Wilpinjong Coal Mine

Modification 3 - Pit 8 Extension

Modification Report

Peabody

EXECUTIVE SUMMARY

This document is a Modification Report for a proposed modification to the Wilpinjong Coal Mine Development Consent (SSD-6764), herein referred to as the Modification.

Wilpinjong Coal Pty Ltd (WCPL), a wholly owned subsidiary of Peabody Energy Australia Pty Ltd, is the owner and operator of the Wilpinjong Coal Mine, an approved and existing open cut mining operation.

Wilpinjong Coal Mine

The Wilpinjong Coal Mine is an existing open cut coal mining operation located approximately 40 kilometres north-east of Mudgee within the Mid-Western Regional Local Government Area, in central New South Wales (NSW) (Figures ES-1 and ES-2).

The Wilpinjong Coal Mine produces thermal coal products which are transported by rail to domestic customers for use in electricity generation and/or to port for export. Open cut mining operations are undertaken 24 hours per day, seven days per week.

The approved Wilpinjong Coal Mine includes some eight named open cuts (i.e. Pits 1-8), plus significant ancillary and supporting infrastructure (Figure ES-3).

This infrastructure includes run-of-mine (ROM) coal storage, coal handling and processing, rail spur, rail loading, internal roads, pipelines, electricity distribution, workshops and water management structures.

Strategic Context for the Modification

WCPL has elected to avoid mining of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8, respectively, under Development Consent (SSD-6764).

This avoidance would sterilise more than 7 million tonnes (Mt) of approved ROM coal and reduce the approved Wilpinjong Coal Mine surface development footprint by approximately 50 hectares (ha).

WCPL is proposing to modify Development Consent (SSD-6764) for the Wilpinjong Coal Mine to facilitate extensions of the existing Pit 8 (Pit 8 Extension) within Exploration Licence 9399 and development of associated supporting infrastructure (Figure ES-4).

Mining operations at the Wilpinjong Coal Mine under Development Consent (SSD-6764) are currently approved until 31 December 2033. In this context, the Modification would provide access to additional ROM coal resources to augment coal production and require an additional six months of mining operations to backfill the final voids and shape the final landform (i.e. until 30 June 2034).

The Modification would maximise the use of existing infrastructure and help slow the natural decline in workforce numbers that would otherwise occur as the approved Wilpinjong Coal Mine progressively completes its current working faces (e.g. in Pit 6), by providing an additional working face for the life of the Modification.

Approval of the Modification would therefore support the continuation of ROM coal extraction and employment levels while WCPL evaluates opportunities to develop a future Wilpinjong Coal Mine State Significant Development extension proposal (e.g. in Exploration Licence 9399).

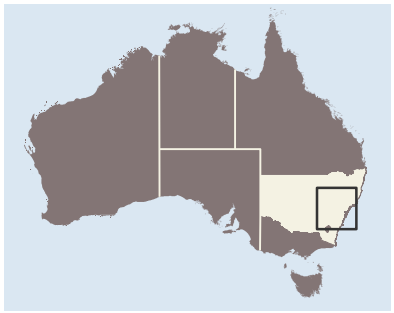
Description of the Modification

The Modification would comprise the following components:

- open cut mining within the Pit 8 Extension area;
- extraction of approximately 14 Mt of ROM coal from the Pit 8 Extension area;
- development of ancillary infrastructure to support open cut mining activities;
- realignment of some public infrastructure to facilitate the Pit 8 Extension (e.g. sections of public roads, local low voltage powerlines and telecommunication services);
- in-pit crushing of waste rock for use as construction and/or stemming material;
- an additional six months of mining operations to backfill final voids and shape the final landform (Figure ES-5) (e.g. mining operations until 30 June 2034); and
- development of additional water management infrastructure (e.g. dams, drains, pumps and pipelines).

The Modification would also include the proposed avoidance of direct disturbance of the existing Cumbo Creek corridor and the Rocky Hill complex (Plate ES-1) which are currently approved to be mined in Pit 4 and Pit 8, respectively (Figure ES-4).

Source: NSW Spatial Services (2025); EnergyCo (2025)



LEGEND
- Major Railway
- Highway
- Renewable Energy Zone (REZ)
- Coalfield

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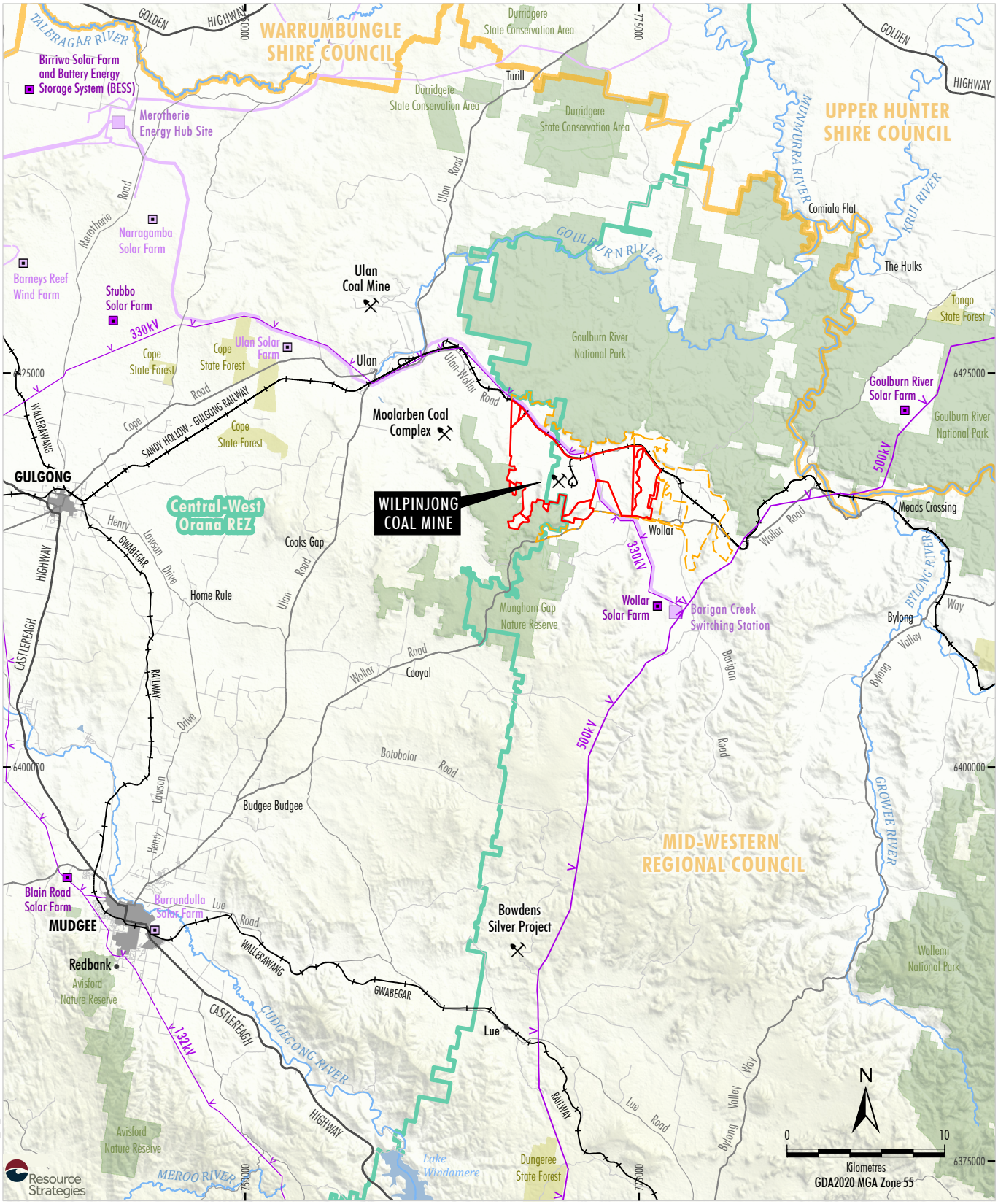
WILPINJONG COAL MINE

Regional Location

Figure ES-1



WIL-22-17 MOD3_ES_202A

Source: NSW Spatial Services (2025); EnergyCo (2025)

LEGEND

- National Park, Nature Reserve or State Conservation Area
- State Forest
- Local Government Area
- Central-West Orana Renewable Energy Zone (REZ)
- Central-West Orana REZ Transmission Project Preferred Corridor
- Central-West Orana REZ Transmission Project Energy Hub
- Proposed Energy Generation Site
- Existing/Approved Energy Generation Site
- High Voltage Electricity Transmission Line
- Mining Lease Boundary
- Exploration Licence Boundary
- Mining Operation

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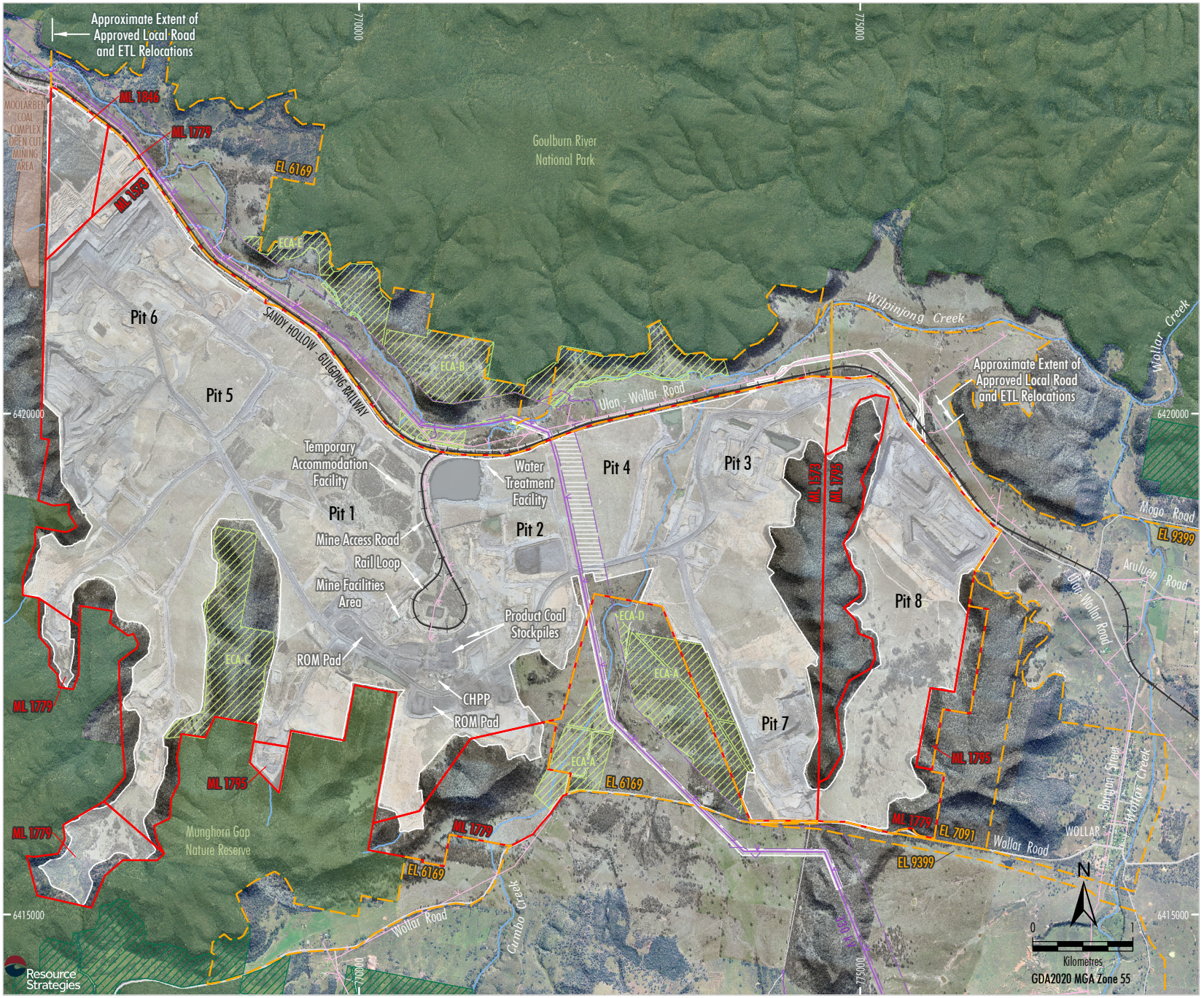
WILPINJONG COAL MINE

Sub-Regional Location

Figure ES-2



LEGEND

- Existing Local Electricity Transmission Line
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Approved/Existing Surface Development Area
- EnergyCo Construction Easement (CWOREZ)

Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Nov 2022)

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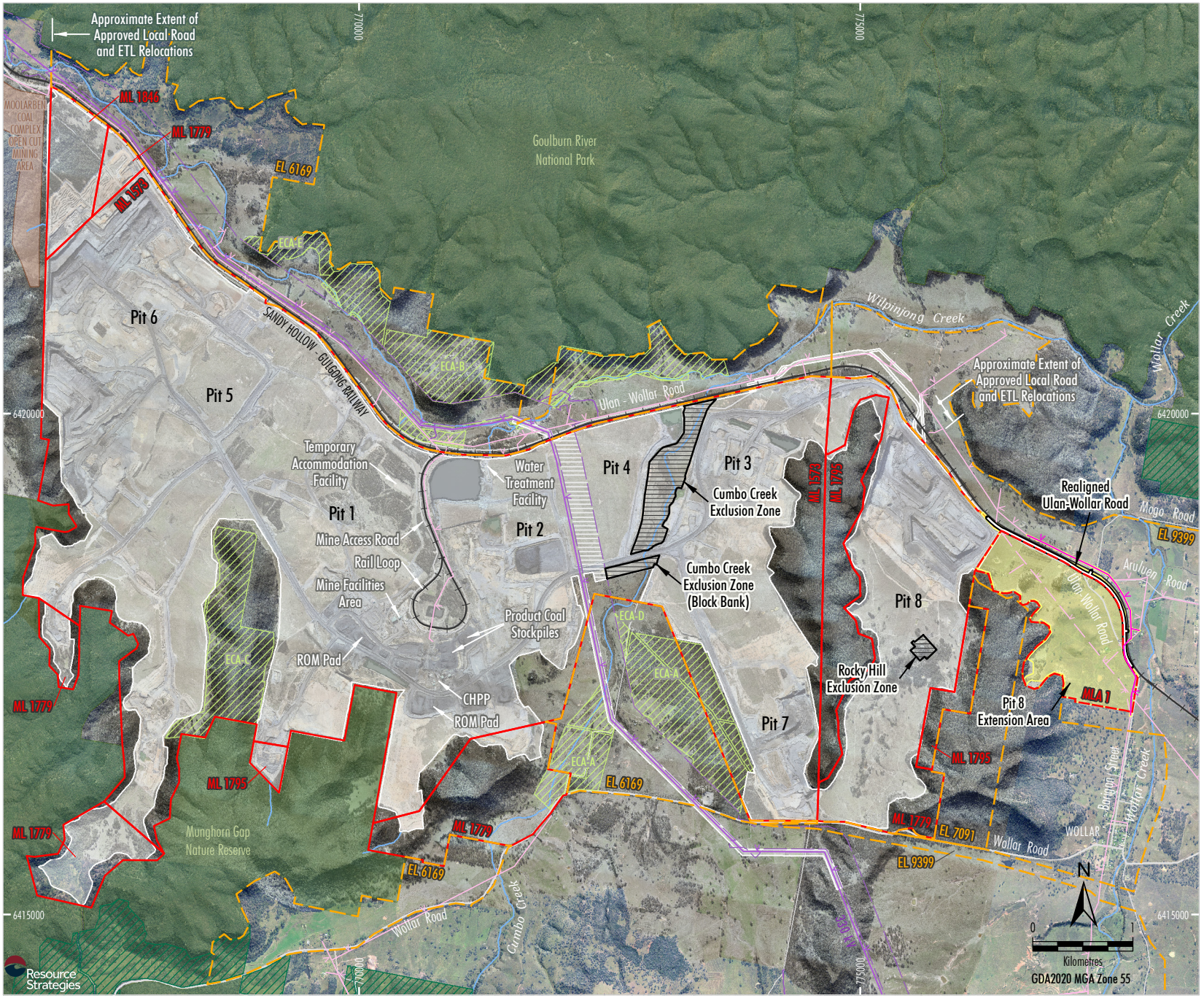
WILPINJONG COAL MINE

Approved General Arrangement

Figure ES-3



LEGEND

- Existing Local Electricity Transmission Line
- Existing Local Electricity Transmission Line to be Removed
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
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- Mine Exclusion Area
- Modification Indicative Development Footprint
- Indicative Public Road Realignment
- Indicative Local Electricity Transmission Line Realignment

Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Nov 2022)

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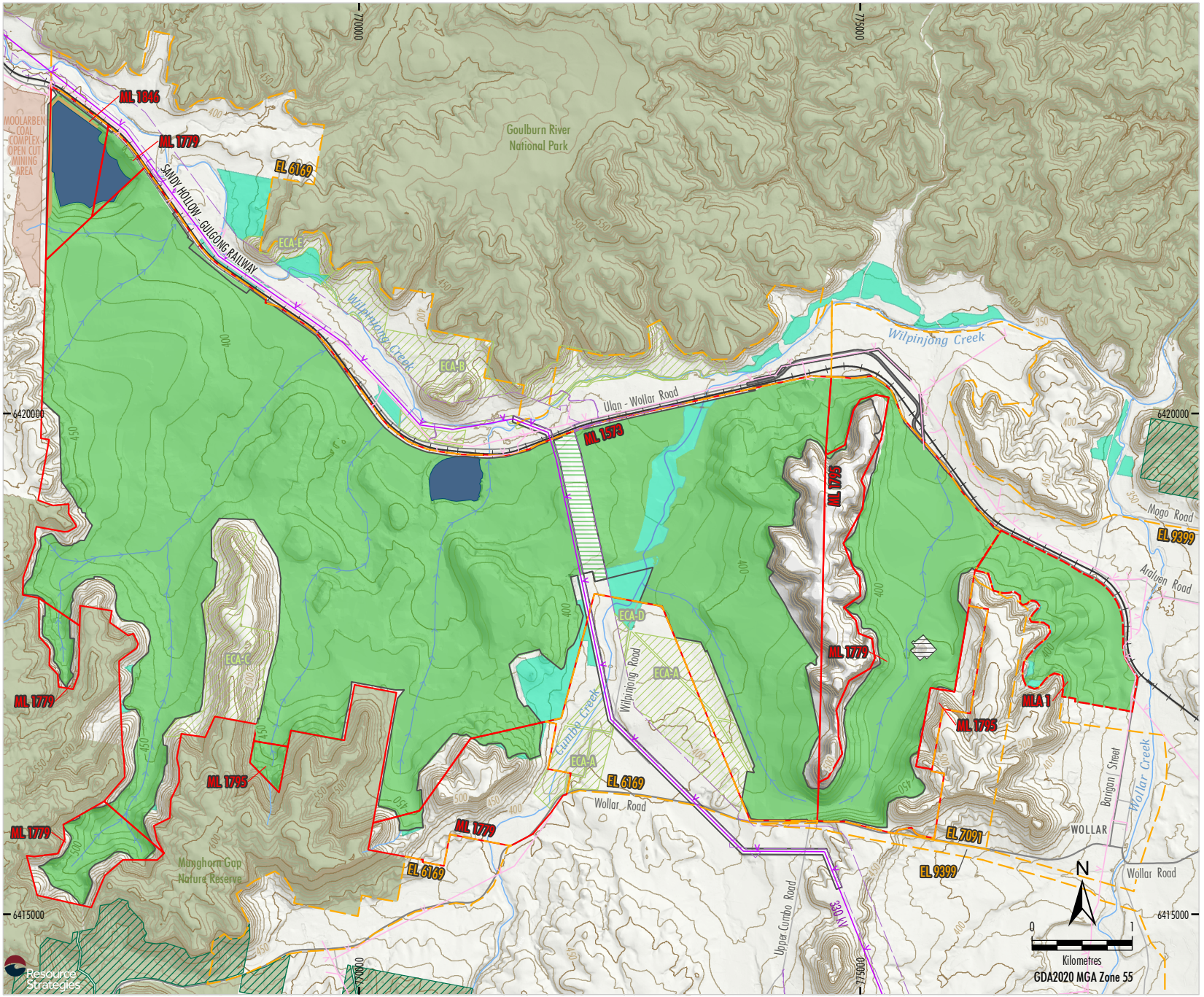
WILPINJONG COAL MINE

General Arrangement
Incorporating the Modification

Figure ES-4

WIL-22-17 MOD3_ES_204A



LEGEND

- Existing Railway
- Existing Local Electricity Transmission Line
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- Avoided Rocky Hill Complex
- Established Rehabilitation
- Established Rehabilitation (EnergyCo Easement)
- Regeneration Area
- Final Void Batter
- Final Void Waterbody
- Drainage Line

Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)

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WILPINJONG COAL MINE

Conceptual Final Landform Incorporating the Modification

Figure ES-5

WIL-22-17 MOD3_ES_205C

Plate ES-1: Rocky Hill Complex Located in Pit 8

There would be no changes to the following approved components of the Wilpinjong Coal Mine for the Modification:

- mining method;
- timeframe for ROM coal production;
- maximum annual ROM coal and waste rock production;
- coal washing and handling systems;
- product coal transport systems;
- water supply and disposal; and
- hours of operation.

Engagement

Contemporary and targeted consultation has been conducted for the Modification. WCPL has met with NSW Department of Planning Housing and Infrastructure, NSW Environment Protection Authority, NSW Department of Primary Industries and Regional Development – NSW Resources, NSW Resources Regulator and NSW Department of Climate Change, Energy, the Environment and Water Environment and Heritage – Heritage NSW regarding the Modification.

WCPL also provided overviews of the Modification to a range of NSW Government agencies including Conservation Programs, Heritage and Regulation within the NSW Department of Climate Change, Energy, the Environment and Water, National Parks and Wildlife Services, Crown Lands, Transport for NSW and NSW Department of Education.

In addition, WCPL has consulted with the Australian Government Department of Climate Change, Energy, the Environment and Water on the Modification proposal, which has been declared a 'controlled action' under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Section 5.2).

WCPL has continued its regular consultation with Mid-Western Regional Council, the Wilpinjong Coal Mine Community Consultative Committee, the Registered Aboriginal Parties Consultation Committee and the combined Cultural Heritage Liaison Sub Committee and Native Title Implementation Committee.

Additional targeted Modification consultation was also undertaken for the Aboriginal Cultural Heritage Assessment and Social Impact Assessment, and with select neighbouring private landholders.

Key comments and issues raised during consultation have been considered and addressed in preparation of this Modification Report.

Environmental Assessment Context

The Pit 8 Extension is modest relative to the approved Wilpinjong Coal Mine open cut pits (Figure 4). The Modification would not substantially change the scale or nature of the Wilpinjong Coal Mine, which would continue to align with the objectives of the NSW Government *Strategic Statement on Coal Exploration and Mining in NSW*.

The continued incremental development of coal resources to the south of the Sandy Hollow-Gulgong Railway adjoining the approved Pit 8, and in close proximity to WCPL's existing facilities is consistent with the nature of the existing mining operation.

WCPL considers that, with the Modification, the material and essential features of the Wilpinjong Coal Mine would remain largely unchanged when compared with the mine incorporating the Wilpinjong Extension Project as approved in 2017.

Key Environmental Assessment Outcomes

WCPL has reviewed the potential environmental impacts of the Modification to identify the key issues requiring assessment. The key environmental issues are summarised in Table ES-1.

Table ES-1
Key Outcomes of the Environmental Review

Environmental Aspect	Summary of Key Environmental Assessment Conclusions	Key Mitigation Measures for the Modification
Operational Noise	With the implementation of WCPL's existing Noise Management Plan and noise management measures (including real-time monitoring and application of operational controls under adverse weather conditions), no noise exceedances are predicted at any private residences without existing negotiated noise agreements.	WCPL would relocate or shutdown some mobile equipment as may be required (e.g. during adverse weather conditions) to maintain operational noise compliance at the nearest private receivers where Development Consent (SSD-6764) noise criteria apply. WCPL would continue to implement the existing real-time noise management system and associated response protocols in the Noise Management Plan. Wilpinjong Coal Mine would continue to implement existing negotiated noise agreements with the three nearest private receivers (i.e. where Development Consent [SSD-6764] noise criteria do not apply).
Blasting	In the absence of blast design controls, blasting in the Pit 8 Extension area could potentially result in exceedances of applicable blasting criteria. A range of maximum instantaneous charges have been evaluated and indicative compliance setback distances determined for differing blast vibration and overpressure criteria.	WCPL would continue to apply blast management measures to maintain blasting compliance at applicable blast receiver types (e.g. private residences, infrastructure and sensitive geological structures). The Blast Management Plan would be updated to include the results of geotechnical investigations and setting of applicable site-specific blast vibration criteria for sensitive geological structures located in close proximity to the Pit 8 Extension.
Air Quality	Air quality modelling indicates that no exceedances of applicable Development Consent (SSD-6764) air quality criteria are predicted to arise at any privately-owned residences as a result of the Modification.	The real-time air quality monitoring system and response protocols detailed in the Air Quality Management Plan would continue to be implemented, including proactive and reactive management measures.
Greenhouse Gas	Approved projected greenhouse gas emissions of the Wilpinjong Coal Mine are already included in NSW's 2024 business as usual greenhouse gas projections. The proposed Pit 8 Extension is also included in NSW's 2024 Scenario 3 greenhouse gas projections. As the mine has relatively low fugitive gas concentrations, approximately 75 percent of the Scope 1 emissions of the Wilpinjong Coal Mine incorporating the Modification would arise from on-site combustion of diesel. Based on WCPL's internal projections, WCPL would largely comply with the current Safeguard Mechanism greenhouse gas intensity decline rates to 2033 because the Wilpinjong Coal Mine has a significantly lower greenhouse gas intensity than the industry average.	As the Wilpinjong Coal Mine is approved to extract ROM coal until 2033 and the Modification coal production would also occur within this timeframe with no material augmentation of mobile equipment or fixed plant required, there are limited opportunities to reasonably and feasibly reduce Scope 1 greenhouse gas emissions. Notwithstanding, WCPL would prepare a Climate Change Mitigation and Adaptation Plan for the Modification. As part of this analysis WCPL would evaluate the potential marginal abatement cost of adoption of premium diesel fuel for the Modification. WCPL would continue to comply with its obligations to report greenhouse gas emissions and energy consumption/production under the Commonwealth *National Greenhouse and Energy Reporting Act 2007* and the associated Safeguard Mechanism.
Water Resources	The Modification would not result in a material change to the approved groundwater and surface water impacts of the Wilpinjong Coal Mine. As the Modification includes the exclusion of approved mining from the existing Cumbo Creek corridor, approved impacts upon the existing creek alignment would be reduced.	WCPL would maintain appropriate groundwater and surface water licences in accordance with the relevant water sharing plans. Water monitoring and management at the Wilpinjong Coal Mine would continue to be undertaken in accordance with an approved Water Management Plan.

Table ES-1 (Continued)
Key Outcomes of the Environmental Review

Environmental Aspect	Summary of Key Environmental Assessment Conclusions	Key Mitigation Measures for the Modification
Biodiversity	The Modification would result in the disturbance of approximately 145 ha of native vegetation, comprising 20 ha of native woodland/forest and 125 ha of derived native grassland. The impact on threatened species and communities resulting from the Modification would not constitute a Serious and Irreversible Impact under the NSW *Biodiversity Conservation Act 2016*. The cumulative impact on threatened species and communities resulting from carrying out the overall Wilpinjong Coal Mine as proposed to be modified (including previous disturbance) would not/is not likely to constitute a Serious and Irreversible Impact.	WCPL would address NSW offset requirements consistent with the NSW Biodiversity Offsets Scheme. WCPL would also implement a number of additional biodiversity management measures, including: • an artificial bat habitat creation programme; • regeneration of the Cumbo Creek mining exclusion area with native vegetation; • planting of box gum woodland tree species within an area of cleared grassland adjacent to the Modification (approximately 50 ha); and • rehabilitation of the Pit 8 Extension area with native woodland vegetation. Biodiversity would continue to be managed in accordance with the Biodiversity Management Plan, which would be updated to incorporate the Modification.
Aboriginal Cultural Heritage	The Modification would avoid the Rocky Hill complex (high cultural significance), and any Aboriginal cultural heritage material associated with the Cumbo Creek open cut exclusion area. The Modification disturbance footprint was reduced to avoid two sites of moderate-high significance WCP1129 (rock shelter with potential archaeological deposit and artefacts) and WCP1143 (subsurface artefact scatter and potential archaeological deposit). Some 12 Aboriginal cultural heritage sites remain within the Modification footprint and would be disturbed (nine of low scientific significance and three of moderate-high scientific significance). Three sites are also located within 100 metres of the Modification surface disturbance area.	Aboriginal heritage would continue to be managed in accordance with the Aboriginal Cultural Heritage Management Plan, which would be updated to incorporate the Modification. Sites impacted by the Modification would be subject to site salvage, sub-surface test work for relevant potential archaeological deposits, and sensitive sites located in close proximity to the Modification would be fenced to avoid accidental damage and rock shelters proximal to open cut blasting would be managed in accordance with the Blast Management Plan.
Social and Community Infrastructure	The Modification represents a continuation of existing mining at the Wilpinjong Coal Mine and most social impacts are therefore continuations of existing experiences, and mostly at similar levels. At a regional level, social impacts are predominantly positive.	Social impacts of the Wilpinjong Coal Mine would continue to be managed in accordance with the Social Impact Management Plan, which would be updated to incorporate the Modification. Fears or aspirations related to potential future expansions of the Wilpinjong Coal Mine would be addressed if and when WCPL progresses any future State Significant Development application.
Economics	The Modification includes relinquishment of some coal from the approved mine and seeks to offset this with 14 Mt of ROM coal from the Pit 8 Extension, resulting in a net benefit to NSW of $21 million Net Present Value. The Modification would also benefit the existing Wilpinjong Coal Mine workforce, who would be employed in higher numbers through to 2033.	A Mine Closure Plan would be developed for the Wilpinjong Coal Mine to address the potential regional economic impacts of closure. WCPL would also continue to investigate opportunities to further extend the life of the Wilpinjong Coal Mine through a separate State Significant Development application.

The review indicates that the environmental management and monitoring measures currently implemented by WCPL at the Wilpinjong Coal Mine could continue to be effectively applied to minimise the potential impacts on existing environmental values and the nearest private residences.

The environmental reviews indicated the Modification would not result in a significant increase in potential environmental impacts compared to the approved the Wilpinjong Coal Mine. It is considered that the consent authority can be satisfied that the environmental impacts of the proposed modification are acceptable, subject to compliance with the environmental performance conditions of Development Consent (SSD-6764).

Summary of Modification Report Findings

The Modification would not significantly increase potential environmental impacts in comparison to the approved Wilpinjong Coal Mine.

The Modification would facilitate the following key socio-economic benefits:

- it would reduce the natural rate of workforce decline at the Wilpinjong Coal Mine and facilitate continued local and regional employment and community contributions;
- direct and indirect flow on economic effects of increased ROM coal production over the productive life of the Modification (i.e. 2027-2033);
- construction of the realigned Ulan-Wollar Road on an improved physical alignment and upgraded pavement condition (relative to existing local roads);
- continuation of existing Voluntary Planning Agreement payments to the Mid-Western Regional Council; and
- incremental increases in royalty payments to the NSW government from additional WCPL coal product sales in the period 2027-2033[1].

The Economic Assessment indicates the Modification would result in a total net benefit to NSW of $21 million in Net Present Value terms.

In a scenario where the Modification is not approved:

- an average of approximately 25 construction jobs (peak 65) would not be created in 2027 to construct the relocated public infrastructure;
- approximately 150 ha of land disturbance associated with the Modification would not occur;
- extraction of more than 7 Mt of ROM coal and disturbance of approximately 50 ha associated with the approved mining of the Cumbo Creek corridor and the Rocky Hill complex could still occur;
- some 14 Mt of ROM coal would not be extracted from the Pit 8 Extension area;
- an additional six months of mining operations to backfill voids and shape the final landform (i.e. to 30 June 2034) would not occur; and
- operational employment and associated direct flow-on economic effects of the Wilpinjong Coal Mine would begin to decline from approximately 2028 and would cease in 2033.

The Modification Report has demonstrated that WCPL could continue to operate the Wilpinjong Coal Mine (as modified) in accordance with existing criteria and performance measures in Development Consent (SSD-6764) and the existing environmental management framework with only minor augmentation of the existing Development Consent conditions.

In weighing up the main environmental impacts (costs and benefits) associated with the proposal, as assessed and described in this Modification Report, the Modification, on balance, is considered to have significant merit and be in the public interest. This is consistent with the key conclusions reached by the NSW Planning and Assessment Commission in approving the Wilpinjong Coal Mine incorporating the Wilpinjong Extension Project in 2017.

[1] As of 31 March 2025, the Wilpinjong Coal Mine has contributed more than $875 million in royalty payments to the NSW Government for State infrastructure and services.

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1 INTRODUCTION

This document is a Modification Report for a proposed modification to the Wilpinjong Coal Mine Development Consent (SSD-6764), herein referred to as the Modification.

Wilpinjong Coal Pty Ltd (WCPL), a wholly owned subsidiary of Peabody Energy Australia Pty Ltd (Peabody), is the owner and operator of the Wilpinjong Coal Mine, an approved and existing open cut mining operation.

This Modification is sought under section 4.55(2) of the New South Wales (NSW) *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 APPLICANT'S DETAILS

The Applicant for the Modification is:

Wilpinjong Coal Pty Ltd
Locked Bag 2005
Mudgee NSW 2850

The Wilpinjong Coal Mine site webpage can be found on the Peabody website:

https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Wilpinjong-Mine

The Wilpinjong Coal Mine is located at 1434 Ulan-Wollar Road, Wilpinjong NSW 2850.

1.2 SUMMARY OF THE APPROVED WILPINJONG COAL MINE

1.2.1 Background

The Wilpinjong Coal Mine is an existing open cut coal mining operation located approximately 40 kilometres (km) north-east of Mudgee within the Mid-Western Regional Local Government Area (LGA), in central NSW (Figures 1 and 2).

The Wilpinjong Coal Mine produces thermal coal products which are transported by rail to domestic customers for use in electricity generation and/or to port for export. Open cut mining operations are undertaken 24 hours per day, seven days per week.

The approved Wilpinjong Coal Mine includes some eight named open cuts (i.e. Pits 1-8), plus significant ancillary and supporting infrastructure (Figure 3).

This infrastructure includes run-of-mine (ROM) coal storage, coal handling and processing, rail spur, rail loading, internal roads, pipelines, electricity distribution, workshops and water management structures.

1.2.2 NSW Approval History

The Wilpinjong Coal Mine originally operated under Project Approval (PA 05-0021) that was granted by the Minister for Planning under Part 3A of the EP&A Act on 1 February 2006.

On 24 April 2017, WCPL was granted Development Consent (SSD-6764) for the Wilpinjong Extension Project. This Consent provides for the continued operation of the Wilpinjong Coal Mine at rates of up to 16 million tonnes per annum (Mtpa) of ROM coal, until 2033, and provides access to approximately 800 hectares (ha) of open cut extensions.

Development Consent (SSD-6764) has superseded the Project Approval (PA 05-0021), which was surrendered by WCPL on 8 April 2020.

WCPL is seeking to modify Development Consent (SSD-6764) to facilitate an extension of the existing Pit 8 (Pit 8 Extension) within Exploration Licence (EL) 9399 (Figure 4) and development of associated supporting infrastructure and facilities.

This Modification is sought under section 4.55(2) of the EP&A Act. This Modification Report has been prepared considering the *State Significant Development Guidelines* (NSW Department of Planning, Housing and Infrastructure [DPHI], 2024a), in particular *Appendix E – preparing a modification report* (NSW Department of Planning and Environment [DPE], 2022a).

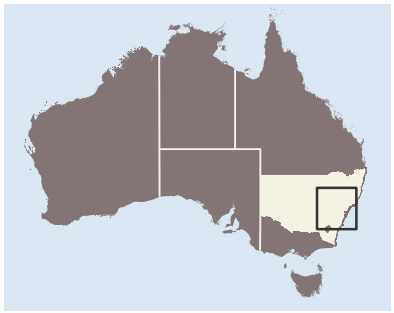
1.2.3 Commonwealth Approvals History

Components of the existing Wilpinjong Coal Mine have previously been referred and/or approved under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Wilpinjong Coal Mine (EPBC 2005/2309) was determined to be 'not a controlled action'. The Wilpinjong Extension Project (EPBC 2015/7431) was determined to be a 'controlled action' (controlling provisions of listed threatened species and communities, and water resources), and subsequently approved on 8 August 2017.

In January 2025, an action associated with the Modification was referred to the Commonwealth Minister (EPBC 2025/10105). On 1 May 2025, a delegate of the Commonwealth Minister determined that the proposed action is a 'controlled action' for the purposes of the EPBC Act. The action is to be assessed under the bilateral agreement between the Commonwealth and NSW (Section 4.4).

Source: NSW Spatial Services (2025); EnergyCo (2025)



LEGEND
- Major Railway
- Highway
- Renewable Energy Zone (REZ)
- Coalfield

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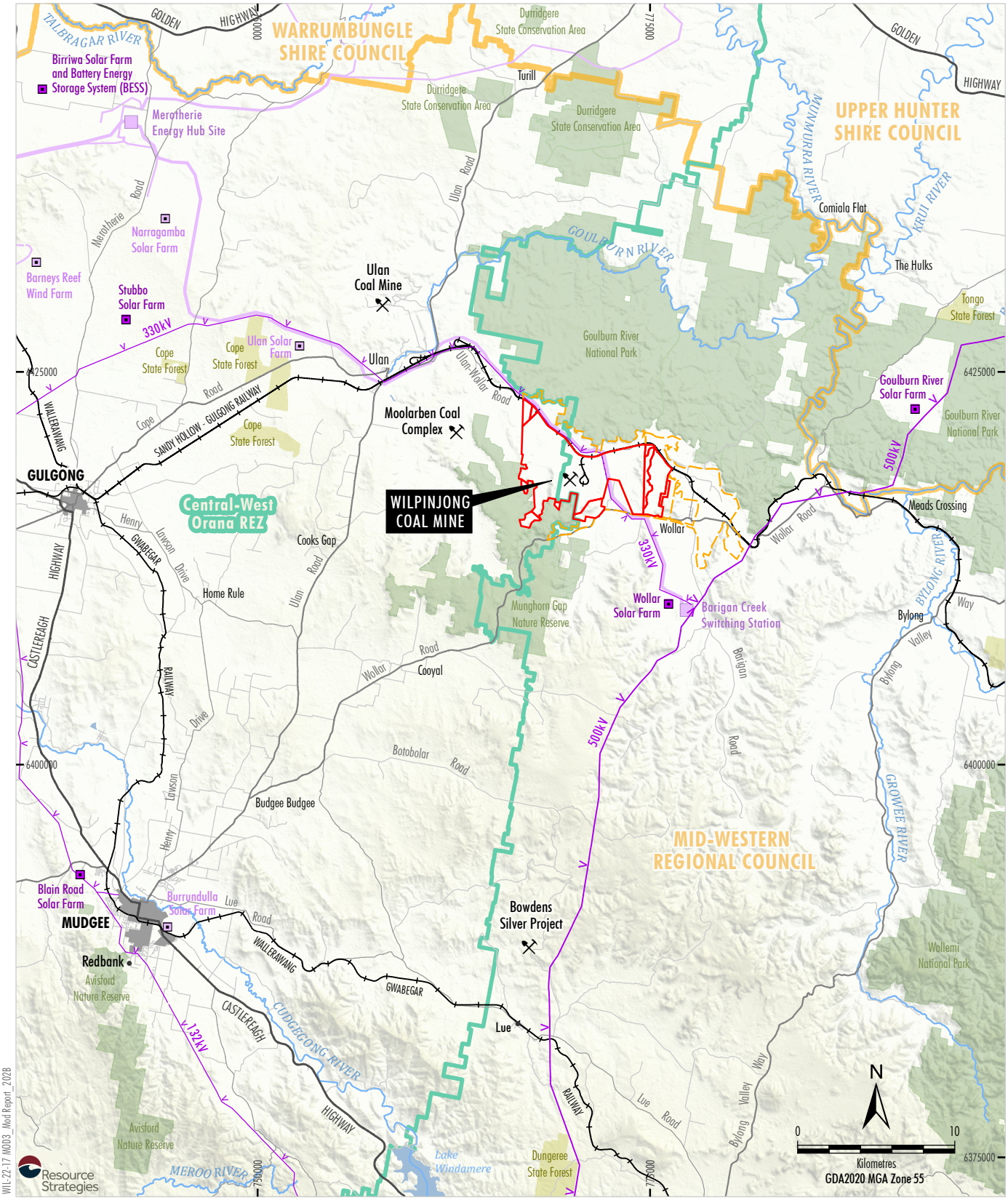
WILPINJONG COAL MINE

Regional Location

Figure 1



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LEGEND

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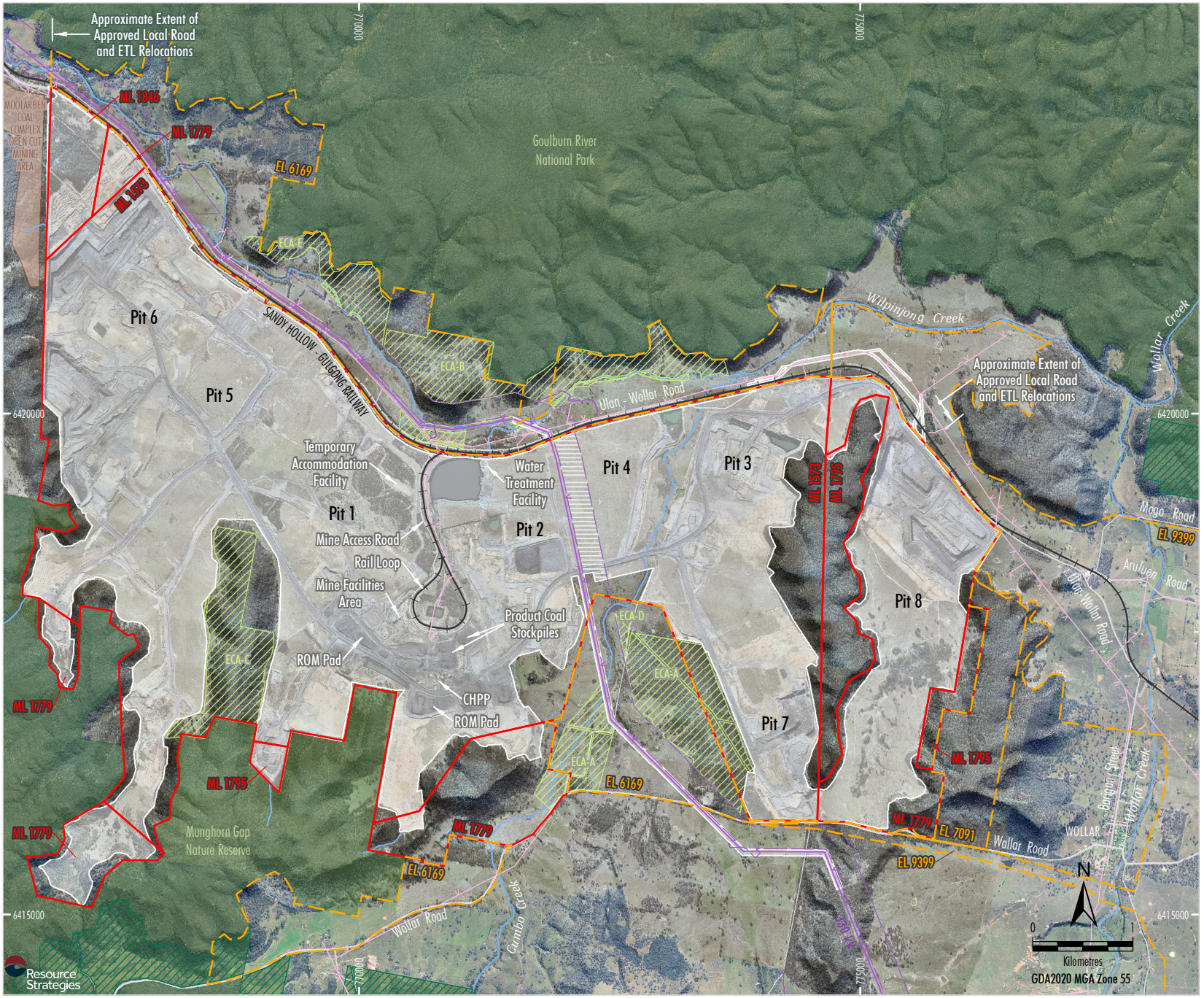
WILPINJONG COAL MINE

Sub-Regional Location

Figure 2



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Orthophoto Mosaic: WCPL (July 2024 - Nov 2022)

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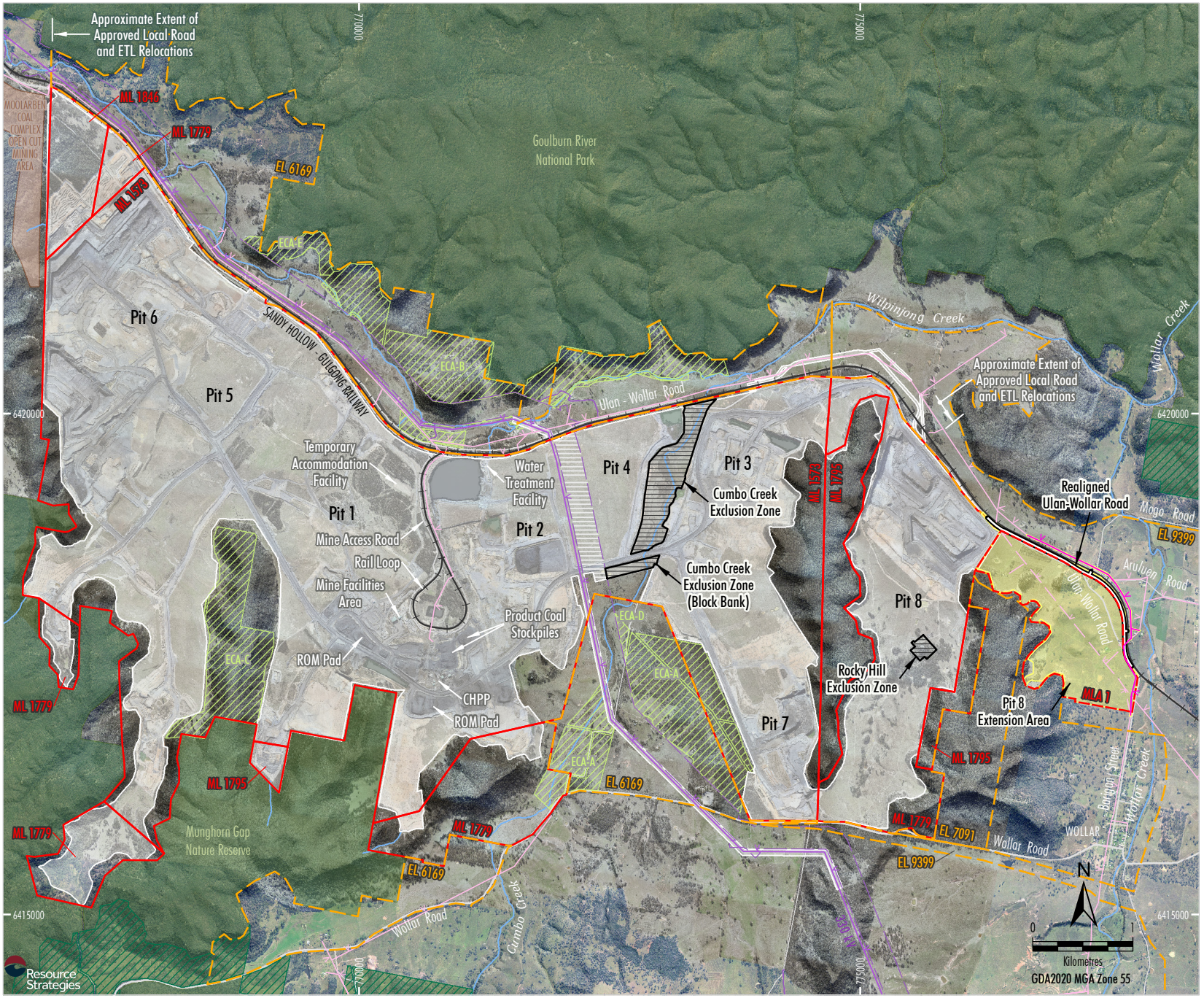
WILPINJONG COAL MINE

Approved General Arrangement

Figure 3



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Orthophoto Mosaic: WCPL (July 2024 - Nov 2022)

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WILPINJONG COAL MINE

General Arrangement
Incorporating the Modification

Figure 4

1.2.4 Mining Operations

Existing Mining Areas

The Wilpinjong Coal Mine is located within the Mid-Western Regional LGA, generally within the existing Mining Leases (ML) 1573, ML 1779, ML 1795 and ML 1846 (Figure 3).

Open cut coal mining at the Wilpinjong Coal Mine has been, or is currently undertaken in Pit 1 through to Pit 8, and early mining areas are under differing stages of mine rehabilitation.

Open Cut Mining Sequence

The Wilpinjong Coal Mine extracts ROM coal that is either processed on-site at the Coal Handling and Preparation Plant (CHPP) or bypassed directly to product stockpiles.

Coal products are transported by rail on the existing Sandy Hollow-Gulgong Railway to domestic energy generators and to the Port of Newcastle for export.

Conventional open cut mining methods are used at the Wilpinjong Coal Mine, with a low strip ratio allowing for relatively rapid pit advance. The general sequence of open cut mining is as follows:

1. Vegetation clearance and removal (including mulching).
2. Topsoil/subsoil stripping by mobile plant. Stripped topsoil is used directly in progressive rehabilitation or is placed in stockpiles for later re-use.
3. Drilling and blasting of overburden, with some waste rock 'cast blast' into the adjacent mined-out strip.
4. Dozer pushing of blasted overburden into the adjacent mined-out strip to expose the target seam, or removal with excavator and haul truck.
5. Drilling and blasting plus ripping of coal/parting material.
6. Mining of exposed coal seams by excavator and loading into haul trucks for transport directly to the ROM dump hopper or ROM pads.
7. Interburden/parting material is then drilled and blasted, ripped, pushed or excavated and hauled to expose the underlying working coal sections.
8. Coarse rejects and tailings from the CHPP are selectively placed within mine voids, waste rock emplacements and approved tailing storage facilities.
9. Hauled overburden/interburden/parting material is strategically placed within mine voids and associated waste rock emplacements to develop the final landform.
10. Progressive landform profiling and rehabilitation of mine voids and waste rock emplacements. In some areas, temporary rehabilitation is undertaken to stabilise landforms until further mining operations are carried out in the future.

Plate 1 illustrates the strip mining method at the Wilpinjong Coal Mine (active mining in foreground and rehabilitation in background).

Plate 1: Active Mining in Pit 6

ROM Coal Storage and Management

ROM coal is either hauled directly to a ROM dump hopper and conveyed to the CHPP for processing or delivered to ROM pads and later rehandled to the ROM dump hopper using a front-end loader and trucks (Plate 2). The existing capacity of the ROM pads is over 2.5 million tonnes (Mt).

Due to previous spontaneous combustion events, WCPL has implemented a risk identification system, whereby coal stockpiles that have a higher propensity to spontaneously combust are closely monitored (including physical inspections and/or use of thermal probes to identify areas of heating). In addition, after select ROM coal types have been stockpiled on-site for a designated period, they are prioritised for washing in the CHPP.

Plate 2: Front End Loader Handling Coal

Mobile Equipment and Supporting Equipment/Plant

The mobile equipment used for approved operations at the Wilpinjong Coal Mine includes up to six major excavators, approximately 30 haul trucks, more than 20 dozers and a wide range of supporting equipment such as front-end loaders, drills, graders, minor excavators and water carts.

Other general plant used to support the mobile equipment include, but are not limited to, service vehicles, pumps and lighting plant.

1.2.5 Coal Processing and Rejects Management

The existing CHPP has a design capacity of approximately 1,400 tonnes per hour ROM coal feed and includes:

- coal sizing;
- screening;
- de-sliming; and
- washing.

Product coal is loaded onto trains 24 hours per day, seven days per week railing east to domestic power generation customers and the Port of Newcastle for export.

CHPP rejects consist of fine rejects and slimes, as well as coarse rejects. Fine rejects and slimes from the thickener are dewatered in the tailings filter press to allow co-disposal of tailings with coarse rejects and to increase water efficiency.

Rejects are placed so that there is sufficient coverage by non-acid forming (NAF) overburden to manage its geochemical characteristics (i.e. acid generation potential). This also assists to minimise the potential for spontaneous combustion within rehabilitated waste rock emplacements.
When the tailings filter press is not operating, tailings are directed to purpose-built tailings storage facilities constructed within mine voids, or may alternatively be transferred to temporary holding and dewatering cells to allow subsequent co-disposal.

Tailings Dams 6 and 7 are active tailings facilities that are used when the tailings filter press is not operating. The other Tailings Dams have either been rehabilitated (Tailings Dams 1 and 2) or are undergoing capping following consolidation (Tailings Dams 3, 4 and 5). Capped and currently active tailing storages are located in Pit 2.

Where relevant, once tailings dams are at capacity, they are progressively capped with overburden material to a minimum depth of cover of 2 metres (m) prior to final profiling and rehabilitation.

1.2.6 Waste Rock Management

Overburden material that is not able to be efficiently ripped and excavated by mobile equipment is drilled and blasted with some overburden material being ‘cast blast’ into the adjacent mined-out strip.

Hauled overburden/interburden/parting material is strategically placed within mine voids and associated waste rock emplacements to develop the final landform. The final landform levels and topography of the backfilled mine landforms are designed to generally approximate the form of pre-mining topography and are designed with an allowance for the long-term settlement of mine overburden and tailings.

Plate 3 illustrates in-pit waste rock emplacement by haul truck.

Plate 3: In-pit Waste Rock Emplacement by Haul Truck

Temporary Emplacements

Unlike many coal mines in NSW, the Wilpinjong Coal Mine does not utilise out-of-pit waste rock emplacements and emplaces waste in-pit to minimise native vegetation clearance and haulage distances. Because of the requirement to backfill multiple pit voids to achieve the approved final landform, some temporary elevated in-pit waste rock emplacements are constructed.

The requirement to design and construct Pit 8 to remain free-draining (a WCPL commitment to address NSW Planning Assessment Commission [PAC] feedback during the Wilpinjong Extension Project assessment process) has led to an increased need for temporary emplacements in the nearby Pits 3 and 7.

These emplacements are developed as close as practical to the ultimate emplacement destination and are temporarily rehabilitated, prior to being rehandled into mine voids later in the mining sequence.

1.2.7 Water Management

The existing water management strategy at the Wilpinjong Coal Mine is based on the containment and re-use of mine water as well as the control of sediment that may be potentially carried with runoff from disturbed areas such as the waste rock emplacements or areas cleared in advance of mining. Undisturbed area runoff is separated from disturbed area runoff by up-catchment diversions, where reasonable and feasible.

Water is required to operate the CHPP, for dust suppression on haul roads, washdown of mobile equipment, and for fixed dust emission control sprays.

The main water sources for the operation are:

- recovery from tailings (as return water or from the tailings filter press);
- groundwater inflows into the open cut mine voids;
- catchment runoff and infiltration;
- groundwater extraction from licensed bores (when required); and
- potable water imported to site.

Existing and/or approved water management infrastructure at the Wilpinjong Coal Mine includes:

- a water treatment facility including a reverse osmosis plant;
- water storages, including a raw water dam, dedicated recycled water dam and clean water dam[2] (Figure 5);
- dedicated in-pit tailings storages;
- up to 19 water supply bores and associated pipelines; and
- pumps and pipelines for Environment Protection Licence (EPL) discharge, on-site transfers and irrigation.

In accordance with EPL 12425, Wilpinjong Coal Mine is currently permitted to discharge up to 6.5 megalitres per day (ML/day) of excess mine water which is treated in a reverse osmosis plant and discharged to Wilpinjong Creek, providing the discharge meets certain quality criteria as stated in the licence.

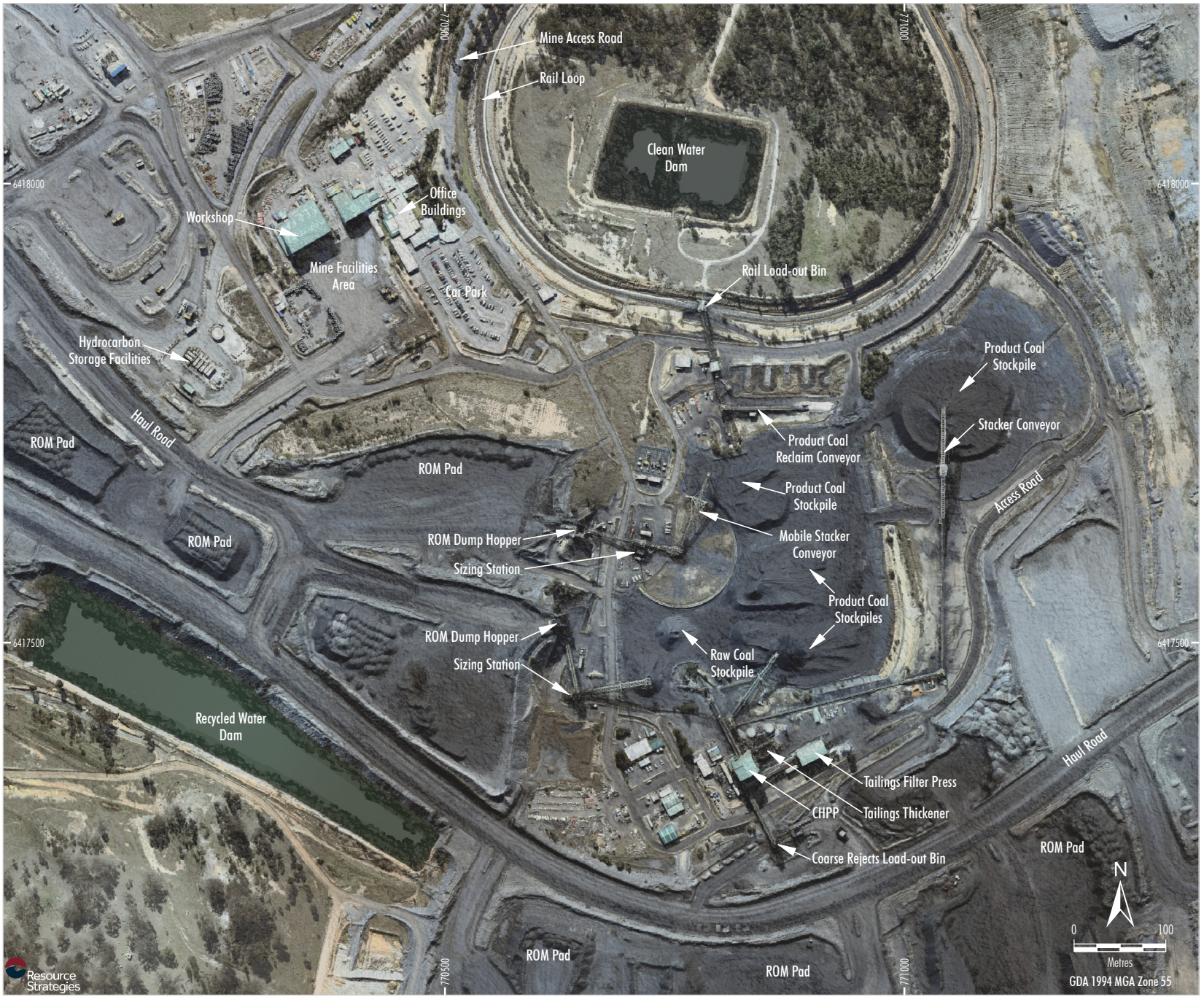
To maintain separation of disturbed area runoff from undisturbed area runoff and to allow transfer of water between contained water storages, various water pipelines, drains and dams are progressively constructed in line with the advancement of mining operations.

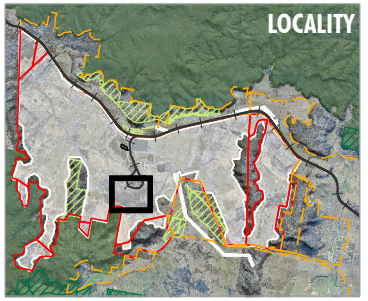
Cumbo Creek is approved to be relocated and the existing alignment of the creek mined as part of the approved Wilpinjong Coal Mine (Figure 3). WCPL is relinquishing its right to construct the approved Cumbo Creek relocation and mine the in-situ coal beneath the existing creek alignment as part of this current Modification (Figure 4) (Section 3).

1.2.8 Accommodation Camp

To address housing shortages in the Mid-Western Regional LGA and provide reliable accommodation for workforce and contractors that do not already reside in the region, WCPL has developed a temporary on-site accommodation facility (Plate 4).

[2] This dam contains water associated with multiple mining sources, not up-catchment water.





Source: WCPL (2025)
Orthophoto: WCPL (July 2024)

Peabody

WILPINJONG COAL MINE

Existing Coal Handling and Preparation Plant and Mine Facilities Areas

Figure 5

Plate 4: Temporary Accommodation Camp

The facility caters for approximately 100 people and is located to the west of the rail loop on a previously mined and backfilled area of Pit 1 (Figure 3). The temporary accommodation facility includes:

- more than 20 single-storey demountable 4-person accommodation buildings;
- various single-storey buildings for supporting facilities including kitchen and dining, amenities, recreation room, gymnasium, administration and services;
- carpark; and
- an internal access road linking the facility to the existing Mine Access Road at the Wilpinjong Coal Mine.

The accommodation camp is available for both operational, maintenance and/or construction contractors to reduce temporary accommodation demand in Mudgee and Gulgong.

The on-site camp also helps minimise daily trips to and from the mine on the public road network.

1.2.9 Other Infrastructure and Service Facilities

The majority of the other infrastructure and service facilities at the Wilpinjong Coal Mine are located adjacent to the ROM pad and rail loop. Other infrastructure and service facilities include (Figures 3 and 5):

- mine access road;
- internal access roads;
- internal haul roads;
- workshop;
- storage buildings;
- office buildings (including crib shed, bathhouse and first aid room);
- muster area;
- service facilities (including potable water, sewerage amenities, fire services and hydrocarbon management);
- parking facilities;
- hydrocarbon (i.e. diesel, lubricant) storage facilities;
- light vehicle workshop (with independent hydrocarbon management and waste storage facilities);
- explosives storage facilities;
- communication towers and associated equipment;
- environmental monitoring equipment and infrastructure; and
- east and west start-points (including cribb and ablution huts, car parking, equipment hardstands, truckwash and bulk fuel facilities).

Plate 5 illustrates major haul trucks undergoing maintenance in the mine workshop.

Plate 5: Wilpinjong Coal Mine Workshop in Use

In addition to the on-site facilities described above, WCPL also contributes to the upgrade and maintenance of off-site road infrastructure through contributions to the Ulan Road Strategy (ARRB Group [ARRB], 2011), Voluntary Planning Agreements (VPA) and relocations and upgrades of Ulan-Wollar Road.

1.2.10 Rehabilitation and Final Landform

The approved Wilpinjong Coal Mine under Development Consent (SSD-6764) has an existing/approved disturbance area of approximately 3,000 ha.

Rehabilitation occurs progressively as ancillary disturbance areas and final mine landforms become available for revegetation to minimise the area of disturbance at any one time.

Rehabilitation objectives for the mine site include:

- it should be safe, stable and non-polluting;
- constructed landforms are to drain to the natural environment (excluding final void catchments);
- the visual impact of final landforms is to be minimized as far as is reasonable and feasible; and
- ensure the final landforms are generally consistent with the surrounding topography of the area, taking into account relief patterns and principles.

Plate 6 illustrates rehabilitation on backfilled mine landforms at the Wilpinjong Coal Mine.

Plate 6: Rehabilitation at Varying Stages on Backfilled Landforms

Completed tailings dams are decommissioned through a capping process (Section 1.2.5) to create a final landform that is stable and can be rehabilitated and revegetated.

The final landform levels and topography of the backfilled mine landforms are designed to generally approximate the forms of the pre-mining topography with some variation and are designed with an allowance for the long-term settlement of mine overburden and tailings.

The revegetation strategy for the Wilpinjong Coal Mine includes on-site rehabilitation to establish the biometric vegetation types and Regent Honeyeater (*Anthochaera phrygia*) habitat as required in Development Consent (SSD-6764).

Appendix 8 of Development Consent (SSD-6764) provides a conceptual rehabilitation strategy and final landform for the approved Wilpinjong Coal Mine (reproduced as Figure 6).

1.2.11 Biodiversity Offsets

The Biodiversity Offset Strategy for the Wilpinjong Coal Mine has evolved over time and comprises a combination of Enhancement and Conservation Areas (ECAs), offset areas that have been progressively transferred to the National Parks and Wildlife Service (NPWS) Estate, regeneration areas and on-site rehabilitation offsets.

The Biodiversity Offset Strategy for the Wilpinjong Coal Mine has been modified to account for major regional electricity transmission infrastructure. The Central-West Orana Renewable Energy Zone Transmission Project (SSI-48323210) (the Transmission Project) is being developed by the Energy Corporation of NSW (EnergyCo) and transects the Wilpinjong Coal Mine.

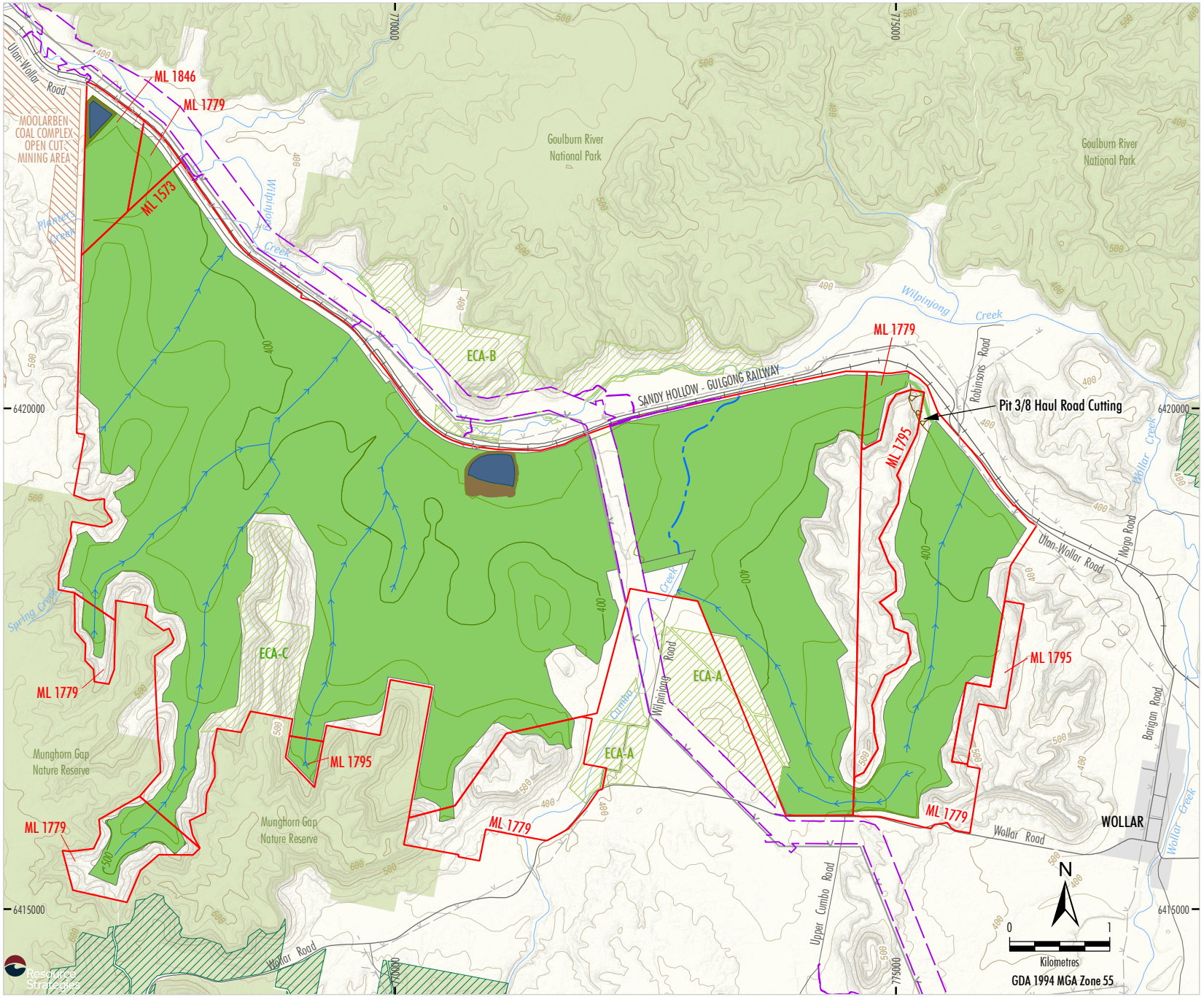
The existing off-site biodiversity offset areas for the Wilpinjong Coal Mine, along with regeneration areas and ECAs, as modified by the approved Transmission Project, are shown on Figure 7. The components of the strategy are outlined below.

WCPL has established five ECAs, which are managed under a voluntary conservation agreement with the NSW Minister responsible for the NSW *National Parks and Wildlife Act 1974* (NPW Act). Originally created as part of the initial Wilpinjong Coal Mine approval, these ECAs have been modified through subsequent project Modifications, including regional electricity transmission projects. The five ECAs (A through to E) cover a combined area of approximately 425 ha.

As part of Modification 5 of Project Approval (PA 05-0021) for the Wilpinjong Coal Mine, two Biodiversity Offset Areas (D and E) totalling approximately 211 ha, were dedicated for permanent conservation and management through their incorporation into the NPWS Estate.

Five Biodiversity Offset Areas (i.e. Areas 1 – 5) approximately 1,000 ha) have been established on land previously owned by Peabody as part of the Wilpinjong Extension Project. WCPL completed transfer of Biodiversity Offset Areas 1 – 5 to the NPWS Estate in August 2023.

Regeneration Areas, originally consisting mainly of cleared agricultural land at the start of mining, have also been established on land located near the final rehabilitation areas of the Wilpinjong Coal Mine (Figure 7). The Regeneration Areas will link the mine rehabilitation areas to native vegetation associated with the Goulburn River National Park, Munghorn Gap Nature Reserve and remnant vegetation in the ECAs.



