### **NSW Resources**

Resources Regulator



September 2024

### Rehabilitation information release

# Liddell Coal Mine – Approval of rehabilitation completion criteria

### Overview

The Resources Regulator is responsible for compliance and enforcement activities across the mining and exploration industry. The Regulator undertakes risk-based compliance and enforcement activities in relation to obligations under the *Mining Act 1992*. This includes:

- conducting assessments and compliance activities to ensure the rehabilitation of mines is undertaken progressively in accordance with the conditions of mining leases<sup>1</sup> and the requirements of the *Mining Act 1992*
- ensuring that rehabilitation security deposits held by the department cover the full costs in undertaking rehabilitation in the event of default by the mining company
- ensuring that rehabilitation achieves the approved final land use for the mining area
  - as set out in the rehabilitation objectives and rehabilitation completion criteria statements,
     and
  - as spatially depicted in the final landform and rehabilitation plan<sup>2</sup>, and
  - as set out in the relevant development consent.

This information release provides information about the approval by the Regulator of the rehabilitation completion criteria statement for the Liddell Coal Mine. The mine is in the upper Hunter Valley about 25 kilometres north-west of Singleton.

### The mine

Liddell Coal Operations is owned through a joint venture between Glencore (67.5%) and Mitsui Matsushima Australia Pty Limited (MMA) (32.5%). Liddell Coal Operations Pty Ltd (Liddell Coal), a wholly owned entity of Glencore, managed the mining operation on behalf of the joint venture. The site is now under the custodianship of the Liddell Coal Closure Project team. The total area of land managed by Liddell Coal is 2,483 hectares (approximately 25 square kilometres).

<sup>&</sup>lt;sup>1</sup> The conditions of mining leases relating to environmental protection and rehabilitation are set out in <u>Schedule 8A of Mining Regulation</u> <u>2016</u>

<sup>&</sup>lt;sup>2</sup> This is only a requirement for 'large mines' under Schedule 8A of Mining Regulation 2016. *Large mine* means a mine the subject of one or more mining leases, the carrying out of activities under at least one of which requires an environment protection licence under the *Protection of the Environment Operations Act 1997*.

The Liddell Coal mine is a former open cut mine within the Hunter Valley coal fields. The mine produced thermal and metallurgical coal for about 100 years before ceasing operations in 2023. The mine is now in a closure and rehabilitation phase, however, rehabilitation has been undertaken progressively over the life of the mining operations with more than 1,000 hectares of land already under rehabilitation. It is expected that active rehabilitation activities such as demolition, landform shaping and revegetation will continue for at least the next 3 years. However, final sign-off by the Regulator is not expected to be granted for at least 10 years until it can be demonstrated, through monitoring and modelling, that rehabilitation has matured to a standard required to support the final land uses.

The approved final land uses for the Liddell Coal Mine includes a mix of native ecosystems, agricultural grazing, rehabilitation biodiversity offset areas, dams and 2 final void water bodies. The approved final land use and rehabilitation progress can viewed in the NSW Government's SEED database by following the link below:

### https://datasets.seed.nsw.gov.au/dataset/mine-rehabilitation

Figure 1: Aerial view of Liddell Coal Mine



### Rehabilitation obligations for mines

The overarching regulatory requirement is to ensure that rehabilitation of the mining area achieves the 'final land use'. The final land use is approved before the commencement of a mine as part of a development consent granted pursuant to the *Environmental Planning and Assessment Act 1979*.

Once a mining operation commences the key obligations<sup>3</sup> are as follows:

- develop and seek approval of:
  - a rehabilitation objectives statement that describes the rehabilitation outcomes required to attain the final land use for the mining area
  - a rehabilitation completion criteria statement that expands on rehabilitation objectives to define the key criteria and 'benchmark values' for each criterion to be achieved - the attainment of which will demonstrate rehabilitation achieved the final land use
  - a final landform and rehabilitation plan (for large mines only<sup>4</sup>) that spatially depicts the final land use, the final landform topography and the location of rehabilitation features.
- develop and implement a forward program that provides a schedule of mining activities and the spatial progression of rehabilitation activities for the next 3 years (which demonstrates rehabilitation is occurring as soon as reasonably practicable following disturbance)
- undertake progressive rehabilitation over the life of the mine and submit an annual rehabilitation report and forward program to demonstrate how rehabilitation is progressing against the approved performance measures and timeframes
- achieve the approved rehabilitation objectives
- achieve the approved rehabilitation completion criteria
- achieve the final landform and final land use(s).

### Submitting rehabilitation completion criteria for approval

As noted above, strict rehabilitation obligations are set through the development consent for the mine as well as the rehabilitation objective statement and final landform and rehabilitation plan approved under the *Mining Act 1992*. To ensure that the appropriate benchmarks are clearly defined in terms of how to measure whether rehabilitation has successfully met these obligations, it is the expectation that lease holders will submit final rehabilitation completion criteria for approval well in advance before rehabilitation of the whole (or identified part) of the mining area is proposed to be completed.

However, for some mining operations, the development of final rehabilitation completion criteria will take many years as time is required for research, monitoring and stakeholder consultation to set the appropriate benchmarks to be achieved for the various aspects of rehabilitation (e.g. landform stability, establishment of vegetation community types, water quality parameters, etc).

<sup>&</sup>lt;sup>3</sup> These obligation are set out in Schedule 8A of Mining Regulation 2016.

<sup>&</sup>lt;sup>4</sup> *Large mine* means a mine the subject of one or more mining leases, the carrying out of activities under at least one of which requires an environment protection licence under the *Protection of the Environment Operations Act 1997*.

To cater for this, final rehabilitation completion criteria are only required to be submitted no later than the due date of the forward program that covers a period which includes completion of rehabilitation for the mining area or part thereof<sup>5</sup>.

The intent of the required timing for submission is to allow sufficient time for research, monitoring and further stakeholder consultation to set the appropriate rehabilitation benchmarks to be achieved. There are some mines where aspects of rehabilitation require further research and consultation before suitable rehabilitation completion criteria can be approved. To confirm expectations, the Regulator will be working closely with some mines on key aspects of rehabilitation such as ecological and agricultural revegetation, landform stability, surface and groundwater quality to better define rehabilitation completion criteria. The key objective being to ensure that when rehabilitation is signed-off against the completion criteria, it will mean that rehabilitation will be sustainable for the long term.

This is consistent with a key aim of Schedule 8A of the Mining Regulation 2016, which is to improve the clarity of the benchmark to be achieved for rehabilitation to be deemed sustainable for the long term. This will also lead to more specificity and consistency in monitoring programs to track the trajectory and compliance of rehabilitation in meeting the final land use.

Rehabilitation completion criteria that have not been approved by the Regulator are considered to be preliminary only, and are to be included as part of the published rehabilitation management plan. Where this is the case, the process and timeframe of ongoing refinement of rehabilitation completion criteria, before being submitted for final approval, will need to be documented in the forward program. The progress towards finalisation will also need to be reported in the annual rehabilitation report.

### Submitting a rehabilitation completion (sign-off) application

The timeframe it takes for active rehabilitation works to be undertaken following the cessation of mining, as well as for rehabilitation to mature to a standard where it is assessed as complete, can take in the order of 3 to 20 years (or longer) following the cessation of mining operations at a mine. Mines can lodge an application with the department for rehabilitation sign-off when it can be demonstrated that rehabilitation areas have achieved the approved final land use -

- as set out in the <u>approved</u> rehabilitation objectives and rehabilitation completion criteria statements, and
- as spatially depicted in the approved final landform and rehabilitation plan, and
- as set out in the relevant development consent.

This may include completion of rehabilitation within a particular area of land within the mining lease or completion of rehabilitation across the entire mining lease area. The application needs to:

- demonstrate that rehabilitation has met the approved rehabilitation objectives
- demonstrate that rehabilitation has achieved the approved rehabilitation completion criteria
- demonstrate that rehabilitation has achieved the approved final landform and final land use(s)

<sup>&</sup>lt;sup>5</sup> Clause 15(3) of Schedule 8A of the Mining Regulation 2016.

 provide sufficient evidence, in some case years of monitoring data, to demonstrate that the standard of rehabilitation has achieved the final land use as set out in above approved rehabilitation outcome documents.

Mines are encouraged to apply for rehabilitation completion progressively when portions of the mining area have achieved the final land use. This will facilitate the lease holder's demonstration of successful progressive rehabilitation 'as soon as reasonably practicable' as required by clause 5 in Schedule 8A of the Mining Regulation 2016. It may also result in partial return of the security deposit.

### Liddell Coal Mine rehabilitation completion criteria

The rehabilitation completion criteria statement for the Liddell Coal Mine was approved by the Regulator in July 2024. This followed extensive consultation with the mine and a detailed assessment by the Regulator.

A summary of both the process and considerations related to the development of the rehabilitation completion criteria for key aspects of rehabilitation at Liddell Coal Operations, is outlined below:

### **Ecological rehabilitation completion criteria**

- Comprehensive monitoring over several years was undertaken across a range of reference sites that represent the key vegetation communities that are the ecological target for native rehabilitation at the mine.
- As part of the Glencore group of mines, Liddell Coal Operations participated in a research program coordinated and funded by the Australian Coal Association Research Program, which published a report entitled "ACARP Project C27038 - Establishing Self-sustaining and Recognisable Ecological Mine Rehabilitation" (December 2021).
- Based on the ACARP final report, and in consideration of years of rehabilitation and reference site monitoring, rehabilitation completion criteria for the mine were developed and refined following consultation with both the Regulator and the Conservation and Restoration Science Branch within the Science and Insights Division of the NSW Department of Climate Change, Energy, the Environment and Water.
- As a result of this consultation, agreement was reached on the use of the 10<sup>th</sup> and 90<sup>th</sup> percentile of reference site values for many completion criteria attributes, as this approach removes the influence of anomalies and outliers in reference site values and prevents unusually high or low values which are atypical of the target community being used as threshold values.
- To adequately define successful ecological rehabilitation, the approved rehabilitation completion criteria address species composition, structure and ecological function (selfsustainability) attributes. This ensures that ecological rehabilitation can be assessed in terms of both recognisability and long term sustainability as a means to determine alignment with the target vegetation communities to be achieved.

### Agricultural grazing rehabilitation completion criteria

• The key to the development of agricultural rehabilitation completion criteria at the mine has been that the rehabilitation areas have been set up with appropriate infrastructure such as

fenced paddocks, stock water troughs, cattle yards, etc in order to facilitate active rotational grazing in parallel with mining operations.

- Active grazing of rehabilitation areas has enabled the mine to conduct research and monitoring
  programs coordinated by suitably qualified agronomists to assess the performance of
  rehabilitation areas against reference sites that have not been impacted by mining.
- The capacity of the rehabilitated land to sustain on-going agricultural production without
  degradation of soil, land air and water resource can be determined using the NSW Land and Soil
  Capability Assessment Scheme. As such, land capability has been used as one of the
  rehabilitation completion criteria as the assessment takes into account the inherent physical
  capacity of the land to sustain land management practices in the long term without degradation.
- Research conducted at Scone in the Upper Hunter Valley by the former Department of Infrastructure, Planning and Natural Resources has shown that at least 70% ground cover is required to prevent excessive run-off and erosion. A ground cover of 70% or greater is required as a completion criterion for agricultural rehabilitation. (Lang & McDonald, 2005).
- 70% of pasture species are perennial Perennial pastures provide stability and long term
  productivity to pasture systems. A dominance of perennial species is preferred in a grazing
  enterprise to ensure long term ground cover and soil protection. Perennial pastures also provide
  competition against weed invasion. The dominance of perennials is important for sustainability as
  they tend to have:
  - a longer growing season,
  - deeper roots which result in greater water use,
  - a greater ability to maintain ground cover, the ability to build soil organic matter (Leech and Keys 2003).
- 70% of pasture species are palatable Pasture 'palatability' is often closely related to the
  digestibility of the pasture. Low digestibility, stalky grass is less palatable than leafy growth.
  Providing pasture of suitable digestibility will ensure increased palatability. Pasture digestibility
  is largely influenced by the stage of growth of a pasture. Pasture is of highest quality in the
  vegetative /leafy stage and declines rapidly after flowering.
- Pasture or priority weed cover <20% The classification of a plant as a weed depends on the
  proposed use for the plant. In grazing paddocks, plants that are potentially damaging to the
  health of the livestock or have a negative effect on pasture and hence animal production are
  generally classified as weeds or undesirable plants.</li>
- Biomass (Dry Matter (kg DM)/ha) of pasture vegetation is >1500 Pasture herbage mass is measured as kilograms of dry matter per hectare. While total herbage mass provides an indication of total mass of the grass/pasture available for livestock to graze, not all the pasture will be utilised. Cattle will preferentially graze some pasture species over other species, which also depends on their stage of growth. Tall, rank growth is often avoided while short fresh green leaf is preferred. Some 'weed' species are also palatable at times and can provide a meaningful proportion of livestock diet at certain times. Pasture utilisation is usually in the range of 30-40% of the feed on offer. The level depends on grazing management, stocking rates and pasture types and growth.

• Low pasture herbage mass will limit livestock performance and can be reflected in reduced ground cover. If pasture biomass is allowed to decline below 1,500 kg DM/ha, cattle are unable to graze enough pasture to maintain weight. Once this critical level of pasture mass is reached, cattle should be removed from the pasture or weight loss will occur.

A copy of the approved rehabilitation completion criteria statement is included in **Appendix 1**.

The approved rehabilitation completion criteria statement recognised that there is still further refinement required for the following completion criteria within some parts of the mine site:

- clarity of the benchmark to be achieved to ensure impacts to the groundwater regime and groundwater quality are within the range predicted in the pre-mining environmental assessment
- clarity of the benchmark to be achieved to ensure impacts to the surface water quality, across areas of the site that drain to the external environment, are within the range predicted in the premining environmental assessment
- the benchmark to be applied to some higher risk landforms to ensure the final landform is stable and does not present a risk of environmental harm downstream/downslope or a safety risk
- the need for additional ecosystem function criteria for soil health and resilience indicators within the areas of the site that will have a native ecosystem final land use.

The Regulator will be working with Liddell Coal and other government agencies to establish the appropriate benchmarks for these aspects of the rehabilitation. This will include working with the NSW Environmental Protection Authority to develop appropriate surface water and groundwater quality criteria for mine rehabilitation. This will enable Liddell Coal to prepare and submit an updated and revised rehabilitation completion criteria statement to the Regulator for determination.

### Rehabilitation sign-off by the Regulator

The approved Liddell Coal Mine rehabilitation completion criteria statement will be used by the Regulator in the assessment of applications for rehabilitation completion across the mine site.

### **Further information**

- Mine rehabilitation regulatory framework
- Standard rehabilitation conditions on mining leases
- Guideline: Rehabilitation objectives and rehabilitation completion criteria
- Guideline: Achieving rehabilitation completion (sign-off)
- Rehabilitation completion on a mining lease application form

### References

Lang D and Mc Donald W (2005) NSW Department of Primary Industries Agfact p2.1.14. Maintaining groundcover to reduce erosion and sustain production.

Leech F and Keys M (2003), The Grazier's Guide to Pastures. NSW Agriculture, Orange, NSW.

*Neil Nelson Agvice P/L (2004)*, Agricultural Rehabilitation Certification Liddell Coal Operations Railway and Pipeline Paddocks.

*Umwelt (Australia) Pty Limited (2021)*, ACARP Project C27038 Establishing Self-sustaining and Recognisable Ecological Mine Rehabilitation.

### About this information release

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the NSW Resources Regulator or the user's independent advisor.

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# Appendix 1 - Approved rehabilitation completion criteria (Liddell Coal Mine)



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# Resources Regulator

Department of Primary Industries and Regional Development



# RCC0001014

Approved rehabilitation completion criteria statement

Liddell Coal

30 July 2024

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## **Application summary**

Detail	Approval
Reference	RCC0001014
Date of decision	30 July 2024
Mine	Liddell Coal
Contact	Sean Pigott
Nominated contact person	Ben de Somer

# Important note

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# Rehabilitation Completion Criteria

The following rehabilitation completion criteria have been approved. Please note the table below will also include any previously approved rehabilitation objectives.

ROB0014518					
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the commun	nity, environment and infrastruct	ure has been addressed as part of rehabilitation.
ROCC0002142					
Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators	Appropriate bushfire hazard controls (where rec	quired) have been implemented or	n the advice from the NSW Rural Fire Service.		
Validation method	Independent verification report.				
ROB0014604					
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwat	er quality are within range as pro	edicted in pre-mining environmental assessment.
ROCC0002384					
Rehabilitation completion criteria	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria stater	nent can be approved.	
Indicators	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria stater	ment can be approved.	
Validation method	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria stater	nent can be approved.	
ROB0014570					
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site the	nat is incompatible with the final	land use or that poses a threat of environmental
ROCC0002350					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)
Indicators	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, where required.				
Validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)				

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ROCC0002324					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	or land use are met, e.g. Health Investigation Level	of the National Environment P	rotection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	of the National Environment Protection (Assessme	nt of Site Contamination) Meas	ure (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S				
ROCC0002337					
Rehabilitation completion criteria	There are no visible signs of contamination				
Indicators	Waste material and/or visible contamination area	as on site			
Validation method	Statement provided and before/after photos				
ROB0014505					
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not presento the public/ stock/ native fauna.	nt a risk of environmental harm	downstream/ downslope of the site or a safety risk
ROCC0002129					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	tion criteria is required before ar	n amended rehabilitation completion criteria stater	nent can be approved for high r	isk landforms.
Indicators	Further refinement of this rehabilitation complet	tion criteria is required before ar	n amended rehabilitation completion criteria stater	nent can be approved for high r	isk landforms.
Validation method	Further refinement of this rehabilitation complet	tion criteria is required before ar	n amended rehabilitation completion criteria stater	nent can be approved for high r	isk landforms.
ROCC0002116					
Rehabilitation completion criteria	Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.				
Indicators	Visual - indicators of erosion and land instability. Visual - indicators that surface water management structure are functioning as designed. Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan. Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.				
Validation method	indicate long-term stability of rehabilitated land	form.	ys, erosion surveys, independent geotechnical repo		sion modelling reports (where required) that

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ROB0014620						
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1	
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g. taili encapsulated so it does not pose any hazards or			
ROCC0002400						
Rehabilitation completion criteria	Visual – no signs of impacts on final land use due Survey - no significant areas of high temperature	sual – verification that capping, type and placement present acceptable residual risk to final land use sual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health urvey - no significant areas of high temperature that impacts vegetation health urvey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)				
Indicators	Visual – indication of residual waste impacting or Survey - targeted thermal scanning of surface fo	risual – capping material placement, type across emplacement risual – indication of residual waste impacting on final land use – vegetation health curvey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators curvey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)				
Validation method	Photos, rehabilitation monitoring reports, as constructed surveys, thermal survey outputs, survey records and plans, quality assurance records for construction, erosion surveys, independent geotechnical reports (where required), groundwater/surface water monitoring reports.					
ROB0014493						
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1	
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	At least 731ha of the target native woodland veg connectivity for the Spotted-tailed Quoll.	getation (Central Hunter Box-Iron	nbark Woodland) is established providing habitat	
ROCC0002092						
Rehabilitation completion criteria	Distribution of Central Hunter Box-Ironbark Wood	dland covers at least 731ha with	in the Project Area and provides for habitat connec	ctivity across the landform.		
Indicators	731ha of Central Hunter Box-Ironbark Woodland	is established across the landfo	rm providing connectivity (native woodland corrido	ors) between adjoining native veg	getation/habitat.	
Validation method	Independent ecological reports and vegetation d	istribution mapping.				
ROCC0002095						
Rehabilitation completion criteria	Habitat features for the Spotted-tailed Quoll are	constructed as per the Final Lar	ndform and Rehabilitation Plan			
Indicators	Suitable habitat features, such as rock and log p	les, are incoporated into the nat	ive woodland areas to provide habitat for the Spot	ted-tailed Quoll		
Validation method	Statement provided, independent field verification. Surveyed and marked on the as-constructed final landform plan.					
ROB0014502						
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1	
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Levels of ecosystem function have been establis	shed that demonstrate the rehab	ilitation is self-sustainable	

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ROCC0002104	
Rehabilitation completion criteria	Cover of 'high threat exotic' (HTE) species is $\leq$ 90th percentile of values observed at suitable reference sites1.  1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, wee infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.
Indicators	Cover of exotic species within 20m x 20m fixed monitoring plots is low
Validation method	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years Monitoring undertaken in accordance with BAM.
ROCC0002113	
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil health and resilience indicators
Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil health and resilience indicators
Validation method	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil health and resilience indicators
ROCC0002110	
Rehabilitation completion criteria	Litter cover is between the 10th and 90th percentile of values from suitable reference sites1, or an ongoing trend toward this target range is observed.  1 - Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.
Indicators	Indicators of nutrient cycling are suitable for sustaining the target vegetation community
Validation method	Rehabilitation monitoring reports, independent soil reports (where required) that demonstrate long term function of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.
ROCC0002107	
Rehabilitation completion criteria	The number of second generation trees are ≥10th percentile of values recorded at suitable reference sites1.  1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, wee infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.
Indicators	Evidence of plant regeneration from 20m x 20m monitoring plots or a walk over of the ecological rehabilitation area
Validation method	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM and walkover inspections undertaken to identify presence of recruitment.
ROB0014496	

Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation composition of the rehabilitation is Woodland) as described by the NSW Scientific Fit Note: Recognisable is defined as "Diagnostic spet the plant community type available on Bionet.	nal Committee Determination.	

