



**NSW  
Resources  
Regulator**

FWP0001015

# **APPIN COLLIERY FORWARD PROGRAM**

Tuesday 31 May 2022 to Friday 30 May 2025

# Contents

Summary.....	3
Important.....	3
Three-year forecast – surface disturbance activities.....	4
Project description.....	4
Description of surface disturbance activities.....	4
Three-year rehabilitation forecast.....	6
Rehabilitation planning schedule.....	6
Rehabilitation research and trials.....	8
Rehabilitation maintenance and corrective actions.....	8
Rehabilitation schedule.....	8
Subsidence remediation for underground operations.....	8
Progressive mining and rehabilitation statistics.....	9
Three-yearly forecast cumulative disturbance and rehabilitation progression.....	9
Rehabilitation key performance indicators (KPIs).....	9
Attachment 1 – Reporting Definitions.....	10
Attachment 2 – Definitions.....	12
Attachment 3 – Plans.....	18

## Summary

### DETAIL

<b>Mine</b>	Appin Colliery
<b>Reference</b>	FWP0001015
<b>Forward program commencement date</b>	Tuesday 31 May 2022
<b>Forward program end date</b>	Friday 30 May 2025
<b>Forward program revision (if applicable)</b>	
<b>Contact</b>	David Gregory
<b>Mining leases</b>	CL 388 (1973), MPL 200 (1973), ML 1473 (1992), MPL 201 (1973), ML 1433 (1992), CCL 767 (1973), ML 1382 (1992), ML 1574 (1992), CCL 724 (1973), CL 381 (1973), ML 1698 (1992), ML 1678 (1992)
<b>Project location</b>	Endeavour Coal Pty Ltd
<b>Date of submission</b>	Friday 29 July 2022

## Important

The department may make the information in your program 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 program to be confidential, please communicate this to the department via the message function on this submission within the NSW Resources Regulator Portal.

# Three-year forecast – surface disturbance activities

## Project description

Appin Mine consists of the merged Appin, Tower, and West Cliff collieries. Appin Mine is owned and operated by Endeavour Coal Pty Ltd, a subsidiary company of Illawarra Coal Holdings Pty Ltd, which is 100% owned by South32 Limited. Key areas associated with the current Appin operations include the Appin North Pit Top site, Appin West Pit Top site, the Appin East Pit Top site, the Appin East Ventilation Shaft 1/2 and 3 sites, the Appin West Ventilation Shaft 6 and Ventilation Shaft 7/8 (Appin Mine Ventilation and Access (AMVA) Project) sites, the Douglas North Substation site, the West Cliff Coal Preparation Plant (WCCCPP), the Coal Wash Emplacement Area (CWEA) and the North Cliff Mine site.

## Description of surface disturbance activities

### Exploration activities

Exploration is anticipated to occur in exploration titles EL4470 and A248 in addition to the mining title CCL 767. Exploration is also to occur in EL8972 (Western Exploration Area). Consultation will be undertaken with all potentially affected landholders during the planning and assessment of any proposed exploration activity in these areas. The proposed exploration will include (but is not limited to):

- Exploration drilling (i.e. slim and large diameter, surface-to-inseam etc.).
- Seismic acquisition (2D and 3D).
- Geophysics (i.e. airborne magnetic surveys etc.).

Activities will also be directed towards the provision of geological information to contribute to short to medium term mine planning in Appin Mine. This would focus on the definition of structures (such as faults, sills and dykes) within the mining domain to determine their impact on mains, surface infrastructure and adjacent longwall block lengths. An example of this is confirmation of the nature of the Wandinong Fault in Area 7 and dyke identification in Areas 7 and 9. The primary techniques for structure definition will be drilling and seismic. Geotechnical investigations (including boreholes and shallow pits) will be directed at confirming ground conditions for proposed ventilation shaft/s. The activities will be reported in the Annual Review.