LEGEND

- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area (as modified)
- Mining Lease Boundary (ML)
- Established Rehabilitation (as modified)
- Final Void
- Final Void Waterbody
- Conceptual Cumbo Creek Realignment
- Drainage Line
- Existing Surface Contour (20 m Interval)
- Final Landform Contour (20 m Interval)
- Local ETL
- Realigned TransGrid 330 kV ETL
- EnergyCo Transmission Project (SSI-48323210)

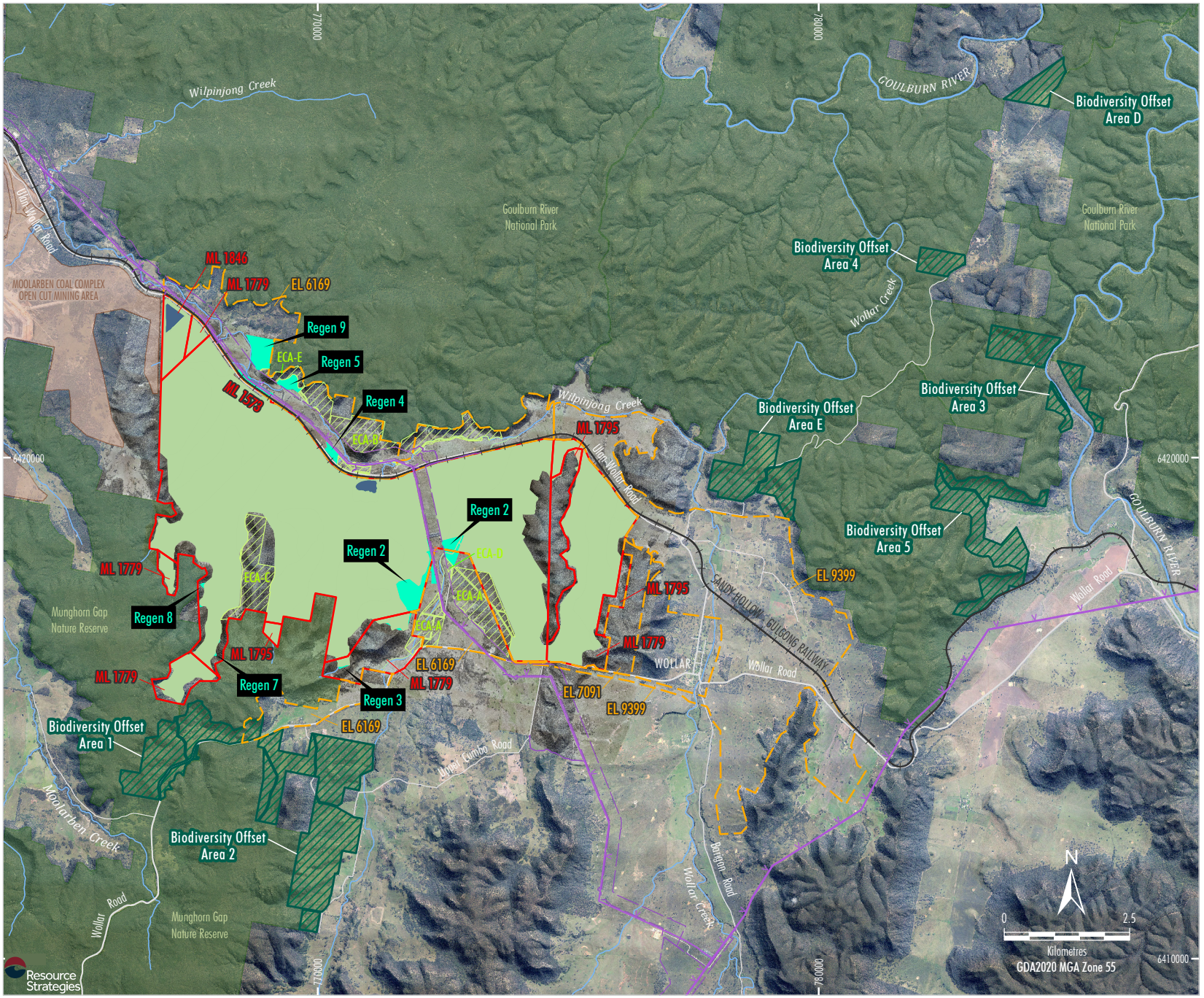
Source: WCPL (2015, 2017, 2024); EnergyCo (2024); NSW Dept of Industry (2024); NSW Land & Property Information (2015)

Peabody

WILPINJONG COAL MINE

Conceptual Final Landform
Development Consent

Figure 6



Peabody

WILPINJONG COAL MINE

Existing Biodiversity Offset and Regeneration Areas

Figure 7

The revegetation strategy for the Wilpinjong Coal Mine, which addresses on-site biodiversity offset requirements and outlines management measures aimed at enhancing flora and fauna values within relevant biodiversity offset areas, is detailed in the Biodiversity Management Plan. Biodiversity offset areas previously associated with the Wilpinjong Coal Mine that have been incorporated into the Goulburn River National Park or Munghorn Gap Nature Reserve are now managed as part of the NPWS Estate.

1.2.12 Workforce

The operational workforce of the Wilpinjong Extension Project was estimated to be approximately 625 people, and peak construction activity required approximately 100 people.

In practice, the mine currently (as at Q2 2025) has an operational workforce of approximately 705 people (full-time equivalent [FTE]), which is due to some extra mobile equipment being utilised on-site, and the associated maintenance and support roles that come with this extra equipment (Plate 7).

Plate 7: Operational Employees – Wilpinjong Coal Mine

1.2.13 Electricity Supply and Distribution

The existing Wilpinjong Coal Mine receives electricity from a 66 kilovolt (kV) supply system owned and operated by Essential Energy. Power is distributed by overhead cable or underground cable where necessary.

Wilpinjong Coal Mine relocates and modifies local low-voltage electricity transmission lines (ETLs) as needed to maintain electrical supply to nearby landholdings and residences as mining advances.

1.2.14 Land Ownership

Since the Wilpinjong Extension Project was approved by the PAC in 2017, WCPL has continued to purchase nearby private land when it has come up for sale. Notwithstanding, a limited number of private landholdings do remain in proximity to the existing approved Wilpinjong Coal Mine (Figures 8a and 8b).

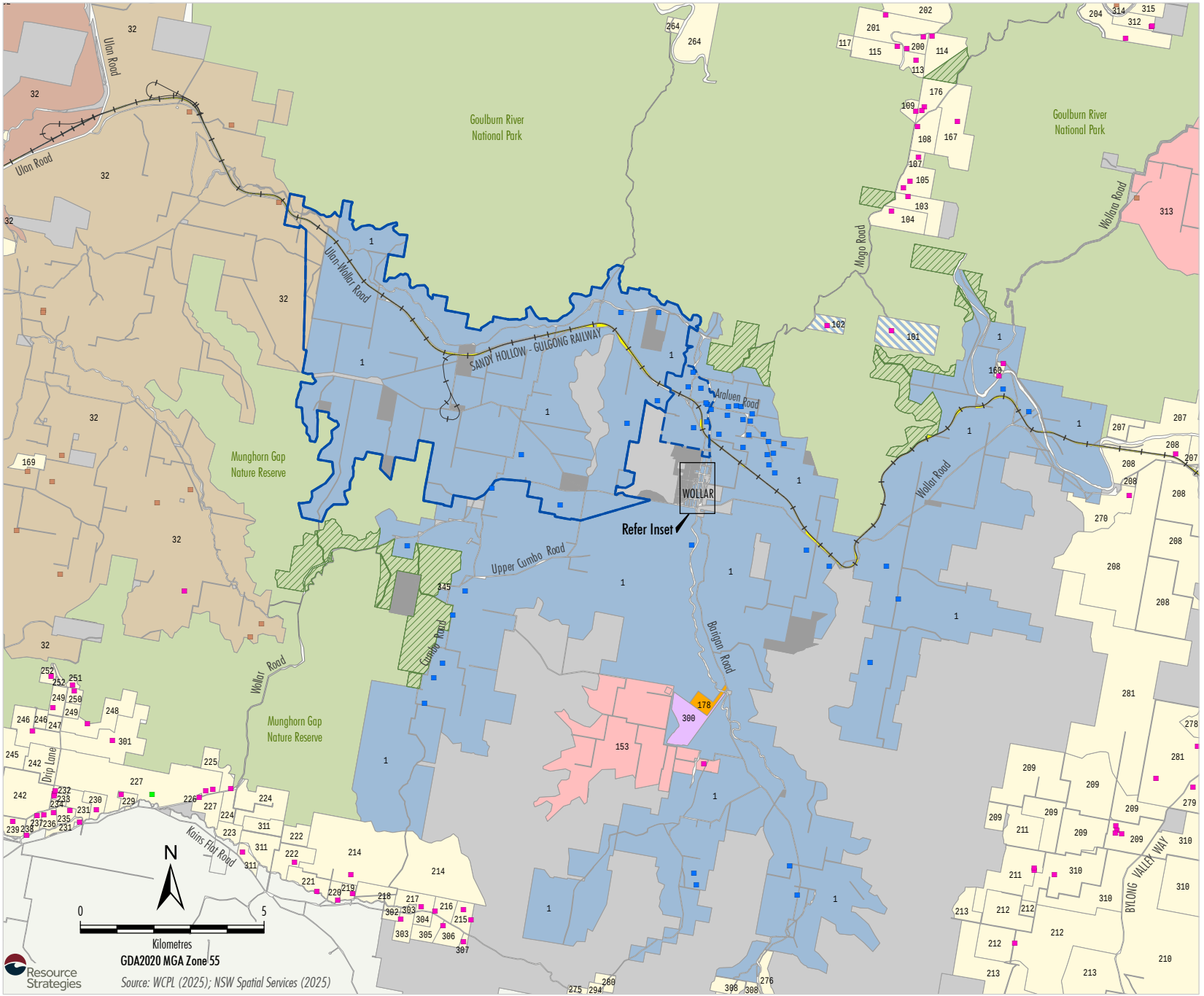
WCPL has developed negotiated agreements with the three nearest private landholders (i.e. within approximately 6 km of the Pit 8 Extension area), including the one private landholder remaining in Wollar. These negotiated agreements allow the mine to potentially exceed amenity limits that are set at these individual receivers under Development Consent (SSD-6764).

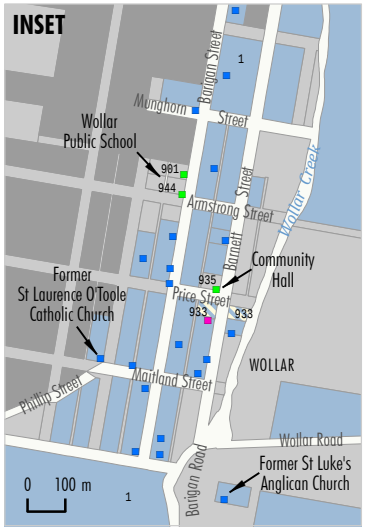
1.3 MODIFICATION OVERVIEW

WCPL is proposing to modify Development Consent (SSD-6764) for the Wilpinjong Coal Mine to facilitate extensions of the existing Pit 8 (Pit 8 Extension) within EL 9399 and development of associated supporting infrastructure (Figure 4).

The Modification would comprise the following components:

- open cut mining within the Pit 8 Extension area;
- extraction of approximately 14 Mt of ROM coal from the Pit 8 Extension area;
- development of ancillary infrastructure to support open cut mining activities;
- realignment of some public infrastructure to facilitate the Pit 8 Extension (e.g. sections of public roads, local low voltage powerlines and telecommunication services);
- in-pit crushing of waste rock for use as construction and/or stemming material;
- an additional six months of mining operations to backfill final voids and shape the final landform (e.g. mining operations until 30 June 2034); and
- development of additional water management infrastructure (e.g. dams, drains, pumps and pipelines).





LEGEND

- Development Application Area
- Proposed Development Application Area Extension
- Peabody-controlled Land
- Crown Land (Peabody Leased)
- Crown Land
- Moolarben Coal Mine
- Ulan Coal Mine
- Solar Farm
- EnergyCo
- TransGrid
- Railway Land
- Private Landholder
- Private Landholder Subject to Noise Agreement in Accordance with Condition 3, Schedule 3
- Owner Not Identified
- National Parks and Wildlife Service (NPWS) Estate
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Peabody-owned Dwelling
- Moolarben-owned Dwelling
- Community Building
- Private Dwelling

Note: Refer Figure 8b for Relevant Landholder List.

Peabody

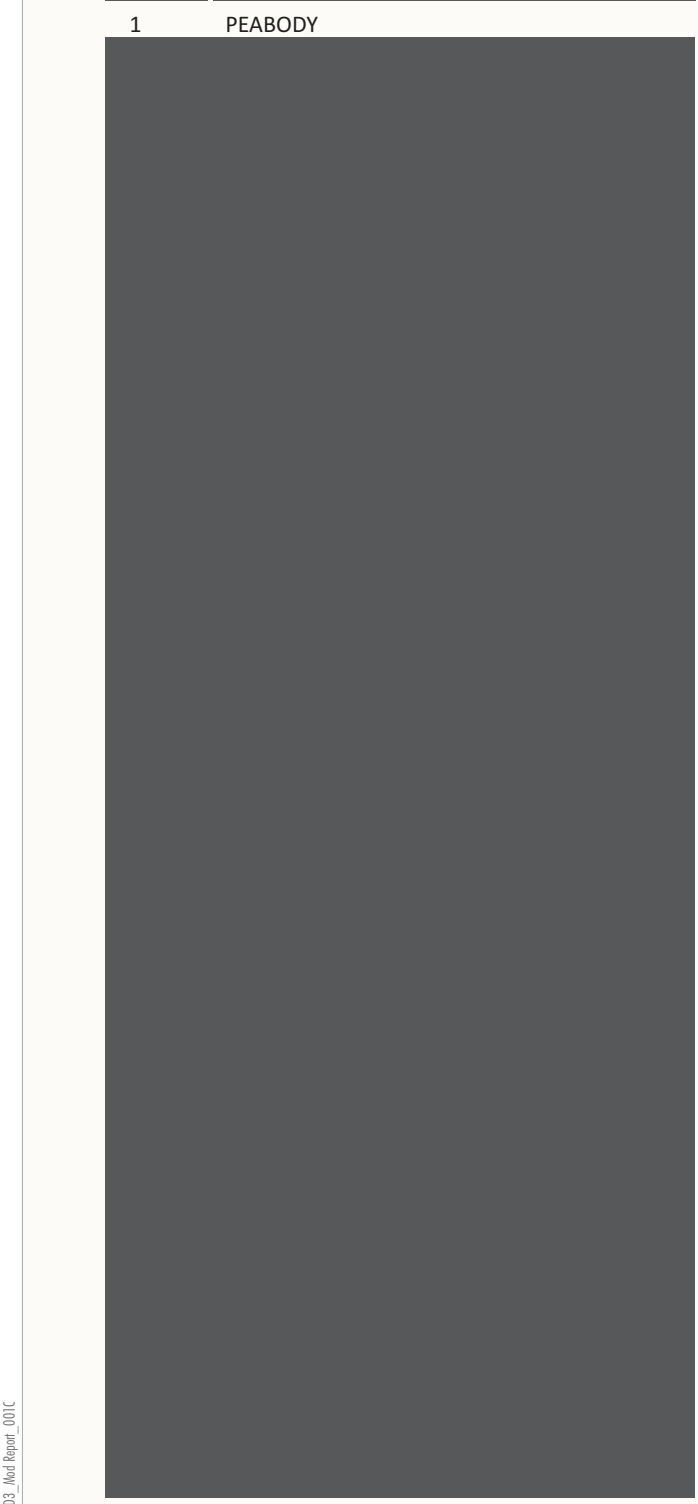
WILPINJONG COAL MINE

Land Ownership Plan

Figure 8a

REF No	LANDHOLDER
1	PEABODY

REF No	LANDHOLDER



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Resource Strategies

Source: WCPL (2025); NSW Spatial Services (2025)

^ Subject to Noise Agreement in accordance with Condition 3, Schedule 3

Note: Refer to Figures 8a for Land Ownership Plan

Peabody

WILPINJONG COAL MINE

Relevant Landholder List

Figure 8b

The Modification would also include the proposed avoidance of mining coal in the existing Cumbo Creek corridor and the Rocky Hill complex (Plate 8) which are currently approved to be mined in Pit 4 and Pit 8, respectively, under Development Consent (SSD-6764). This avoidance would sterilise more than 7 Mt of approved ROM coal and reduce the approved Wilpinjong Coal Mine surface development footprint by approximately 50 ha. Any existing infrastructure within the Cumbo Creek exclusion area (e.g. soil stockpiles) would be removed and the area rehabilitated. No further disturbance would occur in the exclusion areas.

There would be no changes to the following approved components of the Wilpinjong Coal Mine for the Modification:

- mining method;
- timeframe for ROM coal production;
- maximum annual ROM coal and waste rock production;
- coal washing and handling systems;
- product coal transport systems;
- water supply and disposal; and
- hours of operation.

The amendments to Development Consent (SSD-6764) would be sought under section 4.55(2) of the EP&A Act on the basis that the Wilpinjong Coal Mine's incorporation of the proposed modification would be "substantially the same" as the currently approved Wilpinjong Coal Mine.

Plate 8: Rocky Hill Complex Located in Pit 8

The Modification general arrangement is shown on Figure 4 and discussed further in Section 3.

1.4 STRUCTURE OF THIS MODIFICATION REPORT

An overview of the main text of this Modification Report is presented below:

Section 1	Provides a background description of the Wilpinjong Coal Mine and overview of the Modification.
Section 2	Outlines the strategic planning context relevant to the Modification.
Section 3	Provides a detailed description of the Modification.
Section 4	Outlines the statutory provisions relevant to the Modification.
Section 5	Describes the consultation and engagement undertaken in relation to the Modification and ongoing community involvement.
Section 6	Details the environmental assessment of the Modification and describes the existing environmental management systems and measures that would be available to manage and monitor any potential impacts.
Section 7	Provides a justification for the Modification and provides a conclusion.
Section 8	Lists the documents referenced in the main text of the Modification Report.
Section 9	Lists the abbreviations referenced in the main text of the Modification Report.

Attachments to the main text of this Modification Report are also provided as follows:

Attachment 1	Development Application Area and Real Property Descriptions
Attachment 2	Detailed Statutory Compliance Reconciliation Table
Attachment 3	Geotechnical Considerations
Attachment 4	Secretary's Environmental Assessment Requirements and Associated Additional Information
Attachment 5	Site Verification Certificate – Wilpinjong Extension
Attachment 6	Peer Review Letters
Attachment 7	Serious and Irreversible Impact Assessment Reports
Attachment 8	Initial Assessment of Geological Feature Sensitivity
Attachment 9	Consolidated Project Description – Wilpinjong Extension Project
Attachment 10	Summary of Mitigation Measures

Appendices A to N of this Modification Report provide supporting information as follows:

Appendix A	Noise and Blasting Assessment
Appendix B	Air Quality Impact Assessment
Appendix C	Greenhouse Gas Assessment
Appendix D	Groundwater Impact Assessment
Appendix E	Surface Water Assessment
Appendix F	Biodiversity Development Assessment Report
Appendix G	Aquatic Ecology Assessment
Appendix H	Aboriginal Cultural Heritage Assessment
Appendix I	Non-Aboriginal Heritage Assessment
Appendix J	Road Transport Assessment
Appendix K	Social Impact Assessment
Appendix L	Economic Assessment
Appendix M	Geochemistry Assessment
Appendix N	Land Contamination Assessment

2 STRATEGIC CONTEXT

This section outlines the strategic context for the Modification and summarises the strategic need and potential benefits of the Modification.

2.1 REGIONAL CONTEXT

The Mid-Western Regional LGA has a population of approximately 26,000 people, and comprises the major towns and centres of Mudgee, Gulgong, Kandos and Rylstone. Its major industries are mining, agriculture and tourism (Mid-Western Regional Council [MWRC], 2025).

The Wilpinjong Coal Mine is situated in a recognised coal extraction precinct in the Western Coalfield which also includes the Moolarben Coal Complex and the Ulan Coal Mine (Figure 2). These three major mines all transport coal products to customers via the Sandy Hollow-Gulgong Railway, which is located to the immediate north of the Wilpinjong Coal Mine.

MWRC has acknowledged the significant contribution of the three Western Coalfield mining operations to regional output and employment in the region (MWRC, 2022a; 2024).

WCPL has operated the Wilpinjong Coal Mine since its commencement in 2006 and the mine has contributed to the Mid-Western Regional LGA social and economic characteristics since that time.

The majority of the valley floors in the locality have been extensively cleared for historical agricultural land uses. Land use within the vicinity of the Wilpinjong Coal Mine is today characterised by a combination of coal mining operations, rural land uses, conservation lands, stock grazing and rural residential development (Figures 3 and 8a).

Rural dwellings surrounding the Wilpinjong Coal Mine within WCPL ownership continue to be used for workforce accommodation and/or are leased back to the previous landowners where they are suitable for these purposes.

Existing dwellings in Wollar are largely owned by WCPL and the former Wollar Public School has been in recess (i.e. not operating as a school) for an extended period, before being formally closed by the NSW Department of Education in 2025.

2.2 KEY STRATEGIC PLANNING DOCUMENTS

Strategic Statement on Coal Exploration and Mining in NSW

The *Strategic Statement on Coal Exploration and Mining in NSW* (the Statement) outlines how the NSW Government will continue to support responsible resource development for the benefit of the State (NSW Government, 2020).

The Statement recognises the value of coal production to the NSW economy, including:

- the long history of coal mining in NSW and the importance of the industry to regional communities;
- the potential for ongoing coal production to provide significant benefits to regional communities, including jobs and investments; and
- the coal production's significant economic contribution as the State's biggest export commodity and the value of associated royalty payments to fund essential services and infrastructure.

The Modification would allow continued access to the State's coal resources and the ongoing generation of royalties from the Wilpinjong Coal Mine[3] and aligns with the objectives of the Statement.

Central-West Orana Regional Plan

The Modification is located within the *Central West and Orana Regional Plan 2041* (the Regional Plan) area (DPE, 2022b). The Regional Plan provides a strategic framework to ensure the region's ongoing prosperity.

The Regional Plan applies to the LGAs of Bathurst, Blayney, Bogan, Cabonne, Coonamble, Cowra, Dubbo, Forbes, Gilgandra, Lachlan, Lithgow, Mid-Western, Narromine, Oberon, Orange, Parkes, Warren, Warrumbungle and Weddin. The Regional Plan will guide land use planning decisions in the region by the NSW Government, councils and others to 2041 (DPE, 2022b).

[3] As of 31 March 2025, the Wilpinjong Coal Mine has contributed more than $875 million in royalty payments to the NSW Government for State infrastructure and services.

The Central West and Orana has an established mining industry and is rich with high-tech metals, critical mineral resources and construction materials. The Regional Plan acknowledges that the critical minerals and energy resource sectors make a significant economic contribution to the region (DPE, 2022b).

Landmark solar, wind, pumped hydro, green hydrogen, energy from waste, energy storage, bioenergy projects and the Central-West Orana Renewable Energy Zone (REZ) also make the region a renewable energy leader (DPE, 2022b).

The Regional Plan describes the need to consider the life cycle of resource extraction opportunities and notes that the Statement sets out the NSW Government's approach to managing the life cycle impacts of coal mining in mining communities and the global transition to a low carbon future.

Mid-Western Region Community Plan-Towards 2040

The *Mid-Western Region Community Plan-Towards 2040* (the Community Plan) (MWRC, 2022b) outlines the future vision and priorities for the Mid-Western Region to provide economic, social and business benefits to the local community.

The Community Plan recognises that State Significant Development (SSD), such as mining, plays a large role in the growth and prosperity of the population and industry (MWRC, 2022b).

Mid-Western Regional Local Strategic Planning Statement – Our Place 2040

The *Mid-Western Regional Local Strategic Planning Statement – Our Place 2040* (LSPS) (MWRC, 2020) identifies themes, planning priorities and actions to assist in implementing the Community Plan (MWRC, 2022b).

The 20-year land use vision for the Mid-Western Region, as described in the LSPS, is: *To provide for sustainable growth and development, having regard to the Region's unique heritage, environment and rural character and to support agricultural enterprises and the Region's economic base.*

The LSPS planning priorities relevant to the Modification include:

- Respect and enhance the historic character of our Region and heritage value of our towns.
- Ensure land use planning and management enhances and protects biodiversity and natural heritage.
- Provide leadership on economic development initiatives and identify resources and infrastructure required to drive investment and economic growth in the Region.

The Modification would be generally consistent with the relevant planning priorities and strategic land use vision for the Mid-Western Region in the LSPS, as the Modification would:

- suitably manage impacts on items or places of Aboriginal and non-Aboriginal cultural heritage significance, including not proceeding with approved mining of the Rocky Hill complex that hosts a rock art cultural heritage site;
- conserve biodiversity and natural heritage values as WCPL would comply with the requirements of the NSW *Biodiversity Conservation Act 2016* (BC Act) to offset potential biodiversity impacts in accordance with the Biodiversity Assessment Method (BAM) (Department of Planning, Industry and Environment [DPIE], 2020) and would undertake additional innovative measures to develop additional artificial habitat for key threatened bat species that are present within the Modification surface development footprint;
- protect water quality by managing water to separate runoff from disturbed and undisturbed areas, where practicable, and by not proceeding with the approved Cumbo Creek corridor relocation, which would allow regeneration of the existing creek line;
- contribute to the region's economic growth and allow for continued employment of the existing open cut operational workforce; and
- provide continuing support for local and regional business, including construction-related capital expenditure and ongoing operating expenditure.

2.3 PROJECT CONTEXT

2.3.1 Consideration of Modification Scope

A Scoping Letter for the Modification was lodged with DPE (now DPHI) on 14 February 2024.

Initially WCPL proposed an extension of the existing Pits 3 and 8 with an additional open cut mining area of approximately 270 ha to extract some 34 Mt of additional ROM coal, and to relocate the Sandy Hollow-Gulgong Railway.

Since lodgement of the Scoping Letter, WCPL has reduced the proposed Modification scope in consultation with DPHI. This Modification Report has been prepared to assess the environmental impacts of the reduced Modification scope and extent (extracting some 14 Mt of additional ROM coal).

A description of the proposed Modification is provided in Section 3.

2.3.2 Justification of the Modification

Mining operations at the Wilpinjong Coal Mine under Development Consent (SSD-6764) are currently approved until 31 December 2033.

Since the approval of the Wilpinjong Extension Project and the issue of Development Consent (SSD-6764), WCPL has continued to review and refine detailed life-of-mine planning.

As an outcome of this planning process, WCPL has elected to avoid direct disturbance of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8, respectively, under Development Consent (SSD-6764).

This avoidance would sterilise more than 7 Mt of approved ROM coal and reduce the approved Wilpinjong Coal Mine surface development footprint by approximately 50 ha.

In this context, the Modification would provide access to some additional coal resources to augment ROM coal production and would also include an additional six months of mining operations to backfill the final voids and shape the final landform (i.e. mining operations would continue until 30 June 2034).

The Modification would not substantially change the scale or nature of the Wilpinjong Coal Mine, which would continue to align with the objectives of the Strategic Statement (NSW Government, 2020).

The Pit 8 Extension area is minor relative to the approved disturbance extent of the Wilpinjong Coal Mine (Figure 4) and the continued development of incremental coal resources in close proximity to WCPL's existing CHPP and other supporting facilities and to the south of the existing Sandy Hollow-Gulgong Railway is consistent with the existing mining operation.

The Modification would maximise the use of existing infrastructure and would act to reduce the natural rate of workforce decline associated with the approved Wilpinjong Coal Mine progressively completing working faces (e.g. in Pit 6), by providing an extra mine working face for the duration of the Modification.

2.3.3 Benefits of the Modification

Socio-Economic Benefits

The Modification would not involve any material change to the current operational workforce of approximately 705 people[4] (FTE), but would reduce the rate of projected Wilpinjong Coal Mine workforce decline and provide approximately six months of additional mining activity (backfill and final landform shaping).

The Modification would add an average of approximately 25 and a peak of 65 FTE jobs during proposed construction activities in 2027 and would increase the operational workforce by up to approximately 225 jobs in 2028-2032 by counteracting the projected rate of the approved Wilpinjong Coal Mine operational workforce decline that would occur in the absence of the Modification.

The Economic Assessment has identified that the Modification would contribute $21 million in net present value (NPV) terms in benefits to NSW, which includes $37 million in NPV terms in additional royalties to the State over the life of the Modification.

The Modification would also support regional infrastructure with the proposed upgrade and relocation of a section of Ulan-Wollar Road and would allow for ongoing investment in local communities and businesses.

[4] The Wilpinjong Extension Project was estimated to have a peak operational workforce of 625 and a peak construction workforce of some 100 people.

For example, in 2024, the Wilpinjong Coal Mine contributed approximately $100,000 to local community groups, sporting associations, schools and charitable organisations.

The Modification would also act to reduce the natural rate of decline of Wilpinjong Coal Mine ROM coal production, and continued mining employment would support regional economic stability, while contracts related to operational supply and construction would benefit regional businesses and the economy (Plate 9).

Final Landform

The Modification proposes to avoid the direct disturbance of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8, respectively.

This would reduce the approved Wilpinjong Coal Mine surface development footprint and associated by approximately 50 ha and facilitate in-situ regeneration of the existing Cumbo Creek corridor.

While the Modification would include development of a new working face that is separate from the existing Pit 8, no additional final void is proposed.

The Modification would therefore require an additional six months of mining operations to backfill and shape final landforms in Pit 8 and the proposed extension to meet Wilpinjong Coal Mine final landform criteria.

2.3.4 Consequences of the Modification not Proceeding

In the absence of the Modification:

- an average of approximately 25 construction jobs (peak 65) would not be created in 2027 to construct the relocated public infrastructure;
- approximately 150 ha of land disturbance associated with the Modification would not occur;
- extraction of more than 7 Mt of ROM coal and disturbance of approximately 50 ha associated with the approved mining of the Cumbo Creek corridor and the Rocky Hill complex could still occur;
- some 14 Mt of ROM coal would not be extracted from the Pit 8 Extension area;
- an additional six months of mining operations to backfill voids and shape final landform (i.e. to 30 June 2034) would not occur; and
- operational employment and associated direct flow-on economic effects of the Wilpinjong Coal Mine would begin to decline from 2028 and would cease in 2033.

Plate 9: Wilpinjong Coal Mine Family Day

While there would be continued environmental impacts associated with the existing Wilpinjong Coal Mine mining operations continuing for an extra six months (i.e. until 30 June 2034), this Modification Report outlines the reason why this continuation of environmental impacts is considered acceptable when compared to current NSW Government Policy.

2.4 INTERACTIONS WITH OTHER DEVELOPMENTS

This section describes the potential interactions between the Modification and key regional projects. Key proposed or approved projects in the area that may potentially interact with the Modification include:

- Moolarben Coal Complex;
- Ulan Coal Mine;
- Bowdens Silver Project;
- the Transmission Project; and
- other solar and renewable energy projects in the region associated with the Central-West Orana REZ.

Figure 2 shows the location of key proposed and approved projects in the vicinity of the Wilpinjong Coal Mine.

Potential cumulative impacts associated with these developments (where relevant) have been considered in this Modification Report (Section 6).

A summary of consultation undertaken by WCPL with the various proponents of the nearest approved/proposed developments is provided in Section 5.

Further consideration of potential cumulative interactions between the Modification and other proposed or approved projects is included in Section 6 as well as the relevant environmental studies conducted for the Modification.

2.4.1 Moolarben Coal Complex

Moolarben Coal Operations Pty Ltd (MCO) operates the Moolarben Coal Complex, which is located immediately west of the Wilpinjong Coal Mine (Figure 2).

Summary

The existing approved Moolarben Coal Complex comprises four open cut mining areas (OC1, OC2, OC3 and OC4) and three underground mining areas (UG1, UG2 and UG4), as well as other mining related infrastructure including coal processing and transport facilities.

Moolarben Coal Complex mining operations are approved until 31 December 2038 under the Stages 1 and 2 Project Approvals (05_0117 and 08_0135, respectively).

Up to 16 Mt (total) of ROM coal is approved to be extracted cumulatively from the open cut operations (Moolarben Coal Project Stage 1 and Stage 2) at the Moolarben Coal Complex in any calendar year.

Up to 8 Mt (total) of ROM coal is approved to be extracted cumulatively from underground mining operations at the Moolarben Coal Complex in any calendar year.

All product coal from the Moolarben Coal Complex is transported via rail (average of eight trains per day and peak of up to 11 laden trains per day). Further detail regarding consultation with MCO is provided in Section 5.

Relevant cumulative impacts (e.g. road and rail interactions, noise and air) associated with the Modification and the Moolarben Coal Complex have been considered in the relevant technical Appendices and/or subsections of Section 6.

Moolarben Coal Project Stage 1

Stage 1 of the Moolarben Coal Project was approved in 2007 and operates in accordance with Project Approval (05_0117), as modified.

Stage 1 of the Moolarben Coal Complex comprises open cut operations in OC1, OC2 and OC3, underground operations in UG4, coal processing and transport facilities and water treatment facilities.

Moolarben Coal Project Stage 2

Stage 2 of the Moolarben Coal Project was approved in 2014.

Stage 2 of the Moolarben Coal Complex comprises open cut operations in OC4 and underground operations in UG1 and UG2.

All ROM coal extracted from Stage 2 of the Moolarben Coal Project is transported to the Moolarben Coal Project Stage 1 coal processing and transport facilities.

OC3 Extension Project

MCO is proposing to extend open cut mining operations immediately south of the approved OC3 open cut pit as well as develop four new open cut pits to the east and south-east of the approved OC3 mining area.

The OC3 Extension Project would operate within the approved Moolarben Coal Complex cumulative open cut ROM coal extraction limits (i.e. no change to the approved processing or transport limits within the approved mine life).

The OC3 Extension Project has been lodged as a stand-alone Development Application and, if approved, would operate concurrently with Moolarben Coal Project Stage 1 and Stage 2 under a new Development Consent.

2.4.2 Ulan Coal Mine

Ulan Coal Mines Limited (UCML) operates the Ulan Coal Mine, which includes two underground mining operations and an open cut mining operation. The Ulan Coal Mine is located approximately 11 km north-west of the Wilpinjong Coal Mine (Figure 2).

The Ulan Coal Mine operates in accordance with Project Approval (08_0184), which was approved in November 2010 (the Ulan Coal Continued Operations Project), as modified.

Approved mining operations within the Ulan Coal Mine consist of underground mining in the Ulan Underground and Ulan West Underground areas as well as open cut mining, and associated coal handling, processing and transport through to 30 August 2033. The open cut operations are currently in care and maintenance (Umwelt Australia Pty Ltd [Umwelt], 2024).

A modification of Project Approval (08_0184) was approved by DPHI (Modification 6) on 22 May 2025. Modification 6, known as the Underground Mining Extension, extends some of the currently approved longwall panels to extract additional coal. Modification 6 allows for a two-year extension of the approved mine life, with no changes to the extraction limits, coal transportation limits or total workforce.

UCML has also identified additional mineable resources to the west of the currently approved Ulan West Underground mining area. A Modification Report is currently being prepared for the Ulan West Continued Operations Modification (Umwelt, 2024).

There would be no direct interaction between the Modification and the Ulan Coal Mine, however, there is interaction with both road and rail traffic.

2.4.3 Bowdens Silver Project

The Bowdens Silver Project is located approximately 30 km south of the WCPL mining tenements within the Mid-Western Regional LGA (Figure 2).

Bowdens Silver Pty Ltd was granted approval to develop the Bowdens Silver Project under Development Consent (SSD 5765) on 3 April 2023. However, in August 2024, the NSW Court of Appeal declared that Development Consent (SSD 5765) was void and of no effect.

Bowdens Silver Pty Ltd are currently in the process of pursuing re-determination of the Bowdens Silver Project (Silver Mines Limited, 2024).

2.4.4 Renewable Energy Projects

The Wilpinjong Coal Mine is located within the Central-West Orana REZ. The Central-West Orana REZ is a geographic area of approximately 20,000 square kilometres (km^2) centred on the regional towns of Dubbo and Dunedoo (Figure 2).

There are a number of renewable energy projects associated with the Central-West Orana REZ that are either operational, approved but yet to be constructed, or under assessment in the vicinity of the Wilpinjong Coal Mine.

A selection of known nearby projects is provided below. However, this list is not intended to be exhaustive.

In order to account for renewable energy project growth in the region, relevant environmental assessments for the Modification (e.g. road traffic assessment) have considered cumulative impacts with the renewable energy industry over the life of the Modification.

Central-West Orana Renewable Energy Zone Transmission Project

The Transmission Project is being developed by EnergyCo and transects the Wilpinjong Coal Mine.

The Transmission Project includes new twin double circuit 500 kV transmission lines between a new substation at Wollar and new substations at Merotherie and Elong Elong.

The Transmission Project also includes connections from these new lines to renewable energy generation and storage projects in the Central-West Orana REZ.

The Transmission Project was approved by the NSW Minister of Planning and Public Spaces on 26 June 2024.

As the Transmission Project transects the Wilpinjong Coal Mine, Development Consent (SSD-6764) for the Wilpinjong Coal Mine was subsequently modified to facilitate changes required for the approved Transmission Project.

The changes to the conditions in Development Consent (SSD-6764) included the following components to reflect the approval of the Transmission Project:

- modification of the biodiversity offset strategy for the Wilpinjong Extension Project and land-based offset and rehabilitation offset conditions;
- minor modifications to existing operations to accommodate the Transmission Project; and
- amendments to the development layout plan and final landform and land use to reflect the construction area of the Transmission Project.

The Transmission Project is expected to be operational by 2028 (EnergyCo, 2025), so there could be some limited interaction with Modification construction workforce movements and activities in 2027.

Potential cumulative impacts associated with Modification construction activities and the Transmission Project have been considered in relevant assessments (Section 6).

Wollar Solar Farm and BESS

The Wollar Solar Farm (SSD 9254) was approved in February 2020 and is being constructed to the south of the Wilpinjong Coal Mine off Barigan Road (Figures 2 and 8).

The Wollar Solar Farm will comprise the development of a 290 megawatt (MW) solar photovoltaic (PV) facility with energy storage and associated infrastructure.

The Wollar Solar Farm (SSD 9254) included approval for a 30 MW / 30 megawatt-hour (MWh) battery energy storage system (BESS). Wollar Solar Development Pty Ltd is currently investigating a potential increase in the BESS size to provide two hours of storage (280 MW / 560 MWh).

A Modification Application was submitted in May 2025 to modify the Wollar Solar Farm (SSD 9254) to increase the BESS capacity.

Narragamba Solar Farm

The proposed Narragamba Solar Farm is located to the west of Ulan (Figure 2) and would comprise the development of a 320 MW solar farm supplying electricity to the national electricity market via the Merotherie energy hub.

The Narragamba Solar Farm is currently preparing an Environmental Impact Statement (EIS).

Stubbo Solar Farm

The Stubbo Solar Farm (SSD-10452) was approved in June 2021 and is currently under construction to the north of Gulgong (ACEN Australia, 2025a) (Figure 2).

The Stubbo Solar Farm is approved for the development of a 400 MW solar farm with a BESS of up to 200 MWh.

Birrawa Solar Farm and BESS

The Birrawa Solar Farm and BESS (SSD-29508870) was approved in August 2024 and is located to the north of Gulgong (Figure 2).

The Birrawa Solar Farm would comprise a solar PV facility with an estimated capacity of 600 MW and a BESS of up to 1200 MWh.

Construction of the Birriwa Solar Farm and BESS is expected to commence in late 2026 or early 2027 (ACEN Australia, 2025b).

Additionally, a Modification Application is currently being prepared to consider a secondary access route for the construction and operation of the accommodation facility and operation of the BESS (ACEN Australia, 2025b).

Goulburn River Solar Farm

The Goulburn River Solar Farm (SSD-33964533) was approved in August 2024 and is located to the east north-east of the Wilpinjong Coal Mine adjacent to the Goulburn River National Park (Figure 2). The Goulburn River Solar Farm would comprise the installation of a 450 MW solar farm, energy storage and associated infrastructure.

The Goulburn River Solar Farm is currently under construction (Lightsource bp, 2025).

2.4.5 Cumulative Assessment Approach

The approach taken for cumulative impact assessment in this Modification Report has been informed by the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE, 2022c) which provides some relevant commentary regarding the assessment approach:

> *The cumulative impact assessment … is to be proportionate to the scale and potential significance of the cumulative impacts of the project combined with the impacts of other relevant future projects.*
>
> *…*
>
> *It is critical to strike the right balance between pragmatism (or what is practical and reasonable) and precaution, and to remember that the cumulative impact assessment is not an end in itself: its primary purpose is to inform decision-making on the project and to ensure that the implications of approving the project are properly understood.*

There is a range of renewable energy development currently occurring, and projected to occur in the Central-West Orana REZ in the vicinity of the Wilpinjong Coal Mine (Figure 2).

WCPL's specialist have therefore considered cumulative traffic and social impacts should renewable project construction peaks potentially coincide with the Modification peak traffic and workforce demand periods.

3 DESCRIPTION OF THE MODIFICATION

3.1 OVERVIEW

The Modification would comprise the following components:

- open cut mining within the Pit 8 Extension area;
- extraction of approximately 14 Mt of ROM coal from the Pit 8 Extension area;
- development of ancillary infrastructure to support open cut mining activities;
- realignment of some public infrastructure to facilitate the Pit 8 Extension (e.g. sections of public roads, local low voltage powerlines and telecommunication services);
- in-pit crushing of waste rock for use as construction and/or stemming material;
- an additional six months of mining operations to backfill final voids and shape the final landform (i.e. mining operations until 30 June 2034); and
- development of additional water management infrastructure (e.g. dams, drains, pumps and pipelines).

The Modification would also include the proposed avoidance of direct disturbance of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8 respectively, under Development Consent (SSD-6764). This avoidance would sterilise more than 7 Mt of approved ROM coal and reduce the approved Wilpinjong Coal Mine surface development footprint by approximately 50 ha. Any existing infrastructure within the Cumbo Creek exclusion area (e.g. soil stockpiles) would be removed and the area rehabilitated. No further disturbance would occur in the exclusion areas.

There would be no changes to the following approved components of the Wilpinjong Coal Mine for the Modification:

- mining method;
- timeframe for ROM coal production;
- maximum annual ROM coal and waste rock production;
- coal washing and handling systems;
- product coal transport systems;
- water supply and disposal methods; and
- hours of operation.

Table 1 provides a comparison between the existing approved operations at the Wilpinjong Coal Mine and the changes proposed in this Modification.

3.2 LAND OWNERSHIP

Land associated with the proposed open cut extension is largely freehold land owned by WCPL (Figures 8a and 8b).

However, various government agencies and government-owned corporations own roadways, adjacent land and/or land in which Modification infrastructure relocations are proposed to occur, including Crown Lands, MWRC and Australian Rail Track Corporation (ARTC) lands associated with the Sandy Hollow-Gulgong Railway (Attachment 1).

3.3 CONSTRUCTION

The Modification would include the continued use of existing approved infrastructure and progressive development of mine infrastructure to support the advance of mining operations (e.g. relocation or extension of water management structures, internal haul roads and light vehicle roads).

The following provides a summary of the main construction activities to facilitate the Pit 8 Extension (Figure 9):

- realignment of approximately 2.4 km of Ulan-Wollar Road;
- relocation of approximately 2.5 km of local low-voltage ETLs; and
- relocation of approximately 3 km of telecommunication systems.

Services relocations may require some short underground segments following detailed design.

3.3.1 Construction Timing and Hours

Construction activities would commence as soon as all necessary primary and secondary approvals have been obtained (nominally in 2027). Minor construction activities may extend into 2028.

Within the Wilpinjong Coal Mine mining tenements, on-site infrastructure construction would continue to be undertaken up to 24 hours per day and seven days per week, providing these activities can be undertaken in compliance with Development Consent (SSD-6764) noise criteria.

Table 1
Overview of the Approved Wilpinjong Coal Mine and the Proposed Modification

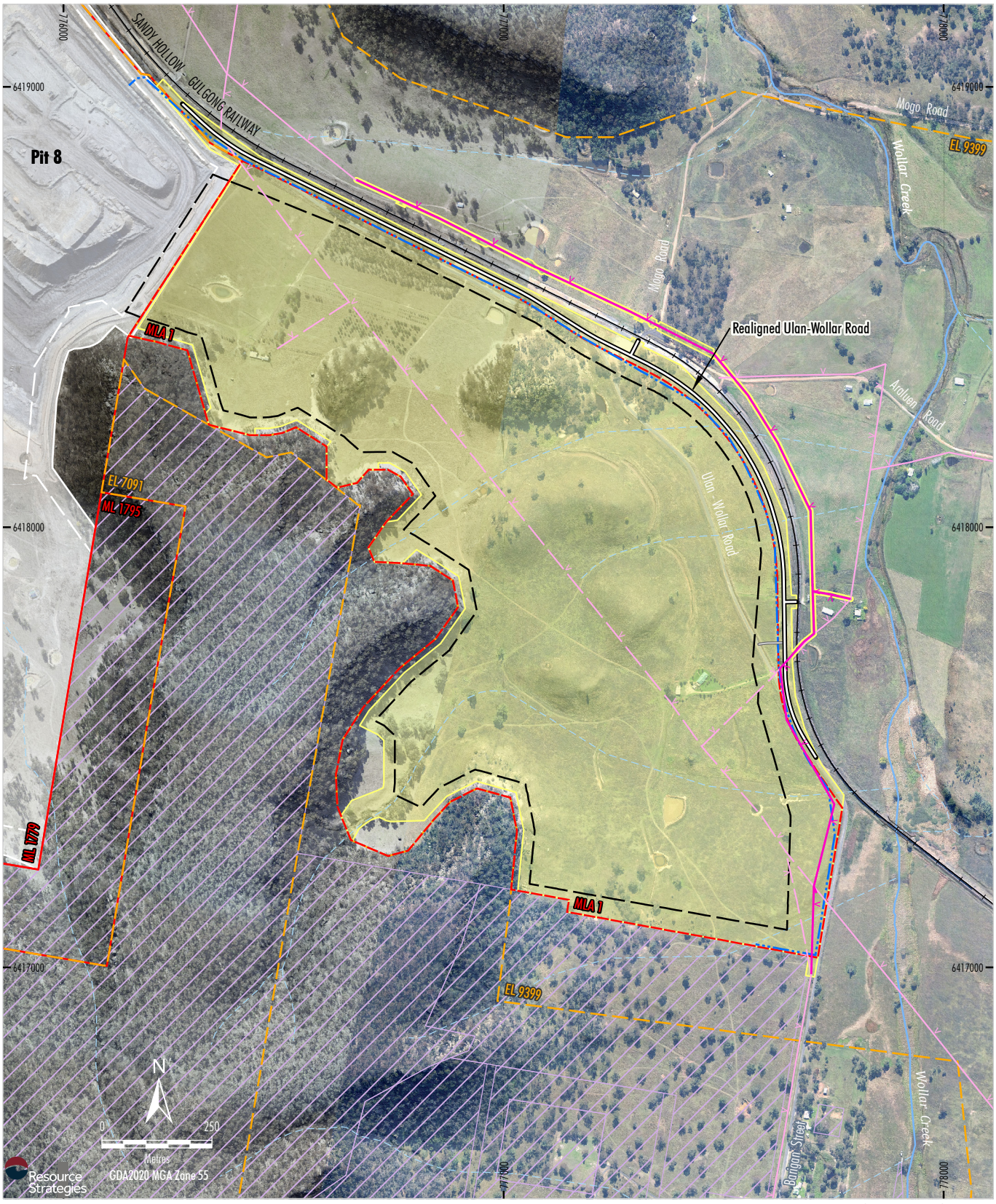
Component	Approved Wilpinjong Coal Mine under Development Consent (SSD-6764)	Proposed Modification
Mining Method and Open Cut Extent	• Open cut mining operation with an indicative mine program for the extraction of approximately 349 Mt of total ROM coal over the life of the Wilpinjong Coal Mine[1]. • Eight open cut pits and associated contained infrastructure area comprising approximately 3,000 ha.	• Relinquishment of approved extraction of more than 7 Mt of ROM coal (Cumbo Creek corridor and Rocky Hill complex). • Extraction of approximately 14 Mt of additional ROM coal from the Pit 8 Extension area. • Extension of Pit 8 by approximately 115 ha, and a reduction in disturbance of approximately 50 ha associated with the Cumbo Creek corridor and Rocky Hill complex.
Maximum Annual ROM Coal Production	• Up to 16 Mtpa of ROM coal.	• No change.
Mine Life	• 28 years with mining authorised until 31 December 2033.	• No change to timeframe for ROM coal production (ceases in 31 December 2033). • Additional six months of mining operations to backfill voids and shape final landform.
Waste Rock Management	• Waste rock is placed predominantly within mine voids and select waste rock used for construction of mine components.	• No change, however, in-pit crushing of select waste rock for beneficial use is also proposed.
Annual Waste Rock Production	• Annual waste rock production of up to approximately 43 million bank cubic metres (Mbcm).	• No change.
Coal Washing and Handling	• Beneficiation of ROM coal in the CHPP. • Facilities for the handling and stockpiling of both washed and unwashed (bypass coal).	• No change.
Maximum Annual Product Coal Production	• Up to approximately 13 Mtpa of thermal product coal for domestic electricity generation and export.	• No change.
Coal Transport	• An average of six and a maximum of 10 laden trains per day leaving the mine. • Transport via the Sandy Hollow-Gulgong Railway.	• No change.
Coal Rejects Management	• Coal rejects placed predominantly within mine voids. • Tailings filter press to allow co-disposal of tailings with coarse rejects.	• Continuation and extension of existing methodology.
Water Supply	• Make-up water demand to be met from runoff recovered from mine operational areas, recovery from tailings, open cut dewatering, advanced dewatering of pit areas and supply from borefield. • Water recovery from tailings via tailings filter press.	• No change to key sources of water supply.
Water Disposal	• Mine water treated in a reverse osmosis plant/water treatment facility and discharged to Wilpinjong Creek in accordance with EPL 12425.	• No change to key aspects of water disposal.

Table 1 (Continued)
Overview of the Approved Wilpinjong Coal Mine and the Proposed Modification

Component	Approved Wilpinjong Coal Mine under Development Consent (SSD-6764)	Proposed Modification
Hours of Operation	• Open cut mining, handling and processing of ROM coal at the CHPP and train loading at the Wilpinjong Coal Mine is undertaken 24 hours per day, seven days per week.	• No change.
General Infrastructure	• Access roads, electricity supply and distribution, rail loop, CHPP, train loading infrastructure, ROM coal stockpiles, coal handling equipment, flood bunds, diesel storage, administration, workshop, ablution buildings, stores, heavy vehicle workshop, parking and washdown facilities.	• Continued use of existing approved infrastructure and progressive modifications to support the operations as required.
Infrastructure Relocations	• Realignment of a 330 kV Electricity Transmission Line, Ulan-Wollar Road and associated rail level crossing and local powerlines and services.	• Realignment of sections of public roads, local powerlines and services.
Operational Workforce	• Approximately 625 at peak[2].	• No new workforce. The Modification would counteract natural workforce decline rates.
Construction Workforce	• Approximately 100 people at peak.	• No change.

[1] Comprised of 254 Mt from the *Wilpinjong Coal Project EIS* and 95 Mt from the *Wilpinjong Extension Project EIS*.

[2] The current (Q2 2025) operational workforce of the Wilpinjong Coal Mine is approximately 705 people.



Source: WCPL (2025); NSW Spatial Services (2025); Phronis (2025)
Orthophoto Mosaic: WCPL (July 2024 - Oct 2022)

LEGEND

- Existing Railway
- Existing Local Electricity Transmission Line
- Existing Local Electricity Transmission Line to be Removed
- Crown Land
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- Approved/Existing Open Cut and Contained Infrastructure Area

Proposed Modification

- Modification Indicative Development Footprint
- Conceptual Pit Boundary
- Indicative Public Road Realignment (approx 2370 m)
- Indicative Local Electricity Transmission Line Realignment
- Indicative Communications Realignment

Peabody

WILPINJONG COAL MINE

Modified General Arrangement - Pit 8 Extension Area

Figure 9

Construction activity for the realignment of Ulan-Wollar Road and local services would be generally limited to standard construction hours. Activities for these elements that are undertaken outside of the standard construction hours would prioritise lesser noise generating activities.

3.3.2 Construction Workforce

The Modification would require an average of 25 construction personnel and an estimated peak of 65 construction personnel in the first year of the Modification (2027[5]).

Modification construction employment would primarily be associated with the Ulan-Wollar Road relocation, and would be lower than past construction workforces peaks at Wilpinjong Coal Mine (Table 1).

3.3.3 Construction Equipment

Mobile equipment utilised for the construction of the public road realignment and the relocation of electricity and communication infrastructure would include civil-scale earthmoving equipment, specialised road construction equipment, elevated work platforms, cranes, stringing equipment and directional borers.

The construction equipment required for the Modification is modest in scale in comparison to the mining equipment being utilised by WCPL. This equipment is also typical of past Wilpinjong Coal Mine public infrastructure relocation activities. Limited short-term truck haulage of fill material along the Ulan-Wollar Road construction corridor, or between the road corridor and the Mine may be required to manage the cut and fill materials balance or to address geotechnical requirements associated with road construction.

3.3.4 Supporting Infrastructure

The Modification would largely utilise the existing infrastructure at the Wilpinjong Coal Mine, and would include alterations to support operations as required (e.g. relocation of haul roads and extensions to site boundary fencing).

The Modification would at times involve the relocation of some local infrastructure (such as local ETLs, cables and water supply pipelines) where required to maintain services to relevant local landholdings and/or the Wilpinjong Coal Mine, to the satisfaction of the relevant service provider/owner.

[5] The assumed Modification start date for the purposes of this Modification Report is 1 January 2027.

3.4 MINING OPERATIONS

The following discussion on the Modification mining operations is provisional, subject to variations in site geological modelling, coal market demands and ongoing detailed mine planning over the life of the Wilpinjong Coal Mine.

3.4.1 Hours of Operation

Consistent with the existing Wilpinjong Coal Mine operations, open cut mining activities and associated mobile equipment movements would continue to be undertaken 24 hours per day, seven days per week, subject to compliance with relevant environmental management criteria (e.g. real-time air quality and noise operational trigger levels).

Nominal shift start and finish times during mining operations would be consistent with the existing Wilpinjong Coal Mine, as follows:

- Administration Personnel – 6.30 am to 4.00 pm or 8.00 am to 5.30 pm weekdays.
- Open Cut (Day) Personnel – 6.30 am to 7.00 pm.
- Open Cut (Night) Personnel – 6.30 pm to 7.00 am.

As per the existing Wilpinjong Coal Mine operations, these shift times would be adjusted as necessary over the life of the Modification, based on operational efficiencies and production demands.

3.4.2 Open Cut Mining Areas

The Wilpinjong Coal Mine has eight approved open cut mining areas, named Pit 1 through to Pit 8 (Figure 3).

The Modification would include an additional open cut mining area of approximately 115 ha in the Pit 8 Extension area (Figure 4), facilitating approximately 14 Mt of additional ROM coal extraction.
The Pit 8 Extension area would be mined using open cut strip mining methods that are consistent with the approved Wilpinjong Coal Mine (Plate 10).

Plate 10: Dozer Working on In-Pit Emplacement

The Modification also includes WCPL relinquishing its right to develop approximately 50 ha of open cut mining and infrastructure works in Pits 4 and 8 associated with mining the Cumbo Creek corridor and the Rocky Hill complex (more than 7 Mt of ROM coal forgone).

3.4.3 Geological Setting

The Wilpinjong Coal Mine is located in the north-western part of the Sydney Basin in the Western Coalfield (Figure 1).

The Late Permian Illawarra Coal Measures, consisting of conglomerate, mudstones, siltstones and coal seams, contain the coal seams mined by the Wilpinjong Coal Mine. Coal resources are largely contained in the Ulan Coal and Moolarben Coal Seam, however, other named coal seams are also present.

The Illawarra Coal Measures are overlain by the Triassic Narrabeen Group (locally known as the Wollar Sandstone) and comprise mainly conglomerate and sandstone. Plate 11 illustrates a typical photograph of coal plies visible in a pit wall at the Wilpinjong Coal Mine.

Plate 11: Pit Wall Showing Various Coal Plies

The geochemical characteristics of the overburden and interburden, and the coal and coal rejects from the Pit 8 Extension area are generally consistent with the findings of the previous geochemical investigations (Geo-Environmental Management [GEM], 2025).

Further discussion of local geology is provided in the Groundwater Impact Assessment and Geochemistry Assessment (Appendices D and M, respectively).

3.4.4 Geotechnical Setting

The geotechnical conditions for mining at the Wilpinjong Coal Mine are relatively benign. Structural disturbances, such as faults and dykes, are present. However, the strata above the coal seams are strong.

Owing to the favourable geotechnical conditions, slope stability is typically not a significant design risk. WCPL has developed a significant length of open cut highwall adjacent to Ulan-Wollar Road and the Sandy Hollow-Gulgong Railway in Pits 1-8 to date (Plate 12).

Plate 12: Pit 6, Ulan-Wollar Road and Sandy Hollow-Gulgong Railway

Tailings dams at Wilpinjong Coal Mine are located in-pit and the coarse and fine rejects are co-disposed within the in-pit waste rock emplacements following dewatering of tailings. The use of in-pit emplacement for the disposal of coal reject material minimises geotechnical concerns with respect to the management of these materials.

Typical highwall batter angles of 70 degrees (°) in competent rock reflects the favourable conditions that exist at the Wilpinjong Coal Mine and highwall designs are checked and adjusted as necessary to reflect the nature and the strength of the in-situ material.

Existing and proposed geotechnical management measures at the Wilpinjong Coal Mine are detailed in Attachment 3.

3.4.5 Indicative Mine Schedule

There would be no increase to the currently approved maximum annual ROM coal production or annual waste rock production rates for the proposed Modification.

An indicative mine schedule for the Wilpinjong Coal Mine incorporating the proposed Modification is provided in Table 2.

Table 2
Indicative Modified Wilpinjong Coal Mine Schedule

Modification Year	Calendar Year	Waste Rock (Mbcm)	ROM Coal (Mt)
1[1]	2027	39.6	9.9
2	2028	34.6	8.9
3	2029	34.8	7.6
4	2030	34.4	6.1
5	2031	33.0	5.7
6	2032	25.6	6.0
7	2033	31.2	0.7
8	2034	10.6	0
	Total[2]	**243.8**	**44.9**

[1] Assumed Modification Year 1 is 2027.

[2] Totals may not equal the sum of each row due to rounding and have not been adjusted for varying moisture contents.

Mbcm = million bank cubic metres.

As shown in Table 2, no ROM coal extraction is anticipated in 2034. Waste rock rehandling from temporary emplacements for void backfilling operations would be the only mining activity occurring in this final year (i.e. inclusive of a reduced operational fleet for final landform works).

Figures 10 to 12 show the conceptual general arrangements and indicative progress of open cut mining in 2027, 2030 and 2032.

The Modification supporting infrastructure such as haul roads, bunding, hardstands, soil stockpiles and water management structures have also been designed to integrate with the existing Wilpinjong Coal Mine operations and minimise additional infrastructure requirements.

The sequence of mining, mobile fleet and/or the general arrangements may be modified throughout the life of the operation to maintain compliance with the applicable noise and air quality criteria specified in Development Consent (SSD-6764) for sensitive receivers, or to comply with EPL 12425.

3.4.6 Mobile Equipment

The mobile equipment currently used for approved open cut mining operations at the Wilpinjong Coal Mine would continue to be used for the Modification (Plate 13). While some existing fleet replacements may occur over the life of the Modification, no material additional major mobile plant items are anticipated to be required.

Plate 13: Cat 793 Haul Truck

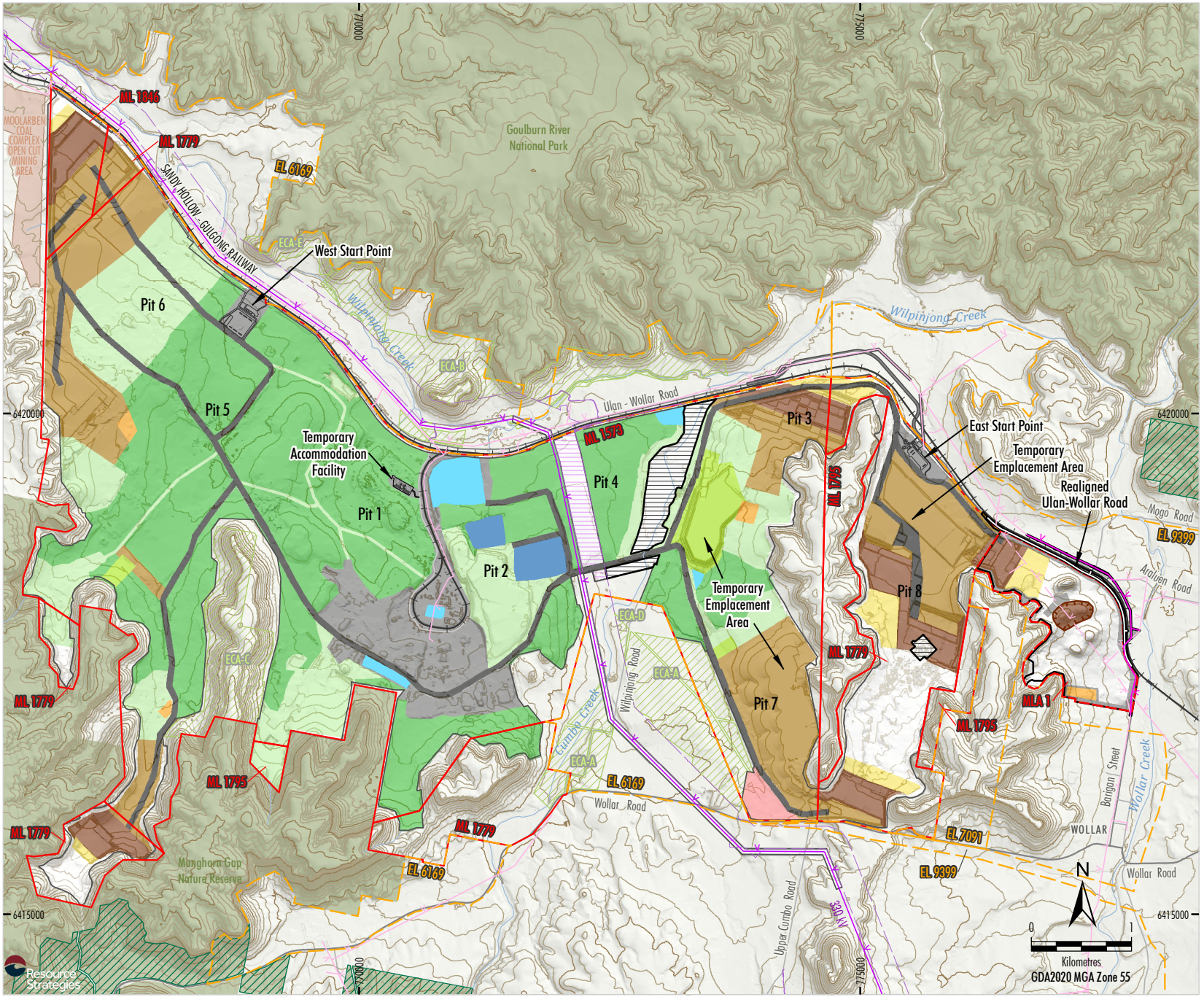
Anticipated mobile equipment that would be used during the Modification are listed in Appendix A.

3.5 COAL PROCESSING AND PRODUCTION

As the Modification proposes no change to the maximum annual ROM coal production rate, no CHPP upgrades are proposed in support of the Modification.

Regular maintenance and repair of Wilpinjong Coal Mine CHPP components would continue to occur on an as needed basis.

ROM coal processing and production rates would be determined by the requirements of the coal market, product specifications and associated blending requirements over the Modification period. A combination of washed and unwashed (bypass) coal may be produced, depending on coal quality market demands.



LEGEND

- Existing Railway
- Existing Local Electricity Transmission Line
- Existing Local Electricity Transmission Line to be Removed
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- Modification Indicative Development Footprint
- Mine Exclusion Area
- Indicative Public Road Realignment
- Indicative Local Electricity Transmission Line Realignment
- Basalt Excavation Area
- Topsoil Stripped
- Active Mining Area
- Active Waste Rock Emplacement
- Topsoil Stockpile
- Laydown Area
- Main Haul Road
- Infrastructure Area
- Tailings Dam
- Water Storage Area
- Temporary Rehabilitation
- Initial Rehabilitation
- Established Rehabilitation
- EnergyCo Easement

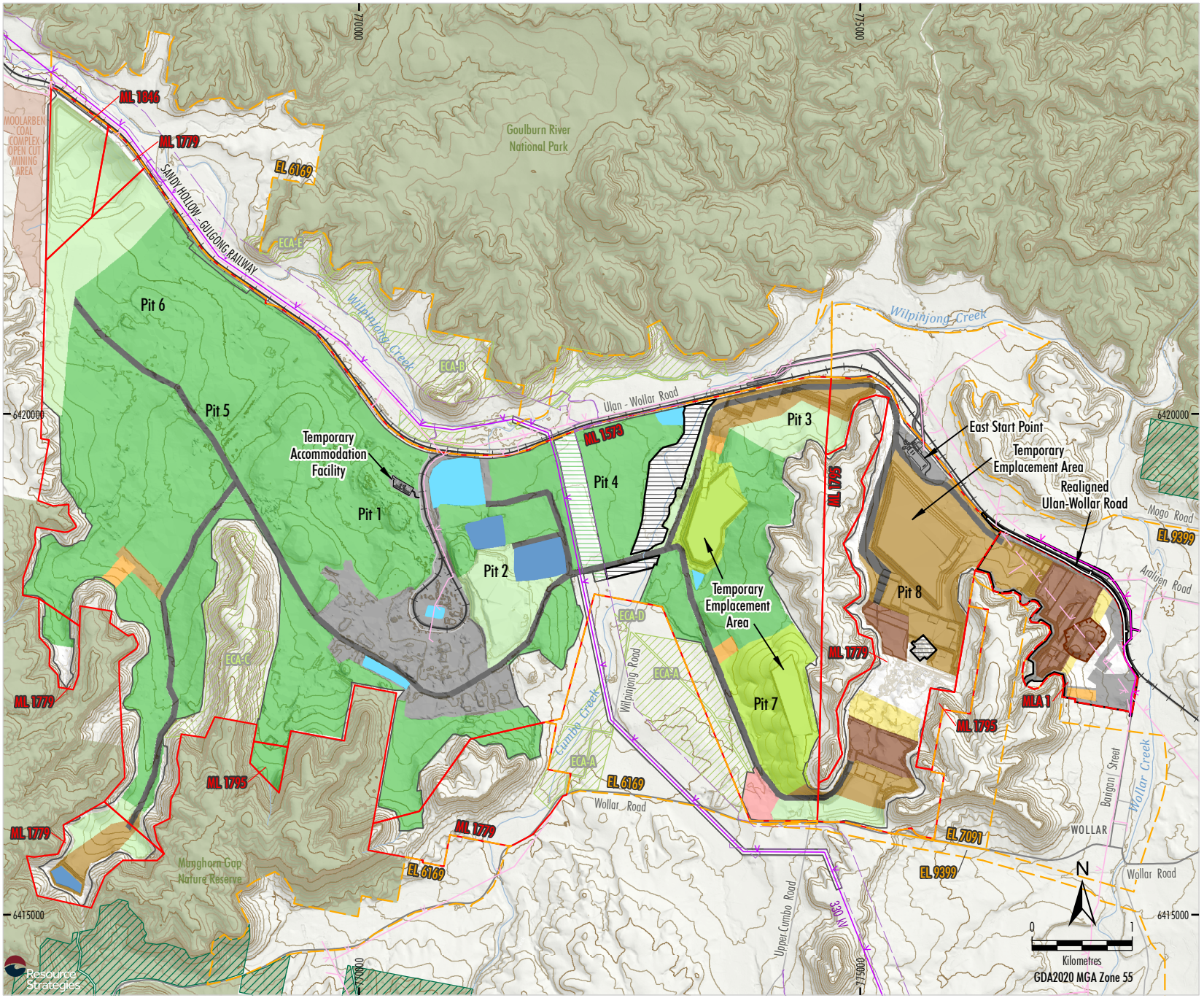
Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)

Peabody

WILPINJONG COAL MINE

Provisional General Arrangement 2027

Figure 10



LEGEND

- Existing Railway
- Existing Local Electricity Transmission Line
- Existing Local Electricity Transmission Line to be Removed
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
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- Approved/Existing Surface Development Area
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- Mine Exclusion Area
- Indicative Public Road Realignment
- Indicative Local Electricity Transmission Line Realignment
- Basalt Excavation Area
- Topsoil Stripped
- Active Mining Area
- Active Waste Rock Emplacement
- Topsoil Stockpile
- Laydown Area
- Main Haul Road
- Infrastructure Area
- Tailings Dam
- Water Storage Area
- Temporary Rehabilitation
- Initial Rehabilitation
- Established Rehabilitation
- Established Rehabilitation (EnergyCo Easement)

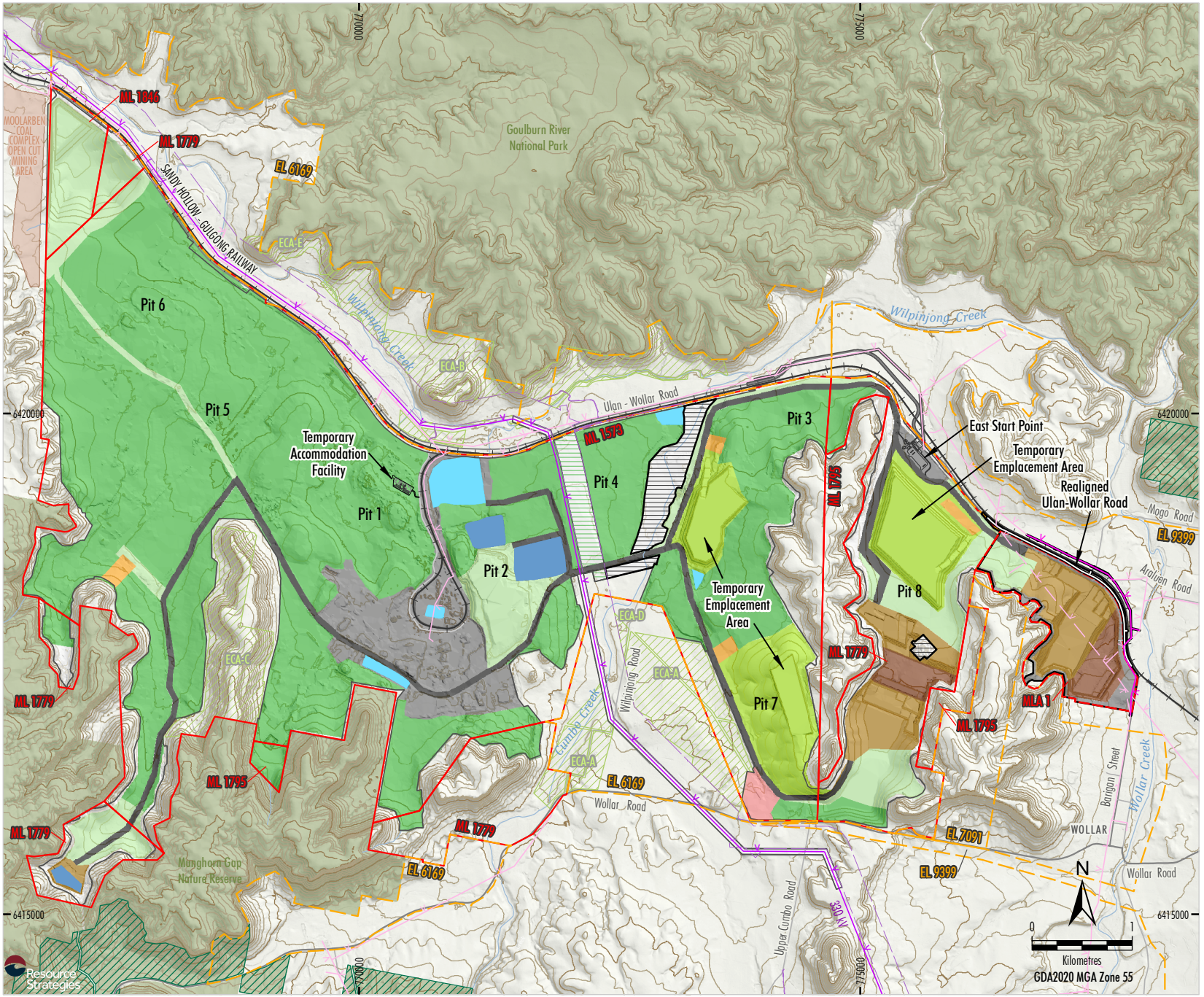
Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)

Peabody

WILPINJONG COAL MINE

Provisional General Arrangement 2030

Figure 11



LEGEND

- Existing Railway
- Existing Local Electricity Transmission Line
- Existing Local Electricity Transmission Line to be Removed
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
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- Topsoil Stockpile
- Laydown Area
- Main Haul Road
- Infrastructure Area
- Tailings Dam
- Water Storage Area
- Temporary Rehabilitation
- Initial Rehabilitation
- Established Rehabilitation
- Establishd Rehabilitation (EnergyCo Easement)

Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)

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WILPINJONG COAL MINE

Provisional General Arrangement 2032

Figure 12

Provisional coal processing and production rates for the Modification are provided in Table 3 based on recent operational experience and current market economics.

