



**NSW
Resources
Regulator**

ARR0001015

LIDDELL COAL ANNUAL REHABILITATION REPORT

Saturday 1 January 2022 to Saturday 31 December 2022

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Summary table

DETAIL

Mine	Liddell Coal
Reference	ARR0001015
Annual report period commencement date	Saturday 1 January 2022
Annual report period end date	Saturday 31 December 2022
Forward program	FWP0001027
Mining leases	ML 1313 (1992), ML 1552 (1992), ML 1597 (1992), CCL 708 (1973)
Lease holder(s)	LIDDELL TENEMENTS PTY LIMITED
Contact	Sean Pigott
Date of submission	

Important

The department may make the information in your report and any supporting information available for inspection by members of the public, including by publication on its website or by displaying the information at any of its offices. If you consider any part of your report to be confidential, please communicate this to the department via the message function on this submission within the NSW Resources Regulator Portal.

Mine details

Project description

LCO is an established open-cut mine located at Ravensworth, approximately 25 kilometres north-west of Singleton in the Upper Hunter Valley of New South Wales. LCO is operated and managed by Liddell Coal Operations Pty Limited, a wholly owned subsidiary of Glencore Coal Pty Limited (Glencore), on behalf of a joint venture between Glencore (67.5%) and Mitsui Matsushima Australia (32.5%). LCO has the approval under DA 305-11-01 to produce 8 million tonnes per annum (Mtpa) run of mine (ROM) coal. Product coal, both semi-soft and thermal, is transported to the Port of Newcastle by rail to export. LCO also has approval to truck 0.5 Mtpa of reclaimed tailings to the local power stations.

Mining is undertaken in two open cut pits, known as South and Entrance Pits. Mining is planned to finish during Q3 2023 and LCO will enter into mine closure.

Life of mine

1 years

Current development consents, leases and licences

Development consents granted under the *Environmental Planning and Assessment Act 1979*

[Redacted]

Authorisations covering the mining area granted under the *Mining Act 1992*

ML 1313 (1992), ML 1552 (1992), ML 1597 (1992), CCL 708 (1973)

Any other approvals, licences, or authorities issued by government agencies that are relevant to the progress of mining operation and rehabilitation activities

EPL 2094

Summary of the scope and/or purpose of the new applications or modifications to existing approvals (if applicable)

No changes to approvals in 2022.

LCO submitted an application to modify DA 305-11-01 (known as MOD 8) during 2022. MOD 8 seeks the following:

- Disposal of tailings within the South Cut Void at LCO as part of LCO's rehabilitation activities until the end of 2050 (noting that there will be no change to the end date for mining operations at LCO);
 - Changes to the conceptual final landform for LCO to reflect the emplacement of tailings in the South Cut Void until the end of 2050;
 - Use of the Entrance Void at LCO as a water storage for the Greater Ravensworth Area Water and Tailings System (GRAWTS);
- MOD 8 has been exhibited and a Response to Submissions is being prepared. The approval of MOD 8 will impact on the final landform and rehabilitation proposed for the LCO final voids.

Changes to land ownership and land use

No changes in land ownership during 2022

Surface disturbance and rehabilitation activities during the reporting period

Surface disturbance and rehabilitation activities that were conducted and an analysis of the progress against the rehabilitation schedule

Surface disturbance - minor disturbance of previously rehabilitated areas surrounding Reservoir South TSF as part of capping works. No disturbance of previously undisturbed areas in 2022.

Rehabilitation - Liddell exceeded the planned 45ha of rehabilitation in 2022, due to rehabilitation of the Antiene TSF progressing faster than scheduled.

- Primary rehabilitation - 33ha of rehabilitation undertaken at the South Pit in 2022. The rehabilitation was completed in accordance with natural landform design and was seeded with Central Hunter Box Ironbark Woodland.

- TSF rehabilitation - 40.5ha of rehabilitation was completed as part of the Antiene TSF and Dam 4 rehabilitation project in 2022. These works included capping of tailings, construction of final landform in accordance with natural landform designs and seeding to meet the final land use of pasture agriculture. A small area was seeded with Central Hunter Box Ironbark Woodland to provide connectivity through this area.

