the Site are presented in **Figure 1**. Surrounding land ownership is predominantly Crown Land, with some freehold land and land held by the State of NSW.

1.3.2. Historical and Current Land Use

The area surrounding the Site was historically used for agricultural activities, predominantly sheep grazing. No significant historical mining activities have been undertaken within the Site area, however, the Kershaw North Shaft on the property is listed as having been worked from 1903 to 1906 (Suppel and Gilligan, 1993) although no production was recorded. In addition, several large quartz veins exposed at the surface have been the subject of prospecting activities through extraction of shallow pits.

Other notable current or previous land uses within or immediately surrounding the Site are as follows:

- Agriculture principally grazing of sheep and limited cropping activities. Agricultural activities are generally undertaken in cleared areas on undulating hills
- Nature conservation and forestry these land uses are mostly restricted to areas of steeper slopes and areas unsuitable for other land uses. The Balowra State Conservation Area is located approximately 9km south of the mine site
- Residential and rural residential The township of Nymagee, located approximately 4km north of Mine Site, and surrounding areas include areas of rural residential and residential land use
- Mineral exploration and mining Sections of the mine site have been the subject of historic and more recent mineral exploration and mining activities. Copper mining at the former Nymagee Copper Mine (1881 – 1917) was undertaken 4.5km north of the mine site, and
- Other minimal use areas of land that are largely unused, likely as a result of steep slopes or dense vegetation.

Current land use is shown in Figure 2.



1 440 2,160







GDA2020 MGA Zone 55

Source: ProjectApproval Boundary and CurrentAuthorisations fromAurelia Netals (2023). Roads, watercourses and electricity transmission lines from LPI (2023). Aerial imagery from ArcGIS Online (capture date unknown).



LEGEND

- Project Approval Boundary
- Mning Lease
- Major Roads
- Local GovernmentArea
- Land Ownership
- CROWN
- FREEHOLD
- NSW GOVERNMENT
- Vegetation Community
- Nand Rocky Hill Woodlands
- Sand Plain Mallee Woodlands
- Western Peneplain Woodlands
- Not dassified

Federation Mine

Rehabilitation Management Plan Land Ownership and Vegetation Communities

Figure 1

Mne name	Federation Mne
Plan name	Federation Mne RMP
Year of anticipated relinquishment	ТВА
Data theme submission ID No.	ТВА
Plan date (date created)	15/03/2024









Source: ProjectApproval Boundary and CurrentAufhorisations fromAurelia Metals (2023). Roads, watercourses and electricity transmission lines from LPI (2023). Aerial imagery fromArcGIS Online (capture date unknown).

LEGEND

- Project Approval Boundary
- Major Roads

Local GovernmentArea

Landuse

- 1.1.0 Nature conservation
- 1.3.00 ther minimal use
 - 21.0Grazing native vegetation
 - 3.20 Grazing modified pastures
 - 330Cropping
- 5.4.0 Residential and farm infrastructure
 - 5.50Services
- 5.7.0 Transport and communication
 - 5.80Mning
- 620Reservoir/dam
- 630River
- 650 Marsh/wetland

Federation Mine

Rehabilitation Management Plan Land Use Figure 2

Mne name	Federation Mne
Plan name	Federation Mine RMP
Year of anticipated relinquishment	ТВА
Data theme submission ID No.	ТВА
Plan date (date created)	15/03/2024

1.3.3. Future Land Use

As described in the EIS the final land uses will include a combination of agriculture - grazing and native ecosystems made up of predominately endemic species comprising trees, shrubs, and grasses similar to pre-mining land use. Infrastructure identified to provide a beneficial post mining use will be retained pending the provision of required approvals.

2. FINAL LAND USE

2.1. Regulatory Requirements for Rehabilitation

The regulatory requirements specific to post mining land use, rehabilitation, and closure at Site are summarised in Table 5 to Table 7.

It is noted that as required by condition A7 of SSD 24319456, Hera Resources must surrender MP10_0191 within 12 months of the date of physical commencement. Until then, Hera Resources will comply with both consents, however in accordance with condition A8 of SSD 24319456, the conditions of SSD 24319456 prevail to the extent of any inconsistencies between the two consents.

Table 5: Regulatory Requirements for Rehabilitation for MP10_0191

Condition	Requirement	Domain	Timing	Section Addressed
PA10_0191 Schedule 2 Condition 9	Demolition 9. The Proponent shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	Infrastructure Area, TSF, Water Management Area	Decommissioning	Section 6.2.2
PA10_0191 Schedule 3 Condition 44	REHABILITATION Rehabilitation Objectives 44. The Proponent shall rehabilitate the site to the satisfaction of the RR. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA and comply with the objectives in Table 7:	All domains	Ongoing. Note, there are limited opportunities for progressive rehabilitation at underground mines.	Section 4 and 6 Biodiversity Management Plan
PA10_0191 Schedule 3 Condition 45	Progressive Rehabilitation 45. The Proponent shall carry out rehabilitation of the site progressively, that is, as soon as reasonably practicable after disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot yet be permanently rehabilitated	All domains	Ongoing	Section 4 and 6
	Note: It is accepted that some parts of the site that are progressively rehabilitated to enable temporary stabilisation, may be subject to further disturbance at some later stage of the project.			
	Rehabilitation Management Plan			
PA10_0191 Schedule 3 Condition 46	46. The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the RR. This plan must:	All domains	Ongoing	This document Section 4.4
	(a) be prepared in consultation with the Department, BCD, DRG, DPIE Water and CSC;			
	(b) be submitted to the RR for approval prior to carrying out development on the site under this approval;	All domains	Ongoing	N/A

Condition	Requirement	Domain	Timing	Section Addressed
	(c) be prepared in accordance with any relevant RR guideline;	All domains	Ongoing	Section 1.3
	(d) outline the procedures to be implemented to achieve the rehabilitation objectives in condition 44;	All domains	Ongoing	Section 4
	(e) describe how the rehabilitation of the site will be integrated with the implementation of the biodiversity offset strategy;	All domains	Ongoing	Section 6.3.1 and 8.2
	(f) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary);	All domains	Ongoing	Section 4 and 10
	(g) describe the measures that will be implemented to ensure compliance with the relevant conditions of this approval, and address all aspects of rehabilitation including mine closure, final landform, and final land use;	All domains	Ongoing	Section 6
	(h) include interim rehabilitation where necessary to minimise the area exposed for dust generation;	All domains	Ongoing	Section 4.3
	(i) include a program to monitor, independently audit and report on the effectiveness of the measures, and progress against the detailed performance and completion criteria; and	All domains	Ongoing	Section 8
	(j) build, to the maximum extent practicable, on the other management plans required under this approval.	All domains	Ongoing	This RMP
Condition 14				
	The licence holder must rehabilitate to the satisfaction of the Department any areas disturbed by operations carried out under Exploration Licence No. 5591 and must lodge any reports required in connection with that licence.	All domains	Ongoing	Section 6.3.1
Hera Mining EA	Statement of Commitments			
Condition 4 Ecology	4.17 Undertake monitoring of the ongoing rehabilitation activities within the Project Site to	All domains		Sections 8.3, 8.4 and 10

Condition	Requirement	Domain	Timing	Section Addressed
	ensure native vegetation regeneration is successful and to control weed invasion			
	4.20 Monitor the rehabilitation activities within the Project Site to ensure native vegetation regeneration is successful and to control weed invasion.	All domains	Ongoing	Section 8
	4.21 Implement the industry best practice land management measures e.g., implementation of a weed and feral animal control program as part of a post- project Land Management Plan.	All domains	Ongoing	Sections 6.3.5 and 7
	4.23 Continue with the annual formal surveys of the Kultarr to establish a population census and compile information for use in the management of this species following rehabilitation activities and to allow year to year comparisons of any changes in habitat usage and population trends.	N/A	N/A	Biodiversity Management Plan
Condition 6 Surface Water	6.18 Develop a Soil and Water Management Plan to accompany the capping works, including the exact nature of the capping procedure, at the former Tailings Storage Facility	Tailings Storage Facility	Ongoing	Section 6.3.3
	6.19 Shape the decommissioned Tailings Storage Facility into a raised plateau with a shallow dome profile so that water would be shed from its surface as sheet flow without concentration	Tailings Storage Facility	Ongoing	Sections 4.3, 6.3.3 and 9.1
Condition 10 Air Quality and Energy	10.7 Cap or otherwise treat the Tailings Storage Facility during rehabilitation activities following completion of operations.	Tailings Storage Facility	Ongoing	Sections 4.3, 6.3.3 and 9.1
	10.17 Reshape, topsoil and rehabilitate completed Waste Rock Emplacement areas as soon as practicable after they are no longer required for mining-related purposes.	Other (Waste Rock Emplacement Area)	Ongoing	Sections 4 and 6.3.3
Condition 12 Soils and Land Capability	12.12 Ensure slopes less than 2% are rehabilitated with Red Earths with due regard to the following precautionary measures:	All domains	Ongoing	Sections 6.3.1 and 6.3.4
	no furrowing would be used			

Condition

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Requirement	Domain	Timing	Section Addressed
maintain the length of exposed slopes to less than 80m			
use windrows of mulch placed along the contours and ensuring these would not act as drains themselves.			
12.17 Use organic material in preference to fertilizers during rehabilitation.	All domains	Ongoing	Section 6.3.4
13.2 Progressively rehabilitate disturbed sections of the Project Site no longer required for the Project and re-vegetate areas that are bare or only have remnant	All domains	Ongoing	Section 4 and 6.3.5

Condition 13 Visual Amenity	the Project Site no longer required for the Project and re-vegetate areas that are bare or only have remnant vegetation.			Section 4 and 6.3.5
Condition 16 Socio Economic	Rehabilitated Lands 16.15 Ensure that the land capability of those sections of the final landform to be used for grazing is similar to the current land capability	All domains	Ongoing	Sections 1.4.2 and 1.4.3
	16.16 Ensure the final landform is free flowing and geotechnically stable	All domains	Ongoing	Sections 6.3.1 and 10

Table 6: Regulatory Requirements for Rehabilitation for SSD 24319456

Condition	Requirement	Domain	Timing	Section Addressed
	 Mining operations may be carried out until 31 December 2036. Notes: Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to 			
A9 Mining Operations	mining operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard.	All Domains	Ongoing	Section 1.1
	• Mining operations and rehabilitation are also regulated under the Mining Act 1992.			
A27 Demolition	All demolition must be carried out in accordance with Australian Standard AS 2601-2001 The Demolition of Structures (Standards Australia, 2001), or its latest version.	Infrastructure	Decommissioning Phase	Section 6.2.2
	The Applicant shall ensure that the floor and walls of:			
B39 Design and	 (a) the leachate management ponds, seepage collection pond (associated with the tailings storage facility), process water dam and raw water dam are lined to achieve a permeability of no less than 1 x 10-9 m/s to a depth of at least 900 millimetres of clay (or equivalent); 	Tailings Storage Facilities		
Permeability of		&	Ongoing	Water Management Plan
Storages	(b) the tailings storage facility (except for the seepage collection pond) is lined to achieve a permeability of no less than 1 x 10-8 m/s to a depth of at least 600 millimetres of clay (or equivalent); and;	Water Management Areas		
	(c) the water management dam is lined to achieve a permeability of no less than 1 x 10-9 m/s to a depth of at least 1000 millimetres of clay or equivalent geosynthetic liner.			
B40 Design and Permeability of Storage	The clean water diversion around the tailings storage facility shall be designed, constructed and maintained to prevent the probable maximum flood from the catchment upstream of the facility from entering the facility.	Water Management Areas	Ongoing	Water Management Plan

Condition	Requirement	Domain	Timing	Section Addressed
B40 Design and Permeability of Storage	The process water dam, raw water dams, stormwater retention pond and lined leachate ponds must be maintained with a minimum freeboard sufficient to accommodate a 1 in 100-year ARI, 72-hour rainfall event without overtopping at all times.	Water Management Areas	Ongoing	Water Management Plan
B85 Rehabilitation Objectives	The Applicant must rehabilitate all areas affected by the development accordance with the conditions imposed on the mining leases(s) associated with the development under the Mining Act 1992. The rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EIS (and shown conceptually in the Rehabilitation Plan in Appendix 3), and must comply with the objectives in Table 7.	All Domains	Ongoing	Section 4.2
B86 Rehabilitation Strategy	The Applicant must prepare a Rehabilitation Strategy for the development to the satisfaction of the Planning Secretary. This strategy must: (a) be prepared by a suitably qualified and experienced person/s; (b) be prepared in consultation with Resources Regulator, DPE Water, BCD, CSC and the CCC; (c) be submitted to the Planning Secretary for approval within six months of the date of physical commencement of development under this consent, unless otherwise agreed by the Planning Secretary; (d) build upon the Rehabilitation Objectives in Table 7, describe the overall rehabilitation outcomes for the development, and address all aspects of rehabilitation including mine closure, final landform, post- mining land use/s and water management; (e) align with strategic rehabilitation and mine closure objectives and address the principles of the Strategic Framework for Mine Closure (ANZMEC and MCA, 2000); (f) describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure; and (g) include details of: (i) how the tailings storage facility will be designed to meet the rehabilitation objectives in Table 7; (ii) target vegetation communities and species to be established within the proposed revegetation areas; and (iii) the design of the surface water drainage network on the final landform; (h) investigate opportunities to refine and improve the final landform over time, including the configuration of the waste rock emplacement;	All Domains	Ongoing	Rehabilitation Strategy

Condition	Requirement	Domain	Timing	Section Addressed
	(i) include a post-mining land use strategy to investigate and facilitate post-mining beneficial land uses for the site, that: (i) align with regional and local strategic land use planning objectives and outcomes; (ii) support a sustainable future for the local community; (iii) utilise existing mining infrastructure, where practicable; and (iv) avoid disturbing self- sustaining native ecosystems, where practicable;			
	(j) include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes;			
	(k) investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure; and			
	(I) include a program to report on the outcomes of the investigations required under this condition and review and update this strategy at least every five years.			
	The Applicant must implement the Rehabilitation Strategy approved by the Planning Secretary.			
B87 Rehabilitation Strategy	Notes: • The Applicant must prepare and implement a Rehabilitation Management Plan in accordance with the conditions imposed on the mining lease(s) associated with the development under the Mining Act 1992.	All Domains	Ongoing	Section 6
Federation Project E	IS Appendix T Mitigation Measures			
Rehabilitation	Implement Rehabilitation Management Plan, as described in Chapter 5.	All Domains	Ongoing	Section 6