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ROCC0002168

criteria

Rehabilitation completion

Cores removed.

RCC0001014   Liddell Coal							
ROCC0002098							
Rehabilitation completion criteria	A minimum of 10 of the 38 characteristic flora sp floristic sampling plot.	minimum of 10 of the 38 characteristic flora species contained in the Central Hunter Grey Box – Ironbark Woodland Final Determination (NSW Scientific Committee 2010) is present in a standard 20 m x 20 m ristic sampling plot.					
Indicators	The number of characteristic species for Centra	l Hunter Box-Ironbark Woodland	present are characteristic of the NSW Scientific	c Committee Final Determination			
Validation method	need to be evaluated over a number of years	All native vascular plant species are recorded to species level from fixed monitoring plots.					
ROB0014499							
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Box-Ironbark Woodland) as described by the I	NSW Scientific Committee Final I	towards the target plant community (Central Hunter Determination. ta to show development for each Growth Form		
ROCC0002101							
Rehabilitation completion criteria	Within a standard 20 m x 20 m floristic sampling	g plot tree (TG) foliage cover is be	etween 10% and 70% AND grass (GG) and forb (F	FG) growth forms are present.			
Indicators	The growth forms present are consistent with, o	r are trending toward, those of th	ne target vegetation types.				
Validation method	Before and after photos, rehabilitation monitoring need to be evaluated over a number of years Monitoring undertaken in accordance with BAM.		al reports (where required). Depending on the na	iture, scale and risks associated v	with a specific site, achievement of criteria may		
ROB0014531							
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1		
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as par materials.	t of the final land use is removed	to ensure the site is safe and free of hazardous		
ROCC0002207							
Rehabilitation completion criteria	All utility infrastructure removed.						
Indicators	Removal of all services (power, water, communications) that have been connected on the site as part of the operation.						
Validation method	Statement provided, independent field verification	Statement provided, independent field verification					

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Indicators	All drill cores have been removed from site and either taken to authorised storage or disposal location.
Validation method	Statement provided, independent field verification, disposal/transfer receipts
ROCC0002155	
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably practicable to avoid exposure pathways to subsequent final land use.
Indicators	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.
Validation method	Statement provided, independent field verification. Surveyed and marked on the as-constructed final landform plan.
ROCC0002220	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	Removal of all water management infrastructure (including pumps, pipes and power).
Validation method	Statement provided, independent field verification and before/after photos.
ROCC0002181	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.
Validation method	As-constructed final landform plan, photos, independent field verification, etc.
ROCC0002194	
Rehabilitation completion criteria	Permits and approval documents issued; archival reports (where required) complete and submitted.
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).
Validation method	Copy of any relevant approval documentation.
ROCC0002233	
Rehabilitation completion criteria	Sealing complete.
Indicators	Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards.
Validation method	Engineering report/statement, survey records, photos etc.
ROCC0002246	
Rehabilitation completion criteria	Sealing completed. OR Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use.

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Indicators	Surveying and sealing of all former underground mine entries. OR Where sealing records are not available, risk assessment completed to define risk to final land use.					
Validation method	Engineering report/statement, risk assessment r	eport, survey records, photos etc	S.			
ROB0014544						
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1	
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of th	e final land use is safe.		
ROCC0002298						
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.					
Indicators	Water management infrastructure (dams, drains	, embankments, etc.) and access	tracks are suitable in size and condition for the po	ost mining land use and practica	lly minimised.	
Validation method	Copy of any relevant plans, photos etc.					
ROCC0002272						
Rehabilitation completion criteria	Hazards isolated and secured.					
Indicators	Potential hazards (e.g. electrical, mechanical) ha	ve been effectively isolated and	secured.			
Validation method	Statement provided.					
ROCC0002259						
Rehabilitation completion criteria	The location of the infrastructure has been mark	ed on a plan and registered with	the relevant local authority (e.g. local Council) and	d Dial Before You Dig.		
Indicators			remain in situ, they do not pose a hazard for the in areas to be returned for Agriculture – grazing the		t constrain the final land use.	
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re	•				
ROCC0002285						
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.					
Indicators	The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.					
Validation method	Engineering report/statement, photos etc.					
ROB0014557						
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1	
Rehabilitation Objective	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land	use has necessary approvals ar	re in place (e.g. development consent under the	

Category			Environmental Planning and Assessment Act 197	79).	
ROCC0002311			, and the second		
Rehabilitation completion criteria	Permits and approval documents issued				
Indicators	Where applicable, necessary approvals are in pla use	ace (e.g. development consent ur	nder the Environmental Planning and Assessment /	Act 1979) where buildings and in	nfrastructure are to be retained as part of final land
Validation method	Copy of any relevant approvals or evidence if app	provals not required e.g. fencing			
ROB0014591					
Final Land Use Domain	Native Ecosystem	Mining Domain	Infrastructure Area	Spatial Reference	A1
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff wat	er quality or as predicted in pre-mining
ROCC0002371					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
ROB0014519					
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ty, environment and infrastruct	ure has been addressed as part of rehabilitation.
ROCC0002143					
Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators	Appropriate bushfire hazard controls (where req	uired) have been implemented or	n the advice from the NSW Rural Fire Service.		
Validation method	Independent verification report.				
ROB0014605					
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pro	edicted in pre-mining environmental assessment.
ROCC0002385					
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				

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Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.					
Validation method	Further refinement of this rehabilitation comple	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				
ROB0014571						
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3	
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contaminati harm.	on on site that is incompatible with the fir	nal land use or that poses a threat of environmental	
ROCC0002325						
Rehabilitation completion criteria	Contamination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999).					
Indicators	Soil testing for contaminants of concern as liste required.	ed by Health Investigation Level o	of the National Environment Protection	(Assessment of Site Contamination) Mea	sure (1999) applicable to land use type, where	
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit					
ROCC0002351						
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	or land use are met, e.g. Health Investig	gation Level of the National Environment I	Protection (Assessment of Site Contamination)	
Indicators	Soil testing for contaminants of concern as liste required.	ed by Health Investigation Level o	of the National Environment Protection	(Assessment of Site Contamination) Mea	sure (1999) applicable to land use type, where	
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit					
ROCC0002338						
Rehabilitation completion criteria	There are no visible signs of contamination					
Indicators	Waste material and/or visible contamination are	as on site				
Validation method	Statement provided and before/after photos					
ROB0014506						
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3	
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and doe to the public/ stock/ native fauna.	s not present a risk of environmental harr	n downstream/ downslope of the site or a safety risk	
ROCC0002130						
Rehabilitation completion criteria	Further refinement of this rehabilitation comple	tion criteria is required before ar	n amended rehabilitation completion cr	iteria statement can be approved for high	risk landforms.	
Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high risk landforms.					

Validation method	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high risk landforms.							
ROCC0002117								
Rehabilitation completion criteria	Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.							
Indicators	Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.  Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.							
Validation method	Before and after photos, rehabilitation monitorin indicate long-term stability of rehabilitated land. Depending on the nature, scale and risks associated in the contract of t	form.			sion modelling reports (where required) that			
ROB0014621								
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3			
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g encapsulated so it does not pose any hazar					
ROCC0002401								
Rehabilitation completion criteria	Visual – verification that capping, type and place Visual – no signs of impacts on final land use due Survey - no significant areas of high temperature Survey - coarse rejects and hot material is a min	e to residual wate materials indi e that impacts vegetation health	cated by vegetation health					
Indicators	Visual – capping material placement, type across emplacement Visual – indication of residual waste impacting on final land use – vegetation health Survey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators Survey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)							
Validation method	Photos, rehabilitation monitoring reports, as constructed surveys, thermal survey outputs, survey records and plans, quality assurance records for construction, erosion surveys, independent geotechnical reports (where required), groundwater/surface water monitoring reports.							
ROB0014494								
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Snatial Reference	Δ3			

Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	At least 731ha of the target native woodland veg connectivity for the Spotted-tailed Quoll.	retation (Central Hunter Box-Iron	nbark Woodland) is established providing habitat

### ROCC0002093

Rehabilitation completion	Distribution of Central Hunter Box-Ironbark Woodland covers at least 731ha within the Project Area and provides for habitat connectivity across the landform.
criteria	Distribution of dentral Flainter Box horizont woodland covers at least 70 ma within the Froject Area and provides for habitat connectivity deross the tandrorm.

ROCC0002096  Rehabilitation completion					
criteria	Habitat features for the Spotted-tailed Quoll are constructed as per the Final Landform and Rehabilitation Plan				
Indicators	Suitable habitat features, such as rock and log piles, are incoporated into the native woodland areas to provide habitat for the Spotted-tailed Quoll				
Validation method	Statement provided, independent field verification. Surveyed and marked on the as-constructed final landform plan.				

### ROB0014503

Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Levels of ecosystem function have been establis	hed that demonstrate the rehab	ilitation is self-sustainable

### ROCC0002105

	Rehabilitation completion	Cover of 'high threat exotic' (HTE) species is ≤ 90th percentile of values observed at suitable reference sites1.
	oritoria	1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed
criteria	Citteria	infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.

Indicators Cover of exotic species within 20m x 20m fixed monitoring plots is low

Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years

Monitoring undertaken in accordance with BAM.

### ROCC0002114

Validation method

Rehabilitation completion	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil
criteria	health and resilience indicators
Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil health and resilience indicators

Further refinement of this robe

Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil health and resilience indicators

### ROCC0002111

Validation method

Rehabilitation completion criteria	Litter cover is between the 10th and 90th percentile of values from suitable reference sites1, or an ongoing trend toward this target range is observed.  1 - Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.
Indicators	Indicators of nutrient cycling are suitable for sustaining the target vegetation community

Validation method

Rehabilitation monitoring reports, independent soil reports (where required) that demonstrate long term function of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years

Monitoring undertaken in accordance with BAM.

### ROCC0002108

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Validation method

need to be evaluated over a number of years Monitoring undertaken in accordance with BAM.

Rehabilitation completion criteria	The number of second generation trees are ≥10th percentile of values recorded at suitable reference sites1.  1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.						
Indicators	Evidence of plant regeneration from 20m x 20m monitoring plots or a walk over of the ecological rehabilitation area						
Validation method	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM and walkover inspections undertaken to identify presence of recruitment.						
ROB0014497							
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation composition of the rehabilitation is recognisable as the target plant community (Central Hunter Box-Ironbark Woodland) as described by the NSW Scientific Final Committee Determination.  Note: Recognisable is defined as "Diagnostic species present for each Growth form for PCT/TEC using the scientific description the plant community type available on Bionet.				
ROCC0002099	ROCC0002099						
Rehabilitation completion criteria	A minimum of 10 of the 38 characteristic flora s floristic sampling plot.	pecies contained in the Central	Hunter Grey Box – Ironbark Woodland Final Deter	mination (NSW Scientific Comm	ittee 2010) is present in a standard 20 m x 20 m		
Indicators	The number of characteristic species for Centra	al Hunter Box-Ironbark Woodlan	d present are characteristic of the NSW Scientific	Committee Final Determination	L.		
Validation method	Before and after photos, statistically robust reh need to be evaluated over a number of years All native vascular plant species are recorded to Monitoring undertaken in accordance with BAM	o species level from fixed monito		nature, scale and risks associate	ed with a specific site, achievement of criteria may		
ROB0014500							
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3		
Rehabilitation Objective Category	The vegetation structure of the rehabilitation is recognisable as, or is trending towards the target plant community (Central Hunter Box-Ironbark Woodland) as described by the NSW Scientific Committee Final Determination.  Note: "Trending Towards the target plant community" requires use of time series data to show development for each Growth Form against benchmark value range (or successional benchmarks)						
ROCC0002102							
Rehabilitation completion criteria	Within a standard 20 m x 20 m floristic sampling plot tree (TG) foliage cover is between 10% and 70% AND grass (GG) and forb (FG) growth forms are present.						
Indicators	The growth forms present are consistent with, or are trending toward, those of the target vegetation types.						

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Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required). Depending on the nature, scale and risks associated with a specific site, achievement of criteria may

ROB0014532								
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3			
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as part of materials.	f the final land use is removed to	o ensure the site is safe and free of hazardous			
ROCC0002208								
Rehabilitation completion criteria	All utility infrastructure removed.							
Indicators	Removal of all services (power, water, communic	ations) that have been connecte	d on the site as part of the operation.					
Validation method	Statement provided, independent field verification	n						
ROCC0002169								
Rehabilitation completion criteria	Cores removed.							
Indicators	All drill cores have been removed from site and e	ither taken to authorised storag	e or disposal location.					
Validation method	Statement provided, independent field verification	n, disposal/transfer receipts						
ROCC0002156								
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably	practicable to avoid exposure p	pathways to subsequent final land use.					
Indicators	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.							
Validation method	Statement provided, independent field verification	n. Surveyed and marked on the	as-constructed final landform plan.					
ROCC0002182								
Rehabilitation completion criteria	Infrastructure removed.							
Indicators			s, stockpile areas, rail infrastructure and loading faction for the strain of the stra		on storage tanks, office complex, portable offices,			
Validation method	As-constructed final landform plan, photos, inde	pendent field verification, etc.						
ROCC0002221								
Rehabilitation completion criteria	Infrastructure removed.							
Indicators	Removal of all water management infrastructure	(including pumps, pipes and po	wer).					
Validation method	Statement provided, independent field verification	on and before/after photos.						
ROCC0002195								
Rehabilitation completion criteria	Permits and approval documents issued; archival	reports (where required) compl	ete and submitted.					

lding retention							
Statement provided.							

	Note: If any underground pipelines or other infrastructure are to remain in situ in areas to be returned for Agriculture – grazing they are at a depth >0.5m and don't constrain the final land use.							
Validation method	Surveyed and marked on the as-constructed final landform plan. Copy of notification to or correspondence with relevant authority							
ROCC0002286								
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.							
Indicators	The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.							
Validation method	Engineering report/statement, photos etc.							
ROB0014558								
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	A3			
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 197		re in place (e.g. development consent under the			
ROCC0002312								
Rehabilitation completion criteria	Permits and approval documents issued							
Indicators	Where applicable, necessary approvals are in pla	ce (e.g. development consent ur	nder the Environmental Planning and Assessment A	Act 1979) where buildings and ir	nfrastructure are to be retained as part of final land			
Validation method	Copy of any relevant approvals or evidence if app	provals not required e.g. fencing						
ROB0014592								
Final Land Use Domain	Native Ecosystem	Mining Domain	Water Management Area	Spatial Reference	АЗ			
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff water	er quality or as predicted in pre-mining			
ROCC0002372								
Rehabilitation completion criteria	Further refinement of this rehabilitation completi	on criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.				
Indicators	Further refinement of this rehabilitation complete	on criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.				
Validation method	Further refinement of this rehabilitation completi	on criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.				
ROB0014520								
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4			
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ity, environment and infrastructu	ure has been addressed as part of rehabilitation.			
ROCC0002144								

Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators	Appropriate bushfire hazard controls (where req	uired) have been implemented or	n the advice from the NSW Rural Fire Service.		
Validation method	Independent verification report.				
ROB0014606					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pro	edicted in pre-mining environmental assessment.
ROCC0002386					
Rehabilitation completion criteria	Further refinement of this rehabilitation complete	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Indicators	Further refinement of this rehabilitation complete	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Validation method	Further refinement of this rehabilitation complete	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
ROB0014572					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site th harm.	at is incompatible with the final	land use or that poses a threat of environmental
ROCC0002326					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as liste required.	d by Health Investigation Level o	f the National Environment Protection (Assessmen	nt of Site Contamination) Measu	re (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit		redited Auditor (where required)		
ROCC0002352					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as liste required.	d by Health Investigation Level o	f the National Environment Protection (Assessmen	nt of Site Contamination) Measu	re (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit		redited Auditor (where required)		
ROCC0002339					
Rehabilitation completion criteria	There are no visible signs of contamination				

Rehabilitation completion

criteria

Indicators

ndicators	Waste material and/or visible contamination are	as on site			
Validation method	Statement provided and before/after photos				
ROB0014507					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not to the public/ stock/ native fauna.	t present a risk of environmental harm	n downstream/ downslope of the site or a safety risl
ROCC0002131					
Rehabilitation completion criteria	Further refinement of this rehabilitation comple	tion criteria is required before an	n amended rehabilitation completion criteria	a statement can be approved for high	risk landforms.
ndicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high risk landforms.				
Validation method	Further refinement of this rehabilitation comple	tion criteria is required before an	n amended rehabilitation completion criteria	a statement can be approved for high	risk landforms.
ROCC0002118					
Rehabilitation completion criteria	Visual- minimal erosion that would not require in Visual – no signs of land instability such as mass Visual - no areas of active gully erosion. Visual - no evidence of tunnel erosion. Visual – no evidence of active scour likely to con Survey verifies final landform complies with final Survey verifies that settlement and/or material	s movement.  mpromise surface water manage al landform construction in accor	ment structure. dance with Final Landform and Rehabilitati		
ndicators	Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.  Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.  Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.				
Validation method	Before and after photos, rehabilitation monitoring indicate long-term stability of rehabilitated land Depending on the nature, scale and risks associ	lform.			osion modelling reports (where required) that
ROB0014622					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (encapsulated so it does not pose any haz		wastes) will be appropriately contained / use.

