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Environmental & Social Consultants

Ulan West Continued Operations Project

Scoping Report

Final

September 2024

Ulan West Continued Operations Project

Scoping Report

Final

Prepared by Umwelt (Australia) Pty Ltd
on behalf of Ulan Coal Mines Pty Ltd

Project Director: Kirsty Davies
Project Manager Matthew Copeland
Report No.: 23074/R01
Date: September 2024

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APPROVED COMPANY ISO 9001
QMS Certification Services

This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Disclaimer

Document Status

Rev No.	Reviewer Name	Review Date	Approved for Issue Name	Approved for Issue Date
Final	Kirsty Davies	11 September 2024	Kirsty Davies	11 September 2024

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1.0 Introduction

The Ulan Coal Complex (UCC) is located approximately 38 km north-east of Mudgee and 19 km north-east of Gulgong in New South Wales (NSW) (refer to **Figure 1.1**). The UCC is owned by Glencore Australia Pty Limited (Glencore) and operated by Ulan Coal Mines Pty Ltd (UCMPL), a subsidiary of Glencore.

The UCC currently operates pursuant to Project Approval (PA) 08_0184 which was granted under Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) on 15 November 2010 for the Ulan Coal – Continued Operations Project (UCCO Project). PA 08_0184 has been modified on six occasions. The UCC is also subject to two approvals (2009/5252 and 2015/7511), issued under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

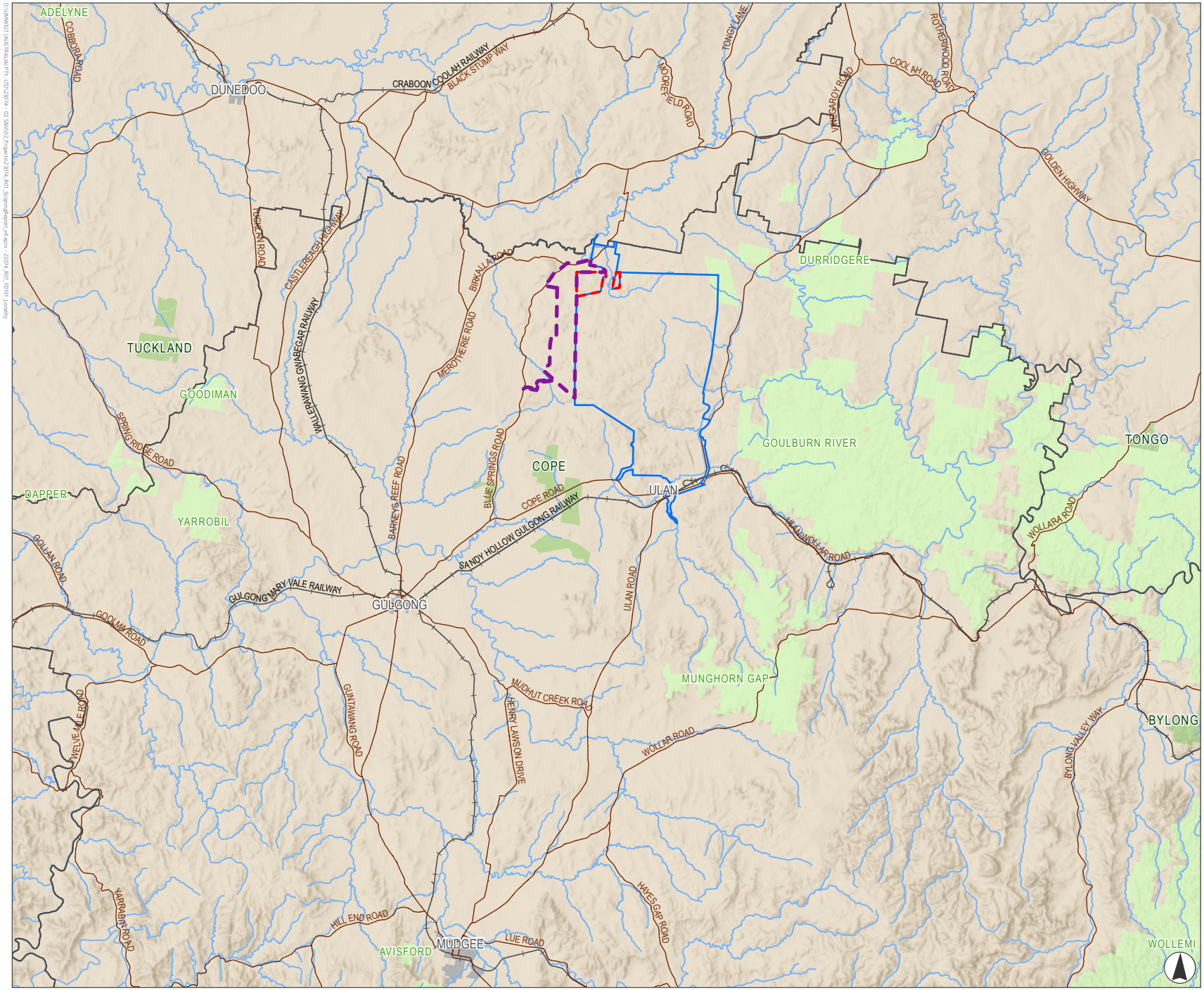
Approved mining operations within the UCC consist of underground mining in the Ulan Underground and Ulan West Underground areas as well as open cut mining, and associated coal handling, processing and transport through to 30 August 2033 (refer to **Figure 1.2**). The open cut operations are currently in care and maintenance. Modification 6 for PA 08_0184 is currently under assessment by the NSW Department of Planning, Housing and Infrastructure (DPHI) and seeks to allow the extension of mining by two years to maximise resource recovery through the extraction of an additional approximately 16.3 million tonnes (Mt) of product coal from existing mining lease and exploration licence areas.

UCMPL has identified additional mineable resources within Exploration Licence (EL) 8687 and EL 9363 located to the west of the currently approved Ulan West underground mining area. UCMPL is proposing the Ulan West Continued Operations (UWCO) Modification (the Proposed Modification) in order to obtain approval to access additional resources within EL 8687 and EL 9363 (refer to **Figure 1.3**).

This Scoping Report has been prepared by Umwelt, in accordance with *State Significant Development Guidelines – Preparing A Scoping Report* (DPIE, 2021), to meet the requirements of DPHI for the issuing of Secretary's Environmental Assessment Requirements (SEARs). The SEARs will identify the information that must be provided in the Modification Report and seek to ensure that the level of assessment and community engagement undertaken is proportionate to the scale and likely impacts of the Proposed Modification. The SEARs will also seek to ensure the Modification Report focuses on the key matters for decision-making.

FIGURE 1.1

Locality Map



Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Proposed UWCO Project Area
- Local Government Area (LGA)
- Road
- Railway
- Major Watercourse
- State Forest
- NSWS Reserves

0 5 10 15

Kilometres

Scale 1:400,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

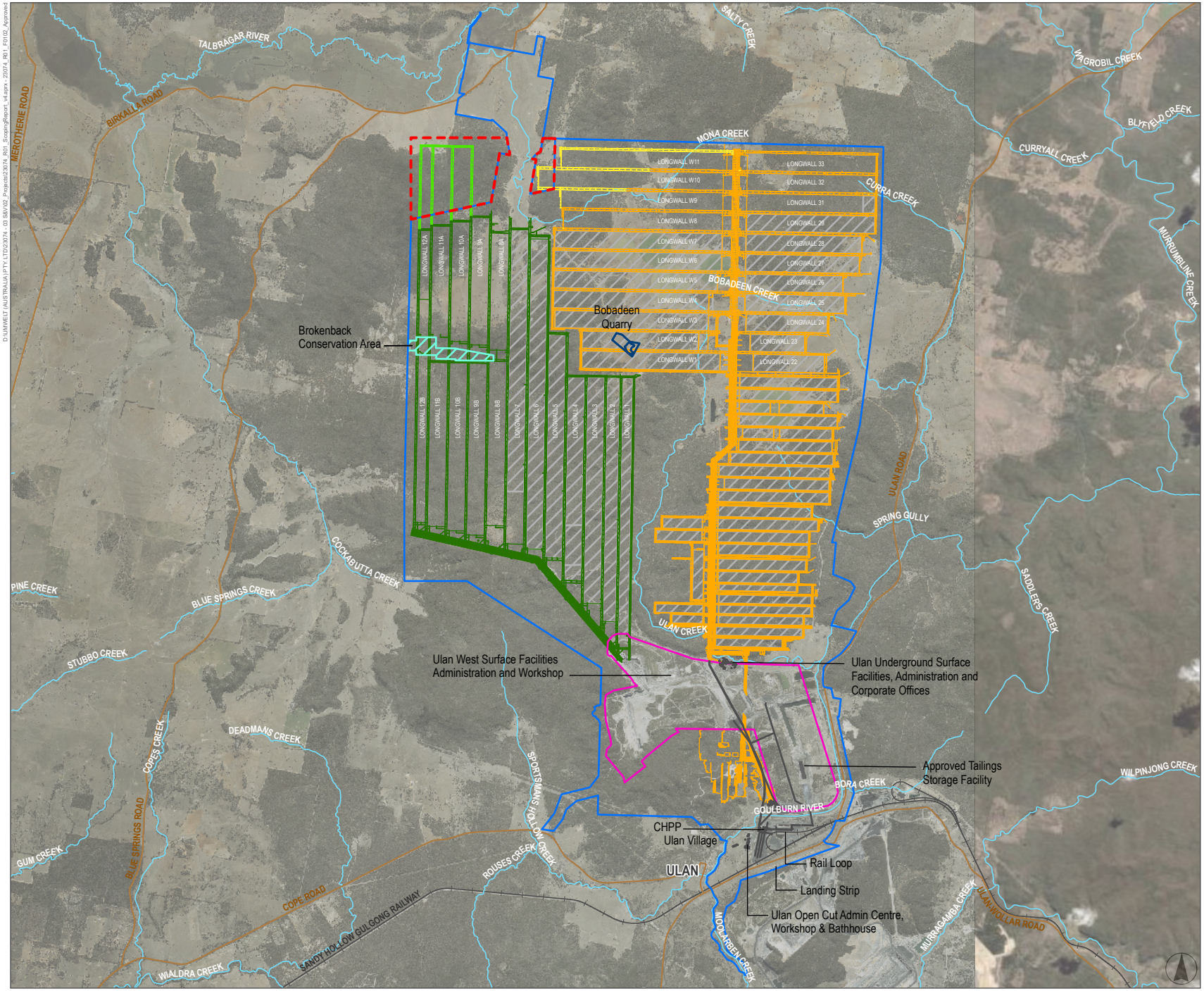


FIGURE 1.2

Approved Operations and Mod 6

Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Brokenback Conservation Area
- Bobadeen Quarry
- Existing Surface Infrastructure
- Road
- Railway
- Major Watercourse
- Approved Ulan West Mine Plan
- Approved Ulan Underground Mine Plan
- Previously Mined
- Approved Ulan Open Cut Area
- Amended Ulan West Underground Mine Plan Modification
- Amended Ulan Underground Mine Plan Modification

0 1.5 3 4.5

Kilometres

Scale 1:120,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

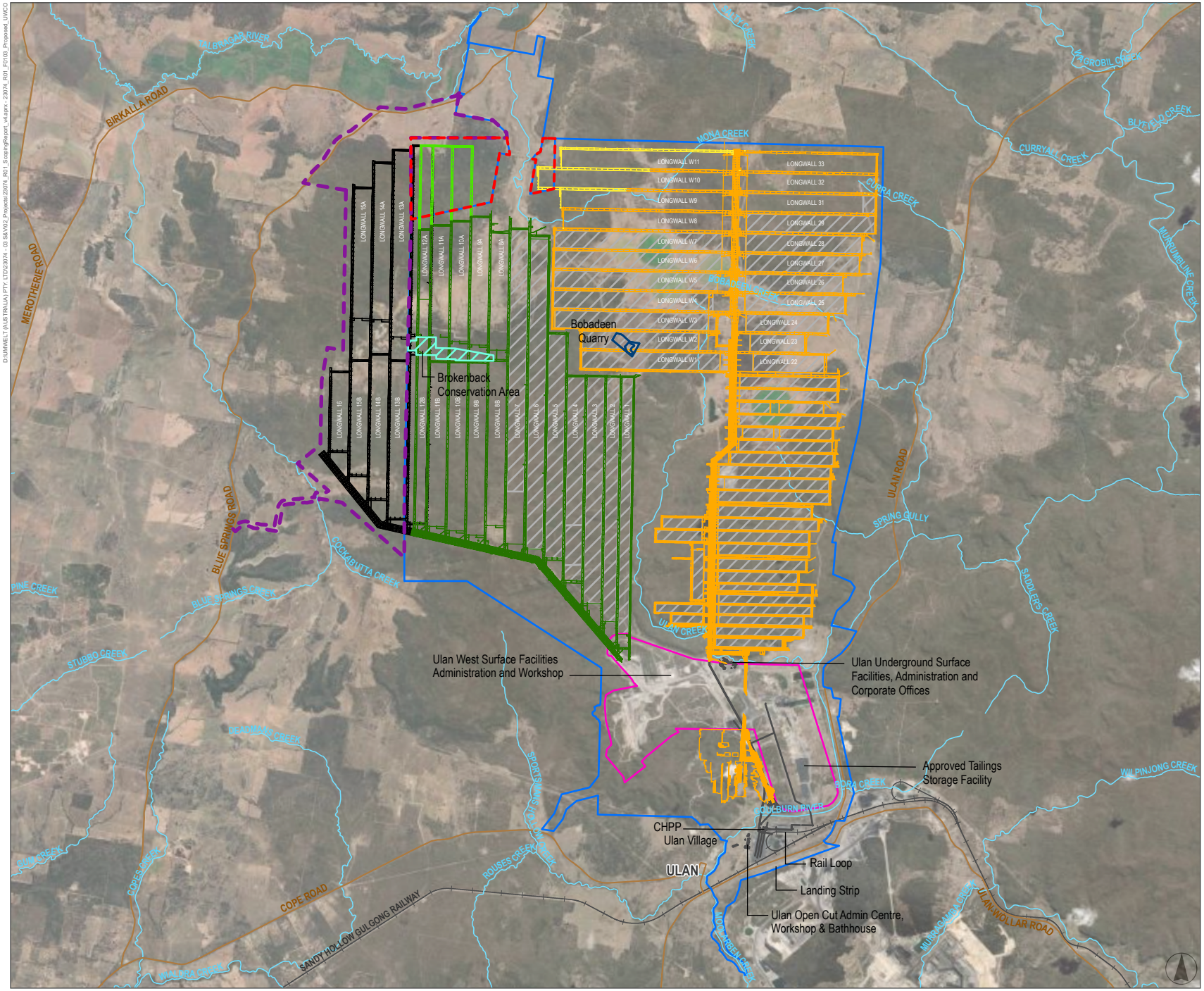


FIGURE 1.3

Proposed Ulan West Continued Operations Project

Legend

- Brokenback Conservation Area
- Bobadeen Quarry
- Road
- Railway
- Major Watercourse

Approved Activities

- Project Approval Boundary
- Approved Ulan Open Cut Area
- Existing Surface Infrastructure
- Approved Ulan West Mine Plan
- Approved Ulan Underground Mine Plan
- Previously Mined

Proposed Modification 6

- Proposed Mod 6 Project Approval Boundary
- Amended Ulan West Underground Mine Plan Modification
- Amended Ulan Underground Mine Plan Modification

UWCO

- Proposed UWCO Project Area
- Proposed UWCO Mine Plan

0 1.5 3 4.5

Kilometres

Scale 1:120,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

1.1 Background and Approved Operations

Mining in the Ulan area has been undertaken since the early 1920s, initially as Ulan No. 1 Colliery Holding for the supply of coal to local markets. The distance to major markets prohibited the continuation of mining and operations ceased. The mine reopened in 1942 and continued operations until 1950. A new mine was developed by Hogan & Gorman in the 1950s further east of the previous mining operations creating the Ulan Colliery Holding No. 2 underground mine to supply coal to a new power station that was built to the north of Ulan Village as well as supplying local markets. This mine is now referred to as Ulan Underground mine. When the power station closed in 1969, mining at Ulan Underground continued on a small scale to supply other domestic markets (Connell Wagner, 1992).

In the late 1970s, Hogan & Gorman registered UCMPL and ownership transferred to White Industries. Part ownership was later transferred to Mitsubishi Operations and NSW State Super Board. An exploration program undertaken in 1976 in the Ulan area proved the existence of extensive coal reserves, and mining operations at the UCC expanded substantially in the 1980s with the establishment of an open cut coal mine. This expansion included the construction of the coal preparation plant and rail loading facility and augmentation of the Ulan Underground in 1982. Traditional bord and pillar underground mining methods were used from the mid-1970s to mid-1980s prior to longwall methods being introduced in 1986 with the commencement of Ulan No. 3. Glencore (formerly Xstrata Coal Pty Limited) purchased 90% of the UCC in 2001. Mining within the open cut continued until mid-2008, when approved reserve recovery areas were exhausted at which time it was placed in care and maintenance. Development of the Ulan West underground mine commenced in 2011 with longwall mining commencing in 2014. There are two longwalls operating at the UCC, one at Ulan Underground (formerly Ulan No. 3) and the other at Ulan West Underground.

As detailed in **Section 1.0**, UCMPL was granted PA 08_0184 under Part 3A of the EP&A Act on 15 November 2010 for the UCCO Project. PA 08_0184 has since been modified on six occasions. A separate modification application (known as 'Modification 6') was also submitted in November 2022 and is currently being assessed by DPHI. Approved mining operations at the UCC consist of underground mining in the Ulan Underground and Ulan West Underground areas as well as open cut mining (currently in care and maintenance) with mining permitted to continue until 30 August 2033.

Operations at the UCC are being carried out in accordance with PA 08_0184, as modified. The approved UCC operations and the proposed Modification 6 (currently under assessment) are shown in **Figure 1.2**.

1.2 Proposed Modification

The key objective of the Proposed Modification is to maximise resource utilisation within the UCMPL held mining tenements, thereby extending Ulan West Mine's economic life and providing ongoing employment for the existing workforce. The Proposed Modification also aims to provide for continued local and regional economic benefits and significant government royalties. The Proposed Modification is appropriately placed to meet the future global demand for thermal coal, in line with NSW government policy which supports the continuation of responsible coal production (refer to **Section 3.0** for further detail).

The Proposed Modification, if approved, will maintain the currently approved coal extraction rate of up to 20 million tonnes per annum (Mtpa) of product coal and will enable extraction of an additional approximate 38 million tonnes (Mt) of product coal.

The Proposed Modification comprises the following mining activities within the Proposed UWCO Project Area (herein referred to as the UWCO Project Area, refer to **Figure 1.3**):

- widening of the approved Ulan West longwall (LW) 12 from approximately 220 m to 400 m
- an additional four longwall panels (three of which are separated by step arounds that consider surface features) consisting of LW13A, LW13B, LW14A, LW14B, LW15A, LW15B and LW16.

The Proposed Modification is also proposing the following new surface infrastructure items to support underground mining activities:

- upcast ventilation shaft, fans and associated infrastructure
- services area containing compressor shed, communication and monitoring buildings, demountable office, process water tank, site dams, drop holes, etc.
- powerlines and associated power infrastructure
- telecommunication lines
- end and mid-block shafts, fans and associated infrastructure
- dewatering infrastructure
- roads and access tracks
- communication and monitoring services
- electrical installation including substations and associated infrastructure
- tailings storage facility within the existing surface infrastructure area
- other associated infrastructure required to service the approved and proposed mining operations.

The UCC will also continue to utilise the existing approved mine infrastructure, including the Coal Handling and Preparation Plant (CHPP) and train loading facilities. The Proposed Modification will extend the life of the approved UCC operation by approximately six years.

The proposed mine plan is considered to provide the current optimal layout for efficient recovery of the coal resources based on existing geological information, use of existing infrastructure and facilities whilst also considering environmental and social aspects, such as:

- a 4th order unnamed tributary of Cockabutta Creek that flows through the centre of the UWCO Project Area
- clifflines
- the Brokenback Conservation Area
- private dwellings
- the minimisation of environmental impacts through the incorporation of mitigation measures through the detailed design phase.

1.3 The Proponent

UCMPL is the proponent for the Proposed Modification and the operator of the UCC. UCMPL is a wholly owned and managed subsidiary of Glencore Coal Assets Australia. Key details of the proponent are provided in **Table 1.1**.

Table 1.1 Proponent Details

Requirement	Details
Full name	Ulan Coal Mines Pty Limited (UCMPL)
Postal address	Private Mail Bag 3006, Mudgee NSW 2850
Project address	4505 Ulan Road, Ulan, NSW 2850
ABN	80 000 189 248
Nominated contact	Alison Freeman, Project Manager Alison.Freeman@glencore.com.au

2.0 Strategic Context

2.1 Proposed Modification Justification

The Proposed Modification will provide for the efficient recovery of approximately 38 Mt of additional coal resource at the UCC with minor changes to the currently approved environmental and social impacts.

The Proposed Modification currently represents the most efficient and economic method of extracting the additional coal resources to the west of the existing UCC operations. Using the existing mining facilities for extracting this coal results in reduced environmental and social impacts when compared to a new greenfield mine to recover this same coal and provides for an efficient use of this resource for the State of NSW.

The outlook for coal is heavily dependent on the ability to meet global stated policies in relation to reductions of fossil fuel use. In the stated policies, overall global coal demand declines gradually after mid- 2030s (International Energy Agency, 2023). Meeting energy demands will still require a mix of energy sources, with thermal coal expected to remain a component within the timeframe of the mine approval.

The UCC is well positioned to contribute to meeting the expected demands in the short to medium term and the Proposed Modification will allow UCC to maximise coal recovery while optimising the use of existing infrastructure and efficiently meeting this demand.

The operations at UCC have provided substantial economic benefits at Commonwealth, State, regional and local levels for many decades. The approved UCC will continue to provide substantial economic benefits until August 2033. The proposed extension of the life of the existing operations at UCC will provide production for a further six years (in addition to the two-year life extension proposed under Modification 6, currently under assessment). If approved, the Proposed Modification, together with Modification 6 would extend mining operations to 2041. This would result in the continued employment of up to 930 employees at UCC, with associated flow on effects for the local and regional communities. This additional six years of production meets existing market demand for coal.

The existing UCC emissions and potential emissions from the Proposed Modification are characterised as follows:

- Scope 1:
    - The UCC is a very low fugitive emission intensity site for Scope 1 due to negligible methane.
    - The UCC is a very low fossil fuel emission intensity site for Scope 1 due to majority of underground equipment being electrified.
    - In comparison to other coal mining operations, the Proposed Modification presents very low Scope 1 emission intensity.
- Scope 2:
    - The UCC is a typical electricity-intensive underground operation, with most equipment electrified.
    - Scope 2 emissions intensity at the UCC will reduce significantly over time as the grid greens.

Glencore has stated it is committed to transitioning to a low-carbon economy and has announced publicly that to assist in meeting the growing needs of a lower carbon economy, globally the company aims to prioritise its capital investment to grow production of commodities essential to the energy transition and responsibly manage the decline of its thermal coal portfolio to meet Glencore's industrial emissions reduction targets.

Glencore has committed to reducing its total global industrial emissions footprint (Scope 1, 2 and 3), against a 2019 baseline as follows:

- 15% reduction by 2026
- 25% reduction by 2030
- 50% reduction by 2035
- ambition to be net zero by 2050 (subject to a supportive policy environment by the end of 2050).

The Proposed Modification is considered within Glencore's commitments. As described on page 14 of the 2024 to 2026 Climate Transition Action Plan (Glencore, 2024), to support anticipated global energy needs, Glencore plans to continue to progress select brownfield coal investments at existing mines. Ulan will continue to align with the Group emissions reduction targets and commitment to a managed decline of the coal portfolio overall.

2.2 Planning and Strategic Context

As identified by the NSW Government's 2020 *Strategic Statement on Coal Exploration and Mining in NSW* (NSW Strategic Statement) coal mining is an important industry for NSW and will continue as such for the next few decades. Coal mining is a significant source of direct and indirect jobs in regional NSW and underpins many local economies.

The NSW Strategic Statement acknowledges the need to recognise existing industry investment by continuing to consider responsible applications to extend the life of current coal mines, and together with other key State policies and programs, plays and important role in ensuring the objects of the NSW *Mining Act 1992* (Mining Act) are met. As an established operation with access to significant coal reserves beyond the term of PA 08_0184, the Proposed Modification fits within the plan of action proposed in the NSW Strategic Statement for supporting responsible coal production.

The NSW Strategic Statement recognises that the use of thermal coal will decline in NSW over the coming decades as aging coal-fired infrastructure is replaced with other forms of energy generation, however it also acknowledges that ending or reducing NSW thermal coal exports while there is still strong long-term global demand would likely have little or no impact on global carbon emissions. On this basis, the Proposed Modification is appropriately placed to continue to meet this existing global demand in line with the NSW Strategic Statement.

As an established underground operation, the proposed expansion of mining at UCC will also fit within the NSW Strategic Statement's plan for reducing the impact of mining on environmental and social outcomes, particularly in relation to its reduced air, noise, biodiversity, visual and other impacts in comparison to open cut coal mining operations.

The Proposed Modification also meets the policy aims of *State Environmental Planning Policy (Resources and Energy) 2021* by demonstrating a continued ability to mine the state's resources in an environmentally and socially acceptable manner through the implementation of design features, operational controls and safeguards to minimise adverse effects on the surrounding environment.

The continued importance of mining to the Central West and Orana region of NSW is also recognised in the *Central West and Orana Regional Plan 2041* (Regional Plan), which promotes further development of the renewable energy, mining, health and education sectors to unlock economic potential and drive diversification across the region (NSW Government, 2022). Objective 3 of the Regional Plan aims to sustainably manage extractive resource land and seeks to identify opportunities that enable productive use of the land without sterilising the potential of the underlying resource. Approved underground operations at UCC currently co-exist with agricultural enterprises, resulting in the delivery of diversified economic benefits to the region.

Despite only accounting for less than 1% of the total land area, mining is a key driver in the growing population and economy of the Mid-Western Regional LGA. Mining is the top employment industry with employment in the sector increasing since 2006, and in 2016 and 2021 mining represented approximately 15% of all employment in Mid-Western Regional LGA (ABS, 2021). According to the NSW Mineral Council's 2020 Annual Expenditure Survey (NSW Minerals Council, 2021) mining also represents over half of the Gross Regional Product (GRP) of the Mid-Western Regional LGA.

The Mid-Western Regional Council's *Towards 2030 Community Plan* outlines the strategic direction for the LGA and includes the delivery of a prosperous and diversified economy as one of its five goals. The Plan recognises the need to attract new industries while retaining those already existing to provide this economic diversity.

2.3 Environmental Context

2.3.1 Land Use

The UCC is located in the Mid-Western Regional Local Government Area (LGA) within a rural setting, primarily surrounded by rural landholdings, native bushland and primary industries including agriculture, forestry and extractive industries. The alluvial lands located along the Talbragar River approximately 3 km to the north of the UCC, are used for intensive cropping. Forestry activities are undertaken in the Durridgere and Cope State Forests to the east and southwest. Significant areas of national park also exist in close proximity to the UCC, with the Goulburn River National Park located to the east and Durridgere State Conservation Area located to the northeast. The Munghorn Gap Nature Reserve is situated approximately 20 km to the southeast of the UCC (**Figure 2.1**).

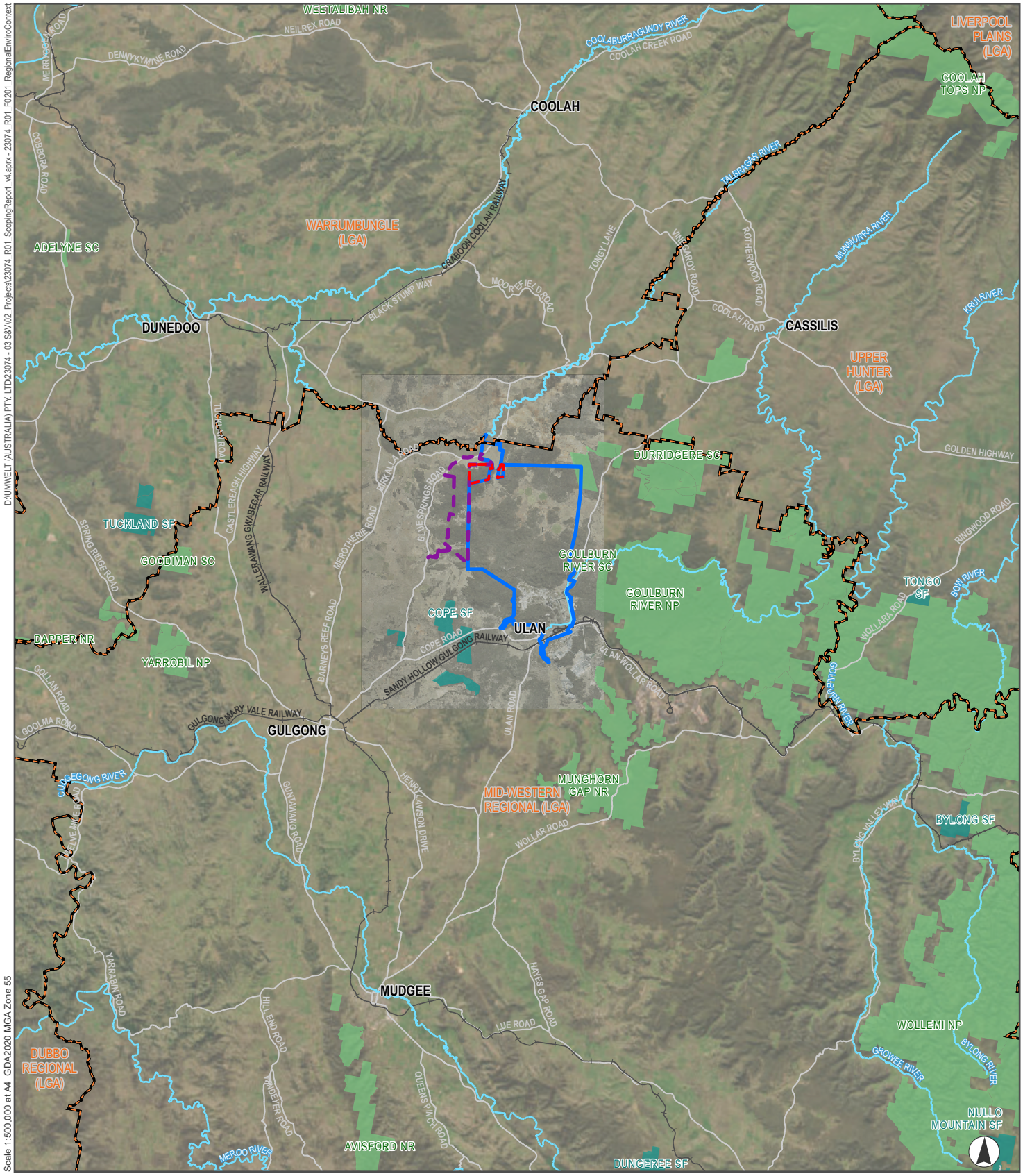
More recently, the region has been identified as an important site for renewable energy generation with a range of wind and solar energy projects being proposed or developed within the Central-West Orana Renewable Energy Zone (REZ), with the proposed 330 kilovolt (kV) transmission line located to the north of the site.

The Proposed Modification has parcels of land within the proposed mine plan that are owned by UCMPL, with the majority of land being either privately owned or Crown Land. Infrastructure including private dwellings, farm facilities such as sheds and dams, and roads are present, although these occupy a small proportion of the total area.

The UWCO Project Area contains 19 private landholdings, of which 12 contain occupied private dwellings, and several parcels of Crown Land (refer to **Figure 2.2**).

UCMPL has existing land access arrangements in place with landholders associated with existing operations. These arrangements provide for surface access, infrastructure easements, subsidence monitoring and repairs, and alternative water supply to allow operations to undermine private landholdings.

UCMPL has commenced consultation with landholders within the UWCO Project Area in regard to the Proposed Modification. UCMPL will consult with and consider landholder feedback as part of the ongoing mine planning processes, which may include refinements of the currently proposed mine plan through the assessment process.



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Scale 1:500,000 at A4 GDA2020 MGA Zone 55

Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Proposed UWCO Project Area
- Local Government Area (LGA)
- NPWS Reserve
- Road
- State Forest
- Major Watercourse
- Railway

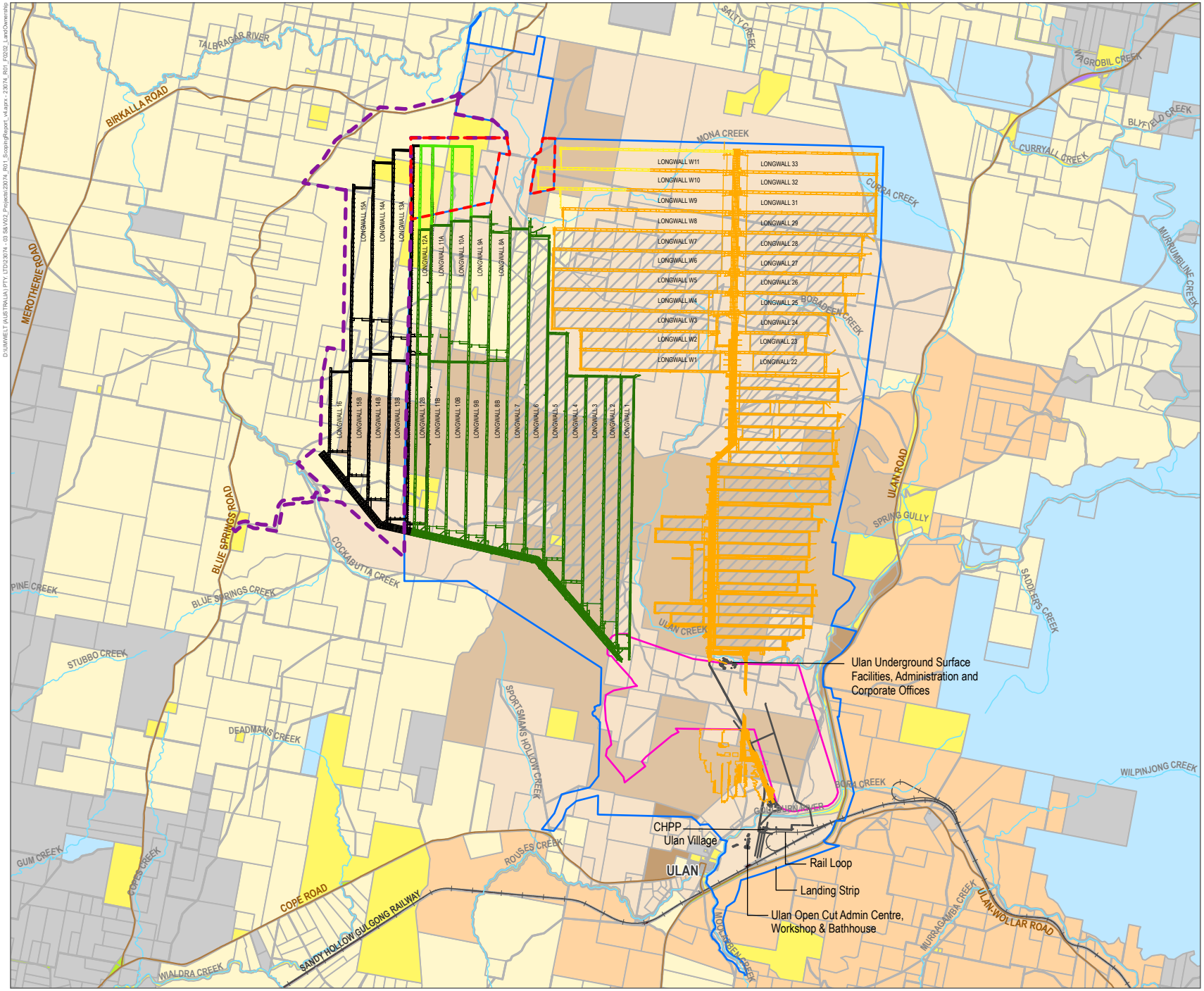
FIGURE 2.1

Regional Environmental Context

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

FIGURE 2.2

Land Use / Ownership



Legend

- Road
- Major Watercourse
- Railway

Approved Activities

- Project Approval Boundary
- Approved Ulan Open Cut Area
- Existing Surface Infrastructure
- Approved Ulan West Mine Plan
- Approved Ulan Underground Mine Plan
- Previously Mined

Proposed Modification 6

- Proposed Mod 6 Project Approval Boundary
- Amended Ulan West Underground Mine Plan Modification
- Amended Ulan Underground Mine Plan Modification

UWCO

- Proposed UWCO Project Area
- Proposed UWCO Mine Plan

Land Ownership

- Crown
- Freehold
- Local Government Authority
- NSW Government
- Other Mine Owned
- Private
- Railway
- Shared Crown/Council
- UCMPL Land Leased
- UCMPL Mining Leasehold
- UCMPL Owned Land

0 1.5 3 4.5

Kilometres

Scale 1:120,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

2.3.2 Topography, Geology and Soils

The UWCO Project Area straddles the Great Dividing Range, which represents the watershed between the Goulburn River catchment to the east and the Talbragar River catchment to the west. Much of the UWCO Project Area is located between about 450 metres and 550–600 metres above sea level. The topography is characterised by a series of east-west tending ridges separated by landforms of a gentler gradient surrounding minor waterways. In general, the ridges are rounded and of a moderate gradient. In places, escarpments are present on the southern face of ridges although these have a limited extent in the UWCO Project Area.

