



**NSW  
Resources  
Regulator**

**FWP0001480**

# **AUSTAR COAL MINE FORWARD PROGRAM**

**Monday 1 July 2024 to Wednesday 30 June 2027**

## Summary

DETAIL	
<b>Mine</b>	Austar Coal Mine
<b>Reference</b>	FWP0001480
<b>Forward program commencement date</b>	Monday 1 July 2024
<b>Forward program end date</b>	Wednesday 30 June 2027
<b>Forward program revision (if applicable)</b>	
<b>Contact</b>	Carly McCormack
<b>Mining leases</b>	ML 1345 (1992), ML 1677 (1992), ML 1283 (1906), ML 1157 (1906), ML 1666 (1992), MPL 23 (1906), MPL 204 (1906), DSL 89 (1901), MPL 233 (1906), MPL 1364 (1906), ML 1851 (1992), ML 1661 (1992), MPL 269 (1906), CCL 752 (1973), ML 1550 (1992), MPL 217 (1906), CML 2 (1992), CCL 728 (1973), ML 1388 (1992)
<b>Project location</b>	Austar Coal Mine Pty Limited
<b>Date of submission</b>	Wednesday 25 September 2024

## 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

Austar Coal Mine (ACM) is a closed underground coal mine located approximately 10 km southwest of Cessnock in the Lower Hunter Valley in NSW. ACM incorporates the former Pelton, Ellalong, Cessnock No. 1 (Kalingo) and Bellbird South Collieries and includes coal extraction, handling, processing and rail and road transport facilities. Pit top facilities are located on Middle Road, Paxton, and the CHPP is located at Wollombi Road, Pelton. Mining operations are approved under two State Significant Development Consents: Bellbird South (DA 29/95) and Stage 3 (PA 08\_0111), along with development approvals from Cessnock City Council. DA 29/95 lapsed on 14 February 2022 whilst PA 08\_0111 approves mining operations until 31 December 2030. ACM is currently in the closure planning stage with investigations and studies being undertaken to inform the closure process. Early works' closure activities are being undertaken including mine sealing, decommissioning and demolition.

## Description of surface disturbance activities

### Exploration activities

Exploration activities will be undertaken in accordance with the proposed work program under EL6598. In addition to the EL6598 work program, drilling will be undertaken in Year 1 as part of Feasibility Study (FS) site investigations to inform material characterisation, subsidence remediation and historic mine entry sealing requirements. The scope of these investigations includes test pitting and borehole drilling with material analysis, geotechnical logging, downhole camera and sonar inspections. Works commenced on 25 March 2024 and are ongoing. Progressive assessment and sealing of historic exploration boreholes will continue in the next three-year period.

### Construction activities

No construction activities are proposed in the next three years.

### Mining schedule

Mining development method and sequencing and general mine features.

Austar is a closed mine, there will be no mining operations in the next three-year period. All activities will be associated with rehabilitation and closure planning, and early works including mine sealing, decommissioning, equipment recovery and demolition.

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

Austar is a closed mine, no mining associated additional overburden, coarse coal rejects or fine tailings will be generated in the next three-year period. Management of emplacement areas including grading and erosion control will occur as required. During operations, coarse coal rejects and/or fine tailings were historically placed in approved emplacement areas at the Pelton CHPP, Aberdare Extended Emplacement Area and Bellbird Areas 12 and 13. Closure investigations to inform and refine rehabilitation and closure requirements for these emplacement areas are continuing. During the Forward Program (FP) period, desilting of the Kalingo Dam will continue in preparation for dam wall removal, de-declaring and rehabilitation of the dam. Sediments will be emplaced in the East Pit emplacement area at the Pelton CHPP for capping in the final landform. It is estimated that 7,000 m<sup>3</sup> of sediment remains to be removed from the dam. Other mine dams including Austar Dam may also be desilted and emplaced in East Pit as required. General maintenance and management works will be undertaken on existing emplacement areas as required including erosion repairs, geotechnical monitoring and testing.

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

Austar is a closed mine, there is no material processing or tailings emplacement proposed in the next three year period. The CHPP has been decommissioned and is scheduled to be demolished in year 1 / year 2 of the FP period. Austar has two tailings facilities, being the North-West Tailings Dam (NWTD) and No. 9 Tailings Dam. No tailings has been placed in either the NWTD or No. 9 Tailings Dam since Yancoal acquired Austar in 2004. Austar are undertaking site investigations to confirm the historic construction of these tailings dams and to refine conceptual capping and closure designs. As part of closure planning, Austar is also reviewing options to reprocess or consolidate tailings material to optimise capping requirements and improve closure outcomes. Should this be determined to be a feasible option this will be reported in future FPs.

### Waste disposal and materials handling operations.

During the next three-year period, waste management will be required during early works decommissioning and demolition. Ahead of demolition activities Austar have prepared a Closure Waste Management Plan (CWMP). The CWMP identifies non-mineral wastes likely to be generated during decommissioning and demolition, management/disposal options and opportunities for beneficial reuse of material for rehabilitation activities. In particular, the following materials are proposed for mine shaft filling (subject to suitability): – Recovered railway ballast (subject to approval for removal from the heritage listed rail line) – Aggregate (general demolition waste, i.e. concrete and brick) – Recovered asphalt pavement Austar have informed the EPA of the intent to beneficially re-use these materials for shaft filling and will implement a due diligence approach to demonstrate that regulatory and environmental obligations will be met. During demolition, hazardous materials will be removed by a licenced contractor and disposed to a licenced facility. Contamination

assessments have not identified any gross contamination of soils which requires specific management in closure. Any contaminated soils identified during demolition will be classified and disposed at a licenced offsite facility. Mineral wastes and removed dam sediments will be disposed to the approved emplacement areas and capped along with reject and tailings material in the final landform.

**Key production milestones**

MATERIAL	UNIT	YEAR 1	YEAR 2	YEAR 3
<b>Stripped topsoil</b> <small>(if applicable)</small>	(m <sup>3</sup> )	0	0	0
<b>Rock/overburden</b>	(m <sup>3</sup> )	0	0	0
<b>Ore</b>	(Mt)	0	0	0
<b>Reject material<sup>1</sup></b>	(Mt)	0	0	0
<b>Product</b>	(Mt)	0	0	0

<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

Austar's indicative closure planning timeline including key closure milestones is published on the Austar website. [https://www.austarcoalmine.com.au/icms\\_docs/334569\\_austar-closure-timeline.pdf](https://www.austarcoalmine.com.au/icms_docs/334569_austar-closure-timeline.pdf) Austar completed the Prefeasibility Study (PFS) in October 2023, during which technical studies and site investigations to address closure knowledge gaps were undertaken and preferred go-forward rehabilitation and closure options were identified. In February 2024, Austar commenced the FS to address recommendations of the PFS specialist studies, prove up the preferred go-forward options and refine the conceptual landform designs and final land use(s). FS site investigations commenced in March 2024 and sampling, analysis and assessment of results is ongoing and will continue during year 1 of this FP. FS assessments and designs will be staged and iterative to optimise closure outcomes. Geotechnical, geochemical, contamination and hydrological studies will inform the development of detailed final landform designs. Final landform designs will be refined based on landform modelling as required to achieve closure outcomes. The FS is scheduled for completion in mid-late 2025 (Year 2), which will be followed by detailed engineering and then commencement of final landform earthworks. During the FP period, Austar will progress the approvals pathways to execute preferred closure option, including final landform design changes where required.

### Stakeholder consultation

Stakeholder consultation will continue to be undertaken in line with the previous year's consultation activities, including quarterly Resource Regulator updates, six monthly multi-agency (NSW Resources Regulator, DPHI and EPA) and scheduled Community Consultative Committee meetings. Liaison is ongoing with Cessnock City Council regarding synergies between Austar closure and Council projects. Other consulted parties may include NSW Crown Land, Rural Fire Service and impacted landholders as required. Near neighbours will be notified of any potential noise impacts during the demolition program. Consultation with DPHI is anticipated to commence during the FP period regarding potential development consent modifications or approvals required to execute preferred closure options. Cessnock City Council will also be consulted regarding Council approval requirements for relevant closure activities.

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

Technical studies being undertaken in the FS to inform closure and rehabilitation methodologies and designs include: - Geotechnical, geophysical and geochemical studies to advance rejects and tailings management and capping designs and develop an FS level

landform design to manage Acid Metalliferous Drainage (AMD) and combustibility. -  
Material characterisation investigations to confirm that adequate volumes of suitable capping material are available on site. - Geotechnical studies to improve the understanding of mine subsidence (land stability) hazards including sinkholes and confirm historic mine entry sealing requirements. - Hydrological assessments to inform the development of the final landform and the transition from a closed mine water catchment to a free draining rehabilitated landform. - Contamination studies to inform management and disposal of contaminated materials identified during closure execution. Detailed landform design will be developed based on the outcomes of the above assessments and will incorporate 3D landform modelling, stability and seepage modelling and landform evolution modelling to demonstrate that the final landform arrangement will be stable and not present a risk of environmental harm in the long term. A final risk assessment will be undertaken at the completion of FS to ensure that the detailed closure designs and controls adequately address closure risks.

## Rehabilitation research and trials

RRT NUMBER	PROJECT/TRIAL NAME	OBJECTIVE OF TRIAL/PROJECT	METHODOLOGY	EXPECTED DATE OF COMPLETION	STATUS
RRT0001130	<b>Growth Medium Trial</b>	Evaluation of composted municipal green waste material as a growth medium, as an alternative to topsoil.	Three rehabilitation trial plots have been established. Plot 1 has no compost, Plot 2 has 50mm of composted growth medium Plot 3 has 100mm of composted growth medium. Soil testing will be used to inform amelioration requirements. All three plots will be seeded with key canopy, shrub and groundcover species of the Lower Hunter Spotted Gum Ironbark Forest vegetation community and a cover crop. Ongoing monitoring will inform suitability of compost use as a growth medium.	31 Dec 2025	Ongoing



## Rehabilitation maintenance and corrective actions

The rehabilitation monitoring program outlined in the RMP is used to identify any maintenance and corrective actions required. Outcomes of rehabilitation monitoring including recommendations for further works to achieve the specific closure criteria are documented in the annual rehabilitation monitoring report. In accordance with recommendations from the annual rehabilitation monitoring report, the following rehabilitation maintenance activities are being undertaken or will be scheduled as required:

- Ongoing weed management of the rehabilitation areas at Aberdare Extended Emplacement Area (EEA), Bellbird Areas 12 and 13 and the Cessnock No.1 Colliery/Kalingo Infrastructure Area
- Installation of concrete blocks around multiple areas where unauthorised access has been made by vehicles into the Aberdare EEA and Bellbird rehabilitation areas.
- Remediation of vehicle damage and dirt bike paths caused by trespassers through rehabilitated areas in the Aberdare EEA
- Review of seed mixes for future rehabilitation.
- Rubbish removal where required.