Rehabilitation planning activities that were conducted, including any specialist studies

LCO coal extraction will cease in Q3 2023 and the site will transition into 'mine closure' with the continued rehabilitation of the site. A summary of mine closure planning themes which underwent continued assessment during 2022 included:

- Review of risks to rehabilitation and development of treatment plans
- Refinement of the final surface landform and rehabilitation completion criteria
- Tailings rehabilitation strategy
- Groundwater regime investigation and water balance for final landform and voids
- Final landform surface water management and creek stream health
- Borehole and underground mining
- Rail pillar stability assessment
- Socio-economic impact assessment
- Closure budget review

Overview of subsidence repair and/or remediation works undertaken

Nil in 2022

Overview of rehabilitation management and maintenance activities

LCO undertook the following management actions throughout 2022 within the rehabilitation areas:

- Ongoing maintenance of 2021 tube stock plots in various rehabilitation areas
- Erosion repairs in the South Cut rehabilitation
- Grazing of stock in South Cut rehabilitation areas
- Vegetation mulching – ground preparation in South Cut Woodland 17 ha for tube stock planting in

autumn 2023

- Control of a variety of weeds, including:
 - o galenia (*Galenia pubescens*)
 - o Rhodes grass (*Chloris gayana*)
 - o Coolatai grass (*Hyparrhenia hirta*)
 - o golden wattle (*Acacia saligna*)
 - o small cooba (*Acacia ligulata*)
 - o fireweed (*Senecio madagascariensis*)
 - o Pampas grass (*Cortaderia selloana*)
 - o other weed infestations as required.

Details of any rehabilitation actions taken as required by any letters, notices or directions issued by government agencies, including the NSW Resources Regulator

No letters or notices received in 2022

Details of any rehabilitation areas that have achieved the final land use

No areas of rehabilitation have received sign off as of 2022. Liddell is preparing a submission for rehabilitation completion for approx. 50 ha of pasture rehabilitation that will be submitted in 2023.

Key production milestones

MATERIAL	UNIT	FWP0001027 YEAR 1	THIS REPORT
Stripped topsoil <small>(if applicable)</small>	(m ³)	0	0
Rock/overburden	(m ³)	15,674,223	29,478,000
Ore	(Mt)	4,272,151	5.06
Reject material¹	(Mt)	1,553,690	1.56
Product	(Mt)	2,718,460	3.5

¹ This includes coarse rejects, tailings and any other wastes resulting from beneficiation.

Disturbance and rehabilitation statistics

Current disturbance and rehabilitation progression

ELEMENT	UNIT	FWP0001027 YEAR 1	THIS REPORT
A Total surface disturbance footprint	(ha)	1,643.13	1,643.13
B Total active disturbance	(ha)	686.87	621.52
C Land prepared for rehabilitation	(ha)	0	0
D Ecosystem and land use establishment	(ha)	1,001.43	1,021.6
E Ecosystem and land use development	(ha)	N/A	0
F Rehabilitation completion	(ha)	N/A	0

Rehabilitation key performance indicators (KPIs)

ELEMENT	UNIT	FWP0001027 YEAR 1	THIS REPORT
G Total new active disturbance area	(ha)		0
H New rehabilitation commenced during annual reporting period	(ha)		0
J Annual rehabilitation to disturbance ratio	%		0
I Established rehabilitation	(ha)	N/A	0
K Rehabilitated land to total mine footprint	%	N/A	0

Progressive achievement of established rehabilitation

ELEMENT	UNIT	THIS REPORT
L Established rehabilitation - agricultural final land uses	%	0
M Established rehabilitation - native ecosystem final land uses	%	0
N Established rehabilitation - other/non-vegetated final land uses	%	0

Variation to the rehabilitation schedule

Identify the components of the most recent forward program that were not achieved

N/A

Key factors that delayed progressive rehabilitation

N/A

Outline actions that will be included in the forward program and carried out to minimise disturbance and undertake progressive rehabilitation as far as reasonably practical

N/A

Rehabilitation monitoring and research findings

Rehabilitation monitoring

The rehabilitation monitoring carried out in the annual reporting period

Woodland monitoring - Most rehabilitation sites (LTM and Initial establishment Monitoring (IEM)) comprised generally healthy vegetation with new growth, indicating resilience to stochastic events, such as the previous drought conditions. The majority of IEM sites were assessed as performing well, being on a positive or neutral trajectory. One IEM site (South Cut Woodland 2019 Site 1) was assessed as being on a negative trajectory due to the extent of introduced species coverage and a low stem count. Although several areas have an appropriate or generally appropriate canopy species richness, few sites have the required stems per hectare. Most areas have low or very low native groundcover species richness.