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Visual – verification that capping, type and placement present acceptable residual risk to final land use

Survey - no significant areas of high temperature that impacts vegetation health

Visual – capping material placement, type across emplacement

Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health

Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)

	Visual – indication of residual waste impacting of Survey - targeted thermal scanning of surface for Survey - survey plans show depth of coarse rejections.	or indications of spontaneous co	mbustion based on visual indicators		
Validation method	Photos, rehabilitation monitoring reports, as con (where required), groundwater/surface water mo		outputs, survey records and plans, quality assura	nnce records for construction,	erosion surveys, independent geotechnical reports
ROB0014495					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	At least 731ha of the target native woodland ve connectivity for the Spotted-tailed Quoll.	getation (Central Hunter Box-	-Ironbark Woodland) is established providing habita
ROCC0002094					
Rehabilitation completion criteria	Distribution of Central Hunter Box-Ironbark Woo	odland covers at least 731ha with	in the Project Area and provides for habitat conne	ectivity across the landform.	
Indicators	731ha of Central Hunter Box-Ironbark Woodland is established across the landform providing connectivity (native woodland corridors) between adjoining native vegetation/habitat.				
Validation method	Independent ecological reports and vegetation distribution mapping.				
ROCC0002097					
Rehabilitation completion criteria	Habitat features for the Spotted-tailed Quoll are	e constructed as per the Final La	ndform and Rehabilitation Plan		
Indicators	Suitable habitat features, such as rock and log p	piles, are incoporated into the nat	tive woodland areas to provide habitat for the Spo	tted-tailed Quoll	
Validation method	Statement provided, independent field verificati	on. Surveyed and marked on the	as-constructed final landform plan.		
ROB0014504					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Levels of ecosystem function have been establ	ished that demonstrate the re	habilitation is self-sustainable
ROCC0002106					
Rehabilitation completion criteria		nt good quality and mature exan			ncluding vegetation clearing, timber harvesting, wed
Indicators	Cover of exotic species within 20m x 20m fixed	monitoring plots is low			
Validation method	Before and after photos, rehabilitation monitorin associated with a specific site, achievement of c Monitoring undertaken in accordance with BAM.			term stability of rehabilitated	landform. Depending on the nature, scale and risks
ROCC0002115					
Rehabilitation completion criteria	Further refinement of this rehabilitation completed health and resilience indicators	tion criteria is required before an	amended rehabilitation completion criteria stater	ment can be approved. Additio	onal ecosystem function criteria are required for soil

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ROB0014501

Indicators	Further refinement of this rehabilitation complete health and resilience indicators	tion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved. Addition	al ecosystem function criteria are required for soil	
Validation method	Further refinement of this rehabilitation complete health and resilience indicators	tion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved. Addition	al ecosystem function criteria are required for soil	
ROCC0002112						
Rehabilitation completion criteria	1 - Suitable reference sites are those that repres	sent good quality and mature exa	rence sites1, or an ongoing trend toward this targe amples of the target community, where evidence o n nature. Published information may also be used, v	f disturbance or modification, i	ncluding vegetation clearing, timber harvesting,	
Indicators	Indicators of nutrient cycling are suitable for sus	staining the target vegetation co	ommunity			
Validation method	Rehabilitation monitoring reports, independent soil reports (where required) that demonstrate long term function of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.					
ROCC0002109	0002109					
Rehabilitation completion criteria	The number of second generation trees are ≥10th percentile of values recorded at suitable reference sites1.  1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.					
Indicators	Evidence of plant regeneration from 20m x 20m	monitoring plots or a walk over o	of the ecological rehabilitation area			
Validation method	Before and after photos, rehabilitation monitoring associated with a specific site, achievement of commonitoring undertaken in accordance with BAM	riteria may need to be evaluated	l over a number of years	term stability of rehabilitated l	andform. Depending on the nature, scale and risks	
ROB0014498						
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4	
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation composition of the rehabilitation Woodland) as described by the NSW Scientific Foote: Recognisable is defined as "Diagnostic spetthe plant community type available on Bionet.	Final Committee Determination		
ROCC0002100						
Rehabilitation completion criteria	A minimum of 10 of the 38 characteristic flora sp floristic sampling plot.	pecies contained in the Central H	Hunter Grey Box – Ironbark Woodland Final Determ	ination (NSW Scientific Comm	ttee 2010) is present in a standard 20 m x 20 m	
Indicators	The number of characteristic species for Centra	l Hunter Box-Ironbark Woodland	I present are characteristic of the NSW Scientific (	Committee Final Determination.		
Validation method	need to be evaluated over a number of years All native vascular plant species are recorded to	The number of characteristic species for Central Hunter Box-Ironbark Woodland present are characteristic of the NSW Scientific Committee Final Determination.  Before and after photos, statistically robust rehabilitation monitoring reports, independent ecological reports. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  All native vascular plant species are recorded to species level from fixed monitoring plots.  Monitoring undertaken in accordance with BAM.				

## Final Land Use Domain Native Ecosystem Noverburden Emplacement Area Spatial Reference A4

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Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation structure of the rehabilitation is Box-Ironbark Woodland) as described by the Nanote:  "Trending Towards the target plant community against benchmark value range (or successions).	SW Scientific Committee Final D		
ROCC0002103						
Rehabilitation completion criteria	Within a standard 20 m x 20 m floristic sampling plot tree (TG) foliage cover is between 10% and 70% AND grass (GG) and forb (FG) growth forms are present.					
Indicators	The growth forms present are consistent with, or	r are trending toward, those of t	he target vegetation types.			
Validation method	need to be evaluated over a number of years	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required). Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.				
ROB0014533						
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4	
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as part materials.	of the final land use is removed	to ensure the site is safe and free of hazardous	
ROCC0002209						
Rehabilitation completion criteria	All utility infrastructure removed.					
Indicators	Removal of all services (power, water, communic	cations) that have been connecte	ed on the site as part of the operation.			
Validation method	Statement provided, independent field verification	on				
ROCC0002170						
Rehabilitation completion criteria	Cores removed.					
Indicators	All drill cores have been removed from site and	either taken to authorised storag	ge or disposal location.			
Validation method	Statement provided, independent field verification	on, disposal/transfer receipts				
ROCC0002157						
Rehabilitation completion criteria	Footings removed to a depth as far as reasonabl	ly practicable to avoid exposure	pathways to subsequent final land use.			
Indicators	Removal of all footings or encapsulation of footi	ings compatible with final landfo	orm/land use objectives.			
Validation method	Statement provided, independent field verification	on. Surveyed and marked on the	as-constructed final landform plan.			
ROCC0002183						
Rehabilitation completion criteria	Infrastructure removed.					

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Indicators	All plant, equipment and associated infrastructuexploration core samples, camp facilities, storage				bon storage tanks, office complex, portable offices,
Validation method	As-constructed final landform plan, photos, inde	ependent field verification, etc.			
ROCC0002222					
Rehabilitation completion criteria	Infrastructure removed.				
Indicators	Removal of all water management infrastructure	e (including pumps, pipes and p	power).		
Validation method	Statement provided, independent field verification	on and before/after photos.			
ROCC0002196					
Rehabilitation completion criteria	Permits and approval documents issued; archiva	ıl reports (where required) com	plete and submitted.		
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).				
Validation method	Copy of any relevant approval documentation.				
ROCC0002235					
Rehabilitation completion criteria	Sealing complete.				
Indicators	Surveying and sealing of all drill holes and bore	noles (where locatable) in acco	rdance with departmental guidelines and re	evant standards.	
Validation method	Engineering report/statement, survey records, p	hotos etc.			
ROCC0002248					
Rehabilitation completion criteria	Sealing completed.  OR  Where sealing records are unavailable, risk asse	essment shows acceptable resi	dual risk remains to final land use.		
Indicators	Surveying and sealing of all former underground OR Where sealing records are not available, risk ass		risk to final land use.		
Validation method	Engineering report/statement, risk assessment r	eport, survey records, photos	etc.		
ROB0014546					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4

Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the final land use is safe.		
ROCC0002300					

Rehabilitation completion criteria

Any required Repairs or Upgrades complete.

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Indicators	Water management infrastructure (dams, drains	emhankments etc.) and access	tracks are suitable in size and condition for the po	ost mining land use and practice	ally minimised
Validation method	Copy of any relevant plans, photos etc.	, embankments, etc./ and access	tracks are suitable in size and condition for the po	ost mining tand use and practice	atty minimiseu.
ROCC0002274	copy or any reservant preme, principle ever				
Rehabilitation completion criteria	Hazards isolated and secured.				
Indicators	Potential hazards (e.g. electrical, mechanical) ha	ve been effectively isolated and	secured.		
Validation method	Statement provided.				
ROCC0002261					
Rehabilitation completion criteria	The location of the infrastructure has been mark	ked on a plan and registered with	n the relevant local authority (e.g. local Council) an	d Dial Before You Dig.	
Indicators	If any underground pipelines or other infrastructure (e.g. building footings) are to remain in situ, they do not pose a hazard for the intended final land use.  Note: If any underground pipelines or other infrastructure are to remain in situ in areas to be returned for Agriculture – grazing they are at a depth >0.5m and don't constrain the final land use.				
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re				
ROCC0002287					
Rehabilitation completion criteria	The structural integrity of the infrastructure has	been inspected by a suitably qu	alified engineer and determined to be safe for the	intended final land use.	
Indicators	The structural integrity of the infrastructure is s	uitable and safe for use as part o	of the intended final land use.		
Validation method	Engineering report/statement, photos etc.				
ROB0014559					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 19		are in place (e.g. development consent under the
ROCC0002313					
Rehabilitation completion criteria	Permits and approval documents issued				
Indicators	Where applicable, necessary approvals are in plause	ace (e.g. development consent ui	nder the Environmental Planning and Assessment	Act 1979) where buildings and	infrastructure are to be retained as part of final land
Validation method	Copy of any relevant approvals or evidence if ap	provals not required e.g. fencing			
ROB0014593					
Final Land Use Domain	Native Ecosystem	Mining Domain	Overburden Emplacement Area	Spatial Reference	A4
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than environmental assessments.	, the pre-disturbance runoff wa	ter quality or as predicted in pre-mining

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ROCC0002373						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
ROB0014521						
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5	
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ty, environment and infrastructu	ure has been addressed as part of rehabilitation.	
ROCC0002145						
Rehabilitation completion criteria	Bushfire controls implemented.					
Indicators	Appropriate bushfire hazard controls (where req	Appropriate bushfire hazard controls (where required) have been implemented on the advice from the NSW Rural Fire Service.				
Validation method	Independent verification report.					
ROB0014607						
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5	
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pre	edicted in pre-mining environmental assessment.	
ROCC0002387						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
ROB0014573						
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5	
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site the harm.	at is incompatible with the final	land use or that poses a threat of environmental	
ROCC0002327						
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level (	of the National Environment Pro	tection (Assessment of Site Contamination)	
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessmen	t of Site Contamination) Measur	re (1999) applicable to land use type, where	

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Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)			
ROCC0002353						
Rehabilitation completion criteria	Contamination will be appropriately remediated s Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level	of the National Environment Pr	rotection (Assessment of Site Contamination)	
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessmen	nt of Site Contamination) Measu	ure (1999) applicable to land use type, where	
Validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)					
ROCC0002340						
Rehabilitation completion criteria	There are no visible signs of contamination	There are no visible signs of contamination				
Indicators	Waste material and/or visible contamination areas on site					
Validation method	Statement provided and before/after photos					
ROB0014508						
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5	
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not presen to the public/ stock/ native fauna.	nt a risk of environmental harm	downstream/ downslope of the site or a safety risk	
			·			
ROCC0002132						
ROCC0002132  Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved for high r	risk landforms.	
Rehabilitation completion	· ·	·	amended rehabilitation completion criteria statem amended rehabilitation completion criteria statem			
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	·	nent can be approved for high r	isk landforms.	
Rehabilitation completion criteria Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved for high r	isk landforms.	
Rehabilitation completion criteria Indicators Validation method	Further refinement of this rehabilitation complet  Further refinement of this rehabilitation complet  Visual- minimal erosion that would not require may visual – no signs of land instability such as mass visual – no areas of active gully erosion.  Visual – no evidence of tunnel erosion.  Visual – no evidence of active scour likely to complications.	ion criteria is required before an ion criteria is required before an oderate to significant ongoing movement.	amended rehabilitation completion criteria statem amended rehabilitation completion criteria statem anagement and maintenance works.	nent can be approved for high r nent can be approved for high r	isk landforms.	
Rehabilitation completion criteria Indicators Validation method ROCC0002119 Rehabilitation completion	Further refinement of this rehabilitation complet  Further refinement of this rehabilitation complet  Visual- minimal erosion that would not require many visual – no signs of land instability such as mass visual – no areas of active gully erosion.  Visual – no evidence of tunnel erosion.  Visual – no evidence of active scour likely to compour Survey verifies final landform complies with final Survey verifies that settlement and/or material love.  Visual - indicators of erosion and land instability.  Visual - indicators that surface water management.	ion criteria is required before an ion criteria is required before an oderate to significant ongoing movement.  Inpromise surface water manager I landform construction in accordoss is within predicted limits and ent structure are functioning as diverify final landform construction	amended rehabilitation completion criteria statem amended rehabilitation completion criteria statem anagement and maintenance works.  ment structure. dance with Final Landform and Rehabilitation Plan. will not compromise final landform drainage via didesigned. In accordance with Final Landform and Rehabilitation	nent can be approved for high r nent can be approved for high r ifferential settlement.	isk landforms.	
Rehabilitation completion criteria Indicators Validation method ROCC0002119  Rehabilitation completion criteria	Further refinement of this rehabilitation complet  Further refinement of this rehabilitation complet  Visual- minimal erosion that would not require moved the visual - no signs of land instability such as mass visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to complicate survey verifies final landform complies with final survey verifies that settlement and/or material low visual - indicators of erosion and land instability.  Visual - indicators that surface water management Measured - Survey of rehabilitated landform to women to survey of rehabilitated landform to survey of rehabilitated la	ion criteria is required before an ion criteria is required before an oderate to significant ongoing movement.  Inpromise surface water manager I landform construction in accordoss is within predicted limits and ent structure are functioning as derify final landform construction pecifically monitor settlement are	amended rehabilitation completion criteria statem amended rehabilitation completion criteria statem anagement and maintenance works.  ment structure. dance with Final Landform and Rehabilitation Plan. will not compromise final landform drainage via didesigned. In accordance with Final Landform and Rehabilitation	nent can be approved for high rent can be approved for high renert can be approved for high rener can be approved for high	risk landforms.	

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	indicate long-term stability of rehabilitated land	form.				
	Depending on the nature, scale and risks associa	ated with a specific site, stability	will need to be evaluated over a number of ye	ears (e.g. 5 years).		
ROB0014623						
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5	
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g encapsulated so it does not pose any hazar			
ROCC0002403						
Rehabilitation completion criteria	Visual – verification that capping, type and place Visual – no signs of impacts on final land use du Survey - no significant areas of high temperatur Survey - coarse rejects and hot material is a min	e to residual wate materials indic e that impacts vegetation health	cated by vegetation health			
Indicators	Visual – capping material placement, type across emplacement  Visual – indication of residual waste impacting on final land use – vegetation health  Survey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators  Survey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)					
Validation method	Photos, rehabilitation monitoring reports, as con (where required), groundwater/surface water mo		outputs, survey records and plans, quality as	surance records for construction,	erosion surveys, independent geotechnical reports	
ROB0014534						
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5	
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as parameterials.	part of the final land use is remove	ed to ensure the site is safe and free of hazardous	
ROCC0002210						
Rehabilitation completion criteria	All utility infrastructure removed.					
Indicators	Removal of all services (power, water, communic	cations) that have been connecte	ed on the site as part of the operation.			
Validation method	Statement provided, independent field verificati	on				
ROCC0002171						
Rehabilitation completion criteria	Cores removed.					
Indicators	All drill cores have been removed from site and either taken to authorised storage or disposal location.					
Validation method	Statement provided, independent field verification, disposal/transfer receipts					
ROCC0002158						
Rehabilitation completion criteria	Footings removed to a depth as far as reasonable	ly practicable to avoid exposure	pathways to subsequent final land use.			

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Indicators	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.
Validation method	Statement provided, independent field verification. Surveyed and marked on the as-constructed final landform plan.
ROCC0002184	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.
Validation method	As-constructed final landform plan, photos, independent field verification, etc.
ROCC0002223	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	Removal of all water management infrastructure (including pumps, pipes and power).
Validation method	Statement provided, independent field verification and before/after photos.
ROCC0002197	
Rehabilitation completion criteria	Permits and approval documents issued; archival reports (where required) complete and submitted.
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).
Validation method	Copy of any relevant approval documentation.
ROCC0002236	
Rehabilitation completion criteria	Sealing complete.
Indicators	Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards.
Validation method	Engineering report/statement, survey records, photos etc.
ROCC0002249	
Rehabilitation completion criteria	Sealing completed. OR
20114	Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use.
Indicators	Surveying and sealing of all former underground mine entries.  OR  Where sealing records are not available, risk assessment completed to define risk to final land use.
Validation method	Engineering report/statement, risk assessment report, survey records, photos etc.

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Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5				
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the	e final land use is safe.					
ROCC0002301									
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.	Any required Repairs or Upgrades complete.							
Indicators	Water management infrastructure (dams, drains,	embankments, etc.) and access	tracks are suitable in size and condition for the pos	st mining land use and practical	ly minimised.				
Validation method	Copy of any relevant plans, photos etc.								
ROCC0002275									
Rehabilitation completion criteria	Hazards isolated and secured.	Hazards isolated and secured.							
Indicators	Potential hazards (e.g. electrical, mechanical) have	ve been effectively isolated and	secured.						
Validation method	Statement provided.								
ROCC0002262									
Rehabilitation completion criteria	The location of the infrastructure has been marked on a plan and registered with the relevant local authority (e.g. local Council) and Dial Before You Dig.								
Indicators	If any underground pipelines or other infrastructure (e.g. building footings) are to remain in situ, they do not pose a hazard for the intended final land use.  Note: If any underground pipelines or other infrastructure are to remain in situ in areas to be returned for Agriculture – grazing they are at a depth >0.5m and don't constrain the final land use.								
Validation method	Surveyed and marked on the as-constructed fina Copy of notification to or correspondence with re								
ROCC0002288									
Rehabilitation completion criteria	The structural integrity of the infrastructure has	been inspected by a suitably qua	alified engineer and determined to be safe for the i	ntended final land use.					
Indicators	The structural integrity of the infrastructure is su	uitable and safe for use as part o	f the intended final land use.						
Validation method	Engineering report/statement, photos etc.								
ROB0014560									
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5				
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 197		e in place (e.g. development consent under the				
ROCC0002314									
Rehabilitation completion criteria	Permits and approval documents issued								
Indicators	Where applicable, 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 and use								

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Validation method	Copy of any relevant approvals or evidence if approvals not required e.g. fencing						
ROB0014594							
Final Land Use Domain	Native Ecosystem	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	A5		
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better environmental assessments.	than, the pre-disturbance runoff	water quality or as predicted in pre-mining		
ROCC0002374							
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.						
Indicators	Further refinement of this rehabilitation comple	etion criteria is required before an	amended rehabilitation completion criteria s	tatement can be approved.			
Validation method	Further refinement of this rehabilitation comple	etion criteria is required before an	amended rehabilitation completion criteria s	tatement can be approved.			
ROB0014587							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1		
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Land use capability is capable of supportin	ng the target agricultural land use	(grazing).		
ROCC0002367							
Rehabilitation completion criteria	Land and Soil Capability classification criteria r	net. Land capability of revegetation	on is generally VI or higher.				
Indicators	Land and Soil Capability classification or is Clas	ss VI or higher					
Validation method	Independent agronomist reports.						
ROB0014583							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1		
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Revegetation consists of grassland areas wand only requires maintenance that is cons		to support sustainable agricultural activities (grazing) I use.		
ROCC0002363							
Rehabilitation completion criteria	>70% of pasture species are perennial, palatable, and productive Ground cover (vegetation, leaf litter, mulch) is greater than 70% Biomass (Dry Matter (kg DM)/ha) of pasture vegetation is >1500 Pasture or Priority weed presence cover is <20% Notes: Priority Weed = Weed listed on the Priority Weed list for the Council Area(s) relevant to GCAA operation. The priority weed list can be accessed via the NSW Department of Primary Industries Weedwise Website (or its latest version). Pasture Weeds = those other weeds that are not listed on the Priority Weed list for the Council Area(s) relevant to GCAA operation, however are unpalatable or otherwise pose a risk to the establishment of the desired pasture composition.						
Indicators	The re-established growth medium substrate (e.g. topsoil / subsoil) is capable of supporting the targeted agricultural regime (grazing) on a sustained basis.						