Table 3
Indicative Modification Processing Schedule

Modification Year	ROM Coal (Mt)	Product Coal (Mt)	Coarse Reject (Mt)	Fine Reject (Mt)
1[1]	9.9	7.8	2.0	0.12
2	8.9	7.0	1.8	0.07
3	7.6	5.8	1.8	0.03
4	6.1	4.6	1.5	0.03
5	5.7	4.2	1.4	0.03
6	6.0	4.6	1.4	0.03
7	0.7	0.5	0.2	0
8	0	0	0	0
Total[2]	**44.9**	**34.6**	**10.0**	**0.31**

[1] Assumed Modification Year 1 is 2027.

[2] Totals may not equal the sum of each row due to rounding and have not been adjusted for varying moisture contents.

Consistent with existing operations, tailings would continue to be pumped as a slurry and deposited in purpose-built tailings storages constructed within mine voids (tailings dams) or directed to temporary holding cells near the CHPP when the tailings filter press is not operating.

The Modification includes an additional provisional tailings storage located in the south of Pit 5 for use in the event that the current Tailings Dam 7 holding capacity is expended prior to the cessation of coal processing under the Modification (Figure 11). Alternatively, dried tailings may be excavated from existing uncapped tailings storages (and co-disposed with waste rock) to provide additional tailings storage capacity proximal to the CHPP.

Consistent with approved operations, where relevant, once tailings dams are at final capacity, they would be progressively capped with overburden material to a minimum depth of cover of 2 m prior to final profiling and rehabilitation.

3.6 PRODUCT COAL AND RAIL TRANSPORT

Product coal at the Wilpinjong Coal Mine is loaded onto trains 24 hours per day, seven days per week.

The existing Wilpinjong Coal Mine is approved to have an average of six laden trains and a maximum of 10 laden trains leaving the site on any day. Wilpinjong Coal Mine trains use the ARTC rail network to transport products east to domestic power generation customers and/or the Port of Newcastle for export.

The Modification proposes no change to the existing train loading infrastructure, typical train routes or approved daily maximum train movements. The existing rail infrastructure, product coal stockpiles and rail loading infrastructure are shown on Figures 3 and 5.

3.7 WATER SUPPLY AND MANAGEMENT

The existing water management system at the Wilpinjong Coal Mine would continue to support ongoing mining activities.

The existing surface water runoff controls aimed at preventing up-catchment runoff water from entering open cut mining operations would be retained and where necessary amended or extended for the Modification.

A description of the water management system for the Wilpinjong Coal Mine incorporating the Modification is provided in the Surface Water Assessment (Appendix E).

3.8 WASTE ROCK MANAGEMENT

The Modification would generate waste streams that would be similar in nature to the existing operations at the Wilpinjong Coal Mine. The key waste streams would continue to comprise:

- waste rock;
- CHPP rejects;
- sewage and wastewater;
- recyclable and non-recyclable wastes; and
- other wastes from mining and workshop activities (e.g. scrap metal, used tyres, waste hydrocarbons and oil filters).

In addition, WCPL would continue to dispose of inert waste from demolition of Peabody-owned dwellings and structures in the waste rock emplacements in accordance with existing approvals and the Waste Management Plan.

All general domestic waste (e.g. general solid [putrescible] waste and general solid [non-putrescible] waste as defined in *Waste Classification Guidelines Part 1: Classifying Waste* [NSW Environment Protection Authority {EPA}, 2014]) and general recyclable products would continue to be collected by an appropriately licensed contractor.

WCPL would continue to maintain a register of waste collected by the licensed waste contractor.

Mine waste rock (including overburden and interburden) generated from the existing open cuts is progressively placed within mine voids once the coal has been mined (or is transferred to temporary emplacements where necessary prior to rehandling later in the mining sequence).

Waste rock production for the Wilpinjong Coal Mine incorporating the Modification would remain less than the maximum annual waste rock production level of the approved Wilpinjong Coal Mine (i.e. 43 Mbcm) (Tables 1 and 2).

Mine waste rock emplacements behind the advancing open cut are constructed to generally approximate the form of the pre-mining topography with variations associated with the mine materials balance and landform design iteration in accordance with the Rehabilitation Strategy. Some inert waste rock is also utilised as needed to construct temporary or permanent visual bunds (e.g. typically approximately 3 m high) to screen views from adjacent public roads into the open cut operations.

3.8.1 Waste Rock Geochemistry

An assessment of the geochemical characteristics of the waste rock material associated with the Modification is provided in the Geochemistry Assessment (Appendix M) prepared by GEM (2025). A summary of the assessment of waste rock produced by the Modification is provided below.

A total of 58 drill-hole interval samples were collected from two drill-holes to represent the overburden and interburden material of the Modification. The test work included acidity, sodicity, electrical conductivity (EC), acid base accounting, and element enrichment and solubility test work (Appendix M).

Acidity, Salinity and Sodicity

GEM (2025) concluded that the waste rock materials generated from the Modification would range from slightly acidic to alkaline and would typically be non-saline.

Consistent with previous geochemical investigations, the fresh overburden and interburden material and is expected to be non-sodic and the weathered material is expected to be slightly to moderately sodic.

Acid Base Accounting

Consistent with the findings of previous geochemical investigations, GEM (2025) concluded that the waste rock materials generated from the Modification are expected to be NAF.

Metal Enrichment and Solubility

A total of 13 overburden and interburden samples were selected for multi-element analyses. Results indicate enrichment of arsenic, bismuth and selenium, consistent with previous test work (GEM, 2025).

Results from multi-element scans performed on water extracts indicate that most of the contained metals are relatively insoluble under the prevailing near-neutral pH conditions; however molybdenum and selenium are likely to be readily soluble under the prevailing conditions (GEM, 2025).

Consideration of potential water quality impacts and relevant controls is provided in Appendices D and E and Sections 6.7 and 6.8.

3.9 TEMPORARY HARD ROCK QUARRY

Exploration has identified a small deposit of igneous rock (i.e. basalt) that overlies the sedimentary sequence that hosts the Wilpinjong target coal seams in the Pit 8 Extension area.

Subject to pre-mining geochemical and geotechnical testing of the in-situ basalt, WCPL anticipates operating a small basalt quarry to beneficially recover construction gravel from this deposit in advance of open cut mining.

Operation of the small on-site quarry could reduce the need to purchase and transport gravel from off-site for use in construction (e.g. on-site haul roads or laydown areas) and for use as blast stemming material.

Basalt would be extracted using a combination of blasting and small earthmoving equipment and processed in an on-site mobile crushing facility in the Pit 8 Extension area (Figures 10 and 11). Crushed gravel would then be transferred to in-pit hardstands for general use in mining operations.

Operation of the temporary quarry would be restricted to daytime-only and may be relocated as mining advances. A crushed gravel production rate of less than (<) 0.5 Mtpa is anticipated.

Depending upon site demand, some crushed gravel produced by the quarry may be stockpiled on-site for future use and/or also beneficially utilised in Ulan-Wollar Road realignment construction works to minimise heavy vehicle deliveries.

3.10 FINAL LANDFORM AND LAND USE

Post-mining Land Use

Rehabilitation at the Wilpinjong Coal Mine is undertaken in accordance with the Rehabilitation Management Plan and the Rehabilitation Strategy.

The final land use goals for the Wilpinjong Coal Mine are based on the site being safe, stable and non-polluting and meeting the rehabilitation objectives of Development Consent (SSD-6764), including:

- landforms integrate with surrounding natural landforms and adjacent mine rehabilitation;
- maximising geotechnical performance, stability and hydrological function;
- maximising surface water drainage to the natural environment (excluding final void catchments);
- minimising long term groundwater seepage from the site; and
- minimising the visual impact of final landforms as far as is reasonable and feasible.

The Modification proposes a revised configuration of the Wilpinjong Coal Mine final landform which avoids direct disturbance of the existing Cumbo Creek corridor and the Rocky Hill complex (Figures 3 and 4). This proposed reduction in the approved disturbance area of the Wilpinjong Coal Mine may marginally alter site rehabilitation biodiversity offset requirements.

WCPL has considered potential Pit 8 Extension post-mining land uses (e.g. nature conservation, agriculture and renewables development) in the context of strategic land use objectives of the area and the Wilpinjong Coal Mine's existing biodiversity offset strategy that includes on-site rehabilitation biodiversity offsets.

The post-mining land use of the approved Wilpinjong Coal Mine incorporating the Modification is expected to continue to largely comprise nature conservation (woodland) land uses. Revegetation of rehabilitation areas would include the use of plant species characteristic of the surrounding vegetation to establish approximately 135 ha of woodland rehabilitation. Target flora species would include species characteristic of Box Gum Woodland and would also include key threatened species food trees (Appendix F).

Conceptual Final Landform

The Pit 8 Extension final landform includes the backfilling of residual voids at the cessation of mining.

Consistent with the rehabilitation objectives detailed above, the topography of the Pit 8 Extension final landform would approximate the forms of pre-mining topography at the Wilpinjong Coal Mine.

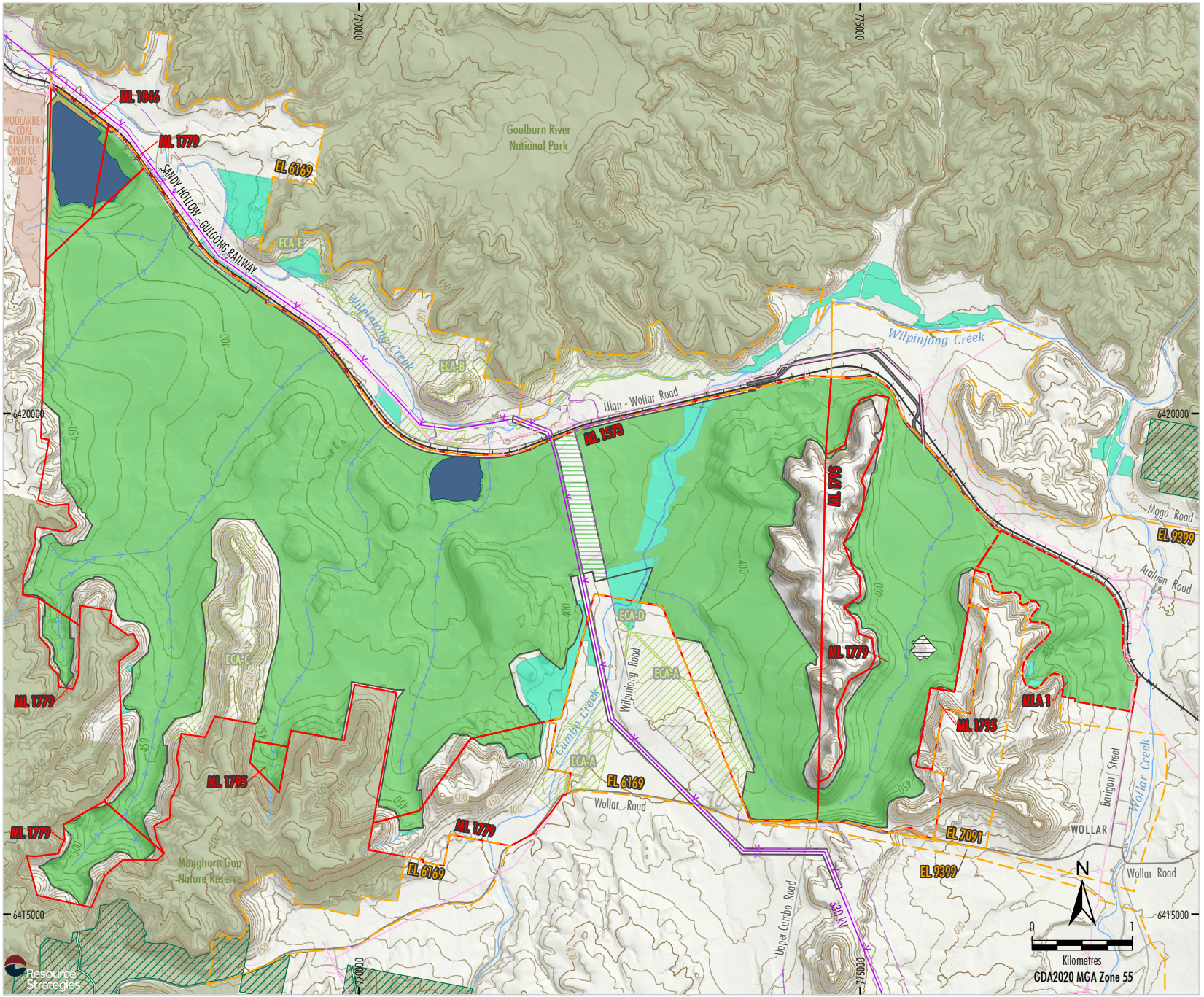
A conceptual Wilpinjong Coal Mine final landform inclusive of the proposed Pit 8 Extension, plus the proposed avoidance of the Rocky Hill complex and the existing Cumbo Creek corridor is shown on Figure 13.

3.11 WORKFORCE

As at Q2 2025, the FTE operational workforce of the Wilpinjong Coal Mine is approximately 705 personnel[6] (Plate 14).

Plate 14: Personnel at the Wilpinjong Coal Mine

[6] The Wilpinjong Extension Project was estimated to have a peak operational workforce of 625 and a peak construction workforce of some 100 people.



LEGEND

- Existing Railway
- Existing Local Electricity Transmission Line
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- Avoided Rocky Hill Complex
- Established Rehabilitation
- Established Rehabilitation (EnergyCo Easement)
- Regeneration Area
- Final Void Batter
- Final Void Waterbody
- Drainage Line

Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)

Peabody

WILPINJONG COAL MINE

Conceptual Final Landform Incorporating the Modification

Figure 13

No increase in Wilpinjong Coal Mine existing operational personnel is proposed for the Modification. However, the Modification would act to delay the natural decline in the Wilpinjong Coal Mine operational workforce by adding an extra working face at a time when some other working faces are progressively being completed (e.g. Pit 6) (Figures 10 to 12).

The development of the Pit 8 Extension would therefore maintain the duration of up to 225 operational jobs that would otherwise no longer be available in the period 2028-2032 by providing an alternative source of on-site ROM coal extraction.

The Pit 8 Extension would also reduce the impact on Wilpinjong Coal Mine ROM coal reserves of WCPL's relinquishment of the approved Cumbo Creek corridor and Rocky Hill complex (Figure 4).

Further discussion of the impacts of the Modification on regional employment and socio-economics are provided in Appendices K and L.

3.12 MINE ACCESS

Over the life of the Modification, an increasing proportion of the open cut workforce would be working in Pit 8 and in the Pit 8 Extension area. As a result, the proportion of the open cut workforce accessing the East Start Point will increase, and the proportion accessing the West Start Point would decrease (Figure 10).

The main mine access road would remain the access used by most mine employees (i.e. management, administration, coal processing and handling, workshop and maintenance personnel). The majority of on-site deliveries would also continue to use the main mine access road.

Once the new Ulan-Wollar Road alignment is operational and the previous alignment has been closed, WCPL could utilise the redundant road as an internal access to the Pit 8 Extension area.

Consistent with the existing Wilpinjong Coal Mine, the Modification open cut mining area would also be securely fenced to restrict site access to authorised personnel.

3.13 PROPOSED AMENDMENTS TO DEVELOPMENT CONSENT

The existing consolidated Development Consent (SSD-6764) would need to be amended to provide for the Modification.

WCPL requests the following key amendments to the wording of Condition 5, Schedule 2 of Development Consent (SSD-6764) to provide for the proposed Modification:

> ***Mining Operations***
>
> *5. The Applicant may carry out mining operations on site until the ~~31 December 2033~~ 30 June 2034.*
>
> *Note: Under this consent, the Applicant is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Secretary.*
>
> *Consequently, this consent will continue to apply in all respects other than the right to conduct mining operations, until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.*

The Modification would require amendment to the Development Consent (SSD-6764) Development Application area to capture the Pit 8 Extension area (Figure 4).

WCPL also anticipates that appropriate minor amendments would be made in relation to other conditions in, or figures appended to, Development Consent (SSD-6764) to reflect the Modification including:

- inclusion of this Modification Report and other associated Modification documentation under the "EIS" definition;
- replacement of relevant superseded plans in Appendices 2, 7 and 8 of Development Consent (SSD-6764);
- various adjustments to the Tables in Schedule 3 with respect to listing relevant sensitive noise and air quality receivers, including the removal of Wollar School[7];
- removal of the requirement to prepare the Cumbo Creek Relocation Plan component of the Water Management Plan required under Condition 30, Schedule 3;

[7] The Wollar School has been formally closed by the NSW Department of Education.

- adjustments to Tables 7, 8 and 9 with respect to biodiversity offset requirements that may be altered by WCPL's relinquishment of the Rocky Hill complex and Cumbo Creek approved mining areas; and
- any additional biodiversity offset obligations associated with the Modification extensions as determined through the Biodiversity Development Assessment Report (BDAR).

Following determination of the Modification, a range of Wilpinjong Coal Mine environmental management plans may require revision, including:

- Noise Management Plan;
- Blast Management Plan, including:
  - Blast Fume Management Strategy;
- Air Quality Management Plan, including:
  - Spontaneous Combustion Management Plan;
- Biodiversity Management Plan;
- Aboriginal Cultural Heritage Management Plan;
- Historic Heritage Management Plan;
- Social Impact Management Plan;
- Water Management Plan, including:
  - Site Water Balance;
  - Surface Water Management Plan;
  - Groundwater Management Plan;
- Rehabilitation Management Plan;
- Rehabilitation Strategy; and
- Bush Fire Emergency Management and Evacuation Plan.

Notwithstanding, all current Wilpinjong Coal Mine environmental management plans would be reviewed within three months of any modification to Development Consent (SSD-6764), in accordance with Condition 5, Schedule 5 of the consent.

4 STATUTORY CONTEXT

This section outlines the statutory requirements relevant to the assessment of the Modification.

As outlined in the *State Significant Development Guidelines* (DPHI, 2024a), Attachment 2 provides a detailed statutory compliance table for the approved Wilpinjong Coal Mine and identifies relevant statutory requirements and the relevant sections in this Modification Report that address these requirements.

4.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The EP&A Act and *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) sets the framework for planning and environmental assessment in NSW.

4.1.1 Applicability of Section 4.55(2) of the Environmental Planning and Assessment Act 1979

WCPL was granted Development Consent (SSD-6764) for the Wilpinjong Extension Project by the PAC, for the continuation of operations to 2033 at rates of up to 16 Mtpa of ROM, superseding the previous Project Approval (PA 05-0021).

WCPL is now seeking to modify Development Consent (SSD-6764) under section 4.55(2) of the EP&A Act.

Section 4.55(2) of the EP&A Act relevantly provides:

> ***4.55 Modification of consents—generally***
>
> *…*
>
> *(2)* ***Other modifications*** *A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if--*
>
> *(a) it is satisfied that the development to which the consent as modified relates is the same or substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all), and*
>
> *(b) it has consulted with the relevant Minister, public authority or approval body (within the meaning of Division 4.8) in respect of a condition imposed as a requirement of a concurrence to the consent or in accordance with the general terms of an approval proposed to be granted by the approval body and that Minister, authority or body has not, within 21 days after being consulted, objected to the modification of that consent, and*
>
> *(c) it has notified the application in accordance with--*
>
> *(i) the regulations, if the regulations so require, or*
>
> *(ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*
>
> *(d) it has considered any submissions made concerning the proposed modification within the period prescribed by the regulations or provided by the development control plan, as the case may be.*
>
> *…*

Under section 4.55(2)(a) of the EP&A Act, the appropriate baseline for assessing whether the Modification constitutes "substantially the same development" is the Wilpinjong Extension Project as originally approved in 2017 under Development Consent (SSD-6764), that is, before Modifications 2 and 4 were approved.

Table 1 presents a comparative summary of the approved Wilpinjong Coal Mine as approved under Development Consent (SSD-6764) and as proposed with the Modification.

A statutory compliance table has also been provided in Attachment 2.

The Modification would involve a modest extension to the Development Application area under Development Consent (SSD-6764) with mining operations continuing for an additional six months, to allow for backfilling activities following the completion of ROM coal extraction in the Pit 8 Extension area.

The Modification also includes the relinquishment of approval to extract more than 7 Mt of ROM coal from the Cumbo Creek corridor and Rocky Hill complex.

The consent authority is required to be satisfied that this proposal to modify Development Consent (SSD-6764), is substantially the same development as the development originally granted.

The Modification would:

- not alter the purpose for which the development is carried out, nor the general scale and nature of the mining operations;
- not require any material alteration to the current mining fleet, operational workforce or period of ROM coal extraction;
- alter the approved general arrangement to remove the Rocky Hill and Cumbo Creek exclusion areas and correspondingly include the Pit 8 Extension (noting the general arrangement of the Wilpinjong Extension Project has also been varied via Modifications 2 and 4, but remains similar in extent);
- result in modest additions to the Development Application area for inclusion of the Pit 8 Extension (noting that some land in Pit 8 has previously been removed from the Development Application area via Modification 2);
- result in additional relocations of local public infrastructure (i.e. to the east of the currently approved Pits 1-8 public infrastructure relocations);
- allow for an extra six months of mining for backfilling operations;
- extract approximately 6 Mt of additional ROM coal (Table 1);
- remain below the originally assessed maximum annual waste rock production rate of approximately 43 Mbcm;
- remain below the originally assessed maximum ROM coal production rate of 16 Mtpa;
- continue to make use of existing coal processing, handling, train loading and rail transport infrastructure without further material augmentation; and
- result in a residual final landform that avoids mining of the approved Rocky Hill and Cumbo Creek exclusion areas and includes the Pit 8 Extension, but is similar in landform design and approach to post-mining revegetation.

It is also important to note that the Wilpinjong Coal Mine, with the proposed Modification, would not involve any material changes to several aspects of the existing Wilpinjong Coal Mine, including the following:

- mining methods;
- primary site access;
- site electricity supply and distribution;
- mine infrastructure areas;
- CHPP, coal stockpile and rail loading facilities;
- duration of ROM coal extraction; and
- the existing hours of operation and key activities.

Taking the above and other similarities into account, WCPL considers that the key material and essential features of the Wilpinjong Coal Mine would remain substantially unchanged compared to the currently approved operation.

For the reason outlined above, the consent authority can be satisfied that the proposed Modification to Development Consent (SSD-6764) constitutes substantially the same development.

This matter is further examined, where relevant, in Sections 6 and 7 of this Modification Report and summarised in Table 1.

4.1.2 NSW Environmental Planning and Assessment Act 1979 Objects

Section 1.3 of the EP&A Act describes the objects of the EP&A Act as follows:

> *(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
>
> *(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
>
> *(c) to promote the orderly and economic use and development of land,*
>
> *…*
>
> *(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*
>
> *(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*

…

(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,

(j) to provide increased opportunity for community participation in environmental planning and assessment.

The Modification is considered to be generally consistent with the objects of the EP&A Act, as it:

- would reduce the natural rate of workforce decline at the Wilpinjong Coal Mine and facilitate continued local and regional employment, economic development opportunities and community contributions (Sections 6.16, 6.17 and 7.4, and Appendices K and L);
- would develop the State's valuable coal resources within WCPL's existing MLs and EL 9399, with the value of coal production recognised in the Strategic Statement (NSW Government, 2020);
- has been designed having regard to relevant principles of ecologically sustainable development (ESD) (Section 7);
- is compatible with its near neighbors, including agricultural businesses (Section 6.3);
- would incorporate a range of measures for the protection of the environment, including the protection of native flora and fauna, threatened species, and their habitats (Section 6.9 and 6.10);
- incorporates appropriate mitigation measures to manage potential direct and indirect impacts on heritage, informed by multiple Aboriginal and historical heritage assessments undertaken for the Wilpinjong Coal Mine (Sections 6.12 and 6.13, and Appendices H and I);
- would make maximum use of the existing Wilpinjong Coal Mine infrastructure, coal handling, rail transport and existing open cut footprint;
- incorporates progressive rehabilitation that would act to minimise the visual contrast of the Modification with the surrounding environment (Section 6.15);
- would be determined by the Minister, or the Minister's Delegate, however, a wide range of stakeholders have been consulted throughout the assessment process (Section 5); and
- allows for the Wilpinjong Coal Mine, incorporating the proposed Modification to continue to be developed in a manner that incorporates community input through the public exhibition of the Modification documents and the major project assessment process.

As outlined in the *State Significant Development Guidelines* (DPHI, 2024a), Attachment 2 includes a detailed statutory compliance table for the Modification, identifying the applicable statutory requirements and corresponding sections of this Modification Report where they are addressed.

4.1.3 Evaluation under Section 4.55(3) of the Environmental Planning and Assessment Act 1979

Section 4.55(3) of the EP&A Act states:

(3) In determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in section 4.15(1) as are of relevance to the development the subject of the application. The consent authority must also take into consideration the reasons given by the consent authority for the grant of the consent that is sought to be modified.

In accordance with section 4.55(3) of the EP&A Act, Section 4.1.4 provides an evaluation of the Modification under section 4.15(1) of the EP&A Act.

In addition, the consent authority must also take into consideration the reasons given by the consent authority for the grant of the consent that is sought to be modified.

For the Wilpinjong Extension Project Development Application, the consent authority, the then PAC, acting as delegate of the Minster for Planning, issued a Determination Report for the grant of Development Consent (SSD-6764) (PAC, 2017).

The Wilpinjong Extension Project Determination Report addresses a broad range of environmental issues relevant to the Project, as raised by regulatory agencies and the public. These include air quality and greenhouse gas emissions, noise and blasting, biodiversity and rehabilitation, final landform, indigenous heritage, social impacts and water resources (PAC, 2017).

The PAC concluded that the Wilpinjong Extension Project would, subject to the mitigation measures proposed, have acceptable impacts and would provide significant benefits to the locality, region and State[8], with minimal impacts beyond that of the existing approved Wilpinjong Coal Mine operations and would be in the public interest (PAC, 2017).

It is also noted that the reasons for approving Modifications 2 and 4 of Development Consent (SSD-6764) are detailed in the respective Department Assessment Reports submitted to the consent authority.

For Modification 2, the Minister's delegate accepted that the proposed Modification (inclusive of the Temporary Accommodation Camp) would mitigate pressures on housing availability in the Mid-Western Regional LGA, impacts on the community and the environment would be appropriately minimised and the Modification was in the public interest (DPHI, 2024b).

For Modification 4, the Minister's delegate accepted that the proposed Modification was an administrative update to ensure Development Consent (SSD-6764) was consistent with the approved alignment and environmental impacts of the EnergyCo Transmission Project and was in the public interest (DPHI, 2024c).

This Modification represents a continuation of socio-economic benefits associated with the Wilpinjong Coal Mine. Although environmental impacts would continue for an additional six months to allow for backfilling operations, the associated amenity impacts are expected to remain generally consistent with those of the currently approved operations, which are being effectively managed under the existing environmental management conditions of Development Consent (SSD-6764) (Section 6).

4.1.4 Evaluation under Section 4.15(1) of the Environmental Planning and Assessment Act 1979

In evaluating the Modification, the consent authority must, in accordance with section 4.55(3), consider the matters listed in section 4.15(1) of the EP&A Act, to the extent that are relevant to the development subject to the Modification.

Section 4.15(1) states:

> ***(1) Matters for consideration—general***
>
> *In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application—*
>
> *(a) the provisions of—*
>
> *(i) any environmental planning instrument, and*
>
> *(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
>
> *(iii) any development control plan, and*
>
> *(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and*
>
> *(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),*
>
> *(v) (Repealed)*
>
> *that apply to the land to which the development application relates,*
>
> *(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
>
> *(c) the suitability of the site for the development,*
>
> *(d) any submissions made in accordance with this Act or the regulations,*
>
> *(e) the public interest.*

[8] Since the approval of the Wilpinjong Extension Project, the Wilpinjong Coal Mine has generated some $490 million in royalties to the State of NSW for infrastructure and services.

This Modification Report has been prepared to address the matters in section 4.15(1) of the EP&A Act, as follows:

- Consideration of the requirements of relevant environmental planning instruments is provided in Section 4.3 and Attachment 2.
- This Modification Report has been prepared in consideration of the relevant provisions of the EP&A Regulation.
- The existing Voluntary Planning Agreement with MWRC under Development Consent (SSD-6764) would continue to apply to the modified Wilpinjong Coal Mine.
- A description of the existing environment, an assessment of the potential environmental impacts associated with the Modification (including environmental, social and economic impacts of the locality), and a description of the potential measures to avoid, mitigate, rehabilitate, remediate, monitor and/or offset the potential impacts of the Modification are described in Section 6 and Appendices A to N.
- The suitability of the site for the development has been assessed and determined previously in the context of Development Consent (SSD-6764) in 2017 by the PAC, and in 2006 by the Minister for Planning in the context of PA 05-0021 (Section 1.2). The suitability and assessment of the final landform as proposed for the Modification has been considered in Sections 3 and 7.
- This Modification Report will be placed on public exhibition and WCPL will respond to any submissions made on the Modification through a Submissions Report.
- Consideration of whether, on evaluation, the Modification is considered to be in the public interest is provided in Section 7.

4.2 OTHER RELEVANT NSW LEGISLATION

In addition to the EP&A Act, the following NSW legislation may be applicable to the Wilpinjong Coal Mine, incorporating the Modification:

- *Aboriginal Land Rights Act 1983;*
- *Biosecurity Act 2015*;
- BC Act*;*
- *Climate Change (Net Zero Future) Act 2023* (Net Zero Act)*;*
- *Contaminated Land Management Act 1997;*
- *Conveyancing Act 1919;*
- *Crown Land Management Act 2016;*
- *Dams Safety Act 2015;*
- *Dangerous Goods (Road and Rail Transport) Act 2008;*
- *Electricity Supply Act 1995;*
- *Fisheries Management Act 1994* (FM Act);
- *Heritage Act 1977;*
- *Local Land Services Act 2013;*
- *Mining Act 1992;*
- NPW Act;
- *Native Title (New South Wales) Act 1994;*
- *Petroleum (Onshore) Act 1991;*
- *Pipelines Act 1967;*
- *Protection of the Environment Operations Act 1997* (PoEO Act);
- *Roads Act 1993;*
- *Rural Fires Act 1997;*
- *Water Management Act 2000* (WM Act)*;*
- *Work Health and Safety Act 2011;* and
- *Work Health and Safety (Mines) Act 2013.*

Relevant licences or approvals required under these Acts would be obtained for the Wilpinjong Coal Mine over the life of the Modification.

Key NSW legislation of potential relevance to the Modification is discussed in further detail below.

Biodiversity Conservation Act 2016

In accordance with section 1.3 of the BC Act, the purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ESD.

The BC Act provides the approach to be followed for assessing a development's impacts on threatened species and ecological communities.

More specifically, Part 7 of the BC Act provides for biodiversity assessment and approvals under the EP&A Act.

In this regard, clause 30 of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* (BC S&T Regulation) states:

> ***New Act applies to modification of planning approvals granted before commencement of new Act***
>
> *The new Act* [i.e. the BC Act] *applies to the modification of a planning approval even if the planning approval was granted before the commencement of the new Act (unless the application for the modification of the planning approval is a pending or interim planning application).*

In accordance with this clause, the BC Act is applicable to this Modification, noting that Development Consent (SSD-6764) was granted prior to the commencement of the BC Act and that this Modification does not constitute a "pending or interim planning application".

Clause 30A in the BC S&T Regulation relevantly provides for how the BC Act applies to the Modification, by stating:

> *(1) The provisions of Division 4 of Part 7 of the new Act* [i.e. the BC Act] *apply to applications for the modification of a planning approval—*
>
> *(a) where the planning approval was granted before the commencement of the new Act, and*
>
> *(b) where the planning approval was granted on or after the commencement of the new Act, as a result of the determination of a pending or interim planning application.*
>
> *(2) For that purpose—*
>
> *(a) the provisions apply in relation to the original development as proposed to be modified, and*
>
> *(b) a biodiversity development assessment report is required to be submitted and taken into consideration if Division 4 of Part 7 of the new Act would have applied to the original development (as proposed to be modified) if planning approval had been granted after the commencement of the new Act, and*
>
> *(c) however a biodiversity development assessment report is not required to be submitted if the authority or person determining the application for modification (or determining the environmental assessment requirements for the application) is satisfied that the modification will not increase the impact on biodiversity values, and*
>
> *(d) the biodiversity development assessment report submitted with the application for modification—*
>
> *(i) is to take into account any measures already taken to avoid, minimise or offset the impact on biodiversity values in connection with the planning approval before the proposed modification, and*
>
> *(ii) is to take into account only the additional impact on biodiversity values resulting from the modification of the development and not those associated with the development as approved, and*
>
> *(e) if an application for the original development as proposed to be modified would have been required to be refused because of serious and irreversible impacts on biodiversity values, the application for modification is required to be refused.*

A BDAR has been prepared for the Modification and is provided in Appendix F. The BDAR was prepared in consideration of the BAM (DPIE, 2020) and relevant provisions of both the NSW *Biodiversity Conservation Regulation 2017* (BC Regulation) and the BC S&T Regulation.

In accordance with clause 30A(2)(d) of the BC S&T Regulation (see above), the BDAR for the Modification takes into account:

- measures already taken to avoid, minimise or offset the impact on biodiversity values in connection with Development Consent (SSD-6764) before this Modification; and
- the additional impact on biodiversity values resulting from the Modification (as distinct from the impact associated with the Wilpinjong Coal Mine as approved by Development Consent [SSD-6764]).

Clause 30A(2)(e) does not apply to this Modification application, as a development application for the original development, as proposed to be modified, would not have been required to be refused under section 7.16 of the BC Act.

A more detailed examination of the biodiversity impacts associated with the Modification is provided in Section 6.9 and Appendix F.

Climate Change (Net Zero Future) Act 2023

The Net Zero Act sets out NSW's approach to climate change and legislates whole-of-government climate action.

The objects of the Net Zero Act are identified in section 4 of the Act as follows:

> *(a) to establish guiding principles for action to address climate change,*
>
> *(b) to set targets for the reduction in net greenhouse gas emissions in New South Wales until 2050,*
>
> *(c) to set an objective for New South Wales to be more resilient to a changing climate,*
>
> *(d) to establish the Net Zero Commission to independently monitor, review and report on progress in New South Wales towards the targets, the adaptation objective and other matters.*

Part 2 of the Net Zero Act sets out guiding principles (section 8), targets for reducing net greenhouse gas emissions in NSW (section 9), an adaptation objective (section 10) and a provision relating to achieving the 2050 net zero target (section 11).

The Net Zero Act sets progressive reduction targets for NSW's net greenhouse gas emissions as follows:

- 50 percent (%) reduction on 2005 levels by 30 June 2030;
- 70% reduction on 2005 levels by 30 June 2035; and
- 'net zero' by 30 June 2050.

Consideration of the Net Zero Act NSW emission reduction targets and a comparison of these targets to the estimated greenhouse gas emissions of the Wilpinjong Coal Mine incorporating the Modification is presented in Section 6.11 and Appendix C.

WCPL considers that the consent authority can be satisfied that the Modification, including the continued mining operations through to 2034, is not inconsistent with NSW's overall targets for reducing net greenhouse gas emissions.

Crown Land Management Act 2016

WCPL is currently working to streamline the administration of compensation and licensing with NSW Crown Lands under the *Mining Act 1992* for mining activities on various Crown Land parcels within its existing mining leases in consultation with NPWS.

Should WCPL require access to incidental Crown Land parcels to facilitate the Modification (e.g. for construction of public infrastructure) within the Development Application area of Development Consent (SSD-6764), provisions under the *Crown Land Management Act 2016* are available to authorise such access.

In accordance with sections 5.21 and 5.3 of the *Crown Land Management Act 2016*, the use or occupation of Crown Land can be authorised through a Crown Licence. If required to support the Modification, WCPL may obtain such licences following the completion of detailed infrastructure design.

For activities within the existing mine leases of the Wilpinjong Coal Mine, WCPL will continue consulting with Crown Lands and anticipates addressing the use and occupation of Crown Land either through an updated agreement under section 65 of the *Mining Act 1992* or via appropriate Crown Licences under the *Crown Lands Management Act 2016*.

Dams Safety Act 2015

The following Wilpinjong Coal Mine dams are declared dams under section 5 of the *Dams Safety Act 2015*:

- Wilpinjong Tailings Dam 2.
- Wilpinjong Tailings Dam 6.

Where relevant existing declared storages would continue to be operated in accordance with the relevant dam safety requirements imposed under the *Dams Safety Act 2015* regime over the life of the Modification.

Additional storage dams on-site could also become declared dams under section 5 of the *Dams Safety Act 2015* (e.g. Tailings Dam 7 or Tailings Dam 8) over the life of the Modification.

Under section 48 of the *Dams Safety Act 2015*, the area of land surrounding, or in the vicinity of, a declared dam can be declared a notification area.

Before a consent authority modifies a development consent for the carrying out of mining operations under the *Mining Act 1992* in a notification area, a consent authority must refer the modification application to Dams Safety NSW and take into consideration any matters that are raised by Dams Safety NSW in relation to the application within the prescribed period.

Provisional Modification general arrangements (Section 3) show that ongoing mining activities are proposed in the vicinity of the existing declared dams over the life of the Modification.

Continued rehabilitation activities and/or the development of new infrastructure would also occur within the notification areas of declared dams over the life of the Modification.

The consent authority will therefore need to refer the application for this Modification to Dams Safety NSW and take into consideration any matters raised by Dams Safety NSW within the prescribed period.

Mining Act 1992

The objects of the *Mining Act 1992* are set out in section 3A of the *Mining Act 1992*. Section 3A states:

> *The objects of this Act are to encourage and facilitate the discovery and development of mineral resources in New South Wales, having regard to the need to encourage ecologically sustainable development, and in particular—*
>
> *(a) to recognise and foster the significant social and economic benefits to New South Wales that result from the efficient development of mineral resources, and*
>
> *(b) to provide an integrated framework for the effective regulation of authorisations for prospecting and mining operations, and*
>
> *(c) to provide a framework for compensation to landholders for loss or damage resulting from such operations, and*
>
> *(d) to ensure an appropriate return to the State from mineral resources, and*
>
> *(e) to require the payment of security to provide for the rehabilitation of mine sites, and*
>
> *(f) to ensure effective rehabilitation of disturbed land and water, and*
>
> *(g) to ensure mineral resources are identified and developed in ways that minimise impacts on the environment.*

WCPL considers that the Modification is consistent with these objects of the *Mining Act 1992* because the Modification would facilitate the continued efficient development of a valuable coal resource until 2033, and completion of associated void backfilling operations in 2034.

Under the Modification, mining operations at the Wilpinjong Coal Mine would continue to occur within existing MLs (Figures 9 to 12). There would be no need for the amendment or variation of the existing authorities under the *Mining Act 1992*.

WCPL would also apply for a new ML within EL 9399 with an indicative Mining Lease Application (MLA) area for the Pit 8 Extension (MLA1) shown on Figure 9.

Section 380AA of the *Mining Act 1992* specifies restrictions on planning applications for coal mining, relevantly including:

> *(1) An application for development consent, or for the modification of a development consent, to mine for coal cannot be made or determined unless (at the time it is made or determined) the applicant is the holder for an authority that is in force in respect of coal and the land where mining for coal is proposed to be carried out, or the applicant has the written consent of the holder of such an authority to make an application.*
>
> *…*

As the holder of MLs 1573, 1779, 1795, 1846 and EL 9399 for Group 9 minerals (coal), WCPL is not impeded from lodging the Modification application under section 380AA.

With respect to the existing MLs for the Wilpinjong Coal Mine, it is noted that these MLs are subject to the standard conditions outlined in Part 2 of Schedule 8A to the *Mining Regulation 2016*, including clause 20 states:

> ***20 Additional requirements—application for or to modify development consent***
>
> *(1) The holder of a mining lease must give written notice to the Secretary within 10 days after—*
>
> *(a) making an application for development consent that relates to the mining area, or*
>
> *(b) making an application for modification of a development consent—*
>
> *(i) under the Environmental Planning and Assessment Act 1979, section 4.55(2), and*
>
> *(ii) that proposes to modify a condition of the consent that relates to rehabilitation of the mining area in a way that may affect an obligation under the mining lease relating to rehabilitation of the mining area.*
>
> *(2) This clause does not apply if the development is State significant development.*

Development Consent (SSD-6764) for the Wilpinjong Extension Project was granted under the State significant development provisions.

Rehabilitation of the Wilpinjong Coal Mine will continue to be carried out in accordance with a Rehabilitation Management Plan prepared in line with the standard conditions of the MLs and updated to reflect the proposed Modification.

National Parks and Wildlife Act 1974

The NPW Act contains provisions for the protection and management of national parks, historic sites, nature reserves and Aboriginal heritage in NSW.

WCPL notes that the proposed Modification mining extension are located at significant setback distances from protected lands within the National Park Estate. The Pit 8 Extension is located approximately 6 km from the Munghorn Gap Nature Reserve and approximately 1 km from the Goulburn River National Park (Section 6.12).

Further, an Aboriginal Cultural Heritage Assessment (ACHA) has been undertaken for the Modification by Navin Officer Heritage Consultants Pty Ltd (Navin Officer) (2025) to assess the potential impacts of the Modification on Aboriginal cultural heritage (Appendix H).

Cultural heritage impacts would continue to be appropriately managed in accordance with the Aboriginal Cultural Heritage Management Plan for the Wilpinjong Coal Mine.

WCPL considers that the consent authority can be satisfied that the cultural heritage impacts associated with the Modification would be appropriately managed in accordance with relevant conditions under Development Consent (SSD-6764) and the requirements of an updated Aboriginal Cultural Heritage Management Plan.

Protection of the Environment Operations Act 1997

The PoEO Act and the *Protection of the Environment Operations (General) Regulation 2022* set out the general obligations for environmental regulation in NSW.

The approved Wilpinjong Coal Mine currently operates under EPL 12425, granted under the PoEO Act.

EPL 12425 contains various environmental management conditions, including conditions that relate to emission and discharge limits, environmental monitoring, and reporting.

If approved, the Modification may necessitate some minor amendments to EPL 12425. Otherwise, the Wilpinjong Coal Mine would continue to operate in accordance with EPL 12425 and other relevant requirements under the PoEO Act framework.

Roads Act 1993

The approved Wilpinjong Coal Mine includes the establishment of new sections of public road and the closure of local minor roads within the mining footprint.

If the Modification is approved, WCPL would apply for any necessary consents under section 138 of the *Roads Act 1993* associated with works in relevant roads such as the construction of the realigned Ulan-Wollar Road.

WCPL and MWRC would also address relevant requirements of the *Roads Act 1993* and *Conveyancing Act 1919* with respect to dedication of new sections of public road and previous public road closures during the life of the Modification.

Water Management Act 2000

The WM Act contains provisions for the licensing, allocation, capture and use of water resources.

Under the WM Act, water sharing plans establish rules for sharing water between different users and between the various environmental sources (namely rivers or aquifers).

Appendices D and E and Sections 6.7 and 6.8 address the water licensing requirements under the WM Act. These assessments outline the water access licences necessary for the Modification within each relevant water source, which are already held by WCPL for the Wilpinjong Coal Mine.

In addition to relying on existing licences to cover the licensed take of water associated with the Wilpinjong Coal Mine, WCPL will apply for any additional approvals under the WM Act that may be required for the Modification.

WCPL considers that the consent authority can be satisfied that the overall impact on water resources both past mining impacts and the proposed under the Modification is acceptable and can continue to be effectively managed.

4.3 ENVIRONMENTAL PLANNING INSTRUMENTS

The detailed statutory compliance reconciliation table in Attachment 2 includes key environmental planning instruments relevant or potentially relevant to the Modification.

This section outlines the relevant provisions of the applicable Local Environmental Plan, including those relating to the permissibility of development, the Plan's aims and the objectives of applicable land use zones.

4.3.1 Permissibility

The modified Wilpinjong Coal Mine Development Application area is within the *Mid-Western Regional Local Environmental Plan 2012* (Mid-Western Regional LEP) area.

The land on which the Modification is located is primarily zoned under the Mid-Western Regional LEP as a combination of Zone RU1 (Primary Production), Zone R5 (Large Lot Residential) and to a lesser extent SP2 (Infrastructure – Rail Infrastructure).

The Modification development within the SP2 zoned land would comprise some limited relocation of public infrastructure, consistent with the existing Wilpinjong Coal Mine.

The Mid-Western Regional LEP defines "mining" as follows:

> *…mining means mining carried out under the Mining Act 1992 or the recovery of minerals under the Offshore Minerals Act 1999, and includes:*
>
> - *the construction, operation and decommissioning of associated works, and*
> - *the rehabilitation of land affected by mining.*

The Mid-Western Regional LEP also defines "open cut mining" as follows:

> ***open cut mining** means mining carried out on, and by excavating, the earth's surface, but does not include underground mining.*

Open cut mining is permitted with consent in Zone RU1 (Primary Production) under the Mid-Western Regional LEP. As it is not listed as a prohibited form of development, open cut mining is also permissible with consent in Zone R5 (Large Lot Residential).

In contrast, within Zone SP2, the Mid-Western Regional LEP expressly prohibits development for the purpose of mining or open cut mining.

However, clause 2.5 of the *State Environmental Planning Policy (Resources and Energy) 2021* (Resources and Energy SEPP) states that the State Environmental Planning Policy (SEPP) applies across all of NSW.

Clause 2.6(1) further establishes that, in the event of any inconsistency between the SEPP and the Mid-Western Regional LEP, the provisions of the SEPP prevail.

Clause 2.9(1) of the Resources and Energy SEPP provides that certain mining development is permissible with development consent.
Clause 2.9(1)(b) states:

> *(1)* ***Mining** Development for any of the following purposes may be carried out only with development consent—*
>
> *…*
>
> *(b) mining carried out—*
>
> *(i) on land where development for the purposes of agriculture or industry may be carried out (with or without development consent), or*
>
> *(ii) on land that is, immediately before the commencement of this section, the subject of a mining lease under the Mining Act 1992 or a mining licence under the Offshore Minerals Act 1999,*

In this regard, as "Extensive agriculture" (which is a type of "agriculture") is permissible under the Mid-Western Regional LEP without consent in Zone SP2 – (Infrastructure), clause 2.9(1)(b) of the Resource and Energy SEPP has the effect that development for the purpose of mining carried out on this land can be carried out with development consent.

In addition, as the development to be carried out on land subject to the SP2 zone is:

1. development for the purpose of mining; and
2. that purpose (i.e. the mining) is to be carried out on land where development for the purposes of agriculture or industry may be carried out (with or without development consent),

Clause 2.9(1)(b) of the Resources and Energy SEPP also has the effect that the development on this SP2 land can be carried out with development consent.

The practical effect of clause 2.6(1) of the Resources and Energy SEPP is that where there is any inconsistency between the provisions of the Resources and Energy SEPP and those contained in the Mid-Western Regional LEP, the provisions of the Resources and Energy SEPP will prevail.

To the extent that the provisions in the Mid-Western Regional LEP and Resources and Energy SEPP relating to the permissibility of proposed development are relevant to determining this proposed modification of development which is authorised by Development Consent (SSD-6764), WCPL considers that the consent authority can be satisfied that the Modification is consistent with these provisions.

4.3.2 Mid-Western Regional Local Environmental Plan 2012

The Mid-Western Regional LGA is subject to the Mid-Western Regional LEP.

Clause 1.2 of the Mid-Western Regional LEP outlines the general aims of the plan, in particular:

(b) to encourage the proper management, development and conservation of resources within Mid-Western Regional by protecting and conserving:

(i) land of significance to agricultural production, and

(ii) soil, water, minerals and other natural resources, and

(iii) native plants and animals, and

(iv) places and buildings of heritage significance, and

(v) scenic values.

(c) to provide a secure future for agriculture through the protection of agricultural land capability and by maximising opportunities for sustainable rural and primary production pursuits,

(d) to foster a sustainable and vibrant economy that supports and celebrates the Mid-Western Regional's rural, natural and heritage attributes,

…

(g) to promote development that minimises the impact of salinity on infrastructure, buildings and the landscape.

To the extent that the aims of the Mid-Western Regional LEP are relevant to determining the Modification, the Modification is considered to be consistent with these aims. In this regard, it is noted that:

- the Modification would not impact any NSW Government mapped Biophysical Strategic Agricultural Land (BSAL);
- the Modification would not impact any NSW Government Mapped Critical Industry Cluster land;
- WCPL mining operations and nearby agricultural enterprises have co-existed since the commencement of operations at the Wilpinjong Coal Mine, and this would continue for the Modification;
- the Modification would facilitate additional construction expenditure in the region and provide additional economic certainty as the Wilpinjong Coal Mine would retain a larger proportion of its current operational workforce in the period 2027-2032 (Sections 6.16 and 6.17);
- the Modification would involve the development of a valuable mineral resource (coal) in a manner that would minimise potential impacts on the environment (including soils, groundwater, remnant vegetation and other biodiversity values) (Sections 6.7 to 6.10);
- the Modification would involve management measures to address direct impacts on known places, items and structures of Aboriginal heritage archaeological significance (Section 6.12); and
- the conceptual final landform of the Wilpinjong Coal Mine incorporating the Modification would include large areas of native vegetation to maximise soil stability on steeper slopes and provide habitat for threatened species (Section 3.10).

4.3.3 Zone Objectives

To the extent that the land use zone objectives in the Mid-Western Regional LEP are relevant to the Modification, the Modification is consistent with the objectives for the two primary land use zones (Zones RU1 or R5), as the Modification:

- would involve the development of a valuable natural resource (coal);
- would support the continued diversity of industry in the Mid-Western Regional LGA;
- would not result in the fragmentation or alienation of resource lands and would maintain recovery of coal within the existing MLs and exploration tenements held by WCPL;
- applies to the Wilpinjong Coal Mine site, which is considered suitable for ongoing mining use, and includes measures to maintain compatibility with existing, approved, and likely preferred land uses (Section 6);
- incorporates measures to avoid and mitigate potential impacts on visual amenity and landscape quality, including the design of the backfilled final landform, progressive rehabilitation and revegetation to native woodland vegetation (Section 3.10); and
- would not unreasonably increase the demand for public services or public facilities.

4.4 COMMONWEALTH LEGISALTION

4.4.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act defines proposals that are likely to have a significant impact on a matter of national environmental significance as a 'controlled action'.

Matters of national environmental significance (MNES) under Part 3 of the EPBC Act include:

- world heritage properties;
- national heritage places;
- wetlands listed under the Ramsar Convention;
- listed threatened species and communities;
- listed migratory species;
- nuclear actions;
- the Commonwealth marine environment;
- the Great Barrier Reef Marine Park; and
- water resources, in relation to coal seam gas development and large coal mining developments.

Proposals that are, or may be, a 'controlled action' are required to be referred to the Commonwealth Minister to determine whether the proposal requires assessment and approval under the EPBC Act.

WCPL already has an EPBC Act approval (EPBC 2015/7431) that extends to 31 December 2033 and addresses the mining and supporting infrastructure associated with the approved Wilpinjong Extension Project.

In January 2025, an action associated with the Modification, specifically the new surface development footprint for the proposed Pit 8 Extension was referred to the Commonwealth Minister. On 1 May 2025, a delegate for the Commonwealth Minister determined that the proposed action is a 'controlled action' for the purposes of the EPBC Act, and therefore requires approval due to its potential impacts on the following MNES:

- listed threatened species and communities (sections 18 and 18A); and
- a water resource, in relation to unconventional gas development and large coal mining development (section 24D and 24E).

The delegate also determined that the action is to be assessed under the bilateral agreement between the Commonwealth and NSW. Accordingly, this Modification Report includes an assessment of potential impacts of the proposed Modification on the identified MNES.

Assessment requirements for MNES matters under the Bilateral Agreement were issued by the DPHI on 29 May 2025. These requirements have been addressed throughout this Modification Report, with Attachment 4 providing a cross-reference summary indicating where each requirement is addressed.

4.4.2 National Greenhouse and Energy Reporting Act 2007

The Commonwealth *National Greenhouse and Energy Reporting Act 2007* (NGER Act) introduced a single national reporting framework for the reporting and dissemination of corporations' greenhouse gas emissions and energy use information.

Section 3 of the NGER Act defines the objects of the Act:

> *(1) The first object of this Act is to introduce a single national reporting framework for the reporting and dissemination of information related to greenhouse gas emissions, greenhouse gas projects, energy consumption and energy production of corporations to:*
>
> *(a) inform government policy formulation and the Australian public; and*
>
> *(b) meet Australia's international reporting obligations; and*
>
> *(c) assist Commonwealth, State and Territory government programs and activities; and*
>
> *(d) avoid the duplication of similar reporting requirements in the States and Territories.*
>
> *(2) The second object of this Act is to contribute to the achievement of Australia's greenhouse gas emissions reduction targets by ensuring that each of the following outcomes (the safeguard outcomes) are achieved:*
>
> *(a) net covered emissions of greenhouse gases from the operation of a designated large facility do not exceed the baseline applicable to the facility;*
>
> *(b) total net safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 do not exceed a total of 1,233 million tonnes of carbon dioxide equivalence;*
>
> *(c) net safeguard emissions decline to:*
>
> *(i) no more than 100 million tonnes of carbon dioxide equivalence for the financial year beginning on 1 July 2029; and*
>
> *(ii) zero for any financial year to begin after 30 June 2049;*
>
> *(d) the 5-year rolling average safeguard emissions for each financial year that begins after 30 June 2024 are lower than the past 5-year rolling average safeguard emissions for that financial year;*
>
> *(e) the responsible emitter for each designated large facility has a material incentive to invest in reducing covered emissions from the operation of the facility;*
>
> *(f) the competitiveness of trade-exposed industries is appropriately supported as Australia and its regions seize the opportunities of the move to a global net zero economy.*

The NGER Act makes registration and reporting mandatory for corporations whose energy production, energy use or greenhouse gas emissions meet specified thresholds.

WCPL reports both Group and Facility greenhouse gas emissions under the NGER Act, noting that the existing Wilpinjong Coal Mine triggers the NGER Act reporting threshold for facilities. This would continue to be the case for the Modification (Section 6.11).

Additionally, the Safeguard Mechanism (underpinned by the Commonwealth *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*) was established through the NGER Act.

The Wilpinjong Coal Mine is a facility that is subject to the Safeguard Mechanism, as it emits more than 100,000 tonnes of carbon dioxide equivalent (t CO_2-e) covered emissions per year. The facility is subject to a baseline for emissions. Where the baseline is exceeded in a given year, it is necessary for the responsible emitter to manage the excess emissions through a prescribed means (for example, purchase and surrender of Australian Carbon Credit Units [ACCUs] or Safeguard Mechanism Credit Units).

Further discussion of greenhouse gas emission policy and guidance materials, and consideration of application of the Safeguard Mechanism to the Modification is provided in Section 6.11 and Appendix C.

Greenhouse gas emissions from the Wilpinjong Coal Mine are currently measured and reported annually, which would continue for the Modification.

4.4.3 Climate Change Act 2022

The Commonwealth *Climate Change Act 2022* (Climate Act) outlines Australia's greenhouse gas emissions reduction targets. Section 10(1) of the Climate Act states:

> *(1) Australia's greenhouse gas emissions reduction targets are as follows:*
>
> *(a) reducing Australia's net greenhouse gas emissions to 43% below 2005 levels by 2030:*
>
> *…*
>
> *(b) reducing Australia's net greenhouse gas emissions to zero by 2050.*

Section 3 of the Climate Act defines the objects of the Act:

> *(aa) to advance an effective and progressive response to the urgent threat of climate change drawing on the best available scientific knowledge; and*
>
> *(a) to set out Australia's greenhouse gas emissions reduction targets which contribute to the global goals of:*
>
> *(i) holding the increase in the global average temperature to well below 2°C above pre-industrial levels; and*
>
> *(ii) pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels; and*
>
> *(b) to promote accountability and ambition by requiring the Minister to:*
>
> *(i) prepare annual climate change statements; and*
>
> *(ii) cause copies of those statements to be tabled in each House of the Parliament; and*
>
> *(c) to ensure that independent advice from the Climate Change Authority informs:*
>
> *(i) the preparation of annual climate change statements; and*
>
> *(ii) the greenhouse gas emissions reduction targets to be included in a new or adjusted nationally determined contribution.*

Where relevant, the objects of the Climate Act are considered in Section 6.11 and Appendix C.

4.4.4 Safeguard Mechanism Reforms

The *Safeguard Mechanism (Crediting) Amendment Act 2023* was introduced in April 2023, and amends relevant Acts (including the NGER Act) to alter the Safeguard Mechanism to facilitate progressive declines in greenhouse gas emissions, consistent with the objects of the Climate Act.

The reforms of the Safeguard Mechanism apply a decline rate to facilities' baselines so that they are reduced gradually on a trajectory consistent with achieving Australia's net emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050 (Australian Government Department of Climate Change, Energy, the Environment and Water [AG DCCEEW], 2024a). The reformed Safeguard Mechanism came into effect on 1 July 2023.

Greenhouse gas emissions over the life of the Modification are further addressed in Section 6.11 and Appendix C.

5 ENGAGEMENT

This section provides an overview of the engagement undertaken during the preparation of this Modification Report and key issues raised.

WCPL and Peabody are committed to continue constructive and open dialogue with the local community and key stakeholders throughout and beyond the duration of this Modification.

5.1 ENGAGEMENT APPROACH

Engagement undertaken during the preparation of this Modification Report has been approached in consideration of the *Undertaking Engagement Guidelines for State Significant Projects* (DPHI, 2024d).

Feedback obtained through engagement with key stakeholders has provided an opportunity to identify issues of concern or interest, and to consider these issues within the Modification Report.

Key objectives of the engagement approach undertaken for this Modification include:

- constructive engagement with key government agencies and public stakeholders regarding the Modification;
- seeking feedback from key stakeholders on various elements of the Modification; and
- to continue the ongoing dialogue between Peabody and key stakeholders regarding Wilpinjong Coal Mine, incorporating the Modification.

These objectives would continue to be upheld for the duration of the assessment of the Modification by the NSW Government.

WCPL has consulted with a range of stakeholders including Federal, State and local government authorities, infrastructure and service providers, surrounding resource industries and the local community to acquire input on the proposed assessment method, potential impacts and proposed mitigation and management strategies for the Modification.

WCPL continues to consult with relevant stakeholders on a regular basis in relation to the Modification and the ongoing mining activities at the Wilpinjong Coal Mine.

5.2 FEDERAL GOVERNMENT AGENCIES

Australian Government Department of Climate Change, Energy, the Environment and Water

WCPL undertook consultation with the AG DCCEEW in January 2025 and February 2025 as part of lodgement of the EPBC Referral for the Modification (the proposed action) under the EPBC Act (EPBC 2025/10105).

A delegate of the Commonwealth Minister determined on 1 May 2025 that the proposed Action is a 'controlled action' for the purposes of the EPBC Act.

This Modification Report provides an assessment of potential impacts to the following controlling provisions considered by the delegate of the Commonwealth Minister to be relevant to the proposed action:

- EPBC Act listed threatened species and communities; and
- water resources (in relation to large coal mining developments).

The delegate of the Commonwealth Minister also determined on 1 May 2025 that the proposed action is to be assessed under an assessment bilateral agreement with the NSW Government.

5.3 STATE GOVERNMENT AGENCIES

WCPL consults with relevant State Government agencies on a regular basis in relation to the approved Wilpinjong Coal Mine and activities on-site. This has included consultation on the environmental management system and ongoing environmental performance.

Department of Planning, Housing and Infrastructure

WCPL held a meeting with the then DPE on 21 June 2023 to provide an initial briefing on the Modification.

Separate meetings were also arranged with the DPE (now DPHI) in March 2023 and June 2023 to outline the proposed approval pathway and the general scope of the proposed environmental assessment.

A Scoping Letter was submitted to DPHI on 14 February 2024.

WCPL subsequently held a meeting with DPHI in August 2024 to discuss the reduced scope of the Modification, status of the environmental assessments and the provisional timing of the lodgement of the Modification application.

Additionally, a pre-lodgement meeting was held with DPHI in July 2025 to provide an overview of the key assessment outcomes of the Modification prior to lodgement. Feedback received from DPHI has been incorporated into this Modification Report.

WCPL would continue discussions with DPHI during the NSW Government assessment process to respond to matters raised during the Modification exhibition process.

Environment Protection Authority

WCPL is in regular contact with representatives of the EPA in regard to EPL 12425 for the Wilpinjong Coal Mine and associated variations and environmental monitoring.

Specific consultation with representatives of the EPA was undertaken with respect to the proposed Modification in May 2025. WCPL provided an overview of the Modification and discussed environmental assessment requirements, the status of key studies and provisional timing for the lodgement of the Modification application.

No material concerns regarding the Modification were raised by the EPA as part of this consultation. The EPA noted a particular interest in surface water management and the site water balance, which is described in Appendix E.

National Parks and Wildlife Services

A Modification briefing meeting was undertaken with NPWS in March 2025. No material comments or concerns were raised by NPWS during the meeting. The NPWS expressed an interest in any potential future additions to the NPWS Estate.

Conservation Programs, Heritage and Regulation (formerly NSW Biodiversity, Conservation and Science Directorate)

A meeting was held with the NSW Biodiversity, Conservation and Science Directorate (BCS) (now Environment and Heritage – Conservation Programs, Heritage and Regulation [CPHR] within the NSW Department of Climate Change, Energy, the Environment and Water [NSW DCCEEW]) in December 2024 to provide an overview of the Modification and environmental assessment requirements.

Further consultation with CPHR was undertaken In June 2025, prior to lodgement of the Modification Report to discuss the key environmental assessment outcomes and proposed offset and mitigation measures.

NSW Crown Lands

A meeting with NSW Crown Lands took place in March 2025 to provide an overview of the Modification. The key issues discussed in the meeting includes:

- the development of Crown Land licences or agreements relevant to the Modification in conjunction with closures of Crown and council roads; and
- alternative access arrangements to reserved lands for the existing operations of the Wilpinjong Coal Mine.

NSW Resources (formerly Mining, Exploration and Geoscience)

A meeting with the Mine Development Panel under the Mining, Exploration and Geoscience (MEG) (now the NSW Resources within the Department of Primary Industries [DPI] and Regional Development) took place in November 2024. No material concerns were raised by the MEG as part of this consultation.

NSW Resources Regulator

WCPL has developed a Rehabilitation Management Plan for the Wilpinjong Coal Mine, including approved Rehabilitation Objectives and Final Landform and Rehabilitation Plan, in consultation with the NSW Resources Regulator. WCPL also regularly participates in Targeted Assessment Programs with the NSW Resources Regulator.

WCPL consulted with the NSW Resources Regulator on the Modification in April 2025 through the rehabilitation and securities panel. As part of the consultation, WCPL provided information on the landform design, land uses and rehabilitation methodology. No material concerns regarding the Modification were raised by the NSW Resources Regulator as part of this consultation.

Heritage NSW

A meeting was held with representatives of NSW DCCEEW Environment and Heritage – Heritage NSW (Heritage NSW) in January 2025 to provide an overview of the Modification, methodology and initial outcomes of the ACHA and consultation with Registered Aboriginal Parties (RAPs).

The feedback from Heritage NSW in this meeting related to potential archaeological deposits (PADs) and presentation of survey coverage which is addressed in the ACHA (Appendix H).

Transport for NSW

WCPL provided a briefing letter to Transport for NSW (TfNSW) in January 2025 to provide an overview of the Modification. WCPL offered to meet with TfNSW to discuss details of the Modification and invited comments or feedback on the proposal.

TfNSW provided email correspondence in March 2025 in response to the briefing letter, which included a number of requirements for a traffic and transport study.

The issues raised by TfNSW have been considered during the preparation of this Modification Report and addressed in Section 6.14 and Appendix J.

NSW Department of Education

An in-person meeting was undertaken with NSW Department of Education in February 2025 to provide an overview of the Modification.

NSW Department of Education advised that the Wollar Public School has been in recess (i.e. not operating as a school) for an extended period, and therefore was formally closed in 2025.

5.4 MID-WESTERN REGIONAL COUNCIL

The Wilpinjong Coal Mine is located in the Mid-Western Regional LGA. In March 2024, WCPL provided a briefing letter to MWRC to provide an overview of the Modification.

WCPL additionally held meetings in October 2024, November 2024 and May 2025 to promote further discussion regarding details of the Modification with the MWRC including infrastructure relocations, and invited MWRC to provide any input on the Modification infrastructure relocations.

Representatives of the MWRC are also involved in the Community Consultative Committee (CCC) for the Wilpinjong Coal Mine. The MWRC and CCC were similarly consulted via the Social Impact Assessment (SIA), as described in Section 6.17.

Communications between WCPL and the MWRC would continue during the Modification assessment process to respond efficiently to any queries.

5.5 INFRASTRUCTURE AND SERVICE PROVIDERS

WCPL has consulted with Essential Energy and Telstra in relation to the Modification and will continue to consult with relevant service providers throughout the detailed design phase regarding the proposed infrastructure relocations.

5.6 ABORIGINAL STAKEHOLDERS

WCPL consulted with Aboriginal stakeholders as part of the ACHA prepared for this Modification. Engagement with RAPs and Native Title Claimant groups was undertaken in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW Department of Environment, Climate Change and Water [DECCW], 2010a) and the NPW Act.

WCPL has consulted with the existing Registered Aboriginal Parties Consultation Committee (RAPCC) and the combined Cultural Heritage Liaison Sub Committee and Native Title Implementation Committee to provide updates on the status of the Modification and the preparation of the ACHA.

Meetings between WCPL, RAPCC and combined Cultural Heritage Liaison Sub Committee and the Native Title Implementation Committee occur at least every six months (or more regularly if required to discuss any urgent issues).

Further detail on consultation with Aboriginal stakeholders, and how comments provided during the ACHA process have been considered is provided in Section 6.12 and in Appendix H.

5.7 COMMUNITY CONSULTATIVE COMMITTEE

WCPL undertakes consultation with the local community through the established CCC for the Wilpinjong Coal Mine.

Meetings between WCPL and the Wilpinjong Coal Mine CCC occur quarterly. Updates on the status of the Modification have been provided to all meetings of the Wilpinjong Coal Mine CCC since November 2023.

Minutes from the Wilpinjong Coal Mine CCC meetings are made publicly available on the Peabody website.

5.8 SURROUNDING MINING OPERATIONS

WCPL undertakes regular consultation at the General Manager and Environment and Community Manager levels with the Moolarben Coal Complex and Ulan Coal Mine.

This Modification has been raised during these regular discussions. Given the Modification would not change the approved period of ROM extraction or the maximum approved ROM rate, no material interactions or concerns have been raised.

5.9 COMMUNITY ENGAGEMENT

WCPL maintains open lines of communication with the community through a number of community initiatives and local involvement, including, but not limited to:

- engagement with the Wilpinjong Coal Mine CCC operated in accordance with *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version);
- maintenance of a website within the Peabody web domain (https://www.peabodyenergy.com/) and a Facebook page for the general public to keep up to date with the operations of the Wilpinjong Coal Mine;
- maintenance of points of contact for the community to ask specific questions of provide feedback, including a Community Hotline, a Community Blasting Hotline and an email address;
- regular contact with local community groups through WCPL's active support of groups through sponsorships and donations;
- monthly 'Have A Chat' sessions where local residents are encouraged to use the sessions to voice any questions or concerns they have in relation to the Wilpinjong Coal Mine; and
- involvement and partnerships with local and regional contractors and suppliers.