Pasture areas - Pasture in areas that had been subject to grazing and over sowing generally showed a higher diversity and higher proportion of pasture species, particularly legume species. These pastures generally had a higher feed quality due to the improved pasture composition and higher proportion of green growth. Pasture sites that were established prior to the revised seed mix (2013) that have not been managed through grazing and over sowing generally had a high biomass and low diversity.

Walkover inspection - only a small number of minor areas of erosion were identified during the annual walkover. A number of problematic weed species were recorded during the inspection.

Status of performance against rehabilitation objectives and rehabilitation completion criteria

The monitoring program that has been implemented

To track changes to values at the monitoring sites, the 2022 LTM results have been compared to their relevant performance indicators and proposed completion criteria (as detailed in the RMP). This assists in identifying where management actions have been successful and where they may require review.

Are all rehabilitation areas in Landform Establishment phase or higher represented in the monitoring program to assess performance against the rehabilitation objectives and approved or, if not yet approved rehabilitation completion criteria and final landform and rehabilitation plan?

NO

Year rehabilitation areas will be included as part of the monitoring program

N/A

An appraisal of whether rehabilitation is moving towards achieving the proposed rehabilitation objectives, approved or, if not yet approved, rehabilitation completion criteria and final landform and rehabilitation plan as soon as reasonably practicable.

The 2023 annual rehabilitation monitoring found the generally, rehabilitation sites of both pasture and woodland are on the correct trajectory for meeting completion criteria. LCO are planning to submit a rehabilitation completion application to certify approximately 50 hectares of pasture rehabilitation in 2023.

Appraisal description

Rehabilitation is moving towards achieving the final land use as soon as reasonably practicable.

Rehabilitation monitoring program findings

LCO undertakes monitoring at a number of reference sites for both pasture and woodland rehabilitation. The sites have been selected to reflect the targeted final land uses for the rehabilitation at LCO, namely pasture and targeted woodland ecosystems. The rehabilitation monitoring program combines walk over inspection and floristic plot analysis. Plot based floristic monitoring is decomposed into two distinct monitoring methods to target parameters appropriate to the age of vegetation and summarised as, Long Term Monitoring (LTM) and Initial Establishment Monitoring (IEM).

In 2023, most rehabilitation sites (LTM and IEM) comprised generally healthy vegetation with new growth, indicating resilience to stochastic events, such as the previous drought conditions. The majority of IEM sites were assessed as performing well, being on a positive or neutral trajectory.

Performance issues and their causes including identification of any knowledge gaps that must be addressed

Weed diversity and abundance is high, despite targeted control efforts by LCO throughout 2022. Climatic conditions likely resulted in rapid weed growth, given that moisture was highly available in the atmosphere, and these are often the first species to colonise and spread seed. Ongoing targeted weed control will continue in 2023.

Minor areas of erosion will be remediated in 2023.

Outcomes of rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	UPDATEDDATE OF COMPLETION	STATUS	ON TRACK?	ON TRACK UPDATE
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ARR000101

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Outcomes of completed trials and research

N/A

Attachment 1 – Reporting Definitions

REPORTING CATEGORY		DEFINITION
A1	Total disturbance footprint – surface disturbance	<p>All areas within a mining lease that either have at some point in time or continue to pose a rehabilitation liability due to surface disturbance activities.</p> <p>The total disturbance footprint is the sum of the total active disturbance, decommissioning, landform establishment, growth medium development, ecosystem and land use establishment, ecosystem and land use development and rehabilitation completion (see definitions below).</p> <p>Underground mining operations should not include the footprint of underground mining areas/subsidence management areas in the total disturbance footprint.</p>
A2	Underground Mining Area	Underground mining operations areas/subsidence management areas.
B	Total active disturbance	Includes on-lease exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste rock emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped) and temporary stabilised areas (e.g. areas sown with temporary cover crops for dust mitigation and temporary rehabilitation).
C	Rehabilitation – land preparation	<p>Includes the sum of all disturbed land within a mining lease that have commenced any, or all, of the following phases of rehabilitation– decommissioning, landform establishment and growth medium development.</p> <p>Refer to the glossary of terms in this document for the definition of these phases of rehabilitation.</p>