Recommendations of rehabilitation monitoring and inspections will be implemented throughout the FP as required.

## Rehabilitation schedule

Demolition of all redundant (non-heritage) mining infrastructure, including the removal of concrete slabs and some asphalt hard stands (e.g. car parks and access roads), is scheduled to commence in October 2024 (Year 1) and be completed in late 2025 (Year 2). Demolition will include the No. 2 and No. 3 Shafts, Austar Pit Top and Pelton CHPP infrastructure areas. Subject to approvals, mine shaft filling and permanent capping will commence during the FP period. No. 2, No. 3, No. 4, No. 5 and No. 6 Shafts will be progressively filled with inert demolition materials and rail ballast as material becomes available. Desilting and decommissioning of Kalingo Dam will continue after works were delayed in the previous period due to wet weather. It is estimated that 7,000 m<sup>3</sup> of silt remains to be removed, this is expected to be completed by the end of Year 1. Following desilting, a sediment dam will be constructed within the dam footprint, 15,000 m<sup>3</sup> of dam wall material will be removed and the dam de-declared. Progressive assessment and sealing of historic exploration boreholes will continue with Rehabilitation Completion Forms (ESF2) planned to be lodged for up to 30 boreholes in Year 1 and up to 50 during the remainder of the FP period. Historic mine entries are subject to a site investigation program in Year 1, and if not limited by approvals or heritage items, sealing of historic entries may commence in year 2 or 3.

## Completion of rehabilitation

not applicable

## Subsidence remediation for underground operations

Subsidence monitoring of Austar underground mining areas completed under Austar's two State Significant Development Consents (Bellbird South (DA 29/95) and Stage 3 (PA 08\_0111)) is complete and no further impacts or required remediation is expected. Sinkholes in historic, non-active mining areas that have developed in historic shallow mine workings in CML 2 (east of Wollombi Road at Bellbird and West Cessnock) will continue to be monitored and repaired where required in collaboration with Subsidence Advisory NSW.

## Progressive mining and rehabilitation statistics

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

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
<b>A Total surface disturbance footprint</b>	(ha)	211.08	211.08	211.08
<b>B Total active disturbance</b>	(ha)	147.87	146.47	145
<b>P Total new area of land proposed for active rehabilitation</b>	(ha)	1.89	3.3	4.76

### Rehabilitation key performance indicators (KPIs)

FORECAST	UNIT	YEAR 1	YEAR 2	YEAR 3
<b>O Total new active disturbance area</b>	(ha)			
<b>P Total new area of land proposed for active rehabilitation during the reporting period</b>	(ha)	1.89	1.41	1.46
<b>Q Annual rehabilitation to disturbance ratio</b>				

## 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
O	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).
P	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).
Q	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>	The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are: <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>	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.
<b>Rehabilitation Completion</b>	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.
<b>Rehabilitation Completion criteria</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation cost estimate</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation management plan</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation objectives</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation risk assessment</b>	As defined in the Mining Regulation 2016.
<b>Rehabilitation schedule</b>	The defined timeframes for progressive rehabilitation set out in the forward program.

WORD	DEFINITION
<b>Relevant stakeholders</b>	<p>Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes:</p> <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*.

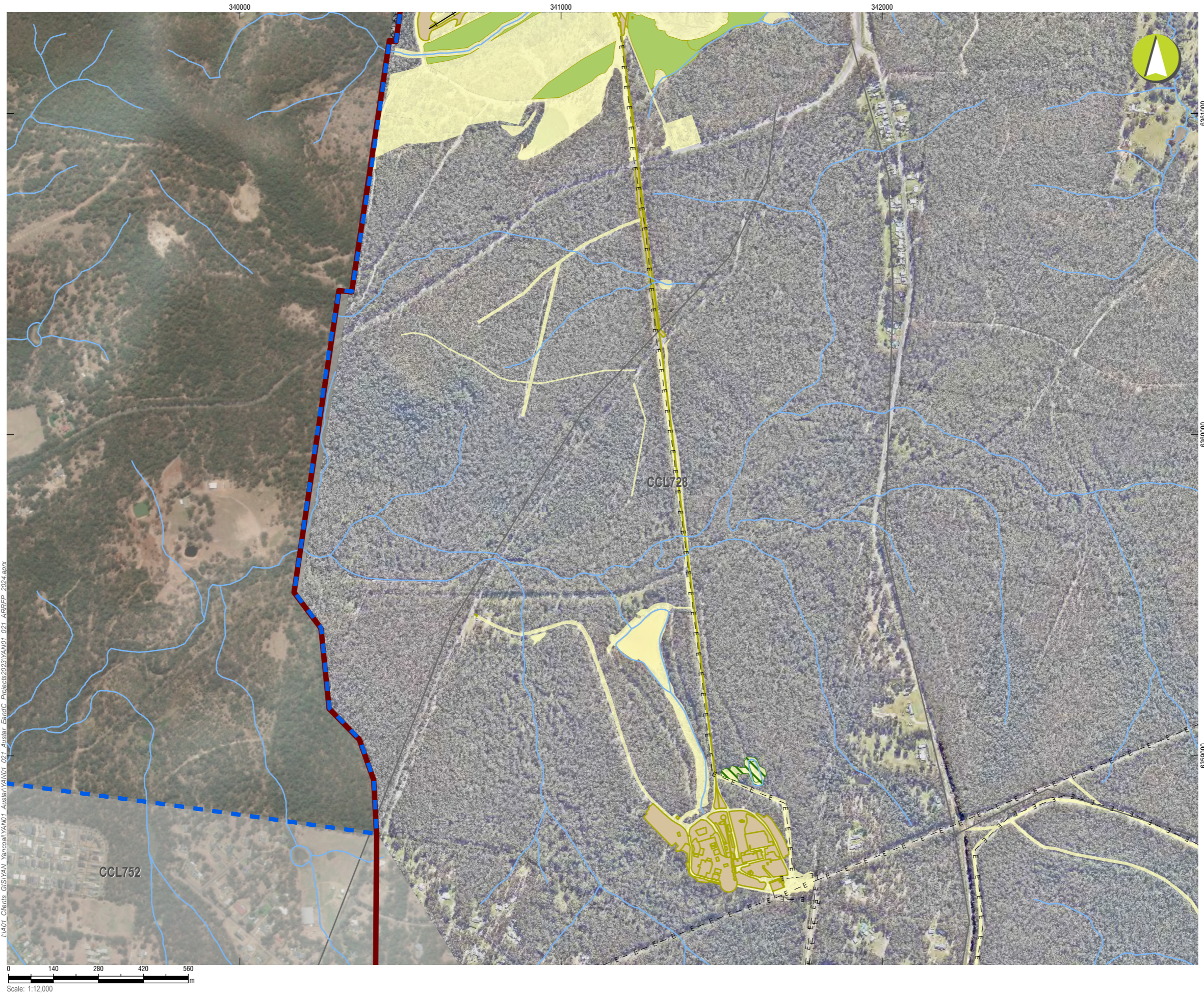
## Attachment 3 – Plans

YAN01\_021\_ARRFP\_Plan2A\_FPyr1\_FY25.pdf

YAN01\_021\_ARRFP\_Plan2B\_FPyr2\_FY26.pdf

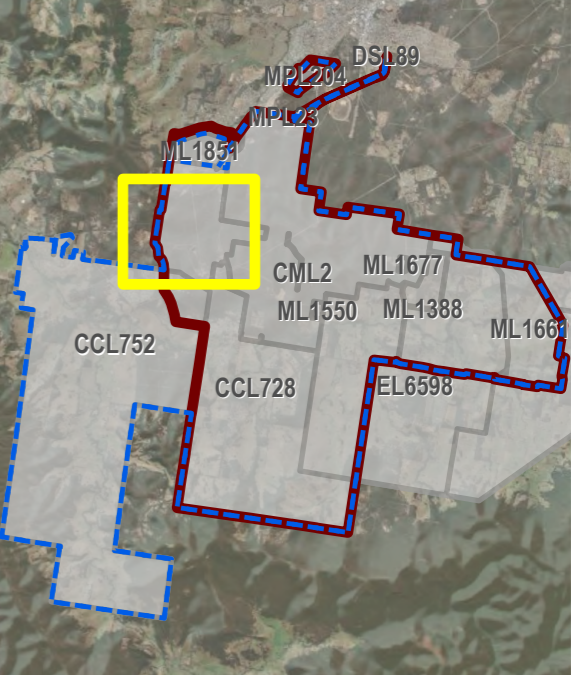
YAN01\_021\_ARRFP\_Plan2C\_FPyr3\_FY27.pdf

Forward Program (LARGE MINE) v2.1



**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Austar Mine Plan
- Road
- Railway
- Electricity Transmission Line
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning
- Ecosystem and Land Use Establishment
- Forecast Area - Year 1 (FY2025)**
- Forecast Land Prepared for Rehabilitation (FY2025)