In addition, WCPL undertook the following specific consultation activities for this Modification:

- face-to-face meetings with directly affected landholders and lessees, where offers to meet were accepted;
- briefings of the Wilpinjong Coal Mine CCC in November 2023, March 2024, June 2024, September 2024, December 2024 and March 2025;
- monthly 'Have A Chat' sessions at the Wollar general store;
- providing an update on extension plans on the Peabody Facebook page on 4 March 2025;
- direct consultation with representatives of the Aboriginal community; and
- consultation with local community groups.

5.10 SOCIAL IMPACT ASSESSMENT

WCPL and Square Peg Social Performance Pty Ltd (Square Peg) undertook consultation activities in support of the SIA for the Modification (Appendix K) in addition to the broader consultation activities conducted by WCPL.

Consultation in support of the SIA included:

- meetings with MWRC;
- meetings with neighbouring residents, Aboriginal stakeholders, Native Title holders, community and environmental groups, service providers and industry groups; and
- meetings with the Wilpinjong Coal Mine CCC representatives.

Further detail on the SIA consultation activities is provided in Section 6.17 and Appendix K.

5.11 FEEDBACK RECEIVED DURING COMMUNITY ENGAGEMENT

Feedback from the community was largely received during the SIA consultation process.

Stakeholders recognised that the population in the region (particularly Mudgee) was growing, and attributed that to the mining industry, including the Wilpinjong Coal Mine (Appendix K).

Regional residents and employees described how they anticipated that the Modification would mean employment would be maintained at the Wilpinjong Coal Mine for longer, and they described how that would provide confidence to the workforce and the community (Appendix K).

Key concerns associated with the Modification were associated with the continuation of amenity impacts, primarily noise and air quality (Sections 6.4 and 6.6). Some stakeholders described how the Modification would facilitate future expansion of the Wilpinjong Coal Mine.

Fear and insecurity about future individual, family and quality of life or sense of place impacts were also raised (Appendix K).

5.12 FURTHER ENGAGEMENT

Key WCPL personnel will remain approachable and available for consultation to allow for direct consideration of stakeholder feedback throughout the Modification assessment process.

WCPL will continue to provide updates through existing mechanisms, such as the CCC, RAPCC, combined Cultural Heritage Liaison Sub Committee and the Native Title Implementation Committee and the Peabody website.

WCPL will also consult with State government agencies, as required, to discuss and resolve any concerns regarding assessment methodology or the application of management measures during the NSW Government assessment process.

6 ASSESSMENT OF IMPACTS

WCPL has undertaken a review of the potential environmental impacts of the Modification to identify key potential environmental issues requiring assessment.

6.1 IDENTIFICATION OF THE KEY ISSUES

The key potential environmental impacts of the Modification are generally related to an increase in disturbance extent (approximately 150 ha) and broadening of mining operations into the Pit 8 Extension area (Figure 4).

Identification of key assessment issues was informed by review of recent Wilpinjong Coal Mine complaints records (Figure 14), where noise is the most common complaint subject. Other key complaint categories include blasting and air quality (dust and odour) (Figure 14).

Recent NSW Governmental guidance on the assessment of greenhouse gas emissions and consideration during the assessment of major developments also indicates heightened interest in emissions estimation and mitigation.

The key assessment issues identified for the Modification are summarised below:

- Continuation and extension of noise, blast and air quality amenity impacts for local private residents.
- Continuation and extension of impacts on water resources.
- Incremental loss of biodiversity and heritage values associated with the Pit 8 Extension.
- Incremental greenhouse gas emissions.
- Extension of existing social and economic impacts of the Wilpinjong Coal Mine.

In light of the key issues identified above and the Modification including a six-month time extension (i.e. for pit backfilling operations), the range of specialist assessments and associated studies conducted for the Modification comprises the following:

- noise and blasting (Appendix A);
- air quality (Appendix B);
- greenhouse gas (Appendix C);
- groundwater (Appendix D);
- surface water (Appendix E);
- biodiversity (Appendix F and Attachment 7);
- aquatic ecology (Appendix G);
- Aboriginal cultural heritage (Appendix H);
- non-Aboriginal heritage (Appendix I);
- road transport (Appendix J);
- social and community infrastructure (Appendix K);
- economics (Appendix L);
- geochemistry (Appendix M);
- land contamination (Appendix N); and
- geotechnical considerations (Attachment 3).

Sections 6.3 to 6.17 and the relevant specialist studies include a description of the existing environment, an assessment of the potential impacts of the Modification, and, where relevant, a description of existing and proposed measures that would be implemented to avoid, minimise and/or mitigate the potential impacts. The key additional mitigation and offset measures are also summarised in Attachment 10.

6.2 CLIMATE

This sub-section describes local and regional climate indicators. The greenhouse gas emissions associated with the Modification are assessed in Section 6.11.

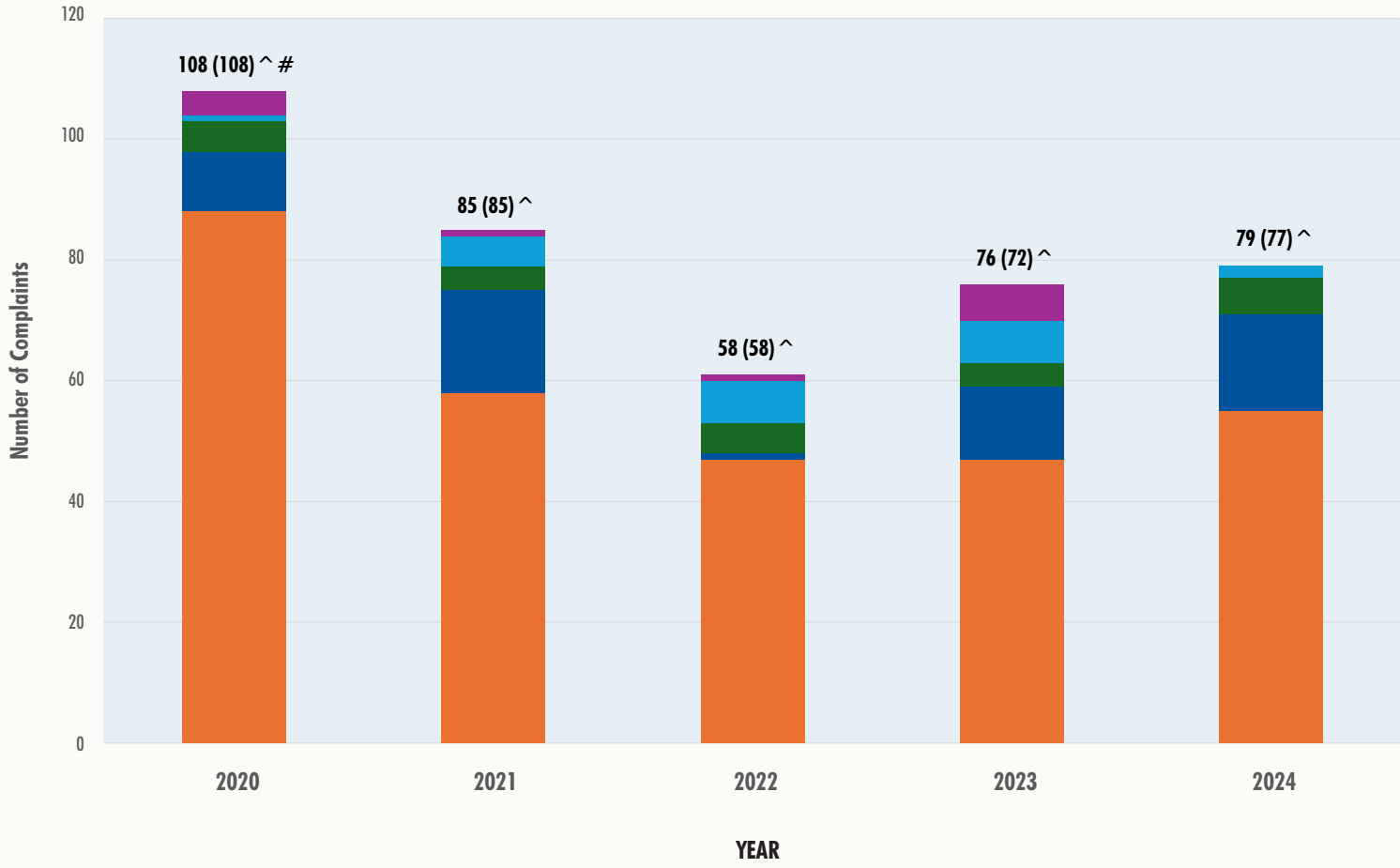
Long-term meteorological data for the region is available from nearby Commonwealth Bureau of Meteorology (BoM) meteorological stations and from the on-site weather station since 2006.

The on-site weather station (Figure 15) monitors a number of meteorological parameters, including temperature, humidity, rainfall, wind speed and wind direction.

A summary of meteorological data in the vicinity of the Wilpinjong Coal Mine is provided below. Further discussion of relevant climatic data for assessment purposes is provided in Appendices A, B, D and E.

Rainfall Data

Table 4 provides a summary of long-term annual and monthly rainfall. The long-term average annual rainfall in the vicinity of the Wilpinjong Coal Mine ranges from 589 millimetres (mm) to 651 mm, with the driest months generally between April and September and the wettest months being December and January.



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Resource Strategies

LEGEND
- Noise
- Odour
- Blast
- Dust
- Other

^ The total number of complaints shown is based on categorised data, where individual complaints have been disaggregated into specific types (e.g. "Noise and Dust" counted under both categories). The number in brackets reflects the total number of complaints reported for each year. As some complaints include multiple issues, the disaggregated totals may appear higher than reported values.

In 2020, 79 complaints are listed in the complaints register, however, complaint type percentages referenced in the 2020 Annual Review were based on a total of 108 complaints. These percentages were used to estimate the distribution by type for 2020.

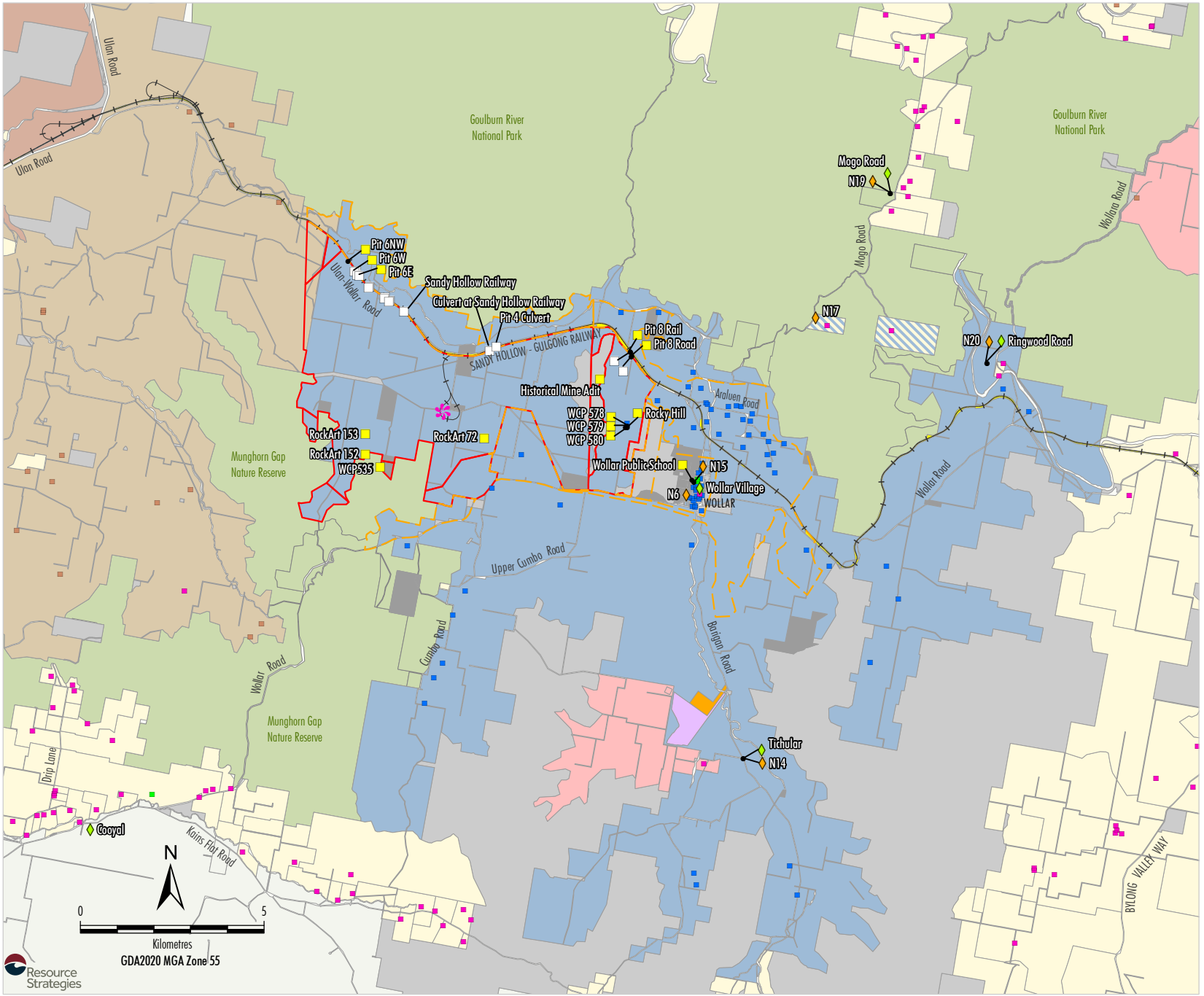
Source: WCPL(2025)

Peabody

WILPINJONG COAL MINE

Wilpinjong Community Complaints Records 2020 to 2024

Figure 14



LEGEND

- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Peabody-controlled Land
- Crown Land (Peabody Leased)
- Crown Land
- Moolarben Coal Mine
- Ulan Coal Mine
- Solar Farm
- EnergyCo
- TransGrid
- Railway Land
- Private Landholder
- Private Landholder Subject to Noise Agreement in Accordance with Condition 3, Schedule 3
- Owner Not Identified
- National Parks and Wildlife Service (NPWS) Estate
- Peabody-owned Dwelling
- Moolarben-owned Dwelling
- Community Building
- Private Dwelling
- Meteorological Station

Noise Monitoring Sites

- Real-time Noise
- Attended Noise

Blasting Monitoring Locations

- Indicative Blast
- Fixed Blast

Source: WCPL (2025); NSW Spatial Services (2025)

Peabody

WILPINJONG COAL MINE

Noise, Blasting and Meteorological Monitoring Locations

Figure 15

Table 4
Meteorological Data Summary – Rainfall and Pan Evaporation

Month	Gulgong Post Office (BoM 062013)		Wollar (Barigan St) (BoM 062032)		SILO Data Drill		Wilpinjong Coal Mine Weather Station[1]		Data Drill Pan Evaporation (mm/month)	Orange Agricultural Institute Pan Evaporation (mm/month)
	Rainfall (mm)	No. Rain Days	Rainfall (mm)	No. Rain Days	Rainfall (mm)	No. Rain Days	Rainfall (mm)	No. Rain Days		
Commence	April 1881		January 1901		January 1889		January 2006		1976	1976
End	-		-		-		-		-	-
No. Years	144		124		136		19		49	49
January	69.7	6.0	67.2	4.6	69.0	9.4	61.2	8.6	227	189
February	62.2	5.5	63.0	4.3	61.9	8.3	64.9	6.0	182	155
March	56.9	5.4	54.8	4.1	57.9	7.9	73.6	9.1	158	133
April	44.2	4.6	40.2	3.5	40.8	7.1	40.7	5.7	105	84
May	43.7	5.7	37.3	3.8	40.2	8.0	30.0	7.2	66	54
June	50.3	7.4	44.1	4.5	48.2	9.8	50.5	10.1	46	36
July	49.0	7.8	42.7	4.7	45.1	10.5	44.2	9.1	52	42
August	45.7	7.0	41.7	4.5	44.1	9.8	36.0	8.4	76	60
September	46.8	6.6	41.1	4.2	44.8	9.0	44.7	7.3	110	87
October	56.2	6.7	53.7	4.8	54.9	9.5	50.2	7.9	155	119
November	61.1	6.4	57.2	4.7	60.2	9.6	84.5	9.1	185	148
December	67.2	6.4	61.5	4.7	61.4	9.5	93.6	8.2	225	179
Annual	**651.9**	**75.7**	**589.3**	**55.1**	**628.5**	**108.4**	**669.1**	**96.6**	**1,586**	**1,288**

Source: Appendix E.
[1] Average monthly rainfall and rain days based on daily data from January 2013 to December 2023.

The mean annual rainfall recorded by the Wilpinjong Coal Mine weather station over the period of record is approximately 669 mm (Table 4).

Evaporation Data

Long-term pan evaporation data from the Orange Agricultural Institute weather station and Data Drill extract indicate the rate of evaporation far exceeds rainfall on a monthly and annual-average basis (Table 4).

Temperature Data

Table 5 shows mean temperature data from the Wilpinjong Coal Mine weather station from 2013-2024. The lowest average minimum temperature recorded was -2.7 degrees Celsius (ºC), and the highest average maximum temperature during that period was 37.6ºC.

Moderate-to-strong temperature inversions occur in the vicinity of the Wilpinjong Coal Mine and have been determined to be of relevance to the Modification, particularly during the night-time. The occurrence of temperature inversions is described in the Noise and Blasting Assessment (Appendix A).

Wind Direction and Speed

The annual and seasonal windroses for the Wilpinjong Coal Mine weather station indicate that the prevailing wind directions are from the east and east-north-east, with a lesser portion of winds from the west. Further discussion of wind direction and speed is provided in the Air Quality Impact Assessment (Appendix B).

Meteorological Monitoring

The Wilpinjong Coal Mine weather station would continue to operate for the Modification. The data recorded would continue to be used as part of the noise (Section 6.4) and air quality (Section 6.6) management regimes, and to assist in the interpretation of groundwater (Section 6.7) and surface water (Section 6.8) monitoring results.

Table 5
Wilpinjong Coal Mine Monthly Temperature Data

	Min (ºC)	Max (ºC)	Mean (ºC)
January	15.4	37.6	24.6
February	11.9	35.7	23.8
March	8.5	33.8	21.1
April	4.5	28.8	16.6
May	-0.4	24.5	12.3
June	-1.6	20.0	9.5
July	-2.7	20.8	9.0
August	-1.4	23.6	10.5
September	0.7	27.7	13.8
October	4.3	31.6	17.6
November	7.6	35.0	20.5
December	9.8	37.2	23.0

Source: WCPL, 2025.

6.3 LAND RESOURCES

6.3.1 Background

Land Use

Contemporary land uses proximal to the Modification include coal mining, agriculture and environmental conservation.

Agricultural activities in the area typically comprise grazing on native pastures in the valley bottoms. Steeper areas to the north-west of the Modification are generally heavily timbered and form part of the Goulburn River National Park. Similarly, timbered ridgelines are also located on Crown Land to the immediate south of the Modification and to the west of Pit 8 (Figure 4).

Residential uses near the Modification include scattered rural residences controlled by WCPL and residences located in Wollar. It is noted that WCPL owns all but one private residence in Wollar (Section 2.1).

Soils

The main soil types mapped in the land associated with the Modification include:

- Rudosols;
- Tenosols;
- Dermosols;
- Kurosols; and
- Natric Kurosols.

Land and Soil Capability

The Land and Soil Capability (LSC) system is used to give an indication of the land management practices that can be applied to a parcel of agricultural land.

Agricultural land is classified by evaluating biophysical features of the land and soil including landform position, slope gradient, drainage, climate, soil type and soil characteristics to derive detailed rating tables for a range of land and soil hazards (NSW Office of Environment and Heritage [OEH], 2012).

The land associated with the Modification has largely been mapped with an LSC classification of 5 or greater, meaning suitable land uses are largely restricted to grazing, some horticulture, forestry and nature conservation (OEH, 2012).

Strategic Agricultural Land Assessment

The *State Environmental Planning Policy (Resources and Energy) 2021* (the Resources and Energy SEPP) requires certain types of developments, such as new MLs, to verify whether the proposed area is classified as BSAL.

A BSAL Site Assessment Report was completed by Minesoils (2023) to support an application for a Site Verification Certificate (SVC) for the land associated with the Modification.

WCPL lodged an application for a SVC for the Modification with the DPE in October 2023.

A SVC was subsequently issued by the Deputy Secretary, Development Assessment and Sustainability of the DPE on 6 August 2024, certifying that the land within the application area is not BSAL (Attachment 5).

Contaminated Land

JBS&G Australia Pty Ltd (JBS&G) (2025) undertook a Land Contamination Assessment for the Modification (Appendix N) in accordance with Chapter 4 of the *State Environmental Planning Policy (Resilience and Hazards) 2021* (Resilience and Hazards SEPP), *Managing Land Contamination Planning Guidelines SEPP 55 – Remediation of Land* and *Guidelines for Consultants Reporting on Contaminated Sites* (EPA, 2020). The Land Contamination Assessment was undertaken in the form of a Stage 1 preliminary investigation as required by the Resilience and Hazards SEPP.

As part of the preliminary investigation, a site inspection was undertaken in order to verify the nature and/or occurrence of potential contamination sources (Appendix N).

Potential sources of contamination identified include (Appendix N):

- Potential application of pesticides as part of previous farming activities.
- Structures identified as a potential source of asbestos-containing material, lead-based paints and metal contaminants.
- Storage and use of chemicals and dangerous goods.

Bushfire Regime

The Modification is located within the jurisdiction of the Cudgegong Bush Fire Management Committee Bush Fire Risk Management Plan area (Cudgegong Bush Fire Management Committee, 2020).

The bushfire season is generally from September to March with the start of the normal fire season coinciding with low humidity and strong north-west winds, which often prevail during November and December.

WCPL has developed a Bushfire Management Plan in consultation with NSW Rural Fire Service to reduce the risk of bushfire within WCPL landholdings (Eco Logical Australia Pty Ltd [Eco Logical], 2013).

The Bushfire Management Plan includes the identification of assets, assessment of fire risk and identification of management strategies to reduce the risk of fire to people and property (Eco Logical, 2013).

6.3.2 Environmental Review

Soils

Potential impacts of the Modification on soil resources would primarily relate to the disturbance of *in-situ* soil resources within additional disturbance areas (e.g. extension of open cut mining areas).

A review of the physical and chemical properties of the soils indicates the soil resources present in the Pit 8 Extension area are consistent with other Wilpinjong Coal Mine development areas and would be suitable as a rehabilitation medium post-mining.

Land Contamination Potential

JBS&G (2025) concluded that Modification area is considered to be a low potential for gross or widespread contamination as a result of historical and/or current site uses. As such, the land is considered to be suitable for the Modification (i.e. no contamination has been identified which would make the land unsuitable for the Modification),

Bushfire Hazard

Any uncontrolled fires originating from Modification activities may present potentially serious impacts to nearby rural properties, Crown Land and the Goulburn River National Park.

Similarly, fires originating in nearby rural areas and reserved areas could pose a significant risk to Modification infrastructure and WCPL staff, contractors and equipment.

The degree of potential impact of a bushfire would vary with climatic conditions (e.g. temperature and wind) and the quantity of available fuel.

6.3.3 Mitigation Measures

Soils

General soil management practices would include the stripping and stockpiling of soil resources for use in rehabilitation.

Pre-disturbance soil investigations would be progressively conducted to confirm soil characteristics, stripping depth and ameliorant requirements.

Land Contamination

JBS&G (2025) recommended the implementation of the following mitigation and management measures to minimise the potential for land contamination during the development of the Modification (Appendix N):

- Work, health, safety, and environmental management controls (including protocols to manage unexpected finds) should be implemented during ground disturbance works.
- A hazardous materials assessment would be conducted on all buildings and building materials prior to demolition (and removal of any hazardous material from site). If asbestos is identified within the structures or surface material on-site, a licensed contractor would be required.

Management and mitigation measures described in the approved Wilpinjong Coal Mine site-wide environmental management plans would continue to be implemented for the Modification. The environmental management plans and monitoring programmes would be reviewed, and where necessary, revised to incorporate the Modification.

Bushfire Management

WCPL would continue to implement the existing bushfire management measures in the Bushfire Management Plan and consult with the Cudgegong Bush Fire Management Committee and the Rural Fire Service, and provide assistance to these organisations as required.

6.4 OPERATIONAL NOISE

A Noise and Blasting Assessment for the Modification was undertaken by RWDI Australia Pty Ltd (RWDI) (2025) and is presented in Appendix A.

The Noise and Blasting Assessment includes assessment of Modification operational noise and cumulative noise and was conducted in consideration of the following guidelines (Appendix A):

- *Noise Policy for Industry* (EPA, 2017) (NPfI).
- *Voluntary Land Acquisition and Mitigation Policy* (NSW Government, 2018a) (VLAMP).
- *Assessing Vibration: a technical guideline* (Department of Environment and Conservation, 2006).
- *Interim Construction Noise Guideline* (NSW Department of Environment & Climate Change, 2009).

The blasting assessment findings are described in Section 6.5.

6.4.1 Background

Noise Measurement and Description

The assessed noise levels presented in Appendix A and summarised in this section are expressed in A-weighted decibels (dBA). The logarithmic dBA scale simulates the response of the human ear, which is more sensitive to mid to high frequency sounds and relatively less sensitive to lower frequency sounds.

The difference between C- and A-weighted levels is used to determine the presence of "unbalanced spectra" where low-frequency noise (LFN) is dominant. Where applicable, these low-frequency characteristics have been considered in accordance with Development Consent (SSD-6764) and applicable modifying factor corrections applied (i.e. a 2-decibel [dB] penalty for affected receivers).

Hearing 'nuisance', for most people, begins at noise levels of about 70 dBA, while sustained noise levels (i.e. eight hours) of 85 dBA can cause hearing damage.

Measured or predicted noise levels are expressed as statistical noise exceedance levels (L_{AN}) which are the levels exceeded for a specific percentage (N) of the interval period. For example, L_{A10} is the noise level that is exceeded for 10% of the sampling period and is also considered to be the average maximum noise level.

The equivalent continuous noise level (L_{Aeq}) refers to the steady sound level, which is equal in energy to the fluctuating levels recorded over a relevant sampling period (e.g. 15 minutes).

Applicable Noise Criteria

Operational Noise Criteria

The NPfI recommends two noise assessment criteria, 'intrusiveness' and 'amenity', both of which are relevant for the assessment of noise as a result of the Modification (Appendix A). Cumulative noise impacts are assessed against the amenity criteria, while the Wilpinjong Coal Mine noise impacts are assessed against the noise impact assessment criteria (i.e. intrusiveness criteria) for private receivers consistent with Development Consent (SSD-6764) (Table 6).

RWDI notes that the evening and night-time noise criteria under Development Consent (SSD-6764) are largely consistent with current NPfI guidance. However, the existing daytime noise criteria for the Wilpinjong Coal Mine are more stringent than contemporary standards (Appendix A).

Appendix A also details the derivation of project noise trigger values for potential receivers that are not private residences, including the Wollar Community Hall (53 dBA) and recreation areas in the NPWS Estate (48 dBA).

Cumulative Noise Criteria

WCPL is required to consider cumulative operational noise generated by the Modification and other nearby industrial sources (including Moolarben Coal Complex and the more distant Ulan Coal Complex) to preserve amenity.

The relevant recommended equivalent continuous noise level for a period ($L_{Aeq,Period}$) amenity noise criteria are presented in Appendix A. However, due to significant intervening distances from other mines, cumulative noise is not a material assessment issue for receivers proximal to the Modification (i.e. east and north-east of Wilpinjong Coal Mine).

Table 6
Development Consent (SSD-6764) Noise Criteria dB(A)

Receiver[1]	Day	Evening	Night	
	$L_{Aeq,15\ min}$	$L_{Aeq,15\ min}$	$L_{Aeq,15\ min}$	$L_{Aeq,1\ min}$
102[2]	36	36	38	45
933[2,3]	36	37	37	45
All other privately owned land	35	35	35	45
901 and 944[4] (Wollar School)	35 (internal)[5] 45 (external) When in use[6]			-

Notes:

1. To identify the locations referred to in Table 6, see Figures 8a and 8b.
2. WCPL has negotiated noise agreements with these receivers and therefore Development Consent (SSD-6764) criteria no longer apply.
3. Referred to as 'Wollar Village – Residential' in Table 3 of Development Consent (SSD-6764).
4. Table 3 of Development Consent (SSD-6764) does not have noise criteria for Wollar School receiver 944. As such, it was assumed to be subject to the same criteria as Wollar School receiver 901.
5. The Noise and Blasting Assessment is based on the external noise criterion. It is assumed that compliance with the external noise criterion would infer compliance with the internal noise criterion.
6. As per Development Consent (SSD-6764), noise criteria for the receivers 901 and 944 are only applicable when the school is in use. As such, the noise criteria for Wollar School have conservatively been applied to the day and evening periods (noting the school was formally closed by the NSW Department of Education in 2025).

Noise Monitoring Program and Noise Management and Control Measures

Noise management at the Wilpinjong Coal Mine is currently undertaken in accordance with the Noise Management Plan which outlines:

- measures to minimise and manage mine-related noise;
- monitoring, reporting, and compliance procedures;
- how noise complaints and exceedances are managed;
- roles and responsibilities for noise management; and
- how the Noise Management Plan is reviewed and kept up to date.

The Noise Management Plan describes the use of a combination of off-site operator-attended monitoring sites, continuous real-time monitors and a WCPL-operated meteorological monitoring station to assess the performance of the Wilpinjong Coal Mine against noise criteria from Development Consent (SSD-6764) (Figure 15).

Current real-time noise monitoring is focused to the east of Wilpinjong Coal Mine in the vicinity of the nearest privately-owned receivers. However, attended monitoring is also undertaken to the north-east and south in locations representative of nearby privately-owned receivers (Figure 15).

The Noise Management Plan describes general noise management and mitigation measures including:

- the training of contractors and staff on environmental noise control and awareness;
- the communication of noise levels for the previous 24 hours to key WCPL personnel at operational and management meetings;
- periodic noise emission test work on mobile equipment;
- consideration of sound power levels in equipment selection and maintaining equipment in good order;
- management of complaints received;
- real-time monitoring and an associated protocol for real-time management of noise emissions;
- monitoring for adverse meteorological conditions and adjusting mining operations where necessary;
- predictive meteorological forecasting to guide day-to-day planning of mining operations; and
- attended monitoring to verify ongoing compliance with noise criteria.

As outlined in the Noise Management Plan, Wilpinjong Coal Mine uses a real-time noise monitoring system with target levels set below compliance limits (e.g. 2 dBA). When noise levels approach these targets, automated alerts are sent via SMS and email to the Control Room Operator and relevant WCPL personnel, triggering the Real-time Response Protocol.

The response includes identifying the noise source, and if it is confirmed to be mine-related, operational changes are made, including shutting down or relocating mobile equipment based on a priority list determined by proximity to the monitor. Equipment is restarted in reverse order once noise levels drop to acceptable levels.

Compliance and Complaints

A review of the Wilpinjong Coal Mine routine noise monitoring results was conducted by RWDI (2025) and is presented in Appendix A. Review of attended compliance noise monitoring results for 2020-2024 indicates compliance with the relevant noise criteria, with the exception of two exceedances in 2022 and 2023 in Wollar at a community building (Appendix A). For both exceedances, immediate remeasurement did not identify any further exceedance.

As shown on Figure 14, noise related community complaints have fallen since 2020, with a total of 55 complaints related to noise recorded in 2024.

In response to complaints, appropriate management actions are implemented as outlined in the Noise Management Plan.

6.4.2 Environmental Review

Operational Noise Assessment

The Environmental Noise Model (a proprietary computer program from RTA Technology Pty Ltd developed in conjunction with the EPA) was used by RWDI (2025) to simulate the Wilpinjong Coal Mine incorporating the Modification using noise source information (i.e. indicative sound power levels and locations) to predict resultant noise levels at relevant receiver locations.

The Environmental Noise Model is compatible with the NPfI (EPA, 2017) and has been previously accepted by the EPA for use in environmental noise assessments (Appendix A).

The model considers meteorological effects, surrounding terrain, the distance from source to receiver and noise attenuation and was subject to site-specific calibration (Appendix A). The locations of modelled receivers (i.e. dwellings) are shown in summary on Figures 8a and 8b.

Meteorological Conditions

The noise modelling completed for the Modification is based on meteorological data obtained from the Wilpinjong Coal Mine meteorological station (Figure 15) for the period January 2020 to December 2024, inclusive. The meteorological data used includes wind speed, wind direction, stability class, humidity and temperature.

RWDI (2025) assessed the meteorological data in accordance with Fact Sheet D of the NPfI to determine the significance of noise-enhancing meteorological conditions.

Based on the site-specific meteorological data, moderate-to-strong temperature inversions were determined to be significant for the Modification in accordance with the assessment methodology in the NPfI. Temperature inversions were modelled as a component of night-time noise-enhancing meteorological conditions. A moderate-to-strong temperature inversion plus a wind of 1 metre per second (source-to-receiver) was conservatively adopted for all receivers (Appendix A).

Details on the analysis and meteorological conditions modelled are provided in Appendix A.

Noise Modelling Scenarios

Three operational scenarios of the Modification were assessed for potential operational noise impacts (Appendix A):

- 2027 – Represents the peak overall ROM extraction and waste material displacement rates for the Wilpinjong Coal Mine (including the Modification).
- 2030 – Represents mid-life of the Modification, with near-peak waste material displacement from the Pit 8 Extension area.
- 2032 – Represents the final year and peak extraction rate of ROM coal extraction within the Pit 8 Extension area, featuring activities closest to Wollar.

The operational scenarios were selected based on the greatest potential for noise impacts on surrounding noise-sensitive receivers, with particular focus on those located east and north-east of the site, closest to the proposed Pit 8 Extension.

Construction activities related to the relocation of Ulan-Wollar Road and associated utilities were included in the 2027 daytime operational scenario (Appendix A).

Low-frequency Noise Assessment

A LFN assessment was conducted for the Modification to ascertain whether any private receivers should be subject to a modifying factor correction due to dominant low-frequency content prior to comparing to the relevant Wilpinjong Coal Mine noise criteria.

The LFN assessment examined likely noise levels at a selection of key representative receivers in different residential zones based on the modelled difference between C- weighted and A- weighted predicted noise levels (Appendix A).

Consistent with the results from other desktop LFN assessments of comparable operations, the desktop assessment for the Modification indicated the potential for unbalanced spectra (Appendix A). A 2 dB LFN penalty was applied during the evening and night periods for three proximal privately-owned residences (933, 101 and 102) (Appendix A).

Predicted Operational Noise Levels

Predicted $L_{Aeq,15min}$ operational noise levels at all identified receivers are presented in Appendix A. Results reflect the 2027, 2030 and 2032 operational scenarios under the applicable modelled meteorological conditions.

In the absence of pro-active noise mitigation measured being applied, noise modelling results indicate that the Wilpinjong Coal Mine incorporating the Modification would comply with applicable day, evening and night Development Consent (SSD-6764) noise criteria at all privately-owned receivers without negotiated noise agreements with the exception of receiver 104 in 2027 and receivers 103, 104 and 153 in 2030 at night (negligible to marginal exceedance). However, with the incorporation of pro-active noise mitigation measures at night, compliance would be achieved at receivers 103, 104 and 153 under all assessed scenarios (Appendix A).

Accordingly, the modelled operational noise levels associated with the Modification can comply with existing Wilpinjong Coal Mine consent conditions under Development Consent (SSD-6764) and are not expected to alter the currently approved impact on the acoustic amenity of the surrounding community, with the exception of an extension of time (Appendix A).

RWDI also found that the Wilpinjong Coal Mine incorporating the Modification would comply with applicable project noise trigger values at the Wollar Community Hall (53 dBA).

Indicative noise contours of maximum Modification operational noise predictions during the 2027, 2030 and 2032 modelling scenarios are presented in Appendix A.

Cumulative Noise Levels

Cumulative noise impacts resulting from the interaction between the Wilpinjong Coal Mine (including the Modification) and neighbouring operations were assessed against applicable criteria (Appendix A).

The cumulative assessment found that all privately-owned receivers without negotiated noise agreements would comply with the relevant cumulative noise criteria during all assessment periods (Appendix A).

Vacant Land Assessment

RWDI (Appendix A) conducted a vacant land assessment in accordance with the VLAMP and concluded that noise generated by the Wilpinjong Coal Mine incorporating the Modification is predicted to comply with the land area noise assessment criteria on all nearby privately-owned land (vacant or otherwise).

Potential Impacts to National Parks and Wildlife Service Estate

NPWS mapping identifies recreational areas near the Modification, including the Moolarben Picnic Area and Castle Rock Walking Track in the Munghorn Gap Nature Reserve, and the Spring Gully and Big River Campgrounds in the Goulburn River National Park.

While there are no formal noise assessment criteria for conservation areas, the NPfI passive recreation Project Noise Trigger Levels of 48 dBA were applied. Based on the predicted outer envelope night-time $L_{Aeq,15min}$ intrusive noise contours for 2027, 2030, and 2032, noise levels at these publicly accessible locations are expected to comply with the passive recreation criterion (Appendix A).

6.4.3 Mitigation Measures

Noise Management

WCPL would continue to apply existing negotiated noise agreements with the three most proximal private receivers (933, 101 and 102).

The predicted operational noise levels at receiver 101 may necessitate some minor amendment of Development Consent (SSD-6764) noise criteria (for consistency with current conditions for receivers 933 and 102).

WCPL would continue to implement the noise mitigation and management measures, and predictive and real-time noise management system and associated response protocols, detailed in the Noise Management Plan for the Wilpinjong Coal Mine.

Proactive and reactive operational noise management measures would continue to occur at the Wilpinjong Coal Mine to ensure compliance with the relevant noise criteria in Development Consent (SSD-6764).

WCPL would also continue to co-ordinate noise management at the Wilpinjong Coal Mine with nearby mining operations to minimise potential cumulative noise impacts.

The Noise Management Plan would be reviewed and, if required, revised to reflect any changes to Development Consent (SSD-6764) that arise from the Modification.

6.5 BLASTING

The Noise and Blasting Assessment for the Modification is presented in Appendix A.

The blasting assessment was conducted in accordance with the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (Australian and New Zealand Environment Council, 1990).

6.5.1 Background

Blast Measurement and Description

Overpressure (or airblast) is reported in linear decibels and is the measurable effect of a blast on air pressure, including generated energy that is below the limit of human hearing. Ground vibration is the measurable movement of the ground surface caused by a blast and is typically measured in millimetres per second (mm/s) as Peak Vector Sum vibration velocity.

Discernible blast emission effects can be divided into the three categories listed below:

a. Occupants of a building can be inconvenienced or disturbed (i.e. temporary amenity effects).

b. Contents of a building can be affected.

c. Integrity of a building structure can be affected.

An individual's response to blasting vibration and overpressure is highly dependent on previous experience and expectations.

Applicable Blasting Criteria

Ground vibration and airblast levels which cause human discomfort are generally lower than the recommended structural damage limits. Therefore, compliance with the lowest applicable human comfort criteria generally means that the potential to cause structural damage to buildings is minimal.

Blasting criteria for the Wilpinjong Coal Mine are provided in Development Consent (SSD-6764) and are presented in Table 7.

Additionally, RWDI has adopted the following nominal vibration criteria for various structures/instances as outlined in the Blast Management Plan (peak component particle velocity [PCPV]) (Appendix A):

- tailing dams – 50 mm/s;
- railway lines and public roads – 200 mm/s;
- railway culverts and public road infrastructure (i.e. concrete pipes, culverts, bridges) – 100 mm/s;

- sensitive geological features (refer to discussion below):
  - poor quality rock – 25 mm/s
  - better quality rock – 50 mm/s
  - existing Blast Management Plan performance criteria for Aboriginal rock art heritage sites – 80 mm/s
- historical mine adit – 80 mm/s
- livestock – 200 mm/s (vector peak particle velocity [PPV]).

Blast Management and Monitoring Regime

Blast management at the Wilpinjong Coal Mine is undertaken in accordance with the Blast Management Plan. The Blast Management Plan describes the blast monitoring regime and general blast management measures. It also describes the process for notifying landowners of upcoming blast events, flyrock monitoring, reporting and complaint management procedures.

Blast management measures used at the Wilpinjong Coal Mine include:

- public notification of upcoming blasts;
- coordinating the time of blasts with the timing of blasts at the Moolarben Coal Complex and Ulan Mine Complex to minimise the potential for cumulative blasting impacts;
- enforcing a minimum exclusion zone of 500 m;
- conducting pre-blast inspections;
- training relevant personnel in environmental obligations and safe handling of explosives;
- designing blasts to ensure that ground vibration and airblast overpressure criteria are compliant, including consideration of meteorological conditions and management of blast maximum instantaneous charge (MIC);
- flyrock management;
- a blast fume management strategy to minimise the occurrence of blast fumes associated with blasting;
- use of adequate stemming, a delay detonation system and careful drilling and hole loading;
- monitoring of blasts at:
  - representative sites of the closest privately-owned receivers;
  - Aboriginal heritage and archaeological sites;
  - historical mine adit; and
  - other infrastructure including railway line/culvert, Ulan-Wollar Road and Wollar Road, powerlines and tailing dams.
- ongoing review of site based prediction equations; and
- visual monitoring of all blasts.

Table 7
Development Consent (SSD-6764) Blast Criteria

Location	Airblast overpressure ($dB_{(Lin\ Peak)}$)	Ground vibration (mm/s)	Allowable exceedance
Residence on privately owned land	115	5	5% of the total number of blasts over a rolling period of 12 months
	120	10	0%
All public infrastructure	-	50 (or a limit determined by the structural design methodology in AS 2187.2-2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Secretary)	0%

mm/s = millimetres per second.

In addition, Ulan-Wollar Road and the Sandy Hollow-Gulgong Railway are temporarily closed when blasting is carried out within 500 m, in accordance with the Blast Management Plan. Temporary road closures are typically for a period of less than 20 minutes and no more than one closure per day. Notification of temporary road closures is provided at least three days prior to planned road closures.

Blasting at the Wilpinjong Coal Mine is carried out at a maximum of two blast per day and five blasts per week averaged over a calendar year. Blasting is carried out between 9.00 am and 5.00 pm Monday to Saturday, inclusive.

Compliance and Complaints

Blast overpressure and vibration monitoring has been undertaken at the Wilpinjong Coal Mine since 2006. The nearest privately-owned receivers are currently located in Wollar, where WCPL maintains a blast monitor (Figure 15).

From the review of blast monitoring data between 2021 and 2024 (i.e. the most recent Independent Environmental Audit period), no airblast or vibration results exceeding the blast criteria described in Table 7 were recorded at any privately-owned properties (Onward Consulting Pty Ltd, 2024).

WCPL manages complaints in accordance with the Blast Management Plan. A summary of blast-related complaints is provided in Appendix A and summarised in Figure 14.

In 2024, six complaints were received in relation to blasting. Subsequent review of the monitored overpressure and vibration levels associated with each complaint indicated that blast emissions were below specified limits.

6.5.2 Environmental Review

The Noise and Blasting Assessment (Appendix A) included an assessment of the potential impacts of on-site blasting. The potential impacts are described further below and in Appendix A.

Predicted Blasting Assessment

Blast sizes at the Wilpinjong Coal Mine typically range up to an MIC of approximately 3,900 kilograms (kg). However, with multiple blasting constraints located in relatively close proximity to the Pit 8 Extension area, it is anticipated that a medium-sized MIC of approximately 1,350 kg (or less) is more likely to be regularly employed in the Modification area (Appendix A). However, should a larger blast be required, WCPL would plan and conduct it in accordance with the Blast Management Plan.

Sensitive Geological Features

WCPL has adopted a blasting performance criteria for sensitive geological features (i.e. rocky habitat for threatened species or proximal Aboriginal rock shelter sites) of ‘no damage that is distinguishable from natural processes’.

WCPL engaged PSM to help derive potential blast vibration criteria for sensitive geological structures (Attachment 8). PSM has provided initial advice that nominates provisional conservative criteria of 50 mm/s (PPV), but recommends further work to identify site-specific criteria. The current Blast Management Plan performance criterion of 80 mm/s has also been assessed by RWDI (2025).

Mapped rocky habitat areas and proximal heritage sites are expected to fall within the minimum compliance distance when applying more conservative criteria for sensitive geological features for an MIC of 1,350 kg. WCPL would need to implement blast management measures (e.g. reduced MICs) when blasting near the pit boundary. Assuming an MIC of 100 kg, the minimum distance required for compliance is approximately 159 m when applying the provisional conservative (50 mm/s) criteria for sensitive geological structures (Appendix A).

WCPL will continue to gather data on blast vibration levels and geological feature performance to determine appropriate site-specific blast vibration criteria to achieve the adopted performance criteria for sensitive geological features of ‘no damage that is distinguishable from natural processes’. Adopted site-specific blasting vibration criteria would be documented in an update to the Blast Management Plan.

Private Residences, School and Community Hall

One privately-owned residential receiver (receiver 933) as well as the former Wollar school (receivers 901 and 944) and Wollar community hall (receiver 935) would fall within the minimum compliance distance for residential ground vibration and airblast overpressure for an MIC of 1,350 kg (Appendix A).

Based on the proximity of these receivers, it is expected that WCPL would need to implement blast management measures (e.g. reduced MICs) when blasting near the southern boundary of Pit 8 Extension. Assuming an MIC of 100 kg, the minimum distance required for compliance with residential criteria is approximately 829 m (Appendix A).

Public Infrastructure

Some public infrastructure are located within the minimum compliance distance for an MIC of 1,350 kg. These include the Ulan-Wollar Road, Sandy Hollow-Gulgong Railway and railway culverts (including historic railway culvert Site 46), power lines and power poles.

Based on the proximity of the public infrastructure, it is expected that WCPL would need to implement blast management measures (e.g. reduced MICs) when blasting near the north and north-west pit boundary. Assuming an MIC of 100 kg, the minimum distance required for compliance is approximately 52 m.

Livestock

No privately-owned farming areas are located within the relevant minimum compliance distances (Appendix A).

Historical Mine Adit

The historical mine adit is located west of the current Pit 8 Extension area and is located outside of the minimum compliance distance (Appendix A).

6.5.3 Mitigation Measures

Blast management measures for the Wilpinjong Coal Mine, including the Blast Fume Management Strategy would continue to be implemented for the Modification. The Blast Management Plan would be reviewed and updated to incorporate the Modification and WCPL's adopted performance criteria for sensitive geological structures, subject to the conditions of Development Consent (SSD-6764) for the Modification.

WCPL would continue to vary the MIC (or other relevant blasting parameters) of blasts over the life of the Modification according to the location of the blast and the proximity of nearby sensitive receivers, to minimise blasting effects at nearby privately-owned receivers, proximal infrastructure features and sensitive geological features.

Temporary closures of Ulan-Wollar Road and the Sandy Hollow-Gulgong Railway would continue to be conducted when blasting is carried out in proximity to them (e.g. within 500 m), in accordance with the Blast Management Plan.

6.6 AIR QUALITY

An Air Quality Impact Assessment for the Modification was undertaken by Airen Consulting (2025a) and is provided in Appendix B. The assessment was conducted in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2022) (the Approved Methods). The predicted air quality impacts from the Modification have also been assessed against the relevant criteria and procedures in the VLAMP.

A peer review of the Air Quality Impact Assessment by Todoroski Air Sciences Pty Ltd (TAS) concluded the Air Quality Impact Assessment meets the expectations for this type of assessment (Attachment 6).

6.6.1 Background

Air Quality Criteria

Development Consent (SSD-6764) Criteria

A summary of existing air quality impact criteria for the Wilpinjong Coal Mine under Development Consent (SSD-6764) is presented in Table 8.

Approved Methods Criteria

Mining activity at the Wilpinjong Coal Mine has the potential to generate particulate matter (e.g. dust) emissions in the form of:

- total suspended particulate matter (TSP);
- particulate matter with an equivalent aerodynamic diameter of 10 micrometres (µm) or less (PM_{10}) (a subset of TSP); and
- particulate matter with an equivalent aerodynamic diameter of 2.5 µm or less ($PM_{2.5}$) (a subset of TSP and PM_{10}).

Table 8
Development Consent (SSD-6764) Air Quality Criteria

Air Quality Indicator	Averaging Time	[d] Air quality criteria from SSD-6764
Particulate matter (PM_{10})	24-hour	50 µg/m^3 [a]
	Annual	30 µg/m^3 [a]
Particulate matter (TSP)	Annual	90 µg/m^3 [a]
[c] Deposited dust	Annual (maximum increase)	2 g/m^2/month [b]
	Annual (maximum total)	4 g/m^2/month [a]

Source: Appendix B.

a. Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

b. Incremental impact (i.e. incremental increase in concentrations due to the development project on its own).

c. Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method.

d. Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.

Table 9
Approved Methods and VLAMP Air Quality Impact Assessment Criteria

Pollutant	Averaging Period	Impact Assessment Criterion [a]	Mitigation Criterion [b]	Acquisition Criterion [c]
Total Suspended Particulates (TSP)	Annual	90 µg/m^3 [d]	90 µg/m^3 [d]	90 µg/m^3 [d]
Particulate matter <10µm (PM_{10})	Annual	25 µg/m^3 [d]	25 µg/m^3 [d]	25 µg/m^3 [d]
	24-hour	50 µg/m^3 [d]	50 µg/m^3 [f]	50 µg/m^3 [g]
Particulate matter <2.5µm ($PM_{2.5}$)	Annual	8 µg/m^3 [d]	8 µg/m^3 [d]	8 µg/m^3 [d]
	24-hour	25 µg/m^3 [d]	25 µg/m^3 [f]	25 µg/m^3 [g]
Deposited dust	Annual	2 g/m^2/month [e]	2 g/m^2/month [f]	2 g/m^2/month [g]
		4 g/m^2/month [d]	4 g/m^2/month [d]	4 g/m^2/month [d]

After: Appendix B.

a. Approved Methods impact assessment criteria (EPA, 2022).

b. VLAMP mitigation criteria (NSW Government, 2018a).

c. VLAMP acquisition criteria (NSW Government, 2018a).

d. Criterion is cumulative (i.e. includes background concentrations and all other sources).

e. Maximum incremental increase in deposited dust level.

f. Criterion is Wilpinjong Coal Mine and the Modification-only (with up to zero allowable exceedances over the life of the development).

g. Criterion is Wilpinjong Coal Mine and the Modification-only (with up to 5 allowable exceedances over the life of the development).

< = less than.

µg/m³ = micrograms per cubic metre.
g/m²/month = grams per square metre per month.

Particulate matter also has the potential to cause nuisance (amenity) effects when it is deposited on surfaces (i.e. dust deposition). Table 9 describes the Approved Methods air quality impact assessment criteria that were adopted by Airen Consulting (Appendix B) for the assessment of impacts at any residence on privately owned land.

NSW Voluntary Land Acquisition and Mitigation Policy

Voluntary mitigation rights may apply as per the VLAMP where, even with best practice management, the development contributes to exceedances of the criteria at any residence on privately-owned land or workplace on privately-owned land.

Table 9 describes the VLAMP mitigation and acquisition criteria for the assessment of air quality impacts at residences on privately-owned land.

Other Potential Emissions

Plant and equipment engine exhausts have the potential to generate emissions that include carbon monoxide, oxides of nitrogen and particulate matter. Post-blast fume has the potential to generate nitric oxide emissions which, in turn, can oxidise to the more harmful nitrogen dioxide (NO_2). Spontaneous combustion of coal also has the potential to cause odour and visible smoke.

Consideration of these other potential air quality emissions and applicable criteria is also provided in Appendix B and summarised in Section 6.6.2.

Environment Protection Licence 12425

Air quality criteria and air quality related conditions stipulated in EPL 12425 are generally consistent with those described in Development Consent (SSD-6764).

EPL 12425 includes condition O3 requiring activities to be carried out in a manner that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust. This condition would continue to apply to the Modification.

Air Quality Monitoring Program and Management and Control Measures

Air quality management at the Wilpinjong Coal Mine is currently undertaken in accordance with the Air Quality Management Plan which outlines:

- air quality mitigation measures and controls;
- air quality monitoring and reporting regimes; and
- procedures for the management of exceedances and complaints.

The monitoring program consists of a combination of depositional dust gauges, High Volume Air Samplers and continuous real-time monitors. Locations of air quality monitoring locations are shown on Figure 16.

Air quality monitoring is conducted at various locations that are considered representative of residential receivers to demonstrate compliance with applicable air quality criteria. Continuous real-time monitoring is also used as an air quality management tool to assist WCPL with implementing proactive and reactive dust management actions to minimise potential air quality impacts from the Wilpinjong Coal Mine.

The air quality management strategy for the Wilpinjong Coal Mine, as described in the Air Quality Management Plan, includes the following:

- implementation of general dust mitigation measures (e.g. haul road watering, dust suppression polymers) as part of operations to minimise potential dust emissions;
- predictive meteorological and air quality forecasting to guide daily operations (e.g. blasting);
- real-time response protocol including the implementation of additional proactive and reactive dust mitigation measures to avoid potential non-compliances;
- progressive rehabilitation (i.e. reshaping, topsoil placement and revegetation) of waste rock emplacements continues throughout the life of the Wilpinjong Coal Mine;
- management of spontaneous combustion through implementation of control measures such as regular inspection and monitoring of coal and carbonaceous materials, application of inert materials (e.g. clay capping), compaction of coal and carbonaceous material in out-of-pit emplacements;

- blast fume management through implementation of blast planning and execution protocols including consideration of meteorological conditions, blast design optimisation (e.g. stemming, confinement, timing), exclusion zone procedures, and post-blast fume risk assessment and reporting to minimise risk of fume generation and offsite impacts; and
- real-time air quality monitoring to guide the implementation of the above management measures to maintain compliance with air quality criteria.

Existing Air Quality and Compliance

A review of Wilpinjong Coal Mine air quality monitoring results is presented in Appendix B.

Airen Consulting (2025a) reviewed data from each WCPL monitoring site, and a detailed discussion of the background levels of each pollutant is provided in Appendix B. In summary:

- all annual average PM_{10} concentrations at WCPL monitoring sites were below the relevant criterion of 25 µg/m³ between 2018 and 2023, with the exception of 2019, where annual averages ranged from 28 to 37 µg/m³ due to drought-related conditions;
- 24-hour average PM_{10} concentrations exceeded the 50 µg/m³ criterion on several occasions between 2018 and 2020, which coincided with regional drought and bushfire conditions;
- $PM_{2.5}$ annual average concentrations remained below the 8 µg/m³ criterion at Wollar between 2018 and 2023, with the exception of 2019 (14.8 µg/m³);
- 24-hour $PM_{2.5}$ levels exceeded the 25 µg/m³ criterion on occasions from 2018 to 2021 due to drought-related conditions, with a peak of 199 µg/m³ recorded in drought-affected 2019;
- estimated TSP concentrations, derived using the NSW Minerals Council (2000) conversion factor, remained below the annual average criterion of 90 µg/m³ in all years from 2018 to 2023, with the exception of one exceedance at HV5 in 2019; and
- deposited dust levels remained below the criterion of 4 g/m²/month across all WCPL monitoring locations from 2018 to 2024.

Most of the exceedances described above for TSP, PM_{10} and $PM_{2.5}$ are a result of the occurrence of dust associated with drought conditions in 2018 and the severe bushfire season in 2019 that affected much of NSW. The years following 2018 and 2019 show a reduction in background air quality pollutant levels as weather conditions improved (Appendix B).

Background Air Quality for Assessment Purposes

The assessment of the Modification and cumulative annual average air quality impacts requires background particulate matter concentrations and dust deposition levels to be defined and added to dispersion modelling results for Modification emissions. The proximity of local air quality monitors to the existing mining operations means that the recorded air quality data includes particulate matter and dust deposition contributions from the existing Wilpinjong Coal Mine (Appendix B).

As a result, the use of these monitoring data represent a conservative approach, as it will lead to some double counting of emissions from the existing Wilpinjong Coal mine.

Complaints

As shown in Figure 14, in the last 5 years there have been up to 20 air quality related complaints each year with no clear trend in complaint numbers over this period. Odour related complaints have generally been more common than dust related complaints.

In response to complaints, appropriate management actions are implemented as outlined in the Air Quality Management Plan.

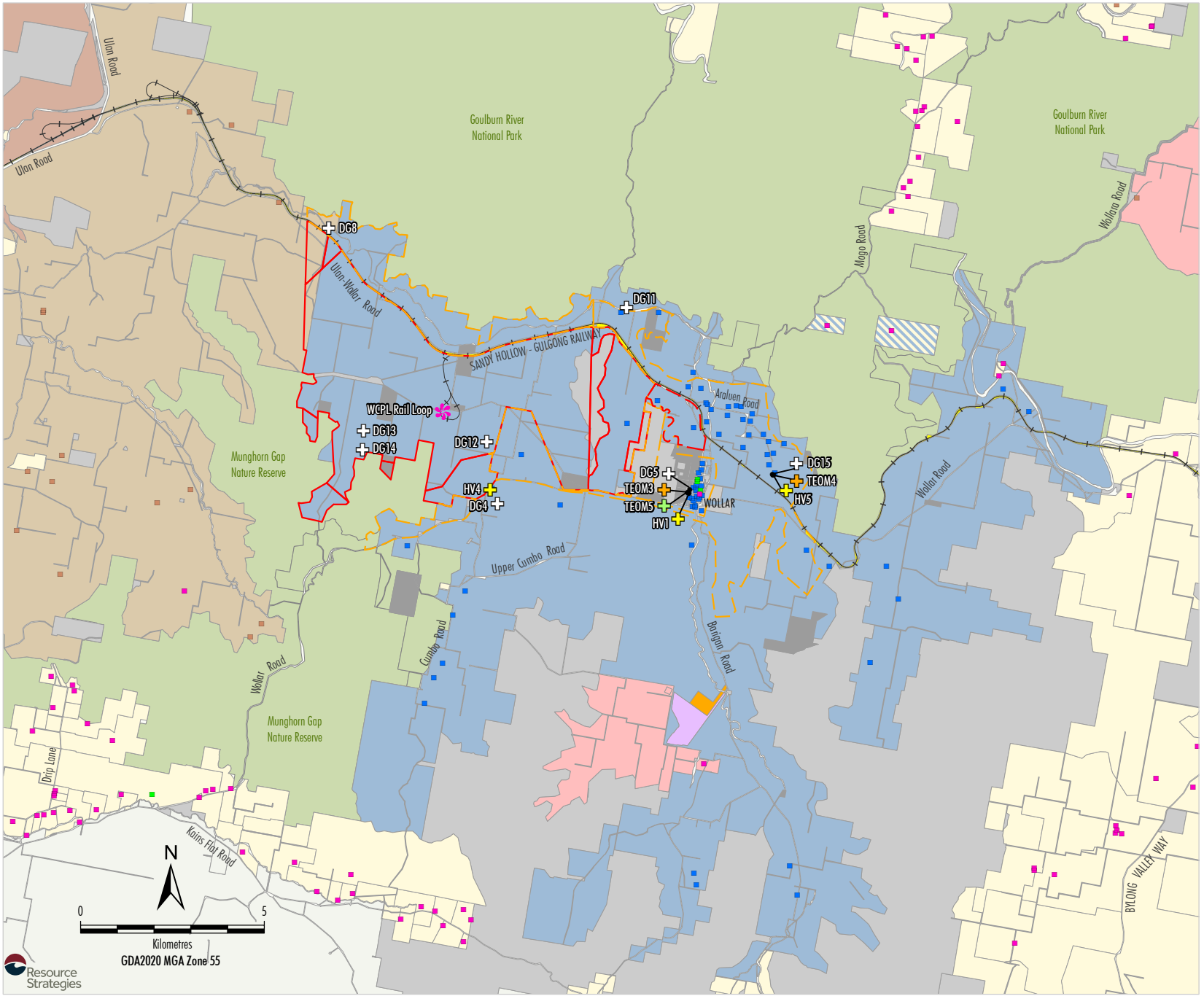
6.6.2 Environmental Review

Dispersion Modelling

The EPA approved CALPUFF/CALMET modelling system was used by Airen Consulting (Appendix B) to simulate the Wilpinjong Coal Mine incorporating the Modification.

Assessment of Meteorological Conditions

The dispersion modelling completed for the Modification is based on meteorological data sourced from on-site monitoring, other local NSW Government monitoring locations and regional BoM monitoring.



LEGEND

- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Peabody-controlled Land
- Crown Land (Peabody Leased)
- Crown Land
- Moolarben Coal Mine
- Ulan Coal Mine
- Solar Farm
- EnergyCo
- TransGrid
- Railway Land
- Private Landholder
- Private Landholder Subject to Noise Agreement in Accordance with Condition 3, Schedule 3
- Owner Not Identified
- National Parks and Wildlife Service (NPWS) Estate
- Peabody-owned Dwelling
- Moolarben-owned Dwelling
- Community Building
- Private Dwelling
- Meteorological Station

Air Quality Monitoring Sites

- High Volume Air Sampler
- Real-time PM_{10}
- Static Dust Gauge
- Real-time $PM_{2.5}$

Source: WCPL (2025); NSW Spatial Services (2025)

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WILPINJONG COAL MINE

Air Quality and Meteorological Monitoring Locations

Figure 16

Prognostic meteorological model data from TAPM and the surface observations were input into the CALMET meteorological model (Appendix B).

Meteorology data for the period between 2018 and 2023 was reviewed to identify a representative year for modelling. Following review of the meteorological data, the 2023 financial year was selected as the representative year. This determination was based on high data capture rate, similar wind patterns to other years and the data being not adversely influenced by bushfire activity or extreme conditions (Appendix B). Details of the analysis of meteorological conditions is provided in Appendix B.

Air Quality Modelling Scenarios

Three operational scenarios of the Modification were assessed for potential air quality impacts (Appendix B):

- 2027 – Represents the peak overall ROM extraction and waste material displacement rates for the Wilpinjong Coal Mine and maximum haul distances (including the Modification).
- 2030 – Represents mid-life of the Modification, with near-peak waste material displacement from the Pit 8 Extension area and higher concentration of mine activities closer to Wollar.
- 2032 – Represents the final year and peak extraction rate of ROM coal extraction within the Pit 8 Extension area, featuring activities closest to Wollar.

The operational scenarios were selected in consideration of maximum potential dust emissions (e.g. to account for the maximum material movements and proximity to sensitive receivers) to evaluate the potential impacts at the nearest privately-owned receivers throughout the life of the Wilpinjong Coal Mine incorporating the Modification.

Dust emissions from the Modification's construction activities (e.g. relocation of Ulan-Wollar Road) are expected to be temporary, limited in scale, and largely confined to 2027. Given the limited scope and short-term nature of the construction works relative to broader mining operations, the associated dust emissions are unlikely to be significant and did not require modelling in the assessment (Appendix B).

Compliance with Development Consent (SSD-6764) Air Quality Criteria

Privately Owned Receivers

No exceedances of Development Consent (SSD-6764) criteria were predicted at any privately-owned receivers in 2027, 2030 or 2032 for annual average dust deposition levels, cumulative annual average and incremental concentrations for 24-hour $PM_{2.5}$ and PM_{10} concentrations and cumulative impact (Appendix B).

Wollar Community Facilities

Consideration has been given to the potential for short-term particulate impacts on community facilities within Wollar. While the Wollar Public School (944) is owned by the NSW Department of Education and has been formally closed, it is understood that one of the former school buildings may currently be tenanted. The Wollar community hall (935) is also expected to continue being used on an infrequent basis.

This assessment identified a potential for very minor short-term particulate matter criteria exceedances (i.e. cumulative criteria for 24-hour average $PM_{2.5}$) occurring at the former Wollar School (i.e. approximately 0.3 to 0.5 µg/m^3 above EPA assessment criteria) in the modelled 2032 scenario (Appendix B).

Only one day was modelled to have a potential exceedance of 25 µg/m^3 (24-hour average $PM_{2.5}$). On this day the background $PM_{2.5}$ concentration was 23.3 µg/m^3 and the contribution from the Wilpinjong Coal Mine was 2.0 µg/m^3. It is therefore suggested that the risk of the Modification causing an exceedance is very low, particularly because of the conservative nature of the modelling whereby real-time operational air quality controls are not incorporated (Appendix B).

Diesel Exhaust and Post Blast Fume Assessment

Emissions from diesel exhausts associated with off-road vehicles and equipment are not expected to result in any adverse air quality impacts (i.e. NO_2), based on conservative modelling which showed compliance with air quality assessment criteria at all sensitive receptors (Appendix B).

Emissions associated with post blast fume are not expected to result in any adverse air quality impacts (i.e. NO_2), based on modelling which showed compliance with air quality assessment criteria at all sensitive receptors (Appendix B).

Spontaneous Combustion

The Modification would involve extraction of the same coal seams currently mined at the Wilpinjong Coal Mine. There would be no change to the current approved maximum annual ROM coal production rate, or coal handling systems.

WCPL would continue to evaluate and manage potential issues associated with spontaneous combustion as documented in the Spontaneous Combustion Management Plan.

Potential Impacts to National Parks and Wildlife Service Estate

Condition 40 of Schedule 3 of Development Consent (SSD-6764) requires the Wilpinjong Coal Mine to setback all open cut pits at least 20 m from the Munghorn Gap Nature Reserve.

The proposed Pit 8 Extension is located approximately 6 km from the Munghorn Gap Nature Reserve and approximately 1 km from the Goulburn River National Park. At these setback distances, the Pit 8 Extension would be located significantly further from the NPWS Estate than the approved Wilpinjong Coal Mine.

Notwithstanding, Airen Consulting (2025a) has considered potential impacts on the Goulburn River National Park and concluded the Modification is highly unlikely to have any material adverse dust impacts or any adverse blast fume impacts on the NPWS Estate (Appendix B).

Vacant Land Assessment

Airen Consulting (2025a) has conducted a vacant land assessment in accordance with the VLAMP and concluded compliance is demonstrated for all air quality indicators and averaging times prescribed by the VLAMP (Appendix B).

6.6.3 Mitigation Measures

WCPL would continue to implement the air quality mitigation and management measures, and real-time air quality management and associated response protocols, detailed in the Air Quality Management Plan for the Wilpinjong Coal Mine.

The Air Quality Management Plan would be reviewed and, if required, revised to reflect any changes to Development Consent (SSD-6764) that arise from the Modification.

6.7 GROUNDWATER

A Groundwater Impact Assessment for the Modification was undertaken by SLR Consulting Australia Pty Ltd (SLR) and is presented in Appendix D. The Groundwater Impact Assessment has been peer reviewed by Dr Noel Merrick and the peer review report is presented in Attachment 6.

The Groundwater Impact Assessment has been prepared in accordance with relevant guidelines including:

- *Australian Groundwater Modelling Guidelines* (Barnett *et al.*, 2012) and *Murray-Darling Basin Commission (MDBC) Groundwater Flow Modelling Guideline* (Middlemis *et al.*, 2001).
- the *NSW Aquifer Interference Policy – NSW Government Policy for the licensing and assessment of aquifer interference activities* (NSW Government, 2012).
- *Significant Impact guidelines 1.3: Coal seam gas and large coal mining developments – impacts on water resources* (AG DCCEEW, 2022).
- *Information guidelines for proponents preparing coal seam gas and large coal mining development proposals* (Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development, 2024) and associated explanatory notes.

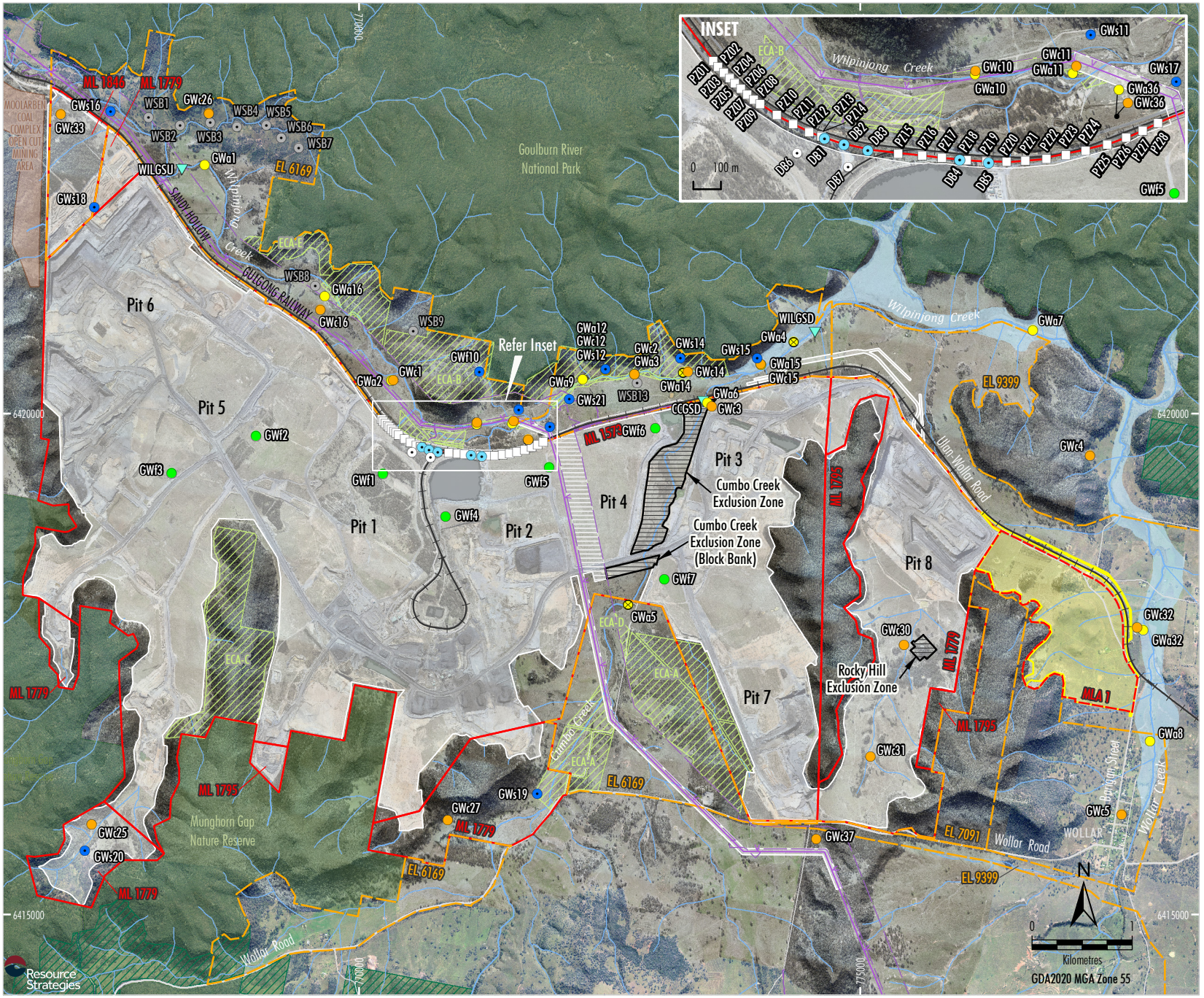
6.7.1 Background

Groundwater Management and Monitoring

Groundwater management and monitoring at the Wilpinjong Coal Mine is currently undertaken in accordance with the Groundwater Management Plan, which is a sub-plan of the Wilpinjong Coal Mine Water Management Plan.