The UCC is located at the western limit of the geological formation known as the Sydney Basin and at the southern end of the Gunnedah Sub-basin, adjacent to the Lachlan Fold Belt. The geology of the UCC is dominated by Triassic era Narrabeen Group sandstone, mudstone and conglomerate. At the Ulan Underground Mine the geology is dominated by Jurassic era Pilliga Sandstone and also Late Jurassic Purlawaugh Formation sandstone, siltstone, mudstone and coal. Sandstone rock formations occur widely in the UCC area, including boulders, shelters, overhangs and open surfaces. The soil types occurring within the boundaries of the UCC generally have low fertility and exhibit moderate to high erosivity. The soils vary in nature and thickness with the thicker, more fertile and alluvial deposits occurring in the low lying areas, predominantly associated with watercourses. The soil landscapes within the UWCO Project Area are mapped on **Figure 2.3** and described below:

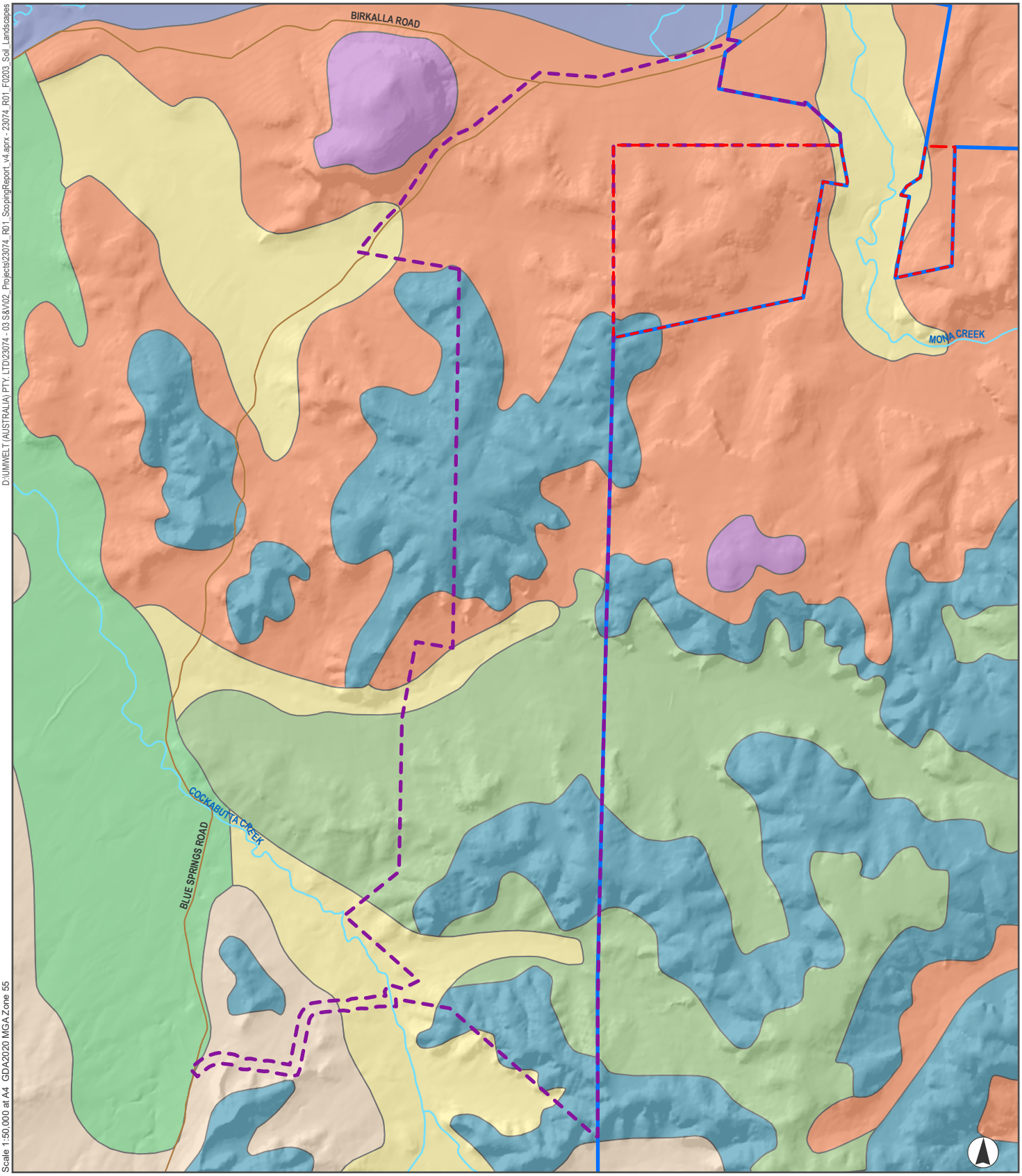
- **Turill Soil Landscape** – occupies large portions in the north of the UWCO Project Area. It comprises low undulating hills and small flats adjacent to creeks and contains Narrabeen Sandstone, mudstone and Jurassic shale and sandstone. On the upper and mid-slopes, yellow and brown earthy sands and siliceous sands are present, while on the lower slopes and flats, red podzolic soils occur. Yellow and grey podzolic soils are present along larger drainage lines. Grey duplex soils are present in isolated areas with laterite type soils which form ridges with gravelly red earths.

- **Lees Pinch Landscape** – is found throughout the UWCO Project Area and consists of rolling hills and steep rocky slopes and valley sides and contains Narrabeen sandstone conglomerate, shale conglomerate, mudstone, chert, coal and torbanite seams. Shallow sandy soils, extensive rock outcrops, sandstone cliffs and debris slopes are present. It also includes grey and yellow earths and yellow podzolic soils on lower slopes.

- **Munghorn Plateau Soil Landscape** – dominates the central portions of the UWCO Project Area and comprises low undulating hills on sandstone plateaux with rock outcrops. Mainly siliceous sands and shallow soils are present on crests and upper slopes. Yellow earths and yellow podzolic soils are present on lower slopes and in drainage depressions. Some peats are also present in these depressions.

- **Ulan Soil Landscape** – is confined to drainage lines in the UWCO Project Area and comprises low undulating rises and flats with shale, sandstone conglomerate, chert, coal and torbanite seams. Yellow podzolic soils are present on lower slopes and drainage lines with patches of yellow solodic soils in association with salt sands. Yellow and brown earths are also present on foot slopes with minor areas of earthy sands.

- **Bald Hill Soil Landscape** – is confined to a small area in the northwest of the UWCO Project Area. This soil landscape comprises basalt in low hillocks and small basalt caps with moderate to steep slopes. Shallow stony loams are present on steeper slopes near crests and brown clays often occur with linear gilgai on lower slopes.



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Scale 1:50,000 at A4 GDA2020 MGA Zone 55

Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Proposed UWCO Project Area
- Road
- Major Watercourse

Soil Landscapes

- Bald Hill
- Home Rule
- Lees Pinch
- Munghorn Plateau
- Rouse
- Talbragar
- Turill
- Ulan

0 500 1,000 1,500
Metres

FIGURE 2.3
Soil Landscapes

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

2.3.3 Hydrology

The UCC is located at the headwaters of both the Goulburn River and the Talbragar River, with the catchments for these river systems separated by the Great Dividing Range. The Goulburn River drains east to meet the Hunter River at Denman and the Talbragar River system drains west to meet the Macquarie River near Dubbo. All of the tributaries within the UCC boundary draining to the Goulburn River and Talbragar River are naturally ephemeral by nature. Controlled release from the UCC occurs to Ulan Creek via two licensed discharge points (LDP6 and LDP19) on a virtually continuous basis, meaning that flow in Ulan Creek and the Goulburn River downstream is effectively perennial.

The UWCO Project Area is adjacent to Cockabutta Creek which is a tributary of the Talbragar River. Two tributaries of Cockabutta Creek (one third order stream and one fourth order stream) traverse the UWCO Project Area, however Cockabutta Creek itself would not be directly affected by the Proposed Modification.

2.3.4 Ecology

Ecological assessments have been undertaken and documented for the approved operations and subsequent modifications. The majority of the UCC Area lies in the Sydney Basin Bioregion, however its proximity to a number of bioregion boundaries including the Brigalow Belt South Bioregion and the South Western Slopes Bioregion mean that a diverse range of flora and fauna assemblages occur in the local area, with a mixture of coastal and inland influences. Most of the vegetation communities present within the UCC area are widespread locally. In general, communities occurring on Triassic conglomerate are well represented in the local area, while those restricted to riparian zones and occurring on basalt-derived soils are less well represented.

All of the mapped vegetation communities, with the exception of planted vegetation, improved and unimproved pasture and rehabilitation areas are naturally occurring, although most have been significantly modified during the past two centuries through extensive management, including clearing, grazing and regeneration. Most of the naturally occurring vegetation communities are grassy woodland and dry sclerophyll forest formations and derived native grasslands.

The woodland areas are generally confined to elevated ridge landforms that generally trend east west while the cleared landforms are associated with valleys formed by tributaries to Cockabutta Creek that is located to the west of the UWCO Project Area.

2.4 Social Context

The area of social influence or ‘social locality’ for the Proposed Modification is defined as:

- the landowners and residents situated on, or proximal to, the area of the Proposed Modification and the UCC
- the State Suburbs (SSC) as per the Australian Bureau of Statistics (ABS) areas of Bungaba, Ulan, Cooks Gap, Uarbry, Turill, Cope, Gulgong and Mudgee, and those further afield which may supply materials and/or workforce for the Proposed Modification, such as Rylstone and Kandos
- the host LGA of the Mid-Western Regional Council
- the Wiradjuri people.

2.5 Cumulative Impact Considerations

A key component of environmental impact assessment is the consideration of cumulative impacts. The Proposed Modification will have regard for the requirements of the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPIE, 2021), which sets clear expectations and requirements for assessing project-level cumulative impacts related to SSD projects. The Modification Report will consider relevant other construction, industrial and employment generating projects within the locality.

There are several other large-scale development projects either in planning, under construction or recently developed across the region, primarily due to the establishment of the Central West Orana Renewable Energy Zone (REZ). This has attracted numerous new energy developers to the region. Notably, the proposed Barneys Reef Wind Farm is proximal to the UWCO Project Area.

Cumulative social impact considerations which may be relevant to the Proposed Modification as a result of the increased renewable energy development in the region include:

- availability of local workforce
- availability of housing and accommodation
- traffic and transport changes to major roads across the region
- access to local services and township facilities
- local economic boost to rural towns
- altered community perceptions of the mining sector.

UCMPL will also continue to consult with neighbouring coal mining operations, Moolarben and Wilpinjong, regarding any interaction issues and management of cumulative impacts. Specialist assessments will consider cumulative impacts specific to subsidence, groundwater, surface water, air quality, noise, biodiversity, heritage and socio-economics.

2.6 Planning and Other Agreements

2.6.1 Voluntary Land Acquisition and Mitigation Policy

Section 2.18 of the *State Environmental Planning Policy (Resources and Energy) 2021* (Resources and Energy SEPP) requires the consent authority to have regard to the NSW Voluntary Land Acquisition and Mitigation Policy (VLAMP).

The assessments to be undertaken for the Proposed Modification will consider the potential air quality and noise impacts for private landholdings relative to the approved operations.

UCMPL will consider the VLAMP and the Modification Report will identify any landowners that may have rights to voluntary mitigation or acquisition under this policy. Where possible, UCMPL will seek to negotiate agreements with relevant landholders prior to determination of the Modification application.

2.6.2 Voluntary Planning Agreements

A voluntary planning agreement (VPA) is a voluntary agreement or other arrangement under Part 7, Division 7.1 of the NSW EP&A Act between a planning authority (or two or more planning authorities) and a developer. UCMPL has an existing VPA in place with Mid-Western Regional Council.

UCMPL will consult with the Mid-Western Regional Council in relation to their existing VPA and the Proposed Modification.

3.0 Project Overview

UCMPL is proposing a modification to PA 08_0184 to maximise resource recovery from within existing mining lease and exploration licence areas. UCMPL has determined that there is a valuable mineable resource within EL 8687 and EL 9363 and is seeking to modify PA 08_0184 to enable access to this coal resource by extending the longwall panels in these areas (refer to **Figure 1.3**).

The key features of the Proposed Modification are detailed below.

3.1 Proposed Modification Summary

The Proposed Modification will maintain the currently approved coal extraction rate of up to 20 Mtpa of product coal and will enable extraction of approximately 38 Mt of additional product coal (in addition to the 16.3 Mt of product coal currently under assessment as part of Modification 6).

The Proposed Modification comprises:

- widening of the approved Ulan West longwall (LW) 12 from approximately 220 m to 400 m
- an additional four longwall panels (three of which are separated by step arounds that consider surface features) consisting of LW13A, LW13B, LW14A, LW14B, LW15A, LW15B and LW16.

The Proposed Modification is also proposing the following new surface infrastructure items to support underground mining activities:

- upcast ventilation shaft, fans and associated infrastructure
- services area containing compressor shed, communication and monitoring buildings, demountable office, process water tank, site dams, drop holes, etc.
- powerlines and associated power infrastructure
- telecommunication lines
- end and mid-block shafts, fans and associated infrastructure
- dewatering infrastructure
- roads and access tracks
- communication and monitoring services
- electrical installation including sub-stations and other associated infrastructure
- tailings storage facility within the existing surface infrastructure area
- other associated infrastructure required to service the approved and proposed mining operations.

The Proposed Modification, if approved, will extend the life of the approved UCC operation by approximately six years allowing mining to continue until the end of December 2041 (including the two-year extension currently proposed as part of Modification 6). The UCC will continue to utilise the existing approved mine facilities, including the CHPP and train loading facilities.

A comparison between the approved development under PA 08_0184 and the Proposed Modification is provided in **Table 3.1**. **Section 3.2** to **Section 3.7** specify the detail on those aspects of the Proposed Modification which differ to the approved development.

Table 3.1 Proposed Modification Summary

Project Element	Approved Development (PA 08_0184 as modified)	Proposed Modification 6 (under assessment)	Ulan West Continued Operations Modification
Mine life	Mining operations until 30 August 2033	Extension of life of mine until 30 August 2035 (an additional two years)	Extension of life of mine until 31 December 2041 (an additional six years to the Proposed Modification 6, being an additional eight years in total to the current Approved Development as modified)
Limits of extraction	20 million tonnes of coal per annum (including maximum of 4.1 Mtpa ROM from open cut) 306.4 Mt total	No change to existing extraction rate Additional approximately 16.3 Mt of product coal	No change to existing extraction rate Additional approximately 38 Mt of product coal
Operating hours	24 hours per day, 7 days per week	No change	No change
Project approval boundary	As per PA 08_0184 (total project area approximately 13,771 ha)	Extension of Project Approval Boundary to include the northern part of EL 7542 (additional 372 ha)	Extension of Project Approval Boundary to include the UWCO Project Area (additional 1,760 ha) (refer to **Figure 1.3**)
Mine plan	As per PA 08_0184 (refer to **Figure 1.2**)	Extension of Ulan Underground LWW10 to LWW11, and Ulan West LW10 to LW12 Widening of Ulan Underground LWW11	Widening of Ulan West LW12 Additional four longwall panels, three of which are separated by step arounds, LW13A, LW13B, LW14A, LW14B, LW15A, LW15B and LW16
Mining methods	As per PA 08_0184	No change, all other existing underground and open cut mining methods will continue	No change, all other existing underground and open cut mining methods will continue
Surface infrastructure	As per PA 08_0184	Minor changes to infrastructure including dewatering bores, one ventilation shaft and associated infrastructure to accommodate the currently proposed mine plan	Minor additions and changes to infrastructure including ventilation shafts and fans, service areas, powerlines, telecommunications lines, dewatering bores, tailings facilities, roads and access tracks, electrical installations and other associated infrastructure require to service the approved and proposed mining operations. Continuation of existing approved infrastructure for the life of the development.

Project Element	Approved Development (PA 08_0184 as modified)	Proposed Modification 6 (under assessment)	Ulan West Continued Operations Modification
Coal handling and processing	As per PA 08_0184 (refer to **Figure 1.2**)	No change	No change
Coal transport	All coal transported from the site by rail. No more than 10 laden trains leave the site each day.	No change	No change
Workforce	Approximately 930 people (UCC)	No change	No change

Appendix 1 provides a full schedule of lands for the approved operations and the Proposed Modification.

3.2 Proposed Modification Area

The Project Approval Boundary for the approved UCC operations is shown on **Figure 1.2**. The approved Project Approval Boundary for the UCC covers approximately 13,771 ha and includes all approved mining operations and associated infrastructure. Modification 6, which is subject to a separate approval process, proposes an amendment to the Project Approval Boundary to include the extension to existing underground mining and associated surface infrastructure (refer to **Figure 1.2**).

The Proposed Modification, should it be approved, would require an extension of the Project Approval Boundary, hereafter referred to as the UWCO Project Area. The UWCO Project Area covers an additional approximately 1,760 ha (refer to **Figure 1.3**). The UWCO Project Area includes the extension to the existing underground mining area and associated infrastructure subject of the Proposed Modification.

The Proposed Modification is seeking approval for additional disturbance to accommodate the proposed changes to surface infrastructure required (refer to **Section 3.4**), referred to as the proposed additional disturbance area. The infrastructure alignment is subject to ongoing design and landholder consultation at the time of preparation of this report.

As discussed, the final layout of the proposed mine plan and location of associated infrastructure is subject to further exploration and detailed mine planning.

The Proposed Modification will also result in subsidence induced impacts. The subsidence affectation area is generally bounded by the angle of draw that has been determined to capture all conventional subsidence impacts (i.e. the angle of the line connecting the edge of the goaf and the limit of subsidence at the surface). Subsidence impacts are well understood at the UCC based on detailed monitoring above underground mining areas that has been undertaken since 1980, with studies in the Ulan West area commencing in 2006. Indirect impacts will also be quantified and assessed for the Proposed Modification (refer to **Section 6.2**).

3.3 Conceptual Underground Mine Plan

The Proposed Modification includes the widening of Ulan West longwall (LW) 12 from approximately 220 m to 400 m and an additional four longwall panels (three of which are separated by step arounds that consider surface features) consisting of LW13A, LW13B, LW14A, LW14B, LW15A, LW15B and LW16 (refer to **Figure 1.3**). All longwalls associated with the Proposed Modification would be approximately 400 m in width, consistent with longwall widths in the approved Ulan West Underground area (with the exception of LW1, LW2 and LW12). Longwall 12 is currently constrained to 220 m width but would be widened to 400 m as part of the Proposed Modification.

The currently proposed longwall panels are numbered sequentially (13 to 16) from east to west with the northern parts of each panel designated as 'A' and the southern parts designated as 'B', noting that LW16 is limited to the southern portion only. The alignment of LW12-16 would be north-south and parallel to the existing approved Ulan West underground mine plan. The longwalls would be mined through a retreat longwall mining method similar to existing approved mining, with the longwall mining progressing north to south towards mains headings developed in the south.

The proposed extension of longwalls represents an increase in approved longwall mining area (relative to that approved up to and including Modification 4). The UWCO Project Area is shown on **Figure 1.3**.

3.4 Surface Infrastructure

The Proposed Modification will require the installation of additional surface infrastructure to support underground mining. Additional surface infrastructure directly related to the Proposed Modification will include:

- upcast and downcast ventilation shafts and associated fans
- service area containing compressor shed, communication and monitoring buildings, demountable office, process water tank, site dams, drop holes etc.
- powerlines and associated power infrastructure
- telecommunication lines
- end and mid-block shafts, fans and associated infrastructure
- dewatering infrastructure
- roads and access tracks
- communication and monitoring services
- electrical installation including sub-stations and other associated infrastructure
- tailings storage facility within the existing surface infrastructure area
- other associated infrastructure required to service the approved and proposed mining operations.

The substation and parts of the proposed access roads and powerline extensions are located over existing approved mining areas within the current UCC Project Approval Area. This infrastructure, if approved, will require ground disturbance and vegetation clearing.

The proposed infrastructure corridors are aligned to appropriately service the location of main headings and end of longwall panels. UCMPL has developed conceptual infrastructure layouts which align with the currently proposed underground mine plan, however, it is acknowledged that the detailed design including the final mine plan layout and location of associated infrastructure is subject to further exploration and detailed mine planning.

3.5 Tailings and Reject Storage

Existing operations are approved to emplace coarse rejects and fine tailings in voids left by open cut mining. It is anticipated that the existing tailings dams will be sufficient for the current operations and Modification 6 (if approved). Therefore, the additional coal to be mined and processed on site as part of the Proposed Modification will necessitate the construction of additional tailings facilities within areas of existing disturbance adjacent to the current tailings facility.

The conceptual location of the additional tailings facility is to the east of the current tailings dams (TD1 to TD4) (refer to **Figure 1.3**).

Rejects from the Proposed Modification will be utilised to fill voids and in the formation of landforms across the site in line with the final landform design. All landforms will be designed such they are non-polluting and long-term stable.

3.6 Operational Workforce and Hours of Operation

There would be no change to the approved workforce of up to approximately 930 employees as a result of the Proposed Modification. The Proposed Modification would provide for up to an additional six years of employment at the UCC (in addition to the further two years proposed as part of Modification 6, which is currently under assessment).

Mining operations would continue 24 hours per day, seven days per week.

3.7 Timing

The Proposed Modification includes the continuation of underground mining at Ulan West and all other currently approved activities. It is envisaged that first working activities associated with the Proposed Modification would extend beyond the currently approved underground mine plan in approximately 2027.

3.8 Alternatives

The Proposed Modification has been designed through a multi-disciplinary social and environmental risk-based approach aimed at maximising resource extraction efficiency and optimising the use of existing site infrastructure, while seeking to minimise impacts on the environment and community.

The key learnings from the long history of mining operations at the site, the stakeholder engagement program, and from environmental and social impact assessments, have all been considered in the design of the Proposed Modification.

Further details on potential alternatives considered for the Proposed Modification are discussed below.

3.8.1 Alternative Mine Plans

As part of the mine planning process, a range of alternative mine plan layouts were considered. This considered a larger mine plan covering a larger portion of EL 8687 and EL 9363.

A detailed analysis of environmental and social constraints was undertaken for each option, to allow a comparison of impacts. The currently approved mine plan for Ulan West defines the start points for the proposed continuation of mining for all options, which considers the nature of the coal resources and other mine planning and geological constraints.

The proposed mine plan (refer to **Figure 1.3**) is currently considered to provide the optimal layout for efficient recovery of the coal resources based on existing geological information, use of existing infrastructure and facilities whilst also considering environmental and social aspects, such as:

- clifflines
- the Brokenback Conservation Area
- 4th order unnamed tributary of Cockabutta Creek that flows through the centre of the UWCO Project Area
- private dwellings
- the minimisation of environmental impacts through the incorporation of mitigation measures through the detailed design phase.

The current proposed layout may be subject to further refinement and revision as more information is obtained through the environmental studies and ongoing feedback from the consultation processes.

3.8.2 Do Nothing Option

An alternative to the Proposed Modification is the option of not proceeding (the 'do nothing' option) which would potentially sterilise the coal resources that would otherwise be accessed.

The Proposed Modification would result in the extraction of an approximately 38 Mt of additional product coal. The extraction of this coal as an extension and continuation of existing mining operations and utilising existing infrastructure, is substantially more efficient and would result in reduced environmental impacts compared to establishing a new 'greenfield' mine elsewhere, or if the existing operations were closed and then had to be reopened to allow recovery of this resource. If the Proposed Modification did not proceed then the anticipated social and economic benefits would also not be realised.

As the coal is currently extracted via the longwall mining method, the most practical and economical approach is to continue this approach westwards of the last approved longwall panel (LW12) at Ulan West. Any separate future operations would be highly unlikely to be considered commercially viable as the benefits of being able to continue mining within an approved mining area and utilise existing infrastructure may not be available if the Proposed Modification does not proceed.

4.0 Statutory Context

The key statutory provisions applying to the Proposed Modification with respect to environmental assessment and planning approval at Commonwealth, State and local level, are outlined in **Table 4.1** below. Further details on mandatory matters are provided in **Appendix 2**.

Table 4.1 Statutory Context Summary

Matter	Relevance to the Project
Power to grant consent ***Environmental Planning and Assessment Act 1979* (EP&A Act)** **and** ***State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP)**	The Proposed Modification seeks to modify PA 08_0184 pursuant to section 4.55 of the EP&A Act. As SSD, the Minister for Planning, or their delegate, will be the consent authority. Modifications sought under section 4.55 must be substantially the same development for which the original consent was granted. In this instance, approvals up to and including Modification 4 are considered to be the original consent, as this was the last approval granted under the now repealed section 75W of the EP&A Act. The Proposed Modification is considered to be substantially the same development as that approved under PA 08_0184, for reasons that include: • The overall nature of the development remains unchanged. • There is no proposed change in annual production rates, mining method, transportation, CHPP and key infrastructure. • The majority of the key project components remain unchanged, and are not varied substantially, from that which is currently approved. • There are not expected to be substantive changes to environmental impacts that radically alter the approved project. The Proposed Modification can be undertaken in accordance with the approved environmental impact criteria contained in the current conditions of PA 08_0184. Based on consultation with DPHI, section 4.55 of the EP&A Act is available as the approval pathway for the Proposed Modification.
Permissibility ***State Environmental Planning Policy (Resources and Energy) 2021* (Resources and Energy SEPP)**	The Proposed Modification is located within the Mid-Western Regional LGA and is subject to the *Mid Western Regional Local Environmental Plan 2012*. The land which is the subject of the UWCO Project Area is within the Mid-Western Regional LEP zones RU1 – Primary Production and E3 – Environmental Management Zone. Underground mining is permitted with consent in the RU1 – Primary Production Zone but prohibited in the E3 – Environmental Management Zone. The permissibility provisions within the Resources and Energy SEPP apply to the Proposed Modification and override any LEP permissibility provisions to the extent of any inconsistency (section 3.28 of EP&A Act). Section 2.9 of the Resources and Energy SEPP permits underground mining to be carried out on any land with consent and therefore the Proposed Modification is permissible with development consent.

Matter	Relevance to the Project
Commonwealth approvals	***Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)** The UCC currently operates under EPBC Approvals EPBC 2009/5252 and EPBC 2015/7511 (granted in 2010 and 2016 respectively). It should be noted that Modification 4 was determined to be not a controlled action under the EPBC Act (EPBC 2018/8337) on 31 January 2019. Modification 6 was referred and has been determined to be a controlled action under the EPBC Act. It is currently under assessment by DPHI as part of the bilateral agreement made under section 45 of the EPBC Act between the Commonwealth of Australia and NSW (Bilateral Agreement) and, if approved by the Commonwealth DCCEEW, would result in an additional EPBC Approval (EPBC 2022/09292) being issued. The components of the Proposed Modification that are not covered under current approvals will be referred to the Commonwealth DCCEEW under the EPBC Act. The referral will include: • additional underground mining areas for Ulan West Underground • additional disturbance to accommodate minor changes to surface infrastructure to support underground mining activities. It is anticipated that the Proposed Modification will be determined to be a controlled action requiring assessment under the Bilateral Agreement and determination under the EPBC Act due to controlling provisions related to listed threatened species and communities, and likely impacts to a water resource.
Commonwealth approvals	***Native Title Act 1993* (NT Act)** The NT Act applies to the grant of mining leases under the NSW Mining Act where native title has not been extinguished within the lease application area. There is one Native Title claimant over the UWCO Project Area, being Warrabinga-Wiradjuri #7. If UCMPL seeks to undertake a 'future act' within the UWCO Project Area (such as applying for new mining leases), the processes under the Native Title Act will apply to the extent that native title has not been extinguished over any of the relevant land within the proposed lease areas.
Other key approvals	***Mining Act 1992* (Mining Act)** Under section 5 and 6 of the Mining Act, a mining lease is required to undertake mining operations and certain designated ancillary mining activities. Mining in the UWCO Project Area will require the grant of a new mining lease/s. Requirements under the Mining Act for compensation agreements, access arrangements and consent for surface activities may also be relevant to the Proposed Modification. The *Coal Mine Subsidence Compensation Act 2017* will also apply to the Proposed Modification in relation to future compensation relating to mine subsidence.
Other key approvals	***Water Management Act 2000* (WM Act)** The Aquifer Interference Policy (AIP) clarifies the requirements for obtaining water licences under NSW water legislation and establishes and objectively defines considerations in assessing and providing advice on whether more than minimal impacts might occur to a key water-dependent asset. The AIP requires that, where mining or any other activity will take water from a source covered by a water sharing plan (WSP), a water access licence is required under the WM Act to account for this loss of water.

Matter	Relevance to the Project
	UCMPL currently holds a number of water access licences (WALs) issued under the WM Act. Assessments will determine whether further WALs will be required for the Proposed Modification. As SSD, the Proposed Modification does not require a water use approval under section 89; a water management work approval under section 90; or an activity approval (other than an aquifer interference approval as outlined above) under section 91.
Other key approvals	***National Parks and Wildlife Act 1974* (NPW Act)** Under section 86 of the NPW Act, it is an offence to harm an Aboriginal object, except where authorised by an Aboriginal heritage impact permit issued under section 90 of the Act. As SSD, it is not necessary for UCMPL to obtain approvals under the provisions of section 90 of NPW Act in respect of the Proposed Modification. However, this does not exempt the Proposed Modification from requiring archaeological assessment, which may identify sites and provide recommendations for their management, and the consideration of the provisions of the relevant statutory controls. An Aboriginal Cultural Heritage Assessment (ACHA) will be completed for the Proposed Modification to assess any potential impacts.
Other key approvals	***Heritage Act 1977* (Heritage Act)** The Heritage Act provides for the identification, registration and protection of items of State heritage significance. As SSD, it is not necessary for UCMPL to obtain approvals under the provisions of the Heritage Act in relation to activities approved under Part 4 of the EP&A Act in respect of the Proposed Modification. However, this does not exempt the Modification from requiring heritage assessment, which may identify heritage/archaeological sites and provide recommendations for their management, and the consideration of the provisions of the relevant statutory controls. An assessment of historic heritage will be completed for the Proposed Modification.
Other key approvals	***Protection of the Environment Operations Act 1997* (POEO Act)** UCMPL currently operates under an Environment Protection Licence (EPL 394) issued pursuant to the POEO Act. Should the Modification be approved, the EPL will be varied, consistent with the approved modified SSD consent.
Pre-conditions	***State Environmental Planning Policy (Resources and Energy) 2021* (Resources and Energy SEPP)** Mining in the UWCO Project Area will require the grant of a new mining lease. This has potential to trigger the NSW Gateway Process under the Resources and Energy SEPP and, at the very least, necessitate the need for a site verification soil surveys to confirm if there is Biophysical Strategic Agricultural Land (BSAL) present. It is noted that the modification application over areas that will require a new lease (even subsurface leases) cannot be lodged unless either a site verification certificate or a gateway certificate is in force in relation to the subject areas where a new lease is required.

Matter	Relevance to the Project
Pre-conditions	***Mining Act 1992* (Mining Act)** Under section 380AA of the Mining Act, a development application or a modification application to mine for coal cannot be made or determined unless the applicant is the holder of an authority that is in force in respect of coal and the land where mining for coal is proposed to be carried out. UCMPL is the holder (or is in the process of becoming the holder) of all authorities required for the Proposed Modification. The requirements of section 380AA will be satisfied at the time the modification application is lodged.
Mandatory matters for consideration	Sections 4.15 and 4.55 of the EP&A Act Part 2.3 Resources and Energy SEPP

5.0 Engagement

UCMPL has an established relationship with the surrounding community and other stakeholders and has implemented a process for ongoing engagement regarding its mining operations.

UCMPL has prepared a Community and Stakeholder Engagement Plan (CSEP) for the Proposed Modification to outline the community and stakeholder engagement approach and implementation program which will inform the Social Impact Assessment (SIA).

The approach to stakeholder engagement adopted for the Proposed Modification is informed by the *Social Impact Assessment Guideline* (DPE, 2023) and the *Undertaking Engagement – Guidance for State Significant Projects* (DPE, 2022).

5.1 Community and Stakeholder Engagement Plan

The CSEP identifies the stakeholder engagement approach and objectives for the Proposed Modification and the surrounding communities.

The objectives of the CSEP are to:

- Support the building of relationships with local stakeholders to establish a socially sustainable project.
- Guide and support a strategic and coordinated approach to engagement, including specific mechanisms, timeframes and responsibilities during the planning and assessment phase of the Proposed Modification.
- Facilitate transparent and meaningful information exchange.
- Identify key stakeholders and communities relevant to the development.
- Support the Proposed Modification's understanding of its local context, identification of stakeholders, including vulnerable community groups, stakeholder expectations and project alignment with local aspirations.
- Facilitate the genuine involvement of stakeholders in the planning and approvals process as well as in developing responses to impacts.
- Ensure that community and stakeholder inputs are effectively integrated into the technical assessments within the Modification Report and inform refinements to project design and plans.
- Meet regulatory requirements for public, stakeholder and community consultation.
- Collaborate with local stakeholders on local benefit sharing strategies to ensure they are co-designed, targeted, and appropriate to the Proposed Modification's operating context.
- Align with UCMPL's values and principles around timely, open, inclusive, and meaningful engagement.

5.2 Stakeholder Engagement

Based on the preliminary social baseline completed for the Proposed Modification, and UCMPL's existing knowledge of the community, a number of stakeholders have been identified to be engaged as part of the SIA and engagement program. These stakeholders have been grouped and prioritised and are presented in **Figure 5.1**.

Figure 5.1 Key Stakeholders

Note: Blue indicates Priority 1, green indicates Priority 2 and grey indicates Priority 3.

5.2.1 Engagement Carried Out

Engagement undertaken with stakeholders during the scoping phase is outlined in **Table 5.1** below.

Table 5.1 Scoping Phase Engagement (Round 1)

Mechanism	Description	Targeted Stakeholders
Project meetings including individual meetings (in person or via telephone)	Individual project meetings, in person or telephone calls were offered to 36 residents and landholders in the UWCO Project Area (refer to **Figure 1.3**), proximal communities, local businesses and service providers during March and April 2024.	Landholders in the UWCO Project Area (including as proposed to be modified) Proximal communities Local businesses and service providers Local community groups Aboriginal stakeholders CCC
Online survey	Online survey developed and circulated to those stakeholders who were not able to attend an individual meeting. Link to the survey was included on the UWCO Update No. 1 that was distributed to approximately 117 stakeholders including landholders in the UWCO Project Area (refer to **Figure 1.3**), and proximal communities.	As above
Project information sheet and community newsletters	**Bungaba Community Newsletter Issue 9 September 2023:** The newsletter contained project information regarding the study area, technical assessments, and seismic survey testing information. **UWCO Update No. 1:** This was distributed by UCMPL to approximately 117 stakeholders on 14 February 2024. This newsletter included a link to the online survey and an invitation to the Community Information Session.	As above plus wider LGA community
Project briefing	Formal briefings to key stakeholders and government agencies, with Project Information Sheet and/or slide deck to: • formally introduce the Proposed Modification • discuss relevant aspects of the Proposed Modification and assessment process and • collect any relevant feedback. Initial briefings were undertaken with DPHI in June 2023 and April 2024, Mid-Western Regional Council on 15 November 2023 and with the CCC in December 2023.	Government agencies UCMPL employees CCC
Project information session	Informal 'drop in' community sessions to provide information and an opportunity to meet the Proposed Modification team, for members of the community to pose questions, to visually share results of any relevant technical studies, and collect community feedback. Two community information sessions were held at Bungaba Hall on 21 February 2024 with nine community members attending in total.	Landholders Proximal communities (Bungaba, Turill, Ulan) Local businesses and service providers Local community groups
ACHA and ACVA	Consultation with Registered Aboriginal Parties has been ongoing during the development of the Scoping Report and has included informal discussions during survey work (as part of the ACHA) and a formal workshop (as part of the ACVA).	RAPs

5.2.2 Community Views

As part of the Social Impact Scoping Report (refer to **Appendix 2**), the perceived positive and negative social impacts of the Proposed Modification were identified and framed in accordance with the social impact categories outlined in the *Social Impact Assessment Guideline for State Significant Projects* (DPE, 2023) (SIA Guideline).

Preliminary social impact identification was informed by engagement with landholders and community members, local business/service providers and community groups, details of which are provided in **Appendix 2**.

As illustrated in **Figure 5.2**, the primary concerns raised by stakeholders were in relation to impacts on surroundings and social amenity and impacts on livelihoods, although it is noted that positive impacts to livelihoods were also raised by stakeholders.

Potential negative impacts identified by stakeholders in relation to surroundings and social amenity were:

- reduction in access to quality water for personal and property use
- loss of social amenity due to noise from construction activities
- loss of social amenity due to operational noise and vibration
- intergenerational equity issues associated with continued use of coal resources and subsequent impacts on climate
- loss of important environmental values
- visual and social amenity impacts associated with light pollution from mine operations.

When stakeholders were asked to identify potential positive impacts of the Proposed Modification, the most frequently raised social impacts included continued employment for the existing workforce and procurement of local suppliers, ongoing regional economic benefits, improved road safety and road condition given upgrades to road networks and increased public safety due to presence of security staff associated with mining operations.