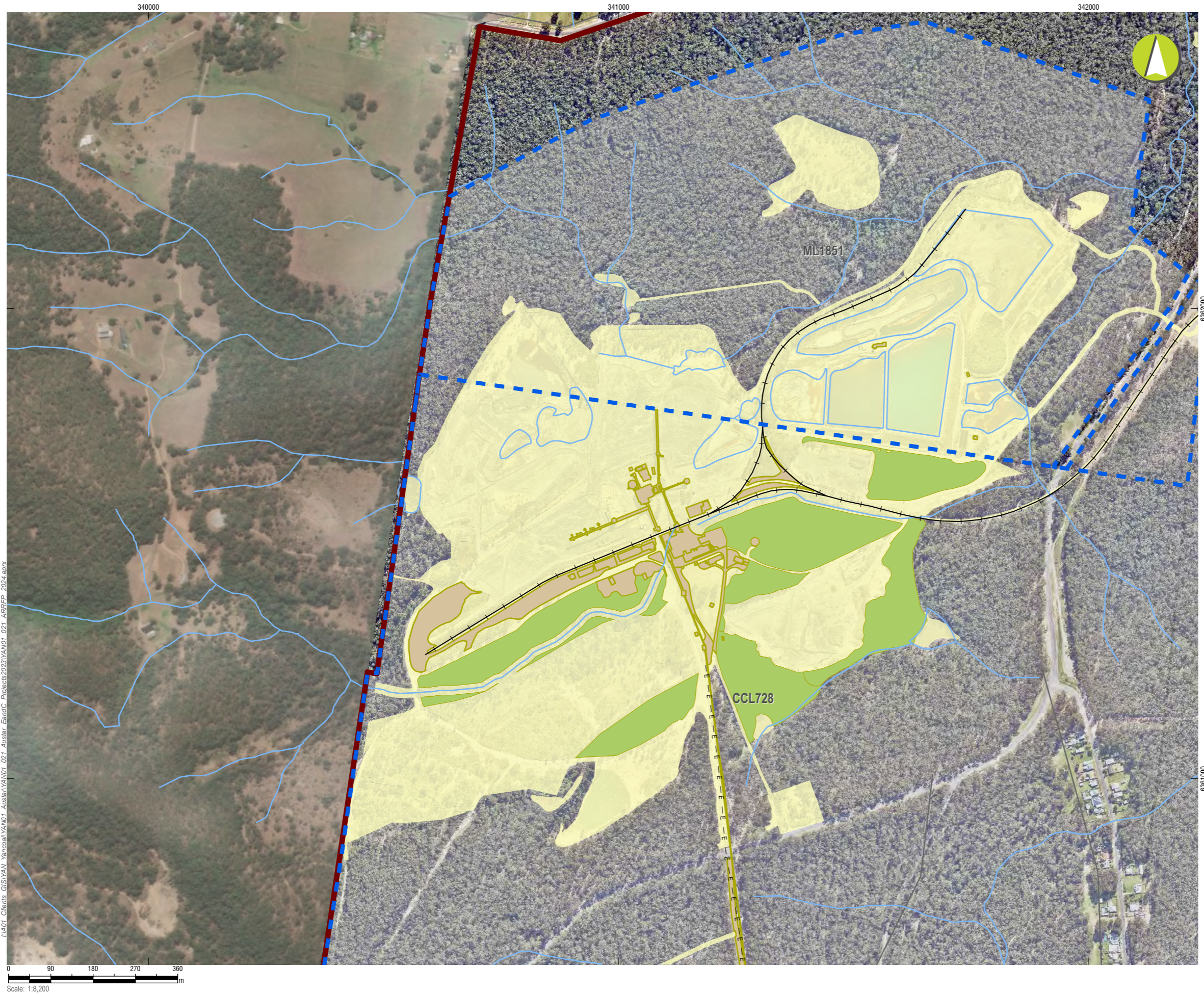
**Austar Coal ARRF 2024**

CMA 1 - Austar Pit Top Facilities











**Mining and Rehabilitation  
Year 1 - FY 2025**

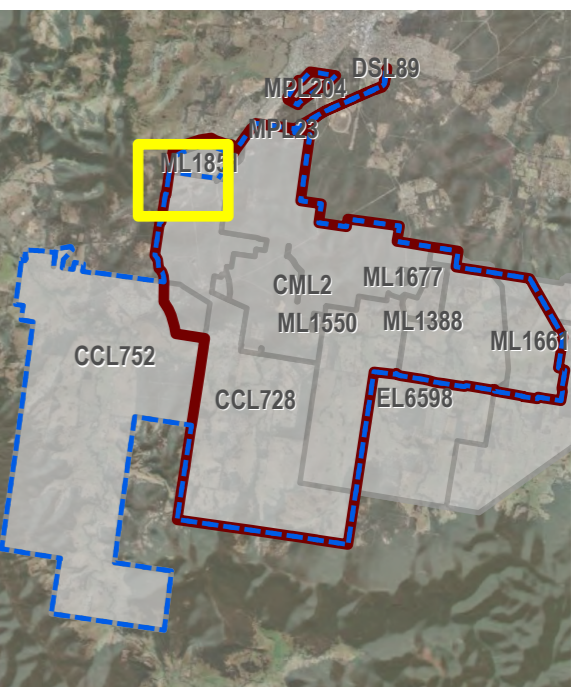
**PLAN 2A**

Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024



**LEGEND**

-  Project Approval Boundary
-  Colliery Holding Boundary
-  Road
-  Railway
-  Electricity Transmission Line
-  Creek lines
- Current Authorisations**
-  Coal - Current Titles
- Current Rehabilitation Phase**
-  Previous Disturbance
-  Decommissioning
-  Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**

CMA 2 - Pelton CHPP - Inset 1

**Mining and Rehabilitation  
Year 1 - FY 2025**








**PLAN 2A**

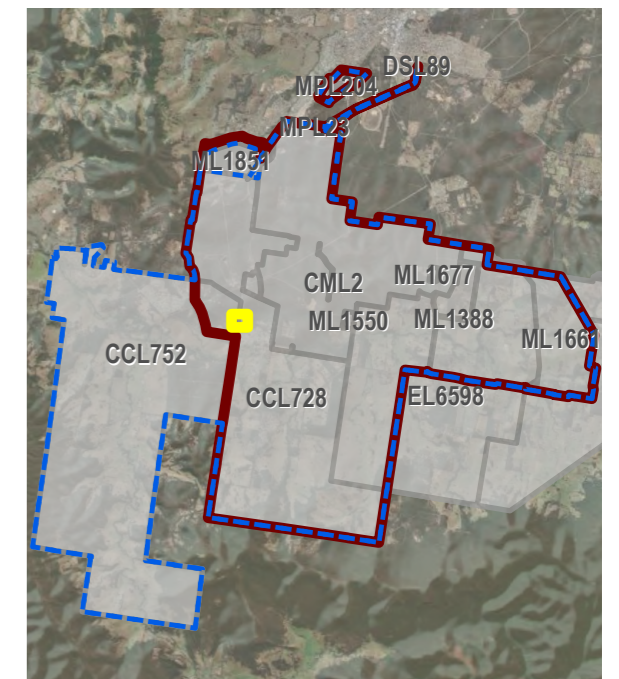
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

-  Project Approval Boundary
-  Colliery Holding Boundary
-  Austar Mine Plan
-  Electricity Transmission Line
-  Creek lines
- Current Authorisations**
-  Coal - Current Titles
- Current Rehabilitation Phase**
-  Previous Disturbance



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

**Austar Coal ARRFP 2024**  
CMA 3 - No.1 Shaft - Inset

**Mining and Rehabilitation**  
**Year 1 - FY 2025**


<b>PLAN 2A</b>	
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024





**LEGEND**

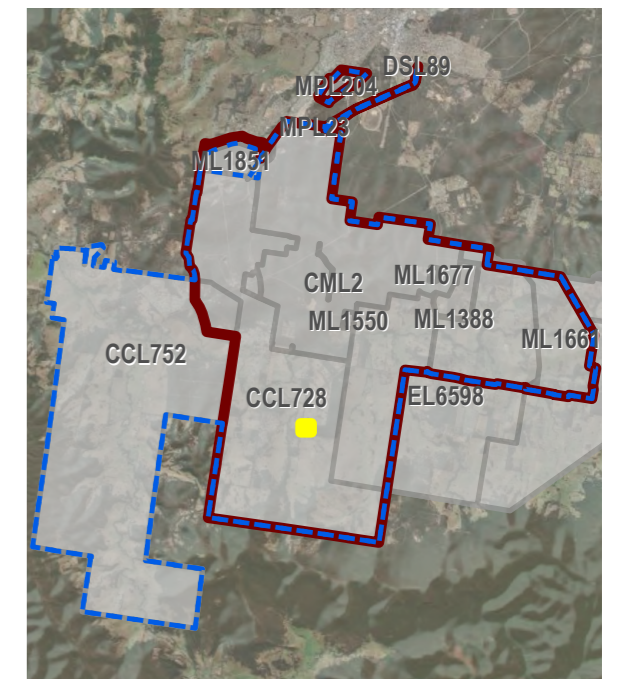
-  Project Approval Boundary
-  Colliery Holding Boundary
-  Auster Mine Plan
-  Electricity Transmission Line
-  Creek lines

**Current Authorisations**

-  Coal - Current Titles

**Current Rehabilitation Phase**

-  Previous Disturbance
-  Decommissioning



**Auster Coal ARRF 2024**  
CMA 4 - No.2 Shaft - Inset

**Mining and Rehabilitation  
Year 1 - FY 2025**

<b>PLAN 2A</b>	
Mine name	Auster Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024













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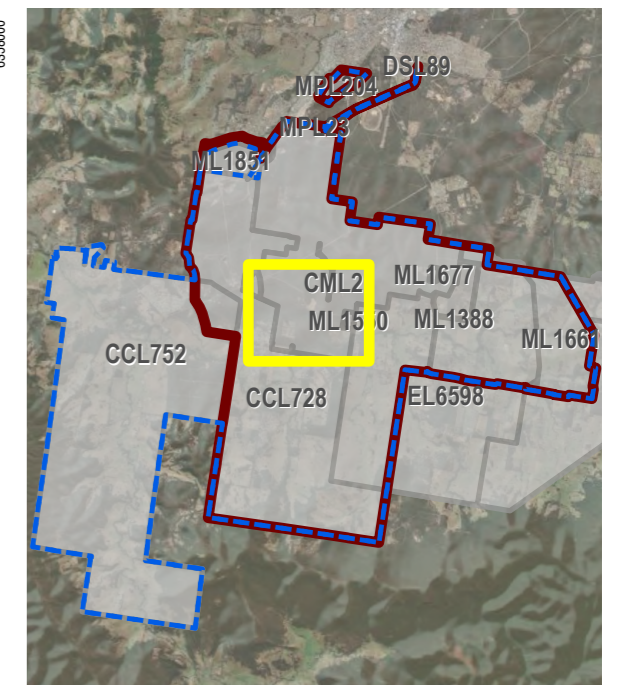
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**LEGEND**

-  Project Approval Boundary
-  Colliery Holding Boundary
-  Austar Mine Plan
-  Road
-  Electricity Transmission Line
-  Creek lines
-  Historic Workings
- Current Authorisations**
-  Coal - Current Titles
- Current Rehabilitation Phase**
-  Previous Disturbance
-  Decommissioning
-  Ecosystem and Land Use Establishment
- Forecast Area - Year 1 (FY2025)**
-  Forecast Land Prepared for Rehabilitation (FY2025)