The Groundwater Management Plan outlines:

- the existing groundwater conditions and baseline data relevant to the Wilpinjong Coal Mine;
- groundwater impact assessment criteria and triggers;
- a program for accurately delineating the boundary of the Wilpinjong Creek alluvial aquifer in any areas intersected by mining;
- management measures for drilling and water supply bores;
- groundwater monitoring (Figure 17);



LEGEND

- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- EnergyCo Construction Easement (CWOREZ)
- Mine Exclusion Area
- Modification Indicative Development Footprint

DPI Water

- Mapped Highly Productive Alluvial Aquifer

Groundwater Monitoring Sites

- Bore Identified for Replacement
- Alluvial Groundwater Monitoring
- Hard Rock Groundwater Monitoring
- Spoil Monitoring
- Water Supply Bore
- Dewatering Bore
- Dewatering Bore - Never used, now a Monitoring Bore
- Water Supply Bore - Never used
- Piezometer

Surface Water Monitoring Sites

- Surface Water Gauging Station

Source: WCPL (2025); DPI Water (2015); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Nov 2022)

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WILPINJONG COAL MINE

Groundwater Monitoring Locations

Figure 17

- the process for validation of previous groundwater predictions; and
- a plan to respond to any exceedances of trigger levels and/or performance criteria.

Appropriate contingency measures for impact on a groundwater supply user may include:

- deepening the affected groundwater supply;
- construction of a new groundwater supply; or
- provision of a new alternative water supply.

The Water Management Plan includes water management performance measures, data management, review, responsibility and reporting requirements.

Baseline Groundwater Data

Baseline geological and groundwater data were reviewed and compiled from a number of sources as part of the Groundwater Impact Assessment (Appendix D) including a baseline desktop analysis of data available from public sources:

- Western Coalfields geological mapping;
- mapping and data from the Sydney Basin-North Coast Groundwater Source under the *Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016*.
- existing water monitoring database from the Wilpinjong Coal Mine, including relevant groundwater quality, level and pressure data (Figure 17);
- previous hydrogeological and groundwater impact assessments and reviews completed at the Wilpinjong Coal Mine;
- previous annual groundwater reporting for the Wilpinjong Coal Mine;
- regional climate data and rainfall statistics (BOM, 2022);
- LiDAR survey data; and
- other regional topographic mapping data.

A hydrogeological field investigation for the Modification (SLR, 2025) (which included the installation of standpipe piezometers and Vibrating Wire Piezometers [VWPs]) has also informed baseline data for the Groundwater Impact Assessment (Appendix D). The investigation completed for the Modification included extensions to the existing groundwater monitoring network at the Wilpinjong Coal Mine, and included the following (SLR, 2025):

- the installation of seven standpipe piezometers and two VWPs;
- groundwater level monitoring and the preparation of associated hydrographs; and
- additional slug/aquifer testing.

Existing Groundwater Regime

The key geological features in the vicinity of the Project of relevance to hydrogeological processes are (Appendix D):

- elevated sandstone plateaus of the Narrabeen Group;
- a thin veneer of recent Quaternary alluvium/colluvium along Wilpinjong Creek and alluvium along Cumbo Creek, Wollar Creek and other watercourses (with alluvial bodies being quite narrow);
- Triassic-aged igneous intrusions within the Pit 8 Extension area;
- unconsolidated deposits in western portions of the Wilpinjong Coal Mine and extending into the Moolarben Coal Complex tenements with coarse-grained lithology up to almost 60 m deep;
- overburden, consisting of the Permian Illawarra Coal Measures (including the Moolarben Coal Member, which is a secondary economic coal resource);
- the Ulan Coal Seam (the primary economic coal resource);
- the Marrangaroo Sandstone and underlying Nile Sub-Group; and
- the Shoalhaven Group and older units acting as the 'basement'.

There is no evidence of major faulting over the Wilpinjong Coal Mine, although faults have been observed and mapped by WCPL. There are minor intrusions, dykes and sills in parts of the Wilpinjong Coal Mine area (Appendix D).

Based on previous hydrogeological conceptualisation at the Wilpinjong Coal Mine (HydroSimulations, 2015) and consistent with the *Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016*, two groundwater systems are identified at Wilpinjong Coal Mine (Figure 18):

- An alluvial groundwater system associated primarily with the alluvial sediments along Wilpinjong and Wollar creeks.
- A porous/fractured rock groundwater system, hosted primarily by the Illawarra Coal Measures.

None of the identified groundwater systems are significant aquifers (Appendix D).

The most permeable units are the Ulan Coal Seam, alluvium and Marrangaroo Formation (Marrangaroo Conglomerate), while the sandstones of the Narrabeen Group are of lower permeability (Appendix D).

The Illawarra Coal Measures also include layers of low permeability mudstones and siltstones.

Groundwater Recharge

Recharge to the groundwater systems occurs from rainfall and runoff infiltration and lateral groundwater flow, especially from the elevated Narrabeen group to the alluvium of Wilpinjong Creek. Seepage faces would be expected along the cliff faces bordering Wilpinjong Creek after rainfall events, and perched water tables might be sustained at high elevations due to the presence of occasional lower permeability beds between the sandstone layers.

Recharge to the alluvial aquifer is predominantly through rainfall recharge and from the porous/fractured rock groundwater system in the topographical valleys. Loss is likely by evapotranspiration along the riverine corridor where the water table is nearer the ground surface.

Recharge to the porous/fractured rock aquifer is predominantly through rainfall recharge with discharge to springs, surface watercourses in the topographical valleys and groundwater levels are typically a subdued reflection of topography.

After mining, waste rock material is placed back in mine voids at the Wilpinjong Coal Mine. The waste rock is likely to be more permeable than the native strata (Hawkins, 1998 and Mackie, 2011), hence there is increased rainfall infiltration into and through areas of waste rock emplacement, causing the water table to rise, or ‘mound’, within waste rock emplacement areas over time.

Groundwater Dependent Ecosystems

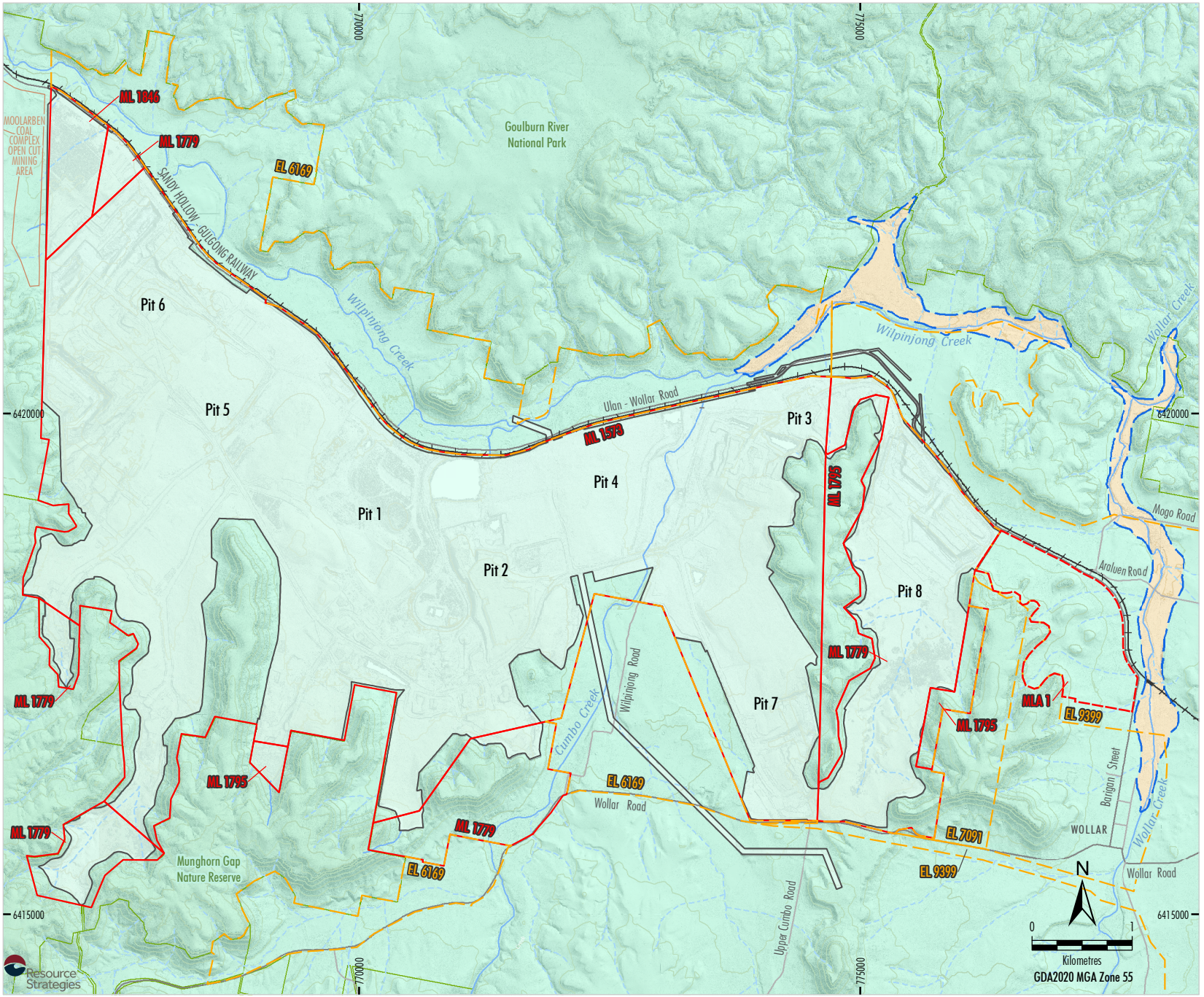
There are no high priority Groundwater Dependent Ecosystems (GDEs) in the vicinity of the Pit 8 Extension area, associated with either the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2022* or *Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016*.

The Groundwater Dependent Ecosystems Atlas (GDE Atlas) (BoM, 2021) was developed as a national dataset of Australian GDEs to inform groundwater planning and management. The GDE Atlas uses the following categories for mapping the likelihood of terrestrial GDEs:

- High potential for groundwater interaction.
- Moderate potential for groundwater interaction.
- Low potential for groundwater interaction.

The term 'potential' is used to reflect the uncertainty inherent in identifying ecosystems as groundwater-dependent using desktop methods.

Mapping on the GDE Atlas (BoM, 2021) shows many areas in valley headwaters, along drainage lines and adjacent to watercourses are mapped as 'high potential terrestrial GDEs’. There are also isolated vegetation communities across the area mapped as ‘moderate potential terrestrial GDEs’, and ‘moderate potential aquatic GDEs’ are mapped along the Goulburn River northeast of Wilpinjong Coal Mine.



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WILPINJONG COAL MINE

Regional Groundwater Sources

Figure 18

Hunter Eco (2025) (Attachment B of Appendix F) undertook a review of groundwater dependent vegetation and identified the following possible facultative groundwater dependent vegetation communities within the modelled incremental groundwater drawdown extent due to the Modification:

- Western Grey Box Woodland;
- Box-Gum Grassy Woodland on Valley Floors;
- Regeneration;
- Fuzzy Box Woodland; and
- Rough-barked Apple Woodland.

No stygofauna were identified during the targeted surveys (Bio-Analysis Pty Ltd [Bio-Analysis], 2025) of alluvial aquifers in the vicinity of the Pit 8 Extension (Appendix G).

The closest known stygofauna from alluvial aquifer habitat are from the Goulburn River alluvial aquifer near Sandy Hollow, approximately 60 km east of the Modification.

Groundwater Use

A search of the NSW Bore Database was undertaken in January 2023 for bores within or near the Pit 8 Extension area. This was compared to the results of a bore census completed by Wilpinjong Coal Mine in February 2005 (WCPL, 2005a) and an additional investigation undertaken to support the Wilpinjong Extension Project EIS (HydroSimulations, 2015).

No additional private groundwater bores were identified in the vicinity of the Pit 8 Extension area during the January 2023 search of the NSW Bore Database.

The 2015 investigation found that bores on public or private land in the vicinity of the Pit 8 Extension area was limited to one bore at Wollar Public School[9] (understood not to be registered) that was used for watering recreational areas and gardens. The bore is 60 m deep, with approximately 40 to 50 m of available drawdown.

The maximum predicted drawdown from the Groundwater Assessment undertaken for the Wilpinjong Extension Project was 6 m, meaning that the bore is unlikely to go dry as a result of the currently approved Wilpinjong Coal Mine (HydroSimulations, 2015).

Groundwater Quality

Groundwater quality has been monitored at Wilpinjong Coal Mine since 2006, in accordance with the approved Groundwater Management Plan. The groundwater monitoring network in the vicinity of the Pit 8 Extension area is comprised of a series of existing standpipe monitoring bores, in addition to standpipe piezometers and VWPs installed as part of the hydrogeological field investigation conducted for the Modification (Figure 17).

Overall, monitoring shows groundwater salinity within and surrounding the Pit 8 Extension is highly variable but generally poor, with most groundwater suitable only for livestock and irrigation of some salt tolerant crops.

Groundwater in the alluvium is more saline than groundwater in the porous/fractured rock (Appendix D).

Further analysis of water quality proximal to the Modification is provided in Appendix D.

Value of Water Resource

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) state:

> *The key factor that will be relevant in determining the value of a water resource will be its utility for all third party uses, including environmental and other public benefit outcomes...*

The potential value of the groundwater resource has been considered with respect to GDEs, anthropogenic use and the suitability of groundwater quality for beneficial use. The locations of potential GDEs are outlined above and include possible facultative groundwater dependent vegetation and stygofauna associated with alluvial aquifers.

[9] The Wollar Public School was formally closed by the NSW Department of Education in 2025.

As described above, the number of privately-owned bores in the vicinity of the Modification is low due to the limited private ownership and variable groundwater yields and groundwater quality (particularly in the alluvium).

Groundwater quality in the vicinity of the Modification is highly variable but generally poor as described above. Groundwater in some areas is too saline for livestock (Appendix D).

6.7.2 Environmental Review

Numerical groundwater modelling was undertaken for the Modification to evaluate potential impacts on the local groundwater regime.

The numerical model covers an area of approximately 2,000 km^2 (i.e. 40 km north-south by 50 km east-west). Compared to the previous Wilpinjong Coal Mine groundwater model, the groundwater model extent has been extended approximately 10 km to the east.

The groundwater model utilised a transient calibration (January 2006 to December 2023) to capture historical mining at Wilpinjong Coal Mine, Moolarben Coal Complex and Ulan Coal Mine.

A total of 7,916 groundwater level targets were set at a total of 197 sites covering Wilpinjong Coal Mine monitoring bores, Moolarben Coal Complex monitoring bores, and relevant registered bores in accordance with Australian Groundwater Modelling Guidelines (Barnett *et al*., 2012). The calibration data set includes data from 57 bores from the Wilpinjong Coal Mine.

Overall, the groundwater model captures depressurisation due to active mining; is numerically stable with negligible mass balance error; and shows a good fit between observed and modelled groundwater levels. As such, the groundwater model is considered fit for purpose to assess potential impacts of the Modification on the local groundwater regime.

Mine Inflows

The predicted average rate of mine inflow over the duration of mining between the present (2025) and the end of mining in 2034 is 348 megalitres per year (ML/year) (1.3 ML/day) for the approved Wilpinjong Coal Mine, and 185 ML/year (0.5 ML/day) over the duration of mining between the present (2025) and the end of mining in 2034 for the Modification.

Surface Water Resources

The existing surface water resources and their characteristics (i.e. streamflow and water quality) are described in Section 6.8.1.

The Groundwater Impact Assessment (Appendix D) included examination of the stream-aquifer (surface water-groundwater) interaction status of the Wollar, Wilpinjong and Cumbo Creeks, and the Goulburn River.

The groundwater model predicts that Wollar Creek may experience minor drawdown impacts (i.e. a maximum water table drawdown of approximately 1 m) as a result of the Modification. As such, a reduction in baseflow contribution to Wollar Creek is anticipated both during mining operations and in the recovery period (i.e. post-mining). Modelling indicates that approximately 30 years post-mining baseflow contributions to Wollar Creek are shown to increase (i.e. no long-term baseflow loss to Wollar Creek) (Appendix D).

The groundwater model simulation demonstrates that any reduction in baseflow to Wilpinjong Creek and to Goulburn River due to the Modification is expected to be small and is consistent with estimates of baseflow capture for the approved Wilpinjong Coal Mine (Appendix D).

Cumulative baseflow loss for all water courses becomes negative approximately 30 years post recovery (2063), which indicates a net gain of river baseflow post mining (Appendix D).

The potential effects of baseflow reductions on flows in Wollar, Wilpinjong, Murragamba and Cumbo Creeks, and Goulburn River are described further in Section 6.8.2.

Groundwater Users

The *NSW Aquifer Interference Policy* provides a water supply work (i.e. groundwater bores) minimal impact consideration for groundwater drawdown of 2 m for alluvial and porous rock water sources (NSW Government, 2012).

Modelling shows no incremental drawdown greater than 2 m is predicted at privately-owned bores installed in the alluvium.

It is noted that incremental drawdown greater than 2 m is predicted at the bore installed in the Shoalhaven group at the former Wollar Public School (now closed) (900 m south of the Pit 8 Extension). The bore is 60 m deep, with approximately 40 to 50 m of available drawdown, and therefore the bore is unlikely to go dry as a result of the Modification (Appendix D).

Groundwater Quality

The Modification does not result in any new or increased mechanism for water quality impacts relative to the approved Wilpinjong Coal Mine and is therefore not expected to result in any significant incremental groundwater quality impacts (Appendix D).

Groundwater Dependent Ecosystems

An assessment of potential impacts on GDEs is included in the BDAR (Appendix F), the Aquatic Ecology Assessment (Appendix G) and summarised in Sections 6.9.2 and 6.10.2.

Cumulative Impacts

The Groundwater Impact Assessment included consideration of potential cumulative impacts of the Modification, the approved Wilpinjong Coal Mine and the Moolarben Coal Complex (Appendix D).

The majority of the predicted cumulative drawdown impacts are not related to the Modification but result from these other existing/approved/proposed mining activities (including the existing approved Wilpinjong Coal Mine) represented in the model.

Cumulative groundwater drawdown contours showing the magnitude and water table pattern caused by coincident mining at the Moolarben Coal Complex and the approved Wilpinjong Coal Mine are presented in Appendix D.

The residual cumulative water table drawdown is limited to the development footprint of the approved Wilpinjong Coal Mine, with the exception of some areas associated with mining operations at the Moolarben Coal Complex. The residual cumulative drawdown in the Ulan Seam is limited to the mining areas, with a maximum of 20 m drawdown in the final void areas of Pit 6 and OC4 (Appendix D).

Potential Impacts on Matters of National Environmental Significance

Potential Impacts on Hydrological Characteristics

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) provide the following guidance on potential impacts of an action on hydrological characteristics:

> *A significant impact on the hydrological characteristics of a water resource may occur where there are, as a result of the action:*
>
> - *changes in the water quantity, including the timing of variations in water quantity*
> - *changes in the integrity of hydrological or hydrogeological connections, including structural damage (for example, largescale subsidence).*
> - *changes in the area or extent of a water resource.*
>
> *where these changes are of sufficient scale or intensity as to significantly reduce the current or future utility of the water resource for third party users, including environmental and other public benefit outcomes.*

As described above, modelling undertaken for the Modification indicates (Appendix D):

- no privately-owned bores located within alluvial aquifers are predicted to experience greater than 2 m drawdown related to the activities of the Modification;
- one bore, located at the former Wollar Public School, predicted to experience greater than 2 m drawdown related to the Modification has 40 to 50 m of available drawdown and is therefore unlikely to go dry as a result of the Wilpinjong Coal Mine;
- modelling indicates the Modification would have a localised, minor and temporary impact on baseflow contributions to the Wollar, Wilpinjong, Murragamba and Cumbo Creeks, and the Goulburn River; and
- no discernible effect is expected on any perched groundwater or springs in the Goulburn River National Park or Munghorn Gap Nature Reserve (i.e. in the Triassic Wollar Sandstone/Narrabeen Group).

Therefore, it is unlikely that the action would result directly or indirectly in a substantial change in the hydrology of groundwater resources.

Potential Impacts on Water Quality

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) provide the following guidance on potential impacts of an action on water quality:

> *A significant impact on a water resource may occur where, as a result of the action:*
>
> - *there is a risk that the ability to achieve relevant local or regional water quality objectives would be materially compromised, and as a result the action:*
> - *creates risks to human or animal health or to the condition of the natural environment as a result of the change in water quality*
> - *substantially reduces the amount of water available for human consumptive uses or for other uses, including environmental uses, which are dependent on water of the appropriate quality*
> - *causes persistent organic chemicals, heavy metals, salt or other potentially harmful substances to accumulate in the environment*
> - *seriously affects the habitat or lifecycle of a native species dependent on a water resource, or*
> - *causes the establishment of an invasive species (or the spread of an existing invasive species) that is harmful to the ecosystem function of the water resource, or*
> - *there is a significant worsening of local water quality (where current local water quality is superior to local or regional water quality objectives), or*
> - *high quality water is released into an ecosystem which is adapted to a lower quality of water.*

As described above, the Groundwater Impact Assessment for the Modification concludes there would be no discernible deterioration in groundwater quality as a result of mining, including in the long-term (Appendix D). Therefore, the Modification could not be considered to have a significant impact on groundwater quality.

Consideration of Cumulative Impacts

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) require the action to be:

> *… considered with other developments, whether past, present or reasonably foreseeable developments.*

The Wilpinjong Coal Mine is situated in an established mining precinct including the Ulan Mine Complex and Moolarben Coal Complex. Cumulative groundwater drawdown contours showing the magnitude and water table pattern caused by coincident mining at the Moolarben Coal Complex and the Project are presented in Appendix D.

The residual cumulative water table drawdown is limited to the development footprint of the approved Wilpinjong Coal Mine, with the exception of some areas associated with mining operations at the Moolarben Coal Complex.

There is predicted to be little change between the Modification-specific and cumulative effects on creeks proximal to the Wilpinjong Coal Mine such as Wollar, Wilpinjong, Murragamba and Cumbo Creeks, and the Goulburn River.

Consideration of Potential for Significant Impact

In consideration of the above, the action associated with the Pit 8 Extension would not result in any significant changes to the quality or quantity of groundwater resources available to third party users or the environment.

Accordingly, the Modification would not have a significant impact on groundwater resources.

6.7.3 Mitigation Measures

Licensing

A comparison of predicted annual groundwater volumes required to be licensed over the life of the Modification and post-mining against existing WCPL groundwater licensing entitlements is presented in Table 10.

Based on the predictive modelling, WCPL currently holds sufficient licence entitlement to cover the predicted modified groundwater ‘take’ from the alluvial and hard-rock groundwater sources.

Predicted take for the post-mining period is already below the water access licence allocations held by WCPL, indicating no potential effect on the future availability of further allocations for other parties.

Groundwater Management Plan

Water management at the approved Wilpinjong Coal Mine is undertaken in the accordance with the Water Management Plan (including the Groundwater Management Plan).

The existing Water Management Plan, including the relevant sub-plans, would be reviewed and revised to incorporate the Modification, subject to the conditions of any modified Development Consent.

Groundwater Monitoring

Groundwater monitoring is conducted at Wilpinjong Coal Mine in accordance with the Groundwater Management Plan. The groundwater monitoring network is shown on Figure 17.

The approved Groundwater Management Plan would continue to be implemented at the Wilpinjong Coal Mine, and would be reviewed and updated, where necessary, to incorporate the Modification.

Table 10
Groundwater Take Summary

Water Sharing Plan	Water Source	Category	Entitlement (Unit shares)	Maximum Estimated take during mining including Modification (ML/year)	Maximum Estimated take post-mining (ML/year)
Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016	Sydney Basin North Coast Groundwater	Aquifer	3,121 [WAL 41862]	831	620
Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2022	Wollar Creek	Aquifer	474 [WAL 21499]	216	384.5
	Upper Goulburn River	Unregulated	511 [WALs 19045, 19055, 19057, 19058]	47.1	30.5

Source: Appendix D.
WAL = Water Access Licence.

6.8 SURFACE WATER

A Surface Water Assessment for the Modification has been prepared by WRM Water & Environment (WRM) (2025) and is presented in Appendix E.

6.8.1 Background

Surface water resources in vicinity of the Wilpinjong Coal Mine (inclusive of the Modification) are regulated, in accordance with the WM Act, by the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2022*.

The drainage network in the vicinity of the Wilpinjong Coal Mine (inclusive of the Modification) is shown on Figure 19.

Regional Hydrology

The Wilpinjong Coal Mine is located in the Wollar Creek catchment, which forms part of the Hunter River Basin. The Hunter River Basin drains some 22,000 km^2 of central-eastern NSW to the Pacific Ocean at Newcastle (Figure 19).

The Wilpinjong Coal Mine is located directly south of Wilpinjong Creek, a headwater tributary of Wollar Creek which joins the Goulburn River north-east of the Wilpinjong Coal Mine (Figure 19).

The catchment area of Wollar Creek at the confluence with the Goulburn River is approximately 530 km^2. The catchment area of the Goulburn River at the confluence is approximately 1,149 km^2 (WRM, 2015).

Local Hydrology

The existing Wilpinjong Coal Mine is primarily drained by Cumbo Creek and various smaller tributaries, which drain north towards Wilpinjong Creek (Appendix E).

The local drainage network proximal to the Modification is primarily characterised by steep, forested headwaters draining to flatter, cleared agricultural areas in the lower catchment (Appendix E).

Numerous first order tributaries traverse the Modification area, which drain to Wollar Creek. The flow regimes of these tributaries have been modified by historical agricultural activities (e.g. contour banks and small farm dams) (Appendix E).

The main drainage feature relevant to the Modification is Wollar Creek, which flows northwards to the east of the Modification (Figure 19).

Wollar Creek drains a catchment area of about 280 km^2 (to its confluence with Wilpinjong Creek) that extends about 30 km to the south of the Sandy Hollow-Gulgong Railway. Wollar Creek joins the Goulburn River approximately 13 km downstream of the Wilpinjong Creek confluence (Appendix D).

Surface Water Quality

WCPL collects surface water quality data at 29 locations, including creeks upstream and downstream of the existing Wilpinjong Coal Mine, as well as at onsite storages.

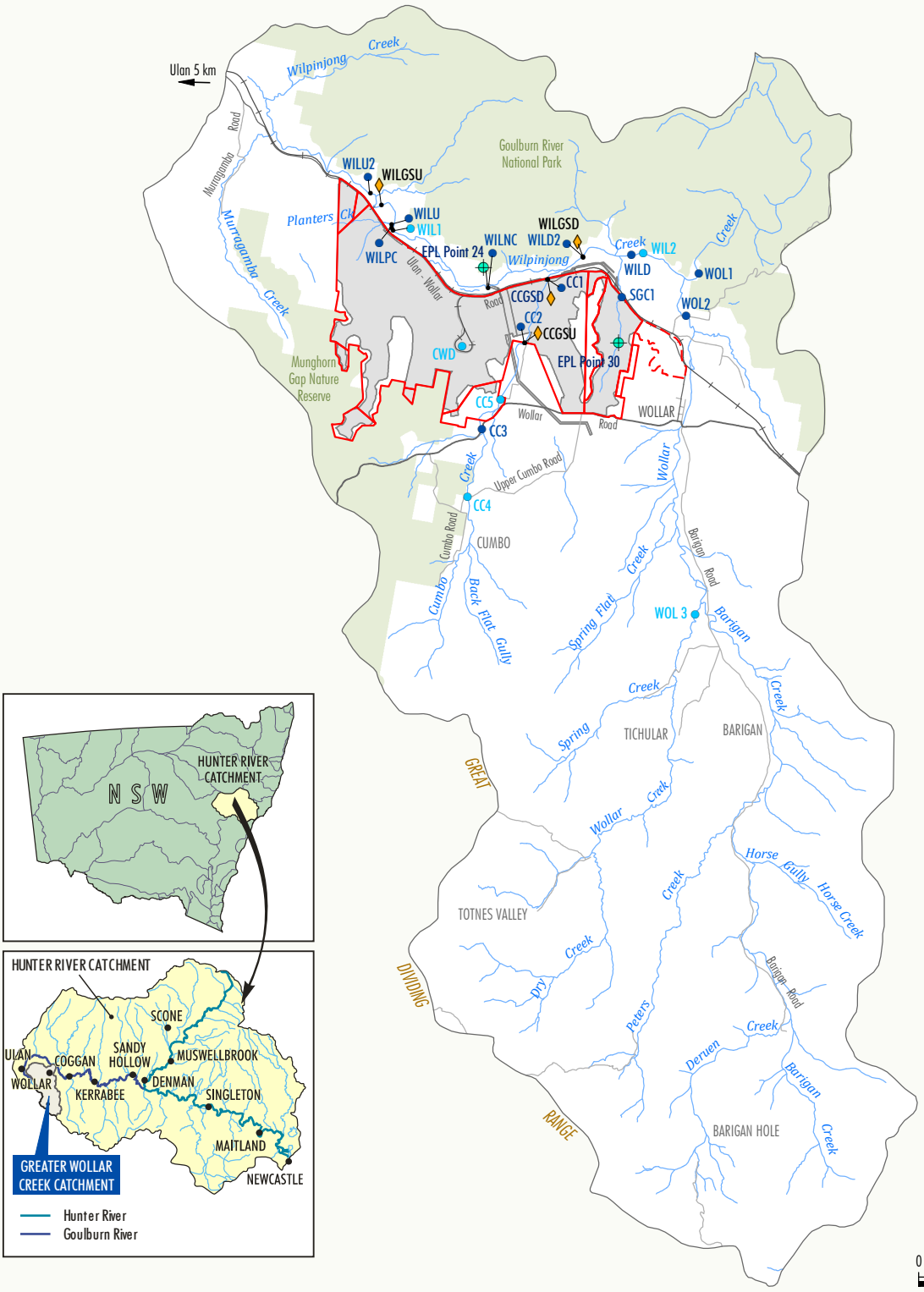
The three surface water monitoring locations relevant to the Modification include the following (Figure 19):

- WIL-D – Wilpinjong Creek, upstream of the Wollar Creek confluence.
- WOL 1 – Wollar Creek, downstream of Wilpinjong Creek confluence, downstream of the Wilpinjong Coal Mine.
- WOL 2 – Wollar Creek, upstream of Wilpinjong Creek confluence.

WOL 2 is upstream of any current mining disturbance and provides a baseline of pre-mining water quality in Wollar Creek for the Modification.

Detailed results of the surface water quality monitoring undertaken by WCPL is further described in Appendix E.

GREATER WOLLAR CREEK CATCHMENT



Source: WCPL (2025); After DIPNR (2003); DPI Water (2015); NSW Spatial Services (2025)

LEGEND

- National Park or Nature Reserve
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area

WCPL Monitoring

- WCPL Gauging Station
- Licensed and Monitoring Point
- Active Surface Water Monitoring Site
- Historical Surface Water Monitoring Site

Peabody

WILPINJONG COAL MINE

Surface Water Monitoring Locations

Figure 19

WIL-22-17 MOD3 _Mod Report_233A

Resource Strategies

Flow Regime

There are three streamflow gauging stations on Wilpinjong Creek and Cumbo Creek in the vicinity of the existing Wilpinjong Coal Mine (Figure 19).

Historically, flows have generally been consistent, although there are two periods of note (Appendix E):

- little to no flows occurred in the period from 2017 to 2019 due to below average rainfall; and
- large flows occurred during 2022 due to above average rainfall.

Further discussion of the historical streamflow data recorded onsite is provided in Appendix E.

Flooding

The existing Wilpinjong Coal Mine is not affected by flooding from downstream watercourses (i.e. Goulburn River).

The existing Wilpinjong Coal Mine has been located such that Wilpinjong Creek and Wollar Creek flooding does not impact on the existing operations up to and including the 0.1% Annual Exceedance Probability (AEP) design flood.

The existing Wilpinjong Coal Mine is located within the Cumbo Creek 0.1% AEP flood extent where Cumbo Creek passes through the Wilpinjong Coal Mine (Appendix E).

Existing Surface Water Management and Monitoring

Surface water management and monitoring at the existing Wilpinjong Coal Mine is currently undertaken in accordance with the Site Water Balance and Surface Water Management Plan, both of which are components of the Water Management Plan.

6.8.2 Environmental Review

Surface Water Flow Regime

Catchment Excision During Mining

During Modification active mining operations, the mine water management system would continue to prevent the contamination of downstream surface water sources by capturing runoff from areas that would have previously flowed to receiving waters.

During the peak operational period, the Modification would result in an incremental excision of a small area reporting to Wollar Creek (approximately 0.7% of catchment area is excised) (Appendix E). This small catchment excision would be a short-term impact of the Modification. Following closure, the Modification would result in the excised catchment area being returned to Wollar Creek due to backfilling of the Pit 8 Extension at the cessation of mining.

The additional peak catchment excision from the Goulburn River (due to the Modification compared to approved Wilpinjong Coal Mine) during operations is approximately 0.02% (Appendix E).

The Modification would not change the total number, location, size or catchment areas of the final voids associated with the Wilpinjong Coal Mine. The Modification would not change the post-mining surface water run-off to the Goulburn River post-mining and the final landform catchment excision for the Wilpinjong Coal Mine would be at around 0.01% of the overall Goulburn River catchment (Appendix E).

Surface Water Flows

The Groundwater Impact Assessment (Appendix D) has modelled the predicted change in baseflow to streams nearby to the mine for the approved Wilpinjong Coal Mine and the Modification (Table 11).

The Modification is predicted to increase the frequency of low flow days (<0.1 ML/day) in Wilpinjong Creek by 1% compared to the approved Wilpinjong Coal Mine and have a negligible change on the frequency of higher Wilpinjong Creek flows. The Modification would therefore have a localised, minor and temporary impact on Wilpinjong Creek flows (compared to the approved Wilpinjong Coal Mine) (Appendix E).

The Modification is predicted to increase the frequency of flow days (<0.1 ML/day) in Wilpinjong Creek by 4% compared to the approved Wilpinjong Coal Mine and have a negligible change on the frequency of higher Wollar Creek flows. The Modification would therefore have a localised, minor and temporary impact on Wollar Creek flows (compared to the approved Wilpinjong Coal Mine) (Appendix E).

Table 11
Maximum Modelled Reduction in Baseflow Contribution Post-mining

Catchment	Approved Wilpinjong Coal Mine (ML/d)	Modified Wilpinjong Coal Mine (ML/d)	Change in baseflow loss due to the Modification (ML/d)
Wilpinjong Creek to Cumbo Creek confluence	0.307	0.321	0.014
Wilpinjong Creek to Wollar Creek confluence	0.144	0.144	<0.001
Wollar Creek to Wilpinjong Creek confluence	0.028	0.066	0.038
Wollar Creek to Goulburn River confluence	0.002	0.002	<0.001
Goulburn River to Hunter River confluence	<0.001	<0.001	<0.001

Source: Appendix D.

The Modification would have negligible post-mining impacts on the baseflow contributed to Wilpinjong, Wollar, Murragamba and Cumbo Creeks (SLR, 2025). Given there is no change to the captured catchment area post-mining, the Modification would therefore have negligible impacts on flow frequency in these streams post-mining (compared to approved conditions) (Appendix E).

As there are no known private surface water users on Wilpinjong Creek or Wollar Creek downstream of the Wilpinjong Coal Mine, the effect of the Modification on private surface water users is predicted to be negligible (Appendix E).

Surface Water Quality

Operations

The Modification could result in adverse water quality impacts due to increased risk of surface water discharges from the water management system to receiving waters caused by:

- the increased surface disturbance areas associated with the modified Wilpinjong Coal Mine; and
- additional groundwater inflow to the additional open cut pit.

Based on water balance modelling, the ongoing operation of the water management system, with the addition of the Pit 8 Extension, is not predicted to result in any external uncontrolled mine water spills (Appendix E).

Discharges from sediment dams would continue for the Modification when rainfall exceeds sediment dam design criteria.

Surface water quality data shows the EC for licensed controlled discharges at the approved Wilpinjong Coal Mine are below average recorded levels in Wilpinjong Creek and background levels in Wollar Creek (Appendix E).

With the implementation of the proposed surface water management system, the Modification would not adversely affect surface water quality in receiving waters (Appendix E).

In addition, the proposed avoidance of direct disturbance of the existing Cumbo Creek corridor that is currently approved to be mined in Pit 4, under Development Consent (SSD-6764) is expected to result in a reduction in potential surface water quality impacts (Appendix E).

Final Landform

Modelling shows that the final void equilibrium water level for Wilpinjong Coal Mine final voids in Pits 2 and 6 would remain below the pit crest of the final voids and are not predicted to be at risk of spilling. As such, the Modification would have no impact on receiving water quality due to spills from the final voids (Appendix E).

Water Balance

The predicted water balance for the Wilpinjong Coal Mine incorporating the Modification is presented in Table 12, as an average of all modelled climatic scenarios.

Table 12
Predicted Wilpinjong Coal Mine Site Water Balance Incorporating the Modification – All Realisations (Averaged)

Description	Stage 1 2025-2026	Stage 2 2027-2029	Stage 3 2030-2031	Stage 4 2032-2033
Inflows (ML/year)				
Direct Rainfall	265	248	255	256
Catchment Runoff	2,480	2,451	2,254	2,083
Groundwater Inflow	922	743	545	276
External Water Supply	0	4	10	19
Total Inflows	**3,668**	**3,446**	**3,065**	**2,633**
Outflows (ML/year)				
Evaporation	569	542	560	563
Water Management System External Overflows	0	0	0	0
Dust Suppression Demand	751	955	775	734
CHPP Demand	1,101	1,020	747	421
MIA loss	100	100	100	100
EPL 12425 Release (reverse osmosis plant release)	1,766	1,059	907	756
Evaporators	58	13	8	4
Clean Water Dam Release	71	20	15	15
Total Outflows	**4,415**	**3,708**	**3,111**	**2,593**
Change in Volume (ML/year)				
Change in Stored Volume	**-747**	**-262**	**-46**	**40**

Source: Appendix E.

Flooding

The Pit 8 Extension open cut extent is located outside of the Wollar Creek flood extent (with the exception of events rarer than 0.1% AEP). Less than 1 ha of the Modification is inundated by flood events up to and including the 0.1% AEP design flood (Appendix E).

During peak operations, the Wollar Creek catchment excision results in a slightly decreased flood extent compared to existing conditions. The final landform returns much of the currently mine captured area to freely drain into Wilpinjong Creek and Wollar Creek, increasing the catchment area compared to existing conditions.

The modified Wilpinjong Coal Mine would have no adverse impact on flooding in Wilpinjong Creek and Wollar Creek and would not result in any flooding impacts to private landholdings downstream of the Wilpinjong Coal Mine (Appendix E).

Final Voids

Consistent with the existing approved Wilpinjong Coal Mine, the final landform after mining of the Modification would include residual voids at Pit 6 and Pit 2.

The approved voids would function as groundwater sinks. Long-term water balance modelling of the final voids shows that they would not overflow and salinity levels would slowly increase over time due to evapoconcentration (Appendix E).

Cumulative Impacts

The Ulan Coal Mine and the Moolarben Coal Mine are upstream of the existing Wilpinjong Coal Mine and the Modification would not result in any material change in the cumulative impacts of the approved Wilpinjong Coal Mine.

Potential Impacts on Matters of National Environmental Significance

Potential Impacts on Hydrological Characteristics

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) provide guidance on potential impacts of an action on hydrological characteristics (Section 6.7.2).

The Modification would result in only minor, localised and temporary impacts to flows in Wilpinjong and Wollar Creeks. Therefore, the Modification is not considered to have a significant impact on surface water hydrology (Appendix E).

Potential Impacts on Water Quality

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) provide guidance on potential impacts of an action on water quality (Section 6.7.2).

The current water management system infrastructure and operating rules have been effective in managing the surface water quality impacts of the approved Wilpinjong Coal Mine (Appendix E).

The Modification would involve a continuation of the existing system with relatively minor augmentations of infrastructure and operating rules to accommodate the Pit 8 Extension.

Surface water quality data shows the EC for licensed controlled discharges at Wilpinjong Coal Mine are well below average recorded levels in Wilpinjong Creek and background levels in Wollar Creek (Appendix E).

Consideration of Cumulative Impacts

The *Significant impact guidelines 1.3: Coal seam gas and large coal mining developments — impacts on water resources* (AG DCCEEW, 2022) require the action to be:

> *… considered with other developments, whether past, present or reasonably foreseeable developments.*

The Wilpinjong Coal Mine is situated in an established mining precinct including the Ulan Mine Complex and Moolarben Coal Complex.

The Ulan Coal Mine and the Moolarben Coal Complex are upstream of the Wilpinjong Coal Mine. The Modification would not result in cumulative impacts that exceed the cumulative impacts of the approved Wilpinjong Coal Mine (Appendix E).

6.8.3 Mitigation Measures

Water Licensing

WCPL would comply with water licensing requirements under the WM Act over the life of the modified Wilpinjong Coal Mine.

Surface water licencing requirements are summarised in Table 10. WCPL holds sufficient WALs and harvestable rights entitlements to account for the predicted surface water take (Appendix E).

Water Management Plan

Water management at the approved Wilpinjong Coal Mine is undertaken in the accordance with the Water Management Plan (including the Site Water Balance and the Surface Water Management Plan) prepared in accordance with Schedule 3, Condition 30 of Development Consent (SSD-6764).

The objectives of the water management system, as outlined in the Water Management Plan, include:

- to protect the integrity of local and regional water sources;
- to operate such that there is no contained water storage overflow;
- to maintain separation between runoff from areas undisturbed by mining and water generated within active mining areas; and
- to provide a reliable source of water to meet mine requirements (e.g. operation water demand and dust suppression).

The Modification represents a continuation of existing operations and the existing water management system as outlined in the Water Management Plan can accommodate the Pit 8 Extension with relatively minor changes to infrastructure and operating rules.

The existing Water Management Plan, including the relevant sub-plans, would be reviewed and revised to incorporate the Modification, subject to the conditions of any modified Development Consent.

6.9 BIODIVERSITY

A BDAR has been prepared for the Modification by Resource Strategies (2025) (Appendix F) in accordance with the BAM (DPIE, 2020).

The "Development Footprint" assessed in the BDAR represents the area of expected additional surface disturbance for the Modification.

6.9.1 Background

Ecological Surveys

Flora and fauna surveys commenced at the Wilpinjong Coal Mine in 2004 for the original environmental approval. Since then, additional large-scale flora and fauna surveys were undertaken for the Wilpinjong Extension Project and as part of ongoing monitoring programmes in mine rehabilitation and offsets.

The flora and fauna survey data for the BDAR was collected by Biodiversity Monitoring Services (BMS) (2025), Bolwarra Environmental Services (Bolwarra) (2025), Hunter Eco (2025), Balance! Environmental (2025) and Capital Ecology Pty Ltd (Capital Ecology) (2025). The methodology for the fauna and flora surveys is provided in Appendix F.

Landscape Features

The Development Footprint is situated on valley floor land currently used for cattle grazing and some minor dry land cropping. The land is undulating with two prominent rocky knolls (with caves, crevices, cliffs and rocks). The Development Footprint also includes some lower slopes of a ridgeline to the south-west. Caves, crevices, cliffs and rocks occur widely in the surrounds due to an abundance of these structures in the local geology.

There are no State or Commonwealth mapped wetlands on, or adjacent to the Modification (Appendix F).

There are no Areas of Outstanding Biodiversity Value listed under the BC Regulation associated with the Modification (Appendix F).

Native Vegetation and Threatened Ecological Communities

Most of the Development Footprint is derived native grassland (DNG) created due to past clearance (124.6 ha [81.1 %]) with areas of woodland (19.6 ha [15.9 %]) and areas devoid of native vegetation (4.4 ha [3 %]).

Seven Plant Community Types (PCTs) were identified of relevance to the Modification (Hunter Eco [2025] [Attachment B of Appendix F]):

- PCT 3760 – *Munghorn Sandstone Grey Gum-Stringybark Forest* (Grey Gum – Narrow-leaved Stringybark Forest);
- PCT 3497 – *Western Hunter Escarpment Slaty Gum Pine Forest* (Slaty Box Forest);
- PCT 3405 – *Central West Flats Inland Grey Box Grassy Forest* (Western Grey Box Woodland);
- PCT 3396 – *Northwest Flats Box Blakely's Red Gum Forest* (Box Gum Grassy Woodland on Valley Floors);
- PCT 3404 – *Central Flats Grassy Box Woodland* (Fuzzy Box Woodland);
- PCT 3403 – *Western Hunter Creekflat Apple Grassy Forest* (Rough-barked Apple Woodland); and
- PCT 3388 – *Central West Valleys White Box Forest* (White Box Grassy Woodland).

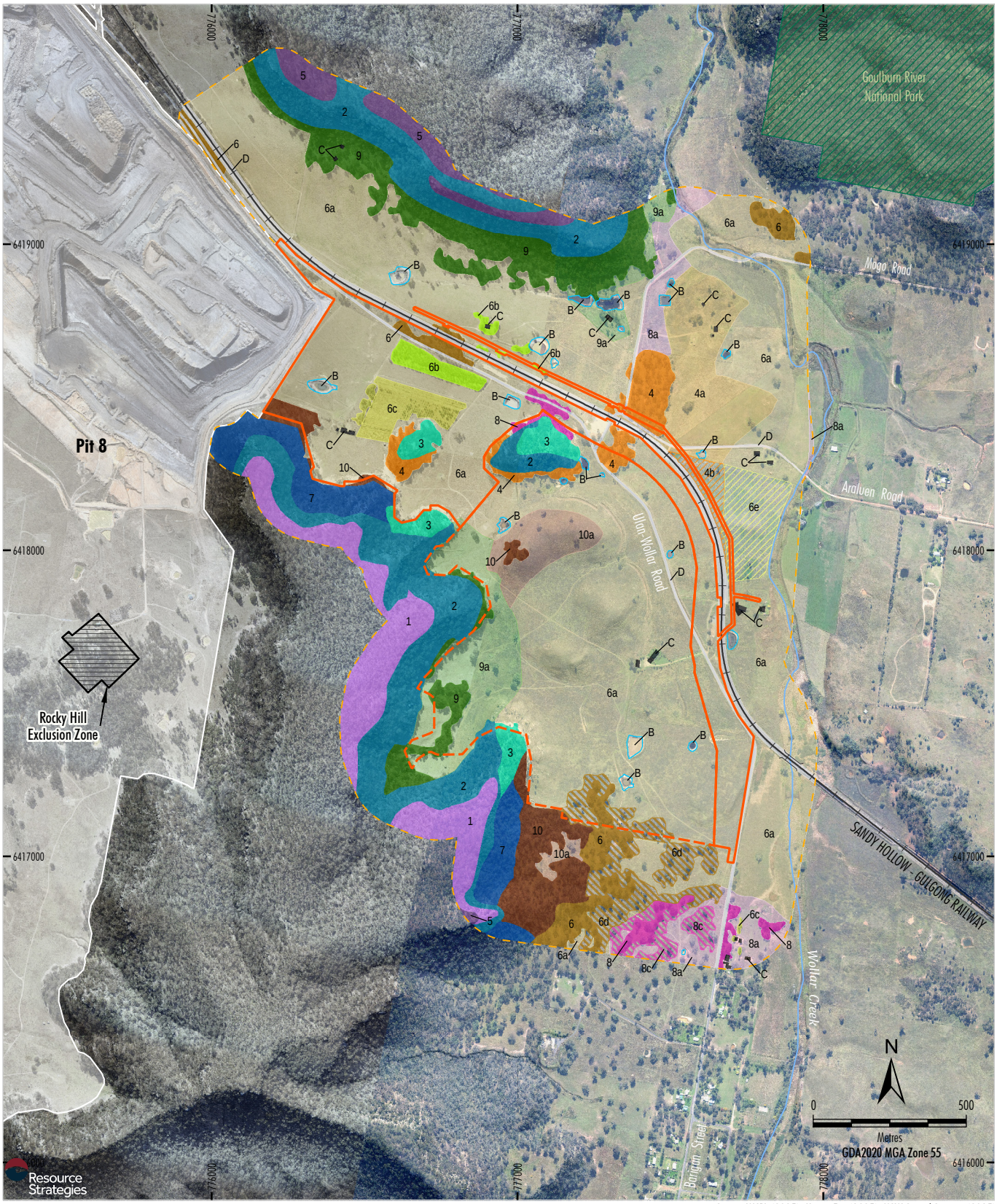
These seven PCTs were divided into 16 vegetation zones based on the condition of the vegetation (Figure 20; Table 13).

Threatened Ecological Communities listed under the BC Act

One threatened ecological community (TEC) listed under the BC Act was identified within the Development Footprint, namely the *White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions Critically Endangered Community* (Box-Gum Woodland critically endangered ecological community [CEEC]) (Table 13).

Threatened Flora Species listed under the BC Act

No threatened flora species listed under the BC Act were identified within the Development Footprint in the extensive targeted surveys by Bolwarra (2025) (Attachment A of Attachment B of Appendix F).



LEGEND

- National Park
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Approved/Existing Surface Development Area
- Mine Exclusion Area
- Subject Land/Development Footprint - Stage 1
- Subject Land/Development Footprint - Stage 2
- Mapping Area (Minimum 200 m Buffer)

Vegetation Mapping

- 1. Narrow-leaved Ironbark Woodland (PCT 3781)
- 2. Grey Gum - Narrow-leaved Stringybark Forest (PCT 3760)
- 3. Slaty Box Forest (PCT 3497)
- 4. Western Grey Box Woodland (PCT 3405)
- 4a. Derived Native Grassland (PCT 3405)
- 4b. Pasture (PCT 3405)
- 5. Red Ironbark Forest (PCT 3780)
- 6. Box-Gum Grassy Woodland on Valley Floors (PCT 3396)
- 6a. Derived Native Grassland (PCT 3396)
- 6b. Plantation River Redgum (PCT 3396)
- 6c. Derived Native Grassland with Exotic Trees (PCT 3396)
- 6d. Regeneration (PCT 3396)
- 6e. Pasture (PCT 3396)
- 7. White Box Shrubby Woodland (PCT 3402)
- 8. Fuzzy Box Woodland (PCT 3404)
- 8a. Derived Native Grassland (PCT 3404)
- 8c. Regeneration (PCT 3404)
- 9. Rough-barked Apple Woodland (PCT 3403)
- 9a. Derived Native Grassland (PCT 3403)
- 10. White Box Grassy Woodland (PCT 3388)
- 10a. Derived Native Grassland (PCT 3388)
- B. Dam
- C. Dwellings and Infrastructure
- D. Rail/Road

Source: WCPL (2025); Hunter Eco (2025); NSW Spatial Services (2025) Orthophoto Mosaic: WCPL (July 2024 - Oct 2022)

Note: Vegetation Communities 8b and A are not present on the figure extent.

Peabody

WILPINJONG COAL MINE

Vegetation Communities

Figure 20

Threatened Fauna Species listed under the BC Act

A number of 'ecosystem credit' fauna species were recorded by BMS (2025) (Attachment C of Appendix F). 'Ecosystem credit' species are species that are assumed to occur based on the type of vegetation present.

Two threatened fauna 'species credit species' were recorded within the Development Footprint, namely, Large-eared Pied Bat (*Chalinobulus dwyeri*) and Eastern Cave Bat (*Vespadelus troughtoni*). These species were also recorded in the wider surrounds.

Two additional threatened fauna 'species credit species' (not recorded within the Development Footprint) have also been assessed, namely, Regent Honeyeater as "*Important Mapped Habitat*" intersects with the proposed Modification and Koala (*Phascolarctos cinereus*) as individuals were recorded within connected wooded vegetation (Appendix F).

Robert Speirs of Capital Ecology (2025) (Attachment F of Appendix F) also completed an Expert Report for the Pink-tailed Legless Lizard (*Aprasia parapulchella*) and determined that the species is likely to be present in a small area of potential habitat in the Development Footprint.

Threatened Ecological Communities listed under the EPBC Act

Three TECs listed under the EPBC Act were identified within the Development Footprint (Table 13), namely:

- *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-Gum Woodland CEEC listed under the EPBC Act);
- *Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia* (Grey Box Grassy Woodlands endangered ecological community [EEC] listed under the EPBC Act); and
- *Central Hunter Valley eucalypt forest and woodland* (Central Hunter Eucalypt CEEC listed under the EPBC Act).

Threatened Flora Species under the EPBC Act

No threatened flora species listed under the EPBC Act were identified within the Development Footprint in the extensive targeted surveys by Bolwarra (2025) (Attachment A of Attachment B of Appendix F).

Threatened Fauna Species under the EPBC Act

BMS (2025) (Attachment C of Appendix F) recorded four EPBC Act listed fauna species within the Development Footprint, these included:

- Brown Treecreeper (eastern subspecies) (*Climacteris picumnus victoriae*);
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*);
- Diamond Firetail (*Stagonopleura guttata*); and
- Large-eared Pied Bat.

BMS (2025) (Attachment C of Appendix F) also recorded four EPBC Act listed species within the surrounds of the Development Footprint, these included:

- South-eastern Glossy Black-Cockatoo (*Calyptorhynchus lathami lathami*);
- White-throated Needletail (*Hirundapus caudacutus*);
- Koala; and
- Corben's Long-eared Bat (*Nyctophilus corbeni*).

The following species were not recorded in the Development Footprint or surrounds but have potential habitat resources present within the Development Footprint (Appendix F).

- Pink-tailed Legless Lizard[10];
- Swift Parrot (*Lathamus discolor*); and
- Regent Honeyeater.

[10] As per Capital Ecology 2025 (Attachment F of Appendix F).

Table 13
Plant Community Types Relevant to the Modification

Vegetation Community		PCT ID	Subject Land/Development Footprint (ha)		
			Stage 1	Stage 2	Total
2	Grey Gum – Narrow-leaved Stringybark Forest	3760	-	2.3	**2.3**
3	Slaty Box Forest[1]	3497	1.2	1.8	**3**
4	Western Grey Box Woodland[2]	3405	2.2	1.5	**3.7**
4a	Derived Native Grassland[2]		0.1	-	**0.1**
4b	Pasture		0.3	-	**0.3**
6	Box-Gum Grassy Woodland on Valley Floors[3,4]	3396	0.9	0.8	**1.7**
6a	Derived Native Grassland[3,4]		41.5	61.6	**103.1**
6b	Plantation River Red Gum[3,4]		2	-	**2**
6c	Derived Native Grassland with Exotic Trees[3,4]		4	-	**4**
6d	Regeneration[3,4]		-	2.3	**2.3**
6e	Pasture[3,4]		0.2	-	**0.2**
8	Fuzzy Box Woodland	3404	0.6	0.4	**1**
9	Rough-barked Apple Woodland	3403	-	2	**2**
9a	Derived Native Grassland		0.1	11.2	**11.3**
10	White Box Grassy Woodland[3,4]	3388	1.1	0.5	**1.6**
10a	Derived Native Grassland[3,4]		-	5.6	**5.6**
Total Woodland^			8	11.6	19.6
Total Derived Native Grassland			46.2	78.4	124.6
Overall Total Native Vegetation			**54.2**	**90**	**144.2**
Cleared Land (Dams, Dwelling, Existing Infrastructure)			2.3	1.6	3.9
Overall Total Subject Land/Development Footprint			**56.5**	**91.6**	**148.1[5]**

^ 'Woodland' includes 6b and 6d.

1 Central Hunter Valley eucalypt forest and woodland CEEC listed under the EPBC Act.

2 Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia EEC listed under the EPBC Act.

3 White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions CEEC listed under the BC Act.

4 White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC listed under the EPBC Act.

5 The area assessed in the Appendix F has been conservatively rounded up to 148.1 ha, assessing a conservative credit calculation.

6.9.2 Environmental Review

The potential direct, indirect, prescribed and cumulative impacts of the Modification on biodiversity have been assessed in the BDAR (Appendix F) and are summarised below.

Impact Avoidance and Minimisation

Development Footprint Refinement

The initial proposed Development Footprint was refined in consideration of the ecological values identified through the assessment of alternate Development Footprints (Appendix F) through:

- revision of the upslope water management approach;
- reduction in the open cut pit extent to reduce impacts to heritage and biodiversity values; and
- reduction of the construction footprint associated with ancillary infrastructure (e.g. low voltage powerlines).

These revisions resulted in a reduction in the clearance of mapped Eastern Cave Bat and Large-eared Pied Bat rocky habitat, and clearance of native vegetation.

These revisions to the Development Footprint have also reduced the impacts on potentially occurring 'Serious and Irreversible Impact (SAII) entities' under the BC Act (Table 14), along with relevant threatened species and TECs listed under the EPBC Act (Table 15) (Appendix F).

Table 14
Reduction of Impacts on BC Act Potential 'SAII Entities'

Matter	Reduction in Disturbance (ha)
Box-Gum Woodland CEEC listed under the BC Act	1.9
Swift Parrot potential foraging habitat	3.99
Regent Honeyeater potential habitat	3.99
Large-eared Pied Bat habitat	2.8 (includes 0.05 ha of mapped rocky bat habitat)
Eastern Cave Bat habitat	2.8 (includes 0.05 ha of mapped rocky bat habitat)

Table 15
Reduction of Impacts on EPBC Listed Communities and Species

Matter	Reduction in Disturbance (ha)
Box-Gum Woodland CEEC listed under the EPBC Act	0.5
Central Hunter Eucalypt CEEC listed under the EPBC Act	0
Grey Box Grassy Woodlands EEC listed under the EPBC Act	0.2
Pink-tailed Legless Lizard	0.1
South-eastern Glossy Black-Cockatoo	2.2
White-throated Needletail	6.1
Brown Treecreeper (eastern subspecies)	2.2
South-eastern Hooded Robin	0.6
Swift Parrot	3.99
Regent Honeyeater	3.99
Diamond Firetail	5.3
Koala	5.3
Corben's Long-eared Bat	1.8
Large-eared Pied Bat	2.8 (includes 0.05 ha of mapped rocky bat habitat)

Mapped Rocky Habitat

To avoid physical damage to mapped rocky bat habitat from indirect impacts, WCPL would undertake blasting in a controlled manner consistent with the recommendations of PSM (2025) (Attachment 8), by:

- conducting inspections of caves and cliff lines as mining advances to assess the local rock mass strength;
- establishing an upper vibration blasting limit based on site-specific evaluation of local rock mass strength;
- maintaining a performance measure of 'no damage that is distinguishable from natural processes'; and
- monitoring to confirm compliance with the performance measures for rocky habitat.

Box-Gum Woodland CEEC Revegetation Areas

WCPL would undertake a programme to regenerate Box-Gum Woodland CEEC in approximately 50 ha of grassland to replace trees that were historically cleared. The proposed Revegetation Areas are directly north of Wilpinjong Creek, between Wilpinjong Creek and the escarpment adjacent to Goulburn River National Park (Figure 21).

Cumbo Creek and Rocky Hill Exclusion Areas

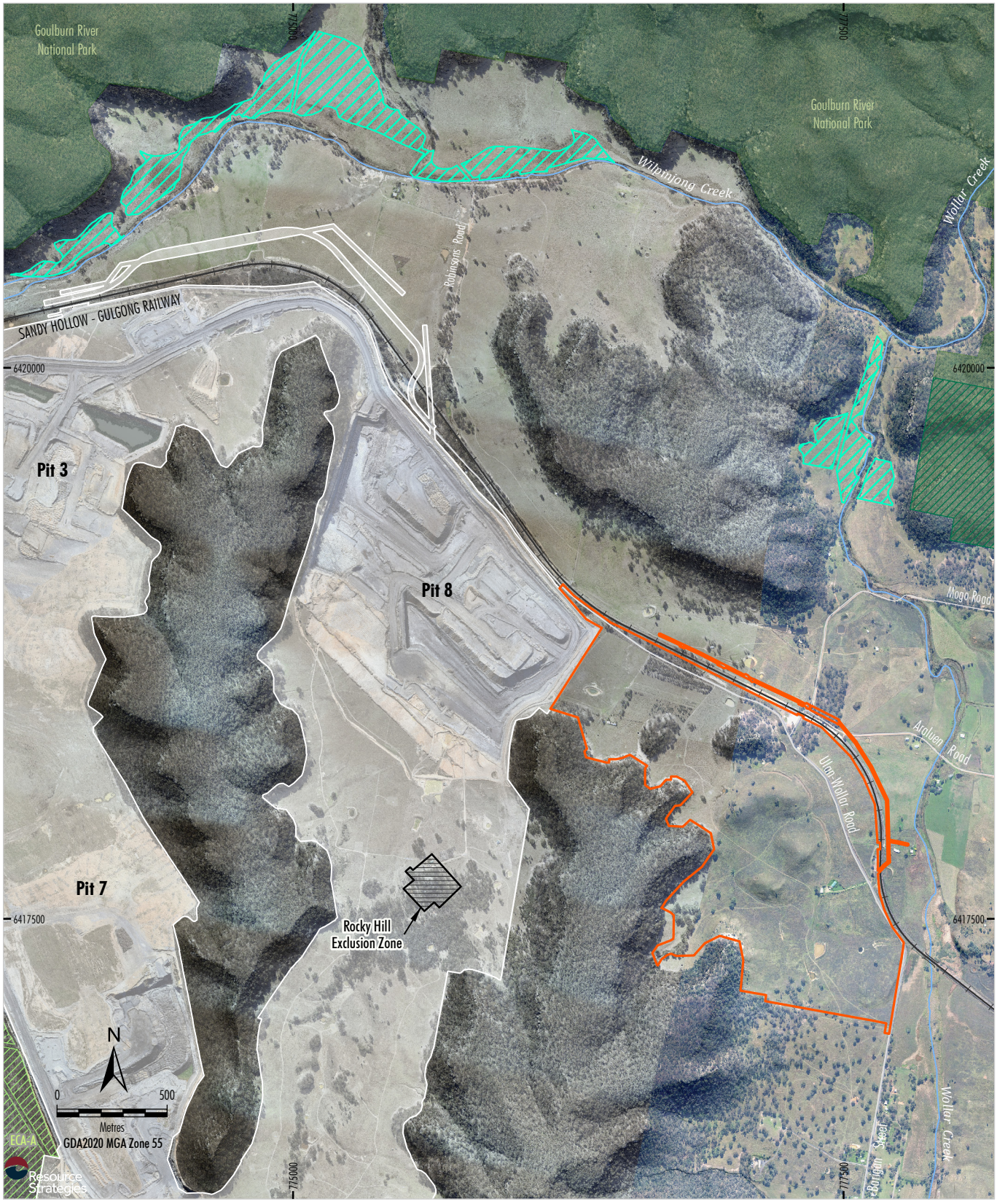
The Modification would include the proposed avoidance of open cut mining of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8, respectively, under Development Consent (SSD-6764) (Figure 4).

WCPL would revegetate 21 ha of Fuzzy Box Woodland and DNG in the Cumbo Creek Exclusion Area/Enhancement Area, providing foraging habitat for woodland birds and bats.

Direct Impacts

The areas of potential native vegetation disturbance associated with the Development Footprint are provided in Table 13. Ecosystem credits for the Modification associated with this proposed disturbance are outlined in Table 16.

Disturbance areas associated with the Modification would be progressively rehabilitated and revegetated once disturbance areas are no longer required.



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Source: WCPL (2025); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Oct 2022)

LEGEND

- National Park
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Approved/Existing Surface Development Area
- Mine Exclusion Area
- Subject Land/Development Footprint
- Box-Gum Woodland CEEC Proposed Revegetation Area

Peabody

WILPINJONG COAL MINE

Box-Gum Woodland CEEC Proposed Revegetation Areas

Figure 21

Table 16
Modification Ecosystem Credit Calculations

Vegetation Community		PCT ID	Ecosystem Credit Obligation		
			Stage 1	Stage 2	Total
2	Grey Gum – Narrow-leaved Stringybark Forest	3760	-	64	**64**
3	Slaty Box Forest[1]	3497	44	67	**111**
4	Western Grey Box Woodland[2]	3405	71	48	**119**
4a	Derived Native Grassland[2]	3405	1	-	**1**
4b	Pasture [2]	3405	0	-	**0**
6	Box-Gum Grassy Woodland on Valley Floor[3,4]	3396	46	41	**87**
6a	Derived Native Grassland[3,4]	3396	819	1,216	**2,035**
6b	Plantation River Red Gum[3,4]	3396	64	-	**64**
6c	Derived Native Grassland with Exotic Trees[3,4]	3396	81	-	**81**
6d	Regeneration[3,4]	3396	-	68	**68**
6e	Pasture[3,4]	3396	3	-	**3**
8	Fuzzy Box Woodland	3404	23	15	**38**
9	Rough-barked Apple Woodland	3403	-	64	**64**
9a	Derived Native Grassland	3403	1	149	**150**
10	White Box Grassy Woodland[3,4]	3388	56	26	**82**
10a	Derived Native Grassland[3,4]	3388	-	124	**124**
		Total	**1,209**	**1,882**	**3,091**

Source: Appendix F.

1 Central Hunter Valley eucalypt forest and woodland CEEC listed under the EPBC Act.

2 Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia EEC listed under the EPBC Act.

3 White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions CEEC listed under the BC Act.

4 White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC listed under the EPBC Act.

Indirect Impacts

Potential indirect impacts on flora and fauna habitat and vegetation has been assessed in the BDAR (Appendix F).

The Modification is unlikely to incur significant indirect impacts on surrounding habitat (Appendix F). The Modification is unlikely to increase the risk of weeds and pest species given the control programs that are implemented by Peabody at the Wilpinjong Coal Mine (Appendix F).

Threatened Species

Fauna species credit requirements for the Modification have been generated for the Large-eared Pied Bat, Eastern Cave Bat, Koala, Regent Honeyeater and Pink-tailed Legless Lizard (Table 17).

Prescribed Biodiversity Impacts

Of the prescribed biodiversity impacts listed within the BDAR (Appendix F), two rocky knolls providing potential breeding habitat for the Large-eared Pied Bat and Eastern Cave Bat would be impacted.

The Modification would reduce the current level of habitat connectivity via land clearance, however rehabilitation and revegetation is proposed to regain lost habitat connectivity (Appendix F).

Hunter Eco (2025) (Attachment B of Appendix F) identified possible facultative groundwater dependent vegetation communities; however no adverse impacts are likely to occur due to groundwater drawdown from the Modification.

Table 17
Modification Species Credit Calculations

Scientific Name	Common Name	Species Credit Obligation		
		Stage 1	Stage 2	Total
Aprasia parapulchella	Pink-tailed Legless Lizard	0	12	**12**
Anthochaera phrygia	Regent Honeyeater	457	717	**1,174**
Phascolarctos cinereus	Koala	917	1,622	**2,539**
Chalinolobus dwyeri	Large-eared Pied Bat	387	568	**955**
Vespadelus troughtoni	Eastern Cave Bat	387	568	**955**

Source: Appendix F.

Serious and Irreversible Impacts

Under the BC Act, there is a small list of threatened species and communities that are considered by the NSW Government to be at risk of a SAII (DPIE, 2020). These species/ecological communities are described as potential SAII entities.

Five 'potential SAII entities' are assessed in the BDAR[11] (Appendix F);

- Large-eared Pied Bat;
- Eastern Cave Bat;
- Regent Honeyeater;
- Swift Parrot; and
- Box-Gum Woodland CEEC listed under the BC Act.

BMS (Attachment 7) provided an assessment of whether an SAII could occur for the Large-eared Pied Bat and Eastern Cave Bat. The key findings from this assessment include the following:

- Large-eared Pied Bat
  - There are records of the Large-eared Pied Bat in 65 National Parks, Nature Reserves and Conservation Areas as well as 13 State Forests in NSW.
  - The Modification would not reduce the extent of occurrence or area of occupancy of the species.
  - Habitat in surrounds is not limited – the amount of cliffline habitat available in the surrounding landscape suggests potential habitat (roosting and breeding) is abundant in the local area.
  - Other breeding sites have been confirmed – three maternity roosts for Large-eared Pied bat were identified in the local area outside of the Development Footprint.
- Eastern Cave Bat
  - There are records of the Eastern Cave Bat in 35 National Parks, Nature Reserves and Conservation Areas as well as 12 State Forests in NSW.
  - The Modification would not reduce the extent of occurrence or area of occupancy of the species.
  - Habitat in surrounds is not limited – the amount of cliffline habitat available in the surrounding landscape suggests potential habitat (roosting and breeding) is abundant in the local area.
  - Other breeding sites have been confirmed – two maternity roosts for the Eastern Cave Bat were identified in the local area outside of the Development Footprint.

BMS (Attachment 7) concluded that the Modification would not contribute significantly to the risk of the Large-eared Pied Bat and Eastern Cave bat becoming extinct in NSW. Therefore, the Modification's impacts to the Large-eared Pied Bat and Eastern Cave Bat should not be regarded as SAII.

Stephen Debus (Attachment 7) provided an assessment of whether an SAII could occur on the Regent Honeyeater and Swift Parrot. The key findings from this assessment include the following:

- Regent Honeyeater
  - No past or current records of the Regent Honeyeater persist inside the Modification after targeted surveys.

[11] Of which three were recorded within the Development Footprint; Large-eared Pied Bat, Eastern Cave Bat and Box-Gum Woodland CEEC listed under the BC Act.

- The Modification does not intersect known breeding locations for the Regent Honeyeater.
- The Modification would not result in a decline in the extent of occurrence and area of occupancy of the Regent Honeyeater.

- Swift Parrot
  - Extensive targeted surveys did not record any Swift Parrots within or surrounding the Modification.
  - The Modification is not recognised as a breeding location for the species, as the species breeds in Tasmania.
  - No "*mapped important habitat*" intersects with the Modification.
  - The Modification would not result in a decline in the extent of occurrence or area of occupancy of the Swift Parrot.

Stephen Debus (Attachment 7) concluded that the Modification would not contribute significantly to the risk of the Regent Honeyeater and Swift Parrot becoming extinct in NSW. Therefore, the Modification's impacts to the Regent Honeyeater and Swift Parrot should not be regarded as SAII.