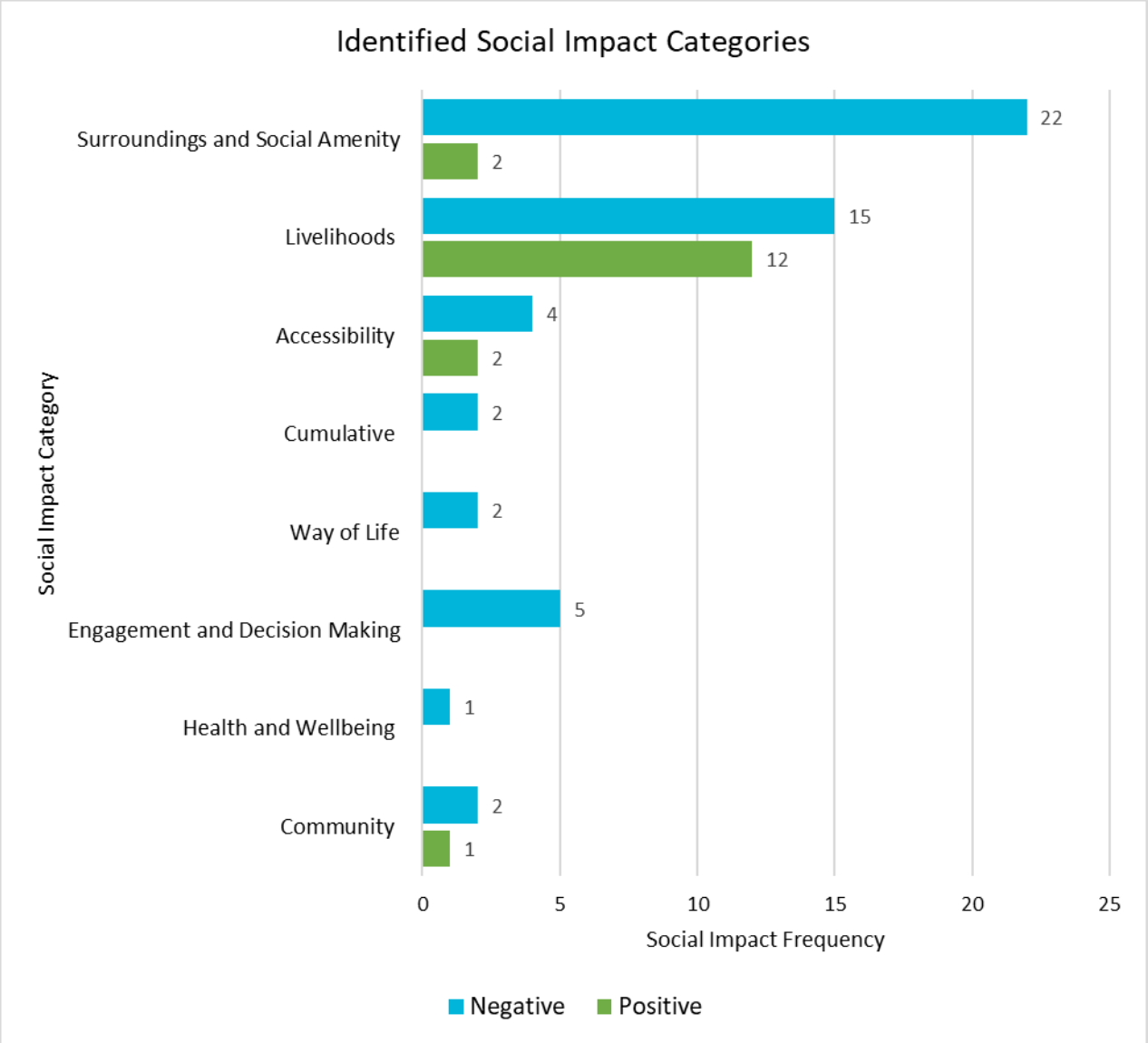

Figure 5.2 Identified Social Impacts

5.3 Engagement to be Carried Out

UCMPL will engage with the community, Mid-Western Regional Council and key agencies during the preparation, and prior to the lodgement, of the Modification Report, in accordance with any SEARs issued for the Proposed Modification. The outcomes and findings of this engagement will be incorporated into the Modification Report.

A detailed assessment of social impacts will be undertaken as part of the Modification Report and will be informed by the ongoing engagement process of consultation. Subsequent phases of the SIA program will involve the following key activities:

- An update of the baseline social profile to ensure that any further data relevant to the impacts identified is obtained.
- Further validation and identification of affected communities and vulnerable groups.

- Provision of feedback to near neighbours, community members and key stakeholders on the outcomes of the issues raised in the scoping phase and communication of the Proposed Modification's SEARs (once issued), including an outline of the next steps in the assessment process and opportunities for community input.
- Further engagement with near neighbours, community members and other key stakeholders on key impact areas. This will involve feedback on the outcomes of the SIA and Modification Report and will provide opportunities for input to the development of appropriate mitigation and enhancement measures.
- A comprehensive assessment and evaluation of social impacts against existing baseline conditions.

Proposed engagement to be undertaken with stakeholders during the assessment phase is outlined in **Table 5.2** below.

Table 5.2 SIA Phase Engagement (Round 2)

Mechanism	Description	Targeted Stakeholders
Project meetings including individual meetings (in person or via telephone)	Follow up interviews will occur during the preparation of the Modification Report. Further interviews with local businesses and service providers will be undertaken in this phase.	Landholders in the UWCO Project Area (including as proposed to be modified) Proximal communities Local businesses and service providers Local community groups Aboriginal stakeholders CCC
Online survey	Online survey to be developed and distributed to local communities and key stakeholders.	As above
Project information sheet and community newsletters	UWCO Update No. 2 – Proposed Modification update and outcomes of scoping phase to be distributed in the assessment phase. UWCO Update No. 3 – Proposed Modification update and outcomes of technical studies to be distributed following the completion of the Modification Report and SIA reports.	As above plus wider LGA community
Project briefing	Further briefings will be undertaken across subsequent phases of the Proposed Modification.	Government agencies UCMPL employees
Project information session	Project information sessions will be held to discuss the outcomes of relevant assessments for the Proposed Modification, prior to lodgement of the Modification Report.	Landholders Proximal communities (Bungaba, Turill, Ulan) Local businesses and service providers Local community groups

Mechanism	Description	Targeted Stakeholders
Town Resource Cluster (TRC) survey	Online survey distributed to employees, contractors and suppliers of UCMPL that aims to: • demonstrate the contribution of operational project workforces and associated supplier value chains • demonstrate the socio-economic contribution of operational workforces to local communities and the broader region and state due to operational presence in the area.	UCMPL employees Contractors and suppliers

The formal notification process for the Aboriginal Cultural Heritage Assessment has commenced. Following receipt of the SEARs, further detailed consultation will be undertaken with the Registered Aboriginal Parties (RAPs) for the Proposed Modification. Consultation will be undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010). Further details on the proposed Aboriginal heritage assessment are provided in **Section 6.2.5**.

6.0 Proposed Assessment of Impacts

The three main types of potential impacts associated with the mining in the UWCO Project Area are:

- impacts associated with or consequent on the underground mining itself and associated subsidence effects (including changes to groundwater systems)
- impacts associated with surface activities including vegetation clearing
- impacts associated with infrastructure installation and impacts associated with the construction and use of tailings facilities.

The Proposed Modification will also result in potential social impacts associated with the above and ongoing operation of the UCC beyond its currently approved life.

Broadly speaking, the Proposed Modification is expected to have similar environmental impacts to the approved operations (as last modified by Modification 4), albeit those impacts will be extended to an area west of the currently approved operations.

The Modification Report will be prepared in accordance with DPHI's *State Significant Guidelines – Preparing a Modification Report.*

6.1 Scoping of Assessment Matters

A review of the environmental and social matters relevant to the Proposed Modification was conducted to determine the issues that will need to be assessed as part of the Modification Report and the level of assessment that is required. This review was undertaken with reference to the categories of assessment matters identified by the *Scoping Guideline* (DPE, 2022), and the key issues and the proposed level and scope of assessments discussed in the following sections.

The environmental and social matters relevant to the Proposed Modification are identified and have been characterised (in accordance with DPE, 2022) as follows:

- matters requiring further assessment in the Modification Report (refer to **Section 6.2**)
- matters requiring no further assessment in the Modification Report (refer to **Section 6.3**).

For the matters requiring further assessment in the Modification Report, **Section 6.2** identifies whether detailed or standard assessment is required (as defined by Appendix D of the Scoping Guideline). **Appendix 3** presents a Scoping Summary Table showing the outcomes of the scoping stage review of matters as required by the *Scoping Guideline* (2022).

6.2 Matters Requiring Further Assessment

The environmental, social and economic matters discussed in this section have been identified as key issues requiring further assessment to fully understand the potential impacts and identify project-specific mitigation measures and/or alternatives. The assessments will be undertaken in consideration of any relevant statutory guidelines.

The UCC has a long history of underground mining, with the ongoing operations at Ulan Underground and development of the Ulan West Underground commencing in 2011 and longwall mining commencing in 2014. Monitoring and management of underground mining operations undertaken to date have resulted in a significant volume of data and a detailed understanding of the conditions at the site.

6.2.1 Subsidence

Longwall mining associated with the Proposed Modification is likely to result in the subsidence of the land surface which may impact on:

- natural features including vegetation, water flow (surface and groundwater) and landscape features such as clifflines
- man-made structures such as roads, houses, buildings, fences and utilities
- items of Aboriginal heritage through damage to clifflines/rock structures which may house sites of cultural value.

A subsidence assessment will be undertaken as part of the Modification Report, building upon the existing subsidence model and utilising the vast amount of historical subsidence monitoring data available for the UCC. The assessment would include:

- review and collation of relevant subsidence monitoring data to update and refine the existing subsidence model
- identify natural and built features above the proposed mining area
- forecast of subsidence effects (maximum vertical subsidence, tilt and strains) and contours of surface subsidence to inform a risk assessment and specialists assessments
- quantitative assessment of subsidence impacts
- assessment of potential impacts to natural and built features including houses, sheds, tanks, dams, fences, power and telecommunications utilities, roads, sewerage and stormwater drainage systems
- details of management measures recommended to address any predicted subsidence impacts, including consideration of existing approved subsidence performance measures and, if necessary, recommendations for additional subsidence monitoring.

The subsidence assessment will consider any relevant guidelines, including:

- NSW Department of Mineral Resources “Guideline for Applications for Subsidence Management Approvals”
- any relevant SEARs issued for the Proposed Modification.

6.2.2 Groundwater

The proposed longwall mining has the potential to cause an interconnected fracture network to develop through the overburden strata to the surface. This fracturing is expected to depressurise groundwater within the overlying strata consistent with that experienced due to existing operations, however the extent of depressurisation would be extended to the west and north-west.

The objective of the groundwater assessment will be to assess the types of impacts, the likelihood of impacts and the magnitude of environmental risk to the groundwater regime posed by the Proposed Modification to assist the regulatory decision-making process.

The groundwater assessment would involve:

- review of available groundwater information and the existing conceptual model of the groundwater regime, including the current geological model
- field investigation activities if required based on the outcomes of the initial review of available information
- update the conceptual model of the hydrogeological regime including identification of causal pathways that connect the mine to potential receptors
- assessment on water quality
- numerical model development and calibration
- impact assessment using the numerical model to make predictions of:
    - incremental changes of groundwater levels due to the Proposed Modification
    - cumulative changes of groundwater levels which combine the approved mining at UCC and the neighbouring Moolarben mine with the Proposed Modification
    - post-closure impacts including the equilibrium groundwater levels within the final voids and long-term drawdown
    - changes in baseflow and river leakage during mining and post-closure.
- uncertainty analysis, including consideration of climate change predictions
- preparation of a Groundwater Assessment report documenting the assessment findings and proposing monitoring, mitigation and management measures
- addressing any peer review comments received throughout the process.

The groundwater assessment will consider any relevant guidelines, including:

- NSW Aquifer Interference Policy (DPI Office of Water, 2012)
- Information guidelines for proponents preparing coal seam gas and large coal mining development proposals (IESC, 2018)
- Australian Groundwater Modelling Guidelines (National Water Commission, 2012) any relevant SEARs issued for the Proposed Modification.

6.2.3 Surface Water

Longwall mining has the potential to result in changes to landforms and watercourses following subsidence. These changes can cause impacts such as increased or reduced ponding, changes to flow paths or flooding, and alterations to existing surface water quantity (e.g. streamflow losses) or quality.

The surface water assessment would involve the following:

- Flooding assessment including hydrologic and hydraulic modelling of all affected streams to allow forecasting of flood levels and velocities and identification of any required flood protection measures.
- Site water and salt balance modelling to identify any additional water management infrastructure required and to assess impacts associated with any predicted changes to licensed discharge from the existing water treatment facilities on site.
- Characterisation of surface water resources including collation of stream flow and water quality monitoring data and geomorphic assessment of streams.
- Surface water flow, quality and geomorphology assessment incorporating:
    - ponding and catchment boundary analysis
    - long section analysis
    - estimation of potential stream losses
    - determination of direct and indirect surface water take
    - identification of water licensing requirements or other approvals
    - assessment of surface water impacts of the Proposed Modification relative to the approved operations and identification of mitigation measures (including erosion and sediment controls where required)
    - assessment of cumulative impacts
    - consideration of climate change impacts
    - recommendations for additional surface water monitoring programs.
- Preparation of a Surface Water Impact Assessment report.

The surface water assessment will consider any relevant guidelines, including:

- Water Reporting Requirements for Mines (NSW Office of Water (NOW), 2009)
- Guidelines for Management of Stream/Aquifer Systems in Coal Mining Developments – Hunter Region (Department of Water and Energy (DWE), undated)
- River Hydrology and Energy Relationships – Design Notes for the Mining Industry (DWE, 2007)
- Significant Impact Guidelines 1.3: Coal Seam Gas and Large Coal Mining Developments – Impacts on Water Resources (DoE, 2022).

6.2.4 Biodiversity

The installation of surface infrastructure and associated roads and utilities to service the Proposed Modification will require land clearing and hence have direct impacts on biodiversity. Additional impacts to biodiversity as a result of subsidence could potentially include:

- direct impact from subsidence related effects such as cracking and land deformation (e.g. tree falls)
- loss of habitat associated with impacts to clifflines
- loss of habitat associated with changes to groundwater systems (e.g. stygofauna and other groundwater dependent ecosystems) and surface water regimes (aquatic and hyporheic fauna impacted through loss of or changes to surface flows and loss of base flow
- direct impacts associated with subsidence remediation work, including clearing for access tracks and earthworks required for physical repair to land deformation and subsidence cracks.

Due to the nature of underground mining, the exact locations of essential surface infrastructure will remain unknown until further geological assessment and testing is undertaken. The proposed infrastructure layout will be included in the Modification Report. The Biodiversity Development Assessment Report will assess the proposed infrastructure layout to support the Modification Report.

A Biodiversity Development Assessment Report will be prepared for the Proposed Modification in accordance with the NSW Biodiversity Assessment Method.

A Stygofauna Impact Assessment will also be undertaken to assess the baseline stygofauna present in groundwater across the UWCO Project Area, the likely impacts to stygofauna and any ongoing monitoring requirements.

The following key resources, policies and documents will be used during the preparation of the Biodiversity Development Assessment Report and undertaking the associated surveys for the Proposed Modification:

- Biodiversity Assessment Method (DPIE, 2020a)
- Biodiversity Assessment Calculator Version 1.4.0.00
- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities –Working Draft (Department of Environment and Conservation (DEC) 2004)
- NSW Guide to Surveying Threatened Plants (DPIE, 2020b)
- Species Credit threatened bats and their habitats: NSW Survey Guide for the BAM (OEH 2018)
- Protected Matters Search Tool for known/predicted EPBC Act-listed TECs (Department of Agriculture, Water and the Environment (DAWE, 2021)
- Threatened Biodiversity Data Collection (TBDC) (DPE, 2022)
- Vegetation Information System (VIS) (DPE, 2022)
- BioNet Atlas of NSW Wildlife (DPE, 2022)

- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DEC, 2004)
- Surveying threatened plants and their habitats (DPIE, 2020)
- Species Credit threatened bats and their habitats: NSW Survey Guide for the BAM (OEH, 2018)
- NSW Survey Guide for Threatened Frogs – a guide for the survey of threatened frogs and their habitats for the BAM (DPIE, 2020)
- Hygiene protocol for the control of disease in frogs (DECC, 2008)
- Draft Survey Guidelines for Australia's Threatened Orchids (Department of Environment, 2013)
- Survey Guidelines for Australia's Threatened Birds (DEWHA, 2010)
- Survey Guidelines for Australia's Threatened Mammals (DSEWPC, 2011)
- Survey Guidelines for Australia's Threatened Frogs (DEWHA, 2010)
- Survey Guidelines for Australia's Threatened Bats (DEWHA, 2010).

6.2.5 Aboriginal Cultural Heritage

Preliminary desktop assessment shows a higher density of Aboriginal sites present in the approved Ulan West area with a lower density of recorded sites in the UWCO Project Area. This is indicative of the higher level of heritage survey that has been undertaken over many years over approved mining areas. Clifflines are associated with rock shelter sites which can include art and grinding grooves as well as artefacts associated with their use. Creeklines tend to have a higher density of scattered artefacts and scarred trees are also generally close to creeks in the Ulan area. There is also potential for prominent or unusual rock or landscape features which have cultural significance to be present, however none are known in the area potentially subject to direct impacts.

Subsidence can impact Aboriginal cultural heritage in six key ways:

- cracking and increased instability of clifflines
- cracking of grinding grooves and cracking within artefact scatters
- instability of scarred trees due to cracking and/or tilt effects
- changes to overland drainage flows which result in scouring of sites in proximity to creeks or drainage lines
- impacts to a sense of place or significant cultural feature which impact intangible values
- direct impacts to sites associated with subsidence repair works.

The Aboriginal Cultural Heritage Assessment (ACHA) methodology will target landforms with known archaeological sensitivity while ensuring that a representative sample of all landform types will be surveyed. The assessment will involve:

- desktop searches and review of aerial imagery to develop a robust predictive model
- field surveys
- consultation with Registered Aboriginal Parties (RAPs) including cultural values workshops
- preparation of an ACHA report including an assessment of cumulative impacts and the identification of appropriate management strategies.

The ACHA will addresses the requirements of Appendices B.1.9 and B.1.11 and Section 5.5 of the existing Heritage Management Plan (HMP) (UCMPL, 2019) and will be prepared with reference to:

- the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011)
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)
- the Aboriginal Heritage Standards and Guidelines Kit (DEC, 1997) as referenced in the HMP.

6.2.6 Historic Heritage

Preliminary desktop assessment indicates that there are no known historic heritage sites across the UWCO Project Area. Any incidentally identified historic heritage sites would be assessed and appropriate management and/or mitigation measures implemented.

6.2.7 Noise and Vibration

The Proposed Modification has the potential to create noise and vibration impacts in the surrounding area during both the construction and operational phases. The proposed assessment approach will be in accordance with the following guidelines and standards:

- Noise Policy for Industry (EPA, 2017)
- Interim Construction Noise Guideline (DECC, 2009)
- Draft Construction Noise Guideline (EPA, 2020)
- Voluntary Land Acquisition and Mitigation Policy (NSW Government, 2018)
- Road Noise Policy (DECCW, 2011).

The assessment will include construction, road traffic and operational noise associated with the Proposed Modification, including modifying factors and sleep disturbance assessed in accordance with the *Noise Policy for Industry*. Cumulative noise from existing UCC operations, the Proposed Modification, and other nearby developments will also be assessed.

6.2.8 Air Quality

The key air quality issue for the Proposed Modification will be dust (i.e. particulate matter) during operations however a range of other air quality issues will also need to be considered including diesel exhaust. An air quality impact assessment report will be prepared which provides the outcomes of the assessment. The EPA has recently (2022) revised their assessment criteria for NO_2, so a quantitative assessment of diesel exhaust will be required.

The assessment will primarily follow the procedures outlined in the EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2022). This requires dispersion modelling to quantify impacts.

The assessment will also identify reasonable and feasible measures to avoid, mitigate and manage the potential impacts of dust emissions.

6.2.9 Greenhouse Gas Emissions

A greenhouse gas impact assessment will be completed as part of the air quality and greenhouse gas impact assessment report.

The greenhouse gas emission estimation will involve emission calculations for each year of the Proposed Modification life in accordance with *The Greenhouse Gas Protocol*, Australian National Greenhouse Accounts (and associated Factors) and the National Greenhouse and Energy Reporting System, and the extraction of estimates in terms of direct and indirect (Scope 1, 2 and 3) emissions.

The greenhouse gas assessment will also consider the NSW EPA's *Draft Climate Change Assessment Requirements and Draft Guide for Large Emitters*. As these policies are currently under consultation, the UWCO Project will consider the most current version that is prevailing at the time of preparation as well as findings from any consultation reports that may be published by the EPA.

In addition to the above, the greenhouse gas impact assessment will also consider, as applicable, the following:

- NSW Government's Net Zero Plan Stage 1: 2020–2030
- The Australian Government's Safeguard Mechanism
- Climate Change (Net Zero Future) Act 2023
- NSW EPA's Climate Change Policy and Climate Change Action Plan 2023–2026.

6.2.10 Agriculture and Land

The Proposed Modification will require a new Mining Lease to cover the proposed footprint and this triggers Chapter 2 of the *State Environmental Planning Policy (Resources and Energy) 2021* which requires verification of the presence of Biophysical Strategic Agricultural Land (BSAL) to accompany a Site Verification Certificate Application (or Gateway Certificate Application if triggered).

In addition, a Soil and Land Impact Assessment and Agricultural Impact Assessment will be undertaken for inclusion with the Modification Report. The assessments will be undertaken in accordance with the following:

- Interim Protocol for Site Verification and Mapping of Biophysical Strategic Agricultural Land (Office of Environment & Heritage (OEH) and Department of Primary Industries – Office of Agricultural Sustainability and Food Security (DPI-OAS&FS), 2013)
- The land and soil capability assessment scheme: second approximation (OEH, 2012)
- Strategic Land Use Policy Guideline for Agricultural Impact Statements (NSW Department of Trade, Investment, Regional Infrastructure and Services (DTIRIS), 2012)
- Agricultural Impact Statement technical notes (DPI, 2013).

The assessments would involve field soil survey, sampling and analysis to satisfy the requirements for both the BSAL verification and the soil and land resources assessments, and the preparation of reports including appropriate maps and soil profile data in accordance with the relevant protocol/guideline as listed above.

6.2.11 Social

As described in **Section 5.0**, a Social Impact Scoping Report has been prepared for the Proposed Modification and is attached as **Appendix 2**.

The Social Impact Scoping Report **Appendix 2** includes the compilation of a social baseline profile for the Proposed Modification, early-stage community and stakeholder engagement to inform the scoping of project-related social impacts and opportunities, and preliminary social impact prediction and evaluation. The preliminary impact evaluation has been undertaken to inform and support the refinement of project design and plans to reduce negative project impacts and achieve greater positive social benefits.
The outcomes of the initial engagement activities and community views in relation to the Proposed Modification are described in **Section 5.2.2**.

A detailed assessment of social impacts will be undertaken as part of the Modification Report and will be informed by an ongoing process of community consultation. As part of the Modification Report, future stages of the SIA for this Proposed Modification will include a comprehensive prediction and assessment of social impacts and development of relevant strategies to mitigate the negative and enhance the positive impacts associated with the Proposed Modification. Further SIA and environmental impact studies will address perceptions of impacts raised by key stakeholders during this phase.

The proposed SIA program will be structured in accordance with the Social Impact Assessment Guideline (DPE, 2023) and Undertaking Engagement Guidelines for State Significant Projects (DPE, 2022).

The SIA will have the following key objectives, namely to:

- identify any significant social impacts associated with the Proposed Modification, building on previous assessment work undertaken at UCC
- develop relevant strategies to mitigate negative and enhance positive impacts
- ensure that social impacts are effectively integrated in project planning
- ensure key stakeholders have an adequate voice in the process.

The methodology for the SIA will be based primarily on information drawn from secondary data review, community engagement and social assessment methods.

6.2.12 Economic

There are no proposed changes to workforce numbers or operating hours. The Proposed Modification will result in the recovery of approximately an additional 38 Mt of coal and extend the life of the mine by approximately six years.

An economic assessment will be undertaken for the Proposed Modification in accordance with the 2015 *Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals* (the Economic Guidelines) and the 2018 *Technical Notes Supporting the Economic Guidelines*.

6.2.13 Cumulative Assessment

Potential cumulative impacts resulting from the Proposed Modification in combination with the existing UCC, neighbouring Moolarben Coal Mine and other major developments in the region (e.g. other mines or renewable projects) will be considered in the Modification Report.

Key considerations will include interactions associated with groundwater, surface water, biodiversity, aboriginal cultural heritage, noise and air quality.

6.3 Matters Requiring No Further Assessment

The matters that are considered to not require further assessment in the Modification Report, based on the scoping phase assessment, are outlined in **Table 6.1** along with a comment justifying why no further assessment is required.

Table 6.1 Matters Requiring No Further Assessment in the Modification Report

Matter	Aspect	Comment
Access	Traffic and transport	In accordance with PA 08_0184, all coal will continue to be transported from the site by rail, with no more than 10 laden trains leaving the site each day. There will also be no change to employee numbers and therefore employee traffic will remain unchanged.
Access	Port and airport facilities	In accordance with PA 08_0184, all coal will continue to be transported from the site by rail to the Port of Newcastle, with no more than 10 laden trains leaving the site each day. No changes to port facilities are required.
Access	Road and rail facilities	In accordance with PA 08_0184, all coal will continue to be transported from the site by rail, with no more than 10 laden trains leaving the site each day. There will also be no change to employee numbers and therefore employee traffic will remain unchanged.
Amenity	Odour	Based on the existing operations, the Proposed Modification will not produce odour.
Built environment	Design quality	N/A
Hazards and risks	Coastal hazards	The Proposed Modification does not occur within the coastal zone.

7.0 References

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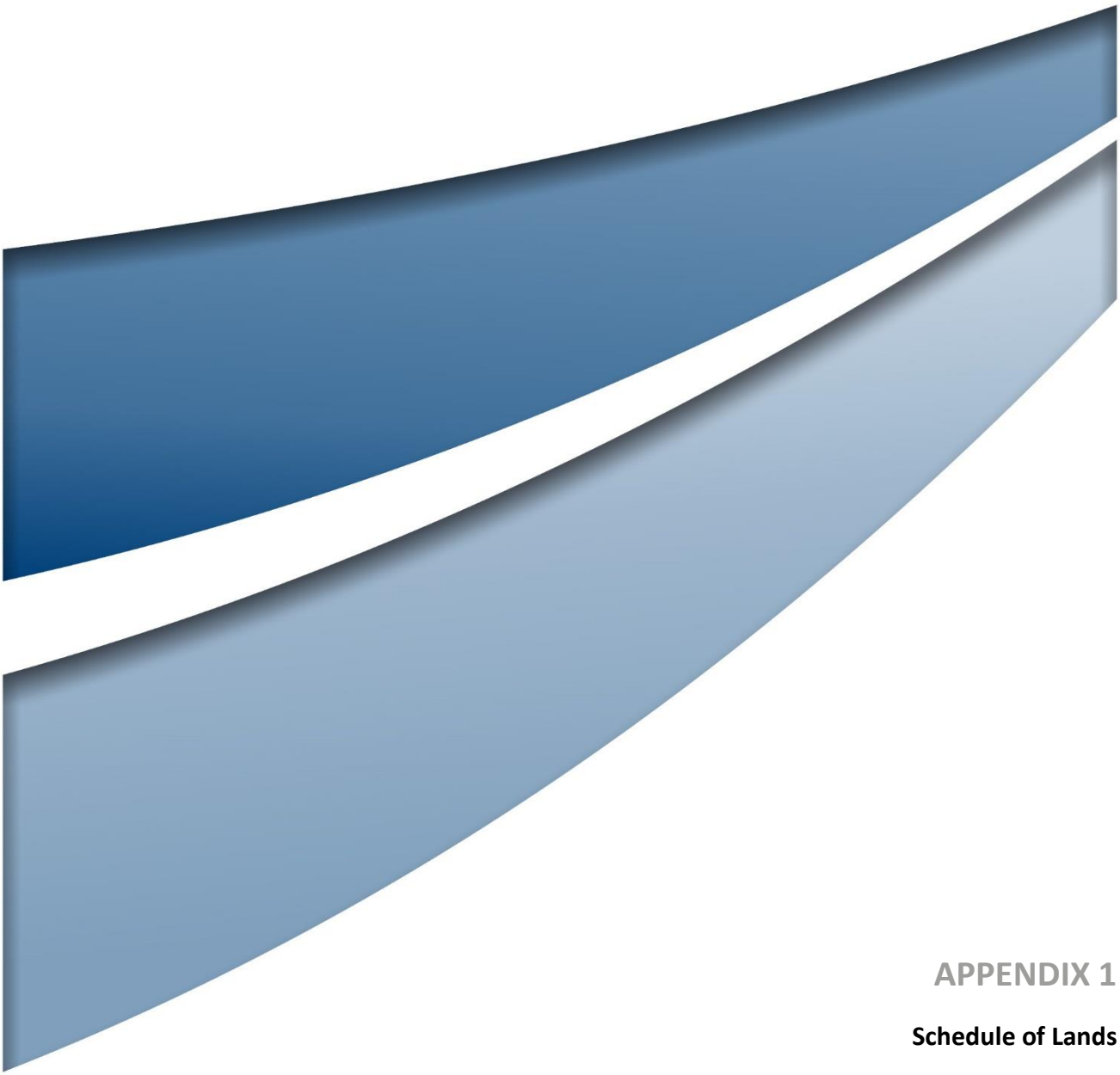
Connell Wagner, 1992. *Ulan Coal Mine Extension of No. 3 Underground Mine Environmental Impact Statement*.

Glencore, 2024. *2024 to 2026 Climate Action Transition Plan.* Retrieved from Glencore website: <https://www.glencore.com/.rest/api/v1/documents/static/1dcd075b-bd27-4930-84c1-9f00aba0e129/GLEN-2024-2026-Climate-Action-Transition-Plan.pdf>.

International Energy Agency, 2023. *World Energy Outlook 2023*.

NSW Government, 2022. *Central West and Orana Regional Plan 2041*. Retrieved from Planning: <https://www.planning.nsw.gov.au/plans-for-your-area/regional-plans/central-west-and-orana-regional-plan-2041>.

NSW Mineral Council, 2021. *2020 Annual Expenditure Survey*.



APPENDIX 1

Schedule of Lands

Table A1.1 Land Within Ulan West Continued Operations Project Area

Lot/Section/DP	Owner	Lot/Section/DP	Owner
72//750742	Private	103//727129	Crown
7002//1001276	Crown	1//580294	Private
7004//1001279	Crown	47//750742	Private
71//750742	Private	79//750742	Private
200//721764	Private	60//750742	Private
7//581165	Private	100//827493	Private
6//580295	Private	57//750742	Private
8//581165	Private	1//1115925	Biodiversity Conservation Trust
7//580295	Private	7304//1148412	Crown
5//580295	Private	7303//1148412	Crown
84//43487	Private	7300//1148421	UCMPL Mining Leasehold
23//750742	Private	1//1170346	Private
24//750735	Private	83//43487	Crown
3//580294	Private	81//750742	Private
59//750742	Private	55//750735	UCMPL Owned Land
2//580294	Private	46//750735	UCMPL Owned Land
25//750746	Private	7301//1148421	UCMPL Mining Leasehold
49//750735	Crown	19//750735	UCMPL Owned Land
80//750742	Private	1//590275	Private
67//750742	Private	1//750742	Private
75//750742	Private	2//590275	Private
62//750742	Private	35//750735	UCMPL Owned Land

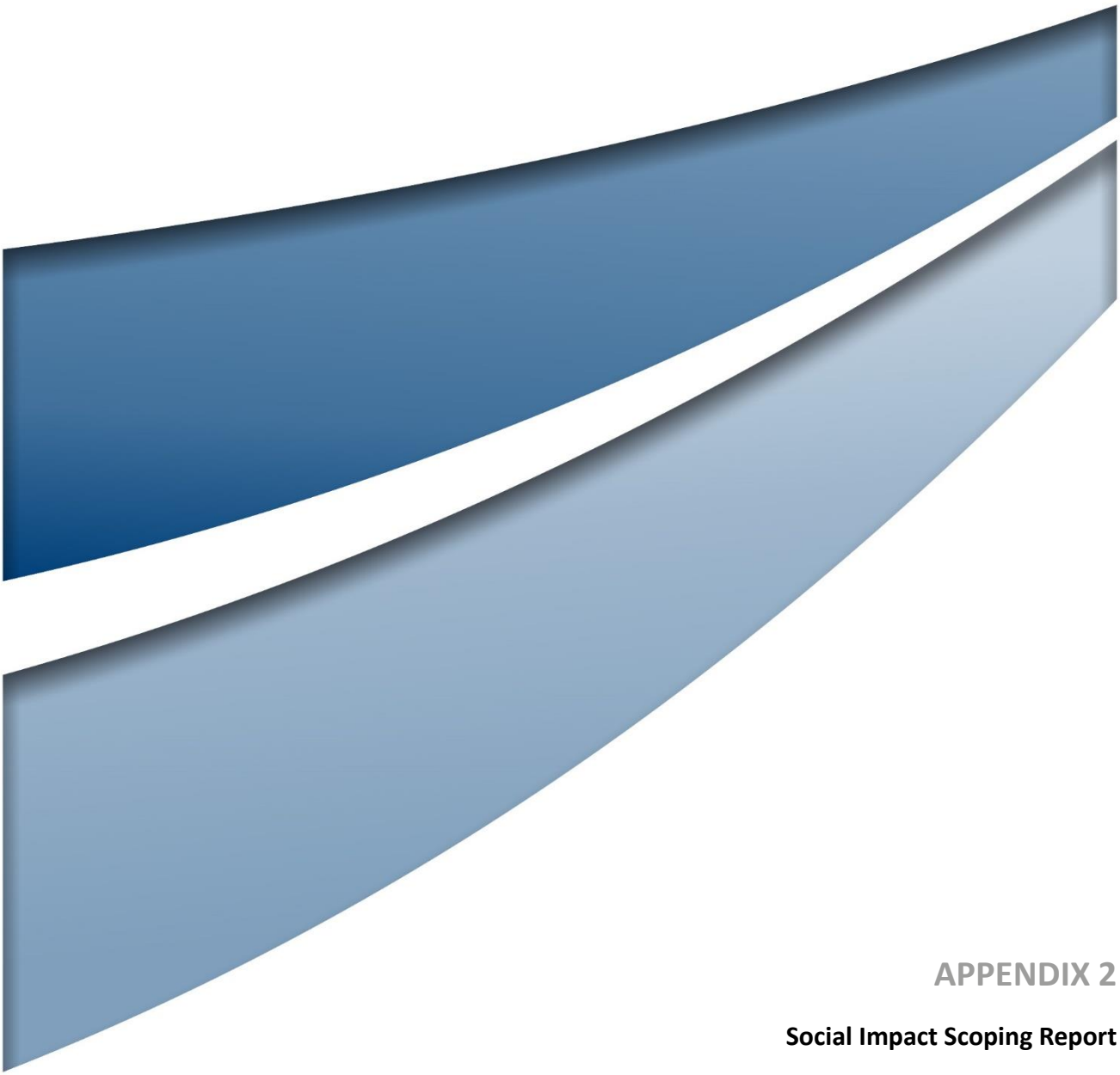
Table A1.2 Land Within Existing Project Approval Boundary (including Modification 6)

Lot/Section/DP	Owner	Lot/Section/DP	Owner
1//1069300	UCMPL Owned Land	28//750735	Private
1//1099495	UCMPL Owned Land	28//750773	UCMPL Owned Land
1//1191436	UCMPL Owned Land	29//750735	Private
1//1214133	Other Mine Owned	30//750735	UCMPL Owned Land
1//182395	UCMPL Owned Land	31//750735	UCMPL Owned Land
1//206588	UCMPL Owned Land	32//631102	UCMPL Owned Land
1//431692	Private	32//750735	Private
1//432146	Private	33//750735	Private
1//518563	UCMPL Owned Land	33//755439	UCMPL Land Leased
1//534014	Crown	34//750735	Private
1//572488	UCMPL Owned Land	35//750735	UCMPL Owned Land
1//661026	UCMPL Owned Land	36//750735	UCMPL Owned Land
1//701346	UCMPL Owned Land	37//750735	UCMPL Owned Land
1//720331	UCMPL Owned Land	38//750735	Private

Lot/Section/DP	Owner	Lot/Section/DP	Owner
1//720332	UCMPL Owned Land	39//750735	UCMPL Owned Land
1//720333	UCMPL Owned Land	41//750735	UCMPL Mining Leasehold
1//720334	UCMPL Owned Land	42//750735	UCMPL Mining Leasehold
1//720335	UCMPL Owned Land	43//736630	Crown
1//722881	Other Mine Owned	43//750735	UCMPL Mining Leasehold
1//750742	Private	44//736630	UCMPL Owned Land
1//750773	UCMPL Owned Land	44//750735	UCMPL Owned Land
1//840034	UCMPL Owned Land	45//736630	Other Mine Owned
1//876943	UCMPL Owned Land	45//750735	UCMPL Owned Land
2//1214133	UCMPL Owned Land	45//750736	UCMPL Owned Land
2//182395	UCMPL Owned Land	46//750735	UCMPL Owned Land
2//206588	UCMPL Owned Land	46//750736	UCMPL Owned Land
2//432146	UCMPL Owned Land	47//750735	UCMPL Owned Land
2//518563	UCMPL Owned Land	48//750735	UCMPL Mining Leasehold
2//534014	Private	49//750735	Crown
2//537477	UCMPL Owned Land	50//750735	UCMPL Owned Land
2//720334	UCMPL Mining Leasehold	51//750735	UCMPL Owned Land
2//722880	UCMPL Owned Land	52//750735	UCMPL Owned Land
2//722882	Private	52//750773	UCMPL Mining Leasehold
2//750735	UCMPL Mining Leasehold	53//750735	UCMPL Owned Land
2//750736	UCMPL Owned Land	54//750735	UCMPL Owned Land
2//750773	UCMPL Owned Land	54//750736	UCMPL Owned Land
2//840034	UCMPL Owned Land	54//750773	UCMPL Owned Land
3//1214133	Other Mine Owned	55//722794	UCMPL Land Leased
3//182395	UCMPL Owned Land	55//750735	UCMPL Owned Land
3//206588	UCMPL Owned Land	56//750735	UCMPL Owned Land
3//534014	Private	56//750773	UCMPL Owned Land
3//701346	UCMPL Owned Land	57//750746	Private
3//720334	UCMPL Mining Leasehold	58//750773	UCMPL Owned Land
3//722880	UCMPL Owned Land	59//750759	Private
3//750735	UCMPL Owned Land	59//750773	UCMPL Owned Land
3//750773	UCMPL Owned Land	60//750736	UCMPL Owned Land
4//1214133	UCMPL Owned Land	60//750742	Private
4//182395	UCMPL Owned Land	61//750736	UCMPL Owned Land
4//206588	UCMPL Owned Land	62//750742	Private
4//615702	UCMPL Owned Land	63//750773	UCMPL Owned Land
4//701346	UCMPL Owned Land	64//750773	UCMPL Owned Land
4//720334	UCMPL Owned Land	65//750773	UCMPL Owned Land
4//750735	UCMPL Owned Land	66//750773	UCMPL Owned Land
5//1246858	Other Mine Owned	68//750773	UCMPL Owned Land

Lot/Section/DP	Owner	Lot/Section/DP	Owner
5//206588	UCMPL Owned Land	70//750773	UCMPL Owned Land
5//750735	UCMPL Mining Leasehold	71//750773	UCMPL Owned Land
5//750773	UCMPL Owned Land	72//750742	Private
6//206588	UCMPL Owned Land	72//750773	UCMPL Mining Leasehold
6//750735	UCMPL Owned Land	73//750773	UCMPL Owned Land
7//206588	UCMPL Owned Land	74//750773	UCMPL Owned Land
7//750735	UCMPL Owned Land	75//750742	Private
8//206588	UCMPL Owned Land	75//750773	UCMPL Owned Land
8//750735	UCMPL Owned Land	76//750773	UCMPL Mining Leasehold
9//750735	UCMPL Owned Land	78//750773	UCMPL Land Leased
9//750773	UCMPL Owned Land	79//750773	UCMPL Owned Land
10//750735	UCMPL Owned Land	81//750742	Private
11//750735	UCMPL Owned Land	83//704077	UCMPL Mining Leasehold
11//750773	UCMPL Owned Land	84//704077	Other Mine Owned
12//750735	UCMPL Owned Land	85//704094	UCMPL Owned Land
13//750773	UCMPL Mining Leasehold	101//595015	UCMPL Owned Land
14//750773	UCMPL Mining Leasehold	151//595016	UCMPL Owned Land
15//750735	UCMPL Owned Land	164//750748	NSW Government
15//750773	UCMPL Mining Leasehold	178//750735	UCMPL Owned Land
16//1140073	Other Mine Owned	179//750735	UCMPL Owned Land
16//750735	UCMPL Owned Land	180//750735	UCMPL Owned Land
16//750773	UCMPL Mining Leasehold	211//750735	UCMPL Owned Land
17//750735	UCMPL Owned Land	212//750735	UCMPL Owned Land
17//750773	UCMPL Owned Land	7003//1025349	UCMPL Land Leased
18//750735	UCMPL Owned Land	7005//1028230	Crown
18//750773	UCMPL Owned Land	7008//1128119	UCMPL Mining Leasehold
19//750735	UCMPL Owned Land	7301//1148421	UCMPL Mining Leasehold
19//750746	Private	7302//1148421	Crown
20//750735	UCMPL Owned Land	7303//1143562	UCMPL Land Leased
20//750773	UCMPL Owned Land	7303//1148412	Crown
20//755439	Other Mine Owned	7304//1148412	Crown
21//750773	UCMPL Owned Land	7305//1148985	UCMPL Mining Leasehold
22//750735	Private	7306//1148985	UCMPL Mining Leasehold
23//750735	Private	B//408792	UCMPL Owned Land
24//750735	Private	C//408792	UCMPL Owned Land
25//750773	Private	Road reserves	Crown
27//750735	Private	Road reserves	Local Government Authority
27//750773	UCMPL Owned Land	-	-

Note: grey cells indicate lots that overlap with the existing Project Approval boundary (including Modification 6) and the UWCO Project Area.