### Construction activities

The following construction activities are planned to be executed over the next three years:

- Upgrade the haul road system between the CWEA and the WCCPP at the Appin North Mine site.
- Construction of water treatment plant at Appin North to treat underground mine water and emplacement underdrainage water to achieve discharge of higher quality water to the Georges River.
- The Appin Mine Ventilation and Access Project (AMVA) includes construction and operation of two ventilation shafts (VS), mine access infrastructure and improved Site access at 345 Menangle Rd, Menangle NSW. Between July 2022 and July 2025, the AMVA project will be under construction. Broadly, this includes construction of two ventilation shafts VS7 and VS8 and associated infrastructure.
- Upgrading the current 8000 tonne product bins at the WCCPP. The project is still in concept phase and preliminary plans.
- WA Switchboard Upgrade and Coal Thickener Upgrade at the WCCPP.
- Installation of VAMMIT infrastructure at Ventilation Shaft No.2.

## Mining schedule

Mining development method and sequencing and general mine features.

Planned mining activities will generally be conducted in two mining domains; Appin Area 7 and Appin Area 9. Roadway development in both domains will be maintained, one to two panels in advance of longwall extraction at all times. Current operations in Appin Areas 7 and 9 will continue in a generally North West direction. All panels will be extracted from West to East as per current practice, with ROM coal being conveyed to the surface at Appin East and Appin North. ROM coal conveyed to Appin East will be stored in surface loading bins or on temporary stockpiles before being trucked to the WCCPP for processing. ROM coal conveyed to Appin North will be either stockpiled or directly fed to WCCPP for processing.

Areas identified for emplacements, the sequencing of emplacements, construction, and management.

ROM coal from Appin Mine will continue to be processed at the WCCPP with a small percentage processed at the Dendrobium Coal Preparation Plant (DCPP) on an as needed basis. The coal wash from the WCCPP will continue to be emplaced at the Coal Wash Emplacement Area (CWEA), with coal wash from the DCPP only being emplaced at the CWEA if beneficial reuses of the coal wash are unable to be sourced. IMC actively seeks opportunities for the beneficial reuse of coal wash from the DCPP.

Emplacement operations will take place within the Stage 3 CWEA. Whilst coal wash emplacement in Stage 4 will not commence during this term, design work and construction of Emplacement Pond 4 (EP4) will commence. It is assumed that the timing for EP4 construction will align with the Mine Plan and exhausting of EP3 capacity. Typically, 0.7 to 0.8Mt of coal

wash will be emplaced at the CWEA annually from the WCCPP. Additional coal wash may be emplaced if beneficial reuse options are not available for the coal wash generated from processing Dendrobium ROM product by the DCPP. Rehabilitation of the CWEA takes place progressively as each section of embankment fill reaches the finished level in accordance with the Appin Mine Coal Wash Emplacement Area Management Plan (CWEAMP).

Processing infrastructure activities and the location of tailings facilities and schedule for emplacement

ROM coal from Appin Mine will continue to be processed at the WCCPP with a small percentage processed at the Dendrobium Coal Preparation Plant (DCPP) on an as needed basis. The coal wash from the WCCPP will continue to be emplaced at the Coal Wash Emplacement Area (CWEA), with coal wash from the DCPP only being emplaced at the CWEA if beneficial reuses of the coal wash are unable to be sourced.

Waste disposal and materials handling operations.

Waste will be managed in accordance with the Appin Mine Waste Management Plan available on the South32 website. Emplacement of coal wash is managed in accordance with the approved Coal Wash Emplacement Area Management Plan (CWEAMP). The Waste Management Plan has been developed to meet Condition 29 of Schedule 4 of the Appin Mine approval. Presently there are comprehensive waste segregation processes in place (on- and off-site) which significantly reduces the amount of general waste going to landfill. General or specific exempted wastes may be disposed of in the CWEA. Waste generated by the project is collected and segregated into appropriate waste types to enable the proper facilitation of waste classification, storage, transport, disposal and tracking.

**Key production milestones**

MATERIAL	UNIT	YEAR 1	YEAR 2	YEAR 3
<b>Stripped topsoil</b> <small>(if applicable)</small>	(m <sup>3</sup> )	33,220	15,000	15,000
<b>Rock/overburden</b>	(m <sup>3</sup> )	0	0	9,000
<b>Ore</b>	(Mt)	4.54	3.95	3.95
<b>Reject material<sup>1</sup></b>	(Mt)	0.6	0.7	0.7
<b>Product</b>	(Mt)	3.9	3.35	3.35

<sup>1</sup> This includes coarse rejects, tailings and any other wastes resulting from beneficiation.