Hunter Eco (Attachment 7) provided assessment of whether an SAII could occur on the Box-Gum Woodland CEEC listed under the BC Act. The key findings from this assessment include the following:

- The ecological community has been shown to respond to measures to improve its habitat and vegetation integrity.
- The Box-Gum Woodland CEEC listed under the BC Act to be cleared is mostly DNG (90.2%), pasture (0.2%) and DNG with exotic trees (3.3%), with a smaller portion of woodland (2.7 %), natural regeneration (1.9%) and plantation (1.7%).
- The Modification would not reduce the extent of occurrence or area of occupancy of the Box-Gum Woodland CEEC.
- The Area of Occupancy would not be reduced as a result of the Modification, which would not place Box-Gum Woodland CEEC at risk of extinction.

Hunter Eco (Attachment 7) concluded that the Modification would not contribute significantly to the risk of the Box-Gum Woodland CEEC listed under the BC Act becoming extinct in NSW.

Therefore, the Modification's impacts on Box-Gum Woodland CEEC listed under the BC Act should not be regarded as SAII.

Groundwater Dependent Ecosystems

Hunter Eco (Attachment B of Appendix F) considered the predicted depth to groundwater and post-mining drawdown at the identified potential facultative groundwater dependent vegetation. Hunter Eco (2025) concluded that the Modification would not have a detrimental effect on these potential GDEs (Appendix F).

Cumulative Impacts

The BDAR also addresses the potential cumulative impacts associated with the Modification (Appendix F).

The BDAR sets out information relating to the historic land clearing in the Mudgee/Wollar area, along with potential interactions with the Moolarben Coal Complex, Ulan Mine Complex, Bowdens Silver Project and theTransmission Project (Appendix F).

Commonwealth Assessment

The Modification would adversely impact approximately 141 ha of EPBC Act listed native vegetation (approximately 16.4 ha is woodland/forest, and 124.6 ha is DNG) (Appendix F). The impacts would be offset in accordance with the NSW Biodiversity Offsets Scheme (Table 18).

Table 18
Application of the BAM to EPBC Act Listed Threatened Species and Communities

Species/Communities	Credit Type	Credits
Box-Gum Woodland CEEC listed under the EPBC Act	Ecosystem	**237**
Central Hunter Eucalypt CEEC listed under the EPBC Act	Ecosystem	**111**
Grey Box Grassy Woodlands EEC listed under the EPBC Act	Ecosystem	**120**
Pink-tailed Legless Lizard	Species	**12**
South-eastern Glossy Black Cockatoo	Ecosystem	**594**
White-throated Needletail	Ecosystem	**3,120**
Brown Treecreeper (eastern subspecies)	Ecosystem	**1,912**
South-eastern Hooded Robin	Ecosystem	**428**
Swift Parrot	Ecosystem	**1,030**
Regent Honeyeater	Species	**1,174**
Diamond Firetail	Ecosystem	**3,117**
Koala	Species	**2,539**
Corben's Long-eared Bat	Ecosystem	**530**
Large-eared Pied Bat	Species	**955**

6.9.3 Mitigation Measures

Existing impact avoidance and mitigation measures for the Wilpinjong Coal Mine would continue to be implemented for the Modification. Measures to mitigate impacts from the Modification are outlined in Table 19.

WCPL would implement other measures that are relevant to reducing potential indirect impacts on biodiversity, such as managing potential noise, air quality, groundwater and surface water impacts, as described in Sections 6.4, 6.6, 6.7 and 6.8.

The approved Biodiversity Management Plan would be updated to include the Modification. As a component of the Modification, WCPL would prepare and implement a Koala Plan of Management as an addendum to the Biodiversity Management Plan. The Koala Plan of Management would be prepared by suitably qualified and experienced person/s.

The Modification disturbance areas would be progressively rehabilitated throughout the life of the mine. The approved Rehabilitation Strategy and Rehabilitation Management Plan would also be updated to include the Modification.

Bat Habitat Creation Programme

WCPL has committed to implementing a programme to construct long-term bat roost structures, replicating known Large-eared Pied Bat and Eastern Cave Bat maternity roost features within the Wilpinjong Coal Mine footprint (Appendix F).

The programme was prepared in consultation with Greg Ford of Balance! Environmental, an approved species expert for the Eastern Cave Bat and Large-eared Pied Bat, and Andrew Lothian of BMS, an ecologist with 16 years' experience in surveying and handling the Eastern Cave Bat and Large-eared Pied Bat.

The habitat creation programme was designed based on:

- background literature review on the two bat species;
- background literature review on other artificial subterranean bat roosts in Australia;
- field surveys to identify local maternity caves; and
- 3D scanning of local maternity caves.

The two proposed designs (artificial roosts), shown in Figures 22 and 23, would mimic known the maternity roost features of the Large-eared Pied Bat and Eastern Cave Bat, including depth, dimensions and surface finish of ceilings and walls (microhabitat features) (Appendix F).

The two proposed designs are described in detail in Appendix F and would include a simpler design located against a mine highwall, and a more complex design to be located in backfilled open cut areas. Key components of the designs include buried concrete structures, smooth walls to prevent access by predators and a second exit for personnel safety.

A variety of ceiling indentations (roosting features) would be provided (different depths, shapes, sizes and honeycomb microhabitat) using methods such as:

- 3D printing of ceiling indentations (based on the 3D LiDAR scans);
- shotcrete wet sprayed concrete;
- fake rock façade with a concrete plaster render;
- pre-cast concrete; or
- carved Hebel bolted to the roof.

Greg Ford has prepared a peer review letter (Balance! Environmental, 2025 [Attachment G of Appendix F]), in which he concluded:

> *…. the Bat Habitat Creation Programme presents a well-considered approach, based on thorough background research, and will likely provide valuable additional roosting habitats for Large-eared Pied Bat and Eastern Cave Bat populations in the Wilpinjong Coal Mine area. With the implementation of a detailed monitoring program following installation, WCPL will be able to refine roost design features, demonstrate the significant positive impact of providing artificial roosting habitat for these species, and encourage future adoption of such programmes by other operators.*

Three of each design (Figures 22 and 23) would be constructed within the mine rehabilitation (i.e. six bat roost structures in total). Two bat roost structures (one of each design) would be constructed in the first year (within 12 months of State and Commonwealth approval of the Modification) and within 24 months the remainder of the roost structures would be constructed incorporating any learnings from the first installations (Appendix F).

Table 19
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
General			
Biodiversity Measure 1 – Site Induction/Access	Consistent with the Biodiversity Management Plan: *All personnel and contractors at the Wilpinjong Coal Mine undergo General Induction Training before being allowed to commence work at the Wilpinjong Coal Mine. This includes specific training in flora and fauna risks, the location of ECAs and Regeneration Areas, land clearing procedures (including Ground Disturbance Permits), cultural heritage and rehabilitation.* Inductions into the mine site would be augmented to include education on Koalas, likely locations they could be found, speed limits on site, site protocols and Koala reporting. Access to active operational/construction areas would only be allowed for authorised personnel and machinery thereby minimising impacts associated with human access.	During operation	Ongoing
Clearing of Native Vegetation and Habitat			
Biodiversity Measure 2 – Clearing Protocols	Staff and personnel involved in vegetation clearance works would be made aware of clearing (disturbance) limits in the relevant Modification approval documentation and of restricted access areas to prevent inadvertent damage. A Ground Disturbance Permit will be used to manage the clearance process and to document all licensing, safety and management requirements. Clearing would, where practicable, be restricted to late summer and autumn to avoid the spring nesting period and winter bat hibernation period. In regard to clearance of rocky bat habitat, clearance would be restricted to between March and April to avoid bat hibernation and breeding.	Prior and during vegetation clearance	Ongoing during vegetation clearance

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Clearing of Native Vegetation and Habitat (Continued)			
Biodiversity Measure 3 – Pre-clearance Surveys and Clearing Activities	Pre-clearance fauna surveys would be undertaken by a suitably trained and qualified ecologist or wildlife handler to identify trees with suspected active nests and tree hollows. Options to minimise harm to fauna by modifying the clearance method would be evaluated by the suitably trained and qualified ecologist or wildlife handler (e.g. non-habitat trees/understorey vegetation would be cleared [before habitat trees with suspected tree hollows] to give fauna an opportunity to relocate, shaking or nudging tree trunks to evacuate mobile fauna, retaining trees with suspected active nests until the nest is disused or lowering trees with suspected tree hollows being used by fauna with the hollow facing upwards to enable fauna to exit). In regard to clearance of rocky bat habitat (the knolls), the suitably trained and qualified ecologist or wildlife handler would evaluate options (e.g. waiting for bats to exit roosts at night and using deterrents/covers to prevent bats from re-entering them prior to clearance, or collection of individual bats for relocation to alternative/artificial roosts). A suitably trained and qualified ecologist or wildlife handler would be present during the clearing of trees/bat rocky habitat to manage animals that may be encountered during land clearing. Management of fauna may allow the animal to relocate by itself, relocating the individual to adjacent habitat or treating injuries (the nearest veterinary clinic, wildlife carer and/or appropriately trained ecologist contact information would be on hand in case any fauna are injured). In the unlikely event that a Koala is identified in a tree marked to be cleared, the tree would be retained until the Koala moves on its own accord. Management of the Koala would be in consideration of the *Code of Practice for Injured, Sick and Orphaned Koalas* prepared by OEH (2018).	Prior and during vegetation clearance	Ongoing during vegetation clearance
Biodiversity Measure 4 – Mine Rehabilitation and Revegetation	Revegetation of Modification rehabilitation areas would include the use of plant species characteristic of the surrounding vegetation to produce a net increase in woodland vegetation. Revegetation would aim to increase the continuity of woodland vegetation by establishing links between extant woodland vegetation.	Progressive during operations until completion of mine rehabilitation	Ongoing

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Clearing of Native Vegetation and Habitat (Continued)			
Biodiversity Measure 5 – Collection and Propagation of Seed for Rehabilitation Works	Seed for mine site rehabilitation is sourced commercially and supplemented with seed collected at site. Consistent with the Biodiversity Management Plan: *Where available, the collection and propagation of locally sourced native seed will be carried out opportunistically by a suitably qualified, licensed provider, who is trained in plant identification, seed collection, data recording, seed storage techniques and propagation.* A seed inventory would be maintained which records the amount of seed collected, species type and treatment and propagation specifications.	Prior and during vegetation clearance and other times as required	At least 12 monthly
Threatened Ecological Communities - Box-Gum Woodland CEEC			
Biodiversity Measure 6 – Mine Site Rehabilitation (Botanical Design)	A suitably qualified ecologist would be engaged to prepare a botanical design for the Modification rehabilitation. This would include: 1. Mapping locations (zones) for target PCTs (considering a range of factors such as topsoil source, aspect, slope, elevation); 2. Development of a list of target flora species (based on local plot data) for each zone, including a variety of overstorey, understorey, and groundcover flora species; and 3. The target flora species would include species characteristic of Box-Gum Woodland CEEC, South-eastern Glossy Black-Cockatoo, Regent Honeyeater and Koala food trees.	During preparation of the revised Rehabilitation Strategy	Once

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Threatened Ecological Communities - Box-Gum Woodland CEEC (Continued)			
Biodiversity Measure 7 – Mine Site Rehabilitation (Tube Stock)	Use of tube stock (established seedlings/plants) in the Modification rehabilitation (for overstorey and understorey flora species) to fast-track revegetation, including species characteristic of Box-Gum Woodland CEEC. Consistent with the Biodiversity Management Plan: *Tubestock planting will be utilised where it is considered natural regeneration of native species is unlikely to occur in a timely manner and to establish a staging in plant ages. Tubestock will be propagated at a nursery using site harvested and local seed where possible. 'Hiko' cells (or similar) will be used as this method results in good root structure and allows for large numbers of seedlings to be planted in short time periods. Alternatively, 50 mm forestry tubes may be used in some circumstances. Forestry tubes provide the advantage of a more mature seedling than 'Hiko' cells, and this will be beneficial when planting within areas where weed density is a concern. 'Hiko' cells will be utilised within areas where weed density is currently low.*	During mine rehabilitation until completion of mine rehabilitation	Ongoing
Threatened Species – Woodland Birds and Tree-dwelling Bats			
Biodiversity Measure 8 – Mine Site Rehabilitation (Mistletoe Seeding)	Seeding of Mistletoe in the mine rehabilitation to provide a nectar source for threatened woodland birds. Consistent with the *Mistletoe Propagation in Eastern Australia - A manual for landholders wanting to restore keystone species and increase biodiversity and landscape health* (Birdlife Australia, 2024), ripe fruit would be collected from a host and transferred to suitable trees located in the rehabilitation areas where sufficient vegetation structure has been established to accommodate the Mistletoe.	During mine rehabilitation until completion of mine rehabilitation	Ongoing
Biodiversity Measure 9 – Mine Site Rehabilitation (Stag Placement)	Placement of stags in the mine rehabilitation to provide hollows and perch sites for threatened woodland birds. Consistent with the Biodiversity Management Plan: *Fallen logs, felled trees and other habitat features (e.g. rocks, stag trees) will be used to improve habitat values in rehabilitation areas. Materials (e.g. stags) will be salvaged during the clearing stage of development and used in the appropriate management domains.*	During mine rehabilitation	Annually during landform establishment

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Threatened Species – Woodland Birds and Tree-dwelling Bats (Continued)			
Biodiversity Measure 10 – Mine Site Rehabilitation (Nest Boxes)	Consistent with the Biodiversity Management Plan: *Nest boxes suitable for woodland birds and microchiropteran bats will be installed in suitable trees located in the regeneration/rehabilitation areas where sufficient vegetation structure has been established to accommodate these habitat features. Nest boxes would be durable and all boxes would be monitored annually and maintained as required. The rate at which these nest boxes will be installed will be determined through consultation with WCPL's ecologists.* The following threatened species recorded within the Development Footprint reside in tree hollows: the Little Lorikeet (*Parvipsitta pusilla*), Brown Treecreeper (eastern subspecies), Yellow-bellied Sheathtail-bat (*Saccolaimus flaviventris*), Corben's Long-eared Bat and Greater Broad-nosed Bat (*Scoteanax rueppellii*). Nest box design would be based on a combination of pre-fabricated nest boxes (nest boxes purchased ready-made), salvaged hollows (hollow limbs salvaged during vegetation clearance at the mine) and chainsaw-carved cavities (cavities carved in sufficiently mature trees, >40cm trunk diameter [BCT, 2020]).	Commencement after sufficiently mature trees have been established	Annually for 5 years
Threatened Species – Cave-dwelling Bats			
Biodiversity Measure 11 – Bat Habitat Creation Programme	A Bat Habitat Creation Programme for the creation of roosting habitat for cave-dwelling bats (Section 8.4 of Appendix E).	Commences within 12 months of State and Commonwealth approval of the Modification	N/A

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

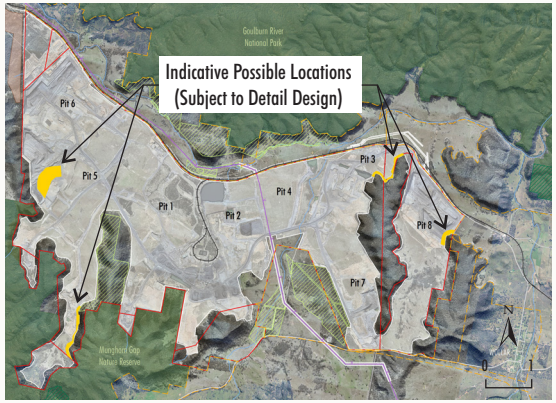
Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Noise and Blasting			
Biodiversity Measure 12– Noise and Blasting Measures	WCPL would undertake blasting in a controlled manner consistent with the recommendations of PSM (2025), by: • conducting inspections of caves and cliff lines as mining advances to assess the local rock mass strength; • establishing an upper blasting vibration limit based on site specific evaluation of local rock mass strength; • maintaining a performance measure of 'no damage that is distinguishable from natural processes'; and • monitoring to confirm no physical damage to rocky habitat. To minimise the risk of physical damage to mapped rocky bat habitat from indirect impacts, WCPL would establish an appropriate upper blasting vibration limit, based on local rock strength conditions. PSM (2025) describe various different blast management techniques that may be used such as optimising the blast design or changing the blast technique.	During operation	Ongoing
Artificial Lighting			
Biodiversity Measure 13 – Artificial Lighting	Night-lighting of the Modification surface facilities would be kept to a practicable minimum and would generally be in working areas only. Whilst ensuring that operational safety is not compromised, light emissions from the Wilpinjong Coal Mine would be minimised using the principles of best practice lighting design (AG DCCEEW, 2023): *1) Start with natural darkness and only add light for specific purposes.* *2) Use adaptive light controls to manage light timing, intensity and colour.* *3) Light only the object or area intended – keep lights close to the ground, directed, and shielded to avoid light spill.* *4) Use the lowest intensity lighting appropriate for the task.* *5) Use non-reflective, dark-coloured surfaces.* *6) Use lights with reduced or filtered blue, violet and ultraviolet wavelengths.*	During operation	Ongoing

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Erosion			
Biodiversity Measure 14 – Sediment and Erosion Controls	Consistent with the Biodiversity Management Plan: *A Ground Disturbance Permit is required to be completed prior to the commencement of new projects or activities requiring ground disturbance within the Wilpinjong Coal Mine site. Where required, a site-specific erosion and sediment control plan is required to be developed as part of this process.* Staged clearing, progressive rehabilitation and management of tracks and roads (including the use of cross-banks, drains, culverts, and sediment dams) would be implemented in order to minimise sediment-laden scouring, runoff, and subsequent deposition.	During operation	Ongoing
Weeds			
Biodiversity Measure 15 – Weed Hygiene Protocol	Prior to clearing, all plant equipment to be used on the clearing program would be inspected and recommended for wash down (in designated wash down areas) as required to ensure weed material from off-site locations do not establish or spread into native vegetation at the mine. Machinery involved in weed management also to be washed down prior to removal from site to prevent weeds from spreading into off site areas.	During operation until completion of mine rehabilitation	Ongoing
Biodiversity Measure 16 – Weed Control	WCPL's weed management program involves regular inspections throughout the year of the mine rehabilitation areas and Regeneration Areas, consistent with the Biodiversity Management Plan. *All plants are regulated under the NSW Biosecurity Act 2015 with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant has a duty to prevent, eliminate or minimise the risk, so far as is reasonably practicable. Qualified and experienced weed management personnel would map the locations of weeds requiring control, identifying species, cover and extent. Mechanical removal of identified weeds and/or the application of approved herbicides. Follow-up site inspections to determine the effectiveness of the eradication programmes.*	During operation until completion of mine rehabilitation	12 monthly

Table 19 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

Mitigation Measure/Action	Method/Technique	Timing (and Duration)	Frequency
Pest Animals			
Biodiversity Measure 17 – Pest Animal Management	Pest animals are regulated under the NSW *Biosecurity Act 2015* with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Consistent with the Biodiversity Management Plan: *Where deemed appropriate, baiting programs will be supplemented by open-range shooting and ripping of rabbit warrens with a bulldozer or similar piece of equipment where suitable access can be achieved whilst avoiding impacts to native vegetation. Feral predators such as dogs, cats, foxes will also be targeted by 1080 poisoning, trapping and shooting. Annual fauna monitoring will be conducted by appropriately trained and experienced personnel in order to determine if feral animal controls are adequate.*	During operation until completion of mine rehabilitation	12 monthly
Bushfire Risk			
Biodiversity Measure 18 – Bushfire Prevention and Control Measures	Development Consent (SSD-6764) requires WCPL to ensure that the Wilpinjong Coal Mine is suitably equipped to respond to any fires on site; and assist the NSW Rural Fire Service and emergency services as much as practicable if there is a fire in the vicinity of the site.	During operation until completion of mine rehabilitation	Ongoing



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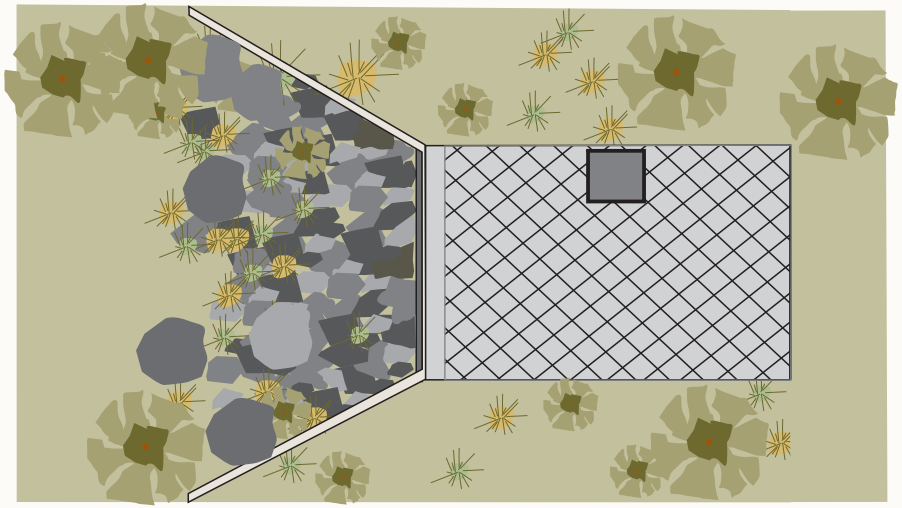
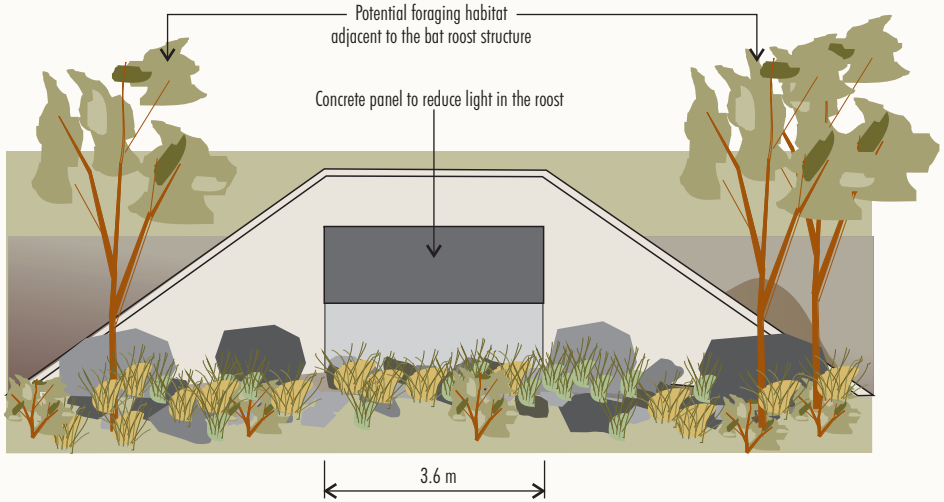
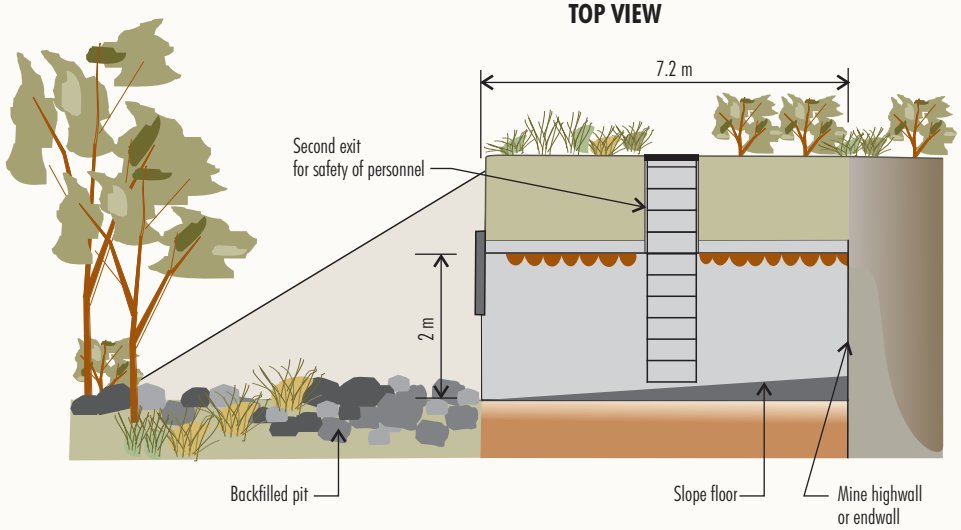


TOP VIEW



FRONT VIEW



SIDE VIEW

Dimensions are Approximate

Not to Scale

Resource Strategies

WIL-22-17 MOD3 _Mod Report _010A

LEGEND
Indicative Ceiling Indentation Design *

* **Variety of Ceiling Indentations Options:**

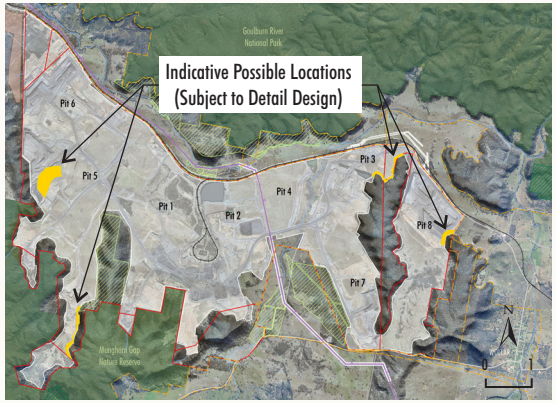
- 3D printing of ceiling indentations
- Shotcrete wet sprayed concrete
- Fake rock facade with a concrete render
- Pre-cast concrete
- Carved Hebel bolted to concrete

Peabody

WILPINJONG COAL MINE

Bat Roost
Conceptual Design 1

Figure 22



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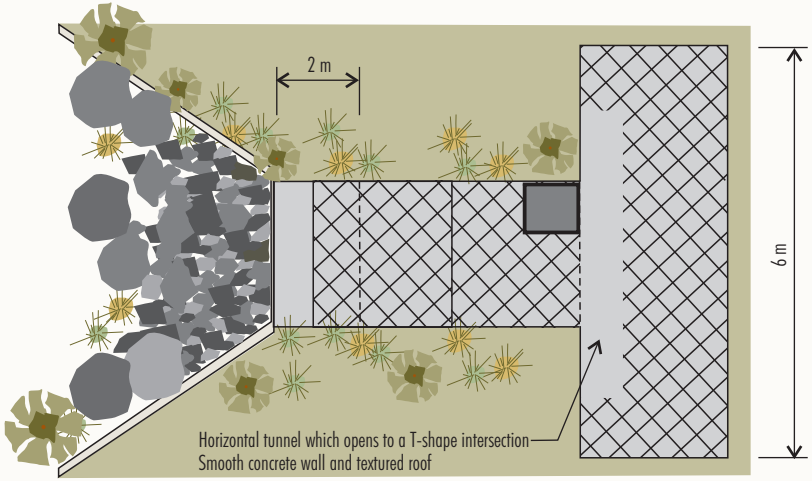
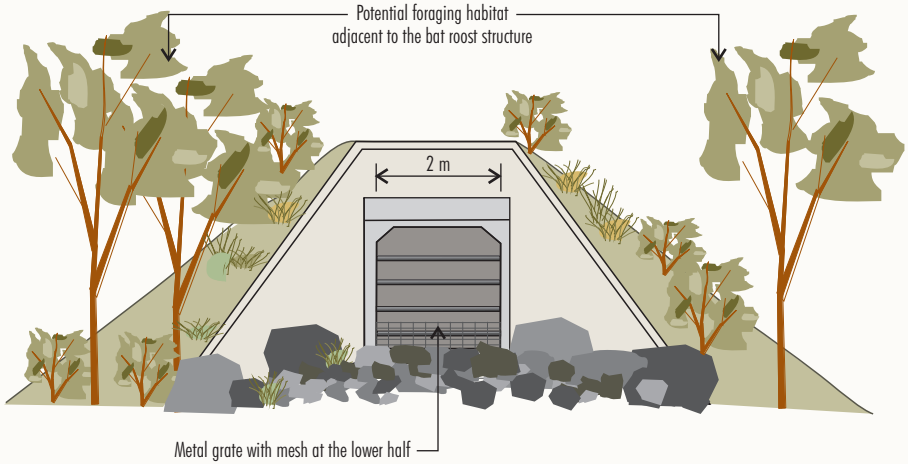
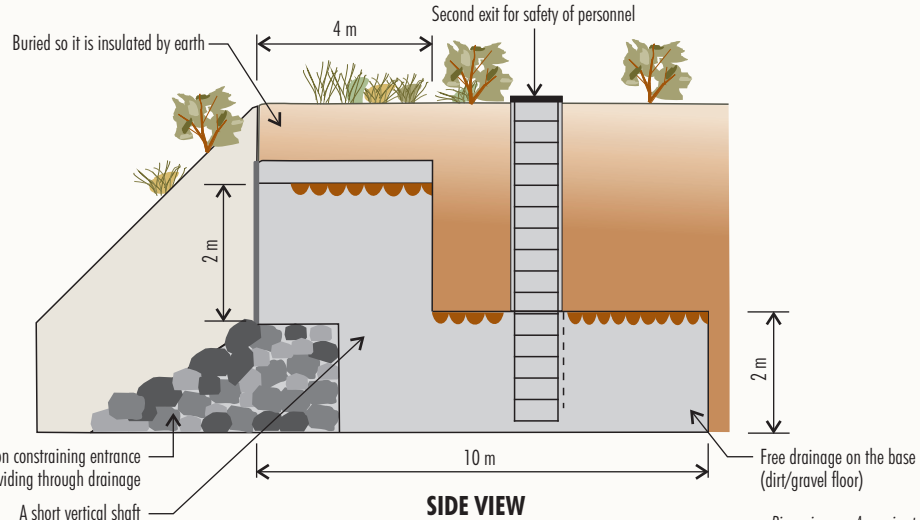


TOP VIEW



FRONT VIEW



SIDE VIEW

Dimensions are Approximate

Not to Scale

Resource Strategies

WIL-22-17 MOD3 _Mod Report _011A

LEGEND
Indicative Ceiling Indentation Design *

* **Variety of Ceiling Indentations Options:**

- 3D printing of ceiling indentations
- Shotcrete wet sprayed concrete
- Fake rock facade with a concrete render
- Pre-cast concrete
- Carved Hebel bolted to concrete

Peabody

WILPINJONG COAL MINE

Bat Roost
Conceptual Design 2

Figure 23

6.9.4 Biodiversity Offset Strategy

The BDAR has assessed a single Development Footprint, split across two 'Stages' (Figure 20). These Stages were adopted so relevant offset obligations could be satisfied in two tranches reflective of the sequence of development.

Under the BC Act and NSW DCCEEW (2025), if a development has an unavoidable impact on biodiversity, that impact must ordinarily be offset by complying with a Biodiversity Credit obligation, which must be satisfied prior to the relevant development commencing.

This credit obligation can be satisfied by the following methods (or commonly a combination of the two methods):

1. **Land Based Offsets** – procuring land with similar biological values to the impacted area to which the credits can be "Like-for-Like" retired; or
2. **Payment into a Fund** – by transferring the obligation to the Biodiversity Conservation Trust by paying into the Biodiversity Conservation Fund.

Credit obligation calculations, including both species and ecosystem credits were calculated by running the BAM Calculator (Tables 16 and 17). A total obligation of 3,091 ecosystem credits and 5,623 species credits has been calculated for Modification.

WCPL has initiated land based offset investigations of three potential Biodiversity Stewardship Agreement (BSA) sites comprising approximately 2,900 ha. WCPL will continue to progress BSA surveys and assessment over the course of the Modification assessment process by the NSW Government.

6.10 AQUATIC ECOLOGY

An Aquatic Ecology Assessment has been prepared for the Modification by Bio-Analysis (2025) (Appendix G).

6.10.1 Background

The Wilpinjong Coal Mine is located within the catchment of the Upper Goulburn River, forming part of the Hunter River Basin. The local drainage network is generally characterized by the ephemeral streams/gullies joining the Wilpinjong, Cumbo and Wollar Creeks (Appendix G).

Aquatic Ecology Monitoring

WCPL conducts stream health monitoring annually during spring and autumn using *NSW Australian River Assessment System (AUSRIVAS) Sampling and Processing Manual* (NSW Department of Environment and Conservation, 2004) (AUSRIVAS protocol). In addition to aquatic macro invertebrate sampling, regular aquatic ecology monitoring includes fish observations, site water quality, stream condition and presence of aquatic and riparian edge flora.

No measurable changes to stream health have been observed in regular aquatic ecology monitoring that would be indicative of an adverse impact associated with the Wilpinjong Coal Mine Operation (Eco logical, 2022, 2023, 2024). Species composition and richness have been comparable to previous surveys along with macroinvertebrate assemblages.

No threatened species listed under the FM Act have been observed in recent aquatic monitoring (Eco logical, 2024).

Aquatic Ecology Surveys

Bio-Analysis (2025) (Appendix G) undertook contemporary aquatic ecology and stygofauna surveys for the Modification (Figure 24).

Aquatic Ecology Habitat

Wilpinjong Creek

Wilpinjong Creek, is naturally ephemeral (Plate 15 and Figure 24), however, the approved release of water from the Wilpinjong Coal Mine Water Treatment Facility (in accordance with EPL 12425) does increase flows downstream of the release point (Appendix G).

Wollar Creek

Wollar Creek is heavily modified upstream of its confluence with Wilpinjong Creek, due mostly to agricultural activities. The creek banks were stable due to extensive cover of weeds including exotic grasses and occasional stands of willows (Plate 16 and Figure 24) (Bio-Analysis, 2025) (Appendix G).

Unnamed Drainage Line

Temporary small pools were present along the downstream reaches of the poorly defined drainage line located to the north of Pit 8 (Plate 17 and Figure 24). The surrounding catchment was pastoral with recent grazing evident (Bio-Analysis, 2025) (Appendix G).

Plate 15: Wilpinjong Creek (Upstream) – Site WI1
Source: Appendix G.

Plate 16: Wollar Creek (Downstream) – Site WO1
Source: Appendix G.

Plate 17: Unnamed Drainage Line (Upstream) – Site SG1
Source: Appendix G.

6.10.2 Environmental Review

The Modification is not expected to result in significant changes to aquatic habitat, flora and fauna. Potential impacts on surface water and groundwater resources, are described in Sections 6.7 and 6.8 and Appendices D and E.

Key Fish Habitat

The Modification would not result in the removal of any mapped Key Fish Habitat (Bio-Analysis, 2025) (Appendix G).

Threatened Ecological Communities under the FM Act

The Modification would not result in the removal of any mapped TECs listed under the FM Act (DPI, 2024) (Appendix G).

Threatened Species under the FM Act and EPBC Act

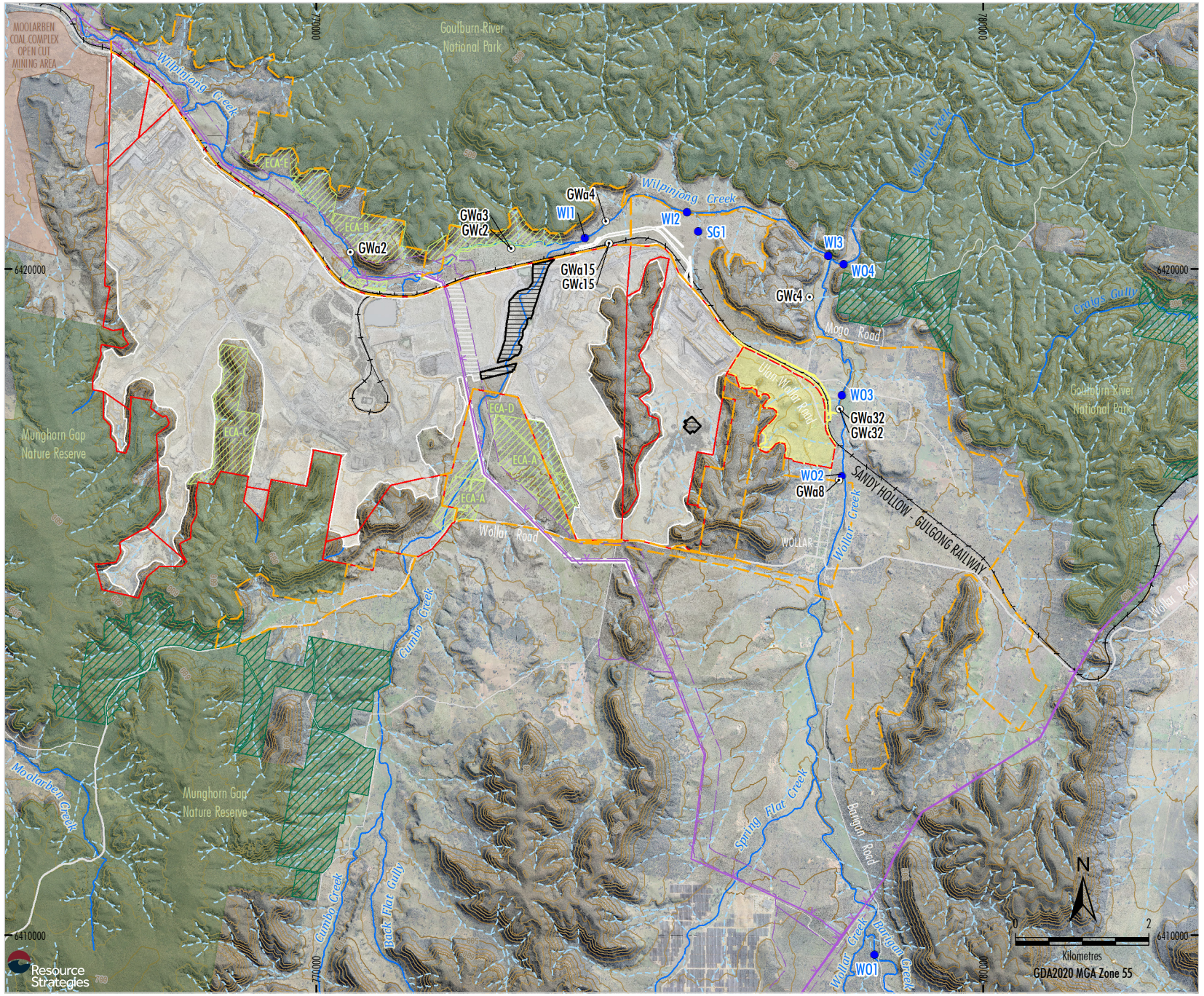
No aquatic species of conservational significance listed under the EPBC Act or FM Act were recorded within the Study Area or are considered likely to occur (Appendix G).

Groundwater Dependent Ecosystems

The Modification is expected to have a negligible impact to baseflow reductions in the Wilpinjong Creek and Wollar Creek (Appendix E) and is unlikely to have a measurable impact on subterranean GDEs (Appendix D).

Stygofauna

No likely stygofauna were identified through targeted surveys (Bio-Analysis, 2025) (Appendix G). The closest known stygofauna in alluvial aquifer habitat were identified in the Goulburn River alluvial aquifer near Sandy Hollow, approximately 60 km east of the Modification (Appendix G).



LEGEND

- Watercourse
- Drainage Line
- Natural Surface Contour (100 m Interavl)
- Natural Surface Contour (25 m Interval)
- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park or Nature Reserve
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- EnergyCo Construction Easement (CWOREZ)
- Mine Exclusion Area
- Modification Indicative Development Footprint

Survey Sites

- Aquatic Ecology Survey Site
- Bores Sampled for Stygofauna

Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)

Peabody

WILPINJONG COAL MINE

Aquatic Ecology Survey Sites

Figure 24

Overall Impact on Aquatic Ecology

Consistent with Bio-Analysis' conclusions in respect of the Wilpinjong Coal Mine (Appendix G), it is considered that the carrying out of the Modification, it is not likely to have a significant impact on aquatic ecology, and that the potential indirect impacts on aquatic ecology would be minimised with the continuation of existing mitigation measures (Appendix G).

6.10.3 Mitigation Measures

Water Resource Management

Mitigation measures relevant to groundwater and surface water are described in Sections 6.7.3 and 6.8.3, respectively. These measures are designed to manage water quality and flow in the vicinity of the Modification and, therefore, are relevant to mitigating potential impacts on aquatic ecology.

Cumbo Creek Exclusion Area

The Modification would formalise avoidance of approved mining of the existing Cumbo Creek corridor in Pit 4. This would reduce approved impacts on the existing creek corridor.

Stream Health Monitoring

Stream health, including assessment of habitat, water quality, aquatic macroinvertebrates, and fish, would continue to be monitored regularly as part of the existing Surface Water Management Plan over the life of the Modification. Any significant change in stream health as determined by stream health trigger levels at or immediately downstream of the Modification would be investigated to determine the source of the change in accordance with the existing trigger action response plans.

Stream Water and Groundwater Monitoring

Sections 6.7 and 6.8 describe the continuation of Wilpinjong Coal Mine groundwater and surface water monitoring that would occur for the Modification.

6.11 GREENHOUSE GAS EMISSIONS

A Greenhouse Gas Assessment has been prepared to assess the potential greenhouse gas emissions of the Modification and identify potential avoidance, mitigation and offset measures and is presented in Appendix C.

The Greenhouse Gas Assessment is supported by a Greenhouse Gas Calculations Report prepared by Airen Consulting (2025b) (Attachment A of Appendix C).

A peer review of the Greenhouse Gas Calculations Report by TAS concluded the methodology used was appropriate, and the overall assumptions align with regulatory expectations (Attachment 6).

6.11.1 Background

Key Greenhouse Gas Policies and Guidance

International

The international framework addressing greenhouse gas emissions, and the global response to climate change, commenced with adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992.

Two of the most important progressions of the UNFCCC were at the 3rd Conference of the Parties (in 1997) and the 21st Conference of the Parties (in 2015), with the adoption of the *Kyoto Protocol* and the *Paris Agreement*, respectively.

The *Kyoto Protocol* entered into force in 2005 and imposed limits on the greenhouse gas emissions of developed countries listed in Annex 1 to the UNFCCC, with an initial commitment period of 2008 to 2012 (UNFCCC, 2024a).

The UNFCCC requires parties to submit national inventories of greenhouse gas emissions and report on steps taken to implement the *Kyoto Protocol* (UNFCCC, 2024a).

Under the *Paris Agreement*, each Party is required to prepare, communicate and maintain Nationally Determined Contributions (NDCs) that would contribute to the long-term goals of the *Paris Agreement* (UNFCCC, 2015). As Australia is a party to the *Paris Agreement*, the potential impacts to greenhouse gas emissions from all Australian sources are collectively managed at a national level, through initiatives implemented by the Commonwealth Government.

Australia's second NDC under the *Paris Agreement* is a greenhouse gas emissions reduction target of 43% below 2005 levels by 2030 (AG DCCEEW, 2024a).

Australia's third NDC is currently under development and must be announced in 2025.

National

The NGER Act is a national framework for reporting greenhouse gas emissions, energy production and energy consumption by corporations. The greenhouse gas emissions and energy data reported under the NGER Act is used by the Commonwealth Government in compiling Australia's national greenhouse gas emission inventory to meet its reporting obligations under the UNFCCC.

The Safeguard Mechanism (underpinned by the Safeguard Rule) was established through the NGER Act and provides baseline emissions and offset requirements for applicable facilities that emit over 100,000 t CO_2-e per year, such as the Wilpinjong Coal Mine.

The Safeguard Mechanism sets a baseline level of emissions for facilities. If a facility exceeds its baseline level, it is generally required to surrender ACCUs (or following recent reforms, Safeguard Mechanism Credits) equivalent to the exceedance to the Clean Energy Regulator (CER).

The Safeguard Mechanism Reforms (AG DCCEEW, 2024a) introduced an amendment to the NGER Act and other legislation to establish the framework to give effect to key elements of the reforms, such as introducing a requirement for facilities to achieve greenhouse abatement via annual downward adjustment of baseline greenhouse gas emission levels.

The Safeguard Mechanism decline rates have been determined by the Australian Government with sufficient headroom allowance for higher than expected growth at new and existing Safeguard facilities (CER, 2025).

Safeguard facility standard baselines are determined based on the amount of product each facility produces in a financial year. The reforms apply a decline rate to a facility's baseline so that baselines are reduced predictably and progressively over time (initially 4.9% per annum) on a proportionate trajectory consistent with achieving Australia's emission reduction targets of 43% below 2005 levels by 2030, and net zero by 2050 (AG DCCEEW, 2024a).

The Wilpinjong Coal Mine has triggered the reporting requirements of the NGER Act, and WCPL reports on its greenhouse emissions each financial year.

Due to the methodology used to calculate baseline emission intensity (i.e. the gradual transition from a site-specific factor to the full industry average), the baseline emission intensity for the Wilpinjong Coal Mine is projected to increase over the short term, including during the Modification.

New South Wales

The NSW Government released the *NSW Climate Change Policy Framework* (OEH, 2016), which committed NSW to the long-term objective of achieving net-zero emissions by 2050.

NSW Climate and Energy Action (within NSW DCCEEW) published the Net Zero Plan in 2020, which describes how, over the next decade, the NSW Government intends to work towards its objective of achieving net-zero emissions by 2050, and an objective to reduce emissions by 70% by 2035, compared to 2005 levels.

The NSW Government has subsequently enshrined in legislation whole-of-government climate action in the Net Zero Act. The Net Zero Act legislates:

- guiding principles for action to address climate change that consider the impacts, opportunities and need for action in NSW;
- emissions reduction targets for NSW, comprising:
  - 50% reduction on 2005 levels by 2030;
  - 70% reduction on 2005 levels by 2035; and
  - net zero by 2050.
- an objective for NSW to be more resilient to a changing climate; and
- establishing an independent, expert Net Zero Commission to monitor, review, report on and advise on progress towards these targets.

Further discussion on greenhouse gas reporting and mitigation measures in NSW are provided in Appendix C.

New South Wales Guide for Large Emitters

In January 2025, EPA released the *NSW Guide for Large Emitters - Guidance on how to prepare a greenhouse gas assessment as part of NSW environmental planning processes* (the Large Emitters Guide), following a period of consultation (EPA, 2025).

The Large Emitters Guide sets out a description of NSW's emission reduction objectives, types of greenhouse gases, and the EPA's suggested greenhouse gas assessment and mitigation requirements to be addressed in Modification Reports.

The Modification is expected to generate Scope 1 and 2 greenhouse gas emissions exceeding 25,000 t CO_2-e per year in some operational years (Appendix C). Therefore, the Modification meets the assessment threshold outlined in the Large Emitters Guide.

Greenhouse Gas Emissions Scopes

The *Greenhouse Gas Protocol* (GHG Protocol) (World Business Council for Sustainable Development [WBCSD] and World Resources Institute [WRI], 2025) contains methodologies for assessing and calculating greenhouse gas emissions. The GHG Protocol provides standards and guidance for companies and other organisations preparing greenhouse gas emission inventories. It covers the accounting and reporting of the seven greenhouse gases covered by the *Kyoto Protocol*.

Under the GHG Protocol, the establishment of operational boundaries involves identifying emissions associated with an entity's operations, categorising them as direct or indirect emissions, and identifying the scope of accounting and reporting for indirect emissions.

Three "Scopes" of emissions (Scopes 1, 2 and 3) are defined for greenhouse gas accounting and reporting purposes. A summary of the emission scopes is provided below, and further detail is provided in Appendix C.

Key Scope 1, 2 and 3 emissions sources considered for the Modification, and the adopted emissions assessment boundary to the Modification is provided in Appendix C.

Scope 1 – Direct Greenhouse Gas Emissions

Direct greenhouse gas emissions are defined as those emissions that occur from sources that are owned or controlled by the entity (WBCSD and WRI, 2025). Direct greenhouse gas emissions are those emissions that are principally the result of the activities undertaken by an entity.

The Modification's key Scope 1 emissions can be categorised into the following sectors using the Intergovernmental Panel on Climate Change (IPCC) Sectors as applied within Australia's national emission projections:

- **Stationary Energy (Excluding Electricity Generation) – Mining**

  (i.e. off-road mobile equipment diesel consumption associated with mining operations – approximately 74.5%).

- **Fugitives – Open Cut Coal Mines**

  (i.e. fugitive gaseous emissions that are liberated during mining from the exposed coal seams – approximately 10.4%).

- **Land Use, Land Use Change and Forestry**

  (i.e. emissions associated with progressive land clearing in advance of mining – approximately 12.8%).

- **Industrial Processes and Product Use**

  (i.e. emissions associated with the use of explosives and other materials – approximately 2.3%).

Scope 2 – Electricity Indirect Greenhouse Gas Emissions

Scope 2 emissions are a category of indirect emissions that account for greenhouse gas emissions from the generation of purchased electricity consumed by an entity.

Scope 3 – Other Indirect Greenhouse Gas Emissions

Under the GHG Protocol, Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions.

Scope 3 emissions are defined as those emissions that are a consequence of the activities of an entity, but which arise from sources not owned or controlled by that entity. Some examples of Scope 3 activities provided in the GHG Protocol are extraction and production of purchased materials, transportation of purchased fuels, and use of sold products and services (WBCSD and WRI, 2025).

The Modification's key Scope 3 emissions would be largely categorised as:

- **Category 4 – Upstream Transportation and Distribution**

  (i.e. transport of purchased liquid fuel, hydrocarbons and electricity – approximately 0.2%).

- **Category 9 – Downstream Transportation and Distribution**

  (i.e. transport of coal to third-parties – approximately 2%).

- **Category 11 – Use of Sold Products**

  (i.e. end use of product coal – approximately 97.8%).

Greenhouse Gas Estimation Methodology

The Wilpinjong Coal Mine's direct and indirect greenhouse gas emissions have been estimated by Airen Consulting (Appendix C) using published emission factors from the National Greenhouse Accounts (NGA) Factors where possible (AG DCCEEW, 2024b).

Where NGA Factors were not available (e.g. for rail and ship transport), greenhouse gas emissions have been estimated based on emissions projections for the same activities for similar projects consistent with the Safeguard Rule as well as relevant guidance for land clearing (Transport Authorities Greenhouse Group, 2013).

Emission factors for electricity usage were obtained from *Australia's emissions projections 2024* (AG DCCEEW, 2024c). These emission factors are based on projections for the decarbonisation of the NSW electricity grid over time.

Greenhouse Gas Scenarios

In order to quantify the incremental greenhouse gas emissions of the Modification, five scenarios have been assessed:

- **Baseline Scenario 1 –** Continuation of Wilpinjong Coal Mine operations, excluding the mining of Cumbo Creek and Rocky Hill. This is referred to as the 'business-as-usual' scenario in the Large Emitters Guide.
- **Baseline Scenario 2 –** Continuation of Wilpinjong Coal Mine operations, consistent with Development Consent (SSD-6764), including extraction of the approved Cumbo Creek and Rocky Hill. This is an alternative 'business-as-usual' scenario.
- **Modification Scenario –** Continuation of Wilpinjong Coal Mine operations, consistent with the Modification proposal. This is referred to as the 'modified business' scenario in the Large Emitters Guide.
- **Modification Only Scenario 1 –** The incremental increase in emissions due to the Modification when compared against Baseline 1. This is referred to as the 'Project only' scenario in the Large Emitters Guide.
- **Modification Only Scenario 2 –** The incremental increase in emissions due to the Modification when compared against Baseline 2. This is an alternative, less conservative 'Project only' scenario.

Two baselines have been considered in the Greenhouse Gas Assessment as the Modification involves the relinquishment of some approved coal extraction. In this context the Modification Only Scenario 1 represent the incremental emissions of the Modification pit extension, whereas Modification Only Scenario 2 represents the net incremental emissions of the Modification when the relinquishment of approved coal extraction is also considered.

For the purposes of the following discussion, the Modification Scenario and Modification Only Scenario 1 are explored below. Results for the Modification Only Scenario 2 are provided in Appendix C.

Modification Greenhouse Gas Emissions

Modification Scenario

The Modification Scenario greenhouse gas emissions estimated by Airen Consulting (Appendix C) are summarised in Table 20.

Table 20
Summary of Greenhouse Gas Emissions Estimates for the Modification Scenario

Component	Estimated Greenhouse Gas Emissions (Mt CO_2-e)		
	Scope 1	Scope 2	Scope 3
Annual Average*	0.122	0.003	12.749
Total	0.934	0.024	89.264

Source: Appendix C.
* Excludes decommissioning phase.
Mt $CO_{2\text{-}e}$ = million tonnes of carbon dioxide equivalent.

The estimated emission intensity per unit of production (i.e. including both Scope 1 and 2 greenhouse gas emissions) for the Modification Scenario is estimated to be approximately 0.018 Mt CO_2-e / Mt ROM coal (Appendix C).

Modification Only Scenario 1

The Modification Only Scenario 1 greenhouse gas emissions estimated by Airen Consulting (Appendix C) are summarised in Table 21.

Table 21
Summary of Greenhouse Gas Emissions Estimates for the Modification Only Scenario 1

Component	Estimated Greenhouse Gas Emissions (Mt CO_2-e)		
	Scope 1	Scope 2	Scope 3
Annual Average*	0.045	0.001	3.566
Total	0.368	0.005	24.976

Source: Appendix C.
* Excludes decommissioning phase.

The estimated emission intensity per unit of production (i.e. including both Scope 1 and 2 greenhouse gas emissions) for the Modification Only Scenario 1 is estimated to be approximately 0.025 Mt CO_2-e / Mt ROM coal (Appendix C).

6.11.2 Environmental Review

Greenhouse Gas Emissions

The Modification's contribution to global climate change effects, including the associated environmental impacts, would be in proportion with its contribution to global greenhouse gas emissions.

Emissions from the Modification would be similar to existing open cut operations at the Wilpinjong Coal Mine.

International

The estimated greenhouse gas emissions of the Modification can be considered in the context of global greenhouse gas emissions associated with anthropogenic sources. Emissions from power generation (including the combustion of coal and gas), transport (e.g. automobiles, aeroplanes and ships), agriculture for food production and industrial processes (e.g. steel production) all contribute to global emissions.

Comparison of Modification Scenario annual average Scope 1, Scope 2 and Scope 3 emissions during mining (approximately 12.874 Mt CO_2-e per annum on average) to the total anthropogenic greenhouse gas emissions globally in 2021 (approximately 49,600 Mt CO_2-e) indicates that it would constitute approximately 0.026% of global emissions per annum over the life of the Modification (Appendix C).

The Modification Only Scenario 1 annual average Scope 1, Scope 2 and Scope 3 emissions during mining represent 0.006% of the estimated 49,600 Mt CO_2-e emitted globally in 2021 (Appendix C).

The Scope 1, Scope 2 and Scope 3 incremental emissions of the Modification would be small in the context of global greenhouse gas emissions, but it is acknowledged that all sources of greenhouse gas emissions would contribute in some way towards the potential global, national, state and regional effects of climate change and is discussed further below.

It should also be noted if the Modification does not proceed, it is highly probable that an equivalent volume of global coal combustion would occur, as customers of the Wilpinjong Coal Mine would be obliged to obtain an alternative source of thermal coal for their heating or electricity generation needs. Under the *Paris Agreement*, each NDC reflects the country's ambition for reducing emissions, taking into account its domestic circumstances and capabilities (UNFCCC, 2024b).

Each country will have its own range of opportunities and priorities to trade off various alternative emission reduction (and carbon sink) options having regard to the economic priorities and physical attributes of the country.

National

Due to the historically low emissions intensity of production at the Wilpinjong Coal Mine, the existing Emissions Intensity Determination (EID) for ROM coal is 0.009093 t CO_2-e per ROM t (Appendix C). This ranks Wilpinjong as having the second-lowest emissions intensity among approximately 70 Australian coal mining facilities with published EIDs (Chart 1).

The average greenhouse gas emissions intensity for the Modification Scenario would be approximately 0.018 Mt CO_2-e / Mt ROM for Scope 1 and Scope 2 emissions (Appendix C).

The emission intensity at Wilpinjong Coal Mine is significantly lower than the industry default value of 0.0653 t CO_2-e per ROM t, as specified under the Safeguard Rule. This low emissions intensity is attributable to both very low fugitive emissions and also low strip ratios characteristic of operations at the Wilpinjong Coal Mine.

Under the Modification Scenario, the Wilpinjong Coal Mine emissions intensity would remain well below the Safeguard Mechanism default ROM coal production variable (0.0653 t CO_2-e/t ROM coal), and relative to other current Australian ROM coal EIDs, would rank approximately 9th (excluding the existing Wilpinjong Coal Mine) out of approximately 70 facilities (based on historical data determinations) (Chart 1).

Table 22 compares projected national Scope 1 greenhouse gas emissions under the 'with additional measures' scenario with estimated emissions under the Modification Scenario and Modification Only Scenario 1 for the years 2030 and 2035.

In 2030, Australia's national Scope 1 emissions are projected to be 351.41 Mt CO_2-e. Under Modification Only Scenario 1, emissions are estimated to be 0.055 Mt CO_2-e in 2030, representing approximately 0.016% of the national total. By 2035, the Modification would not contribute any additional emissions, as it does not seek to extend the approved timeframe for ROM coal extraction at the Wilpinjong Coal Mine, which is proposed to cease by 31 December 2033.

New South Wales

WCPL understands that emissions from the Wilpinjong Coal mine for the approved mine life and production rate, (including the Modification in some modelling scenarios) are already accounted for in the Net Zero Emission Dashboard projections by the NSW DCCEEW (Appendix C).

The proposed Modification of the Wilpinjong Coal Mine would not change the approved maximum annual production rate or duration of ROM coal production. The proportion of Scope 1 emissions from the Modification Scenario and Modification Only Scenario 1 compared to projected NSW emissions projections under the 'Current Policy' scenario in 2030 and 2035 is presented in Table 23.

In 2030, the Modification Only Scenario 1 would account for approximately 0.066% of total projected Scope 1 emissions, around 0.167% of fugitive emissions from NSW open cut coal mines and approximately 0.344% of emissions from NSW stationary energy sources (Appendix C).

As previously mentioned, due to the historically low emissions intensity of production at the Wilpinjong Coal Mine, the existing EID for ROM coal is 0.009093 t CO_2-e per ROM t (Appendix C). This ranks Wilpinjong as having the second-lowest emissions intensity among approximately 26 NSW coal mining facilities with published EIDs (Chart 2).

Under the Modification Scenario the Wilpinjong Coal Mine emissions intensity would remain well below the Safeguard Mechanism default ROM coal production variable (0.0653 t CO_2-e/t ROM coal), and relative to other current NSW ROM coal EIDs, would rank approximately 4th (excluding the existing Wilpinjong Coal Mine) out of approximately 26 NSW coal mining facilities (based on historical data determinations) (Chart 2).

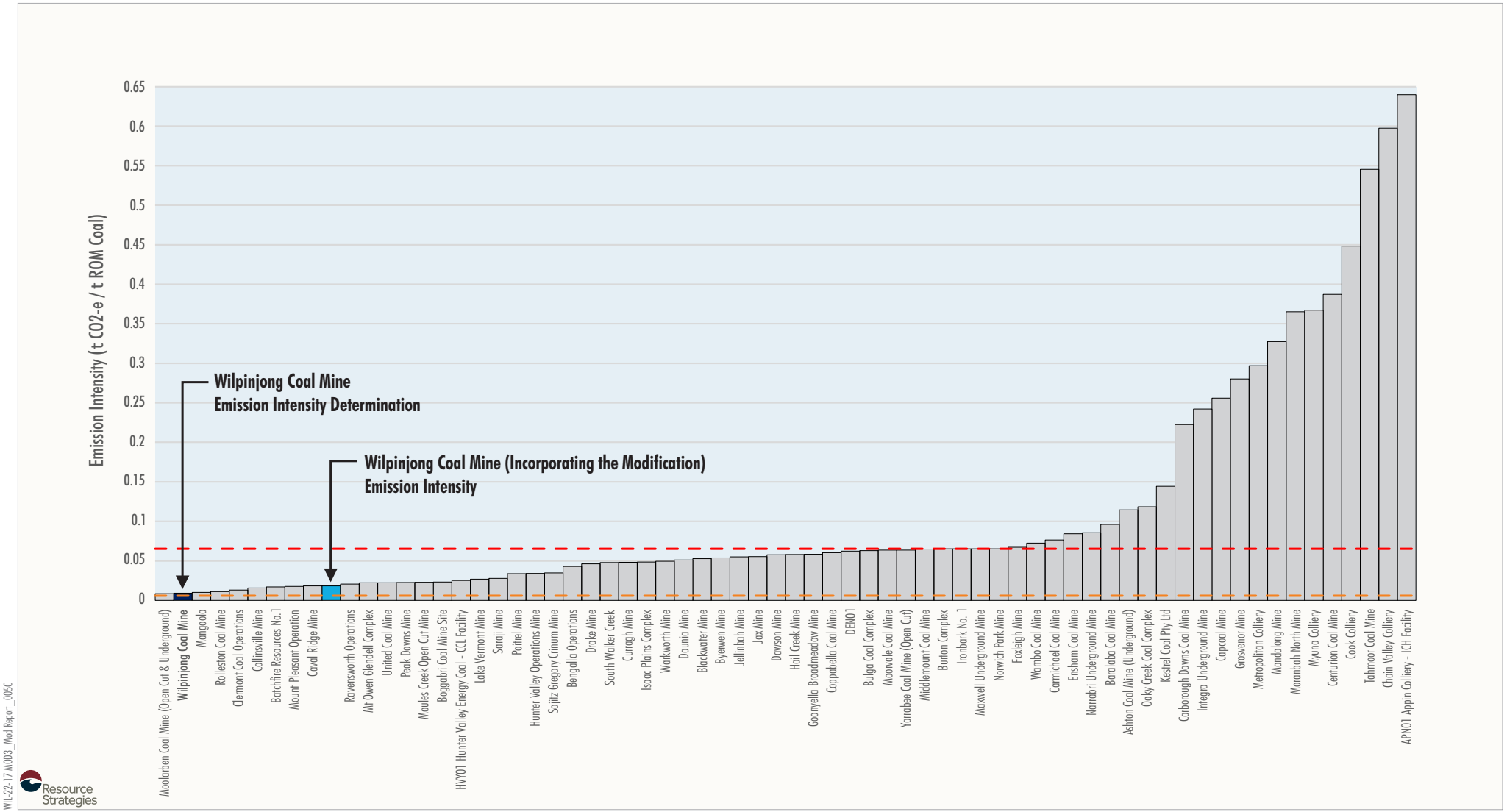
Potential Impacts of Climate Change

Consideration of the potential implications of climate change involves complex interactions between climatic, biophysical, social, economic, institutional and technological processes.

Table 22
Comparison of Estimated Scope 1 Modification Emissions and National Projections

Year	National Projection (Mt CO_2-e)	Modification Scenario		Modification Only Scenario 1	
		Estimated Emissions (Mt CO_2-e)	Proportion of Emissions	Estimated Emissions (Mt CO_2-e)	Proportion of Emissions
2030	351.410	0.113	0.032%	0.055	0.016 %
2035	301.260	0.009	0.003%	-	-

Source: Appendix C.



WIL-22-17 MOD3 _Mod Report _005C

Resource Strategies

LEGEND

Safeguard Mechanism Default Safeguard Emission Intensity

Safeguard Mechanism Best Practice Emission Intensity

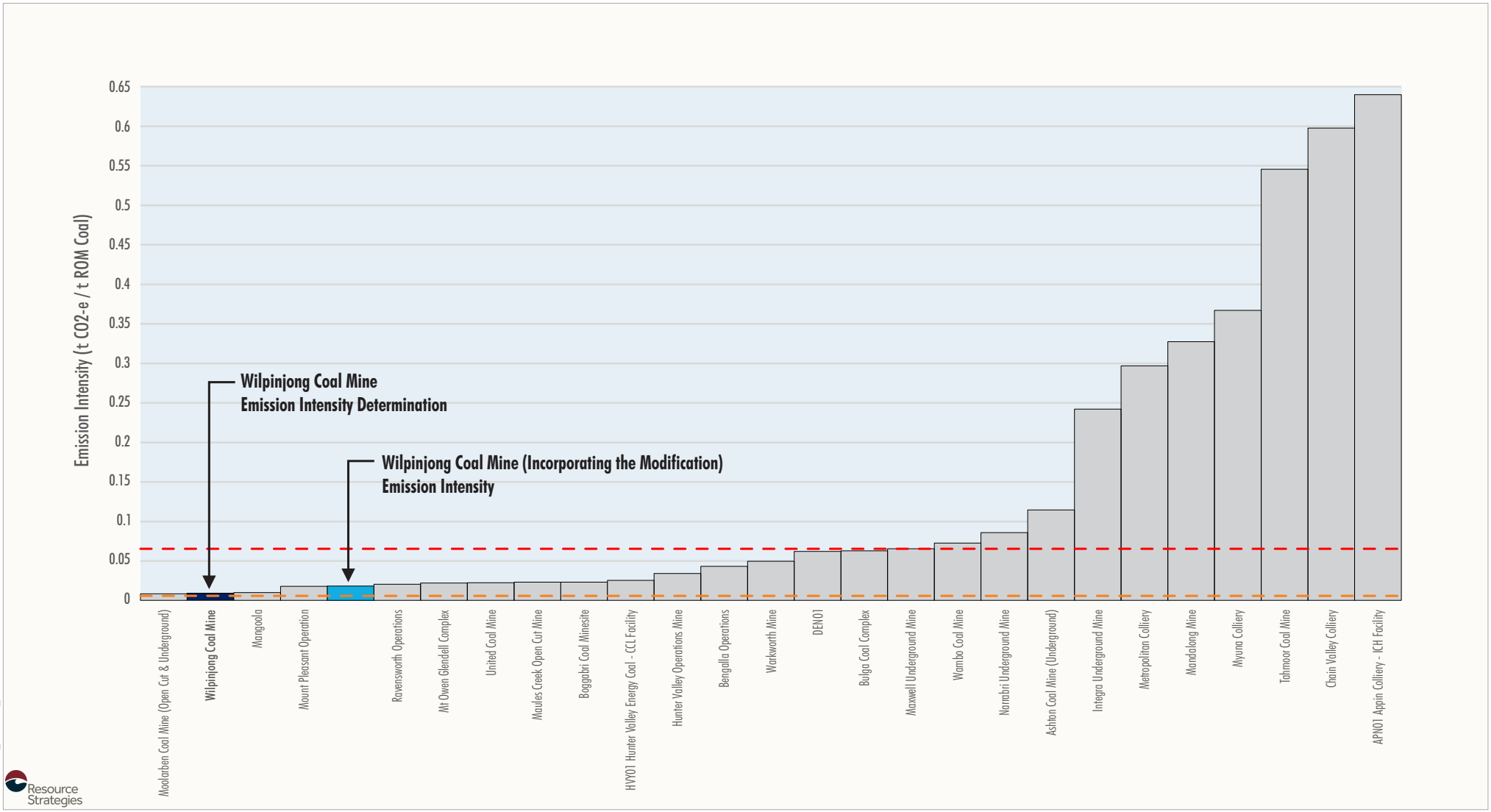
Source: After CER (2025a); Airen Consulting (2025)

Peabody

WILPINJONG COAL MINE

Australian Coal Mine Emissions Intensity Determinations and Projected Modification Emissions Intensity

Chart 1



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Resource Strategies

LEGEND

Safeguard Mechanism Default Safeguard Emission Intensity

Safeguard Mechanism Best Practice Emission Intensity

Source: After CER (2025a); Airen Consulting (2025)

Peabody

WILPINJONG COAL MINE

NSW Coal Mine Emissions Intensity Determinations
and Estimated Modification Scenario Emission Intensity

Chart 2

Table 23
Comparison of Estimated Scope 1 Modification Emissions and NSW Projections

Year	NSW Projection (Mt CO_2-e)	Modification Scenario		Modification Only Scenario 1	
		Estimated Emissions (Mt CO_2-e)	Proportion of Emissions	Estimated Emissions (Mt CO_2-e)	Proportion of Emissions
Total Projected NSW Scope 1 Emissions for 'Current Policy' Scenario (Mt CO_2-e) (NSW DCCEEW, 2025)					
2030	82.970	0.113	0.136%	0.055	0.066%
2035	57.438	0.009	0.016%	-	-
Projected Scope 1 NSW Fugitive Emissions for Coal Mining - Surface Mines for 'Current Policy' Scenario (Mt CO_2-e) (NSW DCCEEW, 2025)					
2030	1.798	0.010	0.556%	0.003	0.167%
2035	1.650	-	-	-	-
Total Projected NSW Scope 1 Stationary Energy Emissions for 'Current Policy' Scenario (Mt CO_2-e) (NSW DCCEEW, 2025)					
2030	13.088	0.086	0.657%	0.045	0.344%
2035	10.438	0.009	0.086%	-	-

Source: Appendix C.

Although scientific understanding of climate change has improved, projections are still subject to a wide range of uncertainties such as (Commonwealth Scientific and Industrial Research Organisation, 2015):

> *…scenario uncertainty, due to the uncertain future emissions and concentrations of greenhouse gases and aerosols; response uncertainty, resulting from limitations in our understanding of the climate system and its representation in climate models; and natural variability, the uncertainty stemming from unperturbed variability in the climate system.*

Given the Modification does not seek to extend the approved timeframe for ROM coal extraction at the Wilpinjong Coal Mine, which is proposed to cease by 31 December 2033, potential climate change impacts are considered within the 'near term' (i.e. up to 2050).

International Projections

The IPCC has completed a number of comprehensive assessments of potential climate change, which include projections for the 'near-term' (for the period 2021 to 2040). 'Near-term' projections indicate global mean surface temperatures are likely to increase by 0.4 to 1.1°C based on the range of all climate scenarios and relative to the reference period of 1995 to 2014. (IPCC, 2021).

Climate projections suggest that many changes in the climate system are likely to become larger in direct relation to increasing incremental global warming, with a warmer climate likely to intensify very wet and very dry weather and climatic events and seasons, noting the frequency is dependent on location (IPCC, 2021).

National Projections

Dowdy *et al.* (2015), as part of the *Climate Change in Australia* paper, presents regionally focused climate projections for Australia in the 'near-term' period (2020 to 2039), based on global climate model simulations and emissions scenarios developed by the IPCC. The Wilpinjong Coal Mine is located within the East Coast South Sub-cluster.

Table 24 presents three global greenhouse gas emissions scenario projections for annual average rainfall in the East Coast South sub-cluster of Eastern Australia for 2020-2039 scenario (relative to 1995). Rainfall projections for the East Coast South sub-cluster indicate a modest overall decline in annual average rainfall across all emissions scenarios for the 2020-2039 scenario, ranging from -1% to -3% (Table 24).

Other key projections for 2020–2039 from *Climate Change in Australia* include a rise in average temperatures of around 0.4 to 1.3°C above 1995 levels, with only small differences between emission scenarios (Dowdy et al., 2015). Little change is expected in average wind speeds, solar radiation, or relative humidity across all scenarios for 2020–2039 (Dowdy *et al*., 2015).