APPENDIX 2

Social Impact Scoping Report

umwelt
Environmental & Social Consultants

Ulan West Continued Operations Project

Social Impact Scoping Report

Final

September 2024

Ulan West Continued Operations Project

Social Impact Scoping Report

Final

Prepared by Umwelt (Australia) Pty Ltd
on behalf of
Ulan Coal Mines Pty Limited

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Report No.:	R03/23074
Date:	September 2024

This report was prepared using Umwelt's
ISO 9001 certified Quality Management System.

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

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Document Status

Rev No.	Reviewer Name	Review Date	Approved for Issue Name	Approved for Issue Date
Final	Kirsty Davies	5 September 2024	Kirsty Davies	5 September 2024

Abbreviations

Abbreviation	Description
ABS	Australian Bureau of Statistics
ACHA	Aboriginal Cultural Heritage Assessment
ASR	Age Standardisation Rate
BCS	DPE's Biodiversity, Conservation and Science Directorate
CCC	Community Consultative Committee
CSEP	Community and Stakeholder Engagement Plan
CSIRO	Commonwealth Scientific and Industrial Research Organisation
Cth	Commonwealth
CWO	Central West-Orana
DCCEEW	Department of Climate Change, Energy, the Environment, and Water
DFID	U.K. Department for International Development
DPE	Department of Planning and Environment (former)
DPI	Department of Planning and Industry
DPHI	Department of Planning, Housing and Infrastructure (current)
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EL	Exploration License
EnergyCo	Energy Corporation of NSW
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EPA	Environmental Protection Authority
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
Glencore	Glencore Coal Australia Pty Limited
GP	General Practitioner
Ha	Hectares
HHI	Herfindahl-Hirschman Index
Hwy	Highway
IAIA	International Association for Impact Assessment
IAP2	International Association for Public Participation
IEO	Index of Education and Occupation
IER	Index of Economic Resources
IPC	Independent Planning Commission NSW
IRSD	Index of Relative Socio-economic Disadvantage
IUCN	International Union for Conservation of Nature
Km	Kilometre
KV	Kilovolt
LALC	Local Aboriginal Land Council
LGA	Local Government Area

Abbreviation	Description
m	Metre
MDEG	Mudgee District Environment Group
MEG	Regional NSW – Mining, Exploration and Geosciences
MoU	Memorandum of Understanding
MP	Member of Parliament
MW	Megawatts
MWRC	Mid-Western Regional Council
NEM	National Electricity Market
NPWS	National Parks and Wildlife Service
NRAR	Natural Resources Access Regulator
NSW	New South Wales
P & C	Parents and Community
PA	Project Approval
PHIDU	Public Health Information Development Unit
RAPs	Registered Aboriginal Parties
REZ	Renewable Energy Zone
SALM	Small Area Labour Markets
SALs	Suburbs and Localities
SEIFA	Socio-Economic Indexes for Areas
SES	State Emergency Service
SIA	Social Impact Assessment
SIA Guideline	NSW Social Impact Assessment Guideline (2023)
SISR	Social Impact Scoping Report
SSD	State Significant Development
TAFE	Technical and Further Education
TRC	Town Resource Cluster
UCC	Ulan Coal Complex
UCCO	Ulan Coal – Continued Operations Project
UCMPL	Ulan Coal Mines Pty Limited
Umwelt	Umwelt (Australia) Pty Ltd
UWCO Project	Ulan West Continued Operations Project
WHO	World Health Organisation

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1.0 Introduction

This Social Impact Scoping Report (SISR) documents the process and outcomes of the scoping phase of the Social Impact Assessment (SIA) undertaken by Umwelt for the Ulan West Continued Operations Project (UWCO Project). The SISR forms part of the Project's application for the Secretary's Environmental Assessment Requirements (SEARs) lodged with the NSW Department of Planning, Housing and Infrastructure (DPHI) by Ulan Coal Mines Pty Ltd (UCMPL).

This Report has been prepared in alignment with the scoping phase requirements of the NSW Department of Planning and Environment (DPE, now DPHI) *Social Impact Assessment Guideline for State Significant Projects* (2023) or 'the SIA Guideline' and the Department of Planning, Industry and Environment (DPIE, now DPHI) *Guideline for Undertaking Engagement for State Significant Projects* (DPIE, 2022).

Following the issue of SEARs, the Modification Report for the UWCO Project will be prepared and will include a SIA of which this report forms a part.

1.1 Project Background and Overview

The Ulan Coal Complex (UCC) is located approximately 38 km north-east of Mudgee and 19 km north-east of Gulgong in in the Mid-Western Regional Local Government Area (LGA), New South Wales (NSW) (refer to **Figure 1.1**). UCC is operated by UCMPL, a subsidiary of Glencore Australia Pty Limited (Glencore).

Coal mining has been undertaken in the Ulan area since the 1920s. Longwall mining commenced at Ulan Underground in 1986 and development of the Ulan West Underground commenced in 2011 with longwall mining production commencing in 2014.

UCMPL was granted its current Project Approval (PA) 08_0184 under Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) on 15 November 2010 for the Ulan Coal – Continued Operations Project (UCCO Project). The UCC also operates pursuant to approvals EPBC 2009/5252 and EPBC 2015/7511, issued under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

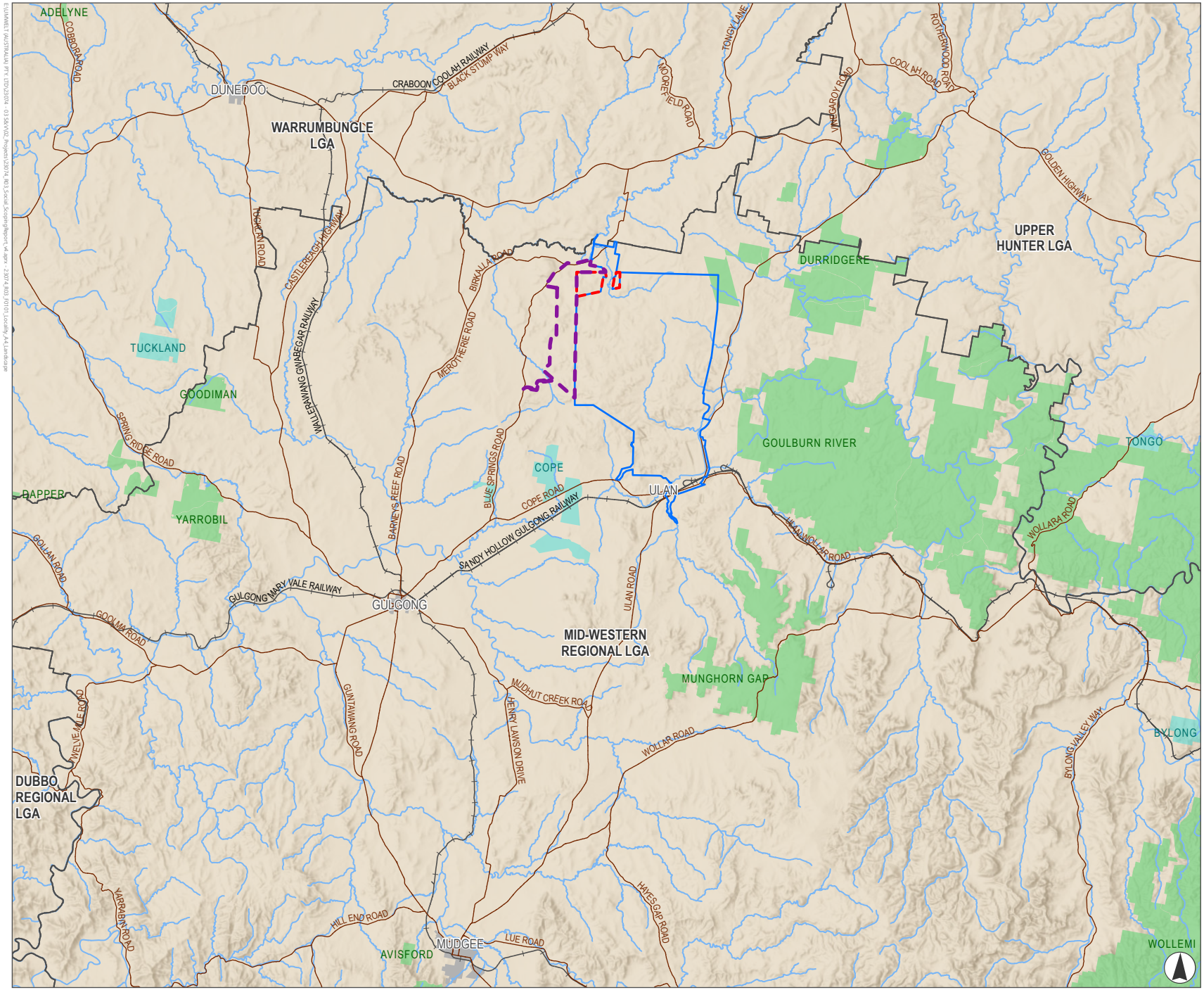
Approved mining operations within the UCC consist of underground mining in the Ulan Underground and Ulan West Underground areas as well as open cut mining, and associated coal handling, processing, and transport, through to 30 August 2033. The open cut operations are currently in care and maintenance.

UCMPL has identified mineable coal resources within Exploration Licence (EL) 8687 and EL9363 located to the west of the currently approved Ulan West underground mining area. UCMPL is proposing the UWCO Project to obtain approvals for accessing and extracting the additional resources within EL8687 and EL9363.

UCMPL is seeking a modification to PA 08_0184 for the UWCO Project under section 4.55(2) of the EP&A Act.

FIGURE 1.1

Locality Map



Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Proposed UWCO Project Area
- Local Government Area (LGA)
- Road
- Railway
- Major Watercourse
- State Forest
- NSWS Reserves

0 5 10 15

Kilometres

Scale 1:400,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

1.2 Report Purpose and Structure

The purpose of this SISR is to detail the outcomes of the social impact scoping undertaken for the UWCO Project. This preliminary phase has involved:

- identifying and defining the UWCO Project's social locality/social area of influence and obtaining an understanding of socio-economic and demographic characteristics, community values of importance, community needs and aspirations, and additional development occurring within the social locality
- identifying stakeholder groups that may be affected by and/or have an interest in the UWCO Project and documenting key community issues relating to the Project, as identified through community consultation undertaken
- providing an initial evaluation of predicted social impacts associated with the UWCO Project and outlining where further assessment is likely to be required
- considering opportunities to revise the project design in response to identified social impacts
- outlining the approach for undertaking the remaining phases of the SIA.

The SISR has been structured as detailed below:

- **Section 1.0**: Provides an introduction and background to the UWCO Project, including a summary of key Project components.
- **Section 2.0**: Details the SIA methodology employed for the Scoping phase of the assessment.
- **Section 3.0**: Outlines the existing operational context of the UCC and its history in the community.
- **Section 4.0**: Comprises a socio-economic profile and demographic analysis of the Mid-Western Regional LGA, the LGA in which the UCC is located, and the key suburb and localities of Ulan, Bungaba, Cooks Gap, Gulgong, Mudgee, Uarbry, Turill, Cope, Rylstone, and Kandos. Further detail on how the social localities have been defined is also included in this section.
- **Section 5.0**: Identifies the likely positive and negative social impacts associated with the UWCO Project, as identified through engagement with key stakeholders, review of other relevant social studies and application of technical expertise.
- **Section 6.0**: Discusses potential strategies for consideration to manage or mitigate the predicted social impacts identified during the assessment process, including consideration of potential project design changes, to address negative impacts of the UWCO Project and, where possible, opportunities to enhance positive social impacts.
- **Section 7.0**: Provides an evaluation of preliminary impacts that have the potential to occur as a result of the UWCO Project.
- **Section 8.0**: Provides recommendations and overall conclusions based on the content of the SISR, to be resolved in the SIA.

2.0 Scoping Methodology

2.1 Assessment Approach

A 'best practice' approach to the SISR has been adopted and addresses the NSW *Social Impact Assessment Guideline for State Significant Projects* (hereafter referred to as the SIA Guideline) (2023) and *Undertaking Engagement Guidelines for State Significant Projects* (2022).

Commencement of SIA early in the project, informed by community and stakeholder engagement, affords the opportunity to effectively address social impacts within the detailed project planning, design and assessment phase, resulting in improved project design and social/community outcomes. Engagement to inform the SIA is considered separate to, and different from, consultation on the environmental impact assessment (EIA) and the project, with the former being more two-way in seeking stakeholder input to the assessment process.

Figure 2.1 outlines the SIA and EIA processes, with further information on the relevant SIA phases provided in **Figure 2.2**. This report provides outcomes of the first phase of the SIA process only, the scoping phase.

Figure 2.1 SIA and EIA Process

Source: Umwelt 2023, adapted from NSW SIA Guidelines, 2023.

Figure 2.2 SIA Phases

Source: Umwelt 2024, adapted from NSW SIA Guidelines, 2023.

Not all social impacts will be equally distributed, some individuals or groups within the community may benefit from the project, while others may also experience negative impacts. If negative impacts are predicted, it is the role of the SIA to determine how such impacts may be addressed effectively to reduce the degree of disruption to those affected. If positive impacts are predicted, the aim of the SIA is to maximise these opportunities and identify how they might be further enhanced and realised.

Monitoring and evaluation are a key component of the SIA process and should outline how social impacts will be monitored and adaptive management applied, should the project proceed, and is important to identify any unanticipated impacts that may arise as a result of the project.

According to the SIA Guideline, social impacts can be grouped according to different social impact categories and may involve changes to people's way of life, community, accessibility, culture, health and wellbeing, surroundings, livelihoods, and decision-making systems (refer to **Figure 2.3**). However, social impacts may fall into a number of impact categories and are often not mutually exclusive. Social impacts are rarely singular cause-effect relationships, but constitute complex patterns of intersecting impact pathways that may be first or second order in nature.

Figure 2.3 Social Impact Categories

Source: (Umwelt, 2023, adapted from NSW SIA Guidelines, 2023).

While some social impacts may directly occur because of the project, others may be *indirectly* caused by changes in the biophysical environment and biophysical impacts, as outlined in **Figure 2.4**. Consequently, both direct and indirect social impacts should be considered.

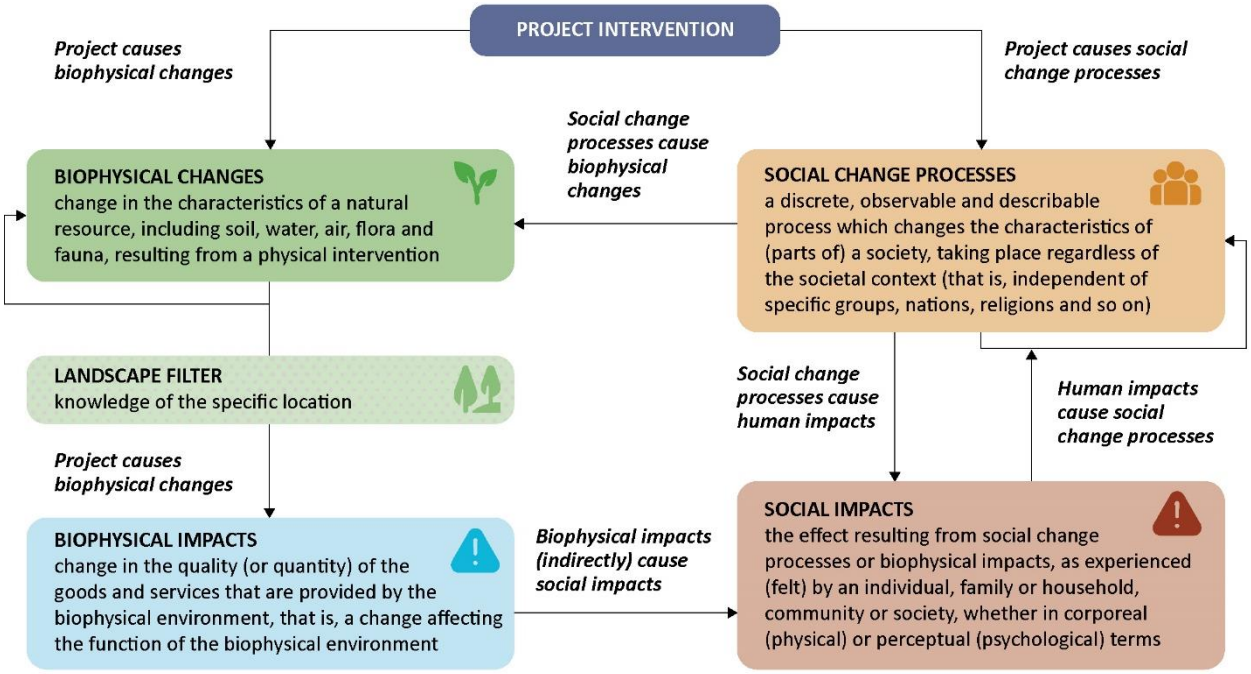


Figure 2.4 Direct and Indirect Social Impacts

Source: Umwelt 2023, Adapted from Slootweg et al 2013 (p.78).

As also outlined in **Figure 2.4**, social impacts may be tangible or intangible in nature and may be experienced by those affected both physically and psychologically. Social impacts may also be experienced at even the rumour of a project change, and may manifest in differing expectations, fears, and anxieties.

Given that social impacts are impacts on people, it is important that their significance is determined from the perspective of those experiencing the impact, integrated with the social impact practitioner's experience, with impact significance also informed by relevant social research and knowledge.

2.2 Social Locality and Baseline Profiling

2.2.1 Social Locality

The term 'social locality' or 'area of social influence' is commonly used in SIA practice. There is no fixed meaning or predefined geographic boundary to a social locality (e.g., the local suburb, or 'within 500 m'). Instead, the scale of the social locality should be established on a case-by-case basis, having regard to the nature of the project and its impacts (DPE, 2023). For further direction, the social locality is defined by:

- The scale and nature of the project; its associated activities including ancillary works and infrastructure; potential direct and indirect impacts (for example, transport and logistics corridors or property acquisitions); and potential cumulative impacts.
- Who may be affected by the project and how they may be affected; their social, cultural and demographic characteristics; their relevant interests and values; the things that differentiate groups (such as cultural diversity) as well as things that they have in common; and the broader community and public interest.

- Whether any vulnerable or marginalised people may be affected by the project; including people on low incomes; people living with disabilities, chronic medical conditions or in poor health requiring access to services; culturally and linguistically diverse communities; people who are homeless or in insecure housing; people who are unable to represent themselves or other vulnerable people such as elderly people, children or single-parent households.

- Built or natural features on or near the project that could be affected, and the intangible values that people may associate with these features, such as a sense of place or belonging, rural character, community cohesion, connection to Country and value of stories within the cultural landscapes, and use of natural areas and resources.

- Relevant social, cultural, demographic trends or social change processes occurring now, or which have occurred in the past near the project site and in the broader region, including how people have felt or experienced these changes; community resilience; different trends and patterns around issues relating to key social issues including rental affordability, employment, changing land uses, population and demographic change; or experiences of extreme weather and natural hazards.

- The history of the proposed project and the area, and any similar experiences people near the project have had, including change prior to, or created by, the planning assessment process; how people have reacted to early discussions; and how these discussions and other experiences have affected the broader community; and the traditional Aboriginal use of the place, recent history of the place and people and any ongoing traumas.

The Social Locality for the UWCO Project is outlined in **Section 4.1.**

2.2.2 Social Baseline Profile

Social baseline profiling provides a comprehensive analysis of the key characteristics of the people and communities located within the project's social locality to afford a more detailed understanding of the social context in which the project is based to inform social impact prediction.

The SIA Guideline (DPE, 2023) outlines key components to be assessed in the development of a social baseline profile.

To assist in structuring the social baseline for the UWCO Project and to better understand the communities of interest and to evaluate their resilience and adaptive capacity to change, the Sustainable Livelihoods Approach or 'community capitals' approach has been adopted (U.K. Department for International Development [DFID] 1999).

According to this framework, people seek to maintain their livelihood within a context of vulnerability. Specifically, threats to their livelihood include shocks (such as sudden onsets of natural disasters, health problems, conflicts, and economic crises), trends (for instance, those relating to the economy, health, resources, and governance) and seasonality (such as cyclical fluctuations in prices or employment). People draw upon these assets to build and maintain their livelihood. A livelihood is considered sustainable *'…when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base'.*

The DFID (1999) approach draws on broad categories of community capitals (human, social, natural, physical and economic/financial) as a fundamental basis to identifying and further enhancing community capacity and resilience. This methodology has been further developed by Coakes & Sadler (2011) and applied in SIA practice. The vulnerability of each capital area can be assessed through the selection of a suite of social and economic quantitative and qualitative indicators specific to each capital area to assess a community's vulnerability to change, or conversely adaptive capacity. Elements of each capital area are further outlined in **Figure 2.5**.

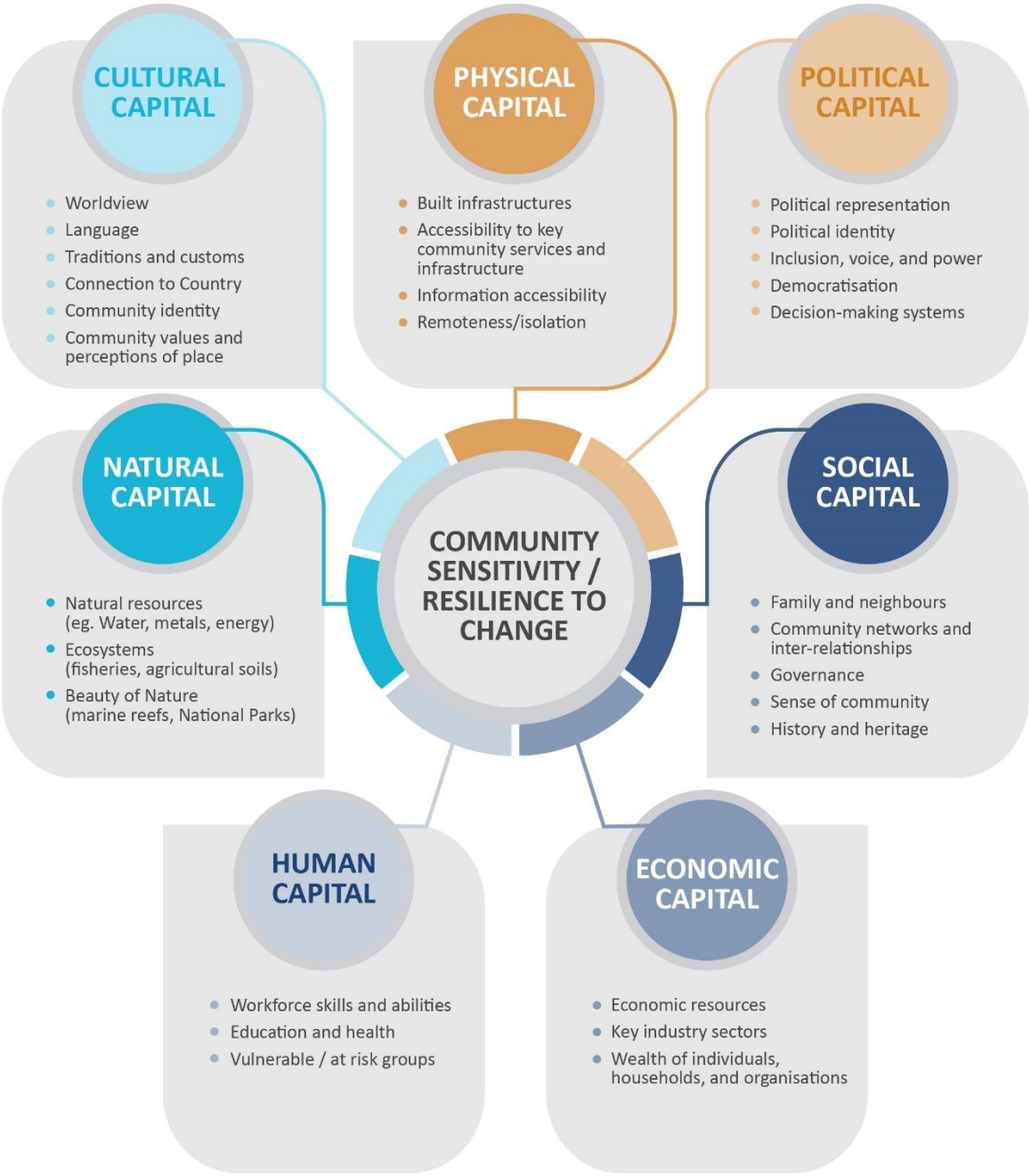


Figure 2.5 Community Capitals

Source: Umwelt 2023.

2.2.3 Data Sources

To gain an understanding of the demographic characteristics and composition of communities within the social locality, and to ascertain how the UWCO Project may change or affect people, socio-economic and demographic data has been gathered and summarised from the ABS Census (2021) and the Social Health Atlas of Australia (PHIDU, 2021), as well as through a review of local media, relevant literature and regional and local government plans and strategies. As has been previously noted, ABS data is used as a proxy indicator set to define the characteristics of residents living in the social locality relevant to the UWCO Project.

Appendix A contains the community profile dataset that has been used to inform the social baseline. The data sources analysed and key indicators of interest, including a brief explanation of their relevance to the Project are outlined in **Appendix B**.

2.3 Stakeholder and Community Engagement

2.3.1 Stakeholder Identification

SIA involves the cooperation and coordination of a number of 'social partners' or 'stakeholders'. As Burdge (Burdge, 2004) outlines, stakeholders may be affected groups or individuals that:

- live, work, or recreate near the UWCO Project
- have an interest in the proposed action or change
- use or value a resource associated with the UWCO Project
- are affected by the Project e.g., may be required to relocate because of the UWCO Project.

A stakeholder identification process was undertaken during the scoping phase of the UWCO Project to support the planning and delivery of community consultation and stakeholder engagement to inform the SIA. This process involved identifying stakeholders with an interest in the UWCO Project, or those directly and indirectly affected by the UWCO Project to identify potential issues/concerns or opportunities.

Figure 2.6 outlines the key stakeholder groups that are anticipated to be relevant to, and potentially interested in, the UWCO Project, with further detail provided in **Table 2.1.** Those groups that have been engaged during the scoping phase are coloured blue in **Figure 2.6.**

Section 2.3.2 outlines the engagement undertaken with stakeholders during the Scoping phase of the SIA to inform this report, and the proposed engagement mechanisms to be utilised in the assessment phase of the SIA.

Figure 2.6 Stakeholder Groups

Table 2.1 Key Stakeholders

Stakeholder Group	Description
Landholders in UWCO Project Area	Residents and landholders who are within the UWCO Project Area and directly impacted by the Project (n=17)
Proximal communities	Residents and landholders proximal to the UWCO Project Area or UCC including those residing in the Ulan Suburb and Locality (SAL), Turill (SAL), Cope (SAL) and Bungaba (SAL) localities
Government agencies	Department of Planning, Housing and Infrastructure (DPHI) Mid-Western Regional Council (MWRC) NSW Resources Regulator Environment Protection Authority (EPA) DPHI Water Water NSW Regional NSW – Mining, Exploration and Geosciences (MEG) Department of Primary Industries – Agriculture and Fisheries Divisions Natural Resources Access Regulator (NRAR) Biodiversity, Conservation and Science Directorate (BCS) Heritage NSW National Parks and Wildlife Service (NPWS) Crown Land Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)
Aboriginal Stakeholders	Local Aboriginal Land Council Registered Aboriginal Parties (RAPs) Warrabinga Wiradjuri #7
Community Consultative Committee (CCC)	UCC CCC members
Local Community Groups	Bungaba Progress Association Turill Community Group
Local Business and Service Providers	Cudgegong Valley Public School St Mathews Central School Gulgong High School Mudgee Public School Mudgee High School All Hallows Catholic School Lue Public School Dunedoo Central School Mudgee Region Tourism Ulan Post Office Hotel Ulan Village Green

Stakeholder Group	Description
	GB Auto Group Ulan Ulan Water Business Mudgee Gulgong Chamber of Commerce Rural Fire Service – Mid Western Regional LGA (Cudgegong Office)
Employees	UCMPL employees Glencore employees
Local Media	Mudgee Guardian and Gulgong Advertiser
Contractors and Suppliers	UCMPL contractors and suppliers
Regional Community	Community members in Gulgong, Mudgee, Kandos, Rylstone and the broader Mid-Western Regional LGA
Neighbouring mining industry	Wilpinjong Coal Mine Moolarben Coal Mine Bowdens Silver (approved, pending construction)
Neighbouring proposed Industry	Renewable energy developments including: • Narragamba Solar Farm • Barneys Reef Wind Farm • Birriwa Solar Farm • Mayfair Solar Farm. Other renewables energy projects associated with the CWO REZ
Regional Businesses and Service Providers	Businesses and service providers in the Mid-Western Regional LGA including those related to: • Accommodation and Housing • Education • Health • Tourism • Community services.
Regional Community Groups	Mudgee Lions Club Rotary Club of Mudgee Rotary Club of Mudgee Sunrise.

2.3.2 Stakeholder and Community Engagement

Table 2.2 outlines engagement mechanisms that have been used to inform the SIA Scoping Phase, and the mechanisms proposed to be used during the assessment phase of the SIA.

Table 2.2 Engagement Mechanisms

Mechanisms	Purpose: SIA/ EIS	Description	Round 1 Engagement (Scoping)	Proposed Round 2 Engagement (SIA Phase)	Targeted Stakeholder Group
Project Meetings including Individual meeting (in person or via telephone)	**SIA Engagement Mechanism**	Undertake meetings (via telephone online and/or in person) using interview guide to capture feedback for the SIA	Individual project meetings, in person or telephone calls were offered to 36 residents and landholders in the Project area, proximal communities, local businesses and service providers during March and April 2024.	Follow up interviews will occur during the preparation of the Modification Report. Further interviews with local businesses and service providers will be undertaken in this phase.	Landholders in the UWCO Project Area Proximal Communities Local businesses and service providers Local community groups Aboriginal Stakeholders CCC
Online Survey	**SIA Engagement Mechanisms**	Online survey developed to capture primary data to inform the SIA	Online survey developed and circulated to those stakeholders who were not able to attend an individual meeting. Link to the survey was included on the Ulan West Continued Operations Update No. 1 that was distributed to approximately 117 stakeholders including landholders in the Project Area and proximal communities.	Online survey to be developed and distributed to local communities and key stakeholders	Landholders in the UWCO Project Area Proximal Communities Local businesses and service providers Local community groups Aboriginal Stakeholders CCC
Project Information Sheet / Community Newsletters	**Project related Engagement mechanisms**	Project information sheets and UCMPL newsletters to distribute information about the UWCO Project to the broader community	**Bungaba Community Newsletter**: Issue 9 September 2023. The newsletter contained project information regarding the study area, technical assessments, and seismic survey testing information.	**Ulan West Continued Operations Update No. 2** – UWCO Project update and outcomes of scoping phase to be distributed in the assessment phase **Ulan West Continued Operations Update No. 3 –**	Landholders in the UWCO Project Area Proximal Communities Aboriginal Stakeholders Wider LGA Community Local businesses and service providers

Mechanisms	Purpose: SIA/ EIS	Description	Round 1 Engagement (Scoping)	Proposed Round 2 Engagement (SIA Phase)	Targeted Stakeholder Group
			Ulan West Continued Operations Update No. 1: UWCO Project overview was distributed by UCMPL to approximately 117 stakeholders on 14/02/24. This newsletter included a link to the online survey and an invitation to the Community Information Session.	UWCO Project update and outcomes of technical studies to be distributed following the completion of the Modification Report and SIA reports	Local community groups CCC
Project Briefing	**SIA Engagement Mechanisms and Project related Engagement mechanisms**	Formal briefings to key stakeholders and government agencies, with Project Information Sheet and/or slide deck to: • formally introduce the UWCO Project • discuss relevant aspects of the UWCO Project and assessment process and • collect any relevant feedback	Initial Project briefings were undertaken with DPHI in June 2023 and April 2024, and with the CCC in December 2023. Project briefing provided to General Manager of MWRC in October 2023 and to Councillors in November 2023.	Further Project briefings will be undertaken across subsequent phases of the UWCO Project.	Government Agencies UCMPL Employees CCC
Project Information Session	**SIA Engagement Mechanisms and Project related Engagement mechanisms**	Informal 'drop in' community sessions to provide information and an opportunity to meet the UWCO Project team, for members of the community to pose questions, to visually share results of any relevant technical studies, and collect community feedback.	Community information session was held at Bungaba Hall on 21 February 2024 for proximal communities. Two sessions were held with 9 community members attending in total.	Project information sessions will be held to discuss the outcomes of relevant assessments for the Proposed Modification, prior to lodgement of the Modification Report.	Landholders Proximal communities (Bungaba, Turill, Ulan) Local businesses and service providers Local community groups Proximal communities (Bungaba, Turill, Ulan)

Mechanisms	Purpose: SIA/ EIS	Description	Round 1 Engagement (Scoping)	Proposed Round 2 Engagement (SIA Phase)	Targeted Stakeholder Group
Town Resource Survey (TRC)	**SIA Engagement Mechanisms**	Online survey distributed to employees, contractors and suppliers of UCMPL that aims to: • demonstrate the contribution of operational project workforces and associated supplier value chains • demonstrate the socio-economic contribution of operational workforces to local communities and the broader region and state due to operational presence in the area	NA	A TRC survey issued to UCMPL employees and contractors.	UCMPL Employees Contractors and suppliers

Table 2.3 provides a summary of the number of stakeholders engaged during the scoping phase to inform the SISR. It is worth noting that additional engagement has been undertaken by the UWCO Project team to inform Project planning and the development of the Scoping Report, that is not reflected in the table. As mentioned in sections above, subsequent phases of the SIA will seek continued involvement across the stakeholder groupings identified in **Figure 2.6**.

Table 2.3 SIA Scoping Phase Consultation Statistics

Stakeholder Group	Number Directly Contacted	Number Engaged
Landholders in Project Area	17 individuals across 16 properties	16 participants across 11 properties
Proximal communities	10	10
Government agencies	0	1
Aboriginal Stakeholders	15	0
Community Groups	1 Community Group / organisation	2 participants across 1 Community Group / organisation
Business and Service Providers	7	2
Broader Community	0	1
Total	**50**	**32**

2.4 Issue Scoping and Preliminary Impact Evaluation

Quantitative and qualitative information collected through consultation activities has been collated and analysed to inform the identification of potential social impacts associated with the UWCO Project (refer to **Section 5.0**), from the perspectives of affected parties, and to afford the preliminary evaluation of social impacts.

The Social Scoping Worksheet (DPE, 2023) is a decision support tool developed by the DPE to consider the social impacts of a project and is used to demonstrate how issues scoping will inform the level of assessment undertaken for each identified impact in the SIA. **Section 7.0** provides the preliminary impact evaluation undertaken for the scoping SIA, using the SIA Guideline's Social Scoping Worksheet.

A key objective of the SIA scoping phase is to identify the level of assessment required for each impact in the assessment phase, as per the SIA Guideline (refer to **Table 2.4**). The level of assessment determines the extent of effort and data required to assess the impact as outlined in **Table 2.5**.

Table 2.4 Guide to Determining Levels of Assessment for Each Social Impact

Level of assessment of the impact	Meaning
Detailed Assessment	The project may result in significant social impacts, including cumulative impacts.
Standard Assessment	The project is unlikely to result in significant social impacts, including cumulative impacts.
Minor Assessment	The project may result in minor social impacts.
Not Relevant	The project will have no social impact, or the social impacts of the project will be so small that they do not warrant consideration.

Source: NSW SIA Guideline (2023).

Table 2.5 Data Requirements for Different Levels of Assessment

	Secondary data	Primary data *Consultation*	*Research*
Minor assessment	Required	Limited - if required (e.g local council)	Not required
Standard assessment	Required	Targeted consultation	Potentially targeted research
Detailed assessment	Required	Broad consultation	Targeted research

Each project activity is assessed by its potential impacts on people, whether previous investigation of the impact has been undertaken, the potential for cumulative impacts, and possible project design changes or mitigation and enhancement measures that may reduce negative impacts and enhance positive impacts of the Project. Social impact characteristics (magnitude and likelihood) that have been considered in this preliminary evaluation are outlined in **Table 2.6**.