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	Pasture composition assessed, including pasture	weeds				
Validation method	Results from Industry research, studies or trials, rehabilitation monitoring reports, independent soil reports, environmental monitoring records, independent agronomist reports. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15 years).					
ROB0014522						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1	
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the commun	nity, environment and infrastruct	ture has been addressed as part of rehabilitation.	
ROCC0002146						
Rehabilitation completion criteria	Bushfire controls implemented.					
Indicators	Appropriate bushfire hazard controls (where required) have been implemented on the advice from the NSW Rural Fire Service.					
Validation method	Independent verification report.					
ROB0014608						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1	
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwar	ter quality are within range as pr	redicted in pre-mining environmental assessment.	
ROCC0002388						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.		
ROB0014574						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1	
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site tharm.	hat is incompatible with the fina	l land use or that poses a threat of environmental	
ROCC0002354						
Rehabilitation completion criteria	Contamination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999).					
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessme	ent of Site Contamination) Measu	ure (1999) applicable to land use type, where	
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		edited Auditor (where required)			

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ROCC0002328							
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	Contamination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999).					
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessmer	nt of Site Contamination) Meas	sure (1999) applicable to land use type, where		
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)				
ROCC0002341							
Rehabilitation completion criteria	There are no visible signs of contamination						
Indicators	Waste material and/or visible contamination area	as on site					
Validation method	Statement provided and before/after photos						
ROB0014509							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1		
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not present to the public/ stock/ native fauna.	nt a risk of environmental harm	downstream/ downslope of the site or a safety risk		
ROCC0002133							
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved for high	risk landforms.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria staten	nent can be approved for high	risk landforms.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria staten	nent can be approved for high	risk landforms.		
ROCC0002120							
Rehabilitation completion criteria	Visual- minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.						
Indicators	Visual - indicators of erosion and land instability. Visual - indicators that surface water management structure are functioning as designed. Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan. Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.						
Validation method	indicate long-term stability of rehabilitated land	orm.	s, erosion surveys, independent geotechnical repo will need to be evaluated over a number of years (		osion modelling reports (where required) that		

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ROB0014624								
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1			
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective		n site (e.g. tailings, coarse rejects and other my hazards or constraints for intended land				
ROCC0002404								
Rehabilitation completion criteria	Visual – no signs of impacts on final land use due Survey - no significant areas of high temperature	Visual – verification that capping, type and placement present acceptable residual risk to final land use Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health Survey - no significant areas of high temperature that impacts vegetation health Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)						
Indicators	Visual – capping material placement, type across Visual – indication of residual waste impacting of Survey - targeted thermal scanning of surface for Survey - survey plans show depth of coarse reject	n final land use – vegetation heal or indications of spontaneous cor	mbustion based on visual indicators					
Validation method	Photos, rehabilitation monitoring reports, as cons (where required), groundwater/surface water mo		outputs, survey records and plans, c	uality assurance records for construction, o	erosion surveys, independent geotechnical reports			
ROB0014535								
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1			
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be materials.	used as part of the final land use is remove	d to ensure the site is safe and free of hazardous			
ROCC0002211								
Rehabilitation completion criteria	All utility infrastructure removed.							
Indicators	Removal of all services (power, water, communic	cations) that have been connected	d on the site as part of the operation					
Validation method	Statement provided, independent field verification	on						
ROCC0002172								
Rehabilitation completion criteria	Cores removed.							
Indicators	All drill cores have been removed from site and e	either taken to authorised storage	e or disposal location.					
Validation method	Statement provided, independent field verification	on, disposal/transfer receipts						
ROCC0002159								
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably practicable to avoid exposure pathways to subsequent final land use.							
Indicators	Removal of all footings or encapsulation of footi	ngs compatible with final landfor	rm/land use objectives.					
Validation method	Statement provided, independent field verification	on. Surveyed and marked on the	as-constructed final landform plan.					

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ROCC0002185								
Rehabilitation completion criteria	Infrastructure removed.							
Indicators		All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.						
Validation method	As-constructed final landform plan, photos, inde	ependent field verification, etc.						
ROCC0002224								
Rehabilitation completion criteria	Infrastructure removed.							
Indicators	Removal of all water management infrastructure	e (including pumps, pipes and pov	wer).					
Validation method	Statement provided, independent field verification	on and before/after photos.						
ROCC0002198								
Rehabilitation completion criteria	Permits and approval documents issued; archiva	Permits and approval documents issued; archival reports (where required) complete and submitted.						
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).							
Validation method	Copy of any relevant approval documentation.							
ROCC0002237								
Rehabilitation completion criteria	Sealing complete.							
Indicators	Surveying and sealing of all drill holes and boreh	noles (where locatable) in accord	ance with departmental guidelines and relevant s	tandards.				
Validation method	Engineering report/statement, survey records, p	hotos etc.						
ROCC0002250								
Rehabilitation completion criteria	Sealing completed. OR Where sealing records are unavailable, risk asse	ssment shows acceptable residu	al risk remains to final land use.					
Indicators	Surveying and sealing of all former underground mine entries.  OR  Where sealing records are not available, risk assessment completed to define risk to final land use.							
Validation method	dation method Engineering report/statement, risk assessment report, survey records, photos etc.							
ROB0014548								
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1			
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of th	ne final land use is safe.				
	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of th	ne final land use is safe.				

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ROCC0002302						
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.					
Indicators	Water management infrastructure (dams, drains,	embankments, etc.) and access	tracks are suitable in size and condition for the po	ost mining land use and practical	lly minimised.	
Validation method	Copy of any relevant plans, photos etc.					
ROCC0002276						
Rehabilitation completion criteria	Hazards isolated and secured.					
Indicators	Potential hazards (e.g. electrical, mechanical) have	ve been effectively isolated and s	secured.			
Validation method	Statement provided.					
ROCC0002263						
Rehabilitation completion criteria	The location of the infrastructure has been mark	ed on a plan and registered with	the relevant local authority (e.g. local Council) and	d Dial Before You Dig.		
Indicators	If any underground pipelines or other infrastruct Note: If any underground pipelines or other infra		remain in situ, they do not pose a hazard for the in areas to be returned for Agriculture – grazing the		constrain the final land use.	
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re-					
ROCC0002289						
Rehabilitation completion criteria	The structural integrity of the infrastructure has	been inspected by a suitably qua	alified engineer and determined to be safe for the	intended final land use.		
Indicators	The structural integrity of the infrastructure is su	uitable and safe for use as part o	f the intended final land use.			
Validation method	Engineering report/statement, photos etc.					
ROB0014561						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1	
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 19	<u> </u>	e in place (e.g. development consent under the	
ROCC0002315						
Rehabilitation completion criteria	Permits and approval documents issued					
Indicators	Where applicable, 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					
Validation method	Copy of any relevant approvals or evidence if approvals not required e.g. fencing					

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Final Land Use Domain	Agricultural – Grazing	Mining Domain	Infrastructure Area	Spatial Reference	B1				
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better that environmental assessments.	n, the pre-disturbance runoff wa	ater quality or as predicted in pre-mining				
ROCC0002375									
Rehabilitation completion criteria	Further refinement of this rehabilitation comple	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.							
Indicators	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.					
Validation method	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.					
ROB0014588	ROB0014588								
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2				
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Land use capability is capable of supporting th	ne target agricultural land use (§	grazing).				
ROCC0002368									
Rehabilitation completion criteria	Land and Soil Capability classification criteria met. Land capability of revegetation is generally VIII or higher.								
Indicators	Land and Soil Capability classification or is Clas	s VIII or higher							
Validation method	Independent agronomist reports.								
ROB0014584									
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2				
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Revegetation consists of grassland areas with and only requires maintenance that is consiste		support sustainable agricultural activities (grazing) use.				
ROCC0002364									
Rehabilitation completion criteria	>70% of pasture species are perennial, palatable, and productive Ground cover (vegetation, leaf litter, mulch) is greater than 70% Biomass (Dry Matter (kg DM)/ha) of pasture vegetation is >1500 Pasture or Priority weed presence cover is <20% Notes: Priority Weed = Weed listed on the Priority Weed list for the Council Area(s) relevant to GCAA operation. The priority weed list can be accessed via the NSW Department of Primary Industries Weedwise Website (or its latest version). Pasture Weeds = those other weeds that are not listed on the Priority Weed list for the Council Area(s) relevant to GCAA operation, however are unpalatable or otherwise pose a risk to the establishment of the desired pasture composition.								
Indicators	The re-established growth medium substrate (e. Pasture composition assessed, including pasture		supporting the targeted agricultural regime (gra	zing) on a sustained basis.					
Validation method			s, independent soil reports, environmental monito uated over a number of years (e.g. 5 years to 15 ye		nomist reports. Depending on the nature, scale and				

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ROB0014523					
Final Land Use Domain A	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communit	y, environment and infrastructu	ure has been addressed as part of rehabilitation.
ROCC0002147					
Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators A	Appropriate bushfire hazard controls (where requ	ired) have been implemented on	the advice from the NSW Rural Fire Service.		
Validation method In	ndependent verification report.				
ROB0014609					
Final Land Use Domain A	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	r quality are within range as pre	edicted in pre-mining environmental assessment.
ROCC0002389					
Rehabilitation completion criteria	Further refinement of this rehabilitation completion	on criteria is required before an a	amended rehabilitation completion criteria statemo	ent can be approved.	
Indicators Fu	Further refinement of this rehabilitation completion	on criteria is required before an a	amended rehabilitation completion criteria stateme	ent can be approved.	
Validation method Fu	urther refinement of this rehabilitation completion	on criteria is required before an a	amended rehabilitation completion criteria stateme	ent can be approved.	
ROB0014575					
Final Land Use Domain A	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	and and water contamination	Rehabilitation Objective	There is no residual soil contamination on site that harm.	at is incompatible with the final	land use or that poses a threat of environmental
ROCC0002329					
·	Contamination will be appropriately remediated so Measure (1999).	o that appropriate guidelines for	land use are met, e.g. Health Investigation Level o	of the National Environment Pro	otection (Assessment of Site Contamination)
Indicators	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, where required.				
validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)				
ROCC0002355					
· ·	Contamination will be appropriately remediated so Measure (1999).	o that appropriate guidelines for	land use are met, e.g. Health Investigation Level o	of the National Environment Pro	tection (Assessment of Site Contamination)

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Indicators	Soil testing for contaminants of concern as listed required.	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, where required.					
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)				
ROCC0002342							
Rehabilitation completion criteria	There are no visible signs of contamination						
Indicators	Waste material and/or visible contamination area	as on site					
Validation method	Statement provided and before/after photos						
ROB0014510							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2		
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not present to the public/ stock/ native fauna.	t a risk of environmental harm d	ownstream/ downslope of the site or a safety risk		
ROCC0002134							
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statemo	ent can be approved for high ris	k landforms.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria stateme	ent can be approved for high ris	k landforms.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved for high ris	k landforms.		
ROCC0002121							
Rehabilitation completion criteria	Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.						
Indicators	Visual - indicators of erosion and land instability. Visual - indicators that surface water manageme Measured - Survey of rehabilitated landform to v	nt structure are functioning as d	lesigned. n in accordance with Final Landform and Rehabilita	tion Plan.			

ROB0014625

Validation method

Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g. taili	ngs, coarse rejects and other wa	astes) will be appropriately contained /

Depending on the nature, scale and risks associated with a specific site, stability will need to be evaluated over a number of years (e.g. 5 years).

Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.

indicate long-term stability of rehabilitated landform.

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Before and after photos, rehabilitation monitoring reports, as constructed surveys, erosion surveys, independent geotechnical reports (where required) and or erosion modelling reports (where required) that

Category			encapsulated so it does not pose any hazards or	constraints for intended land	use.
ROCC0002405					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	tion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
Indicators	Further refinement of this rehabilitation complet	tion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
Validation method	Further refinement of this rehabilitation complet	tion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
ROB0014536					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as part o materials.	f the final land use is removed	d to ensure the site is safe and free of hazardous
ROCC0002212					
Rehabilitation completion criteria	All utility infrastructure removed.				
Indicators	Removal of all services (power, water, communic	cations) that have been connecte	ed on the site as part of the operation.		
Validation method	Statement provided, independent field verification	on			
ROCC0002173					
Rehabilitation completion criteria	Cores removed.				
Indicators	All drill cores have been removed from site and e	either taken to authorised storag	ge or disposal location.		
Validation method	Statement provided, independent field verification	on, disposal/transfer receipts			
ROCC0002160					
Rehabilitation completion criteria	Footings removed to a depth as far as reasonabl	y practicable to avoid exposure	pathways to subsequent final land use.		
Indicators	Removal of all footings or encapsulation of footi	ngs compatible with final landfo	rm/land use objectives.		
Validation method	Statement provided, independent field verification	on. Surveyed and marked on the	as-constructed final landform plan.		
ROCC0002186					
Rehabilitation completion criteria	Infrastructure removed.				
Indicators			s, stockpile areas, rail infrastructure and loading fa f in accordance with Waste Management Regulatio		rbon storage tanks, office complex, portable offices,
Validation method	As-constructed final landform plan, photos, inde	pendent field verification, etc.			
ROCC0002225					

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RCC0001014 | Liddell Coal Rehabilitation completion Infrastructure removed. criteria Indicators Removal of all water management infrastructure (including pumps, pipes and power). Validation method Statement provided, independent field verification and before/after photos. ROCC0002199 Rehabilitation completion Permits and approval documents issued; archival reports (where required) complete and submitted. criteria Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention Indicators or building demolition with footings preserved). Validation method Copy of any relevant approval documentation. ROCC0002238 Rehabilitation completion Sealing complete. criteria Indicators Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards. Validation method Engineering report/statement, survey records, photos etc. ROCC0002251

Rehabilitation completion

Sealing completed.

OR

criteria

Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use.

Surveying and sealing of all former underground mine entries.

Indicators OR

Where sealing records are not available, risk assessment completed to define risk to final land use.

Validation method Engineering report/statement, risk assessment report, survey records, photos etc.

## ROB0014549

Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the	e final land use is safe.	

### ROCC0002303

Rehabilitation completion	
criteria	

Any required Repairs or Upgrades complete.

Water management infrastructure (dams, drains, embankments, etc.) and access tracks are suitable in size and condition for the post mining land use and practically minimised. Indicators

Validation method Copy of any relevant plans, photos etc.

### ROCC0002277

Rehabilitation completion Hazards isolated and secured.

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criteria					
Indicators	Potential hazards (e.g. electrical, mechanical) have	ve been effectively isolated and	secured.		
Validation method	Statement provided.				
ROCC0002264					
Rehabilitation completion criteria	The location of the infrastructure has been mark	ed on a plan and registered with	the relevant local authority (e.g. local Council) and	d Dial Before You Dig.	
Indicators			remain in situ, they do not pose a hazard for the in areas to be returned for Agriculture – grazing they		t constrain the final land use.
Validation method	Surveyed and marked on the as-constructed final landform plan. Copy of notification to or correspondence with relevant authority				
ROCC0002290					
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.				
Indicators	The structural integrity of the infrastructure is su	uitable and safe for use as part o	f the intended final land use.		
Validation method	Engineering report/statement, photos etc.				
ROB0014562					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 197		re in place (e.g. development consent under the
ROCC0002316					
Rehabilitation completion criteria	Permits and approval documents issued				
Indicators	Where applicable, necessary approvals are in pla land use	ace (e.g. development consent ur	nder the Environmental Planning and Assessment $ ho$	Act 1979) where buildings and i	nfrastructure are to be retained as part of final
Validation method	Copy of any relevant approvals or evidence if app	orovals not required e.g. fencing			
ROB0014596					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Tailings Storage Facility	Spatial Reference	B2
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff war	ter quality or as predicted in pre-mining
ROCC0002376					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	

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Validation method	Further refinement of this rehabilitation completi	on criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.		
ROB0014589						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3	
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Land use capability is capable of supporting the	target agricultural land use (gr	razing).	
ROCC0002369						
Rehabilitation completion criteria	Land and Soil Capability classification criteria me	et. Land capability of revegetatio	n is generally VI or higher.			
Indicators	Land and Soil Capability classification or is Class	VI or higher				
Validation method	Independent agronomist reports.					
ROB0014585						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	В3	
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Revegetation consists of grassland areas with po and only requires maintenance that is consistent		support sustainable agricultural activities (grazing) se.	
ROCC0002365						
Rehabilitation completion criteria	its latest version).	eater than 70% tation is >1500 list for the Council Area(s) relev	ant to GCAA operation. The priority weed list can bor the Council Area(s) relevant to GCAA operation,		rtment of Primary Industries Weedwise Website (or nerwise pose a risk to the establishment of the	
Indicators	The re-established growth medium substrate (e.g.		supporting the targeted agricultural regime (grazin	ng) on a sustained basis.		
Validation method	Results from Industry research, studies or trials,	rehabilitation monitoring reports	, independent soil reports, environmental monitorinated over a number of years (e.g. 5 years to 15 years		omist reports. Depending on the nature, scale and	
ROB0014524						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3	
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ty, environment and infrastruct	ture has been addressed as part of rehabilitation.	
ROCC0002148						
Rehabilitation completion	Bushfire controls implemented.					