Table 7: Regulatory Requirements Relating to Authorisations (2022 Amendments)

Condition	Requirement	Domain	Timing	Section Addressed
Mining Amendment (Standard	Conditions of Mining Leases - Rehabilitation) Reg	<u>ulation 2021 – Part 2</u>		
Part 2 Standard Conditions Division 1 Condition 4	Prevent or minimise harm to the environment.	All	Ongoing	Section 3
Part 2 Standard Conditions Division 1 Condition 5	Rehabilitate land and water as soon as reasonably practicable after disturbance occurs.	All	Ongoing	Section 6.1
Part 2 Standard Conditions Division 1 Condition 6	Achieve the approved final land use for the mining area as set out in the: rehabilitation objectives statement; rehabilitation completion criteria statement; and final landform and rehabilitation spatial plan (large mines only).	All	Prior to relinquishment	Section 2.3
Part 2 Standard Conditions Division 2 Condition 7	Undertake a rehabilitation risk assessment and implement measures to eliminate, minimise or mitigate risks to achieving the final land use.	All	Complete/Ongoing	Section 3
Part 2 Standard Conditions Division 3 Condition 10	Prepare and implement a rehabilitation management plan (large mines only).	All	Complete	This document
Part 2 Standard Conditions Division 3 Condition 13	Prepare an annual rehabilitation report which describes the progress of rehabilitation over the annual reporting period.	All	Ongoing	Section 6
Part 2 Standard Conditions Division 3 Condition 13	Prepare a forward program which includes the schedule of mining and rehabilitation activities for the next three years demonstrating how rehabilitation will occur as soon as reasonably practicable after disturbance.	All	Ongoing	Section 6

2.2. Final Land Use Options Assessment

The final land uses for the Site are specified under Development Consent SSD 24319456. Therefore, alternate final land use options assessments have not been undertaken in the development of this RMP.

2.3. Final Land Use Statement

The approved final land use is a combination of agriculture and native vegetation conservation. Most disturbed areas will be rehabilitated to native woodland vegetation. The TSF at the Hera Mine Site will be rehabilitated to a grassland final landform providing some opportunity for limited grazing however with a native ecosystem final landuse. Federation Mine will be predominantly rehabilitated to native vegetation. Site infrastructure identified to be beneficial to the final land uses may be retained, this will include water management dams, access roads, and solar farms (if constructed) at Hera Mine and Federation Mine.

The remainder of the Site outside of the disturbance footprint will be able to continue to be used for pastoral agricultural activities.

The final land use is outline in **Section 2.4.1**. Consistent with the description contained in the EIS and in accordance with the requirements of the consent, the proposed final land use of the Site will be a mixture of native ecosystems and limited agricultural grazing. Site infrastructure that supports the final land use (e.g. water management structures, access tracks) may be retained as agreed with the Resource Regulator.

2.4. Final Land Use and Mining Domains

2.4.1. Final Land Use Domains

Final land use domains are defined as land management units characterised by similar final land use objectives. Each final land use domain will require specific rehabilitation methods.

The final land use domains for this RMP are presented in **Table 8** and shown on the Final Landform and Rehabilitation Plan.

Table 8: Final Land Use Domains

Code	Final Land Use Domain	Description
A	Native Ecosystem	Native woodland vegetation with local species commensurate with Mallee – Smooth - Barked Coolabah (PCT 174) and Poplar Box – Gum Barked Coolabah (PCT 103). Relates to all other rehabilitation other than the TSF, i.e., infrastructure area, and dams that will be rehabilitated, waste rock emplacement area, stockpiles and void.
В	Agricultural - Grazing	Grassland rehabilitation comprising a cover crop which includes native grassland species. Relates to the TSF.
F	Water Management Areas	Includes the water management structures that will remain the final landform.
G	Water Storage	Includes the dams and water storage structures that will remain in the final landform (Pete's Dam, Three Gates Dam, Back Dam, Back Dam East).
I	Infrastructure	Includes all infrastructure that will remain on the site at mine closure, including access tracks and roads, pre-existing infrastructure, including houses and sheds, as well as selected sheds and transportable buildings that could reasonably be required for agricultural and/or nature conservation purposes.
		The domain also includes the solar farms which will be constructed on the Hera Mine and Federation Mine sites.
J	Final Void	If developed, a final void will remain from the Surface Extraction Area at Hera Mine.

2.4.2. Mining Domains

Mining domains identify the footprint of areas disturbed for mining related activities. For this RMP, mining domains have been defined in accordance with the *Form and Way: Rehabilitation Management Plan for Large Mines* (NSW Resources Regulator, 2020), as the set of discrete areas that have a particular operational or functional purpose, therefore having similar geophysical and geochemical characteristics that will have similar rehabilitation requirements.

Mining domains are presented in Table 9.

Table 9: Mining Domains

Code	Mining Domain	Description
1	Infrastructure Area	This domain Includes all existing built infrastructure and facilities (other than water management structures). Includes ROM Pad, processing plant and associated infrastructure, buildings including administration, mine camp, workshops and amenities, roads (including access roads and haul roads), hardstand areas and car park, magazines, ventilation shafts and associated infrastructure areas used for stockpiling of topsoil and subsoil material including from Surface Extraction Area (excludes stockpiled waste rock or ore), the Box cut and Portal providing entrance to the underground mine workings and Surface Extraction Area.
2	Tailings Storage Facility	This domain includes the TSF, including all embankments.
3	Water Management Area	Includes clean and dirty water diversion structures and sediment basins.
4	Overburden Emplacement Area	Includes overburden emplacements, soil stockpiles, and waste rock storage areas.
5	Active Mining	Includes the Surface Extraction Areas at Federation Mine and Hera Mine.
8	Other (Waste Rock Emplacement Area)	Segregated PAF and NAF waste rock dumps at Federation Mine. Mixed PAF/NAF dump at Hera Mine (treated as PAF).

3. REHABILITATION RISK ASSESSMENT

3.1. Summary of Risk Assessments

Two risk assessments have been completed historically for the closure works. **Table 10** summarises the completed rehabilitation risk assessments.

Table 10: Completed Rehabilitation Risk Assessments

Date	Risk Assessment	Details
26 May 2022	Hera Mine RMP Risk Assessment*	A risk assessment was conducted to identify the key issues that presented a risk to achieving satisfactory rehabilitation at Hera and inform the preparation of the RMP. This risk assessment was conducted in accordance with RR's Guideline: <i>Rehabilitation Risk Assessment</i> to satisfy the standard rehabilitation conditions introduced on Mining Leases in July 2021.
21 April 2023	Hera Mine and Federation Mine RMP Risk Assessment	A risk assessment was conducted to identify the key issues that presented a risk to achieving satisfactory rehabilitation for the Site and inform the preparation of the RMP. This risk assessment was conducted in accordance with the RR's Guideline: <i>Rehabilitation Risk</i> to satisfy the standard rehabilitation conditions introduced on Mining Leases in July 2021

*Covered only the Hera Mine site approved under MP10_0191

3.2. Rehabilitation Risk Assessment

Conditions of a mining lease granted under the *Mining Act 1992* require the lease holder to conduct a rehabilitation risk assessment and implement measures to eliminate, minimise or mitigate the risks in accordance with the RR's Guideline: *Rehabilitation risk assessment*.

A risk assessment workshop was undertaken on 21 April 2023. The workshop was used to identify the key issues that presented a risk to achieving satisfactory rehabilitation of the Site.

The risk assessment included key Aurelia/Hera Resources and IEMA personnel and was undertaken in accordance with AS/NZS ISO 31000:2018 *Risk Management - Guidelines* and the *Risk Management Handbook for the Mining Industry* (MDG1010). Aurelia's Risk Matrix was used to calculate the consequence and likelihood of an event and to evaluate the subsequent risk level (risk rank).

The risk assessment has been used to inform the preparation of this RMP. The objectives of the risk assessment were to:

- Identify the risks associated with the rehabilitation and closure of Hera to achieve the approved post mining land uses
- Identify knowledge gaps in Aurelia's current understanding of the risks to rehabilitation
- Identify the investigations/controls/action plans necessary to effectively mitigate risks and/or realise
 opportunities and to close any identified knowledge gaps
- Inform the development of this RMP, to provide a basis to determine additional investigations and/or project works to be undertaken, and
- Provide the framework to satisfy relevant internal and government guidelines, requiring implementation of a risk-based approach to closure.

The 2023 Site risk workshop assessed a total of 46 key rehabilitation risks, which are summarised as:

- 30 risks were ranked as low
- 16 risks were ranked as moderate
- 0 risks were ranked as high

• 0 risks were ranked as extreme

Rehabilitation risks, controls and proposed controls will regularly be reviewed and revised (as required).

3.2.1. Specific Risks relating to Rehabilitation

The key risks (summarised as moderate risks with additional controls required, high and extreme risks) to successful rehabilitation and associated risk controls identified within the April 2023 workshop have been summarised in Table 11. The outcomes of the risk assessment workshop have been used to inform the preparation of this RMP.

Risk Rating	Key Risk	Key Existing Controls	Sections Addressed	
		1. Ongoing communications through the CCC		
Moderate	community as a result of mine closure	2. Development of a community engagement plan as part of the detailed Mine Closure Process	Section 4.4	
		1. Geochemical analysis of materials		
		2. Mining method/plan to place waste rock under ground		
		3. Capping trials and Erosion Modelling on Hera TSF		
		4. Storage of waste rock in designated areas		
Moderate	Failure to achieve the rehabilitation outcome prescribed in the RMP due to geochemical composition and placement of materials	5. Site procedures for prevention of use of PAF material around the site	Section 6.2.1 – Geology and Geochemistry	
moderate		6. TSF design and management	TP1: Proposed Water Management	
		7. Waste Rock Management Plan	mastractare	
		8. Tailings Management Plans		
		9. DSNSW Training		
		10. Geotechnical Engineer (external TSF Design)		
		1. Engineering design of TSF and Engineer of record		
		2. Defined protocols, procedures and plans		
		3. Trained and competent personnel		
	Poor tailings management over Life of	4. Annual surveillance report by engineer	Section 6.2.1 - Ore Beneficiation	
Moderate	Mine (LOM) due to less than adequate	5. Vibration monitoring	Waste Management (Reject and	
	implementation of procedures	6. QA during construction process	Tallings Disposal)	
		7. Daily and Weekly Inspections		
		8. 3rd Party Audits - TSF		
		9. Seepage Monitoring		

Risk Rating	Key Risk	Key Existing Controls	Sections Addressed
		1. Groundwater monitoring	
		2. Fuel/chemical storage systems	Section 6.2.1 -
Madarata	Groundwater pollution due to	3. Water management plan (WMP)	TP2: Complete geochemical
Moderate	operations/rehabilitation	4. Annual Reviews / Annual Return	assessment in accordance with Site
		5. TARP (WMP)	backfill of underground mine waste
		6. Geochemical assessment of the backfill material	
		1. Fuel storage systems	
		2. Incident reporting system and PIRMP	
		3. Spill kits and spill response procedure	
	Contaminated land existing or occurring on the Site at closure	4. Hazardous Materials management plan (under development)	
Moderate		5. Commitments in RMP that studies will be undertaken prior to closure and appropriate recommendations implemented	Section 6.2.1 - Material Prone to
		7. No underground lines - Services Corridor?	Generating Acid Mine Drainage
		8. Self bunded / double skinned	
		9. Oily Water Separator	
		10. Tailings Management Plan	
		11. Adequate Capping	
		12. RCE	
Moderate	Less than adequate sealing of mine	1. Sealing undertaken in accordance with RR standards	Section 6.2.2
	openings at closure	2. Inspections and signoff procedure (QA/QC process)	

Risk Rating	Key Risk	Key Existing Controls	Sections Addressed	
		1. Current EPA radiation licences		
Moderate	Less than adequate disposal/storage of radiation devices	2. Trained employees	Section 6.2.1 – Waste Management	
		3. Advice from suitably qualified radiation consultant		
		4. Licensed waste contractor (waste tracking)		
		1. Materials balance shows surplus (EIS)		
		2. Engineering design for TSF capping		
Moderate	nadequate volume of suitable materials for capping TSF	3. Provisions in RCE	Section 6.2.1 – Soils and Materials	
		4. Column trials for TSF to determine cap thickness		
		5. Approved Surface Extraction Areas		
	Unstable landform due to erosion and/or mass movement issues associated with inappropriate design and/or unsuitable rock soil matrix and/or quality assurance during landform construction.	1. RMP		
		2. Water management plan		
		3. Biodiversity management plan		
		4. Waste rock management plan		
Moderate		5. Landform capping	Section 6.2.3	
		6. Stability assessments and independent reviews		
		7. Amelioration of dispersive materials		
		8. Rehabilitation maintenance and monitoring		
		9. Feral animal management		
	Exposure or release of geochemical	1. Waste rock management plan		
Moderate	and/or geotechnically adverse material (typically tailings or waste	2. Geochemical analysis of materials		
	rock) associated with containment	3. Capping trials on TSF	Section 6.2.1	
	design and construction, including capping/cover system, drainage and	4. TSF design and management		
	liner (if required).	5. Erosion modelling		

Risk Rating	Key Risk	Key Existing Controls	Sections Addressed	
		1. RMP and Environmental Assessment.		
	Final landform unsuitable for final	2. Rehabilitation monitoring program	Section 6.2.1	
Moderate	land use.	3. TARPs	Section 8	
		4. Tailings design and management		
	Use of unsuitable rehabilitation	1. RMP		
	techniques, including equipment fleet due to less than adequate	2. Biodiversity management plan		
Moderate	understanding of site	3. Engage qualified contractors to undertake rehabilitation	Section 6.2	
	conditions/climate (including drought)/target vegetation	4. Consultants for design and assessment of rehabilitation		
	communities	5. Consideration of regional forecast		
		1. Rehabilitation monitoring		
	Availability of areas for revegetation in optimal seasonal conditions.	 Seed mix includes a broad range of species to cover final vegetation community. Based on analogue data. 		
Moderate		3. RMP	Section 8	
		4. Biodiversity management plan		
		5. Experienced Contractors		
	Weather and climatic influences (e.g.	1. Weather conditions considered when planning rehabilitation activities (i.e. seeding / planting).		
Moderate	drought; intense rainfall events; bushfire; climate change etc.).	2. Water management plan	Section 7	
		3. Rehabilitation maintenance and repair costs (RCE)		
Moderate		1. Identification and classification of PAF materials		
	outcome prescribed in the RMP due to	2. Returning PAF material Under Ground	Section 6.2.1- Rock/overburden	
	Acid Mine Drainage.	3. Water Quality Monitoring	Emplacement	
		4. Waste Rock management plan5. TSF capping design		

Risk Rating	Key Risk	Key Existing Controls	Sections Addressed
Moderate	Damage to rehab or offset areas from bushfire.	1. Bushfire emergency response procedure 2. Fire fighting equipment/ procedures	Section 10

3.2.2. Further Studies / Action Plan

A number of proposed controls and further studies were identified during the risk assessment workshop. **Table** 12 presents an action plan for the implementation of the additional risk controls (including moderate, high and extreme risks).