**Austar Coal ARRF 2024**  
CMA 5 - Cessnock No.1 Colliery / Kalingo Infrastructure Area

**Mining and Rehabilitation  
Year 1 - FY 2025**









PLAN 2A	
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

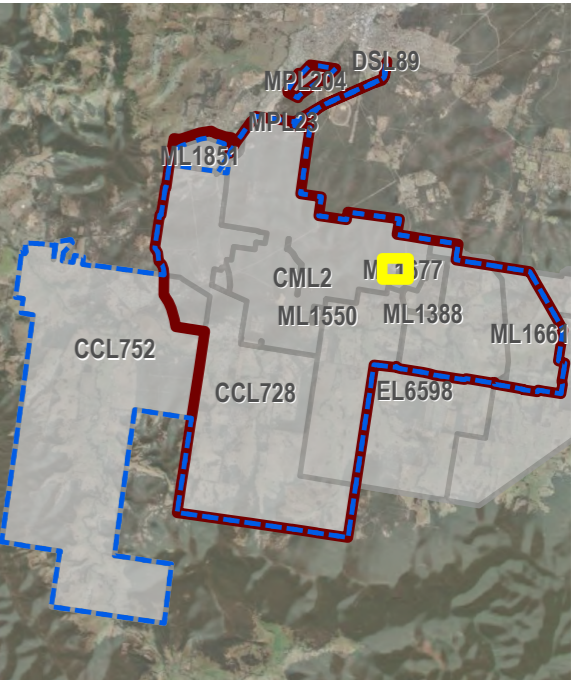
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**LEGEND**

-  Project Approval Boundary
-  Colliery Holding Boundary
-  Auster Mine Plan
-  Road
-  Creek lines
- Current Authorisations**
-  Coal - Current Titles
- Current Rehabilitation Phase**
-  Previous Disturbance
-  Decommissioning



**Austar Coal ARRF 2024**  
CMA 6 - Kitchener Surface Infrastructure Site

**Mining and Rehabilitation  
Year 1 - FY 2025**

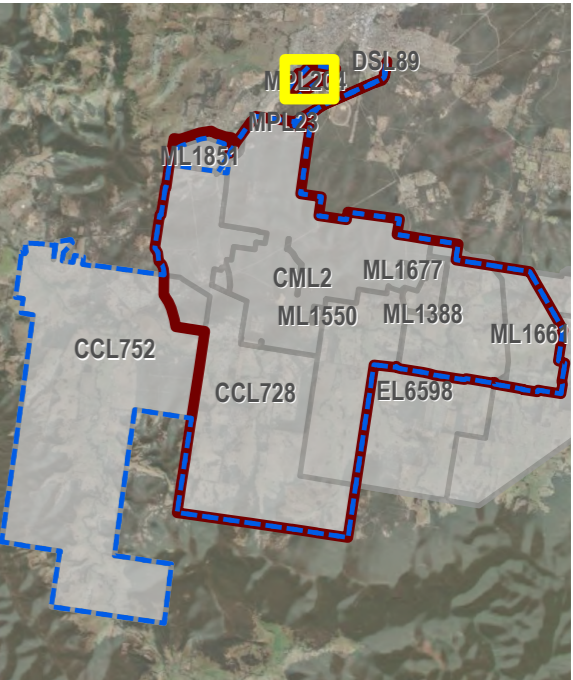
PLAN 2A	
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**  
CMA 7 - Aberdare Extended Emplacement Area

**Mining and Rehabilitation**  
Year 1 - FY 2025

**PLAN 2A**

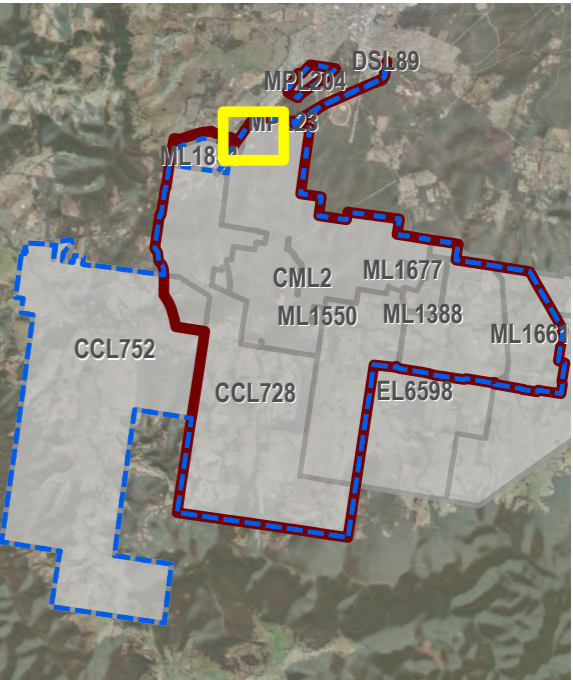
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Road
- Railway
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**

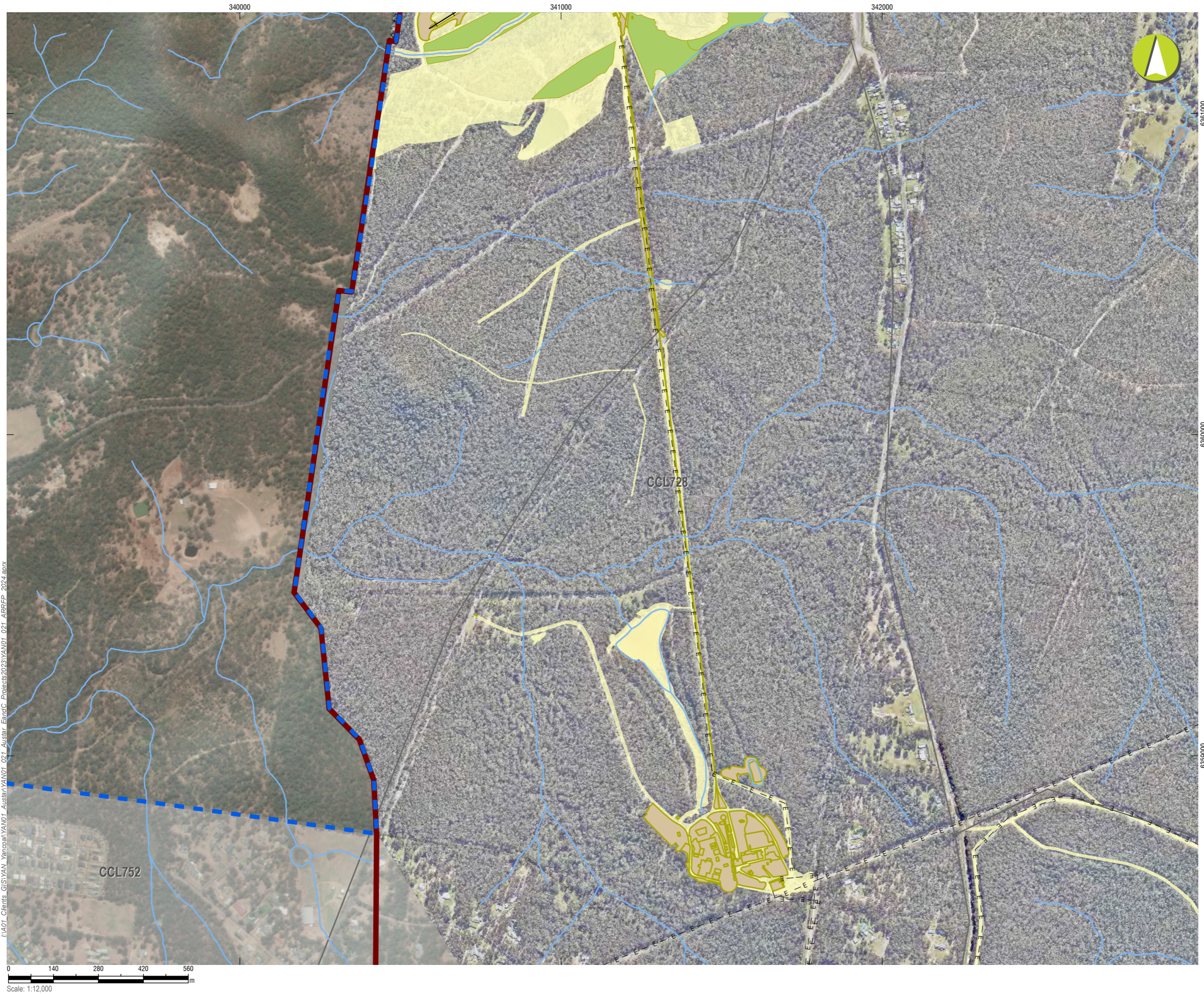
CMA 8 - Bellbird Areas 12 and 13 - Inset

**Mining and Rehabilitation  
Year 1 - FY 2025**

**PLAN 2A**

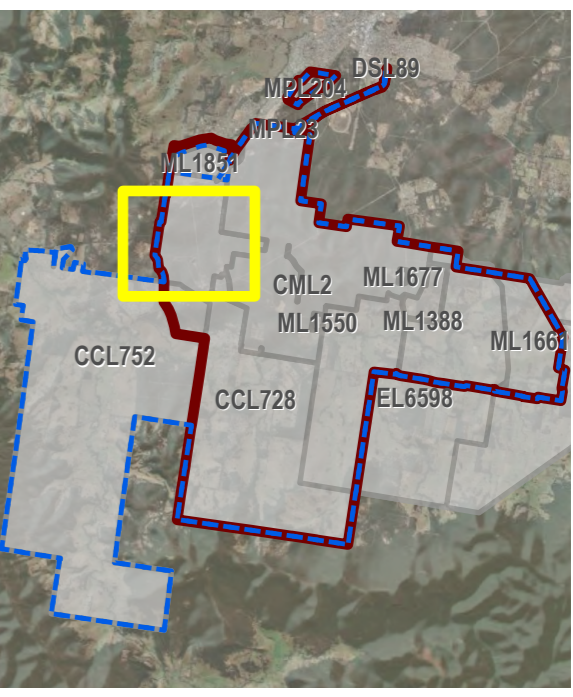
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Austar Mine Plan
- Road
- Railway
- Electricity Transmission Line
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning
- Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**