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criteria							
Indicators	Appropriate bushfire hazard controls (where req	uired) have been implemented o	n the advice from the NSW Rural Fire Service.				
Validation method	Independent verification report.						
ROB0014610							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3		
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pr	redicted in pre-mining environmental assessment.		
ROCC0002390							
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.						
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.			
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.			
ROB0014576							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3		
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site the	at is incompatible with the fina	l land use or that poses a threat of environmental		
ROCC0002330							
Rehabilitation completion criteria	Contamination will be appropriately remediated : Measure (1999).	so that appropriate guidelines fo	or land use are met, e.g. Health Investigation Level	of the National Environment Pr	otection (Assessment of Site Contamination)		
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	of the National Environment Protection (Assessmen	nt of Site Contamination) Measu	ure (1999) applicable to land use type, where		
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)				
ROCC0002356							
Rehabilitation completion criteria	Contamination will be appropriately remediated : Measure (1999).	so that appropriate guidelines fo	or land use are met, e.g. Health Investigation Level	of the National Environment Pr	otection (Assessment of Site Contamination)		
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	of the National Environment Protection (Assessmen	nt of Site Contamination) Measu	ure (1999) applicable to land use type, where		
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)				
ROCC0002343							
Rehabilitation completion criteria	There are no visible signs of contamination						

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Rehabilitation completion

criteria

Indicators

Indicators	Waste material and/or visible contamination are	as on site			
Validation method	Statement provided and before/after photos				
ROB0014511					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does to the public/ stock/ native fauna.	s not present a risk of environmental harr	m downstream/ downslope of the site or a safety ris
ROCC0002135					
Rehabilitation completion criteria	Further refinement of this rehabilitation comple	tion criteria is required before a	an amended rehabilitation completion cri	teria statement can be approved for high	n risk landforms.
Indicators	Further refinement of this rehabilitation comple	tion criteria is required before a	an amended rehabilitation completion cri	teria statement can be approved for high	n risk landforms.
Validation method	Further refinement of this rehabilitation comple	tion criteria is required before a	an amended rehabilitation completion cri	teria statement can be approved for high	n risk landforms.
ROCC0002122					
Rehabilitation completion criteria	Visual - minimal erosion that would not require no Visual - no signs of land instability such as mass Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to consurvey verifies final landform complies with final Survey verifies that settlement and/or material.	s movement. mpromise surface water manag al landform construction in acco	gement structure. Ordance with Final Landform and Rehabil		
Indicators	Visual - indicators of erosion and land instability Visual - indicators that surface water managem Measured - Survey of rehabilitated landform to Measured - survey of rehabilitated landform to	ent structure are functioning as verify final landform construction	on in accordance with Final Landform an	nd Rehabilitation Plan.	
Validation method	Before and after photos, rehabilitation monitoring indicate long-term stability of rehabilitated land Depending on the nature, scale and risks associ	form.			rosion modelling reports (where required) that
ROB0014626					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	В3
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective		site (e.g. tailings, coarse rejects and other y hazards or constraints for intended land	wastes) will be appropriately contained / d use.
ROCC0002406					

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Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health

Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)

Survey - no significant areas of high temperature that impacts vegetation health

Visual – capping material placement, type across emplacement

	Visual – indication of residual waste impacting of Survey - targeted thermal scanning of surface for Survey - survey plans show depth of coarse reject	or indications of spontaneous co	ombustion based on visual indicators		
Validation method	Photos, rehabilitation monitoring reports, as cons (where required), groundwater/surface water mo		y outputs, survey records and plans, quality assura	nce records for construction, e	erosion surveys, independent geotechnical reports
ROB0014537					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as part of materials.	of the final land use is removed	d to ensure the site is safe and free of hazardous
ROCC0002213					
Rehabilitation completion criteria	All utility infrastructure removed.				
Indicators	Removal of all services (power, water, communic	ations) that have been connect	ed on the site as part of the operation.		
Validation method	Statement provided, independent field verification	on			
ROCC0002174					
Rehabilitation completion criteria	Cores removed.				
Indicators	All drill cores have been removed from site and e	either taken to authorised stora	ge or disposal location.		
Validation method	Statement provided, independent field verification	on, disposal/transfer receipts			
ROCC0002161					
Rehabilitation completion criteria	Footings removed to a depth as far as reasonabl	y practicable to avoid exposure	pathways to subsequent final land use.		
Indicators	Removal of all footings or encapsulation of footi	ngs compatible with final landf	orm/land use objectives.		
Validation method	Statement provided, independent field verification	on. Surveyed and marked on the	e as-constructed final landform plan.		
ROCC0002187					
Rehabilitation completion criteria	Infrastructure removed.				
Indicators			es, stockpile areas, rail infrastructure and loading fa of in accordance with Waste Management Regulati		rbon storage tanks, office complex, portable offices,
Validation method	As-constructed final landform plan, photos, inde	pendent field verification, etc.			
ROCC0002226					
Rehabilitation completion criteria	Infrastructure removed.				
Indicators	Removal of all water management infrastructure	e (including pumps, pipes and po	ower).		

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Validation method	Statement provided, independent field verification	on and before/after photos.			
ROCC0002200					
Rehabilitation completion criteria	Permits and approval documents issued; archival	reports (where required) comple	ete and submitted.		
Indicators	Heritage obligations (e.g. development consent or building demolition with footings preserved).	ınder the Environmental Planninş	g and Assessment Act 1979, approvals under the F	Heritage Act 1977, etc.) have be	een met (e.g. archival recording, building retention
Validation method	Copy of any relevant approval documentation.				
ROCC0002239					
Rehabilitation completion criteria	Sealing complete.				
Indicators	Surveying and sealing of all drill holes and boreh	oles (where locatable) in accord	ance with departmental guidelines and relevant st	andards.	
Validation method	Engineering report/statement, survey records, ph	notos etc.			
ROCC0002252					
Rehabilitation completion criteria	Sealing completed. OR Where sealing records are unavailable, risk asses	ssment shows acceptable residu	al risk remains to final land use.		
Indicators	Surveying and sealing of all former underground OR Where sealing records are not available, risk asse		k to final land use.		
Validation method	Engineering report/statement, risk assessment re	eport, survey records, photos etc	Σ.		
ROB0014550					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	B3
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the	e final land use is safe.	
ROCC0002304					
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.				
Indicators	Water management infrastructure (dams, drains,	embankments, etc.) and access	tracks are suitable in size and condition for the po	st mining land use and practica	ally minimised.
Validation method	Copy of any relevant plans, photos etc.				
ROCC0002278					
Rehabilitation completion criteria	Hazards isolated and secured.				
Indicators	Potential hazards (e.g. electrical, mechanical) have	ve been effectively isolated and	secured.		
Validation method	Statement provided.				

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ROCC0002265						
Rehabilitation completion criteria	The location of the infrastructure has been mark	ed on a plan and registered with	n the relevant local authority (e.g. local Council) and	d Dial Before You Dig.		
Indicators			o remain in situ, they do not pose a hazard for the in areas to be returned for Agriculture – grazing they		t constrain the final land use.	
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re-					
ROCC0002291						
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.					
Indicators	The structural integrity of the infrastructure is su	uitable and safe for use as part o	of the intended final land use.			
Validation method	Engineering report/statement, photos etc.					
ROB0014563						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	В3	
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 19		re in place (e.g. development consent under the	
ROCC0002317						
Rehabilitation completion criteria	Permits and approval documents issued					
Indicators	Where applicable, necessary approvals are in plause	ace (e.g. development consent u	nder the Environmental Planning and Assessment A	Act 1979) where buildings and i	nfrastructure are to be retained as part of final land	
Validation method	Copy of any relevant approvals or evidence if app	provals not required e.g. fencing				
ROB0014597						
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Water Management Area	Spatial Reference	В3	
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff wat	er quality or as predicted in pre-mining	
ROCC0002377						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.		
ROB0014590						

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Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Land use capability is capable of supporting the	target agricultural land use (gra	zing).		
ROCC0002370							
Rehabilitation completion criteria	Land and Soil Capability classification or is Class	s VI or higher, except for Mountai	in Block area which is Class VIII				
Indicators	Land and Soil Capability classification or is Class	s VI or higher, except for Mountai	in Block area which is Class VIII				
Validation method	Independent agronomist reports.						
ROB0014586							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Rehabilitation Objective Category	Agricultural revegetation	Rehabilitation Objective	Revegetation consists of grassland areas with pockets of native vegetation to support sustainable agricultural activities (grazinand only requires maintenance that is consistent with the intended final land use.				
ROCC0002366							
Rehabilitation completion criteria	its latest version).	etation is >1500 I list for the Council Area(s) relev	rant to GCAA operation. The priority weed list can bor the Council Area(s) relevant to GCAA operation,				
	The re-established growth medium substrate (e.g. topsoil / subsoil) is capable of supporting the targeted agricultural regime (grazing) on a sustained basis.						
Indicators	The re-established growth medium substrate (e. Pasture composition assessed, including pasture		supporting the targeted agricultural regime (grazii	ig) on a sustained pasis.			
Indicators  Validation method	Pasture composition assessed, including pasture Results from Industry research, studies or trials,	e weeds rehabilitation monitoring reports	supporting the targeted agricultural regime (grazii s, independent soil reports, environmental monitorii lated over a number of years (e.g. 5 years to 15 yea	ng records, independent agronor	mist reports. Depending on the nature, scale and		
	Pasture composition assessed, including pasture Results from Industry research, studies or trials,	e weeds rehabilitation monitoring reports	s, independent soil reports, environmental monitori	ng records, independent agronor	mist reports. Depending on the nature, scale and		
Validation method	Pasture composition assessed, including pasture Results from Industry research, studies or trials,	e weeds rehabilitation monitoring reports	s, independent soil reports, environmental monitori	ng records, independent agronor	mist reports. Depending on the nature, scale and		
Validation method  ROB0014525	Pasture composition assessed, including pasture Results from Industry research, studies or trials, risks associated with a specific site, achievemen	e weeds rehabilitation monitoring reports t of criteria may need to be evalu	s, independent soil reports, environmental monitorion lated over a number of years (e.g. 5 years to 15 year	ng records, independent agronor ers). Spatial Reference	B4		
Validation method  ROB0014525  Final Land Use Domain Rehabilitation Objective	Pasture composition assessed, including pasture Results from Industry research, studies or trials, risks associated with a specific site, achievement  Agricultural – Grazing	e weeds rehabilitation monitoring reports t of criteria may need to be evalu  Mining Domain	s, independent soil reports, environmental monitorion lated over a number of years (e.g. 5 years to 15 year Overburden Emplacement Area	ng records, independent agronor ers). Spatial Reference	B4		
Validation method  ROB0014525  Final Land Use Domain  Rehabilitation Objective Category	Pasture composition assessed, including pasture Results from Industry research, studies or trials, risks associated with a specific site, achievement  Agricultural – Grazing	e weeds rehabilitation monitoring reports t of criteria may need to be evalu  Mining Domain	s, independent soil reports, environmental monitorion lated over a number of years (e.g. 5 years to 15 year Overburden Emplacement Area	ng records, independent agronor ers). Spatial Reference	B4		
Validation method  ROB0014525  Final Land Use Domain Rehabilitation Objective Category  ROCC0002149  Rehabilitation completion	Pasture composition assessed, including pasture Results from Industry research, studies or trials, risks associated with a specific site, achievement  Agricultural – Grazing  Bushfire	rehabilitation monitoring reports t of criteria may need to be evalu  Mining Domain  Rehabilitation Objective	o, independent soil reports, environmental monitorionated over a number of years (e.g. 5 years to 15 years).  Overburden Emplacement Area  The risk of bushfire and impacts to the communi	ng records, independent agronor ers). Spatial Reference	B4		

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ROB0014611					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwat	ter quality are within range as p	redicted in pre-mining environmental assessment.
ROCC0002391					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria stater	ment can be approved.	
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria stater	ment can be approved.	
ROB0014577					
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site t harm.	hat is incompatible with the fina	Il land use or that poses a threat of environmental
ROCC0002331					
Rehabilitation completion criteria	Contamination will be appropriately remediated (Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Leve	l of the National Environment Pr	rotection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessme	ent of Site Contamination) Meas	ure (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)		
ROCC0002357					
Rehabilitation completion criteria	Contamination will be appropriately remediated (Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Leve	l of the National Environment Pı	rotection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessme	ent of Site Contamination) Meas	ure (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)				
ROCC0002344					
Rehabilitation completion criteria	There are no visible signs of contamination				
Indicators	Waste material and/or visible contamination area	as on site			
Validation method	Statement provided and before/after photos				

# ROB0014512

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Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Landform stability	Rehabilitation Objective	The final landform is stable and does not prese to the public/ stock/ native fauna.	ent a risk of environmental harm	downstream/ downslope of the site or a safety risk		
Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria state	ement can be approved for high r	risk landforms.		
Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria state	ement can be approved for high r	risk landforms.		
Further refinement of this rehabilitation complet	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high risk landforms.					
ROCC0002123						
Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.						
Visual - indicators that surface water management Measured - Survey of rehabilitated landform to v	ent structure are functioning as overify final landform construction	n in accordance with Final Landform and Rehabil	itation Plan.			
indicate long-term stability of rehabilitated land	form.			sion modelling reports (where required) that		
Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Management of waste and process materials	Rehabilitation Objective					
Visual – verification that capping, type and placement present acceptable residual risk to final land use						
	Further refinement of this rehabilitation completed.  Further refinement of this rehabilitation completed.  Further refinement of this rehabilitation completed.  Visual- minimal erosion that would not require mover the visual of the visual	Further refinement of this rehabilitation completion criteria is required before an Further refinement of this rehabilitation completion criteria is required before an Further refinement of this rehabilitation completion criteria is required before an Further refinement of this rehabilitation completion criteria is required before an Further refinement of this rehabilitation completion criteria is required before an Further refinement of this rehabilitation completion criteria is required before an Further refinement of this rehability such as mass movement.  Visual – no signs of land instability such as mass movement.  Visual – no evidence of tunnel erosion.  Visual – no evidence of active scour likely to compromise surface water manages Survey verifies final landform complies with final landform construction in according survey verifies that settlement and/or material loss is within predicted limits and Visual - indicators of erosion and land instability.  Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as of Measured - Survey of rehabilitated landform to verify final landform construction Measured - survey of rehabilitated landform to specifically monitor settlement and Before and after photos, rehabilitation monitoring reports, as constructed survey indicate long-term stability of rehabilitated landform.  Depending on the nature, scale and risks associated with a specific site, stability  Agricultural – Grazing  Mining Domain  Management of waste and process materials	Eurther refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state.  Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state. Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state. Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state. Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state. Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state. Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state. Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria state.  Visual - moisigns of land instability such as mass movement.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final Landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plus Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final Landform and Rehability sual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final Landform construction in accordance with Final Landform and Rehability visual - indicates long-term stability of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.  Before and after photos, rehabilitated landform to specifically monitor settlement and/or material loss via erosion.  Depending on the nature, scale and risks associated with a specific site, stab	Eurther refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria is tatement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria attacement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high in Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria is required before an ame		

# Rehabilitation completion

criteria

Indicators

Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health

Survey - no significant areas of high temperature that impacts vegetation health

Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)

Visual – capping material placement, type across emplacement

Visual – indication of residual waste impacting on final land use – vegetation health

Survey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators

Survey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)

Photos, rehabilitation monitoring reports, as constructed surveys, thermal survey outputs, survey records and plans, quality assurance records for construction, erosion surveys, independent geotechnical reports Validation method (where required), groundwater/surface water monitoring reports.

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ROB0014538							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as part materials.	of the final land use is removed	d to ensure the site is safe and free of hazardous		
ROCC0002214							
Rehabilitation completion criteria	All utility infrastructure removed.						
Indicators	Removal of all services (power, water, communic	ations) that have been connecte	ed on the site as part of the operation.				
Validation method	Statement provided, independent field verification	n					
ROCC0002175							
Rehabilitation completion criteria	Cores removed.	Fores removed.					
Indicators	All drill cores have been removed from site and e	ither taken to authorised storag	ge or disposal location.				
Validation method	Statement provided, independent field verification	Statement provided, independent field verification, disposal/transfer receipts					
ROCC0002162							
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably practicable to avoid exposure pathways to subsequent final land use.						
Indicators	Removal of all footings or encapsulation of footing	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.					
Validation method	Statement provided, independent field verification	n. Surveyed and marked on the	as-constructed final landform plan.				
ROCC0002188							
Rehabilitation completion criteria	Infrastructure removed.						
Indicators	All plant, equipment and associated infrastructure exploration core samples, camp facilities, storage				bon storage tanks, office complex, portable offices,		
Validation method	As-constructed final landform plan, photos, indep	pendent field verification, etc.					
ROCC0002227							
Rehabilitation completion criteria	Infrastructure removed.						
Indicators	Removal of all water management infrastructure (including pumps, pipes and power).						
Validation method	Statement provided, independent field verification and before/after photos.						
ROCC0002201							
Rehabilitation completion criteria	Permits and approval documents issued; archival	reports (where required) compl	ete and submitted.				

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Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).						
Validation method	Copy of any relevant approval documentation.						
ROCC0002240							
Rehabilitation completion criteria	Sealing complete.						
Indicators	Surveying and sealing of all drill holes and boreh	Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards.					
Validation method	Engineering report/statement, survey records, ph	notos etc.					
ROCC0002253							
Rehabilitation completion criteria	Sealing completed. OR Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use.						
Indicators	Surveying and sealing of all former underground mine entries.  OR  Where sealing records are not available, risk assessment completed to define risk to final land use.						
Validation method	Engineering report/statement, risk assessment report, survey records, photos etc.						
ROB0014551							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the	e final land use is safe.			
ROCC0002305							
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.						
Indicators	Water management infrastructure (dams, drains,	embankments, etc.) and access	tracks are suitable in size and condition for the pos	st mining land use and practica	ally minimised.		
Validation method	Copy of any relevant plans, photos etc.						
ROCC0002279							
Rehabilitation completion criteria	Hazards isolated and secured.						
Indicators	Potential hazards (e.g. electrical, mechanical) have been effectively isolated and secured.						
Validation method	Statement provided.						
ROCC0002266							
Rehabilitation completion criteria	The location of the infrastructure has been mark	ed on a plan and registered with	the relevant local authority (e.g. local Council) and	Dial Before You Dig.			
Indicators	If any underground pipelines or other infrastruct	ure (e.g. building footings) are to	remain in situ, they do not pose a hazard for the in	tended final land use.			