# Three-year rehabilitation forecast

## Rehabilitation planning schedule

### Rehabilitation planning schedule

Progressive rehabilitation of the CWEA: Rehabilitation of the CWEA surface will take place progressively as each section of embankment fill reaches the finished level. Generally, an estimated 3 ha of the CWEA will be rehabilitated per year.

Progressive closure of redundant assets: IMC is currently progressing investigations and studies to inform the rehabilitation works required at the North Cliff Site and Bulli Shaft sites. Executing the rehabilitation work remains subject to the outcomes of these investigation and studies, as well as external and internal approval processes. Therefore, a detailed schedule of key activities has not yet been prepared. Work to close these sites form part of IMC's Redundant Infrastructure Program.

Rehabilitation of areas affected by subsidence: Impacts associated with Longwalls 32 to 38 have been identified in the Georges River, some requiring rehabilitation. The rehabilitation will be undertaken in accordance with the Georges River Remediation Plan (GRPP). The rehabilitation work is proposed to be carried out in several stages, as grouting works will need to be conducted iteratively. The timeframe stated in the GRRP will not be met due to issues associated with COVID 19, extended catchment closures (affecting the timeframes for trials and assessment of results) and accessibility to impact sites in the Georges River. IMC will continue to work with the Resources Regulator to progress this project.

### Stakeholder consultation

Table 19 (Page 42) of the Appin RMP details the proposed stakeholder consultation activities over the next three years. This is available on our website URL: <https://www.south32.net/docs/default-source/illawarra-coal-bulli-seam-operations/management-plans/mining-operations-plan/appin-mine-rehabilitation-management-plan.pdf>.

### Rehabilitation studies, risk assessments and/or design work

Table 20 (Page 45) of the RMP contains a Forward Work Program which contains a description of the studies and design work required over the next three years. This is available on our website URL: <https://www.south32.net/docs/default-source/illawarra-coal-bulli-seam-operations/management-plans/mining-operations-plan/appin-mine-rehabilitation-management-plan.pdf>.

## Rehabilitation research and trials



# APPIN COLLIERY FORWARD PROGRAM

FWP0001015 | Tuesday 31 May 2022 to Friday 30 May 2025

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS
RRT0001008	<b>Population supplementation of the endangered <i>Persoonia hirsuta</i> to mine rehabilitation.</b>	The overall objective of the program is to increase the population of <i>Persoonia hirsuta</i> plants within mine rehabilitation.	<p>Propagative material was collected from source plants over three years (2017-2019) from a several wild populations throughout the natural plant distribution.</p> <p><i>P. hirsuta</i> plant stock is grown within the nursery at the Australian Botanic Gardens Mt Annan (ABGMA). Plants are transported by vehicle from ABGMA to the recipient sites on the finalised planting dates.</p> <p>Translocations have been carried out over a number of staged plantings (2019, 2021 and 2022).</p> <p>Monitor the plants health overtime.</p>	30 Jun 2025	Ongoing
RRT0001009	<b>Impact of Fire on Rehabilitation</b>	The overall objective is to test the resilience of the rehabilitation at the Coal Wash Emplacement Area (CWEA) and demonstrate that the rehabilitation can withstand a bushfire.	<p>Complete a literature review.</p> <p>Fire Trial Design.</p> <p>Seek approval to carry out the burn.</p>	30 Jun 2025	Ongoing

## APPIN COLLIERY FORWARD PROGRAM

FWP0001015 | Tuesday 31 May 2022 to Friday 30 May 2025

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS
------------	--------------------	----------------------------	-------------	-----------------------------	--------

Subject to approval under the Rural Fires Act, carry out a test burn.

Carry out post-burn monitoring of the rehabilitation.

## Rehabilitation maintenance and corrective actions

The CWEA rehabilitation will be regularly monitored and inspected to identify and rectify issues, including:

- Inspections of site water management and infrastructure to ensure the water management system is functioning properly.
- Inspections of erosion and sediment structure will be regularly inspected to check they are operating satisfactorily and to perform and maintenance work and repairs that may be required. Regular maintenance will include:
  - Sediment removal from drains and sediment basins
  - installation, proper operation and routine maintenance of any flocculant dosing equipment;
  - replacement and or repair of sediment control structures as required;
  - repair of areas that become unstable following periods of high flow
- Quarterly rehabilitation inspections to identify issues with weeds, pests or sediment and erosion. Regular weed spraying and removal is conducted by a third-party contractor.
- Annual detailed survey of rehabilitation (biometric assessments) to assess revegetation success. Where required (i.e., in areas that remain without any, or poor, natural regeneration for a period longer than six months), supplementary planting of local provenance tube-stock may be undertaken to ensure vegetation is progressively reinstated.