Table 12: Further Studies / Action Plan

Risk	Proposed Control / Study	Timeframe
Failure to achieve the rehabilitation outcome prescribed in the RMP due to geochemical composition and placement of materials	Ensuring PAF/NAF Material is appropriately segregated. Construction of new water management structures to contain potentially contaminated runoff.	2024
Groundwater pollution due to contamination during operations/rehabilitation	Complete geochemical assessment in accordance with Site approval requirements regarding backfill of underground mine waste	2025

4. REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA

4.1. MP 10_0191 Requirements

In accordance with Condition 44, Schedule 3 of MP 10_0191 Hera will undertake rehabilitation:

- in accordance with the conditions imposed on the mining lease(s) associated with the development under the Mining Act 1992,
- generally consistent with the proposed rehabilitation strategy described in the EA,
- as soon as reasonably practicable following disturbance, and
- to comply with the rehabilitation objectives in Table 13.

Table 13: Rehabilitation Objectives (Source: Table 7 of MP 10_0191)

Features	Objective
Mine site (as a whole)	 Safe, stable and non-polluting Final land use compatible with surrounding land uses. Final landforms designed to incorporate micro-relief, natural drainage lines and minimize visual prominence by integration with the surrounding landscape. Restore self-sustaining ecosystems, including establishing local native plant species. Minimise visual impact of final landforms as far as is reasonable and feasible.
Surface infrastructure	To be decommissioned and removed, unless the Executive Director Mineral Resources agrees otherwise
Community	Minimise the adverse socio-economic effects associated with mine closure

As noted, MP10_0191 will be surrendered within 12 months of physical commencement of the Site under SSD 24319456.

4.2. SSD 24319456 Requirements

In accordance with Condition B85 of SSD24319456, the Site will undertake rehabilitation of all areas affected by the development in accordance with the conditions imposed on the mining leases(s) associated with the development under the Mining Act 1992. The rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EIS (and shown conceptually in the Rehabilitation Plan in Appendix 3 of the development consent) and must comply with the objectives in **Table 14**.

Table 14: Rehabilitation Objectives (Source: Table 7 of SSD 24319456)

Features Objective	
	Safe, stable and non-polluting
All areas offerted by the	 Fit for the intended post-mining land use/s
development.	 Establish the final landform and post mining- land use/s as soon as practicable after the cessation of mining
	 Minimise post-mining environmental impacts
	Stable and sustainable for the intended post-mining land use/s
Final landform	 Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable

Features	Objective
	 Incorporate macro-relief and micro-relief and drainage features that mimic natural topography and mitigate erosion, to the greatest extent practicable
	 Maximise surface water drainage to the natural environment
	Minimise visual impacts, where practicable
	Backfilled
Stopes	Safe and stable
	 Negligible surface subsidence in the long term
Portals and vent shafts	• To be decommissioned and made safe and stable
Tailings Storage Facility	 Final landform designed for native grassland species, unless further assessment indicates the capping design can accommodate woodland vegetation
	Free draining
	• Free draining
Surface Extraction Area	 Optimise the size and depth to ensure the final landform is stable and non-polluting
	 Minimise to the greatest extent practicable the drainage catchment and any instability risk.
	Minimise the potential for acid mine drainage and erosion
Waste Rock Storage Areas	 Potentially acid forming materials to be emplaced in the underground workings
Mine water discharges following mine closure (from any location).	Negligible environmental impact
Water quality	• Water retained on the site is fit for intended post-mining land use/s
Surface Infrastructure	 To be decommissioned and removed, unless Resources Regulator agrees otherwise
Community	Ensure public safety
	 Minimise adverse socio-economic effects associated with mine closure

4.3. Rehabilitation Objectives and Completion Criteria

Rehabilitation objectives and completion criteria are objective target levels or values assigned to a variety of indicators (e.g., slope, species diversity, percent groundcover), which can be measured to demonstrate progress and ultimate success of rehabilitation. As such, they provide a defined end point, at which point in time rehabilitation can be deemed successful and the lease relinquishment process can proceed. The draft rehabilitation completion criteria for all areas at the Site are listed in **Table 15**.

These completion criteria will be utilised to demonstrate achievement of rehabilitation objectives. It is noted that the completion criteria may be subject to refinement as rehabilitation progresses, including as a result of ongoing consultation with the relevant stakeholders, studies yet to be completed and continuous improvement process informed by rehabilitation monitoring results. The achievement (or otherwise) of the completion criteria will be monitored and reported as required.

Closure criteria have been informed by the following information:

- Relevant conditions of consents MP 10_0191 and SSD 24319456;
- The NSW Resources Regulator rehabilitation guideline documents including:
 - Form and way: Rehabilitation objectives, rehabilitation completion criteria and final landform and rehabilitation plan for large mines;

- Guideline: Rehabilitation objectives and rehabilitation completion criteria;
- Completion criteria from the previously approved Hera Mine MOP;
- Similar rehabilitation projects; and
- Specific information collected to date during detailed planning investigations.

It is noted that the rehabilitation completion criteria for the Site will remain in draft until approved by the RR.

Rehabilitation objectives (ROBJs) for the Site were submitted to the RR for approval on 1 November 2024. As required by Condition 11 of the Mining Amendment, this RMP will be updated to include the version of the ROBJs approved by the RR within 30 days of the approval.

Table 15: Draft Rehabilitation Completion Criteria for Site

Final Land Use Domain	Mining Domain	Rehabilitation Objective (describe the desired feature and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate)	Example Justification Validation Method (evidence that the benchmark has been achieved)
			Removal of all services (power, water, communications) that have been connected on the site as part of the operation.	All utility infrastructure removed.	Statement provided, utility service disconnection record / notification
		All infrastructure not to be used as part of the final land use is removed to ensure the site is safe and free of hazardous materials.	Roads not required for final land use are removed.	Roads removed unless permitted for agricultural or other approved activity.	Plan showing redundant structures. Photos.
			Infrastructure not required for final land use removed.	Relevant infrastructure removed.	Plan showing redundant structures. Photos
All final land use domains	All mining domains		Ventilation rises capped.	Ventilation rises capped (in consultation with Resources Regulator).	Relinquishment inspection and report, including photographs, prepared by a qualified person.
		Groundwater quality is similar to, or better than the background water quality.	Water quality parameters selected from background ground water quality values.	Water quality discharged from the site is within the range of background data based on monitoring results.	Independent hydrological assessment report.
		Impacts to groundwater regime are within range as predicted in pre- mining environmental assessment.	Groundwater quality both on and off a mining lease represent an acceptable level of change from a defined reference condition.	Groundwater levels, groundwater flow.	Water quality monitoring reports. Independent hydrological assessment report.
	Infrastructure (1) Tailings Storage Facility (2) Water Management Area (3) Overburden Emplacement Area (4) Other – stockpiled material (8)		Potential hazards (e.g. electrical, mechanical) have been effectively isolated and secured.	Hazards isolated and secured	Statement provided by suitably qualified engineer
			Damage to access tracks has been repaired and stabilised.	Repairs complete	As-constructed final landform plan, photos
Native Ecosystem (A) Agricultural Revegetation (B) Water Management Areas (F) Water Storage (G) Infrastructure (I)		All retained infrastructure is approved and/or licensed to remain in the final land form.	Necessary approvals are in place (e.g. development consent under the Environmental Planning and Assessment Act 1979) where buildings and infrastructure are to be retained as part of final land use.	Permits and approval documents issued	Copy of any relevant approvals
			The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be suitable and safe as part of the intended final land use.	Engineering report/statement, photos, risk assessment verifying modes of failure are adequately addressed to minimise risks to public safety or the environment.

Final Land Use Domain	Mining Domain	Rehabilitation Objective (describe the desired feature and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective) Infrastructure is in a condition (e.g. structural, electrical, other hazards) that is suitable for the intended final land use.	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate) Formal acceptance from the subsequent landowner that infrastructure is in a condition that is suitable for the intended final land use in accordance with	Example Justification Validation Method (evidence that the benchmark has been achieved) Formal acceptance from landowner.
Native Ecosystem (A) Water Management Areas (F) Water Storage (G) Infrastructure (I) Final Void (J)	Infrastructure (1) Water Management Area (3) Overburden Emplacement Area (4) Active Mining (5) Other – stockpiled material (8)	Domain made safe and free from hazardous materials and contaminants	Contaminated land identified and remediated. Any contaminated material placed within TSF.	formal agreement. Contaminated land assessment confirms soils meet relevant criteria and indicates no contamination risk in final landform.	Contamination report prepared by qualified person.
Water Management Areas (F) Water Storage (G)	Water Management Area (3)	Final water management structures are constructed to be stable in the long term and pose no risk of environmental harm downstream of the site or a safety risk to the public/stock/native fauna.	Remaining water management structures are safe. Water management structures not required	All remaining water management structures made safe. Redundant water	Relinquishment inspection and report, including photographs. Plan showing redundant structures.
		Surface water retained onsite is fit for the intended post mining land use.	for the final land use removed. Water within storages is within relevant criteria	Monitoring of retained surface water from the Site complies with EPL limits and the relevant trigger values identified in the Water Management Plan.	Photographs Water quality testing in accordance with the <i>Water</i> <i>Management Plan</i> . Photographs
	Tailings Storage Facility (2)	Land is capable of supporting the target agricultural land use and will retain pre-mining Agricultural Land Classes, namely: - Class IV or Red Earths and	Resilience demonstrated by the effects of drought and fire on composition, structure and other function attributes of pasture and cropping lands.	Resilience to drought and fire.	Independent soil reports
Agricultural Revegetation (B)		- Class V for Lithosols	Routine soil testing.	The re-established topsoil / subsoil substrate is capable of supporting the targeted pasture regime on a sustained basis.	Independent soil reports. Agronomist reports.
		Residual waste materials (e.g. tailings) will be appropriately capped and contained so it does not present any hazards or constraints for intended final land use.	Visual –capping material placement, type across emplacement	Visual – verification that capping, type and placement consistent with design.	Photographs Monitoring reports
			Measured - survey of emplacement capping to verify construction and to monitor settlement.	Survey verifies that capping placement consistent with design and settlement and/or material loss is within predicted limits and will not	The structural integrity of the infrastructure and capping has been inspected by a suitably qualified engineer and determined to be suitable and safe as part of the intended final land use and

Final Land Use Domain	Mining Domain	Rehabilitation Objective (describe the desired feature and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate)	Example Justification Validation Method (evidence that the benchmark has been achieved)
				compromise final landform drainage via differential settlement.	water material adequately contained.
			Quality assurance records for the construction of the emplacement material including (where relevant) capping material, liner system, seepage control etc	Quality assurance records verify capping constructed and in accordance with design specifications relevant to site risks and target final land use.	Records Engineering reports
			Measured – contamination levels in surface and groundwater surrounding emplacement for contaminants of concern associated with waste material emplaced.	Groundwater and surface water monitoring verify adequate containment of waste materials and seepage/leachate is not contributing to land/groundwater contamination.	Water monitoring reports
		T Revegetation is sustainable for the long term and only requires maintenance consistent with the intended final land use. F a P	The re-established growth medium substrate (e.g. topsoil / subsoil) is capable of supporting the targeted pasture regime on a sustained basis.	Pasture is in good health and provides adequate cover.	Agronomist report Photographs
			Pasture composition assessed, including pasture weeds.	Weed presence is within range found analogue sites and does not present a risk to the intended final land use.	Agronomist report Photographs Weed monitoring
		There is no residual soil contamination on site that is incompatible with the final land use or that poses a threat of environmental harm.	Soil testing for contaminants of concern as listed by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type.	Any contamination has been appropriately remediated in accordance with legislative requirements for the intended final land use.	Soil testing reports Visual inspections
		Vegetation dominated by shallow rooted native grassland species.	Vegetation composition assessed.	Vegetation is in good health and provides adequate cover.	Agronomist report Photographs
Native Ecosystem (A)	Infrastructure (1) Water Management Area (3) Overburden Emplacement Area (4) Other – stockpiled material (8)	Levels of ecosystem function have been established to demonstrate ecosystem is self-sustainable.	Soil health is suitable to sustain the target vegetation community(s)	Vegetation is self- sustainable.	Ecologist reports Soil reports Photographs
Native Ecosystem (A)	Overburden Emplacement Area (4) Other – stockpiled material (8)	Residual waste rock materials are removed from the domain so they do not pose any hazards or constraints for intended final land use.	Waste rock emplacement areas are free of waste rock material.	Visual monitoring shows domain is free of waste rock material.	Photographs Inspection reports
		Runoff water from this part of the site is not having an adverse downstream impact on water quality.	Runoff water quality from rehabilitation areas represent an acceptable level of change from a	Assessment of runoff water quality against local background water quality.	Water quality monitoring reports.