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	Note: If any underground pipelines or other infras	structure are to remain in situ in a	areas to be returned for Agriculture – grazing they	/ are at a depth >0.5m and don't	t constrain the final land use.		
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re-	·					
ROCC0002292							
Rehabilitation completion criteria	The structural integrity of the infrastructure has	been inspected by a suitably qua	alified engineer and determined to be safe for the	intended final land use.			
Indicators	The structural integrity of the infrastructure is su	The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.					
Validation method	Engineering report/statement, photos etc.						
ROB0014564							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 197		re in place (e.g. development consent under the		
ROCC0002318							
Rehabilitation completion criteria	Permits and approval documents issued						
Indicators	Where applicable, 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						
Validation method	Copy of any relevant approvals or evidence if app	provals not required e.g. fencing					
ROB0014598							
Final Land Use Domain	Agricultural – Grazing	Mining Domain	Overburden Emplacement Area	Spatial Reference	B4		
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff wat	er quality or as predicted in pre-mining		
ROCC0002378							
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	on criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.			
Indicators	Further refinement of this rehabilitation complet	on criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.			
Validation method	Further refinement of this rehabilitation complet	on criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.			
ROB0014526							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1		
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ty, environment and infrastruct	ure has been addressed as part of rehabilitation.		
ROCC0002150							

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Rehabilitation completion criteria	Bushfire controls implemented.					
Indicators	Appropriate bushfire hazard controls (where required) have been implemented on the advice from the NSW Rural Fire Service.					
Validation method	Independent verification report.					
ROB0014612						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundw	vater quality are within range as p	redicted in pre-mining environmental assessment.	
ROCC0002392						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria sta	tement can be approved.		
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria sta	tement can be approved.		
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria sta	tement can be approved.		
ROB0014578						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site harm.	e that is incompatible with the fina	al land use or that poses a threat of environmental	
ROCC0002358						
Rehabilitation completion criteria	Contamination will be appropriately remediated : Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Le	vel of the National Environment P	rotection (Assessment of Site Contamination)	
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessr	nent of Site Contamination) Meas	ure (1999) applicable to land use type, where	
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		redited Auditor (where required)			
ROCC0002332						
Rehabilitation completion criteria	Contamination will be appropriately remediated s Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Le	vel of the National Environment P	rotection (Assessment of Site Contamination)	
Indicators	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, where required.					
Validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)					
ROCC0002345						
Rehabilitation completion criteria	There are no visible signs of contamination					

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Indicators

RCC0001014   Liddell Coal						
Indicators	Waste material and/or visible contamination areas on site					
Validation method	Statement provided and before/after photos					
ROB0014513						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and doe to the public/ stock/ native fauna.	es not present a risk of environmental harm	n downstream/ downslope of the site or a safety risk	
ROCC0002137						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion cr	iteria statement can be approved for high	risk landforms.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion cr	iteria statement can be approved for high	risk landforms.	
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion cr	iteria statement can be approved for high	risk landforms.	
ROCC0002124						
Rehabilitation completion criteria	Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.					
Indicators	Visual - indicators of erosion and land instability. Visual - indicators that surface water manageme Measured - Survey of rehabilitated landform to water Measured - survey of rehabilitated landform to survey of survey of rehabilitated landform to survey of surve	ent structure are functioning as deverify final landform construction	in accordance with Final Landform ar	nd Rehabilitation Plan.		
Validation method	Before and after photos, rehabilitation monitorin indicate long-term stability of rehabilitated land. Depending on the nature, scale and risks associated to the control of	form.			osion modelling reports (where required) that	
ROB0014628						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective		site (e.g. tailings, coarse rejects and other ny hazards or constraints for intended land		
ROCC0002408						
Rehabilitation completion criteria	Visual – verification that capping, type and placement present acceptable residual risk to final land use Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health Survey - no significant areas of high temperature that impacts vegetation health Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)					

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Visual – capping material placement, type across emplacement

NOCOOOTOT4   Liddett Coat							
	Visual – indication of residual waste impacting on final land use – vegetation health Survey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators Survey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)						
Validation method	Photos, rehabilitation monitoring reports, as constructed surveys, thermal survey outputs, survey records and plans, quality assurance records for construction, erosion surveys, independent geotechnical reports (where required), groundwater/surface water monitoring reports.						
ROB0014641							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Levels of ecosystem function have been esta	blished that demonstrate the re	habilitation offset area is self-sustainable.		
ROCC0002421							
Rehabilitation completion criteria	Cover of 'high threat exotic' (HTE) species is < 90th percentile of values observed at suitable reference sites1.  1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.						
Indicators	Cover of exotic species within 20m x 20m fixed monitoring plots is low						
Validation method	Before and after photos, rehabilitation monitorin associated with a specific site, achievement of c Monitoring undertaken in accordance with BAM.	riteria may need to be evaluated		ng term stability of rehabilitated	landform. Depending on the nature, scale and risks		
ROCC0002430							
Rehabilitation completion criteria	Further refinement of this rehabilitation complet health and resilience indicators	ion criteria is required before an	amended rehabilitation completion criteria sta	ement can be approved. Additio	onal ecosystem function criteria are required for soil		
Indicators	Further refinement of this rehabilitation complet health and resilience indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil health and resilience indicators					
Validation method	Further refinement of this rehabilitation complet health and resilience indicators	ion criteria is required before an	amended rehabilitation completion criteria stat	ement can be approved. Additio	onal ecosystem function criteria are required for soil		
ROCC0002424							
Rehabilitation completion criteria	Litter cover is between the 10th and 90th percentile of values from suitable reference sites1, or an ongoing trend toward this target range is observed.  1 - Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.						
Indicators	Indicators of nutrient cycling are suitable for sus	staining the target vegetation cor	mmunity				
Validation method	Rehabilitation monitoring reports, independent soil reports (where required) that demonstrate long term function of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.						
ROCC0002427							
Rehabilitation completion criteria	The number of second generation trees are ≥10th 1 Suitable reference sites are those that represe infestation, grazing, fire, erosion, dieback or dise	nt good quality and mature exam	ples of the target community, where evidence		ncluding vegetation clearing, timber harvesting, weed		

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Rehabilitation completion

All utility infrastructure removed.

RCC0001014   Liddell Coal						
Indicators	Evidence of plant regeneration from 20m x 20	Om monitoring plots or a walk over o	of the ecological rehabilitation area			
Validation method	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM and walkover inspections undertaken to identify presence of recruitment.					
ROB0014633						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective		abilitation offset area is recognisable a by the NSW Scientific Final Committee	as the target vegetation communities (Central Hune Determination.	
ROCC0002413						
Rehabilitation completion criteria	A minimum of 10 of the 38 characteristic flora floristic sampling plot.	a species contained in the Central H	Hunter Grey Box – Ironbark Woodland Fin	nal Determination (NSW Scientific Comr	mittee 2010) is present in a standard 20 m x 20 m	
Indicators	The number of characteristic species for Cen	tral Hunter Box-Ironbark Woodland	I present are characteristic of the NSW S	Scientific Committee Final Determinatio	n.	
Validation method	Before and after photos, statistically robust rehabilitation monitoring reports, independent ecological reports. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  All native vascular plant species are recorded to species level from fixed monitoring plots.  Monitoring undertaken in accordance with BAM.					
ROB0014637						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	_		or is trending towards (based on ongoing monitoriland) as described by the NSW Scientific Final	
ROCC0002417						
Rehabilitation completion criteria	Within a standard 20 m x 20 m floristic sampl	ing plot tree (TG) foliage cover is be	etween 10% and 70% AND grass (GG) and	d forb (FG) growth forms are present.		
Indicators	The growth forms present are consistent with	n, or are trending toward, those of th	he target vegetation types.			
Validation method	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required). Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.					
ROB0014539						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1	
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used materials.	d as part of the final land use is remove	ed to ensure the site is safe and free of hazardous	
ROCC0002215						
D. I. I. III.	All city is a second					

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criteria	
Indicators	Removal of all services (power, water, communications) that have been connected on the site as part of the operation.
Validation method	Statement provided, independent field verification
ROCC0002176	
Rehabilitation completion criteria	Cores removed.
Indicators	All drill cores have been removed from site and either taken to authorised storage or disposal location.
Validation method	Statement provided, independent field verification, disposal/transfer receipts
ROCC0002163	
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably practicable to avoid exposure pathways to subsequent final land use.
Indicators	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.
Validation method	Statement provided, independent field verification. Surveyed and marked on the as-constructed final landform plan.
ROCC0002189	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.
Validation method	As-constructed final landform plan, photos, independent field verification, etc.
ROCC0002228	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	Removal of all water management infrastructure (including pumps, pipes and power).
Validation method	Statement provided, independent field verification and before/after photos.
ROCC0002202	
Rehabilitation completion criteria	Permits and approval documents issued; archival reports (where required) complete and submitted.
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).
Validation method	Copy of any relevant approval documentation.
ROCC0002241	
Rehabilitation completion criteria	Sealing complete.

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Indicators	Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards.
Validation method	Engineering report/statement, survey records, photos etc.
ROCC0002254	
Rehabilitation completion criteria	Sealing completed. OR Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use.
Indicators	Surveying and sealing of all former underground mine entries.  OR  Where sealing records are not available, risk assessment completed to define risk to final land use.
Validation method	Engineering report/statement, risk assessment report, survey records, photos etc.

# ROB0014552

Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the	e final land use is safe.	

### ROCC0002306

ROCC0002300	
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.
Indicators	Water management infrastructure (dams, drains, embankments, etc.) and access tracks are suitable in size and condition for the post mining land use and practically minimised.
Validation method	Copy of any relevant plans, photos etc.

### ROCC0002280

Rehabilitation completion criteria	Hazards isolated and secured.
Indicators	Potential hazards (e.g. electrical, mechanical) have been effectively isolated and secured.
Validation method	Statement provided.
ROCC0002267	

Rehabilitation completion criteria	The location of the infrastructure has been marked on a plan and registered with the relevant local authority (e.g. local Council) and Dial Before You Dig.
Indicators	If any underground pipelines or other infrastructure (e.g. building footings) are to remain in situ, they do not pose a hazard for the intended final land use.  Note: If any underground pipelines or other infrastructure are to remain in situ in areas to be returned for Agriculture – grazing they are at a depth >0.5m and don't constrain the final land use.
Validation method	Surveyed and marked on the as-constructed final landform plan. Copy of notification to or correspondence with relevant authority

### ROCC0002293

Rehabilitation completion	
real distriction compression	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.
criteria	The ended and interest and accommode and accommode and accommodate and accommodate and accommodate and accommode and accommode and accommode accom

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Indicators	The structural integrity of the infrastructure is	suitable and safe for use as part o	of the intended final land use.		
Validation method	Engineering report/statement, photos etc.				
ROB0014565					
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of Environmental Planning and Asses		s are in place (e.g. development consent under the
ROCC0002319					
Rehabilitation completion criteria	Permits and approval documents issued				
Indicators	Where applicable, necessary approvals are in puse	olace (e.g. development consent ui	nder the Environmental Planning and	Assessment Act 1979) where buildings ar	nd infrastructure are to be retained as part of final land
Validation method	Copy of any relevant approvals or evidence if a	pprovals not required e.g. fencing			
ROB0014599					
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Infrastructure Area	Spatial Reference	D1
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or environmental assessments.	r better than, the pre-disturbance runoff v	water quality or as predicted in pre-mining
ROCC0002379					
Rehabilitation completion criteria	Further refinement of this rehabilitation comple	etion criteria is required before an	amended rehabilitation completion o	criteria statement can be approved.	
Indicators	Further refinement of this rehabilitation comple	etion criteria is required before an	amended rehabilitation completion of	criteria statement can be approved.	
Validation method	Further refinement of this rehabilitation comple	etion criteria is required before an	amended rehabilitation completion o	criteria statement can be approved.	
ROB0014527					
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to	the community, environment and infrastr	ucture has been addressed as part of rehabilitation.
ROCC0002151					
Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators	Appropriate bushfire hazard controls (where required) have been implemented on the advice from the NSW Rural Fire Service.				
Validation method	Independent verification report.				

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Rebuilt at time of Disease of Controlled Con						
Coregony  ROCCO002333  Robbilitation completion  Final the reference of a literal debuil aid the completion is the completion of the compl	Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3
Retablication composition   Purpose of the catebook interior int	Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pro	edicted in pre-mining environmental assessment.
Further for fine feather facility of the refeath Intended of the refeath Intended completion of the refeath Intended of the Intended of the Refeath Intended of the Refeath Intended of the Intended o	ROCC0002393					
ROBO014579 Final Land Use Domain Residential time Robot Waster Policy Annual Residential Robot Waster Policy Annual Residential Robot Waster Policy Annual Residential Robot Waster Policy Annual Robot Waster Policy	Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Final Land Use Domain Rehabilitation Biodivers by Offset Auros Mining Domain Rehabilitation Objective Carregory Carr	Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Rehabilitation Objective Closeance Rehabilitation objective Contamination will be appropriately remediated to that appropriate guidelines for load use are met, e.g. Health Investigation Level of the National Findroment Protection (Assessment of Site Contamination) Measure (1998).  Redictors Recording Reference Rehabilitation method Residence Rehabilitation objective Contamination will be appropriately remediated by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1998) applicable to land use type, where required)  Recording Rehabilitation completed Contamination will be appropriately remediated by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1998) Rehabilitation completed Contamination will be appropriately remediated by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1998) Rehabilitation complete Rehabilitation complete Sol Testing for contamination of concern as listed by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1998) Replication method Repeated Protection (Assessment of Site Contamination) Measure (1998) Rehabilitation complete Sol Testing for contamination of concern as listed by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1998) Repeated Protection (1998) Repeated Protection	Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Rehabilitation Objective Cotegory ROCCO002333  ROCCO002333  ROCCO002333  Robbilitation objective Contamination will be correctively remediated as bar coordinate guidelines for land use are mot, o.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Rocco002336  ROCC	ROB0014579					
Robabilitation completion contamination will be appropriately remediated so that appropriate guidatines for land use are met, e.g. Health investigation Level of the National Environment Protection (Assessment of Site Contamination) Moseure (1999).  Indicators contamination Remediation Report proceed by Land Contamination Consultant Site Contamination Audit Report and Sto Audit Storment protection Auditor (where required).  Rehabilitation completion contamination Remediation Report proceed by Land Contamination Consultant Site Contamination Audit Report and Sto Audit Storment protected Auditor (where required).  Rehabilitation completion contents and instead by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where criteria and so contamination and the protection Audit Report and Storment and storment or reported by EPA Accredited Auditor (where required).  Rehabilitation completion contamination Remediation are and ultimate programed by Land Contamination Consultant Storment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where required contamination Remediation Report prepared by Land Contamination Consultant Storment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where required contamination Remediation Report prepared by Land Contamination Consultant Storment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where required contamination Remediation Report prepared by Land Contamination Consultant Storment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where required contamination Audit Report and Site Audit Storment Consultant Storme	Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3
Rehabilitation completion criteria  Indicators  Contamination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where required couldnot.  Validation method  Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement propered by EPA Accredited Auditor (where required)  Recordination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where security in the properties of the National Environment Protection (Assessment of Site Contamination) Measure (1999).  Indicators  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, where required contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCCO002346  Rehabilitation completion Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  There are no visible signs of contamination areas on site  Validation method Statement provided and before/after photos  ROCCO002346  Statement provided and before/after photos	Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective		at is incompatible with the final	land use or that poses a threat of environmental
Indicators Soli 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, where required.  Validation method Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  Rehabilitation completion criteria Indicators Contamination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Audit Report and Site Contamination Protection (Assessment of Site Contamination) Accounts (1999).  Indicators Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCCO002346  Rehabilitation completion Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  There are no visible signs of contamination areas on site  Validation method Statement provided and before/after photos  ROBO014514	ROCC0002333					
required.  Validation method  Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCC0002359  Rehabilitation completion criteria method  Sol testing for contamination silitated by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) measure (1999).  Validation method  Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCC0002346  Rehabilitation completion completion There are no visible signs of contamination reas on site  Validation method  Validation method  Statement provided and before/after photos	Rehabilitation completion criteria		so that appropriate guidelines fo	or land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)
Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCC0002359  Rehabilitation completion criteria	Indicators		d by Health Investigation Level o	of the National Environment Protection (Assessmer	nt of Site Contamination) Measu	re (1999) applicable to land use type, where
Rehabilitation completion criteria  Roboti 4 Statement proprietely remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type, where required.  Validation method Contamination Remediation Report prepared by Lend Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCC0002346  Rehabilitation completion criteria Indicators Waste material and/or visible contamination areas on site  Validation method Statement provided and before/after photos  ROB0014514	Validation method			redited Auditor (where required)		
criteria       Measure (1999).         Indicators       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, where required.         Validation method       Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)         Rehabilitation completion criteria       There are no visible signs of contamination         Indicators       Waste material and/or visible contamination areas on site         Validation method       Statement provided and before/after photos	ROCC0002359					
required.  Validation method  Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  ROCC0002346  Rehabilitation completion criteria Indicators  Waste material and/or visible contamination areas on site  Validation method  Statement provided and before/after photos  ROB0014514	Rehabilitation completion criteria		so that appropriate guidelines fo	or land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)
ROCC0002346  Rehabilitation completion criteria Indicators Validation method Validation method Validation method  ROB0014514  Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  Accredited Auditor (where required)  There are no visible signs of contamination  There are no visible signs of contamination  Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)  There are no visible signs of contamination  Accredited Auditor (where required)  There are no visible signs of contamination  Accredited Auditor (where required)  There are no visible signs of contamination  Accredited Auditor (where required)  There are no visible signs of contamination  Accredited Auditor (where required)  There are no visible signs of contamination  Accredited Auditor (where required)  There are no visible signs of contamination  Accredited Auditor (where required)	Indicators					
Rehabilitation completion criteria  Indicators Validation method  ROB0014514  There are no visible signs of contamination  Waste material and/or visible contamination areas on site  Statement provided and before/after photos  ROB0014514	Validation method					
Indicators Validation method  ROB0014514  There are no visible signs of contamination Waste material and/or visible contamination areas on site Statement provided and before/after photos	ROCC0002346					
Validation method  Statement provided and before/after photos  ROB0014514	Rehabilitation completion criteria	There are no visible signs of contamination				
ROB0014514	Indicators	Waste material and/or visible contamination areas on site				
	Validation method	Statement provided and before/after photos				
Final Land Use Domain Rehabilitation Biodiversity Offset Area Mining Domain Water Management Area Spatial Reference D3	ROB0014514					
	Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3

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Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not present to the public/ stock/ native fauna.	nt a risk of environmental har	m downstream/ downslope of the site or a safety risk
ROCC0002138					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved for high	n risk landforms.
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved for high	n risk landforms.
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved for high	n risk landforms.
ROCC0002125					
Rehabilitation completion criteria		movement.  appromise surface water manager  l landform construction in accord			
Indicators	Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.  Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.				
Validation method	Before and after photos, rehabilitation monitoring reports, as constructed surveys, erosion surveys, independent geotechnical reports (where required) and or erosion modelling reports (where required) that indicate long-term stability of rehabilitated landform.  Depending on the nature, scale and risks associated with a specific site, stability will need to be evaluated over a number of years (e.g. 5 years).				
ROB0014629					
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3
Rehabilitation Objective	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g. tail	ings, coarse rejects and othe	r wastes) will be appropriately contained /

Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g. tailings, coarse rejects and other wastes) will be appropriately contained / encapsulated so it does not pose any hazards or constraints for intended land use.
ROCC0002409			
Rehabilitation completion criteria	Visual – verification that capping, type and placement present acceptable residual risk to final land use Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health Survey - no significant areas of high temperature that impacts vegetation health Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)		
Indicators	Visual – capping material placement, type across emplacement Visual – indication of residual waste impacting on final land use – vegetation health Survey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators Survey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)		
Validation method	Photos, rehabilitation monitoring reports, as constructed surveys, thermal survey outputs, survey records and plans, quality assurance records for construction, erosion surveys, independent geotechnical reports (where required), groundwater/surface water monitoring reports.		