Table 2.6 Dimensions of Social Magnitude

Dimensions		Details needed to enable assessment
Magnitude	**Extent**	Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any vulnerable people? Which location(s) and people are affected? (e.g. near neighbours, local, regional, future generations).
	Duration	When is the social impact expected to occur? Will it be time-limited (e.g. over particular project phases) or permanent?
	Severity or scale	What is the likely scale or degree of change? (e.g. mild, moderate, severe)
	Intensity or importance	How sensitive/vulnerable (or how adaptable/resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change.
	Level of concern/interest	How concerned/interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/or intensity.

Source: (DPE, 2023).

Based on an assessment of these impact characteristics, the significance of the potential impact (positive or negative) and its likely effect on differing stakeholder groups is determined, using the impact significance matrix provided in the SIA Guideline and outlined in **Table 2.7**.

Table 2.7 Social Impact Significance Matrix

	Magnitude level				
	1	2	3	4	5
Likelihood level	Minimal	Minor	Moderate	Major	Transformational
A Almost certain	Low	Medium	High	Very High	Very High
B Likely	Low	Medium	High	High	Very High
C Possible	Low	Medium	Medium	High	High
D Unlikely	Low	Low	Medium	Medium	High
E Very unlikely	Low	Low	Low	Medium	Medium

Source: Umwelt, 2023 adapted from NSW SIA Guidelines (DPE, 2023).

In **Section 7.0**, a table is presented which summarises the preliminary social impacts identified, including consideration of:

- the UWCO Project aspect/component
- the social impact category and social impact
- the extent of the impact
- the likely affected stakeholders, and the sensitivity/vulnerability of these individuals and groups and their perceived level of concern/interest (assessed from the perspectives of the stakeholders consulted)
- the duration and/or timing of the impact, and
- the severity of the impact, with consideration of the relevant mitigation and enhancement measures to be put in place.

Proposed management and enhancement strategies proposed to manage the predicted social impacts are further described in **Section 6.0**.

2.5 Assessment Considerations

This report comprises the outputs of the issue scoping phase of the broader SIA process framework.

Consultation has focused primarily on affected landholders (within the Project Area) and proximal landholders/residents.

Due to its nature, this report does not (and cannot) offer a full treatment of all ideas, perspectives, and nuances in the rich and wide-ranging opinions and perspectives of potentially affected stakeholders. Instead, this report highlights themes that have emerged through consultation to date and in consideration of the interrelationships, complementary and contradictory insights which will be explored in detail in subsequent SIA Phases. Further engagement is proposed in the subsequent SIA phase with relevant service providers, local businesses, Aboriginal organisations/groups and other community organisations to further inform social impact prediction and management.

3.0 Operational Context

3.1 History of Mining at Ulan

Mining in the Ulan area has been undertaken since the early 1920s as depicted in **Figure 3.1**, with the Ulan No. 1 Colliery Holding supplying coal to local markets. The distance to major markets prohibited the continuation of mining and operations ceased; with the mine reopening again in 1942 and continuing operations until 1950.

A new mine was developed by Hogan & Gorman in the 1950s located further east of the previous mining operations - the Ulan Colliery Holding No. 2 underground mine – which supplied coal to a new power station that was built to the north of Ulan Village, as well as supplying local markets. This mine is now referred to as the Ulan Underground mine. When the power station closed in 1969, mining at Ulan Underground continued on a small scale to supply other domestic markets (Connell Wagner, 1992).

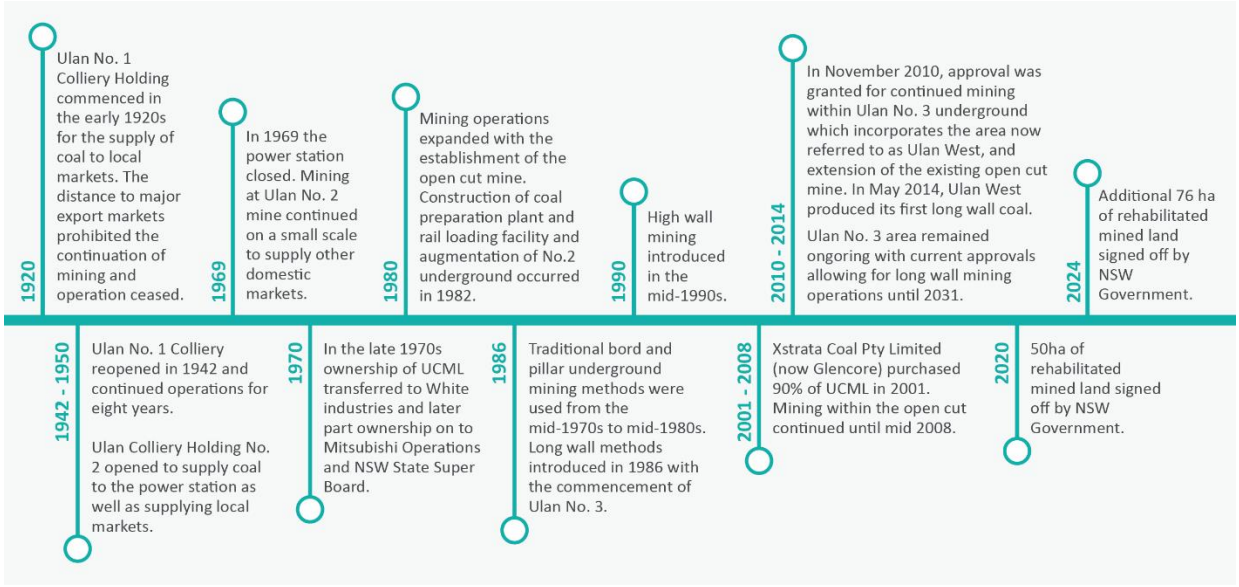


Figure 3.1 History of the Ulan Coal Mine

Source: Umwelt, 2024 adapted from UCMPL, 2021.

In the late 1970s, Hogan & Gorman registered UCMPL and ownership transferred to White Industries. Part ownership was later transferred to Mitsubishi Operations and the NSW State Super Board.
An exploration program undertaken in 1976 in the Ulan area proved the existence of extensive coal reserves, and mining operations at the UCC expanded substantially in the 1980s with the establishment of an open cut coal mine. This expansion included the construction of the coal preparation plant and rail loading facility and augmentation of the Ulan Underground in 1982. Traditional bord and pillar underground mining methods were used from the mid-1970s to mid-1980s prior to longwall methods being introduced in 1986 with the commencement of Ulan No. 3. Glencore (formerly Xstrata Coal Pty Limited) purchased 90% of the UCC in 2001. Mining within the open cut continued until mid-2008, when approved resource recovery areas were exhausted, at which time it was placed in care and maintenance. Development of the Ulan West underground mine commenced in 2011 with longwall mining commencing in 2014.

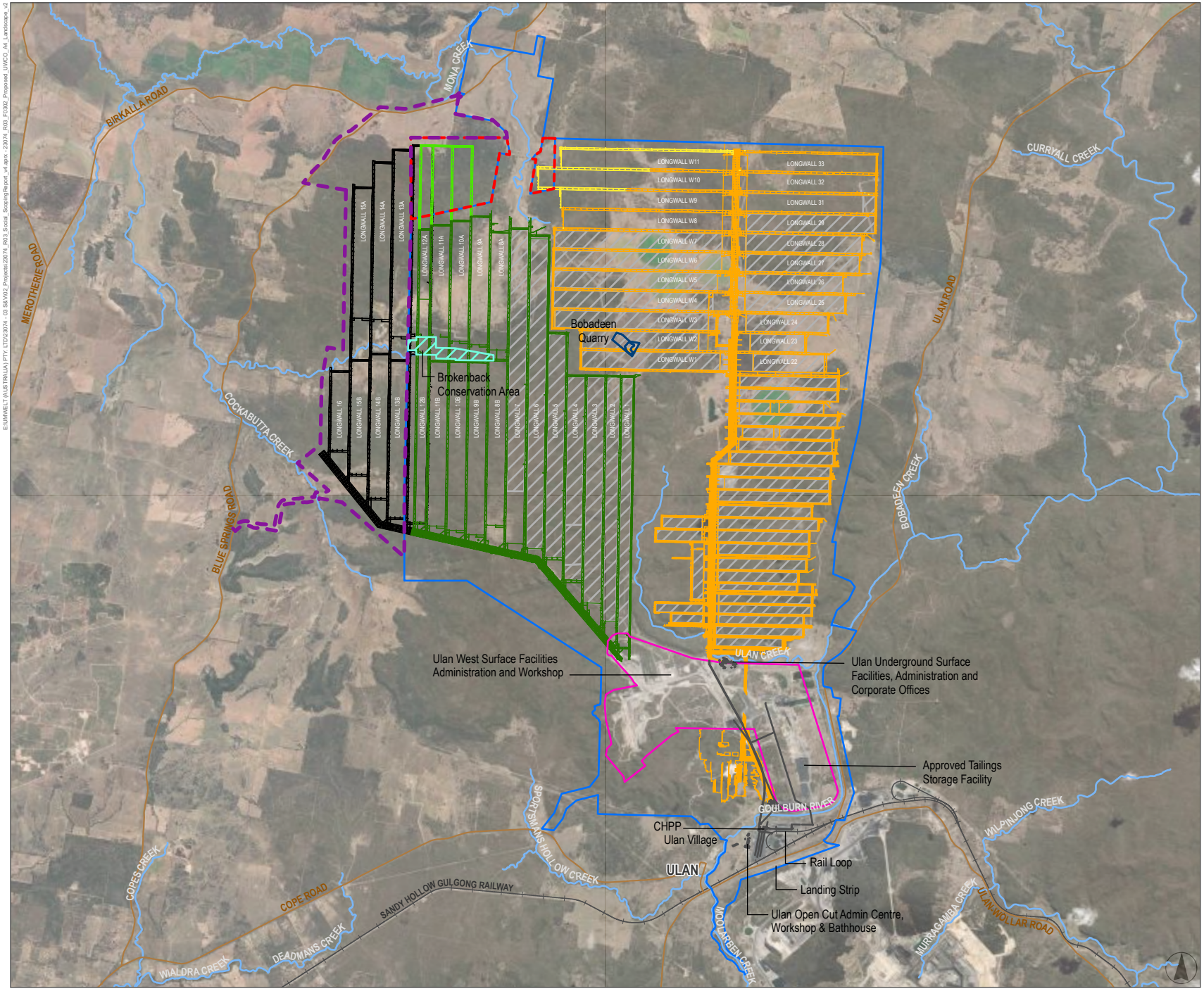
UCMPL was granted PA 08_0184 under Part 3A of the EP&A Act on 15 November 2010 for the Ulan Coal Continued Operations (UCCO) Project. PA 08_0184 has since been modified on six occasions. Approved mining operations at the UCC consist of underground mining in the Ulan Underground and Ulan West Underground areas as well as open cut mining (currently in care and maintenance) with mining permitted to continue until 30 August 2033.

Operations at the UCC are being progressed in accordance with PA 08_0184. The approved UCC operations and the proposed Modification 6 (currently under assessment) are shown in **Figure 3.2**.

The UCC has approval for up to 930 employees. The UCC currently employs 590 people.

FIGURE 3.2

Approved Operations



Legend

- Brokenback Conservation Area
- Bobadeen Quarry
- Road
- Railway
- 4th order or greater flowing water courses

Approved Activities

- Project Approval Boundary
- Existing Surface Infrastructure
- Approved Ulan Open Cut Area
- Approved Ulan West Mine Plan
- Approved Ulan Underground Mine Plan
- Previously Mined

Proposed Modification 6

- Proposed Mod 6 Project Approval Boundary
- Amended Ulan West Underground Mine Plan Modification
- Amended Ulan Underground Mine Plan Modification

UWCO

- Proposed UWCO Project Area
- Proposed UWCO Mine Plan

0 1.5 3 4.5

Kilometres

Scale 1:120,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

3.2 Existing Perceptions of the Operations

Given that UCMPL is an existing operation, prior to being asked to provide their views on the UWCO Project, participating stakeholders were asked to identify any issues or impacts that they were currently experiencing in relation to the operations at UCC, with both positive and negative impacts raised during discussions.

When asked to rate their overall experience with the company to date, 80.6% of participants stated that their experience as 'very good' or 'good', with 7.6% providing an 'acceptable' rating and 11.5% rating their experience as 'poor' (refer to **Figure 3.3**). Further, 76% of participants agreed that UCMPL listens to and responds to community concerns and delivers on promises made (refer to **Figure 3.4**).

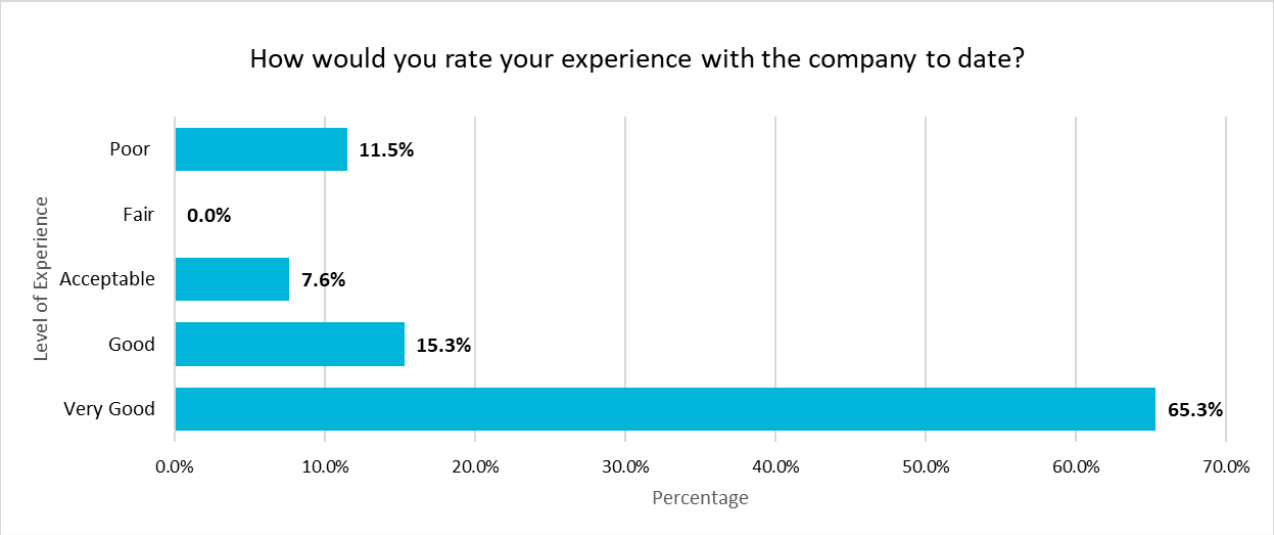


Figure 3.3 Experience with the Company to Date

Source: UCMPL Ulan West Continued Operations Project Survey, 2024 (n=25).

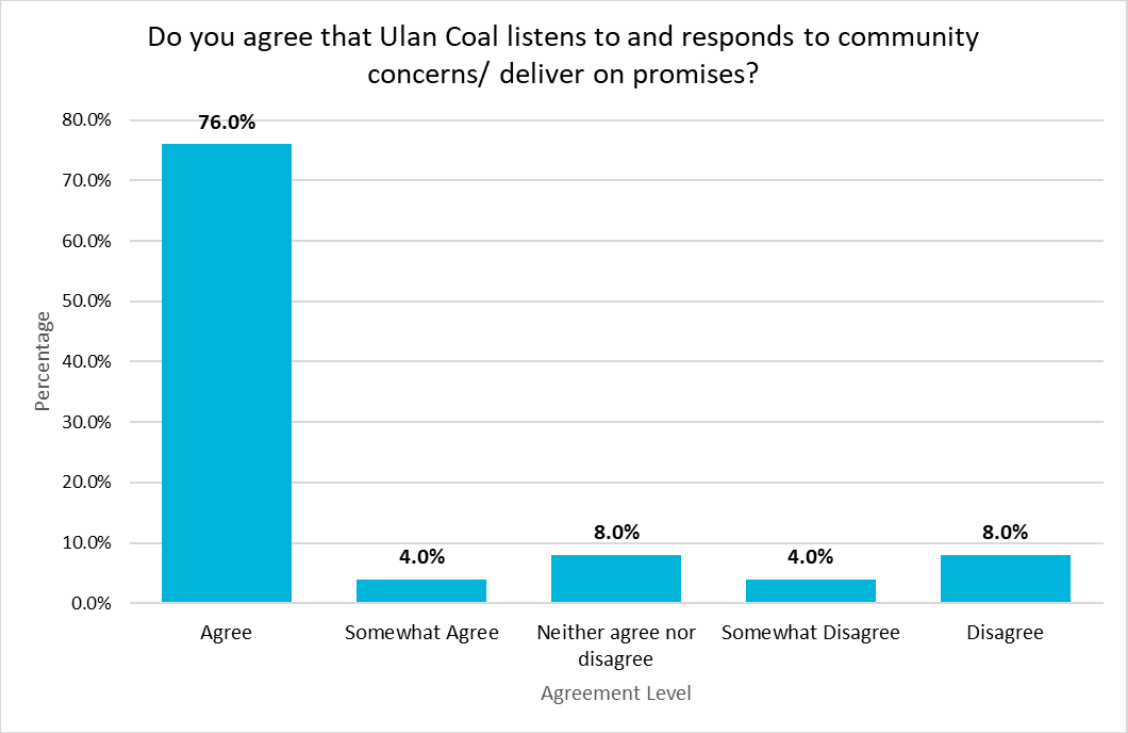


Figure 3.4 Ulan Coal's Response to Community Concerns and Delivery of Promises

Source: UCMPL Ulan West Continued Operations Project Survey, 2024 (n=25).

Moreover, when participants were asked to rate their level of satisfaction in regard to engagement by the company, 80% of participants stated that they were satisfied, with only 8% stating that they were dissatisfied (refer to **Figure 3.5**).

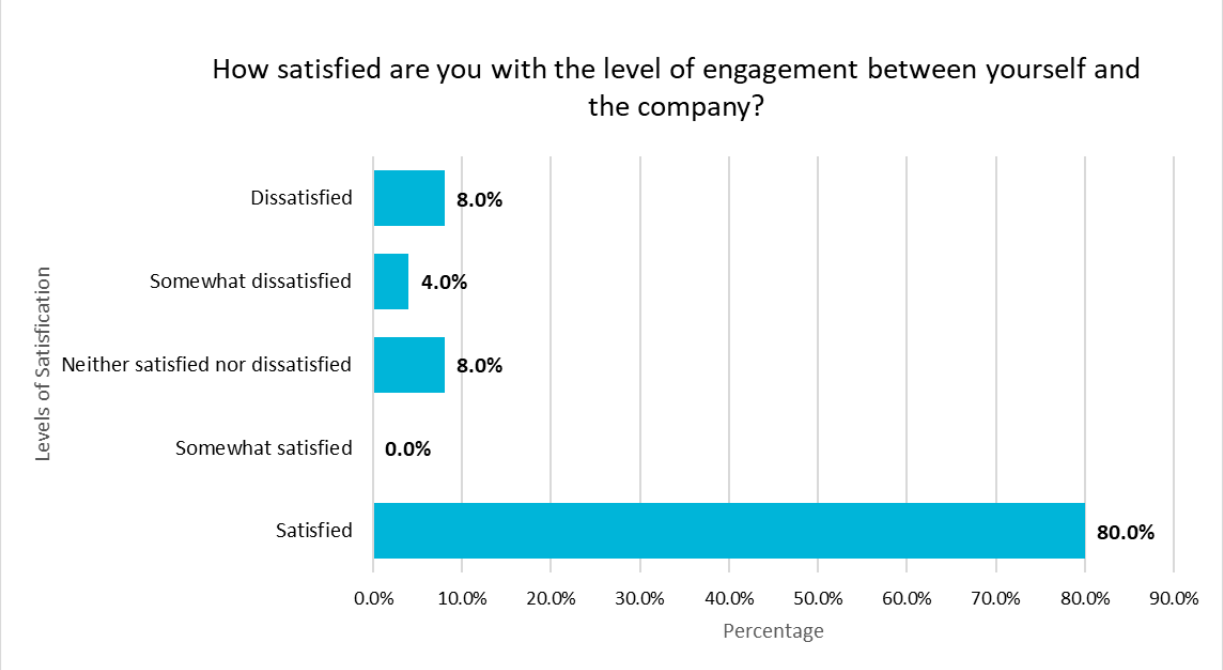


Figure 3.5 Level of Satisfaction of Company Engagement

Source: UCMPL Ulan West Continued Operations Project Survey, 2024 (n=25).

As **Figure 3.6** shows, a total of 33 complaints were received in relation to the UCMPL operations between January 2019 and December 2023; with a low number of complaints per year.

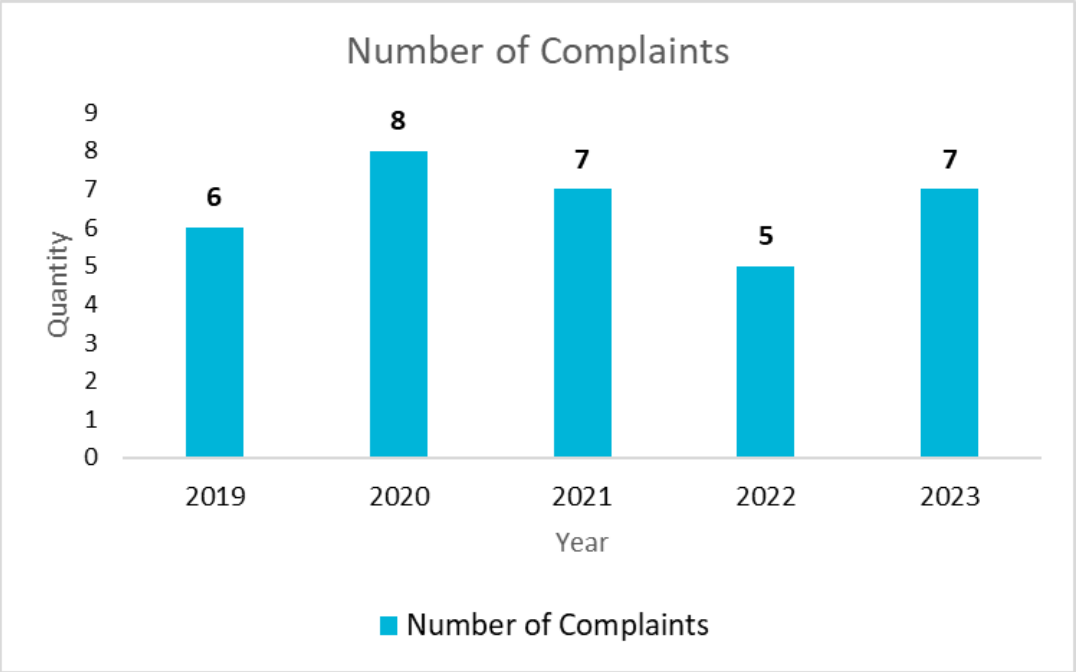


Figure 3.6 Number of Complaints between 2019 and 2023

Source: UCMPL 2023, compiled by Umwelt.

Figure 3.7 illustrates the nature of the complaints recorded. Of those who made a complaint, 16 were in relation to noise disruptions to the social amenity of the area including those associated with monitoring/ testing vibrations being conducted by UCMPL. Seven of the complaints related to property access, specifically land access arrangements and private property access etiquette; with three complaints relating to odour caused from the mine and associated activities. Other complaints referenced traffic hazards and safety, air quality as well as water quality.

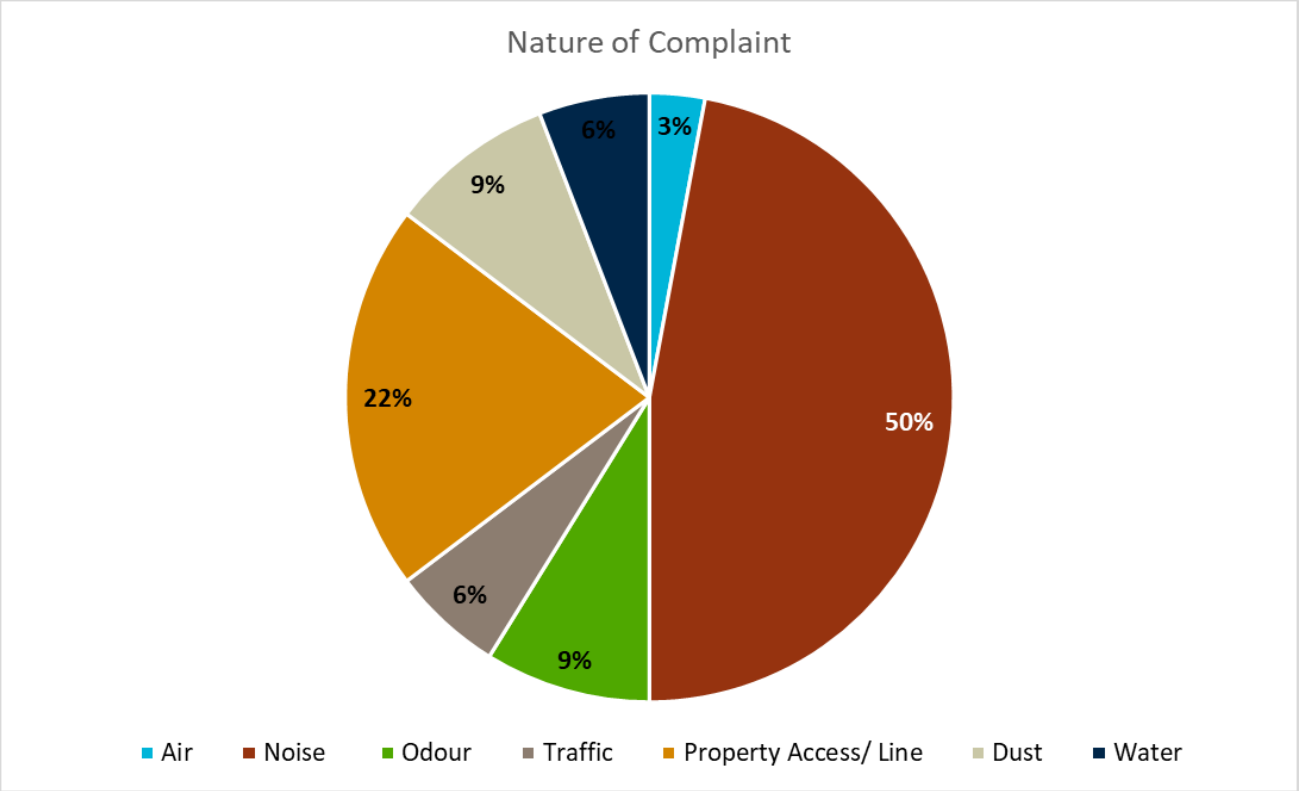


Figure 3.7 Nature of Complaints, 2019–2023

Source: UCMPL 2023, complied by Umwelt. N=33.

3.3 Social Investment – Sponsorships and Donations

Glencore is committed to delivering lasting social and economic benefits within the communities in which they operate and partners with organisations to promote sustainable development in their key focus areas:

- Education
- Health
- Environment
- Other identified areas of local community need
- Enterprise developments.

To date, community partnerships have been developed with the Mudgee High School Link Program, a mentoring and youth engagement program to help guide disengaged youth into further education, TAFE study or local employment. Further partnerships exist with Mudgee Charitable Workers Project, in which apprentices and volunteers undertake improvements and maintenance to local community facilities.

Glencore have implemented a community investment program, involving the following community organisations and partners (refer to **Table 3.1).**

Table 3.1 Glencore Community Partners

Focus Area	Program/ Activity
Education	• 2023 Max Potential program • Tech upgrades at Kandos Public School, St Matthews Catholic School Secondary Campus vegetable garden project • Tech upgrade for Lake Windamere under Canvas • CNC router for Dunedoo Central School • Mudgee High School LINK Program.
Enterprise Development	• Play Like a Girl Scholarships • Woodworking dust collector for Mudgee Men's Shed.
Health	• All Hallows Catholic School Garden Club • Gulgong Public School breakfast club • Wings 4 Kidz • Mudgee Maternity Unit technology and equipment upgrade • Pink up Mudgee.
Junior Sport Development	• Gulgong Junior Rugby League & Netball Club – Tackle bags, goal post pads and first aid kits • Mudgee Gulgong Wolves – Playing jerseys for U12/13 & 14s • Kandos High School – Gym sessions • Mudgee Amateur Swim Club – Canteen equipment upgrades • Central Tablelands Branch Australian Stock Horses – Equipment storage • Mudgee District Netball Association – Bib sets • Mudgee Touch Association – Training camera • Mudgee Indoor Swimming Club – Timers and accessories • Kandos Rylstone Swimming Club – volunteer coaching program, kitchen equipment and swimming aids • Dunedoo Junior League & Netball Association – referee/coaching training course, jerseys, and uniforms • Gulgong Amateur Swimming Club – Learn to swim program.
Environment	• Putta Bucca Wetlands Indigenous signage and bush tucker garden.
Local Need	• Dunedoo Show • Gulgong Show • Mudgee Show • Central Tablelands Branch Australian Stock Horses – 2-way radios • 1st Mudgee Scout Group – leadership training • Lake Windamere Under Canvas – bank regeneration • Lue Public School – Eco schools project and learning equipment. • Mudgee Public School P&C – sport and sensory equipment for support unit • Mudgee Poultry & Pigeon Club – pen upgrades • Grattai CWA Hall – water tank installation • Hargreaves Public School – African drum kit for music • Rylstone & Kandos Business Chamber – small business and NFP training courses

Focus Area	Program/ Activity
	• Warrabinga Native Title Claimants Aboriginal Corporation – NAIDOC Week art competition • Mudgee Rescue Squad – rescue equipment • Bungaba Progress Association – New batteries for solar panel system • Mudgee Community Preschool – Vege pod and trolleys • Turill Community Centre – Community hall grounds works.
Unallocated/Discretionary	• Mudgee PCYC Nations of Origin games • Westpac Rescue Helicopter • TPI Association of NSW for Coolah Veterans Long Tan Day • Rotary Club of Mudgee Sunrise Showground Carols.

4.0 Social Locality and Social Baseline Profile

A baseline social profile gathers knowledge from both primary and secondary data sources to increase understanding of the existing social environment in which a project is proposed, and of potentially affected communities. The social baseline profile is a foundational component of SIA, as it provides the basis from which social impacts associated with the UWCO Project may be predicted.

4.1 Social Locality

To develop the social baseline and an understanding of the social locality, statistical areas prescribed by the Australian Bureau of Statistics (ABS), as well as the land tenure composition of properties in or nearby the Project Area have also been considered. While it is noted that ABS boundaries have limitations, the following ABS 'study communities' (refer to **Figure 4.1**) have been used as a proxy to represent the key demographics of the communities of interest for the UWCO Project, and include:

- the LGA of Mid-Western Regional
- the Suburbs and Localities (SAL) of Kandos, Gulgong, Ulan, Mudgee, Rylstone, Cope, Uarbry, Turill, Cooks Gap and Bungaba
- the State of NSW, included for comparative purposes.

These statistical boundaries are presented in **Figure 4.1** below, with a more comprehensive locality map provided in **Figure 4.2**.

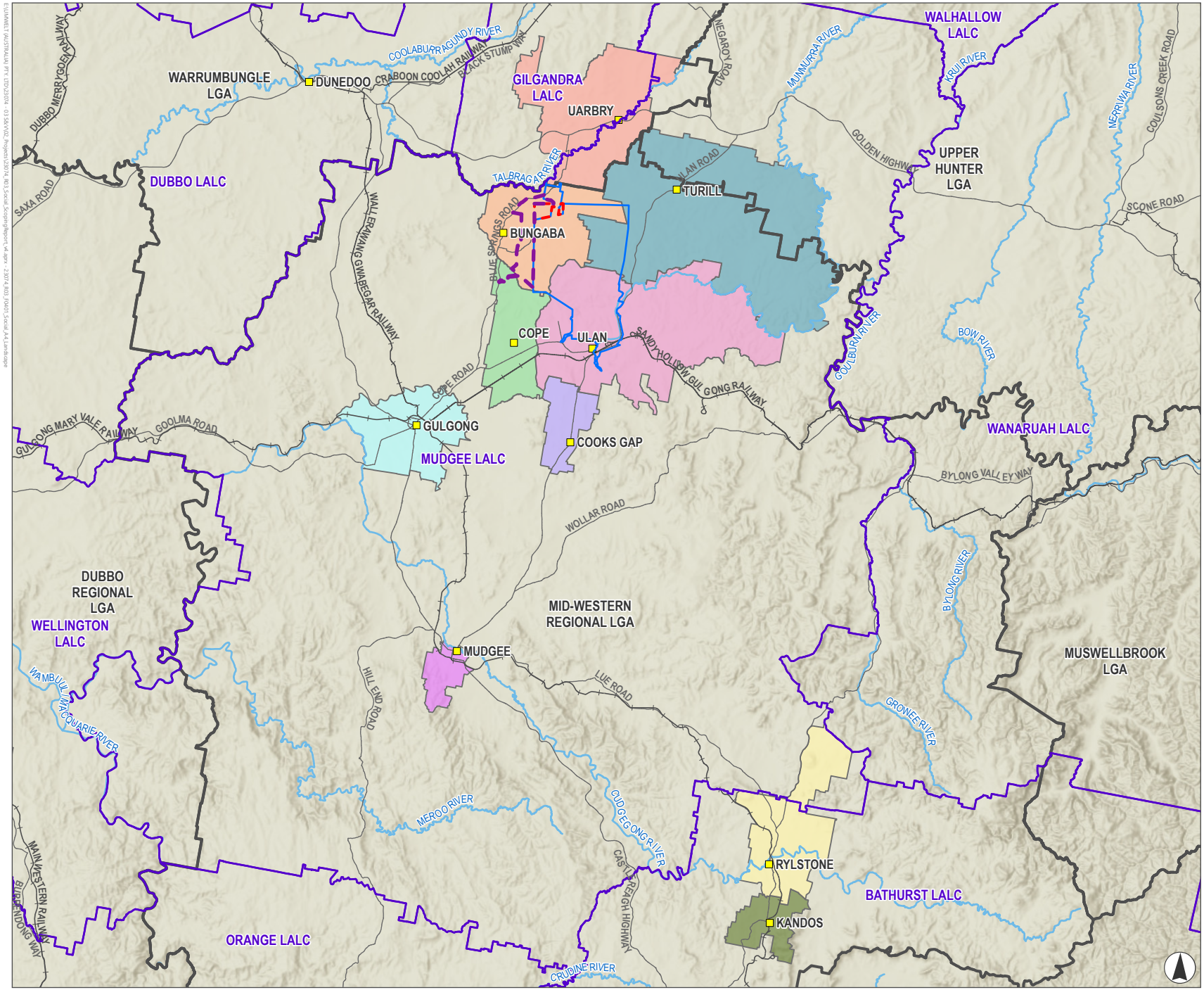


FIGURE 4.1

Communities Relevant to the Social Locality

Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Proposed UWCO Project Area
- Local Aboriginal Land Council (LALC)
- Local Government Area (LGA)
- Bungaba
- Cooks Gap
- Cope
- Gulgong
- Kandos
- Mudgee
- Rylstone
- Turill
- Uarbry
- Ulan

0 5 10 15

Kilometres

Scale 1:600,000 at A4

GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

FIGURE 4.2
Social Locality

Legend

- Project Approval Boundary
- Proposed Mod 6 Project Approval Boundary
- Proposed UWCO Project Area
- National Park / State Forest
- Relevant Suburbs and Localities
- Wind - Operational
- Wind - In Planning
- Wind - Approved
- Solar - Operational
- Solar - In Planning
- Solar - Approved
- Mine site
- Service town

0 5 10 15
Kilometres

Scale 1:600,000 at A4
GDA2020 MGA Zone 55

Image Source: ESRI Basemap (2023) Data Source:NSW DFSI (2023)

Table 4.1 further summarises the aspects that have been considered in defining the social locality for the UWCO Project and depicted in **Figure 4.2.**

Table 4.1 Social Locality Inclusions and Justifications

Settlement Aspect	Community / Stakeholders	Reason for inclusion
UWCO Project Area	Landholders/residents residing in the UWCO Project Area (n=17), which includes: a. those that may be directly impacted by mining (i.e. dwelling undermined) b. those that may be impacted due to the presence of surface infrastructure and/or their land may be affected by mining c. landholders' properties to be undermined	Landholders residing above the proposed additional underground mining footprint and/or those that may be impacted due to the presence of surface related to the Project. Landholders likely to be impacted by proposed longwall mining related to the UWCO Project.
Immediate neighbours of the UWCO Project and UCC Surface Operations	Residents residing in proximity to UWCO Project Area and UCC surface operations in the Bungaba, Turill and Ulan localities.	Residents proximal to the UWCO Project Area that may experience impacts during construction activities. Neighbours proximal to the surface operations that may experience a continuation of current amenity impacts.
Proximal communities	Population of Ulan SAL in 2016 was 58, which grew to 81 in 2021. The population of Bungaba SAL was 93, which decreased slightly to 88 in the 2021 census. (ABS, 2016), (ABS, 2021)	The host SALs are the geographical unit that has been used to analyse demographic data in the localities surrounding the UWCO Project Area. Such data provides indicative insights into the characteristics of landholders likely to experience the most significant impacts from the presence of the UWCO Project.
Proximal communities	Population of the localities in proximity to the UWCO Project are outlined below, with a comparison from 2016 to 2023 Census data. Population of: • Cope SAL was 128 decreasing to 113, • Cooks Gap SAL was 540, slightly increasing to 549, • Turill SAL was 105, slightly decreasing to 100 and • Uarbry SAL was 49, decreasing to 38.	Localities in proximity to the UWCO Project Area who may be impacted by the Project.