Final Land Use Domain	Mining Domain	Rehabilitation Objective (describe the desired feature and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate)	Example Justification Validation Method (evidence that the benchmark has been achieved)
			background condition (baseline study).		
Native Ecosystem (A) Agricultural Revegetation (B) Infrastructure (I) Final Void (J)	Infrastructure (1) Tailings Storage Facility (2) Water Management Area (3) Active Mining (5)	Runoff water from rehabilitation areas is not having an adverse downstream impact on water quality.	Runoff water quality from rehabilitation areas represent an acceptable level of change from a background condition (baseline study).	Assessment of runoff water quality against local background water quality.	Water quality monitoring reports.
Native Ecosystem (A) Agricultural Revegetation (B) Infrastructure (I) Final Void (J)	Infrastructure (1) Tailings Storage Facility (2) Water Management Area (3) Overburden Emplacement (4) Active Mining (5) Other – Stockpiled Material (8)	The final landform is stable for the long-term and does not present a risk of environmental harm downstream/downslope of the site or a safety risk to the public/stock/native fauna.	Visual - indicators of erosion and land instability.	Visual- minimal erosion that would not require moderate to significant ongoing management and maintenance works.	Erosion surveys Photographs
Water Management Areas (F) Water Storage (G) Final Void (J)	Water Management Area (3) Active Mining (5)	Structures that take or divert water are appropriately licenced and where required ensure sufficient licence shares are held in water sources to account for water take.	Final landform considers advice from relevant Government Agency whether sufficient licence shares are available in the water source to account for water stored in voids and dams in the proposed final landform.	Water approvals / licences are granted by relevant NSW Government Agency.	Confirmation from relevant Government Agency that relevant water approvals / licences are able to be granted.
Native Ecosystem (A) Agricultural Revegetation (B) Infrastructure (I)	Infrastructure (1) Tailings Storage Facility (2) Water Management Area (3) Overburden Emplacement (4) Other – Stockpiled Material (8)	The risk of bushfire and impacts to the community, environment and infrastructure has been addressed as part of rehabilitation.	Appropriate bushfire hazard controls (where required) have been implemented on the advice from the NSW Rural Fire Service.	Bushfire controls implemented.	Statement provided and before/after photos.
Native Ecosystem (A)	Infrastructure (1)	 The vegetation composition of the rehabilitation is generally consistent with the pre-mining plant community type. These communities include: Mallee - Gum Coolabah Gum Coolabah Poplar Box - Gum Coolabah - White Cypress Pine 	Cover and abundance of plant growth forms recorded from monitoring plots are characteristic of the target vegetation community.	Cover, abundance and height range of native plant growth forms are characteristic of, or trending towards, the target vegetation community type.	Photographs Ecological monitoring reports

4.4. Rehabilitation Objectives and Rehabilitation Completion Criteria Stakeholder Consultation

4.4.1. Stakeholder Engagement Plan

To satisfy commitments made in the EIS, Hera Resources developed a Communication and Engagement Plan (CEP). The CEP details Sites' stakeholders and the strategies used to communicate with them and provide the foundation for working with stakeholders prior to and during the closure process. The CEP will be regularly revised to reflect the outcomes of technical investigations, the ongoing development and execution of this RMP and the outcomes of ongoing engagement.

4.4.1.1 Relevant Statutory Authorities

Aurelia has consulted with and will continue to consult with the following regulatory bodies in relation to the Hera operations and rehabilitation:

- Department of Planning, Housing and Infrastructure (DPHI) (formerly DPE);
- Department of Regional NSW;
- NSW Resources Regulator (RR);
- NSW Environment and Heritage Group;
- NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) Water;
- NSW DCCEEW Biodiversity, Conservation and Science Group;
- NSW Department of Industry;
- NSW Environment Protection Authority;
- Transport for NSW; and
- Cobar Shire Council.

4.4.1.2 Other Key Stakeholders

Hera Resources has consulted with and will continue to consult with a number of community groups and landholders in relation to the Hera Mine operations and rehabilitation, including:

- Association of Mining Related Council;
- Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan Aboriginal Corporation Native Title Holders;
- Cobar Local Aboriginal Lands Council;
- Local community and affected landowners;
- Community groups; and
- Staff, contractors and unions.

4.4.1.3 Community Consultative Committee

A Community Consultative Committee (CCC) operates in accordance with Schedule 5, Condition 6 of MP 10_0191 and condition A18 of SSD 24319456, with an Independent Chairperson nominated to facilitate the meetings. The Committee meets quarterly and consists of council representatives, community representatives and Site employees.

4.4.2. Summary of Stakeholder Engagement Completed to Date

Aurelia routinely engages with stakeholders regarding rehabilitation and mine closure.

Various stakeholders, DPHI, RR, EPA, DPE Water (now DCCEEW), Office of Environment and Heritage (now Environment and Heritage) and Cobar Shire Council were engaged regarding final land use options and rehabilitation expectations as part developing the former MOPs.

Key issues associated with final land use and rehabilitation addressed in the Hera Mine Approval and Modification Process included:

- The maintenance of the proposed final landform of the modification including what the ongoing maintenance would require, or who would be responsible for this at the cessation of the mining lease.
- How potentially contaminated waste rock and polluted materials would be sealed from groundwater flows within the mine's underground workings after rehabilitation had been completed and the groundwater levels had recovered.
- The material used to construct process water dams may also be contaminated during the mine life and should be considered as part of waste management in the decommissioning of the dam and rehabilitation of the site.

 Table 16 presents a high-level summary of the key consultation undertaken for the Site to date.

Table 16: Consultation Summary to Date

Stakeholder	Date	Issues Raised – Final Land Use Options and Rehabilitation		
RAPs	2011	Consultation with the Aboriginal community was undertaken during preparation of the Environmental Assessment (EA) in 2011. No Aboriginal objects were identified during the associated survey and the Aboriginal representatives consulted stated that the mine site was of little cultural significance. Therefore, no consultation has been carried out with Aboriginal stakeholders during the preparation of MOD 6 or the related MOP.		
ссс	August 2018 – November 2019	MOD 5 was formally presented to the CCC at meetings on 2 August 2018, 1 November 2018, 7 February 2019, 2 May 2019, 1 August 2019 and 7 November 2019. The CCC was briefed on the proposed modification and provided with an opportunity to ask questions and present matters of concern. No matters relevant to the proposed modifications were raised and no specific issues to be addressed were identified.		
		In accordance with ESG3 and MP 10_0191 Condition 46, a copy of the draft MOP was provided for consultation to DPIE (now DPHI), RR, EPA, DPI Water, Office of Environment and Heritage (OEH) and Cobar Shire Council on 23 rd November 2019. Recommendations raised during this consultation are summarized below. These recommendations were addressed in the MOP:		
Government Agencies (DPIE, RR, EPA, DPI Water, OEH and CSC)	23 November 2019	 The MOP should include a protocol for surveying the ventilation shafts and portals for bats prior to capping and developing appropriate management strategies in response to those survey results. The MOP should include a map of the intended final land use across the site. The MOP should include a map detecting: The proposed analogue sites for each native vegetation community to be established during rehabilitation. The monitoring points corresponding to each of the analogue sites. Data from analogue sites should be used to refine the performance targets, performance indicators, completion criteria and trigger points for corrective action. 		
		Trigger points with the failure of vegetation establishment and exotic fauna should be more specifically defined.		
RR	24 January 2020	Following MOD 5, a final version of the MOP, addressing all relevant feedback was submitted to the Resources Regulator for approval on 24January 2020. Approval of the MOP and RCE was received on the 28 February 2020		
ссс	3 September 2020 and 3 December 2020	Further consultation with the CCC was undertaken for MOD6. The committee was briefed on the proposed modification and were provided with an opportunity, both at the meeting and subsequently, to ask questions and present matters that they would like to see addressed in this document. No matters relevant to the Proposed Modification were raised and no specific issued to be addressed were identified		
Government Agencies (NSW DCCEEW Water and NSW BCS)	June 2024	The Consultation required under B86(b) for the Rehabilitation Strategy document received responses from NSW DCCEEW Water Group and Biodiversity Conservation and Science (BCS) Group which also related to content of this RMP.		

4.4.3. Proposed Future Consultation

Consultation will continue with stakeholders during the life of mine, in accordance with the CEP. **Table 17** presents a summary of the proposed future consultation activities key stakeholders.

Table 17: Summary of proposed future stakeholder engagement activities

Stakeholder	Activities
	Ongoing revisions of the RMP
	 Submission of Rehabilitation Outcomes documents
RR	 Submission of the Annual Review and Annual Rehabilitation Report and
	Forward Program
	Detailed Mine Closure Planning
	Rehabilitation Strategy document
	Annual Reviews
	 Ongoing revisions of the RMP
DPHI	 Submission of the Annual Review and Annual Rehabilitation Report
	 Detailed Mine Closure Planning
	Environmental Management Plan reviews
	Annual Reviews
CCC	 Ongoing revisions of the RMP
	Quarterly CCC Meetings
	Detailed Mine Closure Planning
	Annual Reviews
Agencies	 Ongoing revisions of the RMP
	 Submission of the Annual Review and Annual Rehabilitation Report
	Detailed Mine Closure Planning
Stakeholder and	Ongoing revisions of the DND
Community Interest	Origoing revisions of the RMP Detailed Mine Clocure Planning
Groups	
Registered	
Aboriginal Parties	Detailed Mine Closure Planning

As part of the above-mentioned consultation, Hera Resources will seek feedback on actions which would minimise the socio-economic impacts associated with mine closure.

5. FINAL LANDFORM AND REHABILITATION PLAN

5.1. Final Landform and Rehabilitation Plan – Electronic Copy

In accordance with the requirements of the *Form and Way: Rehabilitation Management Plan for Large Mines* (RR, 2021a) a *Final Landform and Rehabilitation Plan* has been prepared to show the proposed final land use and final landform for the Site (refer **Figure 3** and **Figure 4**).



Figure 3: Final Landform Features (RMP Plan 1)



6. REHABILITATION IMPLEMENTATION

6.1. Life of Mine Rehabilitation Schedule

Mine planning is completed annually and outlines proposed mining/disturbance and rehabilitation areas. Figures are prepared as part of the Annual Rehabilitation Report and Forward Program, outlining activities over the next three years.

There will be limited opportunity for progressive rehabilitation over the LoM due to the nature of underground operations, most disturbed areas will be in use until decommissioning activities commence. Progressive rehabilitation in the active mining phase will be predominantly limited to the rehabilitation of exploration holes and pads, disused bores, and minor disturbance associated with Site construction. The Hera Mine TSF will be retained to support operations at Federation Mine.

6.2. Phases of Rehabilitation and General Methodologies

Achievement of the final land uses will be reached through a series of conceptual rehabilitation phases. As defined by the *Form and way: Rehabilitation Management Plan (large mines)* the rehabilitation phases are presented in **Table 18**.

Table 18: Rehabilitation Phases

Rehabilitation Phase	Description
Phase 1: Active Mining	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as land clearing, salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Phase 2: Decommissioning	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan (for large mines only) this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or 'fit for purpose' built infrastructure to be retained for future use(s) following lease relinquishment.
Phase 3: Landform Establishment	This phase of rehabilitation consists of the processes and activities required to construct the approved final landform (as per the development consent and, for large mines, the approved final landform and rehabilitation plan). In addition to profiling the surface of rehabilitation areas to the approved final landform profile this phase may include works to construct surface water drainage features, encapsulate problematic materials such as tailings, and prepare a substrate with the desired physical and chemical characteristics (that is, rock raking or ameliorating sodic materials).
Phase 4: Growth Medium Development –	This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short-lived pioneer species) to ensure achievement of the approved or, if not yet approved, the proposed: rehabilitation objectives rehabilitation completion criteria, and final landform and rehabilitation plan. This phase includes spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.
Phase 5: Ecosystem and Land Use Establishment -	This phase of rehabilitation consists of the processes to establish the final land use following construction of the final landform. For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control.
Phase 6: Ecosystem and Land Use Development –	This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved or, if not yet approved, the proposed: rehabilitation objectives rehabilitation completion criteria, and final landform and rehabilitation plan. For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat

Rehabilitation Phase	Description
	complexity, and development of a productive, self-sustaining soil profile. This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.
	The final phase of rehabilitation when a rehabilitation area has achieved the final land use for the mining area:
Phase 7: Rehabilitation Completion (sign-off) –	 as stated in the approved rehabilitation objectives and the approved rehabilitation completion criteria; and as spatially depicted in the approved final landform and rehabilitation plan.
	Rehabilitation areas may be classified as complete when the RR has determined in writing that rehabilitation has achieved the final land use following submission of the relevant application by the lease holder.

6.2.1. Active Mining Phase

Appropriate measures and strategies are implemented during the active phase of mining to enhance rehabilitation outcomes. Works in this phase are summarised below. It should be noted for the Federation Project, many active mining phase measures are relevant to the construction phase of the project, commencing in May 2024.

a. Soils and Materials

Hera Resources engaged Sustainable Soils Management Pty Ltd (SSM) to conduct a Land and Soil Capability (LSC) Assessment for the Site. The resulting report is hereafter referred to as SSM (2021).

Management protocols for soils and subsoils are implemented to minimise risks and enable soil resources within disturbance areas to be characterised, stripped, stockpiled and re-used appropriately. The management protocols also enable consideration of the main soil types observed within the Site's disturbance boundary and any specific constraints or management measures to be adopted for each soil type.

Soil Resources

SSM (2021) found the soils across the Site to be generally red, non-saline, slightly to moderately acidic clay loam to light clay, with large variation in gravel content and depth to rock. The soils at the Site are described with the following LSC classes:

- 23% of the study area was found suitable for restricted cultivation (LSC Class 4) with the remaining area unsuitable for cultivation.
- 24% was rated as having severe limitations for cropping (LSC Class 5).
- 43% was rated as being only suitable for low impact agricultural uses such as grazing or forestry (LSC Class 6).
- The remainder of the study area was found to have little agricultural potential (LSC Class 7).