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Rehabilitation Biodiversity Offset Area

Final Land Use Domain

Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3			
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Levels of ecosystem function have	peen established that demonstrate the re	habilitation offset area is self-sustainable.			
ROCC0002422								
Rehabilitation completion criteria	Cover of 'high threat exotic' (HTE) species is ≤ 90th percentile of values observed at suitable reference sites1.  1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.							
Indicators	Cover of exotic species within 20m x 20m fix	ed monitoring plots is low						
Validation method	associated with a specific site, achievement	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.						
ROCC0002431								
Rehabilitation completion criteria	Further refinement of this rehabilitation comhealth and resilience indicators	pletion criteria is required before	an amended rehabilitation completion cr	iteria statement can be approved. Additic	onal ecosystem function criteria are required for soil			
Indicators	Further refinement of this rehabilitation comhealth and resilience indicators	pletion criteria is required before	an amended rehabilitation completion cr	iteria statement can be approved. Additic	onal ecosystem function criteria are required for soil			
Validation method	Further refinement of this rehabilitation combealth and resilience indicators	pletion criteria is required before	an amended rehabilitation completion cr	iteria statement can be approved. Additio	onal ecosystem function criteria are required for soil			
ROCC0002425								
Rehabilitation completion criteria	Litter cover is between the 10th and 90th pe 1 - Suitable reference sites are those that re weed infestation, grazing, fire, erosion, dieba	oresent good quality and mature e	examples of the target community, where	e evidence of disturbance or modification	, including vegetation clearing, timber harvesting,			
Indicators	Indicators of nutrient cycling are suitable fo	sustaining the target vegetation	community					
Validation method	Rehabilitation monitoring reports, independent achievement of criteria may need to be evaluated Monitoring undertaken in accordance with B	uated over a number of years	at demonstrate long term function of re	nabilitated landform. Depending on the na	ature, scale and risks associated with a specific site,			
ROCC0002428								
Rehabilitation completion criteria	The number of second generation trees are 1 Suitable reference sites are those that rep infestation, grazing, fire, erosion, dieback or	resent good quality and mature ex	amples of the target community, where		ncluding vegetation clearing, timber harvesting, weed			
Indicators	Evidence of plant regeneration from 20m x 2	20m monitoring plots or a walk ove	er of the ecological rehabilitation area					
Validation method	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM and walkover inspections undertaken to identify presence of recruitment.							

RCC0001014

Water Management Area

Mining Domain

Spatial Reference

D3

Cores removed.

criteria

RCC0001014   Liddell Coal								
Rehabilitation Objective Category	Native revegetation  Rehabilitation Objective  The vegetation composition of the rehabilitation offset area is recognisable as the target vegetation communities (Central Hunter Box-Ironbark Woodland) as described by the NSW Scientific Final Committee Determination.							
ROCC0002414								
Rehabilitation completion criteria	A minimum of 10 of the 38 characteristic flora s floristic sampling plot.	A minimum of 10 of the 38 characteristic flora species contained in the Central Hunter Grey Box – Ironbark Woodland Final Determination (NSW Scientific Committee 2010) is present in a standard 20 m x 20 m floristic sampling plot.						
Indicators	The number of characteristic species for Centra	al Hunter Box-Ironbark Woodland	d present are characteristic of the NSW Scientific	c Committee Final Determination	L			
Validation method	need to be evaluated over a number of years All native vascular plant species are recorded to	Before and after photos, statistically robust rehabilitation monitoring reports, independent ecological reports. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  All native vascular plant species are recorded to species level from fixed monitoring plots.  Monitoring undertaken in accordance with BAM.						
ROB0014638								
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3			
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation structure of the rehabilitation data) the target vegetation communities (Cen Committee Determination.		r is trending towards (based on ongoing monitoring and) as described by the NSW Scientific Final			
ROCC0002418								
Rehabilitation completion criteria	Within a standard 20 m x 20 m floristic sampling	g plot tree (TG) foliage cover is b	petween 10% and 70% AND grass (GG) and forb (F	FG) growth forms are present.				
Indicators	The growth forms present are consistent with, o	or are trending toward, those of t	the target vegetation types.					
Validation method	Before and after photos, rehabilitation monitorineed to be evaluated over a number of years  Monitoring undertaken in accordance with BAN		cal reports (where required). Depending on the na	ature, scale and risks associated	with a specific site, achievement of criteria may			
ROB0014540								
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3			
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as par materials.	t of the final land use is removed	I to ensure the site is safe and free of hazardous			
ROCC0002216								
Rehabilitation completion criteria	All utility infrastructure removed.							
Indicators	Removal of all services (power, water, communi	ications) that have been connect	red on the site as part of the operation.					
Validation method	Statement provided, independent field verificat	ion						
ROCC0002177								
Rehabilitation completion	Cores removed.							

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Indicators	All drill cores have been removed from site and either taken to authorised storage or disposal location.
Validation method	Statement provided, independent field verification, disposal/transfer receipts
ROCC0002164	
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably practicable to avoid exposure pathways to subsequent final land use.
Indicators	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.
Validation method	Statement provided, independent field verification. Surveyed and marked on the as-constructed final landform plan.
ROCC0002190	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.
Validation method	As-constructed final landform plan, photos, independent field verification, etc.
ROCC0002229	
Rehabilitation completion criteria	Infrastructure removed.
Indicators	Removal of all water management infrastructure (including pumps, pipes and power).
Validation method	Statement provided, independent field verification and before/after photos.
ROCC0002203	
Rehabilitation completion criteria	Permits and approval documents issued; archival reports (where required) complete and submitted.
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).
Validation method	Copy of any relevant approval documentation.
ROCC0002242	
Rehabilitation completion criteria	Sealing complete.
Indicators	Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards.
Validation method	Engineering report/statement, survey records, photos etc.
ROCC0002255	
Rehabilitation completion criteria	Sealing completed.  OR  Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use.

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Indicators	Surveying and sealing of all former underground mine entries.  OR						
maioatoro	Where sealing records are not available, risk assessment completed to define risk to final land use.						
Validation method	Engineering report/statement, risk assessment r	eport, survey records, photos et	C.				
ROB0014553							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3		
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of th	e final land use is safe.			
ROCC0002307							
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.						
Indicators	Water management infrastructure (dams, drains	, embankments, etc.) and access	tracks are suitable in size and condition for the po	ost mining land use and practica	ally minimised.		
Validation method	Copy of any relevant plans, photos etc.						
ROCC0002281							
Rehabilitation completion criteria	Hazards isolated and secured.						
Indicators	Potential hazards (e.g. electrical, mechanical) ha	ve been effectively isolated and	secured.				
Validation method	Statement provided.						
ROCC0002268							
Rehabilitation completion criteria	The location of the infrastructure has been mark	ed on a plan and registered with	the relevant local authority (e.g. local Council) and	d Dial Before You Dig.			
Indicators			o remain in situ, they do not pose a hazard for the in areas to be returned for Agriculture – grazing they		t constrain the final land use.		
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re-						
ROCC0002294							
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.						
Indicators	The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.						
Validation method	Engineering report/statement, photos etc.						
ROB0014566							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3		
Rehabilitation Objective	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land				
		j					

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Category			Environmental Planning and Assessment Act 197	79).			
ROCC0002320							
Rehabilitation completion criteria	Permits and approval documents issued						
Indicators	Where applicable, necessary approvals are in plause	ace (e.g. development consent un	der the Environmental Planning and Assessment A	Act 1979) where buildings and i	nfrastructure are to be retained as part of final land		
Validation method	Copy of any relevant approvals or evidence if ap	provals not required e.g. fencing					
ROB0014600							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Water Management Area	Spatial Reference	D3		
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff wat	ter quality or as predicted in pre-mining		
ROCC0002380							
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.						
Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.						
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.			
ROB0014528							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ty, environment and infrastruct	ture has been addressed as part of rehabilitation.		
ROCC0002152							
Rehabilitation completion criteria	Bushfire controls implemented.						
Indicators	Appropriate bushfire hazard controls (where req	uired) have been implemented or	n the advice from the NSW Rural Fire Service.				
Validation method	Independent verification report.						
ROB0014614							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pr	edicted in pre-mining environmental assessment.		
ROCC0002394							
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.						

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Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.						
Validation method	Further refinement of this rehabilitation complet	tion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved.			
ROB0014580							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site therm.	that is incompatible with the fi	nal land use or that poses a threat of environmental		
ROCC0002334							
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Leve	el of the National Environment	Protection (Assessment of Site Contamination)		
Indicators	Soil testing for contaminants of concern as liste required.	d by Health Investigation Level o	f the National Environment Protection (Assessme	ent of Site Contamination) Mea	asure (1999) applicable to land use type, where		
Validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)						
ROCC0002360							
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Leve	el of the National Environment	Protection (Assessment of Site Contamination)		
Indicators	Soil testing for contaminants of concern as liste required.	d by Health Investigation Level o	f the National Environment Protection (Assessme	ent of Site Contamination) Mea	asure (1999) applicable to land use type, where		
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit		redited Auditor (where required)				
ROCC0002347							
Rehabilitation completion criteria	There are no visible signs of contamination						
Indicators	Waste material and/or visible contamination area	as on site					
Validation method	Statement provided and before/after photos						
ROB0014515							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not prese to the public/ stock/ native fauna.	ent a risk of environmental har	m downstream/ downslope of the site or a safety risk		
ROCC0002139							
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high risk landforms.						
Indicators	Further refinement of this rehabilitation complete	tion criteria is required before an	amended rehabilitation completion criteria state	ment can be approved for high	n risk landforms.		

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criteria

Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria	statement can be approved for high r	risk landforms.		
ROCC0002126							
Rehabilitation completion criteria	Visual- minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.						
Indicators	Visual - indicators that surface water manageme Measured - Survey of rehabilitated landform to v	Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.  Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.					
Validation method	Before and after photos, rehabilitation monitoring indicate long-term stability of rehabilitated landf Depending on the nature, scale and risks associate.	orm.			osion modelling reports (where required) that		
ROB0014630							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e encapsulated so it does not pose any haza				
ROCC0002410							
Rehabilitation completion criteria	Visual – verification that capping, type and place Visual – no signs of impacts on final land use due Survey - no significant areas of high temperature Survey - coarse rejects and hot material is a mini	e to residual wate materials indic e that impacts vegetation health	ated by vegetation health				
Indicators	Visual – capping material placement, type across Visual – indication of residual waste impacting or Survey - targeted thermal scanning of surface for Survey - survey plans show depth of coarse reject	n final land use – vegetation heal or indications of spontaneous cor	mbustion based on visual indicators				
Validation method	Photos, rehabilitation monitoring reports, as cons (where required), groundwater/surface water mo		outputs, survey records and plans, quality a	assurance records for construction, e	rosion surveys, independent geotechnical reports		
ROB0014643							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	Levels of ecosystem function have been e	established that demonstrate the reha	abilitation offset area is self-sustainable.		
ROCC0002423							
Rehabilitation completion	Cover of 'high threat exotic' (HTE) species is ≤ 90	Oth percentile of values observed	d at suitable reference sites1.				

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1 Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed

Indicators

	infestation, grazing, fire, erosion, dieback or disea	ase, is absent or minimal in natur	re. Published information may also be used, wher	e appropriate.			
Indicators	Cover of exotic species within 20m x 20m fixed n	nonitoring plots is low					
Validation method		Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that demonstrate long term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  Monitoring undertaken in accordance with BAM.					
ROCC0002432							
Rehabilitation completion criteria	Further refinement of this rehabilitation completing health and resilience indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved. Additional ecosystem function criteria are required for soil nealth and resilience indicators					
Indicators	Further refinement of this rehabilitation completing health and resilience indicators	on criteria is required before an	amended rehabilitation completion criteria state	ment can be approved. Addition	al ecosystem function criteria are required for soil		
Validation method	Further refinement of this rehabilitation completing health and resilience indicators	on criteria is required before an	amended rehabilitation completion criteria state	ment can be approved. Addition	al ecosystem function criteria are required for soil		
ROCC0002426							
Rehabilitation completion criteria	1 - Suitable reference sites are those that represe	Litter cover is between the 10th and 90th percentile of values from suitable reference sites1, or an ongoing trend toward this target range is observed.  1 - Suitable reference sites are those that represent good quality and mature examples of the target community, where evidence of disturbance or modification, including vegetation clearing, timber harvesting, weed infestation, grazing, fire, erosion, dieback or disease, is absent or minimal in nature. Published information may also be used, where appropriate.					
Indicators	Indicators of nutrient cycling are suitable for sus	taining the target vegetation co	mmunity				
Validation method	Rehabilitation monitoring reports, independent so achievement of criteria may need to be evaluated Monitoring undertaken in accordance with BAM.		demonstrate long term function of rehabilitated	landform. Depending on the nat	ure, scale and risks associated with a specific site,		
ROCC0002429							
Rehabilitation completion criteria	The number of second generation trees are ≥10th 1 Suitable reference sites are those that represer infestation, grazing, fire, erosion, dieback or disease	nt good quality and mature exan	nples of the target community, where evidence o		cluding vegetation clearing, timber harvesting, weed		
Indicators	Evidence of plant regeneration from 20m x 20m ı	monitoring plots or a walk over o	of the ecological rehabilitation area				
Validation method	Before and after photos, rehabilitation monitoring associated with a specific site, achievement of cr Monitoring undertaken in accordance with BAM a	iteria may need to be evaluated	over a number of years	g term stability of rehabilitated l	andform. Depending on the nature, scale and risks		
ROB0014635							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation composition of the rehabilitation Box-Ironbark Woodland) as described by the N		the target vegetation communities (Central Hunter Determination.		
ROCC0002415							
Rehabilitation completion criteria	A minimum of 10 of the 38 characteristic flora sp floristic sampling plot.	ecies contained in the Central H	lunter Grey Box – Ironbark Woodland Final Deteri	mination (NSW Scientific Comm	ittee 2010) is present in a standard 20 m x 20 m		

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The number of characteristic species for Central Hunter Box-Ironbark Woodland present are characteristic of the NSW Scientific Committee Final Determination.

Validation method	Before and after photos, statistically robust rehabilitation monitoring reports, independent ecological reports. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  All native vascular plant species are recorded to species level from fixed monitoring plots.  Monitoring undertaken in accordance with BAM.						
ROB0014636							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation composition of the rehabilitation Ironbark - Spotted Gum Woodland) as described		the target vegetation communities (Narrow-leaved Committee Determination.		
ROCC0002416							
Rehabilitation completion criteria	A minimum of 11 of the 44 characteristic flora sp x 20 m floristic sampling plot.	ecies contained in the Central H	unter Ironbark – Spotted Gum – Grey Box Forest F	inal Determination (NSW Scien	ntific Committee 2010b) is present in a standard 20 m		
Indicators	The number of characteristic species for Narrow	ı-leaved Ironbark - Spotted Gum	Forest present is assessed against the NSW Scier	ntific Committee Final Determi	nation.		
Validation method	Before and after photos, statistically robust rehabilitation monitoring reports, independent ecological reports. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years  All native vascular plant species are recorded to species level from fixed monitoring plots.  Monitoring undertaken in accordance with BAM.						
ROB0014639							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective	The vegetation structure of the rehabilitation of data) the target vegetation communities (Centra Committee Determination.		r is trending towards (based on ongoing monitoring and) as described by the NSW Scientific Final		
ROCC0002419							
Rehabilitation completion criteria	Within a standard 20 m x 20 m floristic sampling	plot tree (TG) foliage cover is be	etween 10% and 70% AND grass (GG) and forb (FG	) growth forms are present.			
Indicators	The growth forms present are consistent with, or	r are trending toward, those of the	ne target vegetation types.				
Validation method	Before and after photos, rehabilitation monitorin need to be evaluated over a number of years Monitoring undertaken in accordance with BAM.		al reports (where required). Depending on the natu	ıre, scale and risks associated	with a specific site, achievement of criteria may		
ROB0014640							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Native revegetation	Rehabilitation Objective			r is trending towards (based on ongoing monitoring um Woodland) as described by the NSW Scientific		
ROCC0002420							
Rehabilitation completion	Within a standard 20 m x 20 m floristic sampling plot tree (TG) foliage cover is between 10% and 70% AND grass (GG) and forb (FG) growth forms are present.						

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criteria						
Indicators	The growth forms present are consistent with, or are trending toward, those of the target vegetation types.					
Validation method	Before and after photos, rehabilitation monitorineed to be evaluated over a number of years  Monitoring undertaken in accordance with BAN		ical reports (where required). Depending on tl	he nature, scale and risks associated	d with a specific site, achievement of criteria may	
ROB0014541						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4	
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used a materials.	s part of the final land use is remove	ed to ensure the site is safe and free of hazardous	
ROCC0002217						
Rehabilitation completion criteria	All utility infrastructure removed.					
Indicators	Removal of all services (power, water, commun	cations) that have been connec	ted on the site as part of the operation.			
Validation method	Statement provided, independent field verificat	ion				
ROCC0002178						
Rehabilitation completion criteria	Cores removed.					
Indicators	All drill cores have been removed from site and	either taken to authorised stora	age or disposal location.			
Validation method	Statement provided, independent field verificat	ion, disposal/transfer receipts				
ROCC0002165						
Rehabilitation completion criteria	Footings removed to a depth as far as reasonal	ly practicable to avoid exposure	e pathways to subsequent final land use.			
Indicators	Removal of all footings or encapsulation of foo	ings compatible with final landf	form/land use objectives.			
Validation method	Statement provided, independent field verificat	ion. Surveyed and marked on th	e as-constructed final landform plan.			
ROCC0002191						
Rehabilitation completion criteria	Infrastructure removed.					
Indicators	All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.					
Validation method	As-constructed final landform plan, photos, ind	ependent field verification, etc.				
ROCC0002230						
Rehabilitation completion criteria	Infrastructure removed.					

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Indicators	Removal of all water management infrastructure	e (including pumps, pipes and po	wer).				
Validation method	Statement provided, independent field verification	on and before/after photos.					
ROCC0002204							
Rehabilitation completion criteria	Permits and approval documents issued; archiva	Permits and approval documents issued; archival reports (where required) complete and submitted.					
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).						
Validation method	Copy of any relevant approval documentation.						
ROCC0002243							
Rehabilitation completion criteria	Sealing complete.						
Indicators	Surveying and sealing of all drill holes and bore	noles (where locatable) in accord	dance with departmental guidelines and relevant s	standards.			
Validation method	Engineering report/statement, survey records, photos etc.						
ROCC0002256							
Rehabilitation completion criteria	Sealing completed. OR Where sealing records are unavailable, risk asse	ssment shows acceptable residu	ual risk remains to final land use.				
Indicators	Surveying and sealing of all former underground OR Where sealing records are not available, risk ass		sk to final land use.				
Validation method	Engineering report/statement, risk assessment r	eport, survey records, photos et	C.				
ROB0014554							
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4		
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the	he final land use is safe.			
ROCC0002308							
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.						
Indicators	Water management infrastructure (dams, drains, embankments, etc.) and access tracks are suitable in size and condition for the post mining land use and practically minimised.						
Validation method	Copy of any relevant plans, photos etc.						
ROCC0002282							
Rehabilitation completion criteria	Hazards isolated and secured.						
Indicators	Potential hazards (e.g. electrical, mechanical) ha	ve been effectively isolated and	secured.				

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Validation method	Statement provided.					
ROCC0002269						
Rehabilitation completion criteria	The location of the infrastructure has been marke	ed on a plan and registered with	the relevant local authority (e.g. local Council) an	d Dial Before You Dig.		
Indicators	If any underground pipelines or other infrastructu Note: If any underground pipelines or other infras				t constrain the final land use.	
Validation method	Surveyed and marked on the as-constructed fina Copy of notification to or correspondence with re					
ROCC0002295						
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.					
Indicators	The structural integrity of the infrastructure is su	itable and safe for use as part o	f the intended final land use.			
Validation method	Engineering report/statement, photos etc.					
ROB0014567						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4	
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 19		re in place (e.g. development consent under the	
ROCC0002321						
Rehabilitation completion criteria	Permits and approval documents issued					
Indicators	Where applicable, necessary approvals are in plause	ce (e.g. development consent ur	nder the Environmental Planning and Assessment	Act 1979) where buildings and i	nfrastructure are to be retained as part of final land	
Validation method	Copy of any relevant approvals or evidence if app	provals not required e.g. fencing				
ROB0014601						
Final Land Use Domain	Rehabilitation Biodiversity Offset Area	Mining Domain	Overburden Emplacement Area	Spatial Reference	D4	
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than environmental assessments.	, the pre-disturbance runoff wat	ter quality or as predicted in pre-mining	
ROCC0002381						
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.					
Indicators	Further refinement of this rehabilitation completi	on criteria is required before an	amended rehabilitation completion criteria stater	nent can be approved.		
Validation method	Further refinement of this rehabilitation completi	on criteria is required before an	amended rehabilitation completion criteria stater	nent can be approved.		