REPORTING CATEGORY	DEFINITION
<p>D Ecosystem and land use establishment</p>	<p>Includes the area which has been seeded/planted with the target vegetation species for the intended final land use. However, vegetation has not matured to a stage where it can be demonstrated that it will be sustainable for the long term and or require only a maintenance regime consistent with target reference/analogue sites.</p> <p>Typically, rehabilitation areas would be in this phase for at least two years (and usually more) before rehabilitation can be classified as being in the ecosystem and land use development phase. This phase does not apply to infrastructure areas that are being retained as part of final land use for the site.</p>
<p>E Ecosystem and Land Use Development</p>	<p>Rehabilitation has matured to a level where target revegetation outcomes are on a trajectory towards meeting the final rehabilitation objectives and rehabilitation completion criteria (as verified by monitoring).</p> <p>This phase includes infrastructure areas that are to be retained for an approved post mining land use, following completion of all necessary measures to render the infrastructure fit for this purpose (for example structural integrity).</p>
<p>F Rehabilitation Completion</p>	<p>The NSW Resources Regulator has determined in writing that the mining area has achieved the approved rehabilitation objectives and approved rehabilitation completion criteria and final landform and rehabilitation plan following the submission of <i>Form: ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate and/or notification of mine or petroleum site closure</i>.</p>
<p>G New active disturbance area</p>	<p>The area of any new active disturbance that has been created during the annual reporting period (definition A1 in Table 5).</p>
<p>H New rehabilitation commenced during annual reporting period</p>	<p>The sum of any new rehabilitation commenced in the annual reporting period. These areas may be in the rehabilitation land preparation phase or the ecosystem & land use establishment phase (definitions C and D in Table 5).</p>
<p>I Established rehabilitation (hectares)</p>	<p>The total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5).</p>

REPORTING CATEGORY	DEFINITION
<p>J Annual rehabilitation to disturbance ratio</p>	<p>The rehabilitation to disturbance ratio (H/G) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the year. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that year are the same.</p>
<p>K % Rehabilitated land to total mine footprint</p>	<p>The proportion of the total mine footprint (area of land that has been disturbed by past or present surface disturbance activities) that has established rehabilitation ($I/A1 \times 100$). For open cut mining, the proportion of the total mine footprint verified to be “established rehabilitation” should substantially increase as an operation progresses towards mine closure.</p>
<p>L Established rehabilitation for agricultural final land uses (hectares)</p>	<p>The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5) that have been returned to an agricultural final land use.</p>
<p>M Established rehabilitation for native ecosystem final land uses (hectares)</p>	<p>The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or rehabilitation completion phase (definitions E & F in Table 5) that have been returned to native ecosystem final land use.</p>
<p>N Established rehabilitation for other/non-vegetated final land uses (hectares)</p>	<p>The percentage of total area of land that is verified to be within either the ecosystem and land use development phase or the rehabilitation completion phase (definitions E & F in Table 5) that have been returned to other/non-vegetated final land use.</p>

Attachment 2 – Definitions

WORD	DEFINITION
Active	In the context of rehabilitation, land associated with mining domains is considered ‘active’ for the period following disturbance until the commencement of rehabilitation.
Active mining phase of rehabilitation	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Analogue site	In the context of rehabilitation, an analogue site is a ‘reference site’ that represents an example of the defining characteristics (such as vegetation composition and structure or agricultural productivity) of the final land use. Characteristics of analogue sites can be assessed to develop the rehabilitation objectives and completion criteria for final land use domains.
Annual rehabilitation report and forward program	As described in the Mining Regulation 2016.
Annual reporting period	As defined in the Mining Regulation 2016.
Closure	A whole-of-mine-life process, which typically culminates in the relinquishment of the mining lease. It includes decommissioning and rehabilitation to achieve the approved final land use(s).
Decommissioning	The process of removing mining infrastructure and removing contaminants and hazardous materials.
Decommissioning Phase of Rehabilitation	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or ‘fit for purpose’ built infrastructure to be retained for future use(s) following lease relinquishment.