The distribution of LSC was strongly dissected because soil mapping units and LSC class were controlled by position on hills, slopes and valleys, with the rolling hills presenting large variations. In essence, LSC class 4 occurred in depositional areas or valley floors, while the LSC class became more restrictive (higher LSC class) with distance uphill slopes.

Soil Stripping and Resource Availability

SSM (2021) details the optimal approach for striping and handling soils for use in rehabilitation. The following techniques are implemented to avoid contamination and maintain soil productivity:

- The area to be stripped will be clearly defined on the ground. The target depths of soil to be stripped at each location will be clearly communicated to machinery operators and supervisors.
- A combination of suitable equipment will be used for stripping and placing soil in stockpiles. Machinery circuits will be located to minimise compaction of both undisturbed and stockpiled soil.
- The soil material will be maintained in a slightly moist condition during stripping. Material should not be stripped in either an excessively dry or wet condition.
- All machinery brought onto the site for soil stripping will comply with weed management and biosecurity protocols established for the site.

- Trees present will be cleared and grubbed prior to soil stripping.
- Handling and rehandling topsoil would be minimised as far as possible.

Recommended stripping depths for soil resources are contained in SSM (2021) and are reproduced in **Table 19**. SSM (2021) estimate that approximately 120,000 m³ of soil is required in rehabilitation, indicating that there are adequate soil resources available at the Site.

 Table 19: Recommended Stripping Depths and Available Material

Soil Mapping Unit	Average Stripping Depth	Stripping Depth Range (cm)	Dominant Limitation	Volume available (m³)
Dermosol	75	35 to 135	Coarse fragments in gravel layers	72,000
Non-Calcic Dermosol	60	35 to 140	Coarse fragments of weathered rock	75,000
Rudosol	15	10 to 50	Coarse fragments of weathered rock	18,000
Acidic Rudosol	30	15 to 50	Coarse fragments of weathered rock	14,000
Tenosol	Zero	-	Coarse fragments of weathered rock	

Soil Stockpiling

The stripped soils are stored in a way that minimises compaction of the whole stockpile and maximises biological activity. The following techniques will be implemented where practicable to achieve these goals:

- All stockpiles will be paddock tipped directly into storage without forming or compaction. Soil stockpiles would be designed and constructed to a depth not greater than 3 m in order to minimise the development of anaerobic conditions and to minimise the deterioration of biota and seed banks
- The surface of soil stockpiles will be left in a rough condition to promote water infiltration rather than runoff. Where required, sediment controls will be implemented downslope of stockpiles to capture eroded sediment
- Overland flow onto and across stockpile sites will be kept to a practical minimum, and not allowed to
 concentrate to the extent that it causes visible erosion. This will be achieved by placing stockpiles on locally
 high areas
- Stockpiles will be revegetated to stabilise the surface, limit dust generation, minimise erosion and provide competition for weeds
- Machinery and vehicles will be excluded from general access. Stockpile locations are marked on site maps to identify them so that they are protected from disturbance
- Stockpiles have been surveyed and data recorded about the volumes and soil types present, and
- Stockpiles are monitored for the establishment of declared noxious weeds and control programmes implemented as required.

Soil Resources Balance

The approximate volumes of topsoil estimated to be available for rehabilitation activities, based on recommended stripping depths are provided in **Table 20**.

Table 20: Soil stripping depths and volume

Soil Mapping Unit	Area in Federation Site to be disturbed (ha)	Maximum Stripping Depth (cm)	Volume available (m³)
Dermosol	10	75	72,000
NonCalcic Dermosol	13	60	75,000
Rudosol	12	15	18,000
Acidic Rudosol	5	30	14,000
Total			179,000

SSM (2021) estimates that approximately 120,000 m³ of soil is required in rehabilitation, indicating that there are adequate soil resources available. The Land and Soil Capability Assessment (SSM 2021) identified that large areas of the Site have soils that are highly erodible. To mitigate soil degradation the erosion control measures described in **Section 6.2.1(j)** will be implemented.

b. Flora

Management

Pre-vegetation clearing and vegetation clearing protocols are implemented in accordance with the Biodiversity Management Plan (Bio MP).

Pre-vegetation clearance surveys are conducted by and appropriately qualified and experienced ecologist prior to vegetation clearing. The aim of the surveys is to identify significant ecological features within areas to be cleared and make all reasonable and feasible attempts to minimise the impact of clearing. The preclearing surveys have previously been and will continue to be conducted by a suitably qualified and experienced person.

Resources

Seed will be purchased from a commercial native seed supplier to ensure viability. Seed will be treated or cleaned before use, depending on the species using standard collection and quality assurance methods.

Native seed used in rehabilitation is generally supported by seed viability testing and quality control processes to help guide application rates.

Weed management programs implemented prior to disturbance if heavy weed presence is observed. Additional information on weeds and vertebrate pest control is included in **Section 6.2.5**.

Vegetation identified as potentially valuable habitat e.g. hollow logs, may be stockpiled for use in erosion and sediment control works or for site rehabilitation.

c. Fauna

Management

Pre-vegetation clearing and vegetation clearing protocols are implemented in accordance with the Bio MP. Threatened species will also be managed in accordance with the Bio MP.

Pre-clearance surveys are undertaken to identify fauna or habitat features that require relocation or salvage prior to clearing activities commencing.

The surveys will be undertaken to identify any roosting or nesting fauna that require relocation immediately prior to clearing activities. Safeguards to manage those species that cannot be relocated before clearing commences will be implemented.

During the pre-clearing vegetation survey, a suitably qualified and experienced person will inspect the area to be cleared, paying particular emphasis on habitat with potential to be used by a threatened or hollow dependant species.

Hollow trees and any other trees with the potential to provide habitat will be marked with spray paint and will be left for the second stage of clearing to allow fauna to vacate hollows naturally. During the pre-clearing vegetation survey, the ecologist will record the intended locations and placement of tree hollows. Once the hollows are cleared, they will be transported to the nominated locations. Placement of these resources would not impact existing habitat for threatened species.

When undertaking vegetation removal, the Vegetation Clearing Procedure of the Bio MP will be implemented.

Resources

Major tree trunks, major limbs and if possible minor branches are salvaged and used for rehabilitation activities. This activity would create habitat with structural complexity and encourage many species into the rehabilitated areas.

Large hollow trunks will be transported to undisturbed areas of the Site to provide additional habitat in undisturbed areas. Woody vegetation which may be utilised for rehabilitation will be transported to the area being rehabilitated or may be stockpiled for future rehabilitation activities.

d. Rock/overburden emplacement

During operations, waste rock is stored on designated pads or utilised for backfilling underground stopes. Post mining, potentially acid forming (PAF) waste rock will be returned underground, and non-acid forming (NAF) waste rock will be returned underground, used for backfilling the box cut or in rehabilitation of other areas.

There are segregated waste rock dumps at Federation Mine for PAF and NAF material. Each pad has lined leachate ponds to capture any surface run-off. PAF waste rock that is brought to surface will either be transported back underground (during or post-mining operations) for use as backfill or transported to Hera Mine and disposed of underground. No PAF waste rock is proposed to remain at the surface at closure. All weathered rock excavated for the box cut is NAF. Weathered waste rock may be crushed prior to use in construction activities. It will be used to backfill the box-cut, for other rehabilitation and construction activities or transported to Hera Mine and disposed underground.

e. Waste Management

All waste materials are collected and disposed of by a licenced contractor. Source segregation is undertaken where possible on site to achieve the waste management goals. The advantages of source segregation for waste management includes:

- Reducing the potential for contamination of general waste streams;
- Improving the ease of waste storage, handling, disposal and tracking;
- Educating employees of the importance of waste stream segregation and recycling;
- Potentially generating an income from recyclable waste streams; and
- Reducing the potential disposal costs for some items.

Table 21 identifies those wastes currently managed at Hera Mine including their relevant waste classification, handling and disposal location. These practices will continue for the Site, which will have the same types of waste.

Table 21: Waste Classification, Source, Handling Transport and Disposal

Waste Type	Waste classification	Major source	Handling	Transport/disposal
Office waste and packaging waste	General solid waste (non- putrescible)	General office activities	Waste collected on site	Removed from site by licenced waste contractor and taken to Cobar landfill
Scrap metal	General solid waste (non- putrescible)	Construction site waste and process plant building waste	Waste segregated in fit for purpose bins or stockpiled in the designated scrap metal pile	Removed from site by licenced waste contractor
oil/fuel filters	General solid waste (non- putrescible)	Mining fleet	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Used absorbents – no free liquid	General solid waste (non- putrescible)	Spills associated with maintenance of mining fleet	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Pesticide/ herbicide containers	General solid waste (non- putrescible)	Rehabilitation/weed control	None generated.	

Waste Type	Waste classification	Major source	Handling	Transport/disposal
			Licenced contractor performs this task and removes their own waste.	
Material contaminated with hydrocarbons	General solid waste (putrescible)	Minor spills	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Domestic Waste	General solid waste (putrescible)	Waste food scraps and other general domestic waste	Stored on site in designated bins	Removed by licenced waste contractor as required
Liquid waste from sewage system	Liquid	Office, Kitchen and Bathrooms	Waste collected on site	Treated effluent irrigated in nominated irrigation area
Lubricating oils and hydraulic oils	Liquid	Mining fleet	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Used lead acid batteries	Hazardous	Mining fleet	Stored on site in concrete bunded area	Removed by licenced waste contractor as required
Degreasing fluids, diesel and other petroleum fluids	Hazardous	Mining fleet	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Used oil/fuel filters	Hazardous	Mining fleet	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Used absorbents – free liquid	Hazardous	Spills associated with maintenance of mining fleet	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Pesticide/ herbicide containers (solvent based)	Hazardous	Rehabilitation/weed control	None generated. Licenced contractor performs this task and removes own waste.	
Used/empty bulk chemical containers	Hazardous	Used on site.	Segregated and stored on site	Removed by licenced waste contractor as required
Laboratory wastes	Hazardous	Used on site	Segregated and stored on site in bunded area	Removed by licenced waste contractor as required
Used Tyres	Special Waste	Mining fleet	Segregated and stored on site in designated tyre storage area.	Removed by licenced waste contractor as required

Hazardous materials are managed in accordance with the Hazardous Materials Management Plan. At closure a Phase 1, and if required, a Phase 2 contamination assessment will be completed for the Site. Any identified contamination will either be remediated or removed prior to site relinquishment.

f. Geology and geochemistry

Mineralisation at the Site is epigenetic (i.e. formed later than the host rocks) and structurally controlled within fine-grained sedimentary rocks. Mineralisation consists of several steeply dipping vein breccia and massive sulfide lenses developed in the centre of a broad northeast-southwest striking corridor of quartz-sulfide vein stockwork mineralisation.

Massive sulfide and sulfide breccia base metal mineralisation is typically zinc-rich and associated with intense cross-cutting black chlorite alteration in the lower parts of the known deposit, with silicasulfide dominant infill in

the upper parts. Moderate- to high-grade gold mineralisation is best developed in a steeply plunging shoot in the northeast of the deposit, with recent drilling also highlighting high grades in other parts of the deposit.

Host rock surrounding the deposit (i.e. potential waste rock) exhibits very low-grade mineralisation with relatively low sulfide and carbonate mineralisation. The management of PAF material is described in **Section 6.2.1(d)**.

g. Material prone to spontaneous combustion

No material within the Site is prone to spontaneous combustion and as such no specific risks to rehabilitation have been considered.

h. Material prone to generating acid mine drainage

Waste rock and tailings have been tested to determine the presence of materials prone to generate acid mine drainage as part of the EIS Geochemical Assessment (Terranus Earth Sciences 2021) (EIS-GA).

Tailings have a high potential to generate acid drainage and have a moderate to high potential for saline (sulfate) drainage from sulfide oxidation. The geochemical assessment found that essentially all weathered waste rock (primarily sourced from the Federation Mine box-cut) is classified as non-acid forming (NAF). Most fresh waste rock (indicatively 85 %) is classified as potentially acid forming (PAF), predominantly with a low capacity to generate significant acidity. Overall, fresh waste rock can be classified as PAF.

Waste rock will be managed in accordance with the Waste Rock Management Plan (WRMP). In summary, PAF and potential acid leachate will be managed with the following measures:

- Where possible, PAF material will be left in-situ underground or used as backfill.
- If taken to surface, PAF will be stored on a designated Waste Rock Emplacement Area (WREA).
- The WREA has a Lined Leachate Pond or Leachate Dam that captures any runoff and potential leachate. Sufficient capacity will be maintained in the leachate storages.
- Potential leachate generation and seepage will be monitored through water sampling in accordance with the procedures contained in the WRMP.
- No PAF will remain on the surface following the completion of mining. Once PAF material is placed underground within completed stopes, the potential for further generation of acidic leachate is limited as a result of the limited availability of oxygen for oxidation reactions. PAF waste rock placed on the surface is not encapsulated as it is only temporarily stockpiled on the surface and clay material used for encapsulation will have adverse impacts during stope backfilling operations.
- Any NAF used for rehabilitation or construction purposes outside of the WREA will first be tested to confirm that it is NAF.

i. Ore Beneficiation Waste Management (Reject and Tailings Disposal)

The approved Hera Mine TSF will continue to be used to store tailings from the processing plant which will process ore from the Federation Mine. It is estimated over the life of the Site, 5.2 Mt of tailings will be produced from Federation Mine, of which 3.5 Mt will be returned to the Federation Mine to be used as backfill. The remaining 1.7 Mt will be placed into the approved TSF.

The TSF has an approved area of approximately 50 ha and an approved western embankment elevation of 329m AHD. There is not expected to be a requirement for any TSF wall raises above the approved capacity. Tailings deposition occurs via single point discharge/risers located within the TSF area and has sufficient capacity to cater for all tailings material produced during the proposed life of the mine.