## Rehabilitation schedule

Table 20 (Page 45) of the RMP contains a Forward Work Program which contains a description of the studies and design work required over the next three years. This is available on our website URL: <https://www.south32.net/docs/default-source/illawarra-coal-bulli-seam-operations/management-plans/mining-operations-plan/appin-mine-rehabilitation-management-plan.pdf>.

As mentioned previously, rehabilitation of the CWEA surface will take place progressively as each section of embankment fill reaches the finished level. Generally, an estimated 3 ha of the CWEA will be rehabilitated per year. IMC is currently progressing investigations and studies to inform the rehabilitation works required at the North Cliff Site and Bulli Shaft sites. Executing the rehabilitation work remains subject to the outcomes of these investigation and studies, as well as external and internal approval processes. Therefore, a detailed schedule of key activities has not yet been prepared.

## Subsidence remediation for underground operations

Impacts associated with Longwalls 32 to 38 have been identified in the Georges River, some requiring rehabilitation. The rehabilitation will be undertaken in accordance with the Georges River Remediation Plan (GRPP). The rehabilitation work is proposed to be carried out in several stages, as grouting works will need to be conducted iteratively. Pools with more significant impacts will generally be targeted as a priority, as this may then indirectly improve the condition of pools with lesser impacts. The staged nature of the rehabilitation project has been designed to enable improvements and efficiencies to be incorporated in later activities. Therefore, the activities listed may be adjusted during implementation. Trials are being undertaken at WC21 that will inform the methodology to be employed in the Georges River.

Subsidence area for current longwalls will be monitored and remediated where required in accordance with the relevant extraction plan.

## Progressive mining and rehabilitation statistics

### Three-yearly forecast cumulative disturbance and rehabilitation progression

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
A Total surface disturbance footprint	(ha)	288.52	294.2	298.34
B Total active disturbance	(ha)	222.55	228.23	232.38
C Land prepared for rehabilitation	(ha)	16.23	18.16	21.62
D Ecosystem and land use establishment	(ha)	9.41	19.97	32.45

### Rehabilitation key performance indicators (KPIs)

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
O Total new active disturbance area	(ha)	14.68	5.68	4.15
P Area proposed for active rehabilitation	(ha)	10.56	12.49	15.95
Q Annual rehabilitation to disturbance ratio		0.72	2.2	3.84

# Attachment 1 – Reporting Definitions

REPORTING CATEGORY	DEFINITION
<p><b>A</b> Total disturbance footprint – surface disturbance</p>	<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>
<p><b>B</b> Total active disturbance</p>	<p>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).</p>
<p><b>C</b> Rehabilitation – land preparation</p>	<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>
<p><b>D</b> 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>

REPORTING CATEGORY	DEFINITION
<b>O</b>	The area of any new active disturbance that will be created during the next three years, as defined under definition A1 (definition A1 Table 5).
<b>P</b>	The sum of any new rehabilitation to be commenced in the next three years. These areas may be in the phases “Rehabilitation - Land Preparation” or the “Ecosystem & Land Use Establishment” (definitions C & D in Table 5).
<b>Q</b>	The rehabilitation to disturbance ratio (S / R) indicates how many hectares of new rehabilitation are undertaken for each hectare of land disturbed during the three years. A ratio of 1/1 indicates that the area of new rehabilitation and disturbance in that period are the same.

## Attachment 2 – Definitions

WORD	DEFINITION
<b>Active</b>	In the context of rehabilitation, land associated with mining domains is considered ‘active’ for the period following disturbance until the commencement of rehabilitation.
<b>Active mining phase of rehabilitation</b>	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.
<b>Analogue site</b>	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.
<b>Annual rehabilitation report and forward program</b>	As described in the Mining Regulation 2016.
<b>Annual reporting period</b>	As defined in the Mining Regulation 2016.
<b>Closure</b>	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).
<b>Decommissioning</b>	The process of removing mining infrastructure and removing contaminants and hazardous materials.
<b>Decommissioning Phase of Rehabilitation</b>	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.