WORD	DEFINITION
Department	The Department of Regional NSW.
Disturbance	See Surface Disturbance.
Disturbance area	<p>An area that has been disturbed and that requires rehabilitation.</p> <p>This may include areas such as on-licence exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (i.e. managed to minimise dust generation and/or erosion).</p>
Domain	<p>An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.</p>
Ecosystem and Land Use Development	<p>This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved rehabilitation objectives and completion criteria.</p> <p>For vegetated land uses this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, and increasing habitat complexity, and development of a productive, self-sustaining soil profile.</p> <p>This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.</p>
Ecosystem and Land Use Establishment	<p>This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform.</p> <p>For vegetated land uses this rehabilitation phase includes establishing the desired vegetation community and implementing land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.</p>
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

WORD	DEFINITION
Final landform and rehabilitation plan	As defined in the Mining Regulation 2016.
Final land use	As defined in the Mining Regulation 2016.
Form and way	Means the form and way approved by the Secretary. Approved form and way documents are available on the Department's website.
Growth Medium Development	<p>This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short lived pioneer species).</p> <p>This phase may include spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.</p>
Habitat	Has the same meaning as that term under the <i>Biodiversity Conservation Act 2016</i> and the <i>Fisheries Management Act 1994</i> (as relevant).
Indicator	An attribute of the biophysical environment (e.g. pH, topsoil depth, biomass) that can be used to approximate the progression of a biophysical process. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion (i.e. defined end point). It may be aligned to an established protocol and used to evaluate changes in a system.
Land	As defined in the <i>Mining Act 1992</i> .
Landform Establishment	<p>This phase of rehabilitation consists of the processes and activities required to construct the final landform.</p> <p>In addition to profiling the surface of rehabilitation areas to the approved final landform profile this phase may include works to construct surface water drainage features, encapsulate problematic materials such as tailings, and prepare a substrate with the desired physical and chemical characteristics (e.g. rock raking or ameliorating sodic materials).</p>
Large mine	As defined in the Mining Regulation 2016.
Lease holder	The holder of a mining lease.

WORD	DEFINITION
Life of mine	The timeframe of how long a mine is approved to mine, from commencement to closure.
Mine rehabilitation portal	<p>Means the NSW Resources Regulator’s online portal that lease holders must use (via a registered account) to:</p> <ul style="list-style-type: none"> ■ upload rehabilitation geographical information system (GIS) spatial data ■ develop rehabilitation GIS spatial data (using online tracing functions) ■ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities. <p>Data submitted to the mine rehabilitation portal is collated in a centralised geodatabase for use by the NSW Resources Regulator to regulate rehabilitation performance of lease holders.</p>
Mining area	As defined in the <i>Mining Act 1992</i> .
Mining domain	A land management unit with a discrete operational function (e.g. overburden emplacement), and therefore similar geophysical characteristics, that will require specific rehabilitation treatments to achieve the final land use(s).
Mining land	As defined in the <i>Mining Act 1992</i> .
Native vegetation	Has the same meaning as that term under section 60B of the <i>Local Land Services Act 2013</i> .
Overburden	Material overlying coal or a mineral deposit.
Performance indicator	An attribute of the biophysical environment (for example pH, slope, topsoil depth, biomass) that can be used to demonstrate achievement of a rehabilitation objective. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion, that is, a defined end point. It may be aligned to an established protocol and used to evaluate changes in a system.

WORD	DEFINITION
Phases of rehabilitation	<p>The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are:</p> <ul style="list-style-type: none"> ■ active mining ■ decommissioning ■ landform Establishment ■ growth medium development ■ ecosystem and land use establishment ■ ecosystem and land use development.
Progressive rehabilitation	<p>The progress of rehabilitation towards achieving the approved rehabilitation completion criteria. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.</p>
Rehabilitation Completion	<p>The final phase of rehabilitation when a rehabilitation area has achieved the approved rehabilitation objectives and rehabilitation completion criteria for the final land use. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined in writing that the relevant rehabilitation obligations have been fulfilled following submission of <i>Form ESF2 Rehabilitation completion and/or review of rehabilitation cost estimate</i> application by the lease holder.</p>
Rehabilitation Completion criteria	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation cost estimate	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation management plan	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation objectives	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation risk assessment	<p>As defined in the Mining Regulation 2016.</p>
Rehabilitation schedule	<p>The defined timeframes for progressive rehabilitation set out in the forward program.</p>