The TSF is constructed as a geo-technically stable landform with all water draining internally or from the embankments via water management structures towards diversion drainage that diverts water upslope of the TSF around the facility. The embankments of the TSF are profiled so that slopes are 1:3 (V:H) downstream and 1:2 (V:H) upstream.

j. Erosion and Sediment Control

The Water Management Plan includes the Erosion and Sediment Control Plan (ESCP). These plans incorporate specific design, construction and maintenance protocols for erosion and sediment control structures in accordance with the requirements of Landcom (2004) and DECC (2008a and 2008b). Given the plans, risks associated with sediment and erosion control will be managed though the continued implementation of the ESCP.

k. Ongoing Management of Biological Resources for Use in Rehabilitation

Biological resources are managed during the active mining phase in accordance with the Bio MP to ensure viability for use in rehabilitation. Management measures include but are not limited to the management of weeds, effective storage, regular inspections and maintenance programs.

I. Mine Subsidence

A Surface Subsidence Assessment was completed by Beck Engineering (2021) for the Site through the development of a numerical model of the underground mine to determine the potential surface impacts.

The numerical simulation of mine-scale subsidence for the entire duration of the mine plan indicates that total cumulative 3D surface displacements above the mining footprint will be within the range of 1-2 cm. This includes both horizontal and vertical components of displacement. This level of displacement was determined to be negligible and highly unlikely to have any rehabilitation impact on surface features.

Risks identified included the potential for the top-level of stopes to become unstable and chimney or cave to surface, and instability of the decline, should it be located in poorer ground conditions than expected. Lastly, the two vertical shafts to the south of the mine infrastructure are located in a weak geological domain.

To mitigate such risks a number of design and operational recommendations were provided, which will be adopted for the Site. These included further characterisation of the rock strength, upper stope control measures and a rock mass characterisation.

m. Management of potential cultural and heritage issues

Aboriginal Heritage

Cultural heritage at the Site is managed in accordance with the Aboriginal Cultural Heritage Management Plan (ACHMP). The ACHMP has been developed to manage potential impacts to Aboriginal cultural heritage across the Site, as well as address any statutory requirements.

To date, 34 Aboriginal sites have been recorded within the Site. To avoid inadvertent impact to Aboriginal sites the following measures will be undertaken:

- The locations of the cultural heritage sites will be provided to the relevant supervisors responsible for the construction and operation of the Site. They will be informed that cultural heritage sites are protected under the *National Parks and Wildlife Act 1974* (NSW) (NPW Act), and no harm is to come to them. The presence of the cultural heritage sites will be made clear to the workforce as part of a Site induction.
- Potentially re-identify any Aboriginal sites within 100 m of proposed impacts with the assistance of a qualified archaeologist and the Aboriginal community and install fencing and/or signage around each with a buffer of ten metres from the trunk of the culturally modified trees and five metres from the boundaries of the open sites.
- If changes are made to the proposed works which could impact locations outside of the current Site approved disturbance area, further archaeological investigation would be required.
- If any objects of suspected Aboriginal heritage origin are encountered during the proposed works, work in the area of the find would cease.
- If suspected human remains are located during any stage of the proposed works, work must stop immediately, and the NSW police must be notified.

All sites were outside the impact footprint, with the exception of Peak CMT 6, which will remain in situ within a 10 m buffer. Management measures have been proposed for the ongoing protection of identified Aboriginal sites, and an unexpected finds protocol is detailed in the Aboriginal Cultural Heritage Management Plan.

Peak CMT 6 was the only site within the impact footprint and as such there are minimal heritage-related risks associated with rehabilitation. Engagement with Registered Aboriginal Parties (RAPs) and BCS (formerly BCD) will be undertaken as part of detailed mine closure planning.

European Heritage

The township of Nymagee was established to support copper mining, which was developed in the late 1800's and was operational until 1912. A search of public databases was undertaken to identify any items of historical heritage in proximity to the Site. There are no items of historic heritage located within or adjacent to the Site, therefore potential impacts are considered to be negligible.

n. Exploration activities

Exploration activities will be undertaken within ML 1862, ML1686 and ML1746 (100m surface exclusion) both at the surface and underground and will include the following:

- Geochemical sampling,
- Geological mapping,
- Geophysics, and
- Diamond, Reverse Circulation and percussion drilling.

Exploration activities will be undertaken in accordance with the requirements of the *Exploration Code of Practice: Rehabilitation.* Disturbance from exploration activities will be rehabilitated as soon as practicable following disturbance. All exploration drill holes will be sealed in accordance with relevant RR guidelines at the time.

Additionally, reporting of the environmental performance of the exploration activities will be included within the Annual Review.

6.2.2. Decommissioning

Decommissioning will include the disconnection of remaining services, demolition and removal of infrastructure from the Site to prepare land for rehabilitation. This phase will also include capping of boreholes (where not retained for future water supply for landholders) and sealing of ventilation shafts. Remediation of any contamination will also be undertaken during this phase.

Decommissioning, demolition, and removal of infrastructure from the mine site will generally be undertaken during the mine closure phase. Any infrastructure including dams, roads and buildings which is beneficial for future use by post mining landowners may be left in place subject to relevant landowner agreements and regulatory approvals.

Decommissioning and demolition activities will be appropriately planned and documented to ensure that appropriate approvals are in place for the works.

Further detail regarding demolition activities will be determined as the operation approaches closure. Detail in this regard will be reported in the Forward Program.

a. Site Security

The following measures are implemented for the management of public safety at Site:

- Perimeter fencing with gated entrances and warning signage has been installed as a barrier to prevent public access to the Site
- Inspection and maintenance of fencing as required
- Provision of swipe card access for the main entrance to the Site
- Induction procedures are required for visitors to site
- Installation of appropriate signage, and
- Awareness training for site personnel, contractors and neighbours.

Site security measures will be implemented during and following the decommissioning process to prevent access by members of the public and secure rehabilitation areas, including any heritage places or objects and any retained infrastructure items.

b. Infrastructure to be Removed or Demolished

Hera Resources will decommission and remove all built infrastructure not required for the final landform during the mine closure phase. Decommissioning activities will be undertaken in consultation with the RR. A decommissioning plan will be used as a guide for sequencing and the process of infrastructure removal.

All demolition work undertaken at closure will be carried out in accordance with Australian Standard *AS 2601-2001: The Demolition of Structures*, or its latest version. Decommissioning of groundwater boreholes will be completed in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (2020).

The Detailed Mine Closure Planning process conducted over the life of mine, in consultation with agencies and the CCC will further identify key actions, assessments, studies, detailed designs, and regulatory approvals required to decommission and/or demolish built infrastructure.

c. Buildings, structures and fixed plant to be retained

Some infrastructure may be retained following closure if a beneficial use for future landowners is identified. However, Federation notes that Condition B85 states *Surface Infrastructure – To be decommissioned and removed, unless Resources Regulator agrees otherwise.*

Any infrastructure to be retained will be identified in conjunction with the relevant stakeholders and obtain all necessary approvals (where required) and agreement from the RR. Specific items to be retained will be identified as a part of detailed mine closure planning.

Potential infrastructure to remain (pending RR agreement) includes:

- powerlines
- water management infrastructure
- roads and tracks
- solar farms
- hardstand areas, and
- communication infrastructure.

d. Management of Carbonaceous/Contaminated Material

Carbonaceous Material

Hera Mine and Federation Mine are metalliferous mines and does not have any carbonaceous material onsite. Subsequently carbonaceous material is not applicable to the Site.

Contaminated Material

Contamination assessments will be completed as part of the detailed mine closure planning and decommissioning processes:

- Site will engage a suitably experienced and qualified person to conducted contamination and remediation assessments.
- Phase 1 and Phase 2 (where required) assessments will be undertaken for all features, services and structures within the Infrastructure Area domain.
- Subject to the findings and recommendations of the Phase 1 assessment, a targeted Phase 2 assessment will be completed.
- If contamination is identified, a Remedial Action Plan will be developed, detailing remediation strategies for potential contamination.
- Contaminated materials with be managed so that remedial works are completed prior to rehabilitation being completed. No hazardous materials will be stored at the Site once operations and rehabilitation activities cease.
- All PAF material will be removed from the waste rock pads for backfilling underground to ensure that no contaminated materials remain on site.

d. Hazardous Materials Management

During decommissioning, hazardous materials (hydrocarbons and chemicals) will be managed and stored in accordance with the Site's Hazardous Materials Management Plan. Removal of hazardous materials will be undertaken by a licensed waste disposal contractor and disposed / recycled at a licensed waste facility.

e. Underground Infrastructure

Decommissioning of the underground mining infrastructure will include the following;

- Ventilation rises and escapeways will be sealed and capped with a suitably designed and engineered cap that will permit reopening of the shaft at a later time if required.
- Exploration boreholes will be appropriately capped. Water supply boreholes will be retained or appropriately sealed. Piezometers and monitoring boreholes will be appropriately sealed.
- The portal will be sealed (in consultation with the RR) to restrict unauthorised access to the underground workings.
- The box cuts at both Hera Mine and Federation Mine will be backfilled.

• Backfilling of underground stope voids with waste rock will be undertaken to provide for local mine stability and to allow extraction of higher-grade resources in localised areas. Hera Resources estimates that at least 50% of the stopes created will be backfilled with waste rock, either immediately or following temporary stockpiling of material at the surface. The back-filling will use waste rock material sourced preferentially from concurrent underground development or with additional waste rock PAF material transported from the Southern Waste Rock Emplacement (WRE) on the surface, if required. It is scheduled that all waste rock on the WRE will be backfilled underground before the cessation of mining.

6.2.3. Landform Establishment

The landform establishment phase involves the earthworks required to construct and/or profile all or part of each domain to the approved final landform. The constructed landform will be suitable for the proposed final land use and blend, as far as practicable with the adjacent topography. This stage also includes the construction of any drainage structures needed for the final landform. The final landforms for Hera Mine and Federation Mine is shown on the Final Landform Plans in **Section 5**.

a. Water Management Infrastructure

All infrastructure not required for the final land use will be removed and sediment within structures tested for its acid generating capacity. Dams not required in the final landform will be filled and rehabilitated. Decommissioned dams will be backfilled, and the landform constructed to blend with surrounding topography. Dams to remain in the final landform will have any contaminated sediment removed and be made safe.

Water Management structures that will remain in the final landform include Back Dam East, Back Dam, Pete's Dam, House Dam, and Three Gates Dam. All basin walls and spillways will be made stable and contain a suitably designed spill way for overflow of water to surrounding drainage lines.

The water management structures up slope of the TSF will also remain following mine closure. These structures will deflect upslope water away from the former TSF and have been designed to be stable in a 1 in 100-year Average Recurrence Interval (ARI) storm event.

b. Final landform construction: general requirements

The proposed post-mining landform will involve a combination of pasture and native vegetation. In summary, Hera Resources will ensure that the final landform comprised the following.

- The landform will be constructed so that it is consistent with the surrounding landscape.
- The Federation Mine and Hera Mine box cuts will be backfilled with NAF and the original topography reestablished as far as practicable.
- The portal would be backfilled and sealed, and ventilation rises would be capped and fenced.
- All stockpile areas will be shaped and revegetated.
- If developed, a bunded Surface Extraction Area at Hera Mine with reprofiled and reshaped floor draining to a sump (potential for scaled slopes where suitable material is available). The walls of the Surface Extraction Area will be at a maximum of 65° slope.
- The Surface Extraction Area would be made safe, including bunding of the perimeter of the Surface Extraction Area, scaling of walls and profiling of the floor of the Surface Extraction Area as required.
- The Federation Mine Surface Extraction Area, if developed, will be profiled to a level landform. As such, there will be no final void.
- The Federation Mine box cut will be backfilled with NAF and the original topography reestablished as far as practicable.
- The footprints of the Waste Rock Emplacement would be re-profiled and ripped to create a landform consistent with the completion criteria. All PAF material will be placed underground or within the TSF and NAF material used for rehabilitation activities within the Site.
- Haul roads, access tracks and hardstand areas would be ripped and shaped.

c. Final Landform Construction: Reject Emplacement Areas and Tailings Dams

The final landform characteristics of the TSF at Hera Mine will be informed by the use of landform evolution modelling throughout the life of Site and this RMP will be updated to reflect findings. Generally, the final landform characteristics of the TSF include:

• An appropriately covered a free draining TSF and embankment slopes of approximately 1:3 (V:H) or less.

- All downstream slopes <18° or 1:3 (V:H).
- An embankment height of 9m above the original surface.

Hera Resources proposes to manage the TSF's potential risk to the receiving environment by capping the TSF at final closure with a store and release cover that will mimic a natural soil profile. The purpose of the cover is to:

- Limit rainfall infiltration into the tailings to prevent seepage, and mobilisation of oxidation products from the PAF tailings that may form Acid Rock Drainage (ARD);
- Provide an environment favourable to the growth of vegetation in the cover; and
- Stop capillary rise of constituents from ARD migrating upwards from the tailings into the cover and potentially leaking onto the natural environment.

The final closure strategy for the TSF will be subject to results of rehabilitation trials on the appropriate capping depth and compositions. SGM Environmental (SGM) prepared a report titled *Cover and Landform Design – Tailings Storage Facility* and dated February 2024.

The report findings recommended a cover design that:

- has a preferred thickness of 0.8m to reduce to reduce infiltration storage and promote evaporation in comparison to a thicker cap
- incorporates surface water management structures to reduce erosion hazards and potential for gully formation (e.g. bunds for velocity control), and
- uses a coarser material to avoid excessive erosion occurring in the high-risk areas (i.e. rock/soil matrix on high risk areas).

The final landform may be refined as a result of future investigations. A Soil and Water Management Plan will also be developed to accompany the capping works and final closure strategy for the TSF.

Current research and trials on the TSF capping are detailed in Section 9.1.

d. Final Landform Construction: Final Voids, Highwalls and Low Walls

If developed, the Surface Extraction Area at Hera Mine may leave a final void. The general construction of the Hera Mine Surface Extraction Area will include a reprofiled and reshaped floor draining to a sump (potential for scaled slopes where suitable material is available). The walls of the Surface Extraction Area will be at a maximum of 65° slope.

e. Construction of Creek/River Diversion Works

The Site's final landform does not include creek or diversion works.