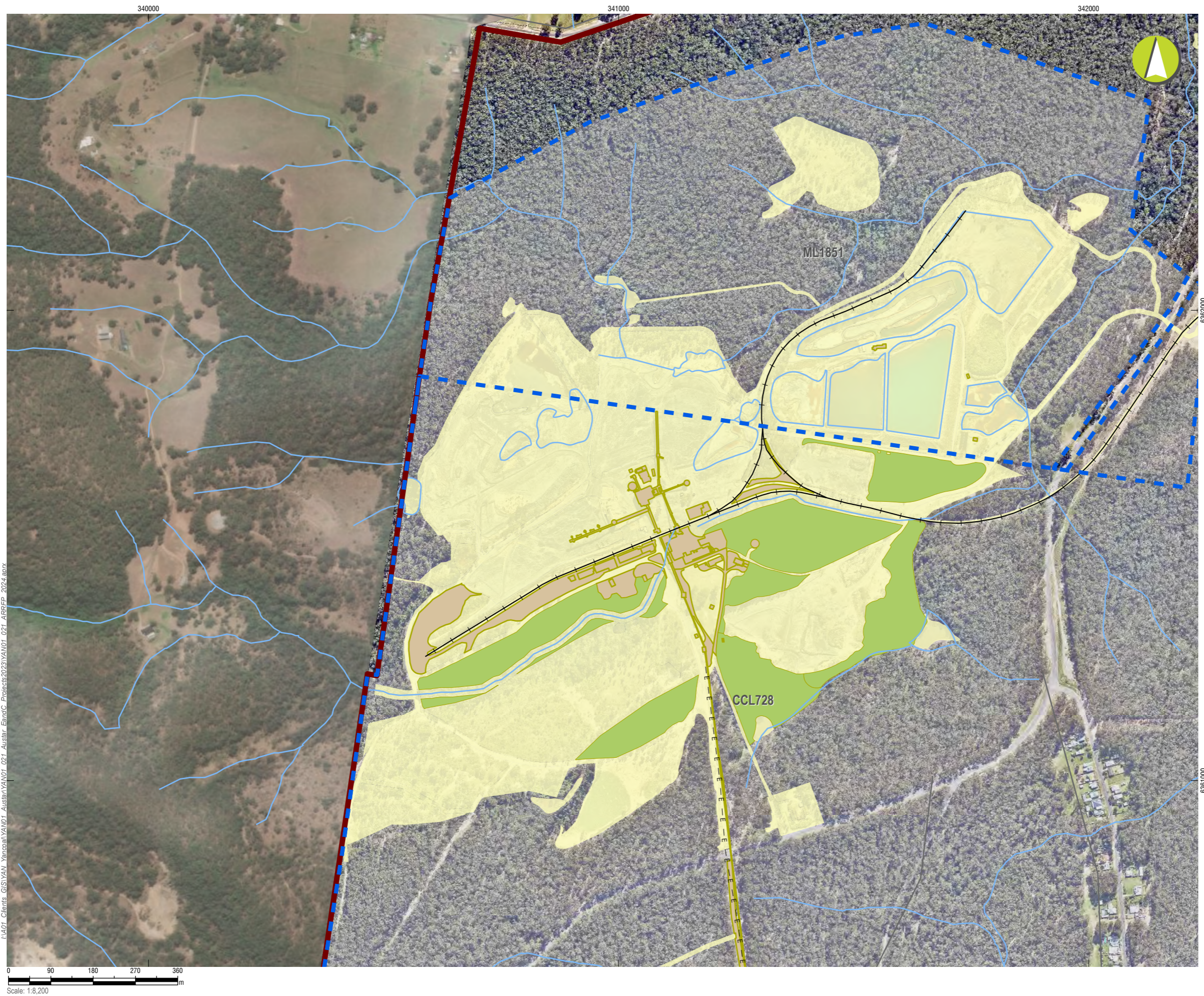
CMA 1 - Austar Pit Top Facilities

**Mining and Rehabilitation  
Year 2 - FY 2026**

**PLAN 2B**

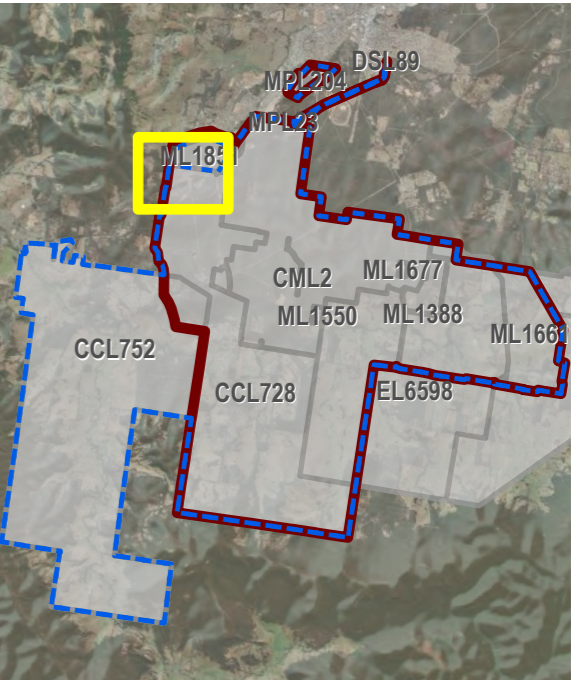
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Road
- Railway
- Electricity Transmission Line
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning
- Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**

CMA 2 - Pelton CHPP - Inset 1

**Mining and Rehabilitation  
Year 2 - FY 2026**

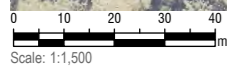
**PLAN 2B**

Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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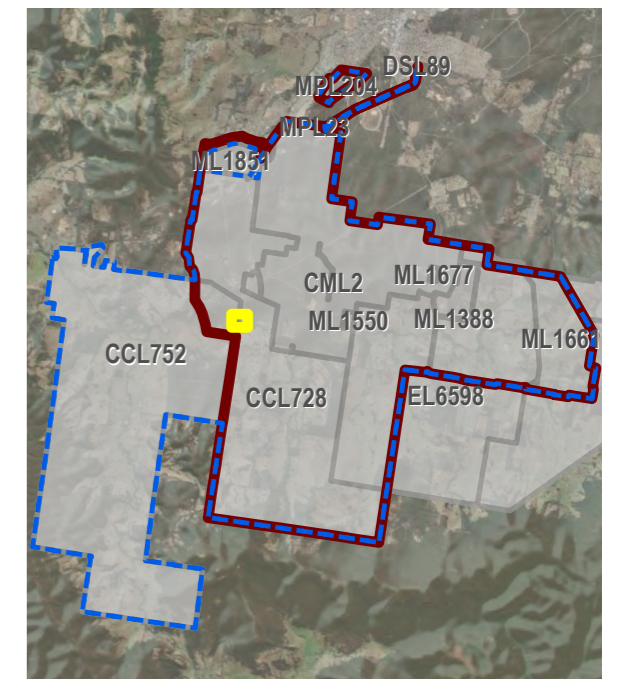


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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Austar Mine Plan
- Electricity Transmission Line
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance



**Austar Coal ARRF 2024**

CMA 3 - No.1 Shaft - Inset






**Mining and Rehabilitation  
Year 2 - FY 2026**

**PLAN 2B**


Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024





**LEGEND**

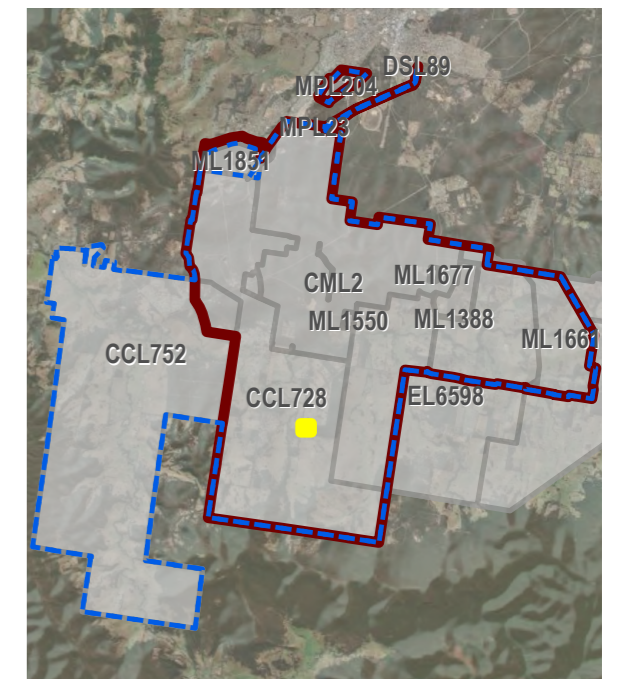
-  Project Approval Boundary
-  Colliery Holding Boundary
-  Auster Mine Plan
-  Electricity Transmission Line
-  Creek lines

**Current Authorisations**

-  Coal - Current Titles

**Current Rehabilitation Phase**

-  Previous Disturbance
-  Decommissioning



**Auster Coal ARRF 2024**

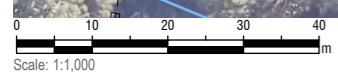
CMA 4 - No.2 Shaft - Inset

**Mining and Rehabilitation  
Year 2 - FY 2026**

**PLAN 2B**

Mine name	Auster Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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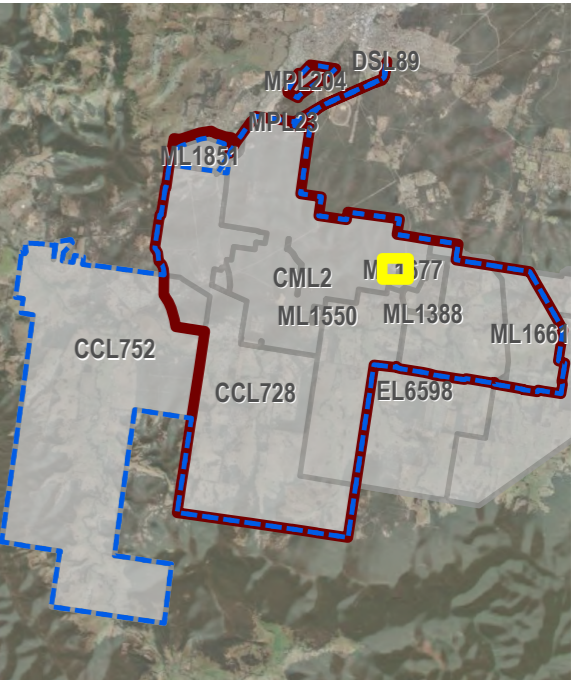






**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Austar Mine Plan
- Road
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning