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ROB0014529					
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the communi	ty, environment and infrastruct	ure has been addressed as part of rehabilitation.
ROCC0002153					
Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators	Appropriate bushfire hazard controls (where req	uired) have been implemented or	n the advice from the NSW Rural Fire Service.		
Validation method	Independent verification report.				
ROB0014615					
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pre	edicted in pre-mining environmental assessment.
ROCC0002395					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved.	
ROB0014581					
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site th harm.	at is incompatible with the final	l land use or that poses a threat of environmental
ROCC0002335					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)
Indicators	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, where required.				
Validation method	Contamination Remediation Report prepared by Land Contamination Consultant Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required)				
ROCC0002361					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Level	of the National Environment Pro	otection (Assessment of Site Contamination)

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Rehabilitation Objective

Management of waste and process materials

Indicators	Soil testing for contaminants of concern as listed required.	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, where required.				
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S					
ROCC0002348						
Rehabilitation completion criteria	There are no visible signs of contamination					
Indicators	Waste material and/or visible contamination area	as on site				
Validation method	Statement provided and before/after photos					
ROB0014516						
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3	
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not pres to the public/ stock/ native fauna.	sent a risk of environmental harm de	ownstream/ downslope of the site or a safety risk	
ROCC0002140						
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before a	n amended rehabilitation completion criteria stat	tement can be approved for high ris	k landforms.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before a	n amended rehabilitation completion criteria stat	tement can be approved for high ris	k landforms.	
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before ar	n amended rehabilitation completion criteria stat	tement can be approved for high ris	k landforms.	
ROCC0002127						
Rehabilitation completion criteria	Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.					
Indicators	Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.  Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.					
Validation method	Before and after photos, rehabilitation monitoring reports, as constructed surveys, erosion surveys, independent geotechnical reports (where required) and or erosion modelling reports (where required) that indicate long-term stability of rehabilitated landform.  Depending on the nature, scale and risks associated with a specific site, stability will need to be evaluated over a number of years (e.g. 5 years).					
ROB0014631						
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3	

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Residual waste materials stored on site (e.g. tailings, coarse rejects and other wastes) will be appropriately contained /

Rehabilitation Objective

Category			encapsulated so it does not pose any hazards o	r constraints for intended land	use.
ROCC0002411					
Rehabilitation completion criteria	Visual – verification that capping, type and place Visual – no signs of impacts on final land use due Survey - no significant areas of high temperature Survey - coarse rejects and hot material is a mini	e to residual wate materials indic e that impacts vegetation health	eated by vegetation health		
Indicators	Visual – capping material placement, type across Visual – indication of residual waste impacting or Survey - targeted thermal scanning of surface for Survey - survey plans show depth of coarse reject	n final land use – vegetation hea or indications of spontaneous cor	mbustion based on visual indicators		
Validation method	Photos, rehabilitation monitoring reports, as cons (where required), groundwater/surface water mo		outputs, survey records and plans, quality assura	ance records for construction, e	rosion surveys, independent geotechnical reports
ROB0014542					
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as part materials.	of the final land use is removed	to ensure the site is safe and free of hazardous
ROCC0002218					
Rehabilitation completion criteria	All utility infrastructure removed.				
Indicators	Removal of all services (power, water, communic	cations) that have been connecte	d on the site as part of the operation.		
Validation method	Statement provided, independent field verification	on			
ROCC0002179					
Rehabilitation completion criteria	Cores removed.				
Indicators	All drill cores have been removed from site and e	either taken to authorised storag	e or disposal location.		
Validation method	Statement provided, independent field verification	on, disposal/transfer receipts			
ROCC0002166					
Rehabilitation completion criteria	Footings removed to a depth as far as reasonably	y practicable to avoid exposure p	pathways to subsequent final land use.		
Indicators	Removal of all footings or encapsulation of footings compatible with final landform/land use objectives.				
Validation method	Statement provided, independent field verification	on. Surveyed and marked on the	as-constructed final landform plan.		
ROCC0002192					
Rehabilitation completion criteria	Infrastructure removed.				

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ROCC0002309

criteria

Rehabilitation completion

Any required Repairs or Upgrades complete.

Indicators			s, stockpile areas, rail infrastructure and loading fa f in accordance with Waste Management Regulati		oon storage tanks, office complex, portable offices,
Validation method	As-constructed final landform plan, photos, indep	pendent field verification, etc.			
ROCC0002231					
Rehabilitation completion criteria	Infrastructure removed.				
Indicators	Removal of all water management infrastructure	e (including pumps, pipes and po	wer).		
Validation method	Statement provided, independent field verification	on and before/after photos.			
ROCC0002205					
Rehabilitation completion criteria	Permits and approval documents issued; archival	l reports (where required) compl	ete and submitted.		
Indicators	Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).				
Validation method	Copy of any relevant approval documentation.				
ROCC0002244					
Rehabilitation completion criteria	Sealing complete.				
Indicators	Surveying and sealing of all drill holes and boreh	noles (where locatable) in accord	ance with departmental guidelines and relevant s	tandards.	
Validation method	Engineering report/statement, survey records, ph	notos etc.			
ROCC0002257					
Rehabilitation completion criteria	Sealing completed.  OR  Where sealing records are unavailable, risk assess	ssment shows acceptable residu	al risk remains to final land use.		
Indicators	Surveying and sealing of all former underground mine entries.  OR  Where sealing records are not available, risk assessment completed to define risk to final land use.				
Validation method	Engineering report/statement, risk assessment re	eport, survey records, photos etc	O.		
ROB0014555					
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of th	ne final land use is safe.	

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Category	Water approvals	Rehabilitation Objective	Structures that take water are appropriately lic	censea.		
Rehabilitation Objective						
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3	
ROB0014617						
Validation method	Copy of any relevant approvals or evidence if ap	provals not required e.g. fencing	3			
Indicators	Where applicable, necessary approvals are in pla	ace (e.g. development consent u	nder the Environmental Planning and Assessment	Act 1979) where buildings and i	nfrastructure are to be retained as part of final land	
Rehabilitation completion criteria	Permits and approval documents issued					
ROCC0002322						
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final land Environmental Planning and Assessment Act 19		re in place (e.g. development consent under the	
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3	
ROB0014568						
Validation method	Engineering report/statement, photos etc.					
Indicators	The structural integrity of the infrastructure is s	uitable and safe for use as part o	of the intended final land use.			
Rehabilitation completion criteria	The structural integrity of the infrastructure has	been inspected by a suitably qu	ualified engineer and determined to be safe for the	e intended final land use.		
ROCC0002296						
Validation method	Surveyed and marked on the as-constructed final Copy of notification to or correspondence with re-					
Indicators			o remain in situ, they do not pose a hazard for the i areas to be returned for Agriculture – grazing the		t constrain the final land use.	
Rehabilitation completion criteria	The location of the infrastructure has been mark	ked on a plan and registered with	n the relevant local authority (e.g. local Council) an	nd Dial Before You Dig.		
ROCC0002270						
Validation method	Statement provided.					
Indicators	Potential hazards (e.g. electrical, mechanical) ha	ve been effectively isolated and	secured.			
Rehabilitation completion criteria	Hazards isolated and secured.					
ROCC0002283						
Validation method	Copy of any relevant plans, photos etc.	Copy of any relevant plans, photos etc.				
Indicators	Water management infrastructure (dams, drains	, embankments, etc.) and access	s tracks are suitable in size and condition for the p	ost mining land use and practica	ally minimised.	

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ROCC0002397					
Rehabilitation completion criteria	Adequate water allocations and associated licenses are held for all applicable structures.				
Indicators	Hydrological and hydro-geological assessments	are undertaken to determine wa	ter take at completion from the relevant water so	urces to confirm that sufficient	allocations are held.
Validation method	Copy of any relevant approvals or evidence if ap	provals not required. Confirmatic	on from relevant Government Agency (e.g. NRAR) t	that licences are held. Independ	dent water harvesting compliance assessment.
ROB0014602					
Final Land Use Domain	Water Storage (Excluding Final Void)	Mining Domain	Water Management Area	Spatial Reference	G3
Rehabilitation Objective Category	Water quality	Rehabilitation Objective	Runoff water quality is similar to, or better than, environmental assessments.	the pre-disturbance runoff wa	ter quality or as predicted in pre-mining
ROCC0002382					
Rehabilitation completion criteria	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
Validation method	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	
ROB0014530					
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5
Rehabilitation Objective Category	Bushfire	Rehabilitation Objective	The risk of bushfire and impacts to the commun	ity, environment and infrastruc	ture has been addressed as part of rehabilitation.
ROCC0002154					
Rehabilitation completion criteria	Bushfire controls implemented.				
Indicators	Appropriate bushfire hazard controls (where req	uired) have been implemented o	n the advice from the NSW Rural Fire Service.		
Validation method	Independent verification report.				
ROB0014616					
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5
Rehabilitation Objective Category	Groundwater	Rehabilitation Objective	Impacts to groundwater regime and groundwate	er quality are within range as pi	redicted in pre-mining environmental assessment.
ROCC0002396					
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				
Indicators	Further refinement of this rehabilitation complet	ion criteria is required before an	amended rehabilitation completion criteria statem	nent can be approved.	

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Validation method	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				
ROB0014582					
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5
Rehabilitation Objective Category	Land and water contamination	Rehabilitation Objective	There is no residual soil contamination on site harm.	that is incompatible with the fi	nal land use or that poses a threat of environmental
ROCC0002362					
Rehabilitation completion criteria	Contamination will be appropriately remediated Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Lev	vel of the National Environment	Protection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessm	nent of Site Contamination) Mea	asure (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		edited Auditor (where required)		
ROCC0002336					
Rehabilitation completion criteria	Contamination will be appropriately remediated : Measure (1999).	so that appropriate guidelines fo	r land use are met, e.g. Health Investigation Lev	vel of the National Environment	Protection (Assessment of Site Contamination)
Indicators	Soil testing for contaminants of concern as listed required.	d by Health Investigation Level o	f the National Environment Protection (Assessm	nent of Site Contamination) Mea	asure (1999) applicable to land use type, where
Validation method	Contamination Remediation Report prepared by Site Contamination Audit Report and Site Audit S		edited Auditor (where required)		
ROCC0002349					
Rehabilitation completion criteria	There are no visible signs of contamination				
Indicators	Waste material and/or visible contamination area	as on site			
Validation method	Statement provided and before/after photos				
ROB0014619					
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	Final voids size, depth and catchments are mi	nimised to the greatest extent p	oracticable.
ROCC0002399					
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				
Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				
Validation method	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.				

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ROB0014517						
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5	
Rehabilitation Objective Category	Landform stability	Rehabilitation Objective	The final landform is stable and does not presen to the public/ stock/ native fauna.	t a risk of environmental harm do	ownstream/ downslope of the site or a safety ris	
ROCC0002141						
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved for high risk landforms.					
Indicators	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved for high risl	k landforms.	
Validation method	Further refinement of this rehabilitation comple	tion criteria is required before an	amended rehabilitation completion criteria statem	ent can be approved for high risl	k landforms.	
ROCC0002128						
Rehabilitation completion criteria	Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.  Visual - no signs of land instability such as mass movement.  Visual - no areas of active gully erosion.  Visual - no evidence of tunnel erosion.  Visual - no evidence of active scour likely to compromise surface water management structure.  Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.  Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.					
Indicators	Visual - indicators of erosion and land instability.  Visual - indicators that surface water management structure are functioning as designed.  Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.  Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.					
Validation method	Before and after photos, rehabilitation monitoring reports, as constructed surveys, erosion surveys, independent geotechnical reports (where required) and or erosion modelling reports (where required) that indicate long-term stability of rehabilitated landform.  Depending on the nature, scale and risks associated with a specific site, stability will need to be evaluated over a number of years (e.g. 5 years).					

## ROB0014632

KOB0014032						
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5	
Rehabilitation Objective Category	Management of waste and process materials	Rehabilitation Objective	Residual waste materials stored on site (e.g. tailings, coarse rejects and other wastes) will be appropriately contained / encapsulated so it does not pose any hazards or constraints for intended land use.			
ROCC0002412						
Rehabilitation completion criteria	Visual – verification that capping, type and placement present acceptable residual risk to final land use Visual – no signs of impacts on final land use due to residual wate materials indicated by vegetation health Survey - no significant areas of high temperature that impacts vegetation health Survey - coarse rejects and hot material is a minimum of 5m below final landform surface (where records are available)					
Indicators	Visual – capping material placement, type across emplacement Visual – indication of residual waste impacting on final land use – vegetation health Survey - targeted thermal scanning of surface for indications of spontaneous combustion based on visual indicators Survey - survey plans show depth of coarse rejects, hot material and other wastes (where records are available)					

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Validation method	Photos, rehabilitation monitoring reports, as con- (where required), groundwater/surface water mo		outputs, survey records and plans, quality assur	rance records for construction,	erosion surveys, independent geotechnical reports	
ROB0014543						
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5	
Rehabilitation Objective Category	Removal of infrastructure	Rehabilitation Objective	All infrastructure that is not to be used as parmaterials.	t of the final land use is remove	ed to ensure the site is safe and free of hazardous	
ROCC0002219						
Rehabilitation completion criteria	All utility infrastructure removed.	ull utility infrastructure removed.				
Indicators	Removal of all services (power, water, communic	cations) that have been connecte	ed on the site as part of the operation.			
Validation method	Statement provided, independent field verification	on				
ROCC0002180						
Rehabilitation completion criteria	Cores removed.					
Indicators	All drill cores have been removed from site and e	either taken to authorised storag	ge or disposal location.			
Validation method	Statement provided, independent field verification	on, disposal/transfer receipts				
ROCC0002167						
Rehabilitation completion criteria	Footings removed to a depth as far as reasonabl	y practicable to avoid exposure	pathways to subsequent final land use.			
Indicators	Removal of all footings or encapsulation of footi	ngs compatible with final landfo	rm/land use objectives.			
Validation method	Statement provided, independent field verification	on. Surveyed and marked on the	as-constructed final landform plan.			
ROCC0002232						
Rehabilitation completion criteria	Infrastructure removed.					
Indicators	Removal of all water management infrastructure	e (including pumps, pipes and po	wer).			
Validation method	Statement provided, independent field verification	on and before/after photos.				
ROCC0002193						
Rehabilitation completion criteria	Infrastructure removed.					
Indicators		All plant, equipment and associated infrastructure including processing facilities, stockpile areas, rail infrastructure and loading facilities, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples, camp facilities, storage racks, samples are disposed of in accordance with Waste Management Regulations.				
Validation method	As-constructed final landform plan, photos, inde	As-constructed final landform plan, photos, independent field verification, etc.				
ROCC0002206						

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Rehabilitation completion Permits and approval documents issued; archival reports (where required) complete and submitted. criteria Heritage obligations (e.g. development consent under the Environmental Planning and Assessment Act 1979, approvals under the Heritage Act 1977, etc.) have been met (e.g. archival recording, building retention Indicators or building demolition with footings preserved). Validation method Copy of any relevant approval documentation. ROCC0002245 Rehabilitation completion Sealing complete. criteria Surveying and sealing of all drill holes and boreholes (where locatable) in accordance with departmental guidelines and relevant standards. Indicators Validation method Engineering report/statement, survey records, photos etc. ROCC0002258 Sealing completed. Rehabilitation completion OR criteria Where sealing records are unavailable, risk assessment shows acceptable residual risk remains to final land use. Surveying and sealing of all former underground mine entries. Indicators Where sealing records are not available, risk assessment completed to define risk to final land use. Validation method Engineering report/statement, risk assessment report, survey records, photos etc.

## ROB0014556

Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Any infrastructure that is to remain as part of the final land use is safe.		
ROCC0002310					

Category	
ROCC0002310	
Rehabilitation completion criteria	Any required Repairs or Upgrades complete.
Indicators	Water management infrastructure (dams, drains, embankments, etc.) and access tracks are suitable in size and condition for the post mining land use and practically minimised.
Validation method	Copy of any relevant plans, photos etc.
DUCCUU03304	

Rehabilitation completion criteria	Any required Repairs or Upgrades complete.
Indicators	Water management infrastructure (dams, drains, embankments, etc.) and access tracks are suitable in size and condition for the post mining land use and practically minimised.
Validation method	Copy of any relevant plans, photos etc.
ROCC0002284	
Rehabilitation completion criteria	Hazards isolated and secured.
Indicators	Potential hazards (e.g. electrical, mechanical) have been effectively isolated and secured.
Validation method	Statement provided.
ROCC0002271	
Rehabilitation completion	The location of the infrastructure has been marked on a plan and registered with the relevant local authority (e.g. local Council) and Dial Before You Dig.
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Category	Water quality	Rehabilitation Objective	Table 1 danted to difficult to, of bottof the	., p. o s.istanbando ranon wat		
Final Land Use Domain  Rehabilitation Objective	Final Void	Mining Domain	Active Mining Area (Open cut void)  Runoff water quality is similar to, or better tha	Spatial Reference	J5  Ter quality or as predicted in pre-mining	
ROB0014603	E: 177.1			0 1110 (	J.C.	
Validation method	Copy of any relevant approvals or evidence if approvals not required. Confirmation from relevant Government Agency (e.g. NRAR) that licences are held. Independent water harvesting compliance assessment.					
Indicators	Hydrological and hydro-geological assessments are undertaken to determine water take at completion from the relevant water sources to confirm that sufficient allocations are held.					
Rehabilitation completion criteria	Adequate water allocations and associated licenses are held for all applicable structures.					
ROCC0002398						
Rehabilitation Objective Category	Water approvals	Rehabilitation Objective	Structures that take water are appropriately licensed.			
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5	
ROB0014618						
Validation method	Copy of any relevant approvals or evidence if approvals not required e.g. fencing					
Indicators	Where applicable, 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					
Rehabilitation completion criteria	Permits and approval documents issued					
ROCC0002323						
Rehabilitation Objective Category	Retention of infrastructure	Rehabilitation Objective	Infrastructure to remain as part of the final lar Environmental Planning and Assessment Act 1		re in place (e.g. development consent under the	
Final Land Use Domain	Final Void	Mining Domain	Active Mining Area (Open cut void)	Spatial Reference	J5	
ROB0014569						
Validation method	Engineering report/statement, photos etc.					
Indicators	The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.					
Rehabilitation completion criteria	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be safe for the intended final land use.					
ROCC0002297						
Validation method	Surveyed and marked on the as-constructed final landform plan. Copy of notification to or correspondence with relevant authority					
Indicators	If any underground pipelines or other infrastructure (e.g. building footings) are to remain in situ, they do not pose a hazard for the intended final land use.  Note: If any underground pipelines or other infrastructure are to remain in situ in areas to be returned for Agriculture – grazing they are at a depth >0.5m and don't constrain the final land use.					
criteria						

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	environmental assessments.			
ROCC0002383				
Rehabilitation completion criteria	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.			
Indicators	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.			
Validation method	Further refinement of this rehabilitation completion criteria is required before an amended rehabilitation completion criteria statement can be approved.			

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