Settlement Aspect	Community / Stakeholders	Reason for inclusion
Residential Locations of UCC Employees, Suppliers and Contractors	Mudgee Gulgong	These communities reflect the communities in which existing UCC employee, contractors and suppliers reside, based on previous analysis (Coakes Consulting, 2009). Townships of residence will be further updated with primary employee and supplier survey data to be collected as part of the UWCO Project.
First Nations Communities	Wiradjuri nation Mudgee Local Aboriginal Land Council	Traditional owners of the land and other Aboriginal people who value the land and may have concerns relating to cultural heritage and sites of significance within or surrounding the UWCO Project Area
Potentially vulnerable Groups	Older community members Lower socio-economic populations	These community members may be more vulnerable to change
Transport Route – mine related traffic (heavy and light vehicles)	Ulan Road, Cope Road, Golden Highway	Given residential locations of the existing UCC workforce and location of suppliers and contractors that service the operations (refer to **Section 3.0**), the noted roads are likely to see continued mine related traffic.
Product transport route – rail	Communities along the rail line between Ulan and the Port of Newcastle.	The major freight rail line between Ulan and the Port of Newcastle will continue to be used for product transport over the life of the Project (additional 6 years), which may result in continued amenity impacts in these communities. It is noted that there is no increase in rate of production or transportation of product coal associated with the UWCO Project.
Key service towns	Population of the key service towns for the Project are outlined below, with a comparison from 2016 to 2023 Census data. Population of: • Mudgee SAL increased population from 10,923 to 11,457 • Gulgong SAL increased from 2,521 to 2,680 • Rylstone SAL slightly decreased from 920 to 904, and • Kandos SAL slightly decreased from 1,315 to 1,263	These settlements are included as they are the key service centres in proximity to the UWCO Project Area and are those townships in which UCC employees, contractors and suppliers are likely to access goods and services, including social infrastructure related to health, education, recreation, etc. These communities may also be more likely to experience economic benefits from the UWCO Project.

Settlement Aspect	Community / Stakeholders	Reason for inclusion
Key natural areas and features	Goulburn River National Park (including the Drip George) Goulburn River Talbragar River Cudgegong River	Key natural features and areas in the locality that are likely to be valued by residents in the social locality and those that may visit the area.
Existing Industry	Wilpinjong Coal Mine Moolarben Coal Mine Vineyards (surrounding Mudgee, approximately 30 mins drive from the UCC) Agriculture (in the surrounding UWCO Project Area and throughout the Mid-Western Regional LGA) Renewable energy developments including: • Beryl Solar Farm	Other industries and land uses in proximity to the UWCO Project that may be competing for workers, contractors or construction materials / supplies.
Proposed Projects	Moolarben OC3 Extension Project Wilpingjong Extension Project Bowdens Silver Project Renewable energy developments including: • Narragamba Solar Farm • Barneys Reef Wind Farm • Birriwa Solar Farm • Mayfair Solar Farm Other renewable energy developments associated with the Central West-Orana (CWO) Renewable Energy Zone (REZ)	Developments approved or currently in planning and assessment phases that have the potential to result in cumulative impacts, including additional community engagement requirements that may result in consultation fatigue.

Source: (ABS, 2016) (ABS, 2021) (ABS, 2022) (NSW Government, 2022) , NSW Major Projects.

Further discussion of characteristics within the social locality is provided in **Section 4.0.**

4.2 Geographic and Historical Context

The UCC is located north of the Ulan village and approximately 38 km north-east of Mudgee and 19 km north-east of Gulgong in the Mid-Western Regional LGA in NSW, within the broader Central West and Orana Region. The Central West and Orana (CWO) Region is a large area encompassing 18 LGAs including Lithgow, Bathurst, Dubbo and Orange.

Ulan, Mudgee and Gulgong are located within the Wiradjuri (also spelt Wirudjuri) region, which covers a large part of the Mid-Western Regional LGA. Wiradjuri means 'the people of the three rivers': The Wiradjuri clan are traditionally associated with a large area of land, encompassing the Macquarie, Lachlan and Murrumbidgee Rivers, bounded by the Murray River in the south (Landskape, 2020). Material found at archaeological sites shows evidence of this occupation dating back some 18,000 years (Landskape, 2020).

Ulan is renowned for its mining history, with the discovery of high-grade coking coal dating back to 1924 (Mudgee Guardian, 2019), and with the Sandy Hollow-Maryvale rail line passing through the Ulan settlement at that time, Ulan soon became an industrial centre for mining activities.

Mining remains a key industry within the area, with a total of 27 mining businesses continuing to operate within the Mid-Western region (ABS, 2022).

4.3 Regional Development Context

The following section contains an overview of local and regional strategic plans relevant to the social locality to provide an understanding of the UWCO Project's development context. Strategic priorities and interests for the local and regional area are also identified, as they relate to the UWCO Project, to capture any ongoing social change processes in the social locality, and to identify how local communities have responded to these changes over time.

The CWO Region is an economically diverse and productive region with strong connectivity to cities of Sydney, Canberra and Newcastle. The CWO Region's key major towns include Bathurst, Orange, and Dubbo, and the increasingly visited centres of Lithgow, Mudgee, and Cowra.

The CWO Region has more than 290,000 people living in the region, with the population projected to grow to around 325,000 people by 2041. Most new residents – as well as the new housing and workplaces required – will be located in Bathurst, Dubbo, Orange, Cowra, Forbes, Lithgow, Mudgee and Parkes (NSW Government, 2022).

The NSW Government's Central West and Orana Regional Plan 2041 notes their vision for the region, 'to facilitate this growth in a sustainable way by adapting to future challenges posed by changes in climate, housing markets and the economy' (NSW Government, 2022).

The CWO Region is also host to the Central West Orana Renewable Energy Zone (CWO REZ). The CWO REZ is a declared area by the Minister for Energy and Environment under section 19(1) of the *Electricity Infrastructure Investment Act 2020* and published in the NSW Gazette on 5 November 2021. The REZ has been identified to host renewable energy generation given its strong renewable energy resource potential, proximity to the existing electricity network, and consideration of potential interactions with existing land uses, including agricultural lands and biodiversity conservation (EnergyCo, 2023).

Appendix A contains an overview of local and regional strategic plans relevant to the social locality to inform an understanding of the development priorities and interests in the region. A review of these plans highlights that while mining, specifically coal mining is still a dominant industry within the Mid-Western Region, and the CWO region more broadly; there is a shift in the economy towards renewable energy generation and increased opportunities associated with further development of the CWO REZ.

Given the UWCO Project's location within the CWO REZ, as well as the region being host to other mining operations, there are multiple other existing and proposed projects proximal to the UWCO Project Area (refer to **Figure 4.3**).

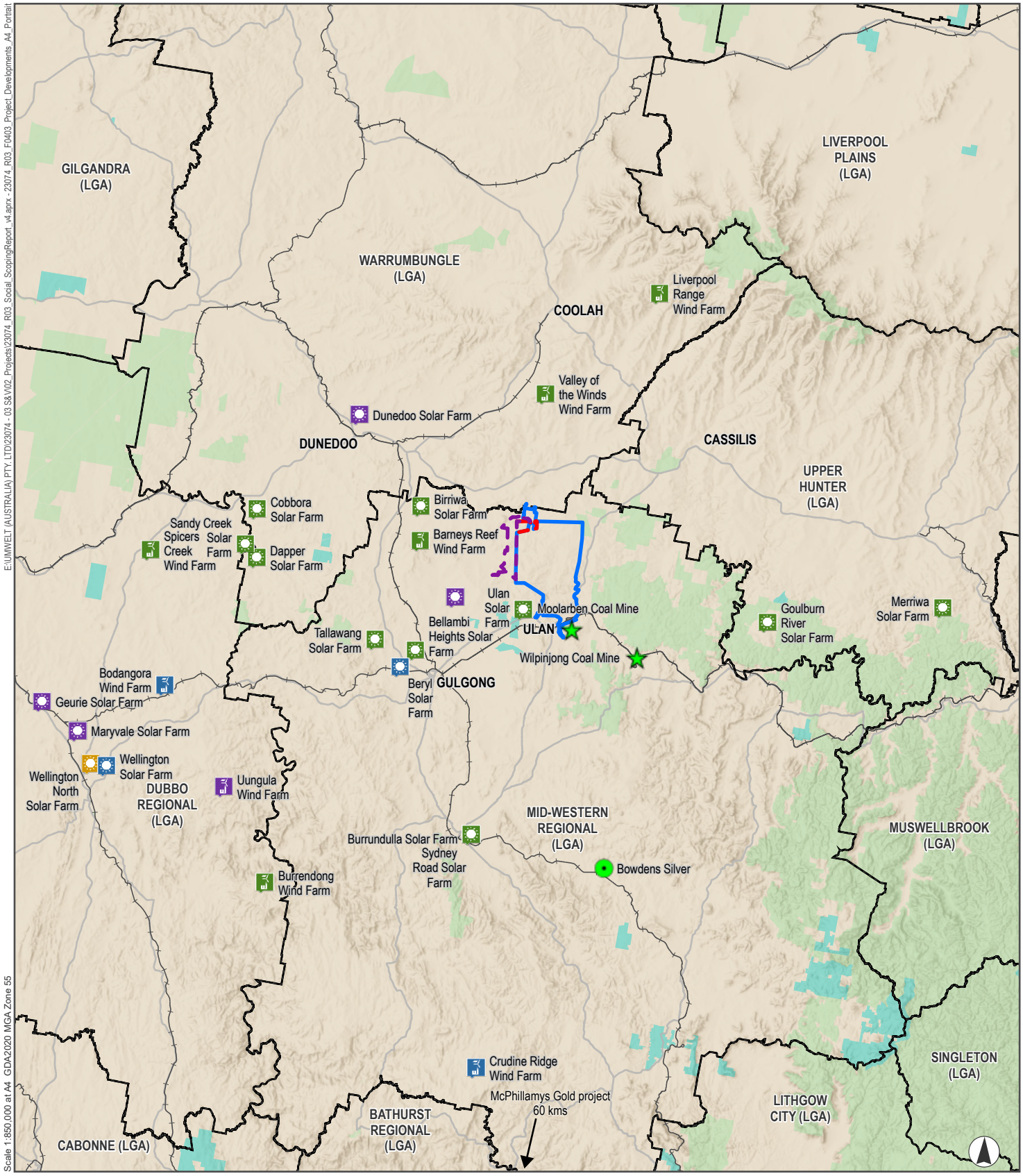


FIGURE 4.3

Projects and Developments in Proximity to the UWCO Project

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

This includes:

- three operating mines within 50 km of the UWCO Project, including Moolarben Coal Operations and Wilpinjong Coal Mine;
- the approved but not yet operating Bowdens Silver Mine (approved in 2023 and expected to commence construction in 2024) and McPhillamy's Gold Project (approved in 2023, though expected construction dates have not been announced, it is likely to begin by 2025–26);
- an additional 27 renewable energy projects located within 100 km of the UWCO Project Area that are proposed or in development, and
- an additional five renewable energy projects that are approved and operational.

Appendix A provides further details of these developments.

The large number of renewable projects approved or in the planning phase highlights that the CWO Region is experiencing significant change. It is understood through a review of these projects that the rate of development in the region is proportionately high and will likely have an effect on community capacity to cope with change.

Concern regarding such change is evident in media articles relating to development within the region and the CWO REZ, which are summarised in the dot points below:

- The Moolarben Open Cut Extension Project (located directly south of Ulan) was objected to by the Australian Institute as 'the cost of emissions to the climate would exceed any economic benefit.' (Gorman, 2023).
- There has been community resistance to the development of the transmission line development needed to support the CWO REZ. Community affected by the project stated they felt like they were, 'being railroaded into hosting last century's technologies based on an outdated regulatory assessment process.' (Macdonald-Smith, 2023).
- The Cadia Gold Mine near Orange was investigated by the EPA due to concerns around dust and heavy metals potentially contaminating the local community and lead being found in rainwater tanks. NSW EPA is urging the state government to tighten its planning and monitoring of the mining industry. The community's experience has prompted a NSW state parliamentary inquiry into the health impacts of mining (Hambrett & Woodburn, 2023).
- Rural communities located near the proposed Bowdens Silver mine have raised concerns for their health and safety due to living near the proposed mine. The Mudgee Regional Action Group has launched a legal challenge against the Bowdens Silver project's approval in the Land and Environment Court as regional communities say health and environmental concerns are being ignored (Woodburn & Hambrett, 2023).

- A review of local media and analysis of consultation outcomes indicates mixed community sentiment relating to mining in the area. Participants engaged to inform the SISR noted the regional economic benefits, employment opportunities, attraction of people to the area afforded by the presence of the mining industry. However, participants with a lower level of mining acceptability noted concerns relating to impacts on social amenity (associated with operational activities), change in sense of place, local skills drain (given higher mining incomes) and livelihood impacts associated with property prices.

The above highlights that there is likely to be an increased interest in the UWCO Project by government agencies and local community, given recent experiences with other major developments in the region and increased political and community pressure to reduce reliance on coal mining.

4.4 Capitals Analysis

4.4.1 Political Capital

Political capital refers to the structures and capabilities in place to impact change, to ensure representation in formal governance structures and/or involvement in democratic decision making. **Table 4.2** describes the state of political capital in relation to the UWCO Project.

Table 4.2 Political Capital

Electorate	Description
Federal Electorate	The UWCO Project is located within the Federal electorate of Calare. The Member for Calare is Andrew Gee who is a representative of an Independent Party and has held the seat since 2016 (Andrew Gee MP, n.d.).
State Electorate	The UWCO Project is located within the Legislative Assembly District of Dubbo. Dugald Saunders has held the seat since 2019 and represents The National Party of Australia (Parliment of NSW, 2023). The Local MP has previously promoted mining in the region as a driver of economic growth and given the global demand for mining minerals and metals (refer to **Appendix C**).
Local Governance	• The Mid-Western Regional Council consists of nine councillors elected by the community. The councillors annually elect the mayor under the Local Government Act, Section 282(2). Councillor Des Kennedy is the current Mayor. • The Councils 'Our Place 2040' is aligned with the 'Mid-Western Region Community Plan Towards 2030' and outlines the land use planning priorities, setting short-, medium- and long-term actions for the community (Mid-Western Regional Council, 2020), informed by community engagement (survey of 286 residents. The mining industry is identified as a key economic driver in the region that continues to provide longer employment opportunities for the region. The Ulan area has current mining approvals in place until 2039 for the three large mining projects in the area. • The Mid-Western Regional Economic Development update (2023) highlights the challenges and trends that have altered the landscape of economic development in many regions and created new opportunities for growth. The update highlights the change in the Mid-Western region from economic dependence on coal mining to the new opportunities that come with the CWO-REZ and shift to renewable energy sources. The plan further highlights vulnerabilities and opportunities associated with the mining industry in the region (Mid-Western Regional Council, 2023). The update further establishes the region continued investment in coal mining and abundance of coal reserves to support the industry.

4.4.2 Natural Capital

Natural capital refers to the natural assets and resources that contribute to community sustainability. Natural capital can include resources such as minerals, land, forests, and waterways, which provide benefit to the community, as well as environmental assets that provide social, cultural, or recreational value. A summary of the natural capital in the social locality is provided below.

- The UWCO Project and UCC are situated in a rural area, primarily rural landholdings, native bushland and primary industries including agriculture, forestry and extractive industries. The UWCO Project Area specifically is dominated by rural residential landholdings, with local residents valuing the privacy and peacefulness of the area.

- The Mid-Western Region is located within three surface water catchment areas being the Cudgegong River, Macquarie River and Goulburn River catchments (Mid-Western Regional Council, 2020). The Talbragar River (part of the Macquarie River catchment) is a key water source located north of the UWCP Project.
- Water access and the impacts of mining on ground and surface water is of key importance to the community. The Independent Planning Commission NSW (2018) report on the cumulative hydrological impacts of coal mining in the upper Goulburn River, NSW has reported that regional groundwater levels in the vicinity of mining footprints have shown a significant decline over time due to mine dewatering and groundwater depressurisation. The report concluded that often the 'approval process allows the assessment of each modification in a piecemeal manner; this narrow focus can obscure and underestimate the full cumulative impacts of the overall project and interaction with adjacent mines'.

- The Mid-Western Regional LGA covers more than 900km² and has a variety of nature reserves and national parks, including the Goulburn River National Park (immediately east of UCC), Munghorn Gap Nature Reserve (approximately 20 km south-east of UCC), Cope State Forest (7 km west of UCC) and Durridgere State Conservation Area (north-east of the UCC) (Regional Development Australia, n.d.).

- The Drip has been identified as an area of community value, with previous community concerns relating to the potential impacts of mining on The Drip and the long-term health and resilience of the Goulburn River system (MDEG, n.d.). While the current UWCO Project is moving further away from this location, relevant assessments will be undertaken to assess any potential impacts on river systems and watercourses.

Rock Wall at The Drip in Goulburn River National Park. Source: (NPWS, n.d.)

- The Great Dividing Range extends through the centre of the UCC area. The UCC is located within the catchment of the Goulburn River, which originates to the south of the Ulan village and flows approximately east into the Hunter River near Denman. The Talbragar River is located north of the UCC area and is part of the Macquarie catchment. The Talbragar River has been host to community initiatives such as the Dunedoo-Coolah Landcare Community Event which has seen the planting of native trees along the river bank to restore the river's ecosystem (Ozfish, n.d.).
- The MWRC's *Our Place* (2020) plan notes that there are 187 listed threatened species of plants and animals known or likely to occur in the Mid-Western Region, and 26 threatened populations and communities are known or likely to occur, including the River Red Gum Endangered Population, the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland Ecological Community, and the Grey Box Grassy Woodlands and Derived Native Grasslands Endangered Ecological Community (Mid-Western Regional Council, 2020).
- The township of Mudgee has a strong history in viticulture that dates back to 1858 and has played a key role in Australian viticulture. The township hosts multiple wine, food, sporting and cultural events and festivals annually to celebrate the regions history.
- The region is predominately rich in coal and mineral mining including silver ore, clays and sandstone. The Central West has been identified as a critical mineral supplier with the development of Australia's first Critical Minerals Hub. The township of Gulgong has a history of gold mining with a gold rush era in the late 1800s, becoming a key gold mining centre and one of the richest gold areas in New South Wales. The area contained several mines, with the Red Hill mine still open for tourists to visit (Gulgong Chamber of Commerce, n.d.).
- The CWO REZ covers approximately 20,000 km² and was declared a REZ due to the region's potential for the development of renewable solar and wind projects (EnergyCo, n.d.).

4.4.3 Human Capital

The level of human capital within a community is assessed by considering population size, age distribution, education and skills, general population health and the prevalence of vulnerable groups within the community. The following categorises the human capital of the social locality.

The median age across study communities was higher when compared to the State (39) except for the Mudgee and Ulan SAL's, which demonstrated an older population. Figure 4.4 illustrates the proportion of population in the Mid-Western LGA that falls in the 55 years and older age-group. This figure has increased in 2021 indicative of an aging population. This has implications for health and social service requirements as older age is correlated with greater health complications and service needs. It also has implications for engagement and information sharing preferences, suggesting a lower reliance on online communications.

In the Mid-Western Regional LGA from 2022 to 2023 there were 153 new houses approved and 28 new other residential buildings approved. In Mudgee SA21 from 2022 to 2023 there were 109 new houses and 24 other resident buildings approved (ABS, 2023).

[1] Data was unavailable at the SAL or UCL level. The SA2 ABS boundary has been used for the purpose of this analysis.

The study communities of Gulgong SAL, Mudgee SAL and Cooks Gap SAL, and the Mid-Western LGA, have experienced a rise in population between 2016 to 2021 census periods. The Mid-Western LGA is projected to have an annual population increase of 0.77% annually to 2041, with this rate lower than the State average (0.95%). However, this projected increase in population, may have implications for future housing and service provision as well as local job and investment growth.

The study communities predominately demonstrated higher proportions of Aboriginal and/or Torres Strait Islander populations than the State (3%), except for the Uarbry SAL (0%).

Certificate level attainment was higher in the identified communities when compared to the State. The Mid-Western LGA's highest field of study at the certificate level is engineering and related technologies (38%) as illustrated in Figure 4.5. The top field of study for bachelor's degree attainment was education (25%).

Health data (PHIDU, 2020) suggests that, when compared to NSW, the Mid-Western LGA has higher rates of obesity (30.9 and 41 ASR per 100 respectively), chronic obstructive pulmonary disease (2.2 and 2.8 ASR per 100 respectively) and asthma (10.6 and 13.7 ASR per 100 respectively). The LGA also has higher rates of behaviours that are considered to increase risk of several lifestyle diseases such as smoking (14.4 and 21 ASR per 100 respectively) and alcohol consultation (consuming more than two standard alcoholic drinks per day on average (15.5 and 21.9 ASR per 100 respectively)).

The Socio-Economic Indexes for Areas (SEIFA) Index of Education and Occupation (IEO), prepared by the ABS, reflects the general level of education and occupation-related skills of people within an area, with a value of one indicating low levels of skills, and a value of ten indicating a high level of skill. It should be noted that different ABS boundaries cannot be compared. As illustrated in Figure 4.6 the SALs ranked on or below the 5th decile demonstrate relative low levels of education and occupation-related skills. The overall Mid-Western LGA was in the 7th decile indicating relatively higher levels of education and occupational skills.

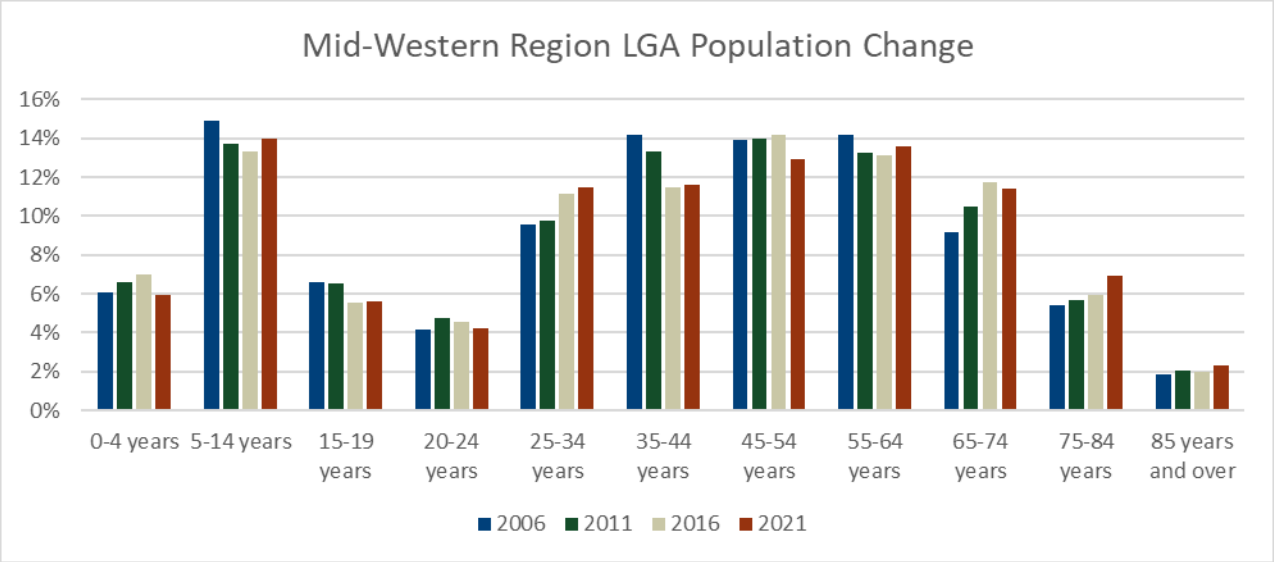


Figure 4.4 Mid-Western Region LGA Population Change by Age Group

Source: (ABS, 2021).

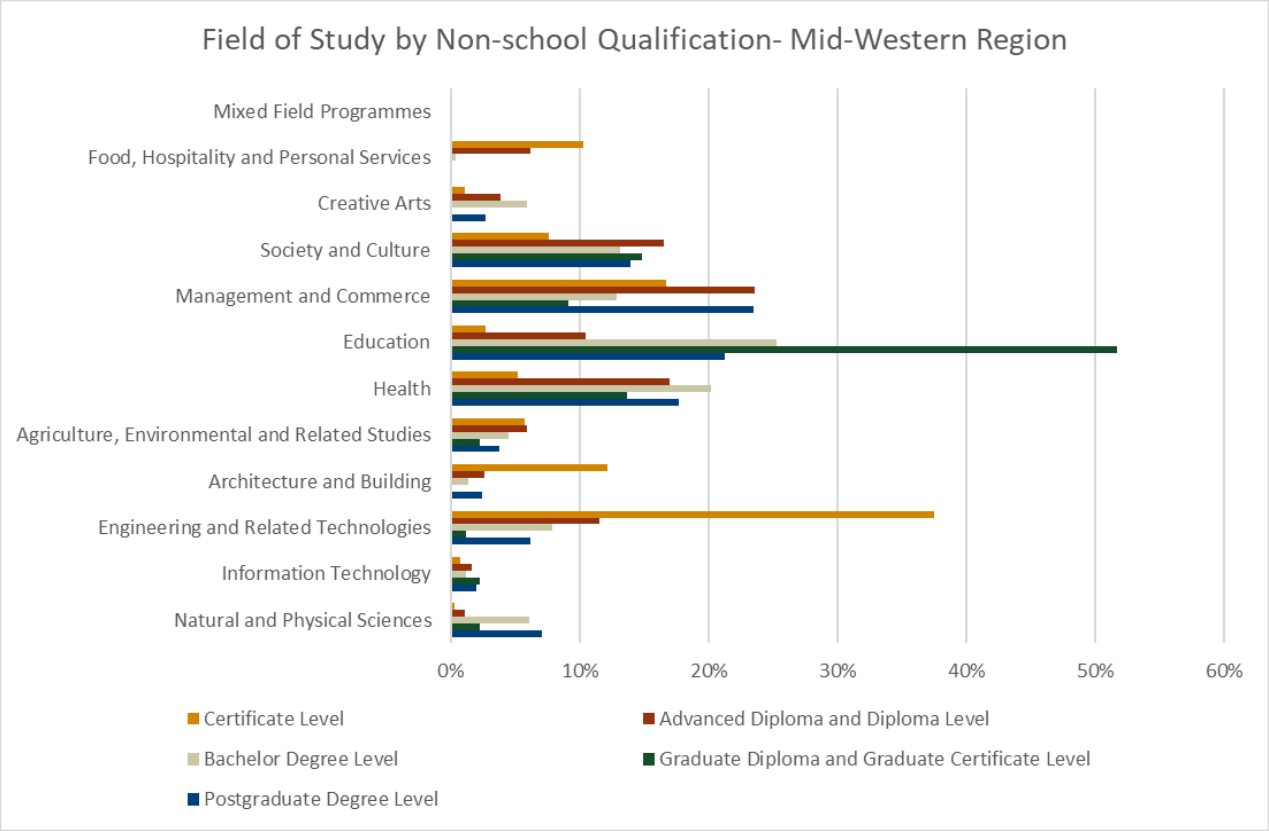


Figure 4.5 Field of Study by Non-school Qualification- Mid Western Regional LGA

Source: (ABS Table Builder Pro, 2021).

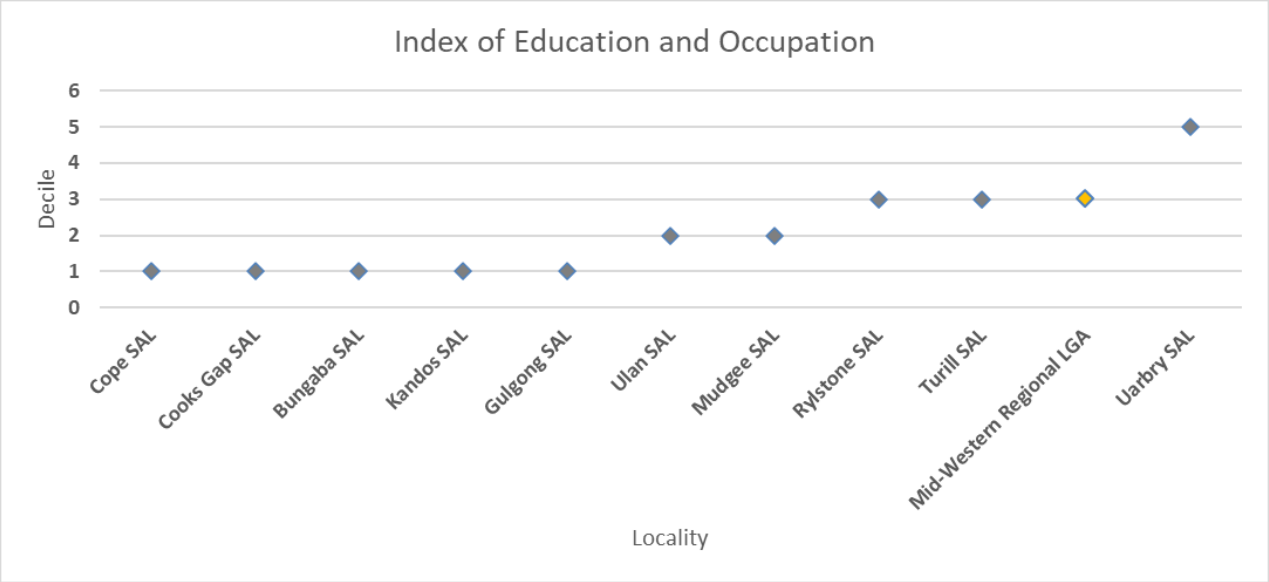


Figure 4.6 Index of Education and Occupation

Source: (ABS, 2023).

4.4.4 Social Capital

Various indicators can be used to examine and assess social capital. Such indicators may include the level of volunteering, population mobility, crime rates, and the demographic composition of the community, such as the percentage of people born overseas, language proficiency etc. The following provides a summary of the key characteristics of the social locality from a social capital perspective.

- Across all study communities (except for Turill SAL), there has been decreasing rates of volunteering, with similar trends occurring at the State level. However, for the Mid-Western LGA as a whole the proportion of the population who volunteered in the past 12 months is slightly higher than the State average (13% compared to 11%).

- When considering those who volunteer, nearly 38% are employed in education and training (13%), mining (13%) and agriculture, forestry and fishing (12%) (refer to **Figure 4.5**).
- Despite declining volunteering rates, during engagement local residents and landholders indicated that the community is tight-knit and 'look out for each other.' Participants detailed instances where neighbours would help pick up items from town for others. Consequently, while formal volunteering has declined it is evident that informal acts of volunteerism are still evident within the community. When asked how they would describe what they like most about living in the area, 11 participants stated they strongly valued the sense of community.

- The Mid-Western Regional LGA has a number of active community and volunteer groups including the Mudgee Garden Club, Mudgee Historical Society, Rotary, Country Women's Association as well as a range of environmental groups, including:
  - Mudgee District Environment Group who focus on the environmental and social impacts of mining.
  - Watershed Landcare a group of 300 plus members who are interested in repairing and improving the natural resources of the region. This group also includes the Watershed Women's group which aims to empower women by providing support, mentoring and professional development.

- Additional groups have also formed in the region in direct response to mining development including the Mudgee Region Action Group (MRAG) (formerly the Lue Action Group) which formed in 2011 in opposition to the Bowdens Silver Mine Project (approved in 2023). The MRAG notes the group is opposed to the Bowdens Silver Pty Ltd proposal for the development of a lead, zinc and silver mine at Lue, on the basis that the mine would have unacceptable impacts on the Mudgee, Rylstone, Kandos and Lue communities, people and surrounding environment in the short, medium and long term (MRAG, 2023).

- In the Mid- Western LGA there was a higher proportion of people who lived at the same address 5 years ago (57%) compared to elsewhere in Australia (43%). This indicates that within the LGA there is a less transient and more established community. This can indicate a community with a stronger attachment to place and cohesion. When considering mobility rates across different industries (refer to **Figure 4.7**), those employed in agriculture, forestry and fishing had the lowest mobility rate, with 76% of the population employed in this industry having lived at the same address 5 years ago. In comparison, those employed in the mining industry had higher mobility rates with 56% living at the same address 5 years ago (as of the 2021 Census). This may be attributed to higher rates of FIFO and DIDO workforce employment in the mining industry.

- Crime rates across the Mid-Western Regional LGA were generally at a higher rate when compared to the State except for robbery and theft. The 24-month trend in crimes (such as murder, robbery, domestic violence, theft, homicide and drug offences have remained stable between 2020 and 2022 (refer to **Appendix A**). As indicated in **Appendix C** local media has however, highlighted a rise in domestic violence in the Mid-Western Regional LGA from 2019 to 2020. When asked to describe the local area, local residents and landholders highlighted a high incidence of property theft. However, participants also noted that the increased presence of Ulan security workers has increased feelings of safety and security.

- Family household composition in the communities within the social locality was lower than the State except for Cope SAL, Cooks Gap SAL and Bungaba SAL. The proportion of family households has increased in these communities except for Bungaba SAL, Rylstone SAL and Kandos SAL.

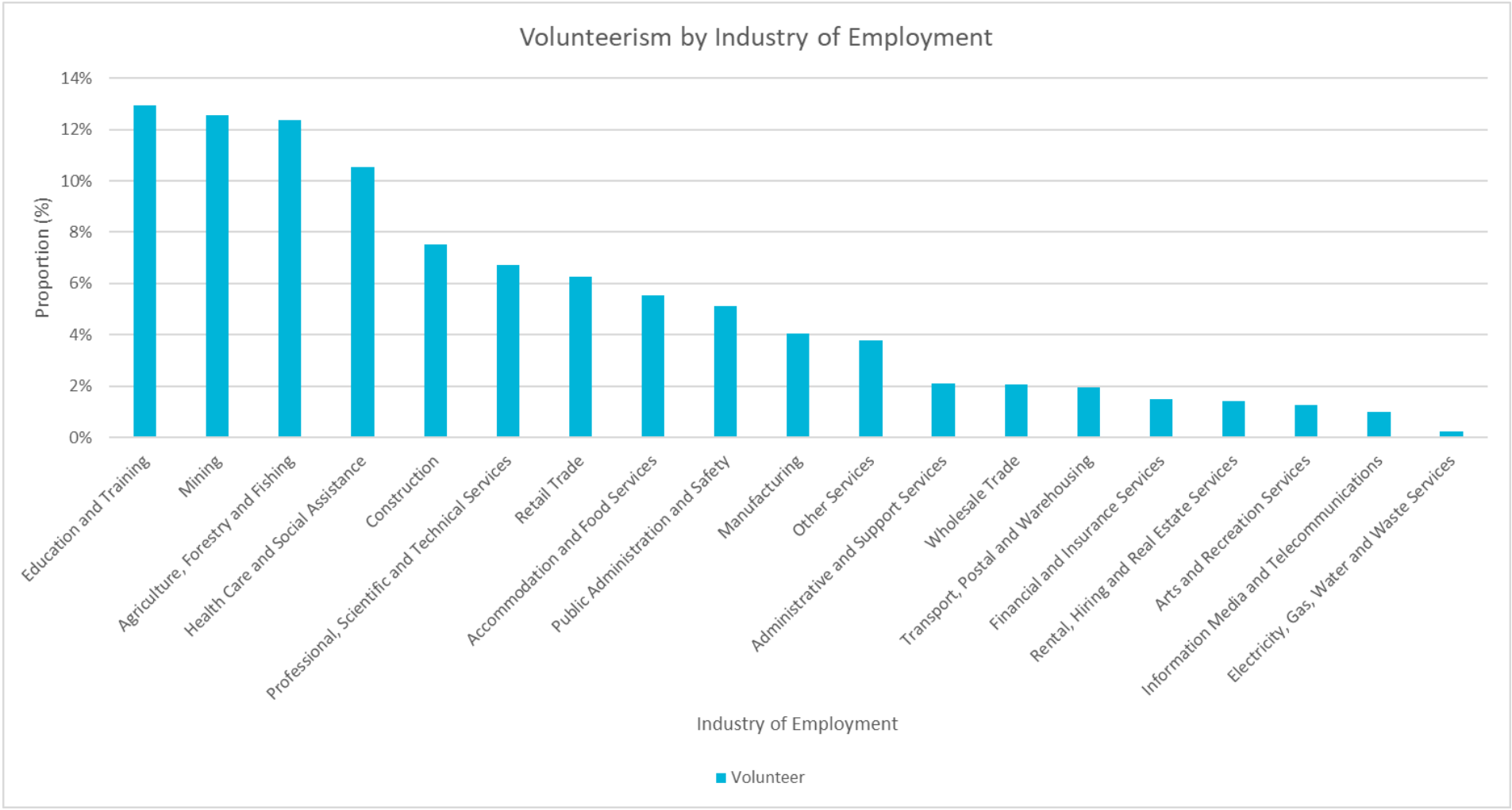


Figure 4.7 Volunteerism by Industry of Employment – Mid-Western Regional LGA

Source: (ABS Table Builder Pro, 2021).