**Austar Coal ARRF 2024**  
CMA 6 - Kitchener Surface Infrastructure Site







**Mining and Rehabilitation**  
Year 2 - FY 2026

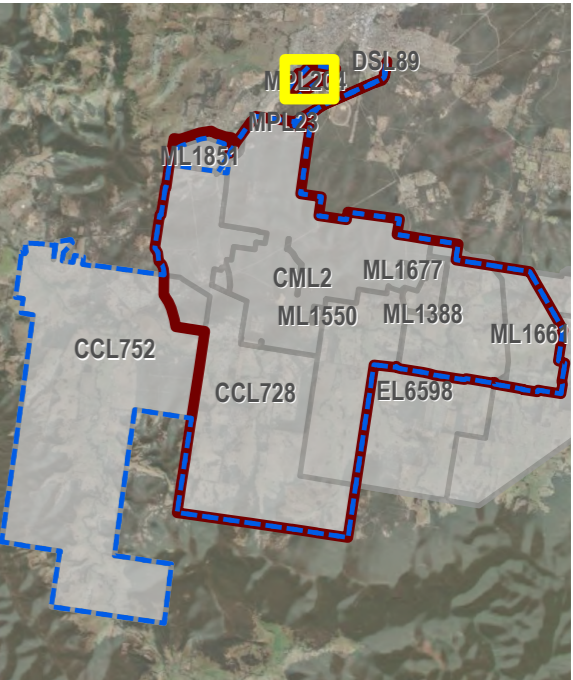
PLAN 2B	
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

-  Project Approval Boundary
-  Colliery Holding Boundary
-  Creek lines
- Current Authorisations**
-  Coal - Current Titles
- Current Rehabilitation Phase**
-  Previous Disturbance
-  Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**

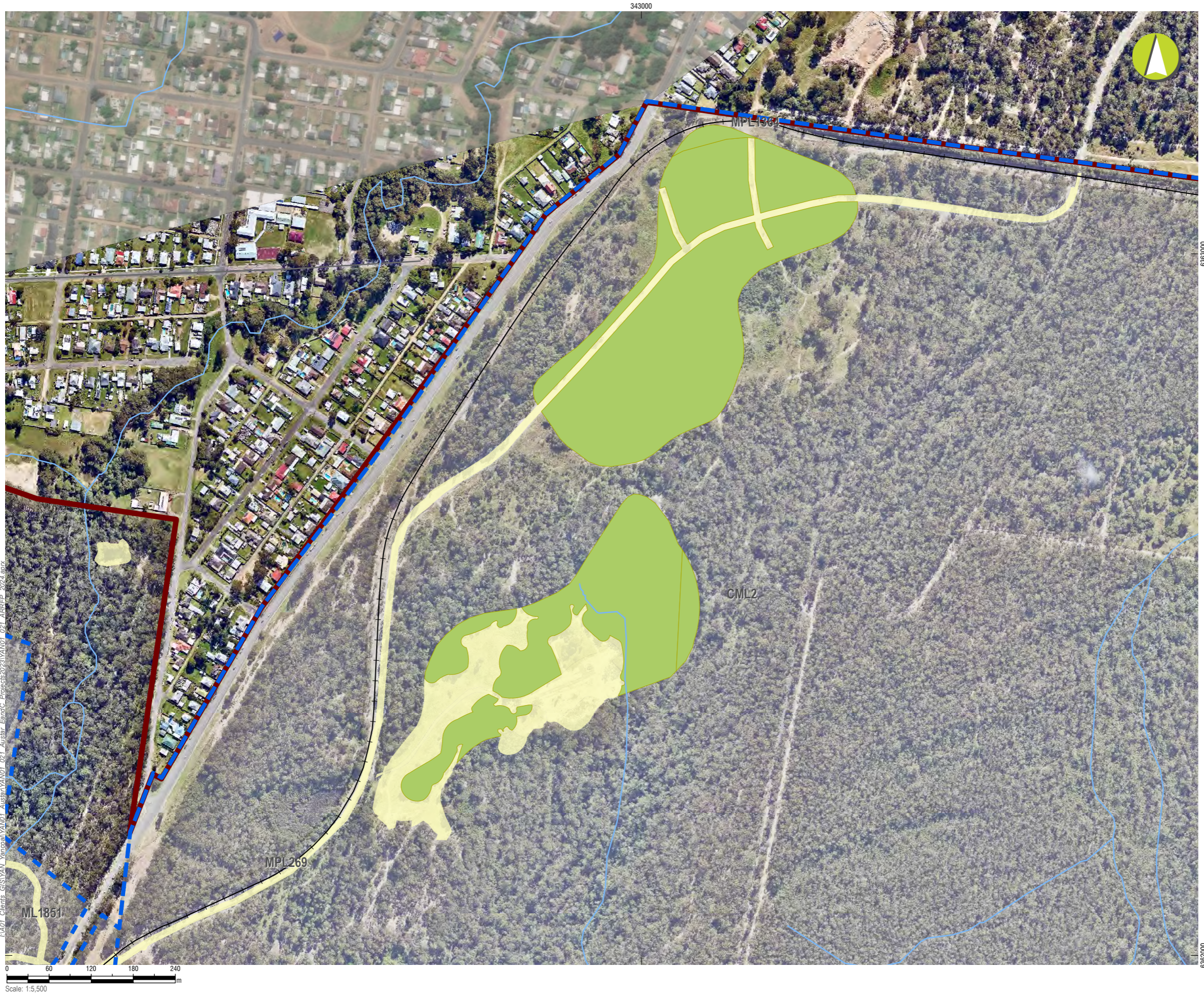
CMA 7 - Aberdare Extended Emplacement Area

**Mining and Rehabilitation  
Year 2 - FY 2026**

**PLAN 2B**

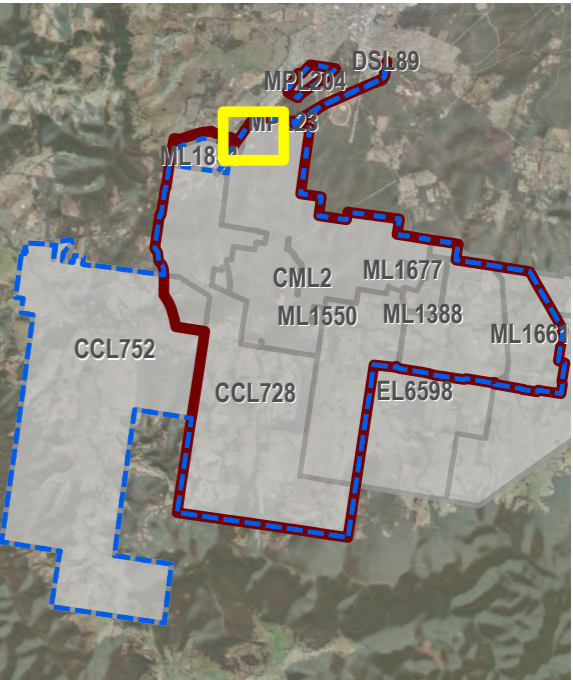
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Road
- Railway
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**

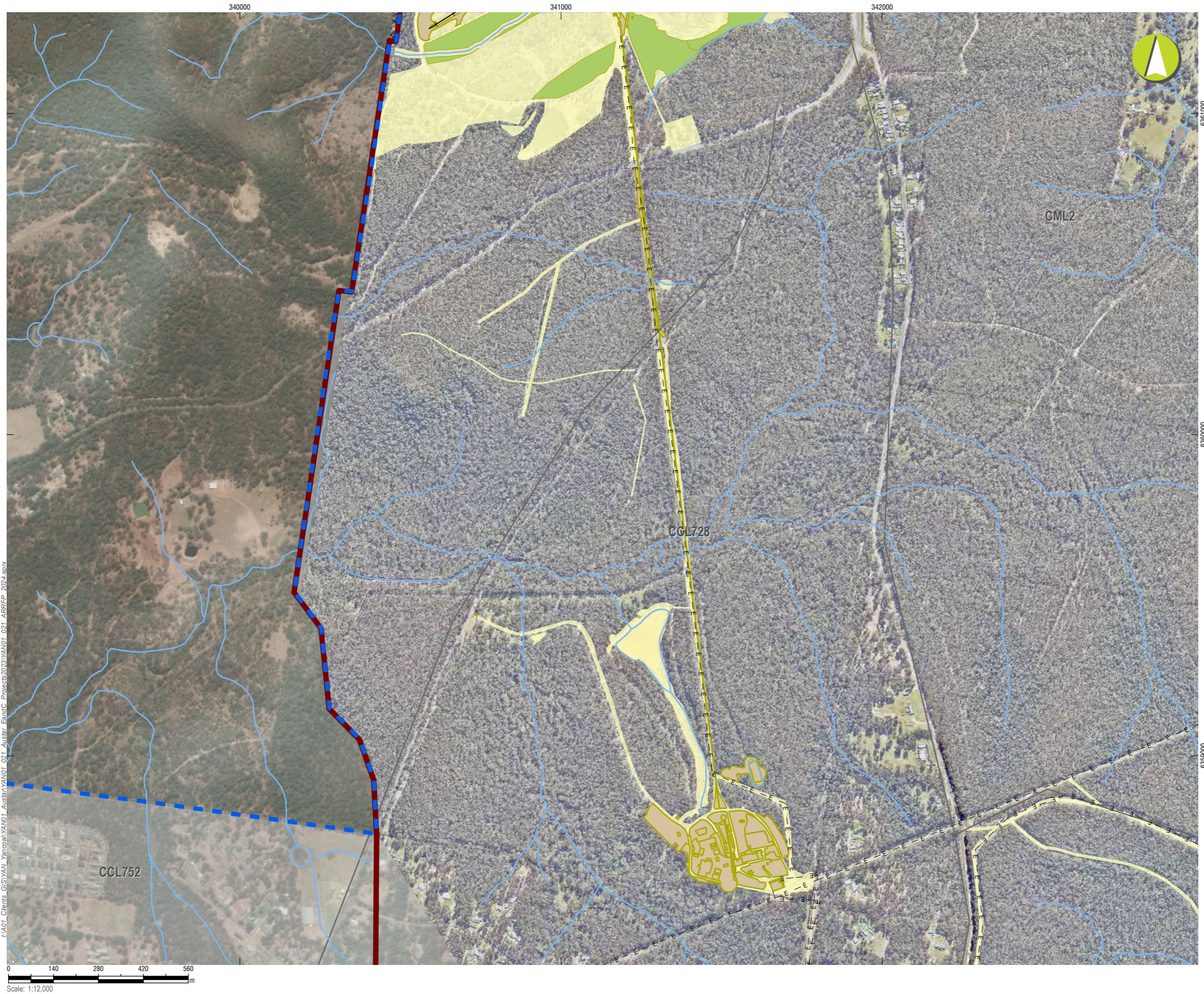
CMA 8 - Bellbird Areas 12 and 13 - Inset