Table 24
Climate Change Projections for the East Coast South Sub-cluster, Eastern Australia – Percentage Change in Rainfall (relative to 1995)

Period	2020-2039		
	RCP2.6	RSP4.5	RCP8.5
Summer	+1	1	2
Autumn	-2	-3	-3
Winter	-2	-5	-8
Spring	-3	-1	-3
Annual	-2	-3	-1

Source: Dowdy *et al.* (2015)
RCP2.6: Emissions scenario assuming strong mitigation measures that rapidly decline carbon dioxide (CO_2) concentration at about 420 parts per million (ppm) by 2100.
RSP4.5: Emissions scenario assuming a slow reduction in emissions that stabilises CO_2 concentration at about 540 ppm by 2100.
RSP8.5: Emissions scenario assuming an increase in emissions leading to a CO_2 concentration of about 940 parts per million (ppm) by 2100.

Rainfall projections for the East Coast South sub-cluster indicate a modest overall decline in annual average rainfall across all emissions scenarios for the 2020-2039 scenario, ranging from -1% to -3% (Table 24).

Other key projections for 2020–2039 from *Climate Change in Australia* include a rise in average temperatures of around 0.4 to 1.3°C above 1995 levels, with only small differences between emission scenarios (Dowdy et al., 2015). Little change is expected in average wind speeds, solar radiation, or relative humidity across all scenarios for 2020-2039 (Dowdy *et al*., 2015).

New South Wales Projections

The Wilpinjong Coal Mine is located within the Central West and Orana Region of the AdaptNSW Project domain of the Interactive Climate Change Projections Map. AdaptNSW projections are based on The NSW and Australian Regional Climate Modelling 2.0 (NARCliM2.0) data which provides projections using the Shared Socioeconomic Pathways (SSPs) from the *Sixth Assessment Report* (IPCC, 2021).

Mean temperatures in the Central West and Orana Region are projected to rise by 1.2°C and 2.1°C by 2050 for the low-emission and high-emission scenario respectively (NSW DCCEEW, 2024).

Changes to annual rainfall are predicted to vary across the Central West and Orana Region, with rainfall projected to decrease the most in summer (NSW DCCEEW, 2024) (Table 25).

Table 25
Climate Change Projections for the Central West and Orana Region, NSW – Percentage Change in Rainfall

Period	2050	
	Low-Emissions Scenario	High-Emissions Scenario
Summer	-8.4	-19.4
Autumn	-12.3	-11.8
Winter	-7.0	-15.5
Spring	-10.0	-14.7
Annual	-9.3	-15.7

Source: NSW DCCEEW, 2024, AdaptNSW, 2024.
Note: Data is based on NARCliM2.0 (2024) projections for SSP1-2.6 (low-emissions) and SSP3-7.0 (high-emissions).

The region is expected to experience several other climate impacts by 2050 under low and high emissions scenarios (NSW DCCEEW, 2024):

- The number of hot days (days over 35°C) is projected to increase by 15.9 (low-emissions scenario) to 24.7 (high-emissions scenario) days per year;
- Cold nights (days below 2°C) are expected to decrease by 11.8 (low-emissions scenario) to 19.6 (high-emissions scenario) nights per year;
- Severe fire weather days are projected to rise by 2.4 (low-emissions scenario) to 3.8 (high-emissions scenario) days annually.

Locality Projections

Unlike its predecessors, NARCliM2.0 provides climate projections with 4 km grid cells for all of NSW, ACT, Victoria and parts of South Australia, Queensland and the Northern Territory (AdaptNSW, 2024).

Climate projections at 4 km resolution are better able to capture the influence of local topography on atmospheric process that influence storms and extreme rainfall (AdaptNSW, 2024).

Therefore, the 4 km grid cell selected for consideration of likely climate change impacts on the locality was the Wollar grid cell.

As anticipated, the results are largely consistent with those presented above for Central West and Orana Region with slight variations.

By 2050, under low and high emissions scenarios, a range of climate changes are projected for Wollar (AdaptNSW, 2025):

- mean annual temperature is projected to increase by 1.19°C (low-emissions scenario) to 1.97°C (high-emissions scenario);
- annual average rainfall is anticipated to decline by 7.18% (low-emissions scenario) to 12.4% (high-emissions scenario);
- hot days (above 35°C) are projected to increase by 10.28 (low-emissions scenario) to 15.75 (high-emissions scenario) days per year;
- cold nights (below 2°C) are expected to decrease by 13.8 (low-emissions scenario) to 23.2 (high-emissions scenario) nights per year; and
- severe fire weather days are projected to rise by 1.3 (low-emissions scenario) to 2.1 (high-emissions scenario) days per year.

These projections indicate a warmer, drier climate with more extreme heat and fire weather conditions for the locality by 2050.

It should be noted that the above projections are based upon a range of emissions scenarios, including two potential global 'shared socio-economic pathways' identified by the IPCC. These socio-economic pathway projections are not related to any specific development, reflecting instead future global greenhouse gas emissions and temperature scenarios.

The IPCC has, however, found that there is a near-linear relationship between cumulative emissions and global warming and each 1000 gigatonnes of cumulative CO_2 emissions is likely to cause a best estimate of 0.45°C increase in global surface temperature (IPCC, 2021).

6.11.3 Mitigation Measures

Existing Mitigation Measures

WCPL currently mitigates greenhouse gas emissions from the Wilpinjong Coal Mine in accordance with the Air Quality Management Plan.

All existing greenhouse gas management and mitigation measures (Appendix C) would continue for the Modification.

Additional Mitigation Measures

The Greenhouse Gas Assessment includes a qualitative evaluation of potential greenhouse gas mitigation measures that could be potentially applied to the Modification. WCPL considers a qualitative evaluation is appropriate given the current stage of Modification planning (i.e. conceptual design for the environmental approvals phase) and duration of the proposal (i.e. ROM coal extraction to 2033) (Appendix C).

Alternative fuels, hybrid equipment, electrified equipment, methane management and renewable electricity were all considered. Of the mitigation measures identified, the use of premium diesel is the only opportunity identified that WCPL considers warrants further reasonable and feasible evaluation (e.g. marginal cost of abatement analysis) for implementation at the Wilpinjong Coal Mine in the period to 2033, including the Modification (Appendix C).

Further quantitative analysis would be undertaken to estimate additional capital and operational costs (including any implications for blasting) and anticipated greenhouse gas emission reductions to identify whether premium diesel is a reasonable and feasible mitigation measure for the Wilpinjong Coal Mine (Appendix C).

Adaptive Management

WCPL anticipates that the existing Air Quality Management Plan will either be updated or replaced with a new Climate Change Mitigation and Adaptation Plan in consultation with the EPA. Should the Modification be approved, WCPL anticipates that the Development Consent conditions for the Modification would reflect contemporary EPA guidance on the content of a Climate Change Mitigation and Adaptation Plan, including:

- Measures to avoid and reduce Modification greenhouse gas emissions applying the EPA's mitigation hierarchy (avoid, reduce, substitute and offset).
- Commitment to monitoring, reporting and reviewing performance of greenhouse gas abatement measures and emissions.
- Expected impacts of the Safeguard Mechanism Baseline on year-to-year emissions.
- Comparison of emissions to NSW Government's legislated emissions reduction targets.

- Strategies to offset excess greenhouse gas emissions.
- A timetable for periodic review of the Climate Change Mitigation and Adaption Plan and associated proposed mitigation, reporting and the overarching greenhouse gas management goals of WCPL.

6.12 ABORIGINAL HERITAGE

An ACHA has been prepared for the Modification by Navin Officer (2025) and is presented in Appendix H.

6.12.1 Background

The ACHA has been undertaken in accordance with the relevant codes, regulations and guidelines including (but not limited to):

- *Aboriginal cultural heritage consultation requirements for proponents 2010* (NSW DECCW, 2010a) (the Consultation Requirements);
- *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (DECCW, 2010b);
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011);
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites, 2013);
- *National Parks and Wildlife Regulation 2019* (NPW Regulation); and
- NPW Act.

The ACHA (Appendix H) incorporates relevant information from previous assessments, the results of field surveys undertaken for the Modification and consultation with the Aboriginal community, including:

- a detailed description of the methods implemented and results from extensive fieldwork and archaeological and cultural investigations previously undertaken by archaeologists and representatives of the Aboriginal community at the Wilpinjong Coal Mine and surrounds;
- search results from the Aboriginal Heritage Information Management System (AHIMS) database and other heritage registers;
- results from archaeological and cultural surveys conducted by archaeologists and representatives of the Aboriginal community for the Modification between April and May 2024; and
- the outcomes of consultation with the Aboriginal community regarding archaeological and cultural heritage values.

A summary of the key inputs to the preparation of the ACHA (Appendix H), and associated consultation is provided below. Further detail on all aspects is provided in the ACHA (Appendix H).

Aboriginal History

The Wilpinjong Coal Mine is primarily located on land that falls within the tribal boundaries of the Wiradjuri people.

Pearson (1981) hypothesised that based on historical sources, most day-to-day activities were undertaken by groups of up to 20 individuals who came together into larger groups at certain times of the year to utilise a resource or undertake law or ceremonial activities (Appendix H).

During the 1820s, increasing European settlement along the Cudgegong River and from Mudgee to Wellington resulted in increasing upheaval to Aboriginal people and their traditional practices. Settlement increased with the gold rush between the 1850s and 1870s, causing further displacement of the local Aboriginal population (Appendix H).

Information about the lifestyle of the Wiradjuri at the time of European contact and in the years that followed may be found within the writings and observations of explorers and settlers (Appendix H).

Previous Archaeological Investigations

A number of Aboriginal cultural heritage surveys and assessments have been undertaken within the Wilpinjong Coal Mine and surrounds.

Previous investigations undertaken at the Wilpinjong Coal Mine and immediate surrounds include (but are not limited to) (Appendix H):

- ACHAs and archaeological surveys (Navin Officer 2005a, South East Archaeology 2013a, 2015);
- a series of reports on the cultural heritage works program arising from the original Wilpinjong Coal Project EIS, including salvage works, excavation works, further surveys and

detailed recording (Navin Officer, 2005b, 2006a, 2006b, 2006c, 2006d; Kayandel Archaeological Services, 2006a, 2006b, 2006c, 2006d, 2007a, 2007b, 2007c, 2008a, 2008b, 2009a, 2009b; South East Archaeology, 2013b, 2013c, 2014a; Apex Archaeology, 2013a, 2014a, 2014b, 2014c);

- reports on investigations for sites WCP33 and WCP216, including archaeological excavations and salvage (Hubschmann and Markus, 2011; Syme et al., 2013);
- reports on rock art monitoring (Brennan, 2013; Navin Officer, 2015);
- various due diligence assessments (South East Archaeology, 2013d, 2014b, 2014c, 2014d; Apex Archaeology, 2013b, 2013c, 2013d; Navin Officer, 2016); and
- ongoing salvage, investigations and Aboriginal heritage management activities at the Wilpinjong Coal Mine.

Aboriginal Community Consultation

Consultation with the RAPs regarding the approved Wilpinjong Coal Mine and the Modification has been extensive and involved various methods including meetings, written and verbal correspondence and archaeological survey attendance.

Aboriginal community consultation for the Modification was undertaken with 21 organisations and/or individuals in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a) and the NPW Regulation.

Table 26 summarises the main stages of the Aboriginal cultural heritage consultation process undertaken for the Modification. A detailed account of the consultation process (including consultation records and a detailed consultation log) for the ACHA is provided in Appendix H.

Heritage Register Searches

An AHIMS search was undertaken in October 2023 (Appendix H) for the Wilpinjong Coal Mine and surrounds.

In addition, searches for the following heritage registers and planning instruments were undertaken in relation to the Modification for Aboriginal heritage items:

- Atlas of Aboriginal Places;
- Australian World Heritage database;
- Commonwealth Heritage List;
- National Heritage List;
- Commonwealth Heritage List (Australian Heritage Council);
- State Heritage Register; and
- Mid-Western Regional LEP.

Searches of the remaining heritage registers and planning instruments (i.e. other than AHIMS) did not identify any further listed Aboriginal heritage sites.

Aboriginal Cultural Heritage Within the Study Area

Initially WCPL proposed extensions of both Pits 3 and 8 which formed the basis of the 'study area' for the ACHA (Appendix H). The Proposed Methodology and full coverage pedestrian survey was undertaken for the full study area. In November 2024, the Modification scope was reduced and the ACHA assesses the potential impacts of the Modification, as currently proposed.

Archaeological Survey Design and Methodology

Archaeological field surveys for the study area were undertaken by a suitably qualified archaeologist, accompanied by representatives of the RAPs between 8 and 12 April 2024.

The archaeological field surveys were informed by the archaeological predictive model and were undertaken by investigating the archaeological sensitivity and subsurface archaeological potential across the study area (Appendix H).

Following the archaeological field surveys, subsurface test excavations were undertaken in areas of high archaeological potential, 200 m from creek lines and waterways, and in areas of high site concentration, to establish the nature and extent of any subsurface archaeological deposits that may be present. The subsurface test excavation program was conducted between 29 April 2024 and 17 May 2024.

Table 26
Summary of Aboriginal Cultural Heritage Undertaken for the Modification

Date	Consultation
Notification of Modification and Registrations	
15 September 2023	A public notice was placed in the *Mudgee Guardian* inviting interested Aboriginal parties or groups to register for the Modification ACHA.
20 September 2023	Letters were provided to existing RAPs for the Wilpinjong Mine to advise them of the Modification and notify them that they had been automatically registered as RAPs for the Modification.
20 September 2023	Letters requesting the names of Aboriginal parties or groups that may be interested in registering for the consultation process were sent to the Mudgee Local Aboriginal Land Council, Mid-Western Regional Council, Heritage NSW, Office of the Registrar (NSW *Aboriginal Land Rights Act 1983*), Native Title Tribunal and Native Title Services Corporation Limited in order to identify Aboriginal stakeholders.
20 October 2023	A total of 21 organisations and/or individuals were registered as RAPs for the Modification following completion of the registration period (September 2023 to January 2024).
Proposed Methodology Review and Information Session	
9 January 2024	The Proposed Methodology for undertaking the ACHA was distributed to the RAPs for review and comment. An invitation to attend an information session to discuss the Modification and Proposed Methodology and an expression of interest for field surveys was also included.
31 January 2024	An information session regarding the Modification and Proposed Methodology was held to give RAPs an opportunity to raise any cultural issues or comments regarding the Proposed Methodology. All comments received on the Proposed Methodology (both in writing and at the information session) were considered (Appendix H).
Field Surveys	
13 March 2024	RAPs were notified that field surveys would take place in April 2024.
8 – 12 April 2024	Aboriginal cultural heritage surveys were undertaken by archaeologists from Navin Officer accompanied by RAPs and their representatives. The cultural significance of the ACHA study area and the identified Aboriginal heritage sites was discussed with the RAPs and representatives.
16 April 2024	RAPs were notified of the subsurface test excavation program that would take place in late April-May 2024.
29 April – 17 May 2024	The subsurface test excavation program was undertaken by archaeologists from Navin Officer accompanied by RAPs and their representatives. The cultural significance of the ACHA study area and the identified Aboriginal heritage sites was discussed with the RAPs and representatives.
24 September 2024	An update was provided to all registered RAPs via email regarding the ongoing status of the Modification and the preparation of the draft ACHA following field surveys.
Draft ACHA Review and Information Session	
5 March 2025	An update was provided to all registered RAPs via email regarding the status and the reduced scope of the Modification and the preparation of the draft ACHA.
5 June 2025	A copy of the draft ACHA was provided to all RAPs for their review and comment. The draft ACHA included the outcomes of field surveys, archaeological and cultural significance assessment (based on feedback received during consultation and fieldwork), consideration of potential impacts and proposed mitigation and management measures. Feedback was requested by 3 July 2025. An invitation was provided to RAPs to attend an information session taking place on 13 June 2025.
13 June 2025	Information session held on 13 June 2025 at the Wilpinjong Coal Mine to discuss the draft ACHA.
July 2025	All comments received on the draft ACHA (both in writing and at the information session on 13 June 2025) were considered and included in the final ACHA (Appendix H).

Source: Appendix H

A total of 89 test pits across eight transects were excavated within the study area. Four PADs were identified following the test excavations in areas of high artefact density, with two of these PADs forming new sites (WCP1142 and WCP1143) (Figure 25).

During the survey and throughout the consultation process, representatives of the RAPs were asked to identify any areas of cultural significance within the study area and surrounds or any cultural values relevant to the area.

All cultural comments relating to the study area and/or wider region were recorded and are included in Appendix H.

Summary of Archaeological Findings

The field survey identified and recorded 70 new Aboriginal sites within the study area. The Aboriginal heritage sites consisted of a majority of artefact scatters and isolated finds (92.8%), with five rock shelters with PADs recorded during the field survey (Appendix H). Four previously recorded sites were relocated during the field program (Appendix H).

It is noted that following the completion of the field survey and test excavations, WCPL elected to modify the proposed open cut extent to stand off two heritage sites of moderate-high scientific significance (WCP1129 and WCP1143) (Figure 25).

A total of 12 newly identified Aboriginal heritage sites were subsequently identified within the amended Modification surface development area. Additionally, three Aboriginal heritage sites are adjacent to the surface development area (Figure 25).

The 15 Aboriginal heritage sites comprise the following (Appendix H):

- six artefact scatters;
- four isolated artefacts;
- two rock shelters with PAD and artefact;
- two rock shelter with PADs; and
- one subsurface artefact scatter and PAD.

Table 26 provides a summary of the Aboriginal heritage sites relevant to the Modification and the assessed scientific significance.

A detailed discussion of the survey results and descriptions of the newly identified sites within the surface development area is presented in Appendix H. The location of the Aboriginal heritage sites within the surface development area is shown on Figure 25.

Relevant Aboriginal heritage sites were assessed in the ACHA for the potential to be directly or indirectly impacted by the Modification (Section 6.12.2).

6.12.2 Environmental Review

Direct Impacts

The Modification has the potential to directly impact 12 Aboriginal heritage sites within the disturbance area (Table 27) (Appendix H):

- nine sites of low scientific significance; and
- three sites of moderate-high scientific significance.

The spatial distribution of the relevant Aboriginal heritage sites is presented on Figure 25.

Rocky Hill Complex Avoidance

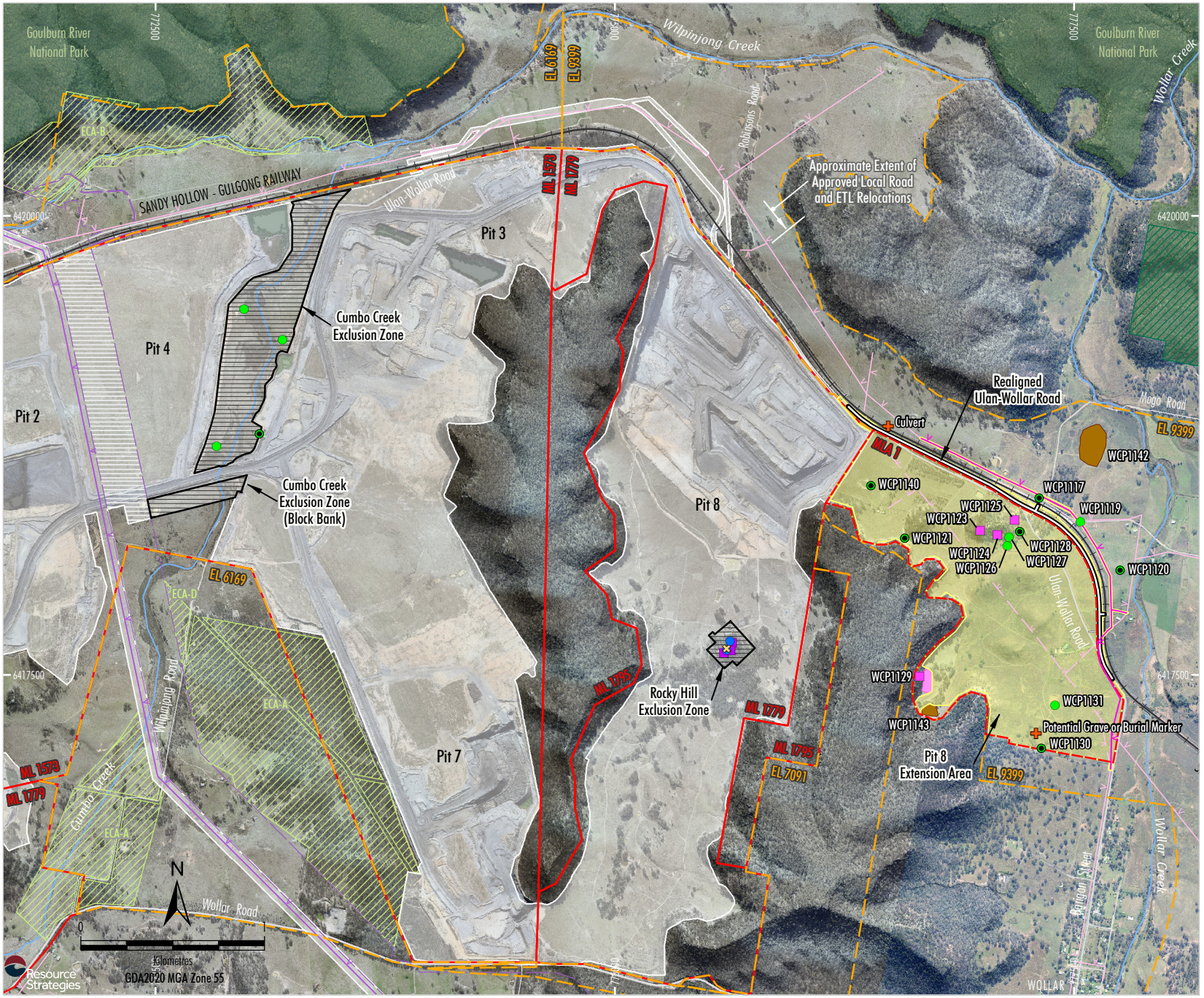
The Modification would include the proposed avoidance of direct disturbance of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8, respectively, under Development Consent (SSD-6764) (Figure 25).

The Rocky Hill complex as a whole has previously been identified by the RAPs as being of high cultural significance and includes:

- three rock shelters with PADs;
- two natural waterhole features; and
- a possible Aboriginal scarred tree.

The Cumbo Creek corridor comprises open artefact sites of low scientific significance, noting however all Aboriginal sites hold significance for present-day Aboriginal people (Appendix H).

The existing Aboriginal Cultural Heritage Management Plan would be reviewed and updated to capture the formal avoidance of the Cumbo Creek corridor and the Rocky Hill complex.



Source: WCPL (2025); EnergyCo (2024); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Nov 2022)

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WILPINJONG COAL MINE

Relevant Heritage Sites

Figure 25

Table 27
Aboriginal Heritage Sites relevant to the Modification

Site Type	Site Name	Degree of Harm	Total No. of Sites
Low Scientific Significance			
Artefact Scatter	WCP1117, WCP1120, WCP1121, WCP1128, WCP1130, WCP1140	Nil – 1 Whole – 5	6
Isolated Artefact	WCP1119, WCP1126, WCP1127, WCP1131	Whole – 4	4
Moderate-high Scientific Significance			
Rock Shelter with PAD	WCP1123, WCP1125	Whole – 2	2
Rock Shelter with PAD and Artefacts	WCP1124, WCP1129	Whole – 1 Nil – 1	2
Subsurface Artefact Scatter and PAD	WCP1143	Nil – 1	1
Total			**15**

Source: Appendix H.
PAD = Potential Archaeological Deposit.

Indirect Impacts

Indirect impacts to Aboriginal heritage can result from potential blast-related vibration associated with open cut mining activities or accidental damage. Open artefact scatters and isolated artefacts are not considered to be sensitive to potential indirect impacts (e.g. blasting vibration).

A total of three Aboriginal heritage sites are located adjacent to the surface development area and have the potential to be indirectly impacted by the Modification due to proximity, comprising:

- one site of low scientific significance (WCP1120; artefact scatter); and
- two sites of moderate-high scientific significance (WCP1129 [rock shelter with PAD and artefact] and WCP1143 [subsurface artefact scatter and PAD]).

Through the continued management of blasting in accordance with the approved Blast Management Plan, WCPL would manage blast vibration to applicable geotechnical criteria at the proximal rock shelter site (WCP1129) (Section 6.5).

Cumulative Impacts

A consideration of the potential cumulative impacts associated with the Modification, including the existing Wilpinjong Coal Mine and other surrounding operations, has been undertaken and is presented in Appendix H.

The Modification has been determined to result in a minor increase in the number of Aboriginal heritage sites potentially impacted due to mining operations. Potential impacts from operations at the Wilpinjong Coal Mine are currently being managed with a known and consistent framework through formalised policies and procedures contained in the approved Aboriginal Cultural Heritage Management Plan.

Navin Officer (2025) concluded that the Modification would not result in any significant cumulative impact on Aboriginal heritage in the region.

6.12.3 Mitigation Measures

The mitigation, management and monitoring measures detailed below have been developed in consultation with the RAPs, in consideration of the cultural and archaeological significance of the Aboriginal heritage sites predicted to be impacted, and the cultural significance of the area.

Aboriginal Cultural Heritage Management Plan

The existing Aboriginal Cultural Heritage Management Plan would be revised to incorporate the recommended mitigation measures and management strategies, should the Modification be approved. This would also include the formalised avoidance of the Cumbo Creek corridor and Rocky Hill complex (Appendix H).

Surface Disturbance

For those areas where Aboriginal heritage sites may be subject to direct surface disturbance as a result of the Modification, a number of mitigation measures and management strategies have been identified, including (Appendix H):

- systematic surface artefact salvage of all the Aboriginal heritage sites within the surface development area would occur prior to undertaking the proposed works;
- sites adjacent to the surface development area (WCP1120, WCP1129 and WCP1143) would be fenced in accordance with the procedures outlined in the approved Aboriginal Cultural Heritage Management Plan to avoid inadvertent impacts; and
- a program of subsurface archaeological test and salvage would be undertaken at the three rock shelters with PAD within the surface development area (WCP1123, WCP1124 and WCP1125), prior to undertaking the proposed works.

Blast Monitoring

WCPL would continue to implement blast management practices to protect Aboriginal cultural heritage sites in the areas adjacent to blasting operations from blasting damage, and to minimise dust and fume emissions.

In accordance with the existing Aboriginal Cultural Heritage Management Plan, to mitigate the risk of blasting at the Wilpinjong Coal Mine damaging any identified rock shelters, WCPL would continue to implement the blast management strategies outlined in the existing Blast Management Plan and extend these to the proximal rock shelter site (WCP1129).

General Measures

The management of all Aboriginal heritage sites would be undertaken consistent with the requirements of the approved Aboriginal Cultural Heritage Management Plan.

On this basis, the following general management measures would be undertaken for the Modification (Appendix H):

- Consultation with the RAPs would continue for the life of the mining operations at the Wilpinjong Coal Mine. Consultation would be undertaken consistent with the consultation requirements in the approved Aboriginal Cultural Heritage Management Plan.
- Should skeletal remains be detected during the course of the Modification, the protocol for the discovery of human remains as outlined in the approved Aboriginal Cultural Heritage Management Plan would be followed.
- Aboriginal Site Impact Recording Form(s) would be prepared following the completion of any salvage program or archaeological excavation.

6.13 NON-ABORIGINAL HERITAGE

A Non-Aboriginal Heritage Assessment (NAHA) for the Modification was undertaken by Extent Heritage Pty Ltd (Extent Heritage) (2025) and is presented in Appendix I.

6.13.1 Background

The NAHA was prepared in consideration of the relevant principles and articles contained in *The Burra Charter: The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance* (Australia International Council of Monuments and Sites, 2013), and in accordance with the relevant guidelines issued and endorsed by OEH (now within the NSW DCCEEW).

The study area adopted by Extent Heritage (2025) comprised the Modification area and a buffer zone of 300 m.

Discussion on the contextual history of the Wilpinjong area including exploration, settlement, mining activities, townships, education, national parks and transport is provided in Appendix I.

Previous Investigations

Historic heritage investigations have been previously undertaken for the Wilpinjong Coal Mine to inform the Wilpinjong Coal Project EIS (WCPL, 2005b) and the Wilpinjong Extension Project EIS (WCPL, 2016).

A detailed NAHA was prepared for the Wilpinjong Coal Project by Heritage Management Consultants (HMC) in 2004. HMC identified 41 potential heritage sites, of which 21 were assessed as being of some historical interest and nine of which were assessed as being of local heritage significance (HMC, 2004).

Niche Environment and Heritage Pty Ltd (Niche) completed a Historic Heritage Impact Assessment for the Wilpinjong Extension Project EIS in 2015. Niche identified 24 potential historical items during their assessment, 21 of which were assessed to be items of local heritage significance.

Archaeological investigations have also been undertaken for the Moolarben Coal Complex, located adjacent to the Wilpinjong Coal Mine. These include Veritas Archaeology and History Service (2005), Heritas Architecture (2008) and EMGA Mitchell McLennan (2013).

Heritage Register Searches

Extent Heritage completed historical and archival research and a review of heritage registers during the preparation of the NAHA. The results of these searches are provided below (Appendix I):

- *Matters of National Environmental Significance under the EPBC Act* – no heritage places listed on the World Heritage List, National Heritage List or Commonwealth Heritage List exist within the Modification area.
- *State Heritage Register* – no heritage items listed in the State Heritage Register are present in the Modification area.
- *Mid-Western Regional Local Environmental Plan 2012* – no heritage items or Heritage Conservation Areas are within the Modification area.
- *National Trust of Australia Register* – no registered places are within the Modification area.
- *Register of Significant Buildings (Australian Institute of Architects)* – no places on the Register of Significant Buildings are in the Modification area.

Management of Historic Heritage Sites

Historic heritage at the Wilpinjong Coal Mine is currently managed in accordance with the approved Historic Heritage Management Plan.

The Historic Heritage Management Plan includes a program and description of the measures and procedures that would be implemented for historic heritage management at the Wilpinjong Coal Mine.

6.13.2 Environmental Review

Following a desktop assessment and review of previous investigations, Extent Heritage (2025) conducted a site investigation of the study area (Appendix I).

As a result of this investigation, 10 items of interest were identified within the study area. Of the 10 items documented, two sites were assessed to be of local heritage significance, and eight items were assessed as not meeting the threshold for heritage significance (i.e. these items are not heritage places with no historical heritage significance). For a full description and location of each item, refer to Appendix I. The two sites of potential local heritage significance are discussed below and are shown on Figure 25.

Site 109 – Potential Grave or Burial Marker

Site 109 comprises two masonry objects partially embedded in the ground and orientated east-west on a natural rise. These objects are weathered and overgrown with grass and moss. Extent Heritage (Appendix I) concluded these objects potentially comprise the remnants of a grave or burial marker (e.g. a headstone) of historical European origin. It is noted this site is proximal to Wollar Cemetery (approximately 625 m north) (Plate 18) and that European settler graves have been identified at other mining operations in the local area (Appendix I).

Adopting a precautionary approach, Extent Heritage (Appendix I) assessed the site as meeting the threshold for heritage significance at the local level. Extent Heritage (Appendix I) noted that even if the site is demonstrated to be a historical gravesite, it is of poor condition and would not be considered rare nor representative within the context of the Wollar and Wilpinjong localities.

The potential grave or burial marker is located within the Pit 8 Extension and would be directly impacted by the Modification (Figure 25).

Site 46 - Culvert

Site 46 comprises a concrete triple box culvert that forms part of the Sandy Hollow–Gulgong railway. The culvert likely formed part of the initial period of the construction of the Sandy Hollow-Gulgong railway line between 1936 and 1951 and was constructed using the a 'cast in place' construction method (Appendix I).

The site was assessed as meeting the threshold for heritage significance at the local level, as it is a good representative example of its construction type and is historical evidence of the importance of the railway in the course of the local area's development in the mid-twentieth century (Appendix I).

The culvert would not be directly impacted by the Modification and would remain *in-situ*. Blasting at the Wilpinjong Coal Mine would continue to be managed to mitigate any potential blasting impacts on the Sandy Hollow-Gulgong railway line.

Potential blasting impacts associated with the Modification have been assessed by RWDI (2025) (Appendix A). RWDI (2025) has concluded that blasting activities associated with the Modification can be managed to mitigate any potential impacts to the culvert (Appendix A).

Cumulative Impacts

Extent Heritage (Appendix I) concluded that the Modification exists within an 'organically evolved landscape' that developed through the nineteenth and twentieth centuries in response to two main social, economic and administrative imperatives: rural activities and mining.

These two activities responded to and modified the natural environment to create a type of 'cultural landscape' that has existed for some generations: a mixed mining and farming landscape (Appendix I).

Given the already modified landscape, Extent Heritage (Appendix I) concluded that the cumulative historic heritage impacts of the Modification would be low and that no specific requirements in mitigation of cumulative impacts are proposed.

6.13.3 Mitigation Measures

Monitoring and management measures for identified historic heritage sites, as outlined in the Historic Heritage Management Plan, would continue to be implemented at the Wilpinjong Coal Mine. The Historic Heritage Management Plan would also be updated to consider the Modification, and the findings presented in Appendix I.

Specific management measures for the historic heritage sites that would potentially experience direct or indirect impacts are provided in Table 28.

Plate 18: Wollar Cemetery

Table 28
Management Measures for Relevant Non-Aboriginal Heritage Sites

Site Number	Non-Aboriginal Heritage Site	Management Measures
109	Potential Gravesite	Site 109 is located within the Modification area. Potential heritage impacts would be mitigated through the implementation of the following measures: • Update the Historic Heritage Management Plan in consultation with Heritage NSW to include an Archaeological Research and Design Excavation Methodology for this site. • Undertake targeted archaeological investigation of Site 109 prior to the commencement of approved surface disturbance activities in this discrete location. This is to be undertaken by a qualified archaeologist. • Targeted archaeological investigation is to comprise the manual hand excavation of grass cover and discrete soil deposits in shallow scrapes, until the existence (and potential extent) of a grave cut (or the absence of) can be confirmed. • In the event that archaeological evidence of a grave cut or human remains are identified as a result of the above investigation, site work would stop immediately in vicinity of the site. An exclusion zone would be established, and the relevant NSW authorities (including the NSW Police) would be notified immediately. Works would only proceed again with approval from NSW Police and after observing the requirements of the NSW Department of Health in relation to the *Public Health Act 1991* and the *Coroners Act 2009*. • If the qualified archaeologist demonstrates through the targeted archaeological investigation that Site 109 is not a grave (e.g. by demonstrating the absence of a grave cut), it would then be appropriate for the Modification to proceed without the need for further inputs from an archaeologist. Regardless of the outcome of the conducted archaeological investigations (e.g. regardless of whether a grave cut and/or human remains are demonstrated to be present or absent), the results of any archaeological investigations would be presented in a formal written report within 12 months of their completion.
46	Culvert	Managing potential indirect impact(s) to Site 46 as a result of the Modification would be achieved, through the following precautionary measures: • Recording the location of Site 46 on the WCPL GIS database with clear identification and warning of its heritage significance and need for avoidance. • Where vehicular or other traffic might be in the vicinity of Site 46, permanent or temporary protective fencing or tape would be utilised to visually identify the site's extent. Continued implementation of the Blast Management Plan as reviewed and revised for the Modification.

Source: Appendix I

6.14 ROAD TRANSPORT

A Road Transport Assessment for the Modification has been undertaken by The Transport Planning Partnership (TTPP) (2025) and is presented in Appendix J.

6.14.1 Background

TTPP (2025) has undertaken an assessment of the potential impact of the proposed Modification on the local road transport network. The assessment considers the potential cumulative road transport impacts of the Wilpinjong Coal Mine in the context of other mining and renewable energy developments and background traffic growth.

The Modification would not involve any material additions to the current operational workforce of approximately 705 people[12] (FTE), but would reduce the rate of projected Wilpinjong Coal Mine workforce decline and provide approximately six months of additional mining activity (backfill and final landform shaping) (Section 3.11).

The Modification would act to maintain operational jobs that would otherwise no longer be available in the period 2028-2032 by providing an alternative source of on-site ROM coal extraction. The Modification would also require an average of 25 construction personnel and an estimated peak of 65 construction personnel in the first year of the Modification (2027[13]) (Section 3.3.2).

Road Network

The following key roads are of relevance to the Modification (Figure 26):

- Ulan Road – forms part of the Main Road 208 (MR 208), which extends between Mudgee and Sandy Hollow, and of Main Road 214 (MR 214), which extends from MR 208 at Budgee Budgee to Cassilis. MR 208 continues from Budgee Budgee to Bylong via Wollar.
- Ulan-Wollar Road – a local rural road which provides an east-west connection between Ulan and Wollar.
- Cope Road – provides an east-west link between Gulgong and Ulan. Cope Road provides the most direct route for Wilpinjong Coal Mine traffic travelling to and from Gulgong and surrounds.
- Mogo Road – a local road that extends northwards from Ulan-Wollar Road and provides access to Araluen Road.

Existing Mine Access Routes

The primary route from Mudgee to the Wilpinjong Coal Mine is via Ulan Road and Ulan-Wollar Road (Figure 26).

Vehicular access to and from Wilpinjong Coal Mine is available via three private roads off Ulan-Wollar Road. The primary access roads to the Wilpinjong Coal Mine are not formally named, and are referred to in this Modification Report as follows (Figure 26):

- the West Access Road, located approximately 11 km east of Ulan Road;
- the Mine Access Road, located approximately 12 km east of Ulan Road; and
- the East Access Road, located approximately 16 km east of Ulan Road.

The East Access Road will be relocated further east, as mining in Pit 8 advances, irrespective of the Modification. The relocation of the East Access Road is anticipated to occur prior to the commencement of the Modification.

All coal produced by the Wilpinjong Coal Mine is railed to domestic customers and to the Port of Newcastle via the Sandy Hollow-Gulgong Railway.

Ulan Road Strategy

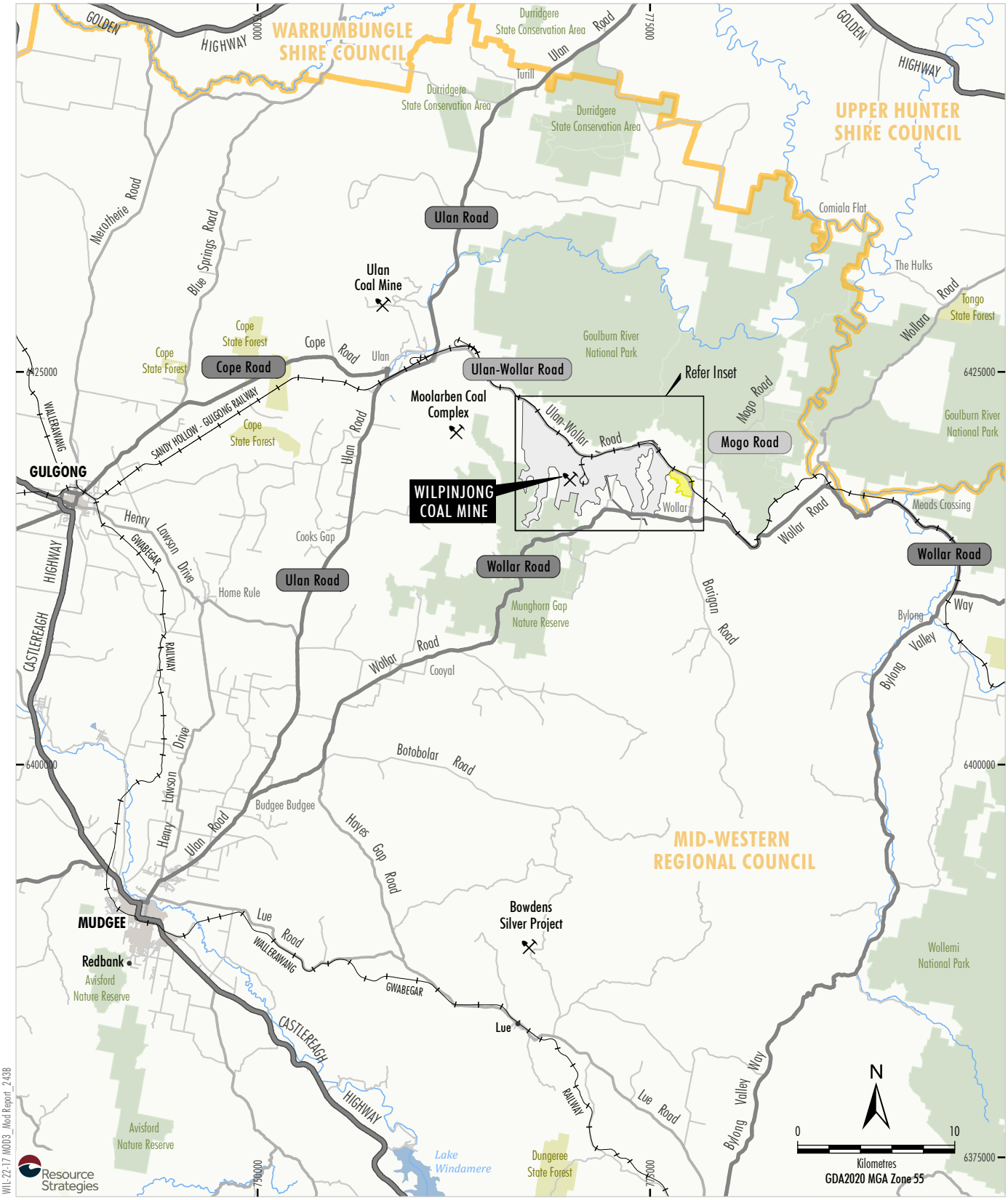
The *Ulan Road Strategy* (ARRB, 2011) reviewed the condition and performance of Ulan Road and recommended upgrades and maintenance required to meet and maintain Ulan Road at the required design standards in consideration of use by mining operations.

The Ulan Road Strategy applies to Ulan Road from Short Road, Mudgee, to the Ulan Coal Mine administration entrance.

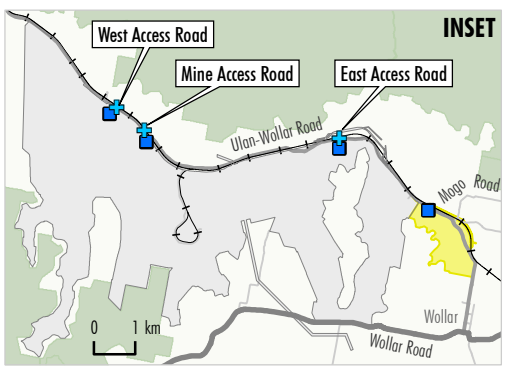
Along with the proponents of the Ulan Coal Mine and the Moolarben Coal Complex, WCPL continues to contribute financially to the implementation of the Ulan Road Strategy in accordance with Development Consent (SSD-6764).

[12] The Wilpinjong Extension Project was estimated to have a peak operational workforce of 625 and a peak construction workforce of some 100 people.

[13] The assumed Modification start date for the purposes of this Modification Report is 1 January 2027.



Source: NSW Spatial Services (2025)



LEGEND

- National Park, Nature Reserve or State Conservation Area
- State Forest
- Local Government Area
- Primary Road
- Arterial Road
- Sub-arterial Road
- Local Road
- Approved/Existing Surface Development Area
- Modification Indicative Development Footprint
- Mining Operation

Traffic Survey and Assessment Locations

- Intersection Survey Location
- Tube Count Survey Location

Peabody

WILPINJONG COAL MINE

Local Road Network and Traffic Survey and Assessment Locations

Figure 26

Existing Traffic Volumes

A program of traffic surveys was conducted during 22 March to 2 April 2025 as part of the assessment of the Modification. The survey program included automatic tube counts and peak period turning movement surveys (Appendix J). The survey locations are shown on Figure 26.

Traffic volumes in the 2025 surveys, previous road traffic surveys and a description of the traffic generated by the existing Wilpinjong Coal Mine is provided in Appendix J.

Intersection Turning Movements

To examine the existing performance of key intersections of relevance to the Wilpinjong Coal Mine, vehicle turning movements were recorded on 1 April 2025 between 5.00 am and 7.00 pm at the three existing mine entrances (Appendix J):

- West Access Road and Ulan-Wollar Road;
- Mine Access Road and Ulan-Wollar Road; and
- East Access Road and Ulan-Wollar Road.

The locations of the intersection turning surveys are shown on Figure 26.

6.14.2 Environmental Review

Potential Impacts

Potential impacts of the Modification on traffic generation, roadway capacity and safety are assessed in Appendix J and summarised below. These potential impacts have been assessed in the context of anticipated future background traffic growth.

Modification Traffic Generation

The following scenarios were adopted for the assessment of the potential peak impacts of the Modification on the road transport environment:

- Year 2027, being the year during which the peak operational workforce and peak Modification construction workforce are present; and
- Year 2032, being the year during which the Modification would provide the greatest incremental maintenance of operational workforce at Wilpinjong Coal Mine.

The road transport implications of the Modification would be broadly related to the realignment of Ulan-Wollar Road, construction activity associated with the infrastructure realignments, and changes to the volume and distribution of traffic generated by Wilpinjong Coal Mine.

Traffic generated by Wilpinjong Coal Mine is principally related to the movement of the workforce. Changes in the workforce at Wilpinjong Coal Mine would therefore have the most significant impact on the number of vehicles travelling to and from the Wilpinjong Coal Mine each day (Appendix J).

Cumulative Future Traffic Volumes

The Road Transport Assessment (TTPP, 2025) has considered a number of traffic sources in the vicinity of the Wilpinjong Coal Mine that may contribute to existing and/or future traffic volumes, including other mining developments, relevant renewable energy developments, development of the Transmission Project, and other proposed road network changes (Appendix J).

Appendix J presents the total predicted cumulative future traffic volumes on key roads in the region, incorporating Modification traffic, traffic from other major developments and estimated background traffic growth.

The cumulative future traffic volume predictions and associated mid-block Level of Service assessment focused on key roads proximal to the Wilpinjong Coal Mine which were considered to be most likely to be impacted by the Modification (Appendix J).

The Austroads (2020) *Guide to Traffic Management Part 3: Traffic Studies and Analysis Methods* provides guidelines for the capacity and performance of two lane, two-way rural roads. Austroads (2020) defines Level of Service as a qualitative measure describing the operational conditions within a traffic stream (in terms of speed, travel time, freedom to manoeuvre, traffic interruptions, comfort, convenience and safety) as perceived by drivers and/or passengers.

Overall, peak hour midblock Levels of Service on key surveyed access roads (i.e. Ulan-Wollar Road) would remain acceptable with the Modification, when considered cumulatively with background growth and impacts from other developments in the region (Appendix J).

Peak Hour Intersection Performance

The peak hour performance of the intersections of Ulan-Wollar Road with the Wilpinjong Coal Mine intersections were analysed using SIDRA INTERSECTION 10 (SIDRA), which is an analysis program that determines the characteristics of intersection operating conditions, including the degree of saturation, average delays and Levels of Service.

From the SIDRA analyses, the key intersections of the Ulan-Wollar Road can be expected to operate at good Levels of Service during the Modification peak hours in 2027 and 2032, with spare capacity and acceptable delays to vehicles (Appendix J). No additional intersection capacity would be required to accommodate the Modification traffic (Appendix J).

6.14.3 Mitigation Measures

The Road Transport Assessment (Appendix J) concluded that the existing network can satisfactorily accommodate the forecast traffic demands resulting from the Modification without any specific additional road upgrade requirements.

TTPP (2025) concluded that, subject to the proposed realignment of Ulan-Wollar Road being designed in accordance with Austroads guidelines and in consultation with MWRC, and construction activity along Ulan-Wollar Road being subject to a Construction Traffic Management Plan, no specific mitigation or management measures would be required to accommodate the traffic generated as a result of the Modification (Appendix J).

6.15 LANDSCAPE CHARACTER AND VISUAL AMENITY

Landscape and visual impact assessments have been undertaken to inform the approval of the Wilpinjong Coal Project and the Wilpinjong Extension Project (EDAW Gillespies, 2005; Marc & Co and Resource Strategies, 2015). This landscape and visual impact assessment considers potential incremental visual and landscape character impacts associated with the Pit 8 Extension.

There are no guidelines outlining a standardised methodology for the assessment of landscape and visual impacts for coal mining developments in NSW. Therefore, this landscape and visual impact assessment has been prepared in consideration of the methodology described in the *Technical Supplement – Landscape and Visual Impact Assessment: Large-Scale Solar Energy Guideline* (the Technical Supplement) (DPE, 2022d).

The Technical Supplement provides quantitative assessment techniques that can be applied to evaluate the potential visual impacts of the Modification.

Consistent with the Technical Supplement, assessment has been conducted in two discrete components:

- Landscape character impact assessment (the assessment of potential impact on an area's cumulative built, natural and cultural character or sense of place).
- Visual impact assessment (the assessment of potential impacts on views).

Assessment of Landscape Character Impacts

A landscape character impact assessment comprises three key steps (DPE, 2022d):

- Baseline Analysis – establish the existing landscape character of the area and its sensitivity. This includes assessing the following aspects of a landscape:
  - key aesthetic and perceptual features;
  - features that have important Aboriginal cultural heritage value;
  - the overall character and condition of the landscape;
  - planning designations relevant to the area; and
  - the location of any approved or operational large-scale energy developments.

- Identify Landscape Character Zones – divide the study area into unique landscape character zones (LCZs) that share distinct visual characteristics and landscape elements including landforms and major land cover features (i.e. a combination of vegetation, water bodies and landforms).
- Assess the Landscape Character Impact – determine the impact of the proposal on each LCZ by evaluating the sensitivity of the landscape and the magnitude of the project's effects in that area. Consistent with the Technical Supplement, both the sensitivity of a landscape and the magnitude of a development's impact should be assigned a rating (low, moderate or high), which is then used to determine overall landscape impact.

Further discussion and specific guidance to inform a landscape character impact assessment is provided in Section 2 of the Technical Supplement (DPE, 2022d).

Assessment of Visual Impacts

The visual impact assessment comprises the following key components (DPE, 2022d):

- Consideration of Visual Magnitude – visual magnitude as determined by the volume of the horizontal and vertical fields of view occupied (using a grid tool).
- Consideration of Visual Sensitivity – refers to the quality of the existing view and how sensitive the view is to the proposed change. The visual sensitivity is determined by identifying the sensitivity of each viewpoint and categorising the scenic quality of the area in view. Decision making matrices used to determine visual sensitivity and scenic quality are provided in the Technical Supplement (DPE, 2022d).
- Determination of Visual Impact – the visual impact rating of each viewpoint is determined by combining the visual magnitude and visual sensitivity ratings.

Matrices used to determine visual magnitude using the "grid tool" and the significance of visual impacts on the basis of visual sensitivity and visual magnitude are reproduced from the Technical Supplement in Tables 29 and 30.

Table 29
Visual Magnitude Thresholds

Number of Occupied Cells	Visual Magnitude Rating
1-6	Very Low
7-12	Low
13-21	Moderate
22-30	High
31+	Very High

Source: DPE, 2022d.

In accordance with the Technical Supplement, the following study areas were used to inform the assessment (Figures 27 and 28):

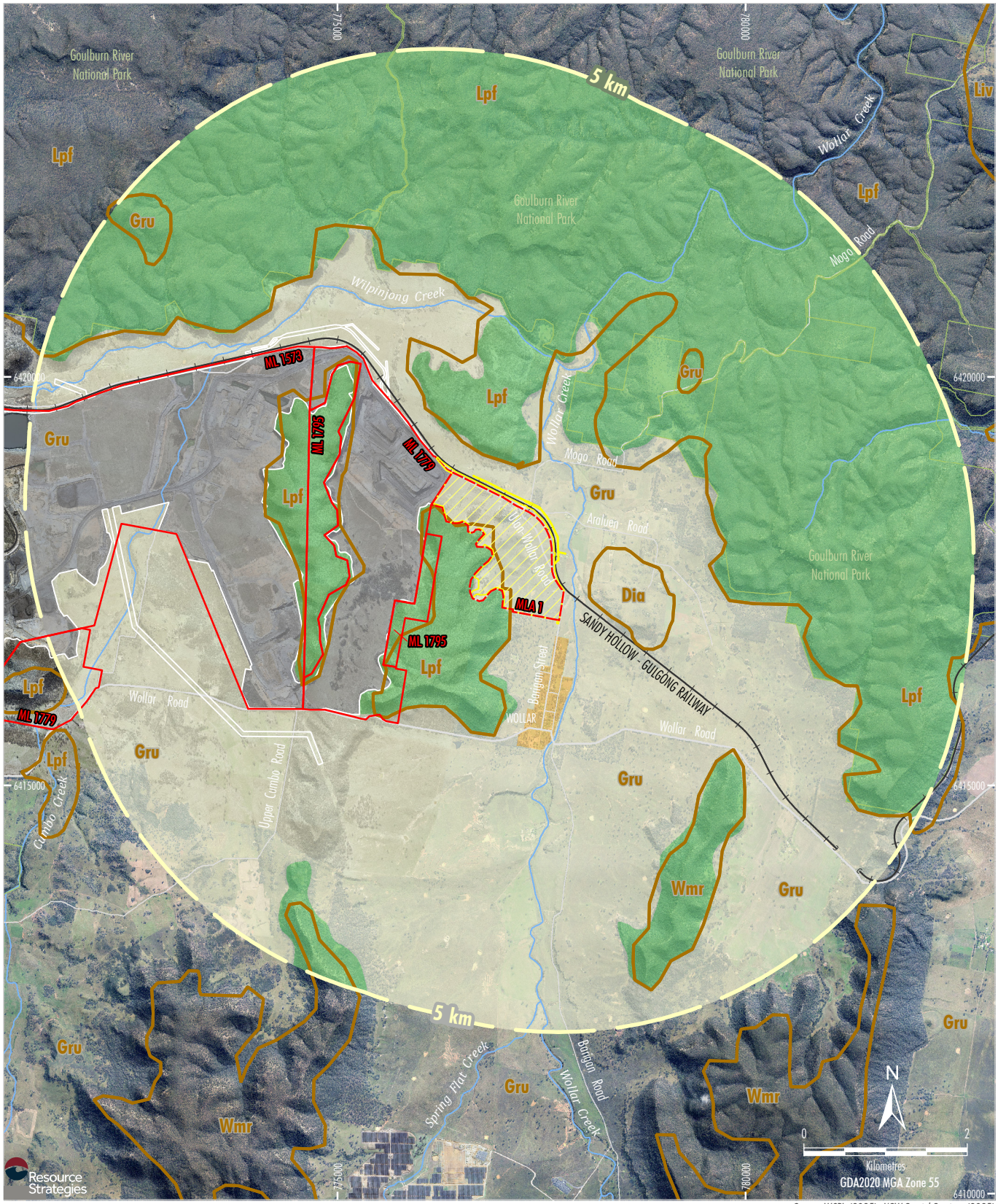
- Landscape Character Study Area – elements and features within a 5 km radius from the Modification.
- Visual Impact Assessment (Regional) – private and public viewpoints within a 4 km radius of the Modification.
- Visual Impact Assessment (Transport) – visual impacts to public roads and rail lines within 2.5 km of the Modification.

Detailed discussion of the processes that underpin the visual and landscape assessment methodology can be accessed in the Technical Supplement.

Table 30
Visual Impact Matrix

Magnitude	High Visual Sensitivity	Moderate Visual Sensitivity	Low Visual Sensitivity	Very Low Visual Sensitivity
Very High Magnitude	High	High	Moderate	Moderate
High Magnitude	High	Moderate	Moderate	Low
Moderate Magnitude	Moderate	Moderate	Low	Low
Low Magnitude	Moderate	Low	Low	Very Low
Very Low Magnitude	Low	Low	Very Low	Very Low

Source: DPE, 2022d.



Source: WCPL (2025); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Oct 2022)

LEGEND

- National Park
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- Modification Indicative Development Footprint

Mitchell Landscapes

- Lpf — Lees Pinch Foothills
- Liv — Liverpool Range Valleys and Footslopes
- Dia — Sydney Basin Diatremes
- Gru — Upper Goulburn Valleys and Escarpment
- Wmr — Wollemi Ranges

Assessment Area

- Landscape Character Assessment Area

Landscape Character Zones

- LCZ1 - National Park and Environmental Conservation
- LCZ2 - Agricultural Plains
- LCZ3 - Mining Operation
- LCZ4 - Village

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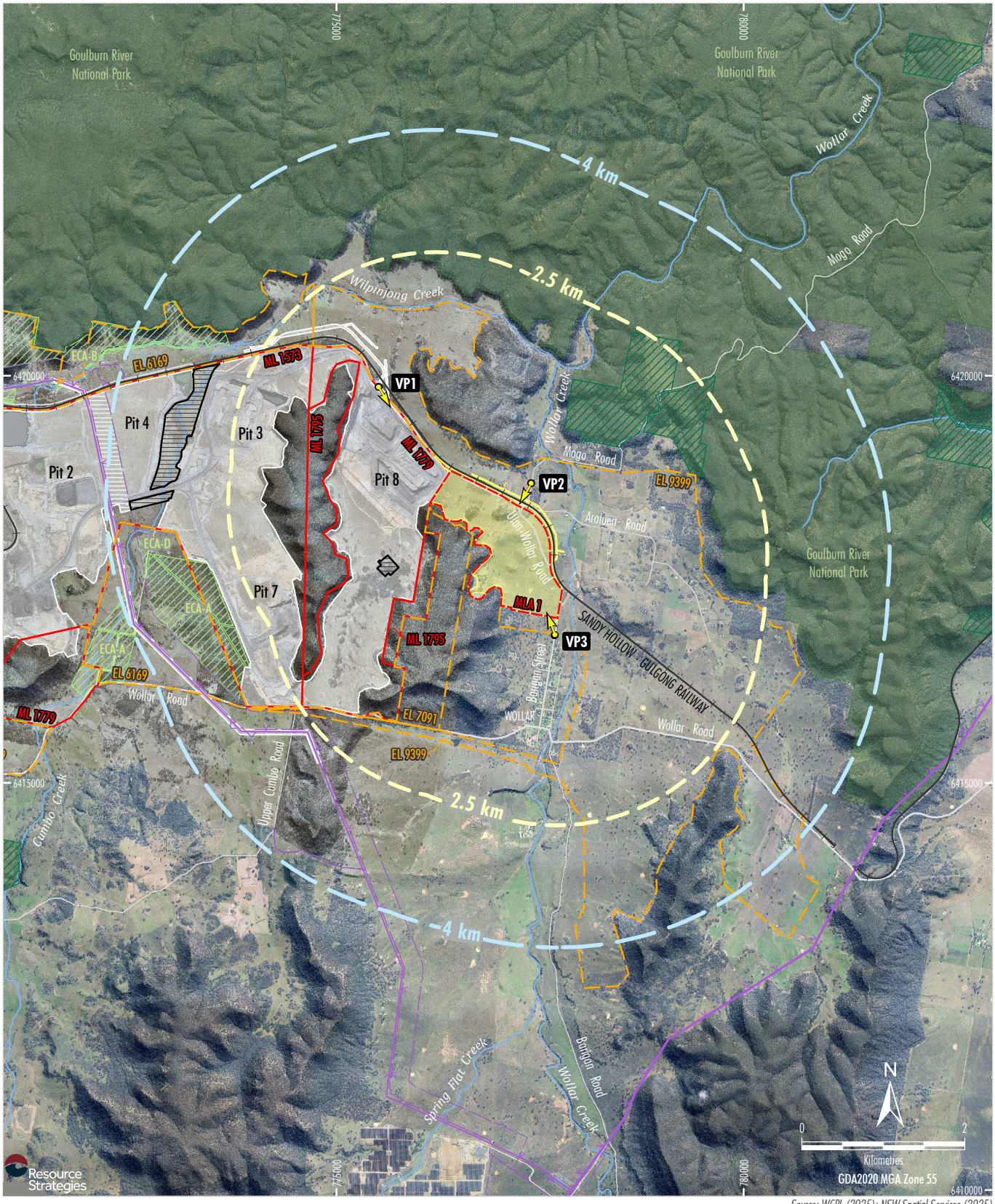
WILPINJONG COAL MINE

Landscape Character Zones

Figure 27



Source: WCPL (2025); NSW Spatial Services (2025)
Orthophoto Mosaic: WCPL (July 2024 - Oct 2022)

LEGEND

- Existing TransGrid Electricity Transmission Line
- EnergyCo Transmission Project (SSI-48323210)
- National Park
- Existing Biodiversity Offset Transferred to the National Parks and Wildlife Service (NPWS) Estate
- Enhancement and Conservation Area
- Exploration Licence Boundary (EL)
- Mining Lease Boundary (ML)
- Proposed Mining Lease Application Boundary (MLA)
- Approved/Existing Surface Development Area
- EnergyCo Construction Easement (CWOREZ)
- Mine Exclusion Area
- Modification Indicative Development Footprint

Assessment Areas

- Transport Visual Impact Assessment Area
- General Visual Impact Assessment Area

- Viewpoint

Peabody

WILPINJONG COAL MINE

Viewpoints and Visual Simulation Locations

Figure 28

WIL-22-17/MOD3_Mod Report_241A

6.15.1 Background

Existing Environment

Key regional elements that comprise the landscape and visual setting primarily includes existing coal mining operations, environmental conservation areas, rural residences located in Wollar or the broader region, and low-intensity agricultural enterprises (e.g. grazing).

As described in Section 1.3, the Modification is an extension to the existing Wilpinjong Coal Mine, which forms part of an existing open cut coal mining precinct, along with Moolarben Coal Mine (immediately west of the Wilpinjong Coal Mine) and Ulan Mine Complex (approximately 11 km north-west of the Wilpinjong Coal Mine).

Residences proximal to the Modification primarily include rural dwellings on land owned by WCPL and in Wollar. It is noted that WCPL owns all but one private dwelling in Wollar (Section 2.1).

The Modification is located within the Upper Goulburn River catchment, which forms part of the Hunter Basin. Wollar Creek is located immediately east of the Modification, and Wilpinjong Creek is generally located to the north of the Wilpinjong Coal Mine between Ulan-Wollar Road and the Goulburn River National Park.

Areas within and to the east and south of the Modification are typically characterised by low undulating hills which have generally been cleared to support historical agriculture; predominantly grazing on valley bottoms (Section 6.3).

North of the Modification land is dominated by the steep slopes and dense vegetation associated with the Goulburn River National Park.

Landscape Character Review

As described in the Technical Supplement, the Landscape Character Assessment Area has been divided into LCZs, informed by existing land uses, relevant government designations and Mitchell Landscapes (Mitchell, P. 2002).

The following broad LCZs were identified in the Landscape Character Study Area:

- LCZ 1 – National Parks and Environmental Conservation.
- LCZ 2 – Agricultural Plains.
- LCZ 3 – Mining Operations.
- LCZ 4 – Village.

Brief descriptions of the LCZs are provided below.

LCZ 1 – National Parks and Environmental Conservation

The Goulburn River National Park, located to the north of the Modification, is the primary landscape feature of LCZ 1. Other landscape features in the LCZ include Crown Land ridges typically zoned Environmental Management (C3) within the Mid-Western Regional LEP, which are associated with sandstone ridges separating LCZ 2 and LCZ 3 areas.

Portions of LCZ 1 are located within the mining tenements held by WCPL, although it is noted that mining operations largely avoid these areas.

LCZ 1 is largely characterised by undisturbed areas of dense vegetation and steep slopes with rugged hills and ridges (Mitchell, 2002). General elevations in the LCZ range from 250 metres Australian Height Datum (m AHD) to 750 m AHD (Mitchell, 2002). The dense vegetation and significant topographic features (Plate 19) provide natural screening to most potential receivers proximal to the Wilpinjong Coal Mine.

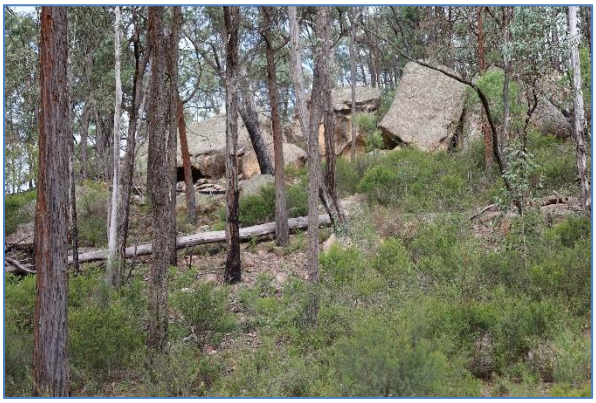


Plate 19: Vegetation and Geological features in Goulburn River National Park

LCZ 2 – Agricultural Plains

LCZ 2 comprises largely cleared, gently sloping areas within and immediately surrounding the Modification. This LCZ also dominates the southern and eastern portions of the Landscape Character Assessment Area (Figure 27).

This LCZ has an extensive history of accommodating low-intensity agricultural activities (e.g. grazing), and the landscape is largely characterised by cleared open grasslands with scattered trees on gently sloping topography (Plate 20).

Wollar Creek and Wilpinjong Creek also traverse this LCZ and the creek lines comprise a combination of remnant riparian vegetation and largely cleared creek corridors.

Human modifications are evident in the LCZ through the broadscale clearance of native vegetation and its proximity to the existing Wilpinjong Coal Mine and Sandy Hollow-Gulgong railway line. As such, LCZ 2 is expected to have capacity to absorb landscape character impacts associated with the Modification.

Plate 20: Paddock Near the Approved Wilpinjong Coal Mine

LCZ 3 – Mining Operations

Open cut mining operations and associated infrastructure at the existing Wilpinjong Coal Mine (i.e. LCZ 3) is a significant feature within the Landscape Character Study Area. Throughout the broader region, mining operations form a significant landscape element, with the three existing coal mines comprising a recognised mining precinct.

The topography associated with this LCZ is highly modified by human activities (Plate 21). As such, it is anticipated that this LCZ would have a high capacity to absorb any landscape character impacts associated with the Modification.

Plate 21: Approved Wilpinjong Coal Mine Including Progressive Rehabilitation

LCZ 4 – Village

LCZ 4 comprises Wollar, located to the south of the Modification.

Public buildings and facilities in Wollar include the Wollar Hall, a cemetery, a park and ablution facilities. The former Wollar Public School (Plate 22) was formally closed by the NSW Department of Education in 2025 (Section 2.1). Residences in Wollar are scattered within the Mid-Western Regional LEP village zoning (RU5), but are located at somewhat greater density than in the surrounding rural lands.

Plate 22: Wollar Public School

Visual Setting

A preliminary visual assessment was completed to determine representative viewpoint locations for the Modification.

The preliminary visual assessment indicated that the surrounding topographic setting and abundance of vegetation screening would limit direct views of the Modification from most publicly accessible viewpoints, apart from the public road network.

The single privately owned residence in the Visual Impact Assessment Area (Regional) (in Wollar) would not experience direct visual impacts associated with the Modification due to distance, intervening topography and vegetation.

The preliminary visual assessment determined the areas most sensitive to the changes proposed by the Modification would be along Ulan Wollar Road and Mogo Road, where views of vegetation clearing, open cut mining operations, highwalls, the temporary Pit 8 waste rock emplacement, mine backfilling and rehabilitation activities would be visible.

Representative viewpoints have been selected for three locations expected to experience more material visual impacts from the Modification.

Further discussion on the representative viewpoints selected for this assessment are provided below.

Viewpoint 1 – Temporary Pit 8 Waste Rock Emplacement

Viewpoint 1 is located on Ulan-Wollar Road, directly adjacent to the boundary of ML 1779 and the approved Pit 8, approximately 1.1 km north-west of the Pit 8 Extension area.

Ulan-Wollar Road is a local rural road which provides an east-west connection between Ulan Road near Ulan and Wollar Road at Wollar.

This viewpoint is representative of visual impacts experienced by motorists travelling along Ulan-Wollar Road.

Evidence of topographic and vegetation screening is noticeable in the foreground of the existing viewshed, which limits views of the existing Pit 8. Views of the existing Wilpinjong Coal Mine are largely evident in gaps between the vegetation and include open cut highwalls, waste rock and mining equipment.

Viewpoint 2 – Mogo Road

Viewpoint 2 is located on Mogo Road, approximately 300 m north of the Pit 8 Extension Area.

Mogo Road is a local road that extends northwards from Ulan-Wollar Road and provides access to private landholdings to the north-east of the Wilpinjong Coal Mine.

This viewpoint is representative of potential visual impacts upper Mogo Road residents would experience travelling southwards towards the Modification.

The existing viewshed offers minimal vegetation screening and lacks any material intervening topographic features that would impede views of the Modification. This viewpoint is expected to experience largely unencumbered views of the Modification.

Viewpoint 3 – Barigan Street and Goulburn Street

Viewpoint 3 is located at the intersection of Barigan Street and Goulburn Street, on the outskirts of Wollar, approximately 170 m south of the Modification.

Barigan Street is the name given to the eastern most extent of Ulan-Wollar Road as it passes through Wollar, and Goulburn Street is an unsealed, unmarked and unsigned local road in Wollar.

This viewpoint lies on the northernmost intersection in Wollar (i.e. closest to the Modification).

6.15.2 Environmental Review

Landscape Character Impacts

Landscape character impacts for the Modification have been determined based on the application of the methodology described in the Technical Supplement.

The results of the landscape character impact assessment are summarised in Table 31, and are further described below. Landscape character impacts for the Modification range from Low to Moderate.

LCZ 1 – National Parks and Environmental Conservation

The landscape character of LCZ 1 largely comprises densely vegetated areas and steep slopes that have largely been undisturbed by human activities.

LCZ 1, in part, borders the southern and western extent of the Modification area, although it is noted that the components of the LCZ within the Goulburn River National Park are at some distance from the Modification (Figure 27).

It is further noted that this LCZ already extensively adjoins the existing Wilpinjong Coal Mine.

As the Modification is not located within this LCZ, direct landscape character impacts will not be experienced in LCZ 1.

Due to its existing proximity to the approved Wilpinjong Coal Mine and the Modification, LCZ 1 is consider to have a Moderate sensitivity to landscape character impacts associated with the Modification.

Topographic variations and dense vegetation associated with the LCZ would limit views. However, the Modification would be clearly visible from some locations of LCZ 1 (i.e. areas directly adjacent to the Modification).

The magnitude of landscape impacts on the LCZ are considered to be Low to Moderate.

In consideration of the methodology prescribed by the Technical Supplement, there is expected to be a Moderate landscape character impact to LCZ 1 as a result of the Modification.