6.2.4. Growth Medium Development

In the context of this RMP, growth medium development encompasses activities to reinstate soils with the initial physical, chemical and biological characteristics required to establish the desired vegetation community.

Characterisation

Sampling will determine if the topsoil and subsoil is suitable for rehabilitation use or if it requires amelioration (e.g., Gypsum) prior to application. Organic material will be used in preference to fertilisers during rehabilitation.

Topsoil Respreading and Amelioration

Topsoils and subsoils stockpiled during site establishment activities would be spread to create growth media on the shaped landform. The subsoils would be placed first followed by topsoil. The thickness of each layer would be determined based on the volume of subsoil and topsoil available. Indicatively, however, Hera Resources anticipates that the recreated soil profile would be broadly similar to the existing soil profile, namely between 200mm and 300mm of topsoil and up to 700m of subsoil.

The following measures will be implemented during the growth medium development phase:

• Establishment of surface water controls during placement of soil material in accordance with the Water Management Plan

- Ensure that slopes less than 2% are rehabilitated with Red Earths. As this soil unit is erodible, furrowing would not be used, and the length of exposed slopes would be kept less than 80m by using windrows of mulch placed along the contour and ensuring that that these would not act as drains themselves.
- Ensure that slopes between 2% and 10% have a concave profile and are covered with Lithosols.
- Ensure that slopes of more than 10% are protected with rock/ soil matrices.
- Where required to increase soil organic carbon, a mineral based biologically inoculated fertiliser will be applied.
- Soil preparation may include ameliorant application (e.g., gypsum) and ripping or scarifying the surface. Refrain from placing soils during wet conditions.

Seed Bed Preparation

Thorough seedbed preparation will be undertaken to ensure optimum establishment and growth of vegetation. Site will ensure that during soil placement operations soil is placed directly onto a scarified surface without compaction and in correct order, namely topsoil overlying subsoil.

6.2.5. Ecosystem and Land Use Establishment

The ecosystem and land use establishment phase involves the establishment and maintenance of vegetation on the completed landform. Initial activities for ecosystem and land use establishment of land that will have a final use of native vegetation will focus on establishing a cover of suitable native groundcover (grasses). Revegetation will then comprise seeding / planting of suitable vegetation and / or natural regeneration from seed within the growth medium. Following completion and during mining activities these areas will be returned to native vegetation occurring within existing PCTs as described in Section 2.3 of the EIS Rehabilitation Strategy (2021).

Rehabilitation of disturbance no longer required for the Site will be undertaken progressively. This will include areas that are bare or only have remnant vegetation.

Final Land Use Domain – Agricultural – Grazing

The domain will be rehabilitated to grassland vegetation. Initially, the area will be seeded with a sterile, fast growing grass cover to ensure erosion and sediment control are managed. Native grass species will be included in the seed mix to facilitate gradual replacement of the initial cover species. The final vegetation outcome will be understorey grass or shrub species from the target PCTs as described in Section 2.3 of the EIS Rehabilitation Strategy (2021). The vegetation will need to stabilise the cover material, stabilise sediment and be visually consistent with the surrounding landscape.

Final Land Use Domain – Native Ecosystem

Initial activities for ecosystem and land use establishment of land that will have a final use of native vegetation conservation will focus on establishing a cover of suitable native groundcover (grasses). Revegetation will then comprise seeding / planting of a native species mix containing tree, shrub and grass species representative of the vegetation communities within the Site.

Six discrete PCTs were identified by AREA (2021) during the Biodiversity Development Assessment of the Site area. Where not sourced from a local supplier, seed will be collected for as many species as possible within the PCTs for use in revegetation works but particularly from PCT103 (Poplar Box – Gum Coolabah – White Cypress Pine shrubby woodland) and PCT174 (Mallee – Gum Coolabah woodland), the dominant PCTs within the Site area.

Trees will be established from either direct seeding or tube stock planting; however, the general strategy will involve direct seeding given the greater likelihood of success and production of more natural assemblage. Where appropriate, seed will be treated, (e.g. inoculated and scarified prior to sowing to improve the chance of early and successful germination).

All revegetated areas will be monitored to ensure long-term resilience and natural regeneration. In areas assigned to native vegetation, success will be based on the establishment and subsequent development of ground cover, mid-storey and canopy species. Revegetation techniques will be continually developed and refined over the life of mine through an ongoing process of monitoring and relevant industry experience elsewhere.

Weed and Vertebrate Pest Control

Ecosystem establishment includes initial management actions to limit the introduction of weeds and vertebrate pest species in rehabilitation areas. The management of these will be undertaken as outlined in the Bio MP including:

Any weed species which are identified upon outbreak will be recorded then destroyed by weed spraying.

- Specific focus upon the removal, deterrence of the growth and the transportation of weeds into the Site.
- Vehicles are washed down on a regular basis to prevent weed spread.
- Feral animal management undertaken as required, including goat removal, cat trapping, fox baiting, and rabbit baiting and/or warren ripping.
- The Site is surrounded by a boundary stock fence which will limit access to the Site and grazing by undesired pests such as goats and pigs. The boundary fence will be inspected and maintained, as required.
- Rehabilitation inspection to identify potential weed infestations.
- Identifying and spraying existing weed populations on-site together with ongoing weed spraying over the life of the mine.

Revegetation Program

An effective revegetation strategy is proposed for the Site that seeks to complement desirable post-mining landuse objectives whilst maintaining effective erosion and weed controls in the longer term.

Revegetation activities will be planned to occur after the completion of reshaping, re-soiling and construction of drainage structures. Where possible, the timing of the soiling and drainage works will be scheduled to enable immediate sowing of grasses and tree seed after preliminary ground preparation works are completed in order to minimise the potential for soil erosion and weed invasion.

Cover crops will be used in revegetation, where necessary, to provide for an effective groundcover until the specific native and pasture grasses are established. This will minimise the likelihood for erosion during the initial establishment phase of the rehabilitation.

All areas will be shallow ripped/scarified prior to sowing to provide a suitable environment that encourages water infiltration in the soil. Large rocks will be removed from the ripped/scarified soil surface prior to sowing. The seeding will be undertaken as soon as possible after ripping / scarifying in order to limit surface crusting and sealing to occur. This will enhance the likelihood of successful seed germination and vegetation establishment.

6.2.6. Ecosystem and Land Use Development

For the purposes of this RMP the ecosystem and land use development phase represents the activities required to develop sustainable ecosystems that have characteristics comparable to similar undisturbed vegetation in the area.

Water Management Area

This phase includes the maintenance and monitoring activities implemented to achieve the relevant performance indicators with respect to the stability and function of the water management structures including:

- Ongoing inspections and monitoring of the structures and related erosion
- Water discharge testing in accordance with the Water Management Plan and regulatory requirements
- Adaptive management and remedial works such as redesign if necessary.

The frequency of monitoring activities would be reduced progressively based on performance.

Native Ecosystem and Agricultural – Grazing Areas

Activities associated with the ecosystem and land use development phase of rehabilitation are generally ongoing maintenance, land management activities and rehabilitation monitoring. Maintenance at rehabilitated areas will include, but not be limited to:

- Ongoing environmental management to minimise risks to rehabilitation;
- Comparing specific ecosystem characteristics such as soil profile development, floristic composition and structure, faunal diversity and abundance with the characteristics of appropriate analogue sites; and
- Undertaking adaptive management and remedial works where characteristics of the rehabilitation are not trending toward desired outcomes.

Rehabilitation monitoring will be undertaken throughout the ecosystem and land use development phase until it can be demonstrated that rehabilitation areas have met completion criteria and all conditions for relinquishment. Rehabilitation maintenance activities will be identified by rehabilitation monitoring and ongoing requirements will be reported annually in the Annual Rehabilitation Report and Forward Program.

6.2.7. Rehabilitation Completion (Sign-Off)

Rehabilitated areas will be submitted to the Resources Regulator Rehabilitation Portal and developed as per the *Guideline: Rehabilitation Objectives and Rehabilitation Completion Criteria*. Rehabilitation will be tracked against the rehabilitation completion criteria for the Site with the goal to achieve rehabilitation sign off as per *Guideline: Achieving Rehabilitation Completion*. Areas of proposed rehabilitation completion are to be nominated in the Annual Rehabilitation Report and Forward Program (ARRFP).

6.3. Rehabilitation of Areas Affected by Subsidence

Mine subsidence is extremely unlikely due to the depth of the orebody below the surface, the high proportion of backfilled voids and the competent nature of the surrounding rock mass. The backfilling of mined stopes with waste rock further reduces the risk of subsidence due to mining.

7. REHABILITATION QUALITY ASSURANCE PROCESS

A Rehabilitation Quality Assurance Process (RQAP) will be implemented throughout rehabilitation and mine closure activities. This will include details of inspections, monitoring and record keeping which will be required to ensure that:

- Rehabilitation is being implemented in accordance with the nominated methodologies; and
- Identified risks to rehabilitation are being adequately addressed at each phase of rehabilitation.

Aurelia will develop and implement the RQAP through every phase of rehabilitation to confirm that the rehabilitation strategies outlined in this RMP have been completed in accordance with the nominated methodologies (See **Section 6**). The RQAP will also include inspections and documentation to verify that each phase of rehabilitation has been completed and has met the completion criteria detailed in **Section 4**. Documentation to be maintained would include (but not limited to):

Phase 1 - Active Mining

- Documentation of pre-clearance surveys,
- Resource salvage records (soil, rocks, habitat trees),
- Dumping plans and surveys, and
- Detailed Landform designs.

Phase 2 - Decommissioning

- Documentation of mine entry and borehole sealing and sign off by RR,
- Inspection and demolition reports to confirm all infrastructure to be demolished has been removed,
- Documentation to identify the future landowner responsible for the ongoing upkeep and management of retained infrastructure, and
- Validation testing to ensure any contamination has been appropriately remediated and/or removed.

Phase 3 - Landform Establishment

- Survey of final constructed slopes, landforms and water drainage structures, and
- Verification reporting to confirm the specified depth of capping has been implemented (i.e., aerial surveys).

Phase 4 – Growth Medium Development

- Maintenance of a topsoil inventory to document stockpiled and re-spread resources,
- Site records of re-spread topsoil, ameliorants, fertiliser etc, and
- Soil testing results to confirm appropriate soil geochemical parameters for plant establishment.

Phase 5 – Ecosystem and Land Use Establishment

- Documentation of reseeding or planting activities undertaken, such as date of planting, weather conditions, seeding rates and/or planting rates, and
- Site inspections and monitoring of rehabilitated areas to allow early identification of any emerging threats to rehabilitation.

Phase 6 – Ecosystem and Land Use Development

- Inspections of temporary and permanent erosion and sediment controls,
- Inspections to identify potential weed infestations,
- Documentation of Rehabilitation Monitoring, and
- Documentation of weed and feral animal management and eradication programs and follow-up inspections.

8. REHABILITATION MONITORING PROGRAM

Rehabilitation monitoring will be undertaken at the Site when rehabilitation sites are established, to measure and assess rehabilitation performance against the stated rehabilitation and closure criteria outlined in this document. The monitoring results are also used to identify the need for corrective actions for rehabilitation performance. The monitoring program incorporates the most appropriate indicators and methods that:

- Provide a measure of completion criteria to be assessed in accordance with the defined rehabilitation objectives
- Adequately track changes to rehabilitation phases
- Are reproducible
- Utilise recognised scientific techniques, and
- Are cost-effective.

Monitoring is conducted by a suitably skilled and qualified personnel at locations representative of the range of conditions on the rehabilitating areas and appropriate analogue sites. Monitoring results will inform refinements of rehabilitation methodology as required. Rehabilitation monitoring will be continued until it can be demonstrated that rehabilitation has satisfied all rehabilitation and closure criteria.

8.1. Analogue Site Baseline Monitoring

Monitoring of vegetation plots entails comparison with control analogue sites as a benchmark and to ensure ecological sustainability is achieved. The analogue sites have been established following the first year of Vegetation Integrity (VI) monitoring at the Site (refer Bio MP) and were selected to represent native woodland vegetation consistent with the surrounding landscape. The VI monitoring plots are described in the Bio MP.

It is anticipated that these plots will provide suitable analogues for eventual revegetation of disturbed areas within the Site. Monitoring of landscape function and vegetation condition within these plots will provide the most effective ecosystem establishment and development strategies for each vegetation community type.

8.2. Rehabilitation Establishment Monitoring

Monitoring of revegetation success will involve a combination of visual and technical assessments of groundcover, biomass and Landscape Function Analysis. A minimum of two monitoring points in each treatment area will be established. A monitoring report will be prepared by a suitably qualified and experienced person. The report will include a summary of performance of the treatment area(s) against representative analogue monitoring points and photographs.

The monitoring will include quarterly visual inspections by site personnel and annual inspections and monitoring report preparation by a suitably experienced person post closure.

Rehabilitation monitoring results will link with the TARP management system in **Section 10** if issues are identified during the monitoring period.

The data yielded from the monitoring program allows an adaptive management approach by providing information to inform the type and implementation of management activities and determining the status of rehabilitation performance in relation to completion criteria. This facilitates the continual improvement and refinement of rehabilitation techniques.

8.3. Measuring Performance against Rehabilitation Objectives and Rehabilitation Completion Criteria

Rehabilitation monitoring will focus upon determining whether progress towards achieving the relevant performance indicators and completion and relinquishment criteria presented in **Section 4** is being achieved.

Rehabilitation areas will be subject to regular inspections, during which the following will be noted:

- Evidence of any erosion or sedimentation from areas with establishing vegetation cover,
- Success of initial cover crop or grass cover establishment,
- Success of tree and shrub plantings,
- Natural regeneration of native species,
- Adequacy of drainage controls, and
- General stability of the rehabilitated areas.