**Mining and Rehabilitation  
Year 2 - FY 2026**

**PLAN 2B**

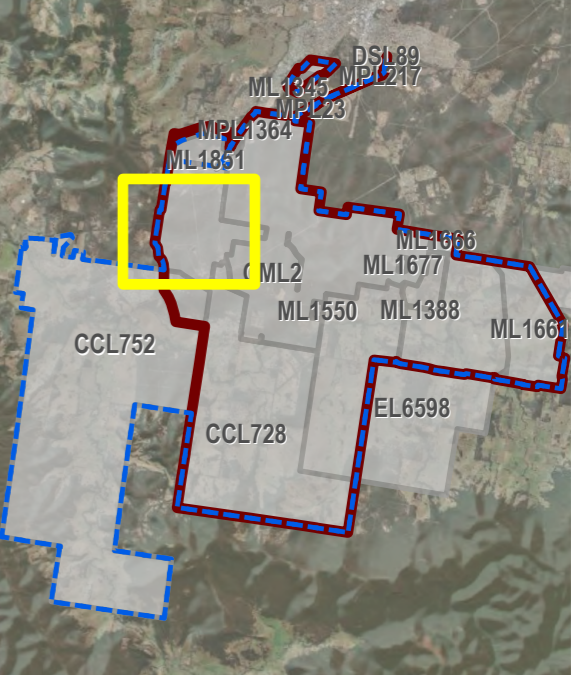
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Auster Mine Plan
- Road
- Railway
- Electricity Transmission Line
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning
- Ecosystem and Land Use Establishment

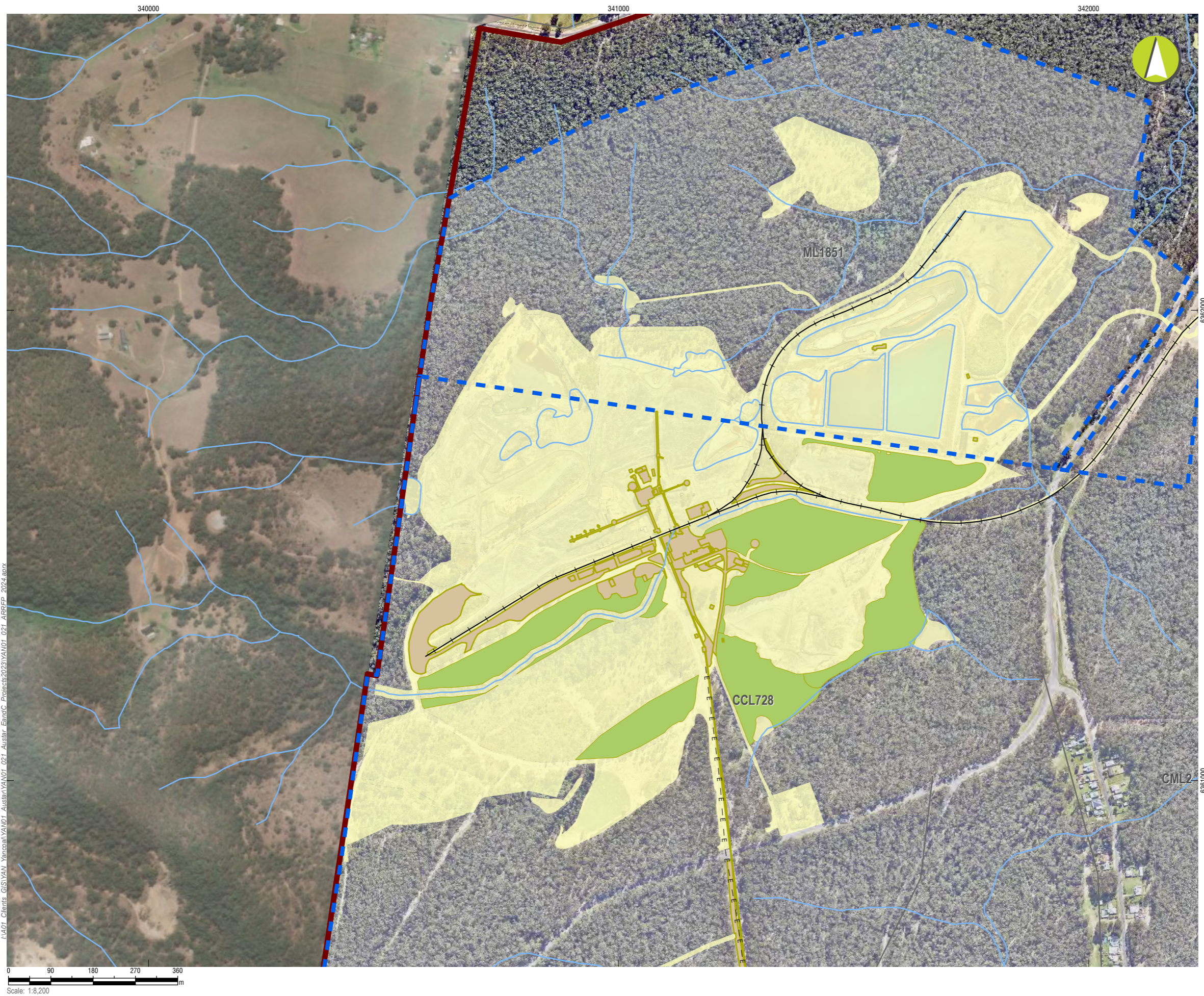


**Austar Coal ARRFP 2024**  
CMA 1 - Austar Pit Top Facilities

**Mining and Rehabilitation**  
Year 3 - FY 2027

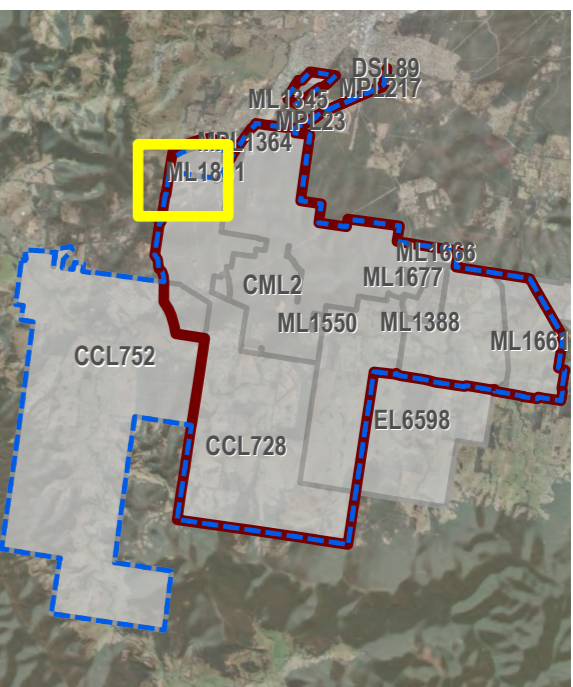
**PLAN 2C**

Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024



**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Road
- Railway
- Electricity Transmission Line
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning
- Ecosystem and Land Use Establishment



**Austar Coal ARRF 2024**  
CMA 2 - Pelton CHPP - Inset 1

**Mining and Rehabilitation  
Year 3 - FY 2027**

PLAN 2C	
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

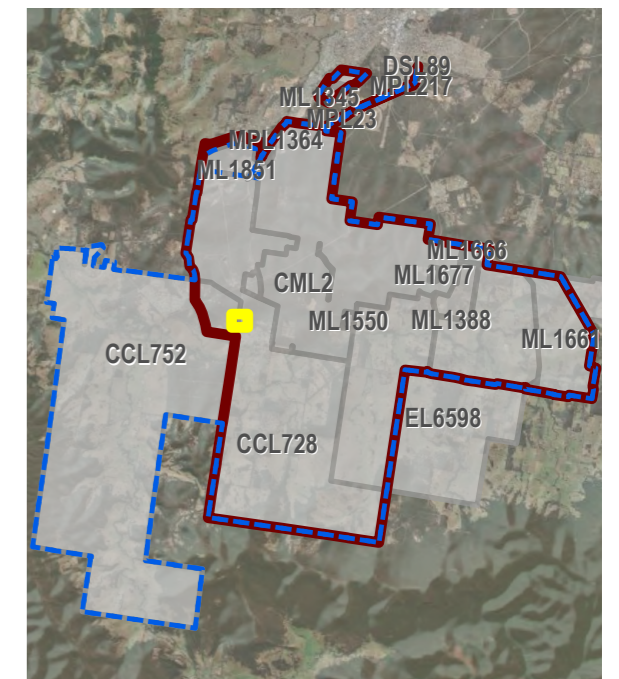
- Project Approval Boundary
- Colliery Holding Boundary
- Auster Mine Plan
- Electricity Transmission Line
- Creek lines

**Current Authorisations**

- Coal - Current Titles

**Current Rehabilitation Phase**

- Previous Disturbance



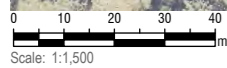
**Austar Coal ARRFP 2024**  
CMA 3 - No.1 Shaft - Inset

**Mining and Rehabilitation**  
Year 3 - FY 2027

**PLAN 2C**

Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

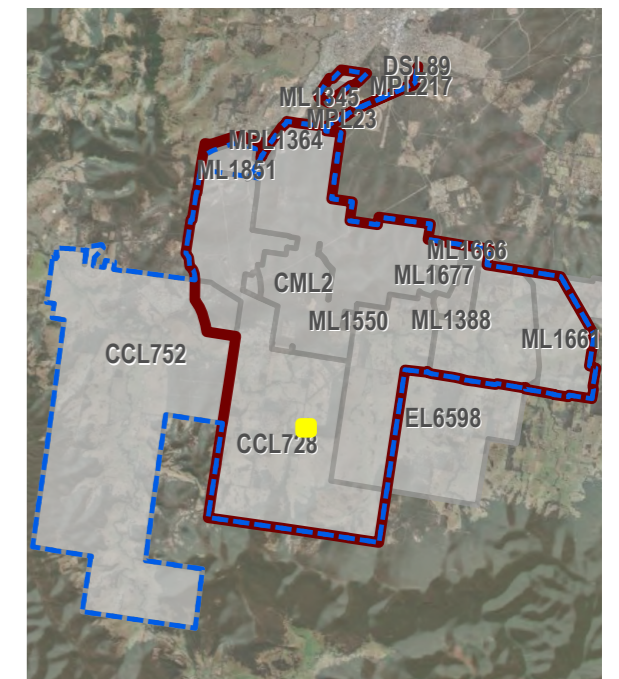
- Project Approval Boundary
- Colliery Holding Boundary
- Auster Mine Plan
- Electricity Transmission Line
- Creek lines