WORD	DEFINITION
Relevant stakeholders	Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: <ul style="list-style-type: none"> ■ the relevant development consent authority ■ the local council ■ the relevant landholder(s) ■ community consultative committee (if required under the development consent) or equivalent consultative group ■ affected land holder(s) ■ government agencies relevant to the final land use ■ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities) ■ local Aboriginal communities, and ■ any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.
Risk	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
Secretary	The Secretary of the Department.
Security deposit	An amount that a mining lease holder is required to provide and maintain under a mining lease condition, to secure funding for the fulfilment of obligations under the lease (including obligations that may arise in the future).
Surface disturbance	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
Tailings	A combination of the fine-grained solid material remaining after the recoverable metals and minerals have been extracted from the mined ore, and any process water ² .
Waste	Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .

² Commonwealth of Australia (DITR), 2007. *Tailings Management*.

Attachment 2 – Rehabilitation Complaints

DATE	COMPLAINANT	COMPLAINT DETAILS	RESPONSE DETAILS	STATUS OF RESPONSE	DATE RESPONSE COMPLETED (IF APPLICABLE)
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Attachment 3 – Stakeholder consultation

DATE	STAKEHOLDER	CONSULTATION ACTIVITIES AND FORMS	MATTERS SUBJECT TO CONSULTATION	ACTIONS TAKEN
21 Dec 2022	NSW Resources Regulator	Quarterly mine closure planning updated held online	Update on mine closure planning progress	Nil actions
18 May 2022	Liddell Community Consultative Committee	Biannual CCC meeting held onsite	Update on rehabilitation progress and closure planning	Nil actions
8 Jun 2022	NSW Resources Regulator	Quarterly closure planning update meeting held between LCO and NSW RR	Updates provided on status of closure planning and execution works	4 recommendations provided by RR on Mt Block monitoring, management of final surface on TSFs in terms on longer term management and removal of rocks from surface, closure planning for treatment / management of remnant highwalls / spon com and mine closure planning. All recommendations are being reviewed as part of the closure planning process.
13 Sep 2022	NSW Resources Regulator	Meeting on site, including site tour of rehabilitation areas and capping works.	Discussed the rehab processes implemented at Liddell, closure planning update and planned ESF2 application for pasture area	ESF2 application progressed
29 Nov 2022	Liddell Community Consultative Committee	Biannual CCC meeting held onsite	Update on rehabilitation and closure planning	Nil actions raised
14 Mar 2022	NSW Resources Regulator	Quarterly mine closure planning update	Discussion on Liddell mine closure planning and rehabilitation	Nil

Attachment 4 – Plans

Liddell ARR 2022 - Plan 1A.pdf

Liddell ARR 2022 - Plan 1Bs.zip

Annual Report (LARGE MINE) v1.3

Liddell Coal 2022 Annual Rehabilitation Report - Plan 1A



Legend

- Rehabilitation**
- Decommissioning
 - Landform Establishment
 - Growth Media Development
 - Ecosystem and Land Use Establishment
 - Ecosystem and Land Use Development
 - Relinquishment (Rehabilitated)
 - Rehabilitation Completion

- Disturbance**
- Beneficiation Facility
 - Infrastructure Area
 - Other
 - Overburden Emplacement Area
 - Tailings Storage Facility
 - Underground Mining Area (SMP)
 - Active Mining Area (Open cut void)
 - Water Management Area

- Project Approval Boundary
 - Mine Operations Area
- World Imagery**
- Low Resolution 15m Imagery
 - High Resolution 60cm Imagery
 - High Resolution 30cm Imagery
 - Citations