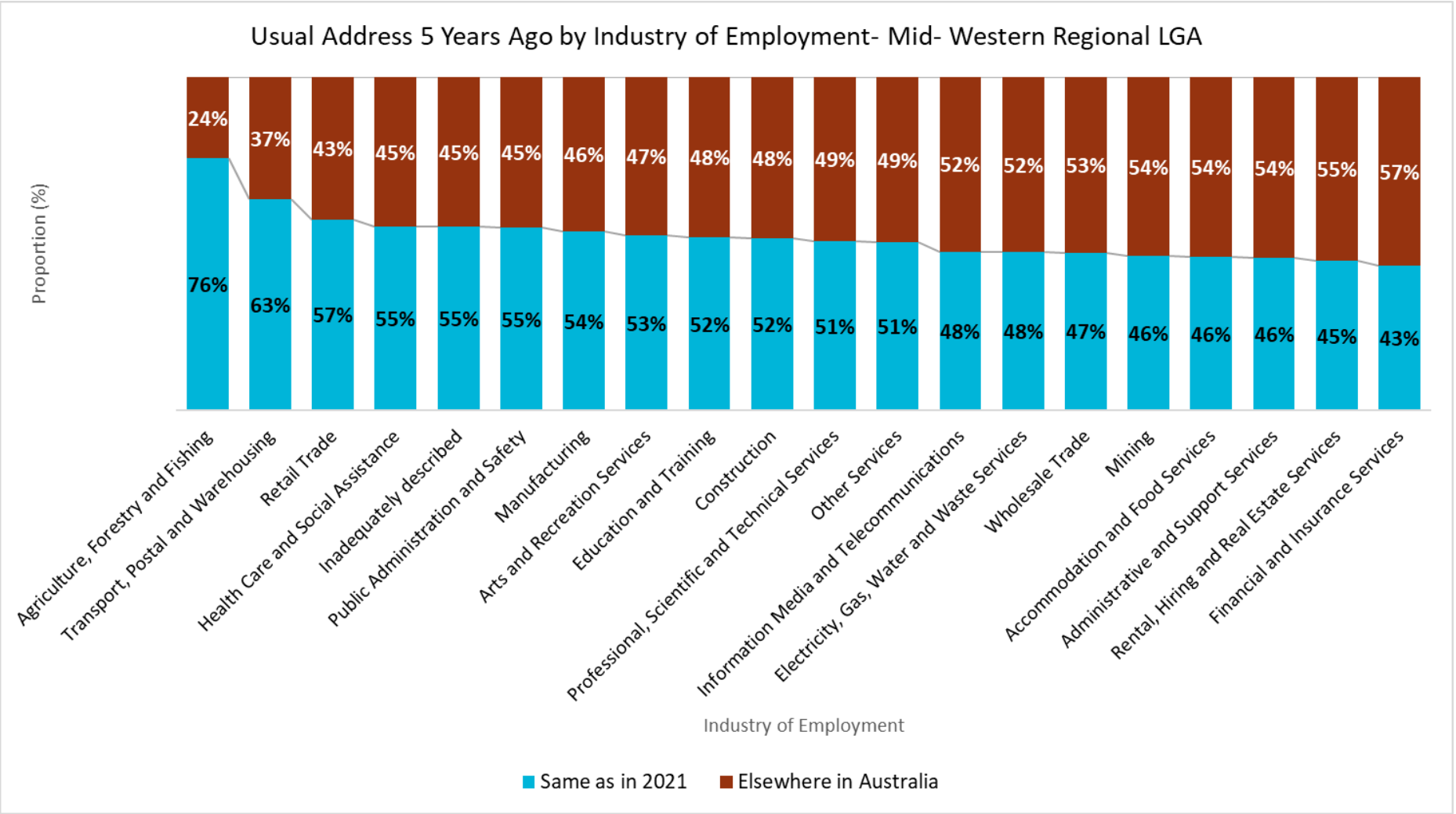


Figure 4.8 Usual Address 5 Years Ago by Industry of Employment- Mid-Western Regional LGA

Source: (ABS Table Builder Pro, 2021).

4.4.5 Economic Capital

Examining a community's economic capital involves consideration of several indicators, including industry and employment distribution, workforce participation and unemployment, income levels and cost of living pressures, such as weekly rent or mortgage repayments. The following provides a summary of the key characteristics of the communities within the social locality from an economic capital perspective, with further detail of relevant economic indicators outlined in **Appendix A.**

Median weekly household incomes have increased between 2016 to 2021 in the communities within the social locality, except for in the Kandos SAL which decreased and Turill SAL which remained the same during that period. While incomes have generally increased in the social locality they remain below the State ($1,829).

The mining industry makes the greatest contribution to economic output in the Mid-Western LGA, accounting for 49.66% of total output ($3.1B). This industry sector is also the largest employer, representing 19% of total employment within the region (2,217 jobs) (REMPLAN, 2021); and illustrates the existing economic dependence of the region on the industry. However, Mid-Westerns Council's 'Our Place 2040' Plan (2020) and Regional Economic Development Strategy (2023) outlines plans to support renewable energy developments through investments in supportive infrastructure and capitalise on the new opportunities renewable energy development bring.

Figure 4.9 demonstrates the market concentration of industries across the social locality. Using NSW as the benchmark of a moderately concentrated market, the key townships of Kandos, Gulgong, Rylstone and Mudgee demonstrate significantly higher market concentration in comparison to NSW.

The Index of Economic resources across the identified SAL's suggests a relative lack of access to economic resources with SAL's ranked in the 5th decile or below. For example, an area may have a low score if there are: many households with low incomes, or many households paying low rent, and fewer households with high income, or those who own their home (ABS, 2023). Across the LGA, there is an indication of higher access to economic resources.

In the Mid-Western LGA, there has been a decline in unemployment from 4.9% in June 2018 to 1.7% in June 2023. During the same period there has been an increase in labour force participation from 12,227 to 13,195 people (refer to Figure 4.10).

As illustrated in Figure 4.11, there has been an increase (+0.9%) in the broader LGA in employment in mining from 2016 to 2021 as well as across all the SALs except for Gulgong and Rylstone, with a corresponding decrease in people employed in agriculture forestry and fishing, except in Turill SAL which saw a 37.5% increase in these industries between 2016 to 2021. This increase in mining industry employment corresponds with the high economic output generated by the industry.

Technicians and trades workers were the top occupation across the social locality, except for in the Cape and Cooks Gap SALs where machinery operators and drivers were the top occupation and in the Uarbry SAL and Turill SAL where managers were more prominent. Once again, many of these occupations are directly related to those employed in the mining industry.

Figure 4.9 illustrates the service townships and broader LGA Herfindahl index in comparison to the State. The Herfindahl Index provides an indication of market concentration within a region, and specifically provides an indication of how many industries are competing for market share within a given locality. The higher the index, the more concentrated the market by industry composition, demonstrating a low level of economic diversity, while a low index indicates a greater number of industries and occupations being serviced within the social locality. Gulgong SAL has a more concentrated market indicating a higher vulnerability to economic changes in dominate industries such as previous reliance on employment in the mining industry to change to renewable energy employment.

Median house prices in Kandos, Gulgong and Mudgee SALs have increased in the 12-month period from September 2022 to August 2023. Though median house prices have increased, the populations in those localities in mortgage stress (11.9% in the broader LGA) were lower than the State (17.3%).

Median monthly mortgage repayment across the communities was also lower when compared to NSW ($2,167). The SALs of Ulan, Cope, Uarbry, Cooks Gap and the Mid-Western LGA as a whole have experienced an increase in mortgage repayment from 2016 to 2021 indicating a rise in the cost of living in those areas.

Median rental cost per week has also increased across Kandos, Gulgong, Mudgee, and Rylstone SALs in the period of 12 months between July 2022 to June 2023.2Median rent in Mudgee SAL ($540) was higher than NSW ($525) in July 2023, indicating higher cost of living.

The Mid-Western region's local strategic plan aims to strengthen the regions tourism industry through focussing on sports tourism as well as establishing the area as a food and wine destination encouraging future investment in accommodation, retail, and hospitality businesses (Mid-Western Regional Council, 2020).

[2] Data was unavailable for the other social localities due to the boundaries and/or the size.

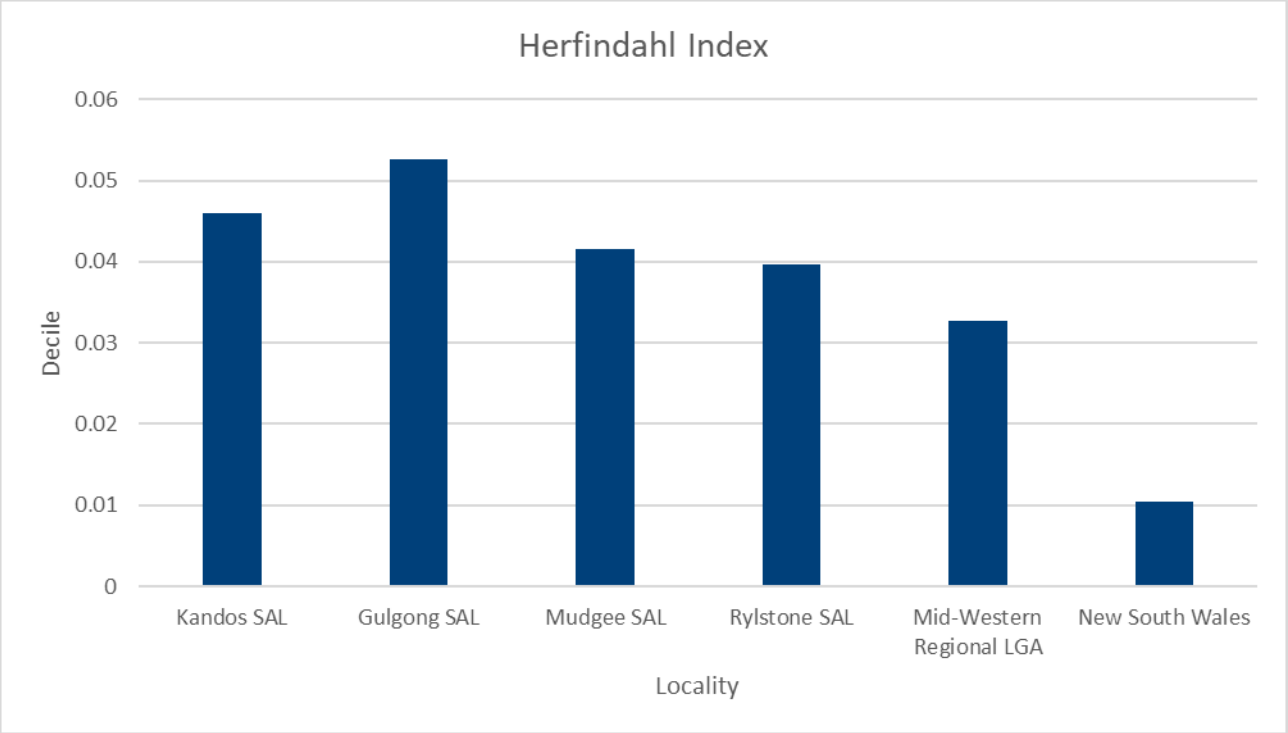


Figure 4.9 Service SALs and Mid-Western Regional LGA Herfindahl Index

Source: (ABS Table Builder Pro, 2021).

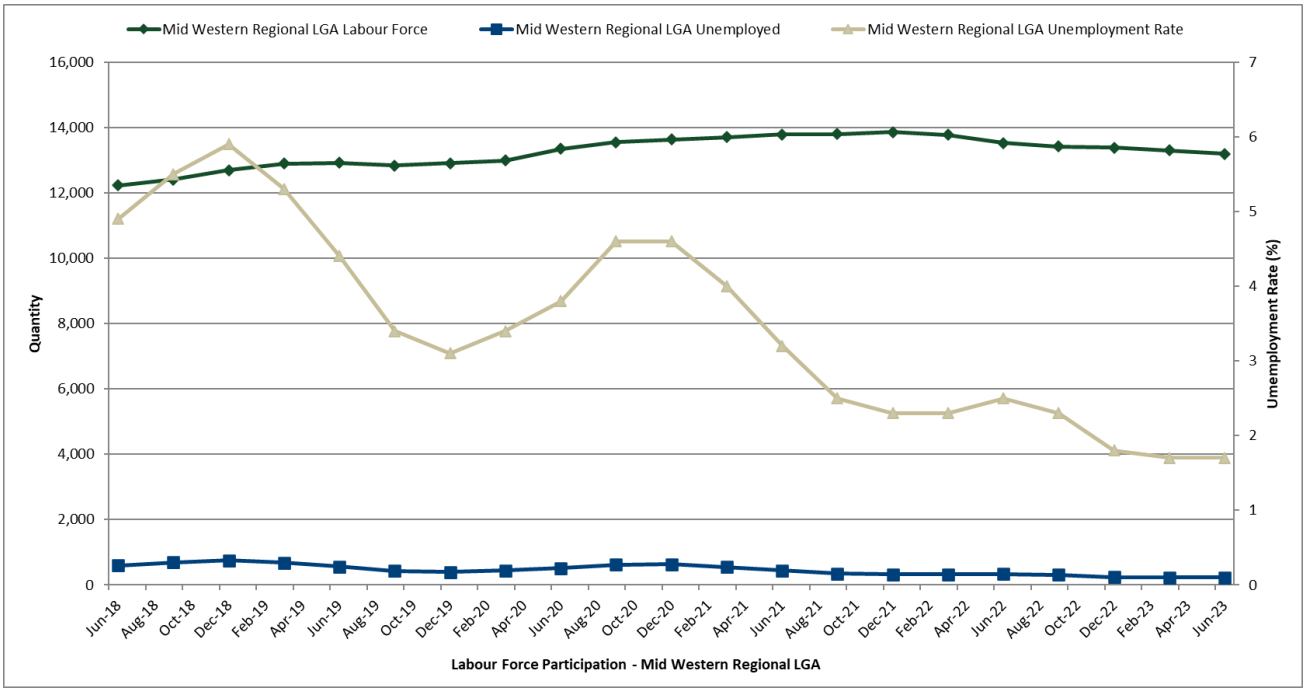


Figure 4.10 Labour Force Participation- Mid-Western Regional LGA

Source: (SALM, 2023).

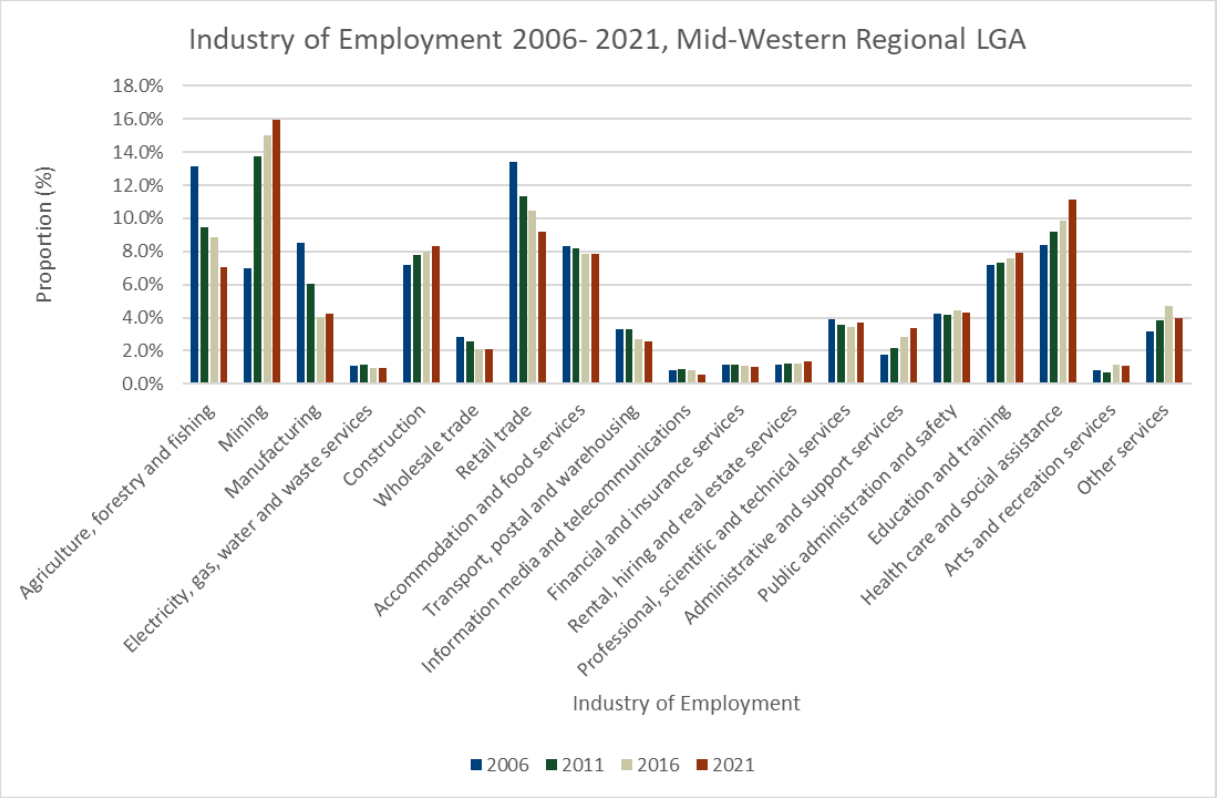


Figure 4.11 Top Industry of Employment – Mid-Western Regional LGA

Source: (ABS Table Builder Pro, 2021).

4.4.6 Physical Capital

Physical or built capital includes provision of infrastructure and services to the community. Within this capital area it is important to consider the type, quality, and degree of access to public, built and community infrastructure (including amenities, services, and utilities) as well as housing.

- In the study communities there is a high proportion of the population who drives a car to work when compared to the State (43%). The high rate can be attributed to the lack of public transport in regional areas as well as distances between townships and service centres (refer to **Appendix C**).
- Access to internet in regional Australia is 3.7% lower than the national average, though this has increased from 65.5% in 2020 to 66.3% in 2021 in regional Australia (Australian Digital Inculsion Index, 2021).
- There is currently a need for affordable housing in the Mid-Western Region LGA, with councils' strategic goals aligning with the rezoning of land to generate 30 years more supply of general residential lots in Mudgee and Gulgong (Mid-Western Regional Council, 2020).

- The Mid-Western Regional Council has developed the *Affordable Housing Policy* (2020) to address the LGAs current increase in demand for affordable housing due to the significant growth in the property market. This growth has been driven largely by the expansion of mining activities as well as other new developments. The increased number of new residents to town to take up employment positions and an increase in short term contractors can place significant demands on the availability of rental accommodation in the Region.

- The Mid-Western Region LGA contains both private and community-based organisations that provide early childhood care and education. These are predominately located within Mudgee, Gulgong and Rylstone (Regional Development Australia, n.d.).

- There are 16 primary schools located within the LGA including both public and private. There are high schools located in Mudgee, Gulgong, and Kandos (Regional Development Australia, n.d.).

- The LGA has access to tertiary educational facilities such as the Mudgee TAFE, Australian Rural Educational Centre, Red Hill Environmental Education (Regional Development Australia, n.d.) and The Country University Centre which opened in early 2024.

- The Mid-western annual report 2022-2023 (Mid-Western Regional Council, 2023) has identified that there will be an increase in demand for health care professionals over the following three to five years due to projected growth of the population in the region. Plans to further support key industries and retaining sufficient workforces in healthcare include creation of essential worker housing.

- The Mid-Western Regional LGA is well connected to the State via Castlereagh Highway and the Golden Highway. The Council has prioritised further development of transport networks to support the growing population.

- Mudgee Airport is owned and managed by the local council. The airport provides the region with unique aviation business opportunities. FlyPelican services the Mid-Western Region by providing direct flights between Sydney and Mudgee, four days per week.

- When asked to describe what they liked most about living in the area, participants noted (n=5) that they valued proximity to quality services, including medical facilities in Mudgee:

'It provides all the services I need without being in the city' (Landholder)

4.4.7 Cultural Capital

Cultural capital refers to underlying factors that provide human societies with the means to adapt to their environment (Cochrane, 2006). It includes the way people know and understand their place within the world. It may also refer to the extent to which the local culture, traditions, or language, may promote or hinder wellbeing, social inclusion, and development (IAIA, 2015). This section provides a summary of the key characteristics of the social locality from a cultural capital perspective.

- The Mid-Western Regional LGA is located on Wiradjuri land, which stretches from the eastern boundary of the Great Dividing Range.
- The Mudgee Historical Society notes that: The Wiradjuri nation was split and sub-split into many tribes. According to oral tradition, in Mudgee, the Mowgee clan extended over a 50 km radius. The Mowgee women's totem was the wedge tail eagle (Mullian) and the men's totem the crow (Waggan). They settled around the Cudgegong River, using its resources for food, and water. The Wiradjuri were the occupants of the Mudgee district, as well as of a large part of what is now the state of New South Wales, prior to the arrival of Europeans. There are, however, numerous traces of their extensive occupation of the land. The Mudgee district holds many sacred Aboriginal sites and cave painting, some sites with evidence of tool making (Mudgee Historical Society, n.d.)

- All communities, with the exception of Uarbry have a higher proportion of Aboriginal and/or Torres Strait Islander population when compared to the State (3.3%).

- The Mid-Western Regional LGA has a low proportion of the population who use a language other than English at home compared to the State (5.1% compared to 29.5%). Similarly in the service townships and SALs of Kandos, Rylstone, Gulgong, and Mudgee there is a lower proportion of the population who use a language other than English at home.

- A key priority of the Mid-Western Regional Local Strategic Plan is to respect and enhance the historic character of the region and heritage value of its towns. Gulgong has a strong history of museums, iconic community events and festivals; with Kandos also having a rich industrial history which continues to shape the town (Mid-Western Regional Council, 2020).

- Kandos has had a rich industrial history since the twentieth century. Cement and coal industries were dominant with iconic historical companies such as Kandos Cement and Kandos Collieries recognised in local history books (Mudgee Guardian, 2014).

- The Mid-Western Region has four Heritage Conservation Areas in Mudgee, Gulgong, Rylstone and Hargraves, 482 Heritage items with 15 being recognised as State Significant (Mid-Western Regional Council, 2020).

4.5 Social Baseline Summary

Table 4.3 summarises the social baseline capitals as well as identifies key challenges and opportunities currently being experienced across the social locality as derived from the Mid-Western Regional Council Community Plan (Mid-Western Regional Council, 2020).

Table 4.3 Social Baseline Summary

Capital	Strengths	Challenges
Political	• State member has previously stated support for the continuation of the mining industry. • Local council plans support the continued growth of the mining industry to support the regional economy. • Local council's strategic objectives and planning capacity.	• Increased political and community pressure to reduce reliance on mining.
Natural	• Strong presence of natural resources. • Region rich with natural minerals and mining history including being within Australia's critical mineral resource deposits. • Strong viticulture history which supports the tourism economy. • Strong community values related to the natural landscape and environment.	• Previous impacts of mining on groundwater quality. • Central West Orana is a key renewable energy zone, consequently there are numerous renewable energy projects that are planned or underway as part of the NSW Governments planned renewable energy transition and decarbonisation. • Use of water by key industries including mining. • Presence of many threatened species in the region, including the River Red Gum Endangered Population, the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland Ecological Community, and the Grey Box Grassy Woodlands and Derived Native Grasslands Endangered Ecological Community.
Human	• Growing populations in the social locality with continued projections of growth. • Higher proportion of trades skills in the region as demonstrated by higher rates of certificate attainment than the State. • The broader Mid-Western LGA ranks within the top 30% of NSW LGAs of population with higher skilled occupations and education. • Continued growth in the region with SSD projects.	• Older and aging population. • Higher proportion of vulnerable populations such as those with chronic health issues such as obesity, heart disease and asthma. • Low levels of IEO in the proximal SALs indicating a higher proportion of people employed in lower skilled occupations and lower levels of education.
Social	• Lower population mobility of those who work in the agriculture, forestry and fishing industry. • Enhancement of historic industrial character of the region.	• Reduced sense of personal safety and higher rates of crime in comparison to the State.

Capital	Strengths	Challenges
Economic	• Development of new skills in the local population and employment. • Capitalisation of renewable energy resources and leading the shift towards the transition to renewable energy. • Workforce housing, associated with project developments, provide opportunities to leave a social/community legacy in relation to infrastructure provision in local communities within the region. • Growing regional tourism. • Growth in demand for critical minerals and deposits, which exist in the region. • The Royalties for Rejuvenation Fund provides opportunities to support economic diversification, including the funding of infrastructure, training services, programs and other activities. • The mining industry was the largest contributor to the economy in the region. • Increase in employment in the mining industry since 2016 across majority of the social locality. • Top occupations, such as technicians and trades workers and machinery operators directly correlate to the occupations used in the mining industry. • Viticulture rising as a significant industry in relation to economic output.	• Lack of access to economic resources as indicated by the low IER. • Increasing housing costs including house prices and rent. • Rapid transition to alternative energy sources. • Highly competitive markets susceptible to change. • Rising stress due to cost of living increases.
Physical	• Council plans to rezone land to create new housing developments given housing shortages. • Access to private and public early childhood education facilities. • Multiple primary schools in the SALs as well as high schools located in Mudgee, Gulgong and Kandos. • Some tertiary education facilities in Mudgee. • Access to Mudgee Airport.	• Limited public transport access and higher dependency on car transportation. • Decreasing access to the internet in regional Australia, and more specifically for those in the Social Locality. • Demand for health care practitioners. • The Mid-Western Regional's Local Strategic Planning Statement outlines a need for new transport infrastructure to support sustainable future population growth.

Capital	Strengths	Challenges
	• Improved infrastructure including sporting and cultural facilities and roads and transport routes. • Council plans to increase housing including afford housing.	• Need for additional affordable housing.
Cultural	• The social locality encompasses Wiradjuri land. • Strong historic ties to mining and industrial industries. • Aboriginal cultural sites within the region and strong connection to the land.	• Low proportion of the population who speak a language other than English in the region indicating low cultural diversity. • Historical displacement of Wiradjuri people from their traditional lands and cultural.

Source: (ABS, 2023) (Mid-Western Regional Council, 2023) (Mid-Western Regional Council, 2020) (Mid-Western Regional Council, 2023) (ABS, 2021).

5.0 Social Impact Scoping

This section summarises the scoped social impacts (positive and negative) in relation to the UWCO Project and has been framed in accordance with the social impact categories outlined in the SIA Guideline (DPE, 2023). The impact scoping exercise has been informed by community consultation undertaken during the scoping phase and analysis undertaken for the social baseline profile.

5.1 Summary of Identified Social Impacts

Table 5.1 and **Table 5.2** illustrate the scoped negative social impacts and positive social impacts/ opportunities associated with the UWCO Project by category social impact category. Preliminary social impact identification has been informed by engagement with landholders residing within the Project Area (n= 12) and proximal adjacent landholders and residents (n=8) (collectively referred to below as 'landholders'). In addition, two local business / service providers, two community group members, and one broader community member were also engaged during this phase.

When stakeholders were asked to identify the potential negative impacts of the UWCO Project, both prompted and unprompted social impacts of concern included reduced access to water for household and property use (n=9), loss of social amenity due to operational noise and vibration (n=9), potential property damage due to subsidence and property devaluation and/or ability to sell property as a result of the Project (n=7) (refer to **Table 5.1**).

As indicated in **Figure 5.1**, primary concerns were raised by stakeholders in relation to impacts on surroundings and social amenity (n=22) and livelihoods (n=15). Furthermore, positive impacts to livelihoods were raised by 12 stakeholders. When stakeholders were asked to identify potential positive impacts of the UWCO Project, the most frequently raised social impacts included continued employment for the existing workforce and procurement of local suppliers (n=6), ongoing regional economic benefits (n=6), improved road safety and road condition given upgrades to road networks (n=2) and increased public safety due to presence of security staff associated with mining operations (n=2) (refer to **Table 5.2** for further details).

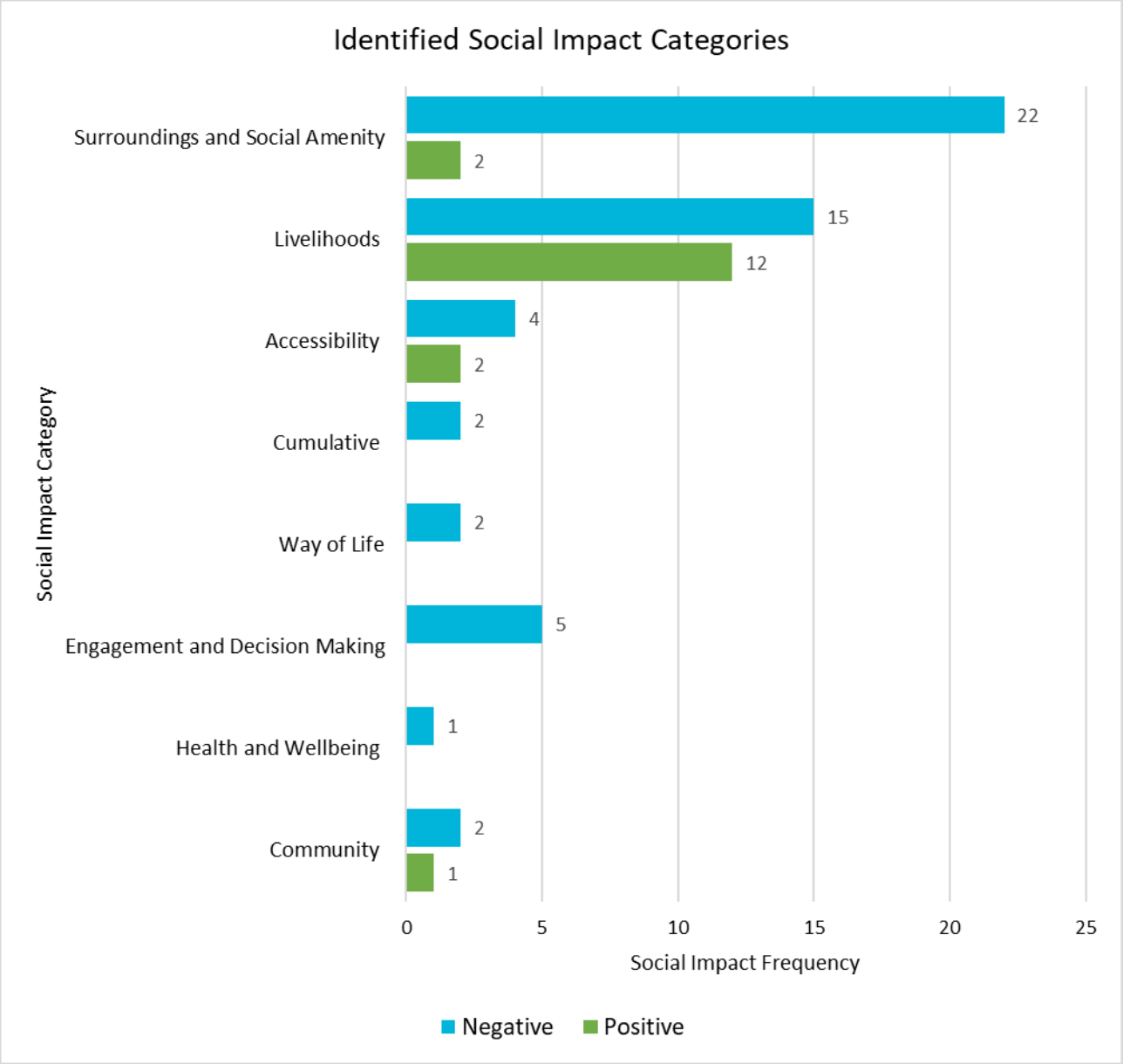


Figure 5.1 Identified Social Impact Categories

Source: Scoping Phase Engagement, 2024 (n=23).

Table 5.1 Social Impact frequency – Engagement with Key Stakeholders

Impact Category	Impact	Frequency
Community	Changes to surroundings impacting on the rural landscape, enjoyment of the natural environment and sense place	1
Community	Loss of existing personal and community networks due to landholder relocation	1
Accessibility	Road safety concerns given increased traffic and road deterioration	4
Livelihoods	Increased house prices as result of the presence of the mining industry	1
Livelihoods	Damage to vehicles as a result of degradation of road conditions given increased traffic movements	1

Impact Category	Impact	Frequency
Livelihoods	Skills drain from other trade and service worker roles, given the higher incomes being offered in the mining industry	1
Livelihoods	Potential property damage due to subsidence	8
Livelihoods	Reduction in property value and/ or ability to sell due to the presence of mining	4
Surroundings and Social Amenity	Reduction in access to quality water for personal and property use	9
Surroundings and Social Amenity	Loss of social amenity due to noise from construction activities	1
Surroundings and Social Amenity	Loss of social amenity due to operational noise and vibration	9
Surroundings and Social Amenity	Intergenerational equity issues associated with continued use of coal resources and subsequent impacts on climate	1
Surroundings and Social Amenity	Loss of important environmental values	1
Surroundings and Social Amenity	Visual and social amenity impacts associated with light pollution from mine operations	1
Health and Wellbeing	Increase in anxiety and stress as a result of continued operations	1
Engagement and Decision Making	Lack of ability to influence decision making process given perception that the Project will be approved.	2
Engagement and Decision Making	Uncertainty associated with the Project and inability to make personal decisions until Project is determined	3
Way of Life	Disruption to way of life given need to relocate due to the Project	2
Cumulative	Potential cumulative impacts on the community given other significant project development in the area	2

Source: Scoping Phase Engagement, 2024 (n=23).

Table 5.2 Perceived Positive Impacts and Community Benefits

Impact Category	Impact	Frequency
Community	Continued social investment in the local community and contribution to the improvement of community infrastructure and service provision	1
Accessibility	Improved road condition and access given road upgrades	2
Livelihoods	Continued employment for the existing workforce and procurement of local suppliers	6
	Ongoing broader economic benefits	6
Surroundings	Increased public safety due to presence of mining operations (e.g. mine security)	2

Source: Scoping Phase Engagement 2024 (n=21).

Further description of the social impacts identified within each SIA category are described in the following sections.

5.2 Surroundings and Social Amenity

Impacts to people's surroundings refer to changes that the UWCO Project may have on a community's experience of the landscape, environmental assets, and resources and/or ecosystem services. This can include people's amenity, their access to and use of the natural and built environment, and the aesthetic value of surrounds.

5.2.1 Reduced Access to Water for Household Use

During engagement to inform the SISR, the most frequently raised concerns related to potential reduction in access to quality water for personal and property use (n=9). Residents and landholders in proximity to the UWCO Project (including those in the Project Area) raised concerns relating to the potential of the UWCO Project to reduce access to bore and surface water (e.g. dams). With the loss of water recognised as a key community concern more broadly (refer to **Section 4.4.2**), concerns were raised that the UWCO Project would potentially exacerbate this issue. Landholders also noted that bore water is the main water source utilised for household purposes and were concerned how the UWCO Project may affect this:

> 'We use bore water for almost everything. We do have rainwater tanks for drinking, but everything else we use bore water for'. (Landholder)

> 'We use Bore water for all our house water, would hope that isn't impacted.' (Landholder)

Landholders raised concerns that subsidence associated with UWCO Project operations, may also have the potential to drain local dams and result in a loss of groundwater. A number of landholders also highlighted the potential for flow on effects including reduction in water availability for other landholders and the broader community.

A further landholder, residing in proximity to the UWCO Project also raised concern that impacts to the water table could increase salinity in the area and ultimately impact on agricultural practices.

> 'We had a spring fed dam down the front, but it is dried up at the moment. This then increases salinity in the area and has impacts to agricultural practices for others in the area.' (Landholder)

5.2.2 Loss of Social Amenity due to Noise from Mining Operations

The potential for social amenity impacts, as a result of noise and vibration associated with construction (n=1) and mining operations (n=9), were also raised as a concern for local landholders and residents.

Proximal landholders with these concerns, spoke of existing noise impacts experienced from UCC operations, particularly in relation to noise from surface infrastructure, including vent shafts and fans. Landholders stated that these noise disruptions often occur under certain weather conditions:

> 'When the wind blows a certain way, I can hear dozers and drilling as if they are right next to me.' (Landholder)

> 'Noise impacts from the longwall fan site on a cold night!' (Landholder)

Subsequently, landholders were concerned that the Project could further increase social amenity impacts as a result of noise and vibrations from underground works.

5.2.3 Visual Amenity

In relation to existing operations within the region, one landholder noted that there has been an increase in light pollution due to the presence of numerous operations, suggesting that the UWCO Project would add to this cumulative effect.

> 'Light pollution from the surface operations have increased dramatically over the years and are an annoyance and probably impacts insect populations as it draws them in.' (Landholder)

5.2.4 Increased Public Safety

Two landholders in proximity to the UWCO Project highlighted that the presence of mining security contractors contributes to enhanced safety in the local area and noted that since the presence of security services there had been a reduced number of thefts in the area.

> 'The project will ensure that there is an added security in the area, of the workforce being around and of Ulan Coal hiring the local security company to drive around. Since the Mid-West Security services have been present, I have noticed a lot less things being taken from my house, and less people driving up my driveway.' (Landholder)

With crime rates being higher in Mid-Western Region LGA (refer to **Section 4.4.4)**, the presence of security may assist in reducing crime in the locality.

One landholder raised concerns regarding bushfire safety. They noted the dense bushland in the local area, particularly along Wonga Roo Road and felt that the area is subject to increased bushfire risk. To address this, it was suggested that UCC could provide support through tree clearing along the road:

> 'Glencore could support bushfire preparedness by clearing trees, especially along the road.' (Landholder)

5.2.5 Impact on Important Environmental Values

One proximal landholder noted concern that the UWCO Project may impact the local wombat population as a result of undermining, as they have a number of wombat burrows on their property along the creek:

> 'We fill up our little watering hole with bore water, and that gives the wildlife somewhere to drink. Kangaroos, sugar tail gliders, wombats, goannas etc all come and drink from our water hole and also eat the food we put out for them.' (Landholder)

5.2.6 Intergenerational Equity

During engagement, one community member raised intergenerational equity issues associated with continued use of coal resources and subsequent impacts on climate. Intergenerational equity relates to applying fairness or facilitating distribution of well-being between/across generations, preserving natural resources and/or caring for the environment for the benefit of future generations. 'A sustainable world is one in which human needs are met equitably without sacrificing the ability of future generations to meet their needs' (Summers, 2014).

5.3 Way of Life and Community

Impacts in relation to way of life refer to the potential impacts on how people live, work, play and interact with one another; with such impacts referring to changes in the composition, cohesion, and character of the population, as well as how the community functions and impacts on sense of community and sense of place.

5.3.1 Reduced Sense of Community and Cohesion

The development of the UWCO Project, may result in a change in the number of landholders given potential relocation as a result of the project, and the subsequent loss of personal relationships and connections.

Sense of community focuses on the notion that an individual exists within a larger interdependent network or system that is greater than personal relationships between individuals. It includes a sense of communal efficacy and mutual responsibility to do 'right' by the community, where community members believe that they can do together what they can't achieve on their own (Jason, Stevens & Ram, 2015; Pretty, Bishop, Fisher & Sonn, 2007). It is not an outcome or an end state but can be perceived as a process in which members of a community interact with each other, express who they are in an individual and collective sense, seek and provide social support, and create experiences that facilitate a shared history (Pretty, Bishop, Fisher & Sonn, 2007).

As previously mentioned in **Section 4.4.4,** a strong sense of community was noted by various stakeholders when asked to consider the key strengths/assets of their community. For instance, one proximal landholder reflected on having community members purchased by mining companies and moving out of the area, resulting in a loss of long-term friendships.

A further two proximal landholders also raised concerns that their overall way of life could be affected if they had to relocate as a result of the UWCO Project:

> 'Having to sell and having to relocate is something I am concerned about.' (Landholder)

The area has a long history of mining, with mining activities occurring at the UCC site since the 1920s. There are also a number of other mining operations located in the area e.g. Moolarben Coal, Wilpinjong Mine and Bowdens Silver (not yet operational). While there is no expected workforce change associated with the UWCO Project, there may be a loss of sense of community if long term residents within the Project Area relocate due to the UWCO Project.