**Current Authorisations**

- Coal - Current Titles

**Current Rehabilitation Phase**

- Previous Disturbance
- Decommissioning



**Auster Coal ARRFP 2024**  
CMA 4 - No.2 Shaft - Inset

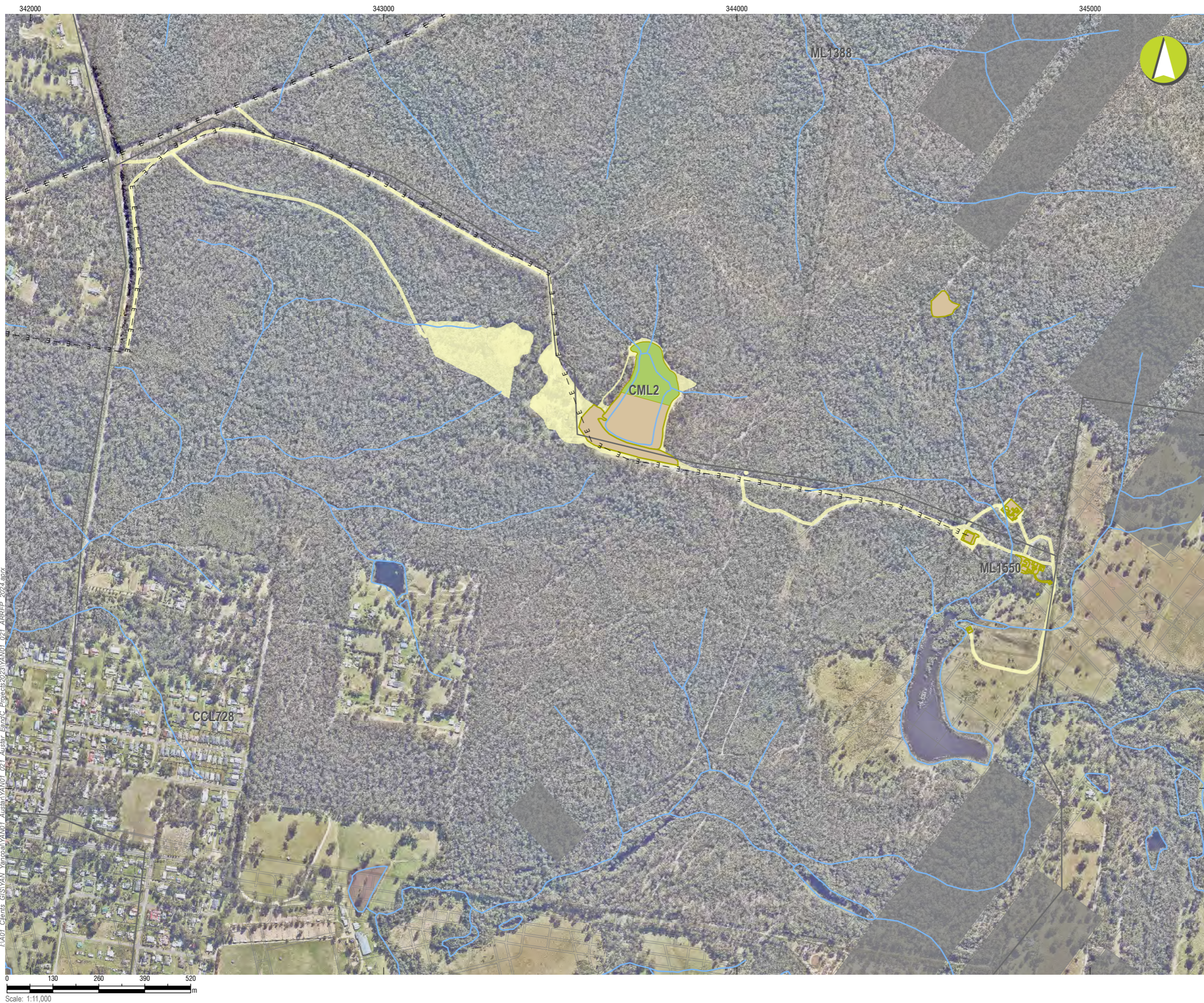
**Mining and Rehabilitation**  
Year 3 - FY 2027

PLAN 2C	
Mine name	Auster Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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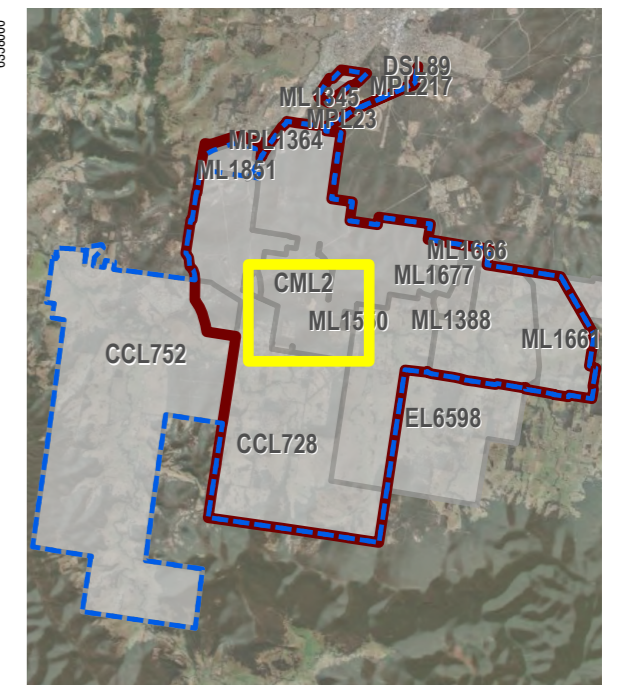
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**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Astar Mine Plan
- Road
- Electricity Transmission Line
- Creek lines
- Completed workings
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Decommissioning
- Ecosystem and Land Use Establishment



**Austar Coal ARRFP 2024**  
CMA 5 - Cessnock No.1 Colliery / Kalingo Infrastructure Area










**Mining and Rehabilitation  
Year 3 - FY 2027**

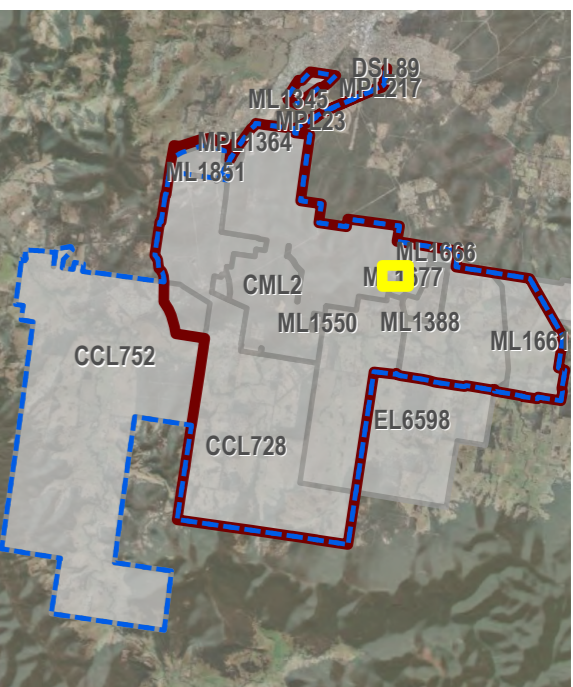
PLAN 2C	
Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024

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**LEGEND**

-  Project Approval Boundary
-  Colliery Holding Boundary
-  Auster Mine Plan
-  Road
-  Creek lines
-  Completed workings
- Current Authorisations**
-  Coal - Current Titles
- Current Rehabilitation Phase**
-  Previous Disturbance
-  Decommissioning



**Auster Coal ARRFP 2024**  
CMA 6 - Kitchener Surface Infrastructure Site

**Mining and Rehabilitation  
Year 3 - FY 2027**

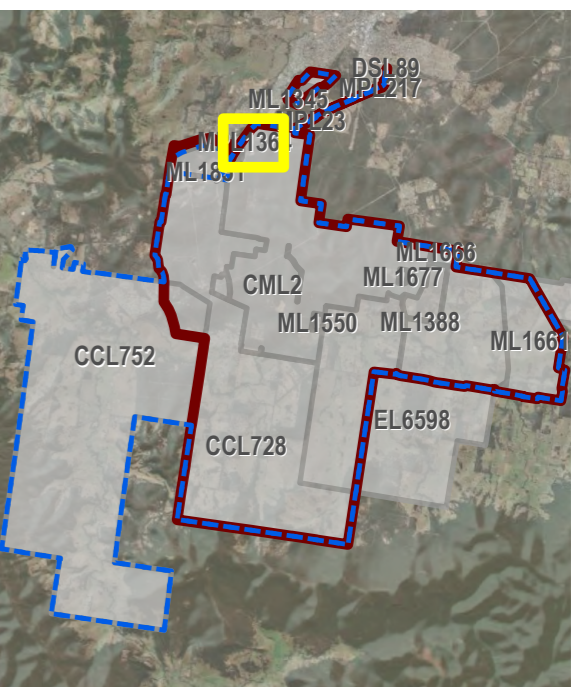
PLAN 2C	
Mine name	Auster Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024





**LEGEND**

- Project Approval Boundary
- Colliery Holding Boundary
- Road
- Railway
- Creek lines
- Current Authorisations**
- Coal - Current Titles
- Current Rehabilitation Phase**
- Previous Disturbance
- Ecosystem and Land Use Establishment



**Austar Coal ARRFP 2024**

CMA 8 - Bellbird Areas 12 and 13 - Inset

**Mining and Rehabilitation  
Year 3 - FY 2027**

**PLAN 2C**

Mine name	Austar Coal Mine
Plan name	
Year of anticipated relinquishment	TBA on final submission
Data theme submission ID No.	XXXX
Spatial Reference	GDA2020 MGA Zone 56
Plan date (date created)	12/09/2024