<b>WORD</b>	<b>DEFINITION</b>
<b>Department</b>	The Department of Regional NSW.
<b>Disturbance</b>	See Surface Disturbance.
<b>Disturbance area</b>	<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>
<b>Domain</b>	<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>
<b>Ecosystem and Land Use Development</b>	<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>
<b>Ecosystem and Land Use Establishment</b>	<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>
<b>Exploration</b>	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

WORD	DEFINITION
<b>Final landform and rehabilitation plan</b>	As defined in the Mining Regulation 2016.
<b>Final land use</b>	As defined in the Mining Regulation 2016.
<b>Form and way</b>	Means the form and way approved by the Secretary. Approved form and way documents are available on the Department’s website.
<b>Growth Medium Development</b>	<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>
<b>Habitat</b>	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).
<b>Indicator</b>	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.
<b>Land</b>	As defined in the <i>Mining Act 1992</i> .
<b>Landform Establishment</b>	<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>
<b>Large mine</b>	As defined in the Mining Regulation 2016.
<b>Lease holder</b>	The holder of a mining lease.

WORD	DEFINITION
<b>Life of mine</b>	The timeframe of how long a mine is approved to mine, from commencement to closure.
<b>Mine rehabilitation portal</b>	<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"> <li>■ upload rehabilitation geographical information system (GIS) spatial data</li> <li>■ develop rehabilitation GIS spatial data (using online tracing functions)</li> <li>■ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities.</li> </ul> <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>
<b>Mining area</b>	As defined in the <i>Mining Act 1992</i> .
<b>Mining domain</b>	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).
<b>Mining land</b>	As defined in the <i>Mining Act 1992</i> .
<b>Native vegetation</b>	Has the same meaning as that term under section 60B of the <i>Local Land Services Act 2013</i> .
<b>Overburden</b>	Material overlying coal or a mineral deposit.
<b>Performance indicator</b>	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
<b>Phases of rehabilitation</b>	<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"> <li>■ active mining</li> <li>■ decommissioning</li> <li>■ landform Establishment</li> <li>■ growth medium development</li> <li>■ ecosystem and land use establishment</li> <li>■ ecosystem and land use development.</li> </ul>
<b>Progressive rehabilitation</b>	<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>
<b>Rehabilitation Completion</b>	<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>
<b>Rehabilitation Completion criteria</b>	<p>As defined in the Mining Regulation 2016.</p>
<b>Rehabilitation cost estimate</b>	<p>As defined in the Mining Regulation 2016.</p>
<b>Rehabilitation management plan</b>	<p>As defined in the Mining Regulation 2016.</p>
<b>Rehabilitation objectives</b>	<p>As defined in the Mining Regulation 2016.</p>
<b>Rehabilitation risk assessment</b>	<p>As defined in the Mining Regulation 2016.</p>
<b>Rehabilitation schedule</b>	<p>The defined timeframes for progressive rehabilitation set out in the forward program.</p>

WORD	DEFINITION
<b>Relevant stakeholders</b>	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"> <li>■ the relevant development consent authority</li> <li>■ the local council</li> <li>■ the relevant landholder(s)</li> <li>■ community consultative committee (if required under the development consent) or equivalent consultative group</li> <li>■ affected land holder(s)</li> <li>■ government agencies relevant to the final land use</li> <li>■ affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities)</li> <li>■ local Aboriginal communities, and</li> <li>■ any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.</li> </ul>
<b>Risk</b>	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2009).
<b>Secretary</b>	The Secretary of the Department.
<b>Security deposit</b>	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).
<b>Surface disturbance</b>	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
<b>Tailings</b>	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 <sup>2</sup> .
<b>Waste</b>	Has the same meaning as that term under the <i>Protection of the Environment Operations Act 1997</i> .

<sup>2</sup> Commonwealth of Australia (DITR), 2007. *Tailings Management*.

## Attachment 3 – Plans

APPIN\_2022\_Plan2A.zip

APPIN\_2022\_\_Plan2B.zip

APPIN\_2022\_\_Plan2C.zip

Forward Program (LARGE MINE) v2.1