Photo points have been established for each vegetation monitoring plots for analogue sites at the Biodiversity Stewardship Agreement (BSA) site, Chelsea, and Hera Mine. Photo points will also be established for rehabilitation areas. Photographs will be taken at approximately the same direction, location, and height at commencement and annually thereafter. All photographs will be dated, stating the direction in which they were taken and identified with their locations.

Hera Resources will prepare an Annual Review for each reporting period. The Annual Review will include a summary of all environmental monitoring relevant to the reporting period. This will include details of rehabilitation monitoring compared against the performance measures and criteria established in this RMP.

8.3.1. Rehabilitation Performance

Hera Resources will evaluate the rehabilitation monitoring and methodologies annually based on performance and consultation with key stakeholders. Any changes will be outlined in the RMP, ARRFP, and Annual Review.

9. REHABILITATION RESEARCH, MODELLING AND TRIALS

9.1. Current Rehabilitation Research, Modelling and Trials

Hera Resources wishes to manage the TSF potential risk to the receiving environment by capping the TSF at final closure with a store and release cover that will mimic a natural soil profile. The purpose of the cover is to:

- Limit rainfall infiltration into the tailings to prevent seepage, and mobilisation of oxidation products from the PAF tailings that may form Acid Rock Drainage (ARD);
- Provide an environment favourable to the growth of vegetation in the cover; and
- Stop capillary rise of constituents from ARD migrating upwards from the tailings into the cover and potentially leaking onto the natural environment.

During the 2021 reporting period Hera decommissioned TSF column trials and completed a capillary rise assessment with the expert assistance of SGM Environmental. The column trials were being undertaken to determine the most appropriate cap thickness on the TSF upon mine closure. Trial simulated rainfall was applied until the trials reached saturation point. Each trial contained tailings and a different thickness cap (0.2m, 0.4m, 0.6m and 0.8m). The 0.8m trial was constructed outside. The intermediate bulk container (IBC) was placed on stacked pallets which were slightly graded so that seepage flows toward a drainage tap at the base of the trial. The column was ~1 m tall and had a surface area of ~1.17 m².

The trials indicated that the 0.6 m cap was most suitable for rehabilitation purposes. During the previous reporting period it was found that increasing the cover thickness from 0.6 m to 0.8 m is likely to improve seepage from less than 1% to near 0%. The sensitivity analysis showed that cover performance is unlikely to improve beyond 0.8 m, and may start to decline at cover thicknesses equal to or greater than 1 m. The optimum cover thickness is therefore between 0.6-0.8 m. At this stage, the recommended cover thickness is 0.6 m (SGM, 2024).

During decommissioning of the IBC cover trials, sampling for capillary rise was undertaken. There was evidence of capillary rise of salts, acidity and some metals/metalloids in both the 0.4 and 0.6m covers. The 0.4m cover is considered likely to fail because capillarity will limit plant growth. Noting that the 0.4m cover has been disbanded as a preferred cover based on its performance in the IBC trials and was not recommissioned in the steel column trials. EC was elevated at the base of the 0.6m cover making 0.4m available to support plant growth. Notwithstanding, the need for a capillary break layer in the cover is inconclusive at this stage.

The results of column cover trials completed in 2024 found a preferred capping thickness of 0.6m.

Hera Resources are also conducting revegetation trials on the TSF using a direct seeding hydraulic growth medium and biological remediation to provide temporary surface cover for dust and wind erosion protection. The results of this trial may help inform future rehabilitation methods for the TSF.

9.2. Future Rehabilitation Research, Modelling and Trials

No future rehabilitation trials are currently planned for the Site. This section will be updated as future avenues for research or rehabilitation trials are identified.

10. INTERVENTION AND ADAPTIVE MANAGEMENT

Where rehabilitation performance is not trending toward the nominated completion criteria this may indicate that there is a potential threat to long term rehabilitation success. Threats to rehabilitation may include events such as extended periods of drought, bushfire events, or pressures from weeds and feral/pest animals.

A Rehabilitation and Closure Trigger Action Response Plan (TARP) has been developed to provide a framework to manage potential key risks to rehabilitation. The Rehabilitation and Closure TARP includes:

- Identification of the principal contributing factors and impacts for each major risk to rehabilitation.
- Identification of upper limits (trigger values) for causes and impacts that are considered to represent an unacceptable level of risk.
- Identification of appropriate responses to mitigate or remediate the causes and impacts, including a notification protocol.

The Rehabilitation and Closure TARP provides management responses for lower (first tier) and upper (second tier) trigger values. First tier trigger values identify opportunities for closer monitoring or early intervention that may mitigate potential impacts before notable impact to rehabilitation occurs. Second tier trigger values identify when indicators have reached a threshold that requires more substantive or widespread remedial actions to remediate or mitigate rehabilitation failure.

Should any trigger conditions be met resulting in the requirement for intervention or adaptive management, actions will be reported in the Annual Rehabilitation Report. Hera Resources will notify the RR and other relevant stakeholders of any incident (such as bushfire or disease) that results in major impacts to rehabilitation that are likely to significantly impact the potential to achieve rehabilitation success.

The Rehabilitation and Closure TARP is provided in **Table 22** and will be revised as conditions at Site change or new risks to rehabilitation are identified.

Table 22: Trigger Action Response Plan

Rehabilitation Threat	Potential Adverse Outcome	Trigger/Response	1 st Level Trigger/Response	2 nd Level Trigger/Response
	Contaminated land present	Trigger	Sampling and monitoring or contamination assessment identifies contaminated land present within Mine Site.	Contamination continues to be ident contamination assessment being imp
		Response	Recommendations of contamination assessment implemented.	Verification monitoring / testing und completely removed.
Failure to address contamination.	Contaminated	Trigger	Water monitoring or contamination assessment identifies contamination within groundwater setting as a result of mining activities.	Contamination continues to be ident contamination assessment being imp
	groundwater present	Response	Recommendations of contamination assessment implemented.	Verification monitoring / testing und contamination has been completely
	Contaminated surface	Trigger	Water monitoring or contamination assessment identifies contamination within water management structures present within the Mine Site.	Contamination continues to be ident contamination assessment being imp
	water present.	Response	Recommendations of contamination assessment implemented.	Verification monitoring / testing und completely removed.
	Final slopes of surface/ embankments are too steep	Trigger	Survey plan prepared by surveyor indicates that final slopes greater than or equal to approved final landform (i.e., slopes >18° and/or longitudinal grade of contour drains > 2%, or 65° for the Surface Extraction Area)	Monitoring identifies failures/deficie external reporting.
Final landform does not	to be revegetated as planned or achieve landform design.	Response	Re-profile areas to meet the approved final landform.	Review undertaken by geotechnical establishment.
conform to approved final				Findings to be reported to Agencies
landiorm.	Landform is not free draining /water is pooling above reprofiled and sump areas for Surface Extraction Area.	Trigger	Visual inspections identify pooling water / poorly drained areas on free-draining landforms or water pooling outside of reprofiled and sump areas on internally draining landforms.	Review of the landform design ident
		Response	Undertake a review of the landform design to assess risks to stability and free draining design.	Re-profile slopes or install drainage reduce slopes and profile for maxim
Final landform not safe	Geotechnical instability of Final Landform	Trigger	Monitoring or final closure geotechnical assessment identifies instability / unacceptable movement (actual or potential) in final landform	Ongoing monitoring or geotechnical movement (actual or potential) in fir completion criteria.
stable and secure.		Response	Continue monitoring for trends	Suitably qualified geotechnical engine a range of recommendations to remo
			assessments	implemented in consultation with Ag
		Trigger	Soil inventory indicates a deficit of soil material.	Soil inventory indicates a deficiency alternative materials.
	Insufficient soil available for rehabilitation.	Response	Undertake review of alternative growth medium in accordance with trial recommendations.	Suitable source of additional soil ma the need for importation of material
		Response		Investigation into measures that ma make them suitable for use as a grow
Respread growth medium does not conform to completion criteria	Inadequate soil thickness applied to	Trigger	Test pitting following placement of soil material identifies placed soil thickness not consistent with final approved soil thickness (i.e., <200mm)	Sufficient suitable topsoil cannot be specified depth for the proposed fina
	final landform.	Response	Spread additional topsoil to achieve required depth.	Engage a consultant to recommend a
				Suitably qualified agronomist or soil
	Soil not capable of sustaining vegetation community.	Trigger	Soil parameters not within 10% of analogue sites.	range of recommendation to ensure suitable for sustaining the vegetatio
		Response	Engage a consultant to recommend appropriate soil/spoil amelioration. Undertake amelioration and re-vegetation in accordance with the consultant recommendations.	Implement report recommendations
Sediment and erosion control structures	Final landform is a source of pollution.	Trigger	Surface water monitoring or visual inspection indicates that final landform is eroding or is a source of unacceptable levels of sedimentation	Initial erosion works are unsuccessfu

tified following recommendations from the plemented.

dertaken to confirm contamination has been

tified following recommendations from the plemented.

dertaken to confirm. removed.

tified following recommendations from the plemented.

dertaken to confirm contamination has been

encies in final landform design that require

expert to confirm stability and vegetation

ifies the landform is not stable or free draining.

to provide a stable, free- draining landform or um water levels.

assessments verify instability / unacceptable nal landform, or landform is not in accordance with

neer engaged to assess the instability and provide ediate the instability. Recommendations to be gencies

of growth medium following assessment of

aterial / growth medium to be identified, including I from off site.

by be implemented to ameliorate other materials to wth medium.

e identified for reinstatement at the minimum al land.

appropriate soil/spoil amelioration. Undertake ccordance with the consultant recommendations. I scientist engaged to prepare a report including a that the identified criteria are achieved / soil is on community.

ul.

Rehabilitation Threat	Potential Adverse Outcome	Trigger/Response	1 st Level Trigger/Response	2 nd Level Trigger/Response
inadequate or fail.		Response	Remediate eroding area through additional earthworks, soil works, revegetation or other stabilisation works.	Engage a suitably qualified professi assessment report and recommenda assessment report in consultation w
TSF capping is	Inadequate capping of the	Trigger	Surface water or groundwater monitoring identifies that leachate is present and does not comply with trigger values for ambient water quality. Visual inspection of landform indicates failure of the lining or capping materials.	Leachate continues to be identified
inadequate.	contamination.			Undertake an assessment of the TS
		Response	Undertake minor remediation works	Commission a suitably qualified exp measures to remediate the failure. I consultation with Agencies.
		Trigger	Rehabilitation monitoring identifies failure or partial failure of vegetation establishment on final landform.	Continued failure of vegetation esta
Failure of vegetation establishment operations.	Vegetation does not become established on final landform.	Response	Revegetate areas where vegetation has failed with the suitable seed mix or tube stock.	Suitably qualified ecologist or reveo failure of revegetation and recommo community corresponds as closely a the analogue sites will be reviewed completion criteria and trigger poin
				Implement above recommendations
	Weeds and pests become established and require significant resources to manage	Trigger	Monitoring identifies significant weed infestations and weeds comprise a significant proportion of the species in any stratum.	Weed or pest management is not su pest control.
Weed or pest			Monitoring identifies exotic fauna, such that vegetation establishment and growth is threatened.	
management fails		Response	Undertake a targeted program of weed or pest control consistent with current management practices.	Engage a suitably qualified ecologi measures and develop a Weed and Implement management plan in co
Vegetation	Final landform requires significantly more management than analogue sites.	Trigger	Visual assessment of groundcover, biomass or Landscape Function Analysis identify that relevant indices are not trending towards the analogue sites.	Rehabilitation monitoring identifies from analogue sites.
community is not self- sustaining.		Response	The success of the above indices will be tracked through the rehabilitation monitoring program.	Suitably qualified ecologist or reveg additional management requiremen required with that of the analogue s Implement above recommendations
		Trigger	Measured agricultural productivity of the final landform is	recommend actions to sustainably i
Final agricultural	Agricultural productivity significantly less than analogue sites.		significantly less than that of an analogue site	Implement above recommendations
p. substanty is madequate.		Response	The success of measured agricultural productivity will be tracked through the rehabilitation monitoring program.	Rehabilitation monitoring identifies productivity away from analogue sit
		Trigger	Minor erosion up to 0.3 m	Erosion greater than 0.3 m
Failure of final landform	Final landform fails during major storm/rainfall event.	Response	An inspection of the site will be undertaken by a suitably trained person. Investigate opportunities to install water management infrastructure to address erosion. Remediate as appropriate.	Carry out earthworks to repair and/ Assess growth medium status and r Install diversion bunds and drains u

ional in sediment and erosion control to prepare an lations. Implement recommendations of the with the Resources Regulator.

through monitoring.

F to determine the source of leachate.

pert to assess the lining or capping and identify Implement recommendations of the assessment in

ablishment on final landform.

getation expert engaged to assess reasons for end actions to ensure that the final vegetation as possible to analogue sites. Data obtained from and utilised to refine the performance indicators, hts for corrective action.

s in consultation with Agencies.

iccessful following immediate program of weed or

ist to assess reasons for failure of management I/or Pest Species Management Plan. onsultation with Agencies.

an ongoing trend of the relevant indices away

getation expert engaged to assess reasons for its and recommend actions to align management sites.

s in consultation with Agencies ged to assess reasons for lower productivity and improve productivity.

in consultation with the RR.

an ongoing trend of the measured agricultural tes.

/or alter the drainage structures. repair any areas damaged. pstream.

11. REVIEW, REVISION AND IMPLEMENTATION

11.1. Review and Revision of the RMP

This RMP will be reviewed and if required revised in the event of the following:

- To substitute the proposed version of a rehabilitation outcome document (FLRP, ROBJs, RCC) with the version approved by the Secretary
- An amendment to the rehabilitation objectives, completion criteria or proposed final land use
- Changes to risks, risk control measures or rehabilitation strategies being identified during the completion of rehabilitation risk assessment or additional investigations
- When directed to by the RR Secretary, and
- When triggered by consent conditions (Annual Reviews, Independent Environmental Audits, Incident Reports, Modifications).

11.2. Implementation

The process for ensuring that mining and rehabilitation are conducted in accordance with the RMP is the preparation and implementation of an ARRFP.