Table 31
Landscape Character Impact Summary

Landscape Character Zone	Sensitivity	Magnitude	Landscape Character Impact
LCZ 1 – National Parks and Conservation	Moderate	Moderate	Moderate
LCZ 2 – Agricultural Plains	Low	High	Moderate
LCZ 3 – Mining Operations	Very Low	Low	Very Low
LCZ 4 – Village	High	Low	Moderate

LCZ 2 – Agricultural Plains

LCZ 2 consists of landscape elements commonly associated with historical agricultural activities.

LCZ 2 is considered to have capacity to absorb further landscape character impacts, and as such has been assigned a Low sensitivity to landscape character impacts associated with the Modification.

The Modification is located directly in LCZ 2. It is therefore expected that the Modification would directly impact landscape elements in LCZ 2.

The magnitude of impacts on LCZ 2 are therefore assessed to be High.

In consideration of the methodology prescribed by the Technical Supplement, there is expected to be a Moderate landscape character impact to LCZ 2 as a result of the Modification.

LCZ 3 – Mining Operations

Within the Landscape Assessment Area, LCZ 3 consists of the approved open cut mining operations at the existing Wilpinjong Coal Mine, with key landscape elements consisting of large-scale coal mining operations and associated infrastructure. It is noted that these alterations are being attenuated by progressive rehabilitation of backfilled mine landforms.

LCZ 3 is therefore considered to have a high capacity to absorb landscape impacts associated with the Modification. The sensitivity of LCZ 3 is therefore assigned as Very Low.

The Modification is located directly adjacent to LCZ 3, and works associated with the Modification would expand the extent of this LCZ, contributing additional landscape elements to LCZ 3 (i.e. the Modification would not remove landscape elements associated with LCZ 3).

As such, the magnitude of landscape character impacts associated with the Modification is considered to be Low.

In consideration of the methodology prescribed by the Technical Supplement, there is expected to be a Very Low landscape character impact to LCZ 3 as a result of the Modification.

LCZ 4 – Village

Landscape elements in LCZ 4 primarily include rural dwellings located in Wollar and community infrastructure such as the former public school, a cemetery and public hall.

Due to the village zoning under the Mid-Western Regional LEP (i.e. RU5), LCZ 4 has been assigned a sensitivity designation of High.

LCZ 4 is located some 400 m away from the nearest part of the Modification and views would largely be obscured by topographic and vegetative intervention.

Due to visual interference associated with LCZ 2 landscape elements and physical separation from the Modification, the magnitude of landscape impacts on LCZ 4 would be Low.

In consideration of the methodology prescribed by the Technical Supplement, there is expected to be a Moderate landscape character impact to LCZ 4 as a result of the Modification.

Visual Impacts

The methodologies for determining visual sensitivity and magnitude, as prescribed by the Technical Supplement, are briefly described in Section 6.15.1.

Consistent with the Technical Supplement, visual impact from each viewpoint is determined by combining the visual magnitude and visual sensitivity.

The results of the Visual Impact Assessment have been summarised in Table 32.

Viewpoint 1 – Temporary Pit 8 Waste Rock Emplacement

Viewpoint 1 is located on Ulan-Wollar Road (a sealed local road) and adjacent to the Sandy Hollow-Gulgong railway line. The viewpoint sensitivity is therefore Very Low.

The existing viewshed largely comprises foreground views of the existing open cut mining operations at Wilpinjong Coal Mine, resulting in a low scenic quality. Background views of the vegetated ridgelines associated with LCZ 1 are also available, but existing mining and public infrastructure dominates the viewshed.

The visual sensitivity for Viewpoint 1 has been assessed as Very Low (DPE, 2022d).

The Visual Magnitude Grid Tool indicates that 19 cells are occupied by the Modification, resulting in a Moderate Magnitude rating.

The visual impact of the Modification on Viewpoint 1 is therefore classified as Low (Table 32).

Viewpoint 2 – Mogo Road

Viewpoint 2 is located along Mogo Road, an unsealed local road that enters the Goulburn River National Park to the north of the Modification. The viewpoint sensitivity is therefore Very Low.
The existing viewshed looks towards the Modification area, and comprises a foreground of cleared paddocks and associated infrastructure (e.g. fencing, unsealed tracks), and densely vegetated ridgelines in the background.

This results in high scenic quality in the existing viewshed.

The visual sensitivity for Viewpoint 2 has been assessed as Low (DPE, 2022d).

The Visual Magnitude Grid Tool indicates that 19 cells are occupied by the Modification, resulting in a Moderate Magnitude rating. The visual impact of the Modification on Viewpoint 2 is therefore classified as Low (Table 32).

Viewpoint 3 – Barigan Street and Goulburn Street

Viewpoint 3 is located at the intersection of Barigan Street (local sealed road) and Goulburn Street (local unsealed road). The viewpoint sensitivity is therefore Very Low.

Existing views comprise a largely undisturbed landform, with some cleared paddocks and associated agricultural infrastructure noticeable in the foreground. The background of the viewshed largely comprises undisturbed treed areas and densely vegetated ridgelines. The existing viewshed therefore comprises high scenic quality.

The visual sensitivity for Viewpoint 3 has been assessed as Low (DPE, 2022d).

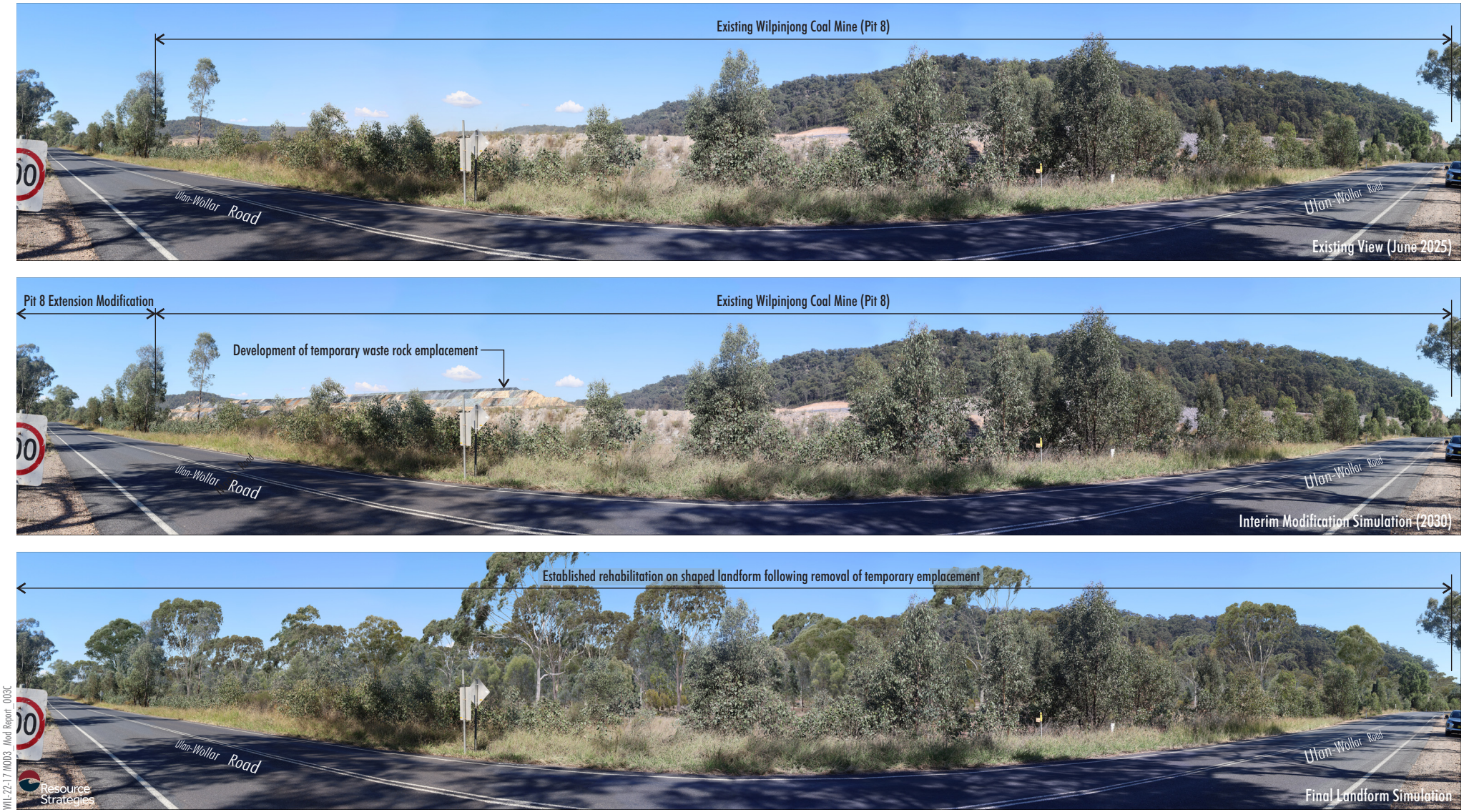
The Visual Magnitude Grid Tool indicates that 11 cells are occupied by the Modification, resulting in a Low Magnitude rating.

The visual impact of the Modification on Viewpoint 3 is therefore classified as Low (Table 32).

Figures 29 to 31 present visual simulations from Viewpoints 1 to 3 (including existing views and simulations for 2030 and post-mining).

Table 32
Visual Impact Assessment Summary

Viewpoint	Viewpoint Type	Viewpoint Sensitivity	Scenic Quality	Overall Visual Sensitivity	Occupied Cells	Visual Magnitude	Visual Impact
Viewpoint 1 – Temporary Pit 8 Waste Rock Emplacement	Local Road	Very Low	Low	Very Low	19	Moderate	Low
Viewpoint 2 – Mogo Road	Local Road	Very Low	High	Low	19	Moderate	Low
Viewpoint 3 – Barigan Street and Goulburn Street	Local Road	Very Low	High	Low	11	Low	Low



WIL-22-17 MOD3_Mod Report_003C

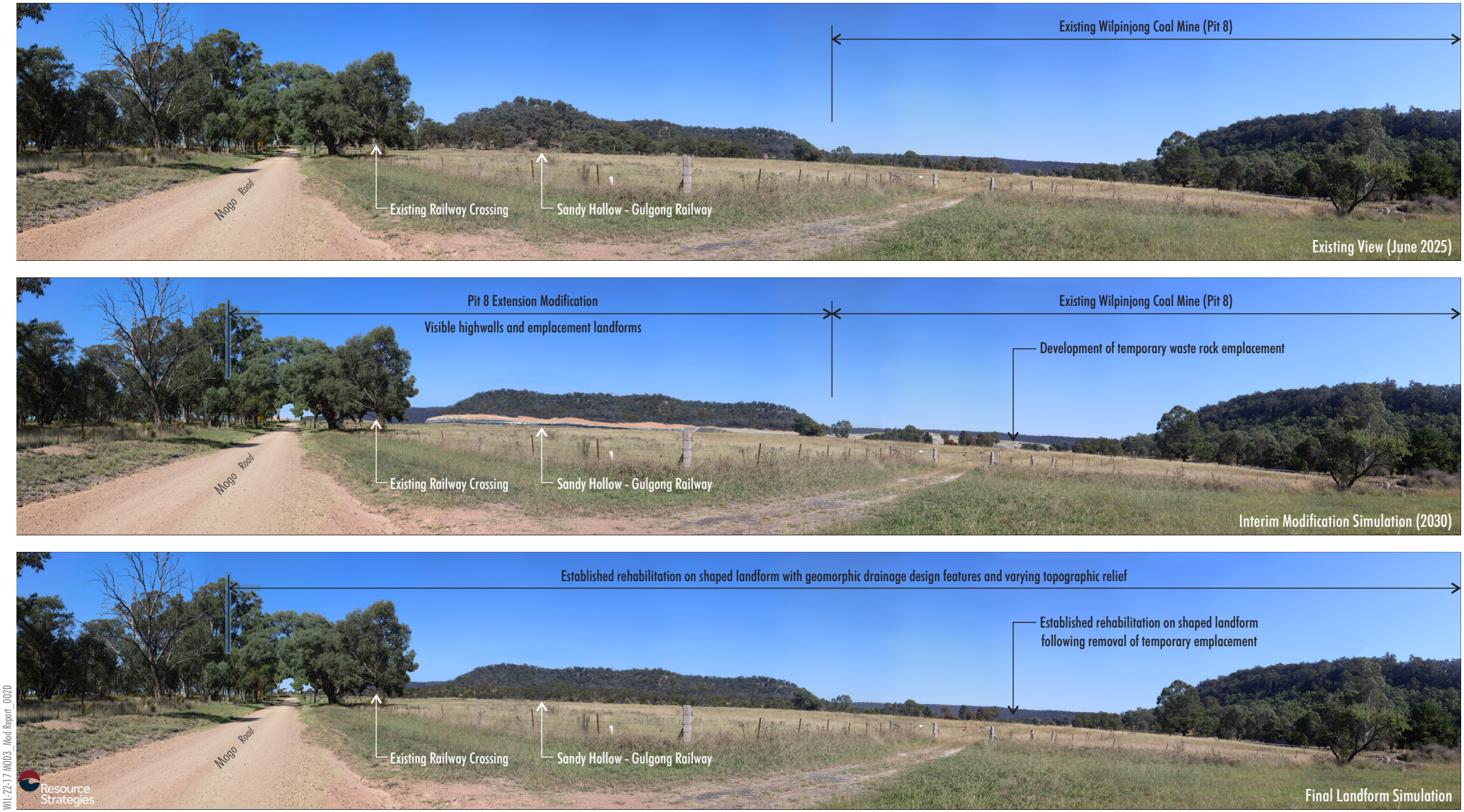
Source: Greenpond (2025)

Peabody

WILPINJONG COAL MINE

Viewpoint 1
Ulan -Wollar Road (Pit 8)

Figure 29



WIL-22-17 MOD3 _Mod Report _002D

Resource Strategies

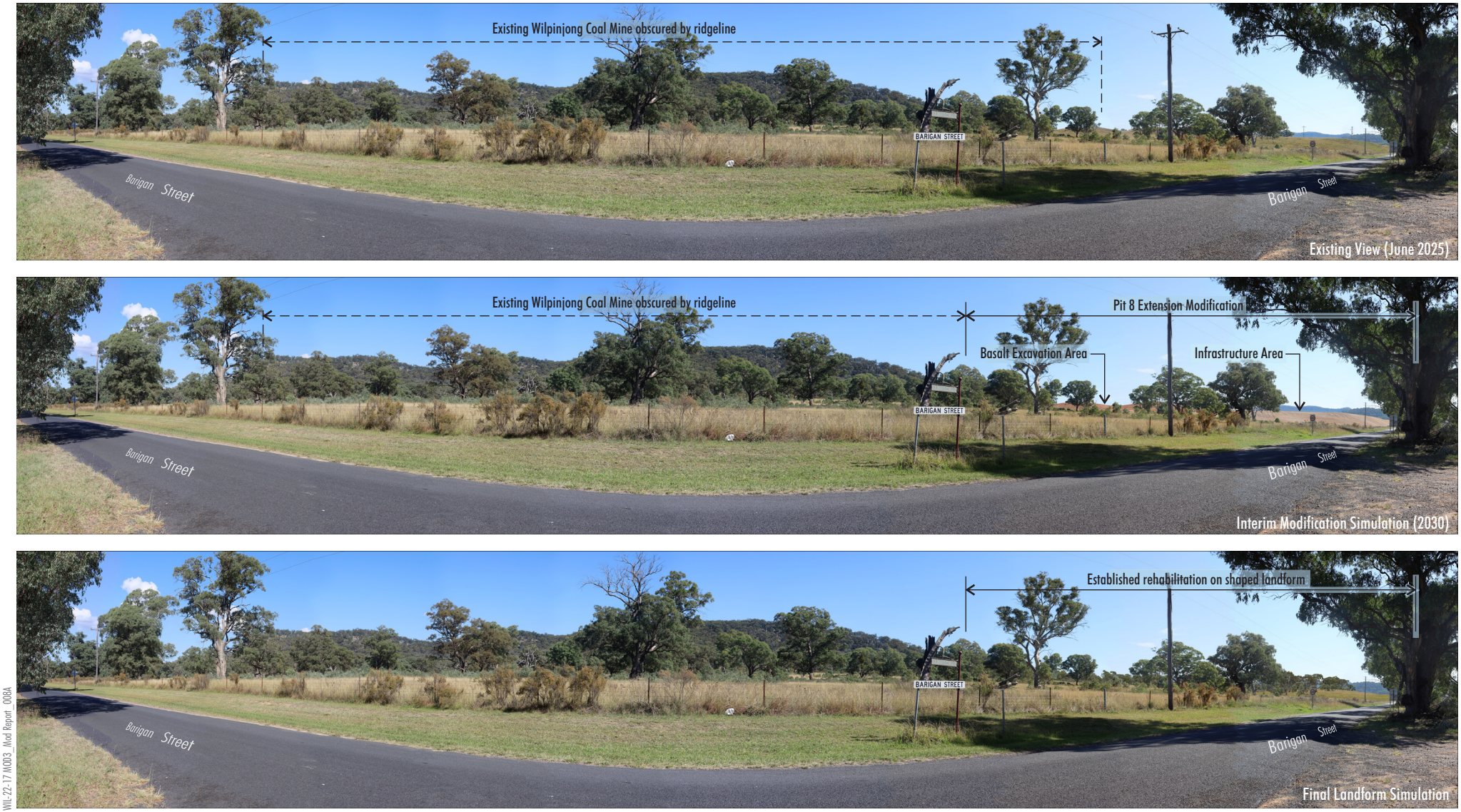
Source: Greenpond (2025)

Peabody

WILPINJONG COAL MINE

Viewpoint 2
Mogo Road

Figure 30



WIL-22-17 MOD3 _Mod Report_ 008A

Source: Greenpond (2025)

Peabody

WILPINJONG COAL MINE

Viewpoint 3
Barigan Street Wollar

Figure 31

Night Lighting

There are two types of lighting effects generally emitted from mining operations (VPA Visual Planning and Assessment, 2020):

- Direct Light Effects – result from when the light source is directly visible and would be experienced if there is a direct line of sight between the light source and viewpoint.
- Diffuse Light Effects - relate to the general night-glow (diffuse light) that results from light of sufficient strength being reflected into the atmosphere.

Potential direct light effects from the Modification would be primarily associated with vehicle headlights, flashing safety lights of smaller vehicles and mobile lighting equipment. These impacts are consistent with the approved Wilpinjong Coal Mine.

A number of mining operations and residences in the vicinity of the Modification contribute to regional diffuse light effects into the night sky (sky glow).

The scale and intensity of night-lighting for the Modification would be similar in intensity to the existing night-lighting at the Wilpinjong Coal Mine. Night lighting sources would however extend eastward into the Modification open cut extension area from the existing Pit 8.

The Siding Springs Observatory is located approximately 145 km to the north-west of the Modification. As such, the Modification is within the Dark Sky Region (i.e. within 200 km radius of the Siding Spring Observatory), as defined in the *Dark Sky Planning Guideline* (DPE, 2023a). There are a number of light sources between the Modification and the Siding Springs Observatory, which may contribute to sky glow at the Siding Springs Observatory.

Any potential impacts associated with diffuse light effects of the Modification would be similar to those assessed for the approved Wilpinjong Coal Mine, and therefore would not materially change any approved impacts at the Siding Springs Observatory. Notwithstanding, mitigation measures, developed in consideration of *AS/NZS 4282:2023 – Control of the obtrusive effects of outdoor lighting*, to minimise diffuse light impacts the Siding Springs Observatory as far as practicable, would continue to be implemented at the Wilpinjong Coal Mine (Section 6.15.3).

6.15.3 Mitigation Measures

The mitigation and management measures that would be implemented for the maintenance of visual amenity at the Modification are described below.

Progressive Rehabilitation

Progressive rehabilitation of Modification landforms would be undertaken in order to reduce the contrast between the Modification landforms and the surrounding environment. This would include progressive establishment of selected native tree and shrub species (endemic where practicable) (Section 6.9). The effectiveness of progressive rehabilitation in reducing visual impacts is shown on Plate 20.

The Pit 8 Extension final landform has also been designed to integrate where practicable with the adjoining natural landforms.

Existing Mitigation Measures

WCPL would maintain the following existing measures implemented to minimise potential visual impacts at the Wilpinjong Coal Mine for the Modification:

- Visual bunds (e.g. up to 3 m in height) are used along select pit boundary areas.
- A tree screen has been established along the east-west section of Wollar Road to the south of the Wilpinjong Coal Mine.
- Trees have been established along the mine access road.
- Mine areas are rehabilitated as soon as practicable following disturbance.
- Temporary rehabilitation of approved temporary waste rock emplacements occur following construction.

In addition, existing remnant vegetation along Ulan-Wollar Road and Wollar Road would continue to be maintained where practicable, to minimise views of the Wilpinjong Coal Mine from these roads.

Night Lighting

Whilst ensuring that operational safety is not compromised, WCPL would continue to minimise light emissions by select placement, configuration and direction of lighting so as to reduce off-site nuisance effects where practicable.

All external lighting at the Project would be operated in accordance with *AS/NZS 4282:2023 – Control of the obtrusive effects of outdoor lighting*.

6.16 ECONOMIC CONSIDERATIONS

An Economic Assessment for the Modification was undertaken by AnalytEcon Pty Ltd (AnalytEcon) (2025) and is presented in Appendix K.

6.16.1 Background

The Economic Assessment was prepared in accordance with the *Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals* (NSW Government, 2015) and the *Technical Notes supporting the Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals* (NSW Government, 2018b).

The Economic Assessment is primarily concerned with the 'net benefits' of a proposal for NSW and for a local region in terms of specific indicators, such as employment and income.

In this case, the local region assessment (Figure 32) was conducted on the Lithgow-Mudgee SA3 Region, where approximately 77% of the Wilpinjong Coal Mine workforce resides (Appendix K).

Mining, health care and social assistance, retail trade, construction, accommodation and food and education and training are the largest sectors from an employment perspective in the SA3 Region (Appendix K).

The mining sector is of greater relative importance to the Lithgow-Mudgee SA3 regional economy than to the NSW economy, as a number of operational mines are located within and proximal to the region (Appenidx K).

As part of the Modification, WCPL proposes to relinquish mining of more than 7 Mt of coal in the Cumbo Creek corridor and Rocky Hill complex and consideration of WCPL foregoing the extraction of this approved coal was included in the Economic Assessment along with the proposed extraction of approximately 14 Mt of ROM coal from the Pit 8 Extension.

6.16.2 Environmental Review

AnalytEcon (2025) has conducted a cost-benefit analysis to evaluate the potential net benefits of the Modification to NSW (Appendix K).

The assessment of flow-on effects in the local region and NSW is based on input-output modelling developed by AnalytEcon (2025).

Net Benefit for NSW

The Modification would result in a total net benefit of $21 million, which consists of additional coal royalties of $37 million in NPV terms, and a reduction in NSW's deemed share of company income taxes of (-) $16 million in NPV terms (Appendix K).

Sensitivity analysis undertaken for discount rates, royalties, taxes and coal prices shows that the net benefits accruing to the NSW community remain positive in the scenarios modelled (Appendix K).

Employment and Income

If approved, the Modification would deliver the following benefits to the Lithgow-Mudgee SA3 Region between 2026 and 2033 (Appendix K):

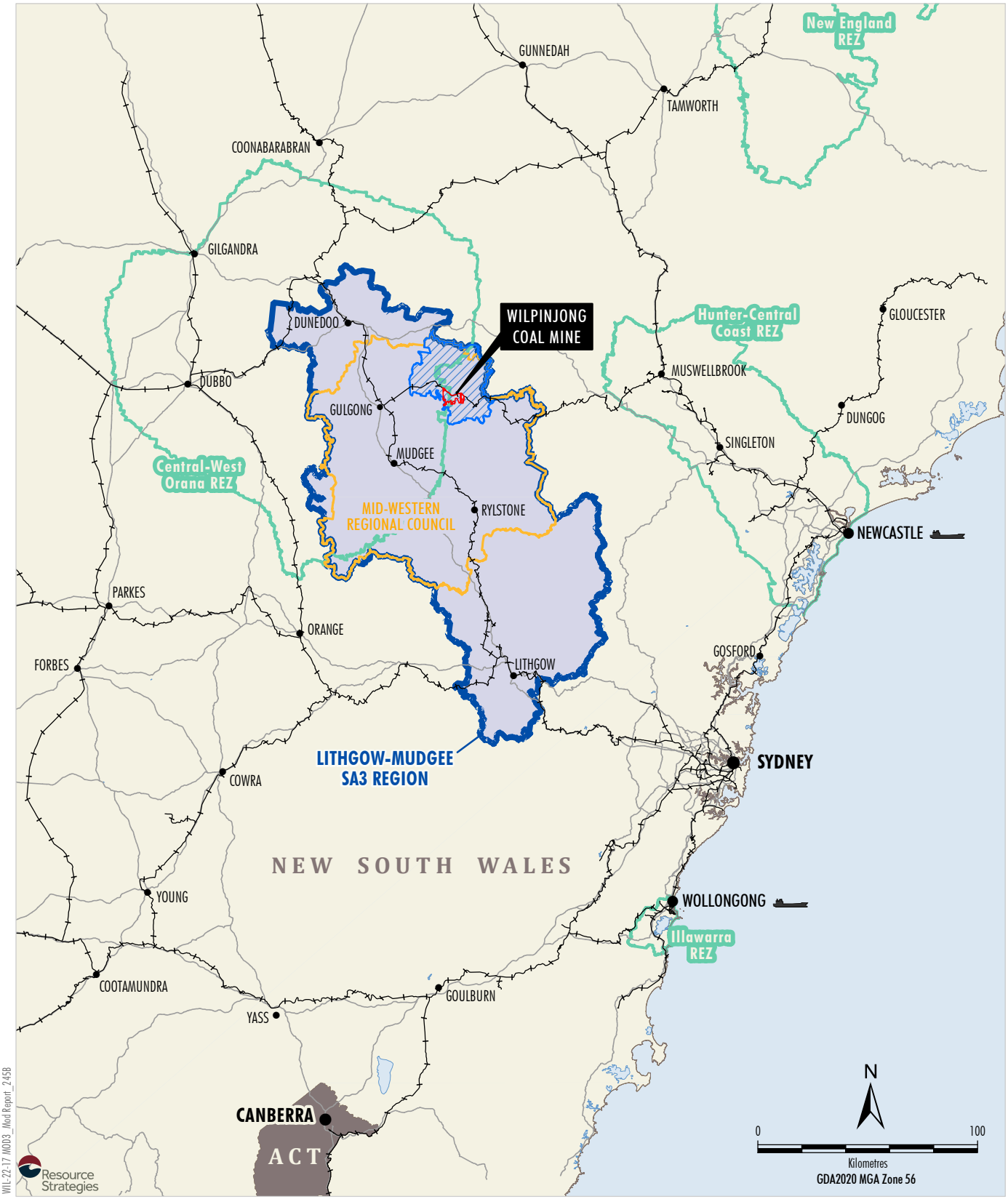
- local suppliers would benefit from additional expenditure;
- on average, an additional 73 FTE operational jobs per annum for local workers;
- additional disposable income accruing to the local operational workforce would amount to $41 million in NPV terms; and
- the local operational workforce would earn $23 million in NPV terms more than the median wage in the Lithgow-Mudgee SA3 Region.

Voluntary Planning Agreement

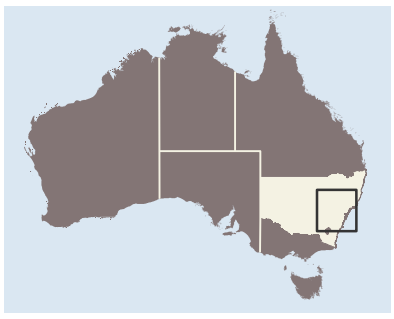
WCPL's VPA has with the MWRC (signed in 2011) comprises a range of benefits for the local community, including an annual:

- community infrastructure contribution;
- road maintenance contribution; and
- social amenity/infrastructure contribution.

These payments are linked to the number of permanent employees and contractors at the Wilpinjong Coal Mine (and the Modification would act to reduce the rate of workforce decline). In 2023-2024, WCPL's VPA payments amounted to almost $600,000. WCPL additionally contributed more than $260,000 to the Ulan Road Strategy (Appendix K).



Source: NSW Spatial Services (2025); EnergyCo (2025)



LEGEND

- Major Railway
- Highway
- Renewable Energy Zone (REZ)
- Mid-Western Regional Local Government Area
- Local Economic Region
- Relevant Social Locality
- Mining Lease Boundary (ML)

Peabody

WILPINJONG COAL MINE

Social Locality and Economic Assessment Regions

Figure 32

In addition, WCPL supports a broad range of health, education, sports, indigenous, environmental and other community initiatives.

6.16.3 Mitigation Measures

The Modification would reduce the natural rate of workforce decline at the Wilpinjong Coal Mine and result in additional regional expenditure and employment until June 2034 (Appendix K).

Cessation of mining operations would, however, result in a contraction in regional economic activity.

The magnitude of the regional economic impacts from cessation of the Wilpinjong Coal Mine incorporating the Modification would depend on a number of interrelated factors. Including the movements of workers and their families, alternative development opportunities and economic structure and trends in the regional economy at the time.

A Mine Closure Plan would therefore be developed for the Wilpinjong Coal Mine in consultation with relevant regulatory authorities and community stakeholders to address this transition.

Adaptive Management

WCPL is investigating opportunities to seek additional environmental approvals for a future SSD Project in its exploration tenements to the east of the Modification.

If WCPL elects to pursue this opportunity it would be the subject of comprehensive environmental assessments, including consideration of potential economic impacts.

6.17 SOCIAL AND COMMUNITY INFRASTRUCTURE

An SIA was prepared for the Modification by Square Peg Social Performance Pty Ltd (Square Peg) (2025) that considered the potential impacts of the Modification on social values, population and community infrastructure (Appendix K).

6.17.1 Background

The SIA was prepared in accordance with the *Social Impact Assessment Guideline for State Significant Projects* (DPE, 2023b) and its supporting *Technical Supplement - Social Impact Assessment Guideline for State Significant Projects* (DPE, 2023c), and *Undertaking Engagement Guidelines for State Significant Projects* (DPHI, 2024d).

In addition, where relevant, the *Community Consultative Committee Guideline – State Significant Projects* (DPE, 2022e) and the *Practice Note – Engaging with Aboriginal Communities* (DPE, 2023d) have informed engagement with the Wilpinjong Coal Mine CCC representatives and Aboriginal stakeholders.

Square Peg (2025) assessed the potential social impacts associated with the Modification proceeding, the Modification not proceeding and also considered the cumulative combined impacts with the approved Wilpinjong Coal Mine and surrounding projects and operations (Appendix K).

Community Consultation

The SIA (Appendix K) was informed by consultation undertaken by WCPL since commencement of operations at the Wilpinjong Coal Mine in 2006 and relevant Modification specialist assessments (Appendices A to N).

Square Peg engaged with a range of stakeholders to ascertain views on existing cumulative and potential incremental social impacts of the Modification, including (but not limited to) (Appendix K):

- the Wilpinjong Coal Mine CCC;
- MWRC;
- Gulgong Chamber of Commerce;
- Business Mudgee;
- Wollar Progress Association;
- Aboriginal stakeholders, including the RAPCC, and Native Title holders; and
- a selection of nearby residents, landholders, pastoral licence holders on WCPL-owned land and WCPL employees.

A summary of key themes and community views from this consultation is provided in Table 33. Further details are presented in Appendix K.

Existing Environment

The Wilpinjong Coal Mine is located on the traditional lands of the Wiradjuri Nation, approximately 40 km north-northeast of Mudgee within the MWRC LGA in the Central Tablelands of NSW. Major towns within the MWRC LGA include Mudgee, Gulgong, Rylstone and Kandos. The MWRC LGA character and history is shaped by its agricultural base, including viticulture and associated tourism.

Table 33
Summary of the Themes and Community Views from the SIA Consultation

Theme	Community Views
Employment and business opportunities and attendant population growth	• Stakeholders acknowledged how employment at the Wilpinjong Coal Mine has provided people with well paid jobs, and that had enabled them to stay in or return to the region. • Most respondents recognised that the population in the region – particularly Mudgee – was growing, and attributed that to the mining industry, including the Wilpinjong Coal Mine. • There were mixed views about the employment opportunities in Wollar and district. Some described the benefits of employment, others commented that there weren't many jobs available for locals. • Regional residents and employees described how they anticipated that the Modification would maintain employment at the mine for longer, and they described how that would provide confidence to the workforce and the community.
Housing affordability and availability	• Access to housing and housing affordability was a key regional issue, particularly in Mudgee. Several stakeholders noted the strained housing market and attributed this to the mining industry. • Some stakeholders acknowledged that housing affordability was an issue across Australia, and not unique to the region. • Stakeholders commented on the renewable energy projects in the area, which were also contributing to housing demand.
Population reduction in the Wollar district and attendant loss of services	• Stakeholders expressed concern with the historical reduction in the availability and affordability of properties due to past mine property acquisition and competitive markets. • Stakeholders noted how property acquisition enabled residents to sell their properties at good prices and move (e.g. to Mudgee). This was seen as positive for the affected people, as it would enable the ageing population to live closer to services and family. • Some stakeholders noted that the declining population had significantly affected their quality of life. This included losing access to services, shops, and the school. • There were however different views on the causes of the decline in services, with some noting that other than the school and the shop, there were not many services left in Wollar when the mine was established.
Amenity impacts	• Residents expressed concern for the current amenity impacts (i.e. noise, odour, dust and light from the Wilpinjong Coal Mine) and the perceived effect on their lives and sense of wellbeing. • Some residents described how the Modification would move the mine closer to their residences, and believed this would lead to experiencing more frequent or more intense amenity impacts, particularly noise. Others, whilst not foreseeing any change in intensity, commented that the Modification would prolong their current experiences of impacts.
Environmental impacts	• Stakeholders expressed concern about the environmental impacts of the Wilpinjong Coal Mine in relation to the health of the Goulburn River. This was described as having deteriorated since the establishment of multiple mines in the area.
Additional land required by the Modification	• Pastoral licence holders described how the Modification could reduce the land they currently used for cattle grazing.
Quality of life and sense of place	• Some regional residents noted how employment at the mine had enabled them to stay in or return to Mudgee – a place they felt connected to – and to build good lives for themselves and their families.
Connection to a future mine expansion	• Some local residents described how the Modification enabled a future expansion of the Wilpinjong Coal Mine into Pit 9 and Pit 10 within EL 9399, which is located to the east of Wollar, enabling mining through to 2044. For some, the Modification represented an existential threat to the Village of Wollar and felt that these projects should be assessed together. • Some respondents who valued employment and business opportunities – including current WCPL employees – noted how the Modification would instill confidence that these would continue. Residents interpreted the Modification as an enabler of future expansions, which was viewed in a positive light.

Source: Appendix K.

Following the development of the Wilpinjong Coal Mine, WCPL has acquired most of the properties within Wollar. Some of these properties are occupied by WCPL employees whilst on shift. Most permanent residents live in the surrounding areas, including on Mogo Road, Araluen Road and Barigan Road.

The SIA for the Wilpinjong Extension Project estimated that there were approximately 23 households in the Wollar community, and a resident population of approximately 40 to 50 people (Elliot Whiteing, 2015). It is likely that ongoing acquisition of private properties has contributed to a further decline in the population in the Wollar area since the time of the Wilpinjong Extension Project SIA (Appendix K).

Social Locality

The SIA defines the social locality as the area where the social impacts associated with the Modification are likely to be experienced.

Square Peg (2025) identified primary and secondary social localities for the Modification. The primary social locality consists of the suburbs and localities (SALs) of Wollar, Mogo, Ulan, Turill, Wilpinjong and Cumbo. This is the area where most stakeholders are likely to directly experience potential social, environmental and/or amenity related impacts from the Modification.

Square Peg (2025) identified that stakeholders within the Wollar and Mogo SALs are most likely to experience any direct impacts associated with the Modification (Appendix K).

A secondary social locality comprising the MWRC LGA was also defined in the SIA. This is the area where many of the socio-economic impacts relating to employment, business opportunities, housing and services are likely to be experienced (Appendix K).

The MWRC LGA had a total population of approximately 25,700 persons (at the time of the 2021 Census) (Appendix K).

Figure 32 shows the MWRC LGA and the relevant social localities assessed as part of the SIA (Appendix K).

Social Baseline

A description of the existing population profile, employment, housing, health, education and other services in the region is provided in Appendix K. This includes key local and regional social baseline findings identified during consultation.

The characteristics of the primary and secondary social localities can be summarised as follows (Appendix K):

- The primary social locality consists of a number of SALs, centred on Wollar. The population in this area is small, and has been declining for some time. At total of 19 private dwellings and 52 residents were recorded in Wollar in the ABS 2021 Census.
- WCPL owns most of the properties within Wollar, and leases these to community members or workers.
- In Wollar in particular, the workforce participation rate is low, and unemployment rate is high. Median incomes are however higher than in the neighbouring SALs and the MWRC LGA.
- Across the MWRC LGA, the population has been increasing since around 2005. Mining is the largest industry of employment, and added 365 jobs to the LGA between 2016 and 2021.
- Housing costs have been increasing in MWRC LGA. Median mortgage repayments, median rents and the proportion of people in rental stress is nevertheless lower than across NSW.
- Most social services in the region are located in the centres of Mudgee, Gulgong or Rylstone.
- Mining was the largest industry of employment in the MWRC LGA, accounting for 16% of employment.
- Education levels in the secondary social locality are generally lower compared to NSW. There are more residents with a certificate level education in the MWRC LGA.
- Within the MWRC LGA, income inequalities are comparable to across NSW.

6.17.2 Environmental Review

Square Peg (2025) assessed the potential impacts of the Modification as a continuation of the social impacts currently being experienced from the Wilpinjong Coal Mine. Negative social impacts would continue to be experienced by people in close geographical proximity to the operation, while positive social impacts would continue to be experienced at a regional level (Appendix K).

A number of the potential impacts identified for the Modification were also considered to already occur due to the existing nearby mining operations, and cumulative social impacts would continue to occur in combination with the Modification (Appendix K).

The potential social impacts of the Modification identified by Square Peg (2025) are summarised in Table 34. Cumulative impacts of the Modification with other operational, proposed or approved major projects in the region are described in Appendix K.

The potential social impacts and opportunities associated with the Modification not proceeding have also been considered in the SIA (Appendix K).

The Modification would not involve any material change to the current operational workforce of approximately 705 people (FTE) but would counteract the projected rate of the approved Wilpinjong Coal Mine operational workforce decline that would occur in the absence of the Modification. It would also extend the life of operation by approximately six months.

Several stakeholders spoke about how employment at the Wilpinjong Coal Mine had enabled people to move to or stay in the MWRC region, and on a personal level how it had enabled them to build good lives for themselves and their families (Appendix K).

Cumulative Impacts

The potential cumulative impacts of the Modification and other potentially relevant approved and proposed projects within or near the primary social locality has been considered in the SIA (Appendix K).

Several stakeholders during the consultation process discussed the cumulative effect the mining industry – including the Wilpinjong Coal Mine, Moolarben Coal Complex and Ulan Coal Mine – had at a regional level. This was mostly considered positive as it contributed to population growth and economic and social vibrancy in the region, although some also acknowledged the pressures on housing affordability and availability and accessibility of social services (Appendix K).

Appendix K provides a detailed description of the interaction of surrounding operations and projects have with the Modification, and their potential cumulative impact in terms of livelihood, community and surrounding impacts (Plate 23).

Table 34
Summary of Potential Impacts for the Modification

Impact	Significance Assessment
Positive	
Preservation of cultural heritage areas/objects through the avoidance of direct disturbance of the existing Cumbo Creek corridor and Rocky Hill complex.	High
Continuation of employment opportunities within the region by the mining industry.	High
Aspirations about future employment and contracting opportunities as stakeholders described the Modification as enabling a future expansion of the Wilpinjong Coal Mine into Pit 9 and 10.	High
Negative	
Potential for continued population reduction in Wollar through Wilpinjong Coal Mine land acquisitions.	Medium
Temporary accommodation demand during the construction phase of the Modification would strain the ongoing demand for housing (rent) within the region.	Low
Potential for disturbance of valued cultural heritage objects within the surface development area.	Medium
Continued amenity matters including noise, light, odour and dust would affect the sense of place of nearby residents.	Medium
The Modification would contribute to the visual impact for nearby residents which affects their sense of place.	Medium
Reduced viability of farming enterprises currently used for cattle grazing for the affected pastoral licence holder.	Medium
Uncertainty about the future of Wollar, as stakeholders described the Modification as enabling a future expansion of the Wilpinjong Coal Mine into Pit 9 and 10.	High

Source: Appendix K.

Mine Closure

The Modification would not materially change any impacts of mine closure from a social perspective.

In the absence of the Modification, operational employment and associated direct flow-on economic effects of the Wilpinjong Coal Mine would begin to decline from 2028 and would cease in 2033. Additionally, an average of 25 construction jobs (peak of 65), would not be created in 2027 to construct the relocated public infrastructure.

Intergenerational Equity Considerations

Due to the minimal scale of change and short duration of the Modification, Square Peg (2025) has assessed that it is considered unlikely that any social impacts of the Modification proceeding would affect intergenerational equity (Appendix K).

6.17.3 Mitigation Measures

WCPL would continue to work with local government and community to minimise potential social impacts of the Modification and maximise potential opportunities.

A number of mitigation and management strategies have been identified by Square Peg (2025) and would be implemented by WCPL, including the following key strategies (Appendix K):

- Engage with the affected pastoral licence holder in relation to the impact to the agricultural operations as a result of the Modification.
- Implement appropriate, transparent and ongoing engagement with stakeholders in relation to the future of the Wilpinjong Coal Mine and Wollar.
- Review the building demolition requirements of the existing Social Impact Management Plan in consultation with the community and the CCC.

For the impacts that represent continuations of existing impacts, no new mitigation measures are proposed. WCPL has existing management plans, procedures and personnel that address these impacts within existing operations.

Square Peg (2025) recommends WCPL continues to implement and improve these throughout the life of the Modification.

Plate 23: Coal Train on the Sandy Hollow-Gulgong Railway

6.18 OTHER ENVIRONMENTAL ASPECTS

6.18.1 Road Traffic Noise

The Modification annual ROM coal production rate would be well below the approved peak (16 Mtpa) and the peak operational workforce would be consistent with the current approved operation (noting the workforce is expected to progressively decrease from 2028 onward). It is expected the number of deliveries and contractors accessing the site would remain generally consistent with the current operation.

Construction activities associated with the Modification are expected to require an average of 25 personnel, with a peak of 65 personnel during 2027 (well below the approved construction workforce of 100 personnel) and would primarily be associated with the MWRC completing road relocation works (Plate 24).

Considering the small number of construction personnel and the relatively short duration of works, road traffic noise from construction is expected to be negligible when considering traffic noise from the approved operation and existing baseline traffic levels (Appendix A).

6.18.2 Rail Transportation Noise

The Modification does not propose any changes to the currently approved coal transport rates. Consistent with the current Wilpinjong Coal Mine, the Modification would generate up to a peak daily maximum of 10 laden trains per 24 hours. The Modification would not alter the duration of Wilpinjong Coal Mine product coal transport on the rail network (i.e. to 2033).

6.18.3 Hazard And Risk

WCPL would continue to operate the existing declared dams under the NSW *Dams Safety Act 2015* and consult with Dams Safety NSW regarding the management of declared dams operated by WCPL.

WCPL has obtained supplementary advice on geotechnical (Attachment 3) and geochemistry (Appendix M) considerations which indicate the Pit 8 Extension area would be generally consistent with the approved mine.

The proposed activities associated with the Modification (e.g. continuation of open cut mining and waste emplacement activities) are consistent with the approved mine and would not significantly alter the risk profile of the operation.

Notwithstanding, a range of environmental management plans and monitoring programmes would be reviewed, and where necessary, revised to include the Modification and manage any associated environmental risks (as described above).

6.18.4 Dangerous Goods

The transportation, handling and storage of all dangerous goods for the Modification would continue to be conducted in accordance with the requirements of the NSW *Work Health and Safety Regulation 2017* (or its latest equivalent). On-site consumable storage areas would continue to be designed with appropriate bunding and fuel and explosive storage areas would be regularly inspected and maintained.

Plate 24: Ulan-Wollar Road North of Pit 8

7 JUSTIFICATION OF THE MODIFICATION

This section provides a justification for the Modification and conclusion for the Modification Report.

As part of the justification of the Modification, consideration has been given to:

- the strategic context, inclusive of avoidance of approved mine areas and the status of WCPL's exploration of future expansion opportunities (Section 7.1);
- environmental assessment context (Section 7.2)
- the engagement undertaken for the Modification (Section 7.3);
- key environmental assessment outcomes including the potential impacts of the Modification (Section 7.4);
- the relevant planning and policy objectives (Section 7.5); and
- the benefits of the Modification (Section 7.6).

7.1 STRATEGIC CONTEXT

WCPL has elected to avoid mining of the existing Cumbo Creek corridor and the Rocky Hill complex which are currently approved to be mined in Pit 4 and Pit 8, respectively, under Development Consent (SSD-6764).

This avoidance would sterilise more than 7 Mt of approved ROM coal and reduce the approved Wilpinjong Coal Mine surface development footprint by approximately 50 ha.

Mining operations at the Wilpinjong Coal Mine under Development Consent (SSD-6764) are currently approved until 31 December 2033. In this context, the Modification would provide access to additional ROM coal resources to augment coal production and require an additional six months of mining operations to backfill the final voids and shape the final landform (i.e. until 30 June 2034).

The Modification would maximise the use of existing infrastructure and help slow the natural decline in workforce numbers that would otherwise occur as the approved Wilpinjong Coal Mine progressively completes its current working faces (e.g. in Pit 6), by providing an additional working face for the life of the Modification.

Approval of the Modification would therefore support the continuation of ROM coal extraction and employment levels while WCPL evaluates opportunities to develop a future Wilpinjong Coal Mine SSD extension proposal (e.g. in EL 9399).

7.2 ENVIRONMENTAL ASSESSMENT CONTEXT

The Pit 8 Extension is modest relative to the approved Wilpinjong Coal Mine open cut pits (Figure 4). The Modification would not substantially change the scale or nature of the Wilpinjong Coal Mine, which would continue to align with the objectives of the Strategic Statement (NSW Government, 2020).

The continued incremental development of coal resources to the south of the Sandy Hollow-Gulgong Railway adjoining the approved Pit 8, and in close proximity to WCPL's existing facilities is consistent with the nature of the existing mining operation.

WCPL considers that, with the Modification, the material and essential features of the Wilpinjong Coal Mine would remain largely unchanged when compared with the mine incorporating the Wilpinjong Extension Project as approved in 2017 (Section 4.1.1).

7.3 STAKEHOLDER ENGAGEMENT OVERVIEW

Contemporary and targeted consultation has been conducted for the Modification. WCPL has met with DPHI, EPA, NSW Resources, NSW Resources Regulator and Heritage NSW regarding the Modification.

WCPL also provided overviews of the Modification to a range of NSW Government agencies including CPHR within the NSW DCCEEW, NPWS, Crown Lands, TfNSW and NSW Department of Education (Section 5).

In addition, WCPL has consulted with the AG DCCEEW on the Modification proposal, which has been declared a 'controlled action' under the EPBC Act (Section 5.2).

WCPL has continued its regular consultation with MWRC, the Wilpinjong Coal Mine CCC, the RAPCC and the combined Cultural Heritage Liaison Sub Committee and Native Title Implementation Committee.

Additional targeted consultation for the Modification was undertaken for the ACHA and SIA, as well as with selected neighbouring private landholders.

Key concerns included ongoing impacts on local amenity (primarily air quality and noise), social impacts, and potential cumulative effects in conjunction with renewable energy development in the region. The comments and issues identified during consultation have been considered and addressed in the preparation of this Modification Report.

7.4 CONSOLIDATED SUMMARY OF ASSESSMENT OUTCOMES

WCPL could operate the Wilpinjong Coal Mine incorporating the Modification in accordance with the existing criteria and performance measures as set out in Development Consent (SSD-6764) and the existing environmental management framework with only minor augmentations.

WCPL has reviewed the potential environmental impacts of the Modification to identify the key issues requiring assessment. The key environmental issues are summarised in Table 35.

The review indicates that the environmental management and monitoring measures currently implemented by WCPL at the Wilpinjong Coal Mine could continue to be effectively applied to minimise the potential impacts on existing environmental values and the nearest private residences.

The Modification would not result in a significant increase in potential environmental impacts compared to the approved the Wilpinjong Coal Mine. It is considered that the consent authority can be satisfied that the environmental impacts of the proposed modification are acceptable, subject to compliance with the environmental performance conditions of Development Consent (SSD-6764).

Table 35
Key Outcomes of the Environmental Review

Environmental Aspect	Summary of Key Environmental Assessment Conclusions	Key Mitigation Measures for the Modification
Operational Noise	With the implementation of WCPL's existing Noise Management Plan and noise management measures (including real-time monitoring and application of operational controls under adverse weather conditions), no noise exceedances are predicted at any private residences without existing negotiated noise agreements.	WCPL would relocate or shutdown some mobile equipment as may be required (e.g. during adverse weather conditions) to maintain operational noise compliance at the nearest private receivers where Development Consent (SSD-6764) noise criteria apply. WCPL would continue to implement the existing real-time noise management system and associated response protocols in the Noise Management Plan. Wilpinjong Coal Mine would continue to implement existing negotiated noise agreements with the three nearest private receivers (i.e. where Development Consent [SSD-6764] noise criteria do not apply).
Blasting	In the absence of blast design controls, blasting in the Pit 8 Extension area could potentially result in exceedances of applicable blasting criteria. A range of MICs have been evaluated and indicative compliance setback distances determined for differing blast vibration and overpressure criteria.	WCPL would continue to apply blast management measures to maintain blasting compliance at applicable blast receiver types (e.g. private residences, infrastructure and sensitive geological structures). The Blast Management Plan would be updated to include the results of geotechnical investigations and setting of applicable site-specific blast vibration criteria for sensitive geological structures located in close proximity to the Pit 8 Extension.

Table 35 (Continued)
Key Outcomes of the Environmental Review

Environmental Aspect	Summary of Key Environmental Assessment Conclusions	Key Mitigation Measures for the Modification
Air Quality	Air quality modelling indicates that no exceedances of applicable Development Consent (SSD-6764) air quality criteria are predicted to arise at any privately-owned residences as a result of the Modification.	The real-time air quality monitoring system and response protocols detailed in the Air Quality Management Plan would continue to be implemented, including proactive and reactive management measures.
Greenhouse Gas	Approved projected greenhouse gas emissions of the Wilpinjong Coal Mine are already included in NSW's 2024 business as usual greenhouse gas projections. The proposed Pit 8 Extension is also included in NSW's 2024 Scenario 3 greenhouse gas projections. As the mine has relatively low fugitive gas concentrations, approximately 75% of the Scope 1 emissions of the Wilpinjong Coal Mine incorporating the Modification would arise from on-site combustion of diesel. Based on WCPL's internal projections, WCPL would largely comply with the current Safeguard Mechanism greenhouse gas intensity decline rates to 2033 because the Wilpinjong Coal Mine has a significantly lower greenhouse gas intensity than the industry average.	As the Wilpinjong Coal Mine is approved to extract ROM coal until 2033 and the Modification coal production would also occur within this timeframe with no material augmentation of mobile equipment or fixed plant required, there are limited opportunities to reasonably and feasibly reduce Scope 1 greenhouse gas emissions. Notwithstanding, WCPL would prepare a Climate Change Mitigation and Adaptation Plan for the Modification. As part of this analysis WCPL would evaluate the potential marginal abatement cost of adoption of premium diesel fuel for the Modification. WCPL would continue to comply with its obligations to report greenhouse gas emissions and energy consumption/production under the NGER Act and the associated Safeguard Mechanism.
Water Resources	The Modification would not result in a material change to the approved groundwater and surface water impacts of the Wilpinjong Coal Mine. As the Modification includes the exclusion of approved mining from the existing Cumbo Creek corridor, approved impacts upon the existing creek alignment would be reduced.	WCPL would maintain appropriate groundwater and surface water licences in accordance with the relevant water sharing plans. Water monitoring and management at the Wilpinjong Coal Mine would continue to be undertaken in accordance with an approved Water Management Plan.
Biodiversity	The Modification would result in the disturbance of approximately 145 ha of native vegetation, comprising 20 ha of native woodland/forest and 125 ha of DNG. The impact on threatened species and communities resulting from the Modification would not constitute a SAII under the BC Act. The cumulative impact on threatened species and communities resulting from carrying out the overall Wilpinjong Coal Mine as proposed to be modified (including previous disturbance) would not/is not likely to constitute a SAII.	WCPL would address NSW offset requirements consistent with the NSW Biodiversity Offsets Scheme. WCPL would also implement a number of additional biodiversity management measures, including: • an artificial bat habitat creation programme; • regeneration of the Cumbo Creek mining exclusion area with native vegetation; • planting of box gum woodland tree species within an area of cleared grassland adjacent to the Modification (approximately 50 ha); and • rehabilitation of the Pit 8 Extension area with native woodland vegetation. Biodiversity would continue to be managed in accordance with the Biodiversity Management Plan, which would be updated to incorporate the Modification.

Table 35 (Continued)
Key Outcomes of the Environmental Review

Environmental Aspect	Summary of Key Environmental Assessment Conclusions	Key Mitigation Measures for the Modification
Aboriginal Cultural Heritage	The Modification would avoid the Rocky Hill complex (high cultural significance), and any Aboriginal cultural heritage material associated with the Cumbo Creek open cut exclusion area. The Modification disturbance footprint was reduced to avoid two sites of moderate-high significance WCP1129 (rock shelter with PADs and artefacts) and WCP1143 (subsurface artefact scatter and PADs). Some 12 Aboriginal cultural heritage sites remain within the Modification footprint and would be disturbed (nine of low scientific significance and three of moderate-high scientific significance). Three sites are also located within 100 m of the Modification surface disturbance area.	Aboriginal heritage would continue to be managed in accordance with the Aboriginal Cultural Heritage Management Plan, which would be updated to incorporate the Modification. Sites impacted by the Modification would be subject to site salvage, sub-surface test work for relevant PADs, and sensitive sites located in close proximity to the Modification would be fenced to avoid accidental damage and rock shelters proximal to open cut blasting would be managed in accordance with the Blast Management Plan.
Social and Community Infrastructure	The Modification represents a continuation of existing mining at the Wilpinjong Coal Mine and most social impacts are therefore continuations of existing experiences, and mostly at similar levels. At a regional level, social impacts are predominantly positive.	Social impacts of the Wilpinjong Coal Mine would continue to be managed in accordance with the Social Impact Management Plan, which would be updated to incorporate the Modification. Fears or aspirations related to potential future expansions of the Wilpinjong Coal Mine would be addressed if and when WCPL progresses any future SSD application.
Economics	The Modification includes relinquishment of some coal from the approved mine and seeks to offset this with 14 Mt of ROM coal from the Pit 8 Extension, resulting in a net benefit to NSW of $21 million (NPV). The Modification would also benefit the existing Wilpinjong Coal Mine workforce, who would be employed in higher numbers through to 2033.	A Mine Closure Plan would be developed for the Wilpinjong Coal Mine to address the potential regional economic impacts of closure. WCPL would also continue to investigate opportunities to further extend the life of the Wilpinjong Coal Mine through a separate SSD application.

7.5 CONSIDERATION OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

7.5.1 Objects of the Environmental Planning and Assessment Act 1979

Section 1.3 of the EP&A Act describes the objects of the EP&A Act (Section 4.1.2). The Modification is considered to be generally consistent with the objects of the EP&A Act, because it is a Modification that:

- would reduce the natural rate of workforce decline at the Wilpinjong Coal Mine and facilitate continued local and regional employment, economic development opportunities and community contributions;
- would develop the State's valuable coal resources within WCPL's existing MLs and EL 9399, with the value of coal production recognised in the Strategic Statement (NSW Government, 2020);
- has been designed having regard to relevant principles of ecologically sustainable development, including:
  - continued implementation of WCPLs adaptive approach to environmental management and high standards for environmental, occupational health and safety performance;
  - assessment and management of greenhouse gas emissions associated with the Modification;
  - consideration of risks and uncertainty in project planning and environmental assessment;
  - consultation with community and regulatory stakeholders; and
  - the socio-economic benefits arising from the proposed continuation of the Wilpinjong Coal Mine.
- is compatible with its near neighbours, including agricultural businesses;
- would incorporate a range of measures for the protection of the environment, including the protection of native plants and animals, threatened species, and their habitats;
- incorporates appropriate mitigation measures to manage potential direct and indirect impacts on heritage, informed by multiple Aboriginal and historical heritage assessments undertaken for the Wilpinjong Coal Mine;
- would make maximum use of the existing Wilpinjong Coal Mine infrastructure, coal handling, rail transport and existing open cut footprint;
- incorporates progressive rehabilitation that would act to minimise the visual contrast of the Modification with the surrounding environment;
- would be determined by the Minister, or the Minister's Delegate, however, a wide range of stakeholders have been consulted throughout the assessment process; and
- allows for the Wilpinjong Coal Mine, incorporating the proposed Modification to continue to be developed in a manner that incorporates community input through the public exhibition of the Modification documents and the major project assessment process.

7.5.2 Evaluation Under Section 4.15(1) of the Environmental Planning and Assessment Act 1979

In evaluating the Modification, under section 4.15(1) of the EP&A Act, the consent authority is required to take into consideration a range of matters as they are of relevance to the subject of the application (Section 4.1.4).

While this is a requirement of the consent authority, this Modification Report has been prepared to generally address the requirements of section 4.15(1) of the EP&A Act to assist the consent authority, as follows:

- Consideration of the provision of relevant environmental planning instruments is provided in Section 4.3 and Attachment 2.
- This Modification Report has been prepared in consideration of the prescribed matters in the EP&A Regulation.
- The existing planning agreement with the MWRC would continue to apply to the modified Wilpinjong Coal Mine.

- A description of the existing environment, an assessment of the potential environmental impacts associated with the Modification, and a description of the potential measures to avoid, mitigate, rehabilitate, remediate, monitor and/or offset the potential impacts of the Modification are described in Section 6 and Appendices A to N.
- The suitability of the site of the Wilpinjong Coal Mine was considered in the Wilpinjong Coal Project EIS (WCPL, 2005b) and the Wilpinjong Extension Project EIS (WCPL, 2016) and by the Planning Assessment Commission (now IPC) in 2017 in determining the Wilpinjong Extension Project (PAC, 2017).
- The Wilpinjong Coal Mine incorporating the Modification would remain substantially the same as the Wilpinjong Extension Project and the proposed Modification final landform is considered in Section 3 and 6.
- This Modification Report will be placed on public exhibition and WCPL will respond to any submissions made on the Modification through a Submissions Report.
- This Modification Report demonstrates why the Modification is considered to be in the public interest.

7.6 JUSTIFICATION FOR THE MODIFICATION

WCPL currently has approval under Development Consent (SSD-6764) to carry out mining operations until 31 December 2033, inclusive of mining of Cumbo Creek and Rocky Hill, that are proposed mine exclusion areas under the Modification.

The Modification would also complete ROM coal extraction by 31 December 2033 but would exclude the Cumbo Creek and Rocky Hill mining areas and correspondingly add approximately 14 Mt of additional ROM coal reserves from the Pit 8 Extension area.

The Modification would facilitate the following key socio-economic benefits:

- it would reduce the natural rate of workforce decline at the Wilpinjong Coal Mine and facilitate continued local and regional employment and community contributions;
- direct and indirect flow on economic effects of increased ROM coal production over the productive life of the Modification (i.e. 2027-2033);
- construction of the realigned Ulan-Wollar Road on an improved physical alignment and upgraded pavement condition (relative to existing local roads);
- continuation of existing Voluntary Planning Agreement payments to the MWRC; and
- incremental increases in royalty payments to the NSW government from additional WCPL coal product sales in the period 2027-2033[14].

The Economic Assessment indicates the Modification would result in a total net benefit to NSW of $21 million in NPV terms.

In a scenario where the Modification is not approved:

- an average of approximately 25 construction jobs (peak 65) would not be created in 2027 to construct the relocated public infrastructure;
- approximately 150 ha of land disturbance associated with the Modification would not occur;
- extraction of more than 7 Mt of ROM coal and disturbance of approximately 50 ha associated with the approved mining of the Cumbo Creek corridor and the Rocky Hill complex could still occur;
- some 14 Mt of ROM coal would not be extracted from the Pit 8 Extension area;
- an additional six months of mining operations to backfill voids and shape final landform (i.e. to 30 June 2034) would not occur; and
- operational employment and associated direct flow-on economic effects of the Wilpinjong Coal Mine would begin to decline from approximately 2028 and would cease in 2033.

[14] As of 31 March 2025, the Wilpinjong Coal Mine has contributed more than $875 million in royalty payments to the NSW Government for State infrastructure and services.

In determining the Wilpinjong Extension Project in 2017 the PAC (now the NSW Independent Planning Commission) found (PAC, 2017):

> *The Commission notes that the Project will provide significant benefits to the locality, region and State, with minimal additional impacts beyond that of the existing approved Wilpinjong Coal Mine operations and that the Project is in the public interest.*

It is considered that this finding is equally applicable to the Pit 8 Extension as proposed in this Modification, which is significantly smaller in scale than the Wilpinjong Extension Project and would also be accompanied by reductions within the currently approved mine plan (i.e. for the Rocky Hill complex [Plate 25] and Cumbo Creek corridor).

Plate 25: Eastern Cave Bat – Rocky Hill Complex
Source: BMS (2025).

This Modification Report has demonstrated that WCPL could continue to operate the Wilpinjong Coal Mine (as modified) in accordance with existing criteria and performance measures in Development Consent (SSD-6764) and the existing environmental management framework with only minor augmentation of the existing Development Consent conditions.

7.7 CONCLUSION

The proposed Modification to develop the Pit 8 Extension and extend mining operations under Development Consent (SSD-6764) by some six months and exclude mining from Cumbo Creek and Rocky Hill would involve a range of positive socio-economic effects (Plate 26) and a minor extension in time of current environmental impacts from the Wilpinjong Coal Mine.

In weighing up the main environmental impacts (costs and benefits) associated with the proposal, as assessed and described in this Modification Report, the Modification, on balance, is considered to have significant merit and be in the public interest.

This is consistent with the key conclusions reached by the PAC in approving the Wilpinjong Coal Mine incorporating the Wilpinjong Extension Project in 2017.

Plate 26: Employee at the Wilpinjong Coal Mine

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9 ABBREVIATIONS

<	Less than
°	Degrees
°C	Degrees Celsius
g/m^2/month	grams per square metre per month
µm	Micrometres
µg/m^3	Micrograms per cubic metre
ACCU	Australian Carbon Credit Unit
ACHA	Aboriginal Cultural Heritage Assessment
AEP	Annual Exceedance Probability
AG DCCEEW	Australian Government Department of Climate Change, Energy, the Environment and Water
AHIMS	Aboriginal Heritage Management Information System
AnalytEcon	AnalytEcon Pty Ltd
ARRB	ARRB Group
ARTC	Australian Rail Track Corporation
AUSRIVAS protocol	*NSW Australian River Assessment System (AUSRIVAS) Sampling and Processing Manual*
BAM	*Biodiversity Assessment Method*
BC Act	NSW *Biodiversity Conservation Act 2016*
BC Regulation	NSW *Biodiversity Conservation Regulation 2017*
BC S&T Regulation	*Biodiversity Conservation (Savings and Transitional) Regulation 2017*
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
Bio-Analysis	Bio-Analysis Pty Ltd
BMS	Biodiversity Monitoring Services
Bolwarra	Bolwarra Environmental Services
BoM	Bureau of Meteorology
BSAL	Biophysical Strategic Agricultural Land
Capital Ecology	Capital Ecology Pty Ltd
CCC	Community Consultative Committee
CEEC	Critically Endangered Ecological Community
CER	Clean Energy Regulator
CIC	Critical Industry Cluster
CHPP	Coal Handling and Preparation Plan
CO_2	Carbon Dioxide
CPHR	NSW DCCEEW Environment and Heritage – Conservation Programs, Heritage and Regulation
dB	Decibels
dBA	A-Weighted Decibels
DECCW	NSW Department of Environment, Climate Change and Water
DNG	Derived Native Grassland
DPE	NSW Department of Planning and Environment
DPHI	NSW Department of Planning, Housing and Infrastructure
DPI	NSW Department of Primary Industries
DPIE	NSW Department of Planning, Industry and Environment
EC	Electrical Conductivity
ECA	Enhancement and Conservation Areas
Eco Logical	Eco Logical Australia Pty Ltd
EEC	Endangered Ecological Community

EID	Emissions Intensity Determination
EIS	Environmental Impact Statement
EL	Exploration Licence
EnergyCo	Energy Corporation of NSW
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EP&A Regulation	NSW *Environmental Planning and Assessment Regulation 2021*
EPA	NSW Environment Protection Authority
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
ETL	Electricity Transmission Lines
Extent Heritage	Extent Heritage Pty Ltd
FM Act	NSW *Fisheries Management Act 1994*
FTE	Full-time Equivalent
GDE	Groundwater Dependent Ecosystem
GDE Atlas	Groundwater Dependent Ecosystem Atlas
GEM	Geo-Environmental Management
GHG Protocol	*Greenhouse Gas Protocol*
ha	Hectares
Heritage NSW	NSW DCCEEW Environment and Heritage – Heritage NSW
HMC	Heritage Management Consultants
JBS&G	JBS&G Australia Pty Ltd
IPCC	Intergovernmental Panel on Climate Change
kg	Kilogram
km	Kilometres
km^2	Square kilometres
kV	Kilovolt
L_{Aeq}	Equivalent Continuous Noise Level
$L_{Aeq, Period}$	The equivalent continuous A-weighted sound level over the entire assessment period (Day, Evening, Night)
L_{AN}	Statistical noise exceedance levels, where 'N' is the levels exceeded for a specific percentage
LCZ	Landscape Character Zones
LFN	Low-Frequency Noise
LGA	Local Government Area
LSPS	*Mid-Western Regional Local Strategic Planning Statement – Our Place 2040*
LSC	Land and Soil Capability
m	Metres
m AHD	Metres Australian Height Datum
Mbcm	Million Banks Cubic Metres
MCO	Moolarben Coal Operations Pty Ltd
MEG	Mining, Exploration and Geoscience
MIC	Maximum Instantaneous Charge
Mid-Western Regional LEP	*Mid-Western Regional Local Environmental Plan 2012*
ML	Mining Lease
MLA	Mining Lease Application
ML/day	Megalitres per day
ML/year	Megalitres per year
mm	Millimetres
mm/s	Millimetres per second

MNES	Matters of National Environmental Significance
Mt	Million Tonnes
Mt CO_2-e	Million Tonnes of Carbon Dioxide Equivalent
Mtpa	Million Tonnes per Annum
MW	Megawatt
MWh	Megawatt-hour
MWRC	Mid-Western Regional Council
NAF	Non-Acid Forming
NAHA	Non-Aboriginal Heritage Assessment
NARCliM2.0	NSW and Australian Regional Climate Modelling 2.0
Navin Officer	Navin Officer Heritage Consultants Pty Ltd
NDC	Nationally Determined Contribution
Net Zero Act	NSW *Climate Change (Net Zero Future) Act 2023*
NGA	National Greenhouse Accounts
NGER Act	Commonwealth *National Greenhouse and Energy Reporting Act 2007*
Niche	Niche Environment and Heritage Pty Ltd
NO_2	Nitrogen Dioxide
NpfI	*Noise Policy for Industry*
NPV	Net Present Value
NPW Act	NSW *National Parks and Wildlife Act 1974*
NPWS	National Parks and Wildlife Service
NPW Regulation	*National Parks and Wildlife Regulation 2019*
NSW	New South Wales
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
OEH	NSW Office of Environment and Heritage
PAC	NSW Planning Assessment Commission
PAD	Potential Archaeological Deposit
PCPV	Peak Component Particle Velocity
PCT	Plant Community Type
Peabody	Peabody Energy Australia Pty Ltd
PM_{10}	Particulate Matter with an Equivalent Aerodynamic Diameter of 10 µm or Less
$PM_{2.5}$	Particulate Matter with an Equivalent Aerodynamic Diameter of 2.5 µm or Less
PoEO Act	NSW *Protection of the Environment Operations Act 1997*
ppm	parts per million.
PPV	Peak Particle Velocity
PV	Photovoltaic
RAPs	Registered Aboriginal Parties
RAPCC	RAP Consultation Committee
Resources and Energy SEPP	*State Environmental Planning Policy (Resources and Energy) 2021*
Resources and Energy SEPP	*State Environmental Planning Policy (Resources and Energy) 2021*
REZ	Renewable Energy Zone
ROM	Run-of-Mine
RWDI	RWDI Australia Pty Ltd
SAII	Serious and Irreversible Impact
SALs	Suburbs and Localities
SEPP	State Environmental Planning Policy

SIA	Social Impact Assessment
SIDRA	SIDRA INTERSECTION 10
SLR	SLR Consulting Australia Pty Ltd
SSD	State Significant Development
SSP	Share Socioeconomic Pathway
Square Peg	Square Peg Social Performance Pty Ltd
SVC	Soil Verification Certificate
TAS	Todoroski Air Sciences Pty Ltd
t CO2-e	Tonnes of Carbon Dioxide Equivalent
TEC	Threatened Ecological Community
TfNSW	Transport for NSW
the Approved Methods	*Approved Methods for the Modelling and Assessment of Air Pollutants In New South Wales*
the Community Plan	Mid-Western Region Community Plan- Towards 2040
the Consultation Requirements	*Aboriginal cultural heritage consultation requirements for proponents 2010*
the Large Emitters Guide	*NSW Guide for Large Emitters - Guidance on how to prepare a greenhouse gas assessment as part of NSW environmental planning processes*
the Regional Plan	*Central West and Orana Regional Plan 2041*
the Strategic Statement	*Strategic Statement on Coal Exploration and Mining in NSW*
the Technical Supplement	*Technical Supplement – Landscape and Visual Impact Assessment: Large-Scale Solar Energy Guideline*
the Transmission Project	Central-West Orana Renewable Energy Zone Transmission Project
TSP	Total Suspended Particulate Matter
TTPP	The Transport Planning Partnership
UCML	Ulan Coal Mine Limited
Umwelt	Umwelt Australia Pty Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VLAMP	*Voluntary Land Acquisition and Mitigation Policy*
VPA	Voluntary Planning Agreement
VWP	Vibrating Wire Piezometers
WAL	Water Access Licence
WBCSD	World Business Council for Sustainable Development
WCPL	Wilpinjong Coal Pty Ltd
WM Act	NSW *Water Management Act 2000*
WRI	World Resources Institute
WRM	WRM Water & Environment