2,715.7 0 1,357.86 2,715.7 Meters

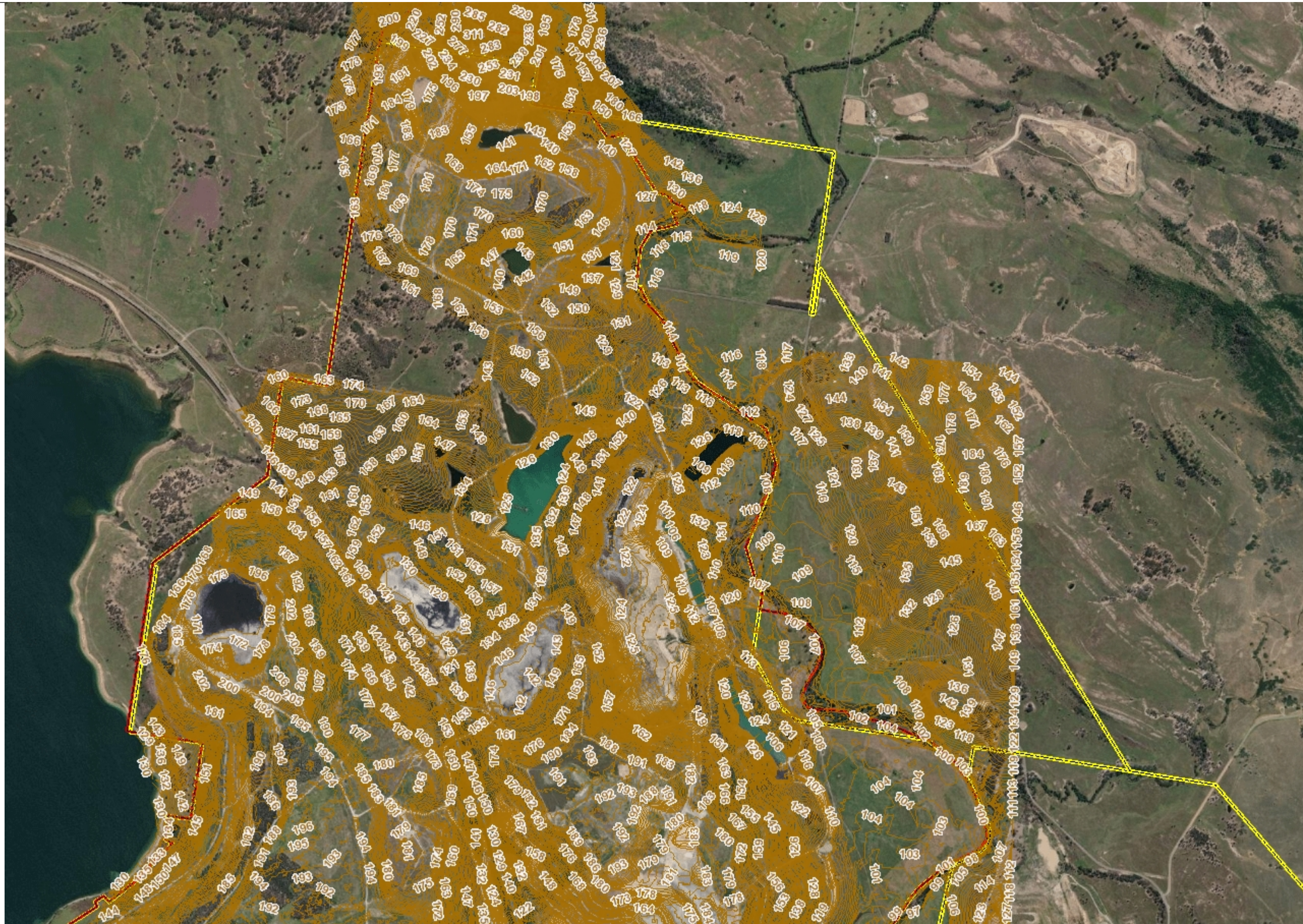
WGS_1984_Web_Mercator_Auxiliary_Sphere
© DRE

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Liddell Coal 2022 Annual Rehabilitation Report -Plan 1B (North)



- Legend**
- Current Landform Contours
 - Project Approval Boundary
 - Mine Operations Area
 - World Imagery
 - Low Resolution 15m Imagery
 - High Resolution 60cm Imagery
 - High Resolution 30cm Imagery
 - Citations

1,213.0 0 606.49 1,213.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere
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Notes

Liddell Coal 2022 Annual Rehabilitation Report -Plan 1B (South)



Legend

-  Current Landform Contours
-  Project Approval Boundary
-  Mine Operations Area
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

Notes

917.2 0 458.62 917.2 Meters

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