5.3.2 Community Benefits – Continued Local Community Investment

The continued investment in community, should the UWCO Project be approved, was also noted by a member of the wider community. As outlined in **Section 3.2**, UCMPL has an ongoing program for community investment, with a number of community partnerships in place. In 2023, $65,226.77 was contributed to a range of projects relating to education, enterprise development, health, environment and local needs.

Other landholders in proximity to the UWCO Project also stated that Ulan are '*always there for the community*' and '*do a lot for the local community*', with six participants expressing that UCMPL are generous in supporting the community.

When participants were asked if they could recall any community projects, groups or organisations supported by UCMPL, 15 participants identified the following:

- Local festivals and events (n=4)
- School and educational programs (n=4
- Bungaba Progress Association (n=1)
- Gulgong Rural Fire Service (RFS) (n=1)
- Sport clubs and sporting events (n=3)
- Health services (n=2)
- Men's Shed (n=1).

Furthermore, when asked 'what initiatives or programs do you think would be good for UCMPL to support in the community?', participants identified a number of potential opportunities:

- Medical transport for patients to and from Mudgee and Dubbo.
- Local sports and entertainment venues.
- Monetary donations to the RFS.
- Support local community clubs including the Local Cricket Association, The Pony Club and the Men's Shed.
- Support local events such as the Polocrosse carnival.
- Support hospital services and programs.
- Training opportunities in addition to youth apprenticeships.
- Support for youth services.
- Upgrade Blue Springs Road.

5.4 Livelihoods

Livelihood impacts refer to the capacity of community members to sustain their livelihood through income-generating activities such as employment or business. This impact category considers the changes that economic conditions caused by the UWCO Project may have on individuals and businesses and whether people are likely to experience any personal disadvantage.

5.4.1 Property Damage and Financial Loss

A number of landholders (n=8), both within and proximal to the proposed project area, raised concerns about the potential impact of underground mining/subsidence on their properties. Concerns in this regard related to damage to dwellings, property infrastructure and land, and subsequent financial loss due to repair and property and land devaluation. Uncertainty relating to the likely or proposed subsidence impacts were also noted.

> 'Subsiding and cracking of topsoil and as a result damage to buildings/ infrastructure.' (Landholder)

> 'Concerned about subsidence, hard to know how far it will spread.' (Landholder)

> 'What impacts us is always being concerned about movement of our land and housing and outbuildings' (Landholder)

Devaluation of property, including land value, was a key concern given the presence of mining in the area (n=4). Such impacts were of greater concern to landholders residing in properties in proximity to the mining area; with landholders identifying potentially detrimental impacts on their livelihoods and their future.

One participant was also concerned about the potential for the UWCO Project to result in an increase in housing prices, given that a demand for housing for mining workforces is a factor in rising house prices and can make it unaffordable for those employed in other sectors. As indicated in **Section 4.4.5,** there has been a visible increase in median house prices in Kandos, Gulgong and Mudgee SALs (between September 2022 and August 2023). It is however noted that there is no proposed increase to employment as a result of the UWCO Project.

5.4.2 Skills Drain

A local business owner also outlined that the mining industry is drawing local labour away from other trade and service worker roles, given the higher incomes being offered in the sector. Consequently, other industries struggle to attract and retain workers, given an inability to compete with these wages. Employment data noted in **Section 4.4.5,** indicates a 0.9% increase in employment in mining in the broader region between the 2016 and 2021 ABS Census. Due the continuation of current workforce numbers as part of the Project, the expected impact to skills drain is expected to be minimal.

5.4.3 Opportunities for Local Employment, Procurement and Regional Economic Development

Stakeholders consulted (n=6) emphasised the opportunity for continued employment for the existing workforce, local suppliers, and potentially new employment opportunities should the Project proceed. Participants highlighted that the continuation of mining would retain employment in the area and provide longer-term opportunities and flow on effects to the regional economy. Six stakeholders raised the ongoing broader economic benefits as a positive impact correlated to the Project.

> 'Keeps employment in the area.' (Landholder)

> 'For everyone. It will provide longer term jobs for people.' (Landholder)

> 'More jobs' (Landholder)

> ‘If it goes ahead, there will be an economic benefit for the people in Bungaba.’ (Landholder)

> ‘Good having locals work there, and increases on the (number of people within the) community, more business for us at the pub.’ (Local business)

Whilst the UWCO Project will not result in an increased workforce at UCC, the proposed extraction of product coal will add an additional 8 years to the mine life (including Modification 6) providing for the continued employment of the current mining workforce.

As previously mentioned, UCC currently has approval to employ up to 930 employees and currently employs 590, with over 90% of current employees residing within the Mid-Western Regional LGA.

5.5 Health and Wellbeing

Health and wellbeing impacts include impacts to both physical and mental health and may include psychological stress resulting from financial and/or other pressures, as well as changes to individual and broader public/community health.

5.5.1 Increase of Stress and Anxiety as are Result of the Project

One landholder in proximity to the UWCO Project expressed that they were experiencing an increase in stress and anxiety due to the uncertainty associated with the Project (refer to **Section 5.7.1**) given the potential for continued mining operations. A further landholder expressed their concern that the Project may result in them having to relocate out of the area:

> ‘Concerned about having to move….We were planning on staying here, we have moved [many] times in our lives and are not excited about the idea of moving again.' (Landholder)

Another landholder highlighted concerns for those who would remain in the area, because their homes are not acquired. As a result, they felt that these residents would have to live with the stress of being in proximity to the UWCO Project.

5.6 Accessibility

Impacts relating to community accessibility refer to people’s ability to access and use infrastructure, services, and facilities and how the UWCO Project may inhibit or enhance such access.

5.6.1 Road Safety given Increased Traffic and Road Deterioration

Landholders raised concerns regarding road user safety due to road deterioration and subsequent damage to cars.

> ‘I am also concerned about the damage to my car when the road is degraded, the big potholes etc are not good for my car.’ (Landholder)

> ‘I am concerned about the damage to the roads with the increase of traffic.’ (Landholder)

> ‘People continuously using the roads will deteriorate the roads.’ (Landholder)

> ‘Not only damage to the road, but also the increase in traffic causing safety concerns due to driver behaviour of driving in the middle of the road and not slowing down.’ (Landholder)

A further two landholders also raised the potential disruption to road users as a result of increased traffic, with one landholder noting that traffic in the area has already increased significantly due to the development of other projects. It was expressed that the UWCO Project may further exacerbate these traffic conditions and the subsequent safety of road users.

However, potential road infrastructure upgrades were considered a possible benefit of the UWCO Project for the wider community.

> ‘Potential upgrade to Walkerville Road.’ (Landholder)

> ‘Potential for road upgrades will be good for the people who live along Blue Springs Road and Wonga Roo Road’. (Landholder)

The UWCO Project does not propose to increase traffic volumes. As previously noted, the UWCO Project will not result in an increased workforce at UCC, the proposed extraction of product coal will add an additional 8 years to the mine life (including Modification 6) providing for the continued employment of the current mining workforce.

5.7 Engagement and Decision-Making Systems

Impacts in relation to decision-making systems relate to people’s ability to make meaningful contributions to decisions that affect their lives, including their ability to influence change.

5.7.1 Uncertainty of the Project

The inability to make development decisions due to the uncertainty of the UWCO Project was raised by three landholders as a concern. The landholders highlighted feelings of uncertainty about planned future developments on their properties and noted that they are unable to make any decisions until the outcome of the proposed UWCO Project is known. As a result, landholders emphasised that they are in a state of limbo.

> ‘If it is undermined it will change what we can do on our property. We were planning on building another house but won't if this goes ahead because we won’t be allowed to. Same for our neighbour.’ (Landholder)

> ‘This is frustrating because I have this piece of land which I can’t live in, and I can’t sell because who is going to live there.’ (Landholder)

The uncertainty of the UWCO Project and associated impacts was also linked to mental health and wellbeing including increased anxiety and stress due to project uncertainties as discussed in **Section 5.5.1**.

5.7.2 Decision-Making Process

Two landholders in proximity to the UWCO Project did not feel like they could influence Project decisions, suggesting that the Project would likely go ahead despite their input/ opinions given the operation’s longevity in the locality.

'Don't feel like my opinion is going to change anything, it's been there for 40 odd years, not getting any smaller….Realistically it's going to happen.' (Landholder)

A further landholder expressed a sense of powerlessness with the assessment process, suggesting that they were unable to gain information or have their questions answered and emphasising the challenges in working with a large multi-national company.

Figure 5.2 provides an overview of preferred future information provision and engagement mechanisms identified by participants in the engagement program. As indicated in the chart, participants would prefer to receive information via email (78%), followed by newsletters (35%). Nearly 40% of participants noted 'other' mechanisms, with most of these responses noting they would prefer a phone call or text message if there's anything to discuss.

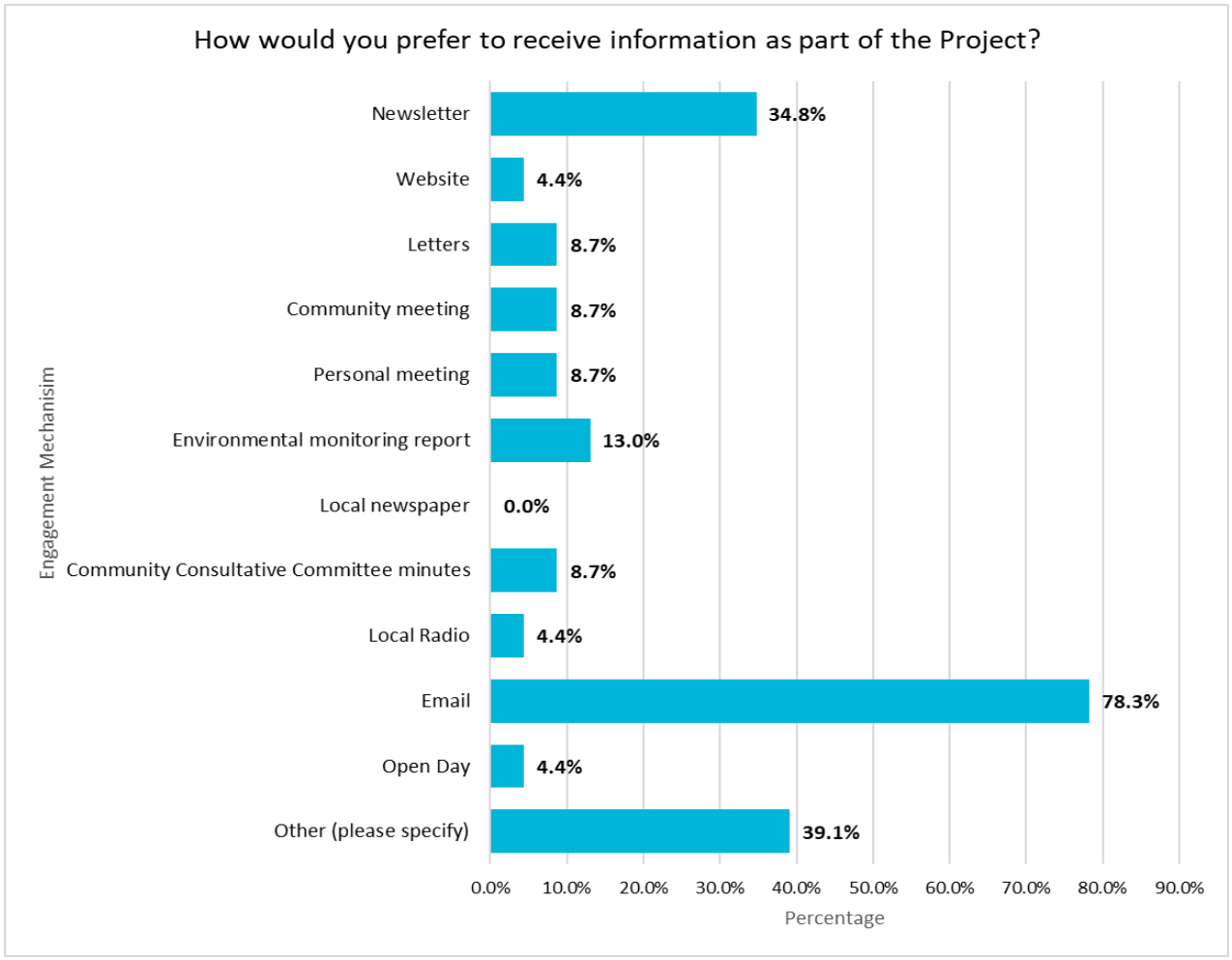


Figure 5.2 Preferred Future Information/ Engagement Mechanisms

Source: UCMPL Ulan West Continued Operations Project Survey, 2024 (n=23).

5.8 Culture

Impacts on culture include changes that may occur because of a Project to values, shared beliefs, customs, and connections of those who reside within a social locality.

Consultation with local Registered Aboriginal Parties has commenced as part of the Aboriginal Cultural Values Assessment process for the Project. Issues identified in other projects (including previous SIAs completed for UCC) include:

- land rights, land use and management
- the disturbance of cultural sites, objects and artefacts (including potential impacts of underground mining and subsidence on rock art and caves), and the preservation of traditional practices
- cultural connections to Country
- community programs and partnerships, and support for representation and the interests of Aboriginal people in the local area.

Impacts upon culture and on local Aboriginal communities will be further explored in the SIA Phase.

5.9 Cumulative Impacts

Cumulative impacts are 'a result of incremental, sustained and combined effects of human action and natural variations over time and can be both positive and negative. They can be caused by the compounding effects of a single project or multiple projects in an area, and by the accumulation of effects from past, current and future activities as they arise' (DPIE, 2022).

Two landholders noted the increase in other proposed developments in the area, and the cumulative impacts of development in the locality and across the region. Projects that were particularly noted included the Stubbo Solar Farm and the Energy Co Project CWO Transmission Project, with one landholder specifically identifying increased traffic.

As indicated in **Table 4.1**, there are approximately 18 proposed development projects within a 100 km radius of UCC that have the potential to cause cumulative impacts social developments (additional detail of these projects is provided in **Appendix A**).

6.0 Potential Mitigation and Enhancement Measures

Table 6.1 identifies potential strategies identified by those consulted during the scoping phase, as well as opportunities for the UWCO Project to positively contribute to the local community. It is important to note, however, that some of the strategies noted, may be outside the control of UCMPL and/or require relevant approvals by Council. Strategies to mitigate and enhance social impacts relating to the proposal will be further explored in the SIA phase.

Table 6.1 Community Suggestions for Potential Strategies and Opportunities

Impact Theme	Community Identified Strategy/ Opportunity
Accessibility	• Tree clearing on either side of Wonga Roo road to reduce number of trees falling down on the road. • Upgrades to local roads. • Ensure council keeps the bus route going.
Surroundings & Social Amenity	• Implement flood management measures and provide landholders with information regarding flooding impacts. • Implement noise monitoring. • Implement water monitoring. • Source water outside of local water supplies if water levels become low. • Supplying local residents with seedlings to plant native vegetation (e.g. ironbark). • Tree clearing on either side of Wonga Roo road to increase visibility and reduce risk of bushfire.
Engagement & Decision Making	• Continued communication and engagement – Information Sessions. • Provision of information relating to mitigation and management strategies to address impacts.
Community and Way of Life	• Implementation of a transition/closure strategy.
Livelihoods	• Fairness in Acquisition of properties.

7.0 Preliminary Impact Evaluation

Table 7.1 outlines the preliminary impact evaluation undertaken for the scoping SIA, using the SIA Guideline's Social Scoping Worksheet. The scoping sheet identifies potential social impacts that may be relevant to the Project and notes the level of assessment to be undertaken for each identified impact in subsequent phases of the SIA.

The significance ratings identified are based on preliminary investigation and current understanding of the potential social impacts, prior to any mitigation measures being considered. This has included consideration of whether the Project activity (without mitigation or enhancement) is likely to cause material social impacts in terms of:

- extent i.e. the number of people potentially affected
- duration of expected impacts (i.e. construction or operation)
- intensity of expected impacts i.e. scale or degree of change
- sensitivity or vulnerability of people potentially affected
- level of concern/ interest of people potentially affected.

These impact ratings will be further evaluated in the assessment phase of the SIA with consideration of mitigation measures, including landholder agreements.

Table 7.1 Preliminary Social Impact Evaluation

Project Activity	Categories of Social Impact	Potential Impacts on People			Elements of Impact – Based on Preliminary Investigation					Assessment Level	Project Refinements	Mitigation / Enhancement measures
Project Activity	Social Impact Category	What impacts are likely, and what concerns/ aspirations have people expressed about the impact?	Nature	Will this impact combine with others from this project, and/or with impacts from other projects (cumulative)?	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of:					Level of assessment for each social impact	Has the Project been refined in response to preliminary impact evaluation or stakeholder feedback?	Mitigation/enhancement measures are being (or will be) considered? [3]
					Extent	Duration	Intensity	Sensitivity	Level of Concern /			
Presence of the operation	**Community**	Changes to surroundings impacting on the rural landscape, enjoyment of the natural environment and sense of place	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	The Project comprises an extension to underground mining operations, as a result the Project is unlikely to have a significant change to rural landscape, enjoyment of the natural environment or sense of community and place. The Project has been designed to limit the number of impacted private landholders as far as practicable.	Continued review and update the Stakeholder Engagement Strategy that addresses community information requirements and preferences for engagement. Continued contribution to the Ulan Coal Community Investment Program.
Prescence of the operation	**Community**	Continued social investment in the local community and contribution to the improvement of community infrastructure and service provision	Positive	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	No	Yes	Yes	Detailed assessment of the impact		Continued investment in the Ulan Coal Community Investment Program.
Land acquisition and presence of the operation	**Community**	Loss of existing personal and community networks due to landholder relocation	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	No	Yes	Yes	Yes	Detailed assessment of the impact	The Project has been designed to limit the number of impacted private landholders as far as practicable.	Continued engagement with landholders.
Land acquisition and presence of the operation	**Way of Life**	Disruption to way of life given need to relocate due to the Project	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	No	No	Yes	Yes	Detailed assessment of the impact	The Project has been designed to limit the number of impacted private landholders as far as practicable.	Continued engagement with landholders.
Workforce	**Accessibility**	Additional strain on infrastructure, services and facilities	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	No	No	No	No	No	Minor assessment of the impact	The Project is not expected to place increased strain on infrastructure, services and facilities. There will be no increase to employee numbers as a result of the Project.	
Underground mining causing subsidence impacts	**Livelihoods**	Potential property damage due to subsidence	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	The Project has been designed to limit the number of impacted private landholders as far as practicable. UCMPL will seek to enter into relevant agreements with all impacted landholders, or potentially modify the proposed mine plan based on the outcomes of further assessment.	Consultation with land holders and make agreements where required Prepare Private Property Subsidence Management Plans where required in consultation with landholders. Monitoring outcomes will continue to be provided via the annual subsidence report.

[3] Mitigation measures include suggestions from members of the community and those identified by the Project team that will be considered by UCMPL for refinement in the next phase of the assessment.

Project Activity	Categories of Social Impact	Potential Impacts on People			Elements of Impact – Based on Preliminary Investigation					Assessment Level	Project Refinements	Mitigation / Enhancement measures
Presence of the operation and operational impacts (including visual, noise, dust, subsidence)	**Livelihoods**	Increased house prices as result of the presence of the mining industry	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	No	No	Yes	Yes	Standard assessment of impact		Continuing engagement with near neighbours to address any concerns.
Presence of the operation and operational impacts (including visual, noise, dust, subsidence)	**Livelihoods**	Reduction in property value and/ or ability to sell due to the presence of mining	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact		Continuing engagement with near neighbours to address any concerns.
Prescence of the Project	**Livelihoods**	Continued employment for the existing workforce and procurement of local suppliers can improve personal livelihoods and the broader community's human and economic capital over time	Positive	Yes – Existing Ulan Coal operations	Yes	Yes	No	No	No	Detailed assessment of the impact		Continuation of current employment and procurement practices.
Presence of the operation and operational impacts (including visual, noise, dust, subsidence)	**Surroundings and Social Amenity**	Reduction in access to quality water for personal and property use	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	No	Yes	Yes	Detailed assessment of the impact	The proposed mine plan has been designed to avoid a 4th order stream to minimise potential impacts to water resources.	Ongoing engagement with near neighbours. Continued use of subsidence remediation methods and associated erosion and sediment control measures and monitoring programs to manage potential subsidence impacts on watercourses. Continuation of the annual private bore monitoring. Continued implementation of the Surface Water and Groundwater Trigger Action Response Plans. Alternative water supply agreements where applicable. Investigation if proposed triggers are exceeded or if a complaint is received. Update of the Water Management Plan to accommodate the UWCO Project. Reporting of groundwater monitoring results annually in the Annual Review.
Construction of surface infrastructure	**Surroundings and social amenity**	Loss of social amenity due to noise from construction activities	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact		Engagement with near neighbours regarding construction. Management of construction activities.
Addition of surface infrastructure	**Surroundings and social amenity**	Loss of social amenity due to operational noise and vibration	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	No	No	Yes	Detailed assessment of the impact		Implementation of reasonable and feasible noise mitigation strategies. Continuation of the 24/7 community complaints line. Continue to publish noise monitoring data on the company website.

Project Activity	Categories of Social Impact	Potential Impacts on People			Elements of Impact – Based on Preliminary Investigation					Assessment Level	Project Refinements	Mitigation / Enhancement measures
Addition of surface infrastructure and underground operations	**Surroundings and social amenity**	Changes to surroundings impacting on the visual amenity of the rural landscape (light pollution, cliff and steep slope damage)	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact	Due to the nature of the landscape, there would be limited views of cliff line or steep slope impacts. Lighting would be limited to surface infrastructure. All lighting would be designed in accordance with relevant standards to minimise potential impacts.	Use of suitable non-reflective, natural tones for infrastructure such as shafts and bores that will be visible to the public. Progressive decommissioning of infrastructure that no longer supports mining operations (or relocation if required). Progressive rehabilitation of disturbed areas that have had infrastructure removed.
Addition of surface infrastructure	**Surroundings and social amenity**	Increase in dust potentially increasing annoyance for nearby residents and impacting on their way of life (e.g., increased cleaning, reduced time spent outdoors, altered use of private property) and health and wellbeing	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	No	No	Yes	Detailed assessment of the impact		Continue air quality and dust emissions monitoring regime. Continue to implement a Trigger Action Response Plan that identifies specific meteorological conditions that, upon measurement, require action for managing dust.
Product haulage and mine related traffic	**Surroundings and social amenity**	Road safety concerns given increased traffic and road deterioration	Negative	Yes – Existing Ulan Coal operations	No	No	No	No	Yes	Minor assessment of the impact	Traffic would be managed within approved traffic volumes.	Continued engagement with near neighbours to address any concerns. Continued implementation of the UCMPL Community Awareness Procedure controls. Continue to implement on site management measures to reduce dust in accordance existing Air Quality and Greenhouse Gas Management Plan. Continuation of the 24/7 community complaints line.
Presence of the operation and continued supply of coal	**Surroundings and social amenity** **Cumulative Impact**	Intergenerational equity issues associated with continued use of coal resources and subsequent impacts on climate	Negative	Yes – Existing Ulan Coal operations and other industries	Yes	Yes	Yes	No	Yes	Detailed assessment of the impact		Continued implementation of energy efficiency measures.
Final land use and rehabilitation	**Surroundings and social amenity**	Enhanced environmental and social values for surrounding communities, post mining through improved rehabilitation ensuing equitable intergenerational opportunities are realised	Positive	Yes – Existing Ulan Coal operations	Yes	Yes	No	No	Yes	Standard assessment of the impact		Continue monitoring and maintenance programs for rehabilitated areas until relinquishment. Engagement of key stakeholders and community residents in closure planning. Continued progressive rehabilitation. Continued development of Private Property Subsidence Management Plans detailing subsidence impacts, mitigation, remediation and compensation.
Presence of the project and operational impacts	**Surroundings and social amenity**	Loss of important environmental values	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	No	No	Yes	Standard assessment of the impact	The Project design will aim to avoid, minimise and offset impacts to environmental impacts as far as practicable.	Ongoing implementation of the progressive rehabilitation program. Ongoing engagement with near neighbours to address concerns.

Project Activity	Categories of Social Impact	Potential Impacts on People			Elements of Impact – Based on Preliminary Investigation					Assessment Level	Project Refinements	Mitigation / Enhancement measures
Presence of the Project and operational impacts	**Health and wellbeing**	Increase in anxiety and stress as a result of continued operations	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact		Publish environmental monitoring results on website. Ongoing engagement with near neighbours to address any concerns. Access to 24/7 complaints/information line.
Presence of the project and operational impacts	**Health and wellbeing**	Sleep disturbances due to noise	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	No	Yes	Yes	Detailed assessment of the impact		Ongoing engagement with near neighbours to address concerns. Implementation of noise mitigation strategies in accordance with the UCMPL Noise Management Plan. Continuation of the 24/7 community complaints line.
Presence of the operation and operational impacts	**Health and wellbeing**	Impact to physical health from exposure to dust / dust inhalation Contribution to cumulative air quality impacts on health	Negative	Yes – Existing Ulan Coal operations	Yes	Yes	No	Yes	Yes	Detailed assessment of the impact		Continue to implement on site management measures to reduce dust in accordance existing Air Quality and Greenhouse Gas Management Plan.
Subsidence	**Culture**	Potential loss of culturally significant heritage	Negative	Yes – Existing Ulan Coal operations	Yes	No	No	Yes	Yes	Detailed assessment of the impact		Ongoing implementation of a Heritage Management Plan. Ongoing engagement with local Aboriginal stakeholders.
Engagement process	**Engagement and decision making**	Lack of ability to influence decision making process given perception that the Project will be approved	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	No	Yes	No	Yes	Detailed assessment of the impact		Continue to provide updates on the UWCO Project in the UCMPL Newsletters and community meetings. Ongoing engagement with local community and key stakeholders. Ongoing engagement with local community and key stakeholders on community investment strategy and initiative. Regular newsletters distributed to the community and available on the website. Continuation of the 24/7 community complaints line.
Engagement process	**Engagement and decision making**	Opportunity to participate and have a voice in the assessment process	Positive	No	Yes	No	Yes	Yes	Yes	Detailed assessment of the impact		Continue to provide updates on the UWCO Project in the UCMPL Newsletters and community meetings. Ongoing engagement with local community and key stakeholders. Continuation of the 24/7 community complaints line.
Presence of the operation and continued supply of coal	**Cumulative impacts**	Potential cumulative impacts on the community given the other significant project developments in the area	Negative	Yes – Existing Ulan Coal operations and other major projects in the region	Yes	Yes	Yes	Yes	Yes	Detailed assessment of the impact		Ongoing engagement with local community and other local mines and development projects. Continuation of the 24/7 community complaints line.

8.0 Recommendations and Conclusions

This SISR has documented the SIA process undertaken during the scoping phase of the UWCO Project and forms part of the Scoping Report to inform the issue of SEARs by the NSW DPHI.

This SISR has included the compilation of a social baseline profile for the Project, early-stage community and stakeholder engagement to inform the scoping of Project-related social impacts and opportunities, and preliminary social impact prediction and evaluation. The preliminary impact evaluation has been undertaken to inform and support the refinement of Project design and plans to reduce negative project impacts and achieve greater positive project benefits.

As an outcome of this SISR, it is understood that a detailed assessment of social impacts is required as part of the Modification Report and should be informed by an ongoing process of community consultation. As part of the Modification Report, future stages of the SIA for this Project will include a comprehensive prediction and assessment of social impacts and development of relevant strategies to mitigate the negative and enhance the positive impacts associated with the Project. Further SIA and environmental impact studies will address perceptions of impacts raised by key stakeholders during this phase.

Subsequent phases of the SIA program will involve the following key activities:

- An update of the baseline social profile to ensure that any further data relevant to the impacts identified is obtained.
- Further validation and identification of affected communities and vulnerable groups.
- Provision of feedback to near neighbours, community members and key stakeholders (refer to **Section 2.3**) (via newsletter, information session, or other relevant mechanism) on the outcomes of the issues raised in the scoping phase and communication of the Project's SEARs (once issued), including an outline of the next steps in the assessment process and opportunities for community input.
- Further engagement with key stakeholders on the outcomes of the environmental assessments and the proposed mitigation of identified impacts.
- A comprehensive assessment and evaluation of social impacts against existing baseline conditions.

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APPENDIX A

Social Context and Baseline

A.1 Indicators

Table A.1 Social Baseline Indicators

Indicators	Kandos SAL				Gulgong SAL			Ulan SAL			Mudgee SAL				Mid-Western Regional LGA				NSW			
Year	2011	2016	2021	Change	2016	2021	Change	2016	2021	Change	2011	2016	2021	Change	2011	2016	2021	Change	2011	2016	2021	Change
Human Capital																						
Population	1,283	1,318	1,263	↓	2,518	2,680	↑	58	81	↑	9,829	10,927	11,457	↑	22,319	24,074	25,713	↑	6,917,660	7,480,231	8,072,163	↑
Population Change (%)	-	+2.7%	-4.2%	↓		+6.0%	↑		+28.4%	↑	-	+10.0%	+4.6%	↑	-	+7.3%	+6.4%	↑	-	+6.8%	+7.3%	↑
Aboriginal and/or Torres Strait Island people (% of population)	5%	5%	9%	↑	8%	8%	—	0%	8%	↑	4%	6%	7%	↑	4%	5%	7%	↑	2%	3%	3%	—
Median Age	45	52	54	↑	41	41	—	47	38	↓	37	37	36	↓	41	42	42	—	38	38	39	↑
Highest educational attainment – Year 10 (%)	37%	39%	35%	↓	38%	37%	↓	32%	19%	↓	37%	35%	34%	↓	38%	36%	35%	↓	26%	23%	20%	↓
Highest educational Attainment – Year 12	23%	24%	23%	↓	33%	28%	↓	46%	17%	↓	37%	42%	39%	↓	35%	39%	34%	↓	54%	59%	58%	↓
Bachelor's degree highest level of non-schooling attainment (%)	4%	7%	2%	↓	10%	3%	↓	0%	0%	—	8%	16%	7%	↓	8%	8%	6%	↓	14%	26%	11%	↓
Certificate/ s highest level of non-schooling attainment (%)	19%	46%	18%	↓	47%	23%	↓	31%	20%	↓	23%	44%	23%	↓	23%	25%	23%	↓	18%	30%	15%	↓
Index of education and occupation			1			1			2				2				3					
Social Capital																						
Proportion of the population who volunteered in the past 12 months	21%	21%	14%	↓	21%	12%	↓	15%	11%	↓	19%	20%	11%	↓	21%	22%	13%	↓	17%	18%	11%	↓
Family Household	59%	54%	48%	↓	66%	67%	↑	57%	65%	↑	68%	67%	68%	↑	70%	69%	69%	—	72%	72%	71%	↓
Group Household	3%	3%	2%	↓	2%	2%	—	0%	0%	—	3%	3%	4%	↑	3%	3%	3%	—	4%	4%	4%	—
Lone person Household	38%	42%	50%	↑	31%	30%	↓	21%	47%	↑	29%	29%	29%	—	27%	29%	28%	↓	24%	24%	25%	↑

Indicators	Kandos SAL				Gulgong SAL			Ulan SAL			Mudgee SAL				Mid-Western Regional LGA				NSW			
Year	2011	2016	2021	Change	2016	2021	Change	2016	2021	Change	2011	2016	2021	Change	2011	2016	2021	Change	2011	2016	2021	Change
Proportion of the population living at a different address 1 year ago	14%	12%	9%	↓	13%	15%	↑	5%	6%	↑	20%	17%	17%	—	16%	14%	14%	—	14%	14%	15%	↑
Proportion of the population living at a different address 5 years ago	35%	28%	27%	↓	34%	37%	↑	53%	11%	↓	43%	45%	44%	↓	37%	37%	37%	—	37%	39%	38%	↓
Proportion of the population living at the same address 5 years ago	62%	58%	57%	↓	53%	49%	↓	22%	41%	↑	49%	44%	42%	↓	57%	51%	49%	↓	57%	54%	51%	↓
SEIFA- Socio-economic Disadvantage			1			2			2				3				5				-	
Economic Capital																						
Median Household Income (weekly)	$614	$698	$677	↓	$1,086	$1,371	↑	$1,375	$1,624	↑	$1,023	$1,256	$1,678	↑	$929	$1,131	$1,486	↑	$1,237	$1,486	$1,829	↑
Median mortgage repayment ($/monthly)	$1,000	$867	$867	—	$1,517	$1,495	↓	0	$1,334	↑	$1,733	$1,733	$1,733	—	$1,551	$1,690	$1,733	↑	$1,993	$1,986	$2,167	↑
% of population employed in mining	16.1%	8.9%	11.3%	↑	19.6%	19.4%	↓	42.9%	63.6%	↑	15.3%	16.9%	18.0%	↑	13.8%	15.0%	15.9%	↑	1.0%	0.9%	1.0%	↑
% employment in mining (change)	-	-7.2%	+2.4%	↑	-	-0.2%	↓		+20.7%		-	+1.6%	+1.1%	↓	-	+1.2%	+0.9%	↑	-	-0.1%	+0.1%	↑
Labour force participation	39%	33%	33%	—	52%	55%	↑	44%	35%	↓	59%	58%	62%	↑	56%	54%	58%	↑	60%	59%	59%	—
Work full time	51%	43%	43%	—	54%	56%	↑	54%	52%	↓	59%	59%	59%	—	58%	56%	57%	↑	60%	59%	55%	↓
Work Part time	28%	35%	40%	↑	33%	32%	↓	33%	31%	↓	31%	30%	31%	↑	30%	32%	32%	—	28%	30%	30%	—
Unemployed	17%	16%	12%	↓	9%	6%	↓	9%	5%	↓	5%	6%	4%	↓	6%	7%	4%	↓	6%	6%	5%	↓
Median House Price (July 22–June 23) (% 12-month change)			$360,000	+11.6%		$560,000	+20.4%	Unavaiable					$700,000	+6.1%								
Median Rent / week (July 22–June 23) (% 12-month change)			$350	+9.4%		$450	+7.1%	Unavaiable					$540	+8.0%							$525	+6.0%
Herfindahl Index of Industrial Diversity	-	-	0.0459		-	0.0527		-	0.4325		-	-	0.0415		-	-	0.0327		-	-	0.0104	
Index of economic resources	-	-	1		-	3		-	2		-	-	3		-	-	7		-			

Indicators	Kandos SAL				Gulgong SAL			Ulan SAL			Mudgee SAL				Mid-Western Regional LGA				NSW			
Year	2011	2016	2021	Change	2016	2021	Change	2016	2021	Change	2011	2016	2021	Change	2011	2016	2021	Change	2011	2016	2021	Change
Physical Capital																						
Travel to work by car	69%	63%	69%	^	67%	66%	v	57%	82%	^	63%	69%	68%	v	61%	66%	65%	v	58%	58%	43%	v
Total Occupied Dwellings	553	573	603	^	907	1,012	^	14	17	^	3,639	3,988	4,360	^	8,362	8,768	9,638	^	2,471,299	2,604,314	2,900,468	^
Rented	31.3%	29.3%	28.4%	v	28.2%	24.0%	v	85.7%	58.8%	v	35.2%	36.5%	35.4%	v	26.5%	27.4%	24.4%	v	30.1%	31.8%	32.6%	^
Mortgage	20.8%	18.7%	16.6%	v	30.5%	33.5%	^	0%	17.6%	^	29.6%	31.5%	31.7%	^	29.3%	30.6%	32.2%	^	33.4%	32.3%	32.5%	^
Owned	44.1%	47.6%	48.1%	^	37.3%	38.6%	^	21.4%	29.4%	^	31.2%	28.2%	30.0%	^	40.5%	38.0%	38.9%	^	33.2%	32.2%	31.5%	v

Indicators	Rylstone SAL				Cope SAL			Uarbry SAL			Turill SAL			Cooks Gap SAL				Bungaba SAL		
Year	2011	2016	2021	Change	2016	2021	Change	2016	2021	Change	2016	2021	Change	2011	2016	2021	Change	2016	2021	Change
Population	874	920	904	v	125	113	v	45	38	v	104	100	v	493	533	549	^	69	88	^
Population Change (%)	-	+5%	-1.7%	v		-9.6%	v		-15.5%	v		-3.8%	v	-	+7.5%	+2.9%	^		+21.6%	^
Aboriginal and/or Torres Strait Island people (% of population)	2%	4%	4%	—	0%	4%	^	0%	0%	—	12%	5%	v	6%	9%	8%	v	4%	5%	^
Median Age	49	50	54	^	37	43	v	53	56	^	51	53	v	44	43	43	v	38	51	^
Highest educational attainment- Year 10 (%)	37%	38%	27%	v	43%	45%	^	17%	0%	v	38%	28%	v	44%	41%	43%	^	36%	40%	^
Highest educational Attainment- Year 12	32%	35%	32%	v	22%	24%	^	50%	15%	v	32%	16%	v	29%	32%	27%	v	24%	33%	^
Highest non-schooling level of attainment-bachelor's degree	7%	14%	5%	v	3%	3%	—	8%	0%	v	11%	6%	v	5%	10%	4%	v	9%	7%	v
Highest level of non-schooling attainment- Certificate	24%	45%	23%	v	34%	31%	v	16%	24%	^	18%	17%	v	29%	48%	29%	v	47%	34%	v
Index of education and occupation			3			1			5			3				1			1	

Indicators	Rylstone SAL				Cope SAL			Uarbry SAL			Turill SAL			Cooks Gap SAL				Bungaba SAL		
Year	2011	2016	2021	Change	2016	2021	Change	2016	2021	Change	2016	2021	Change	2011	2016	2021	Change	2016	2021	Change
Social Capital																				
Proportion of the population who volunteered in the past 12 months	27%	25%	18%	↓	13%	12%	↓	42%	21%	↓	10%	13%	↑	15%	16%	9%	↓	12%	7%	↓
Family Household	66%	65%	62%	↓	72%	74%	↑				53%	54%	↑	77%	72%	74%	↑	78%	74%	↓
Group Household	2%	4%	3%	↓	0%	0%	—				0%	0%	—	2%	4%	5%	↑	0%	0%	—
Lone person Household	32%	31%	34%	↑	33%	20%	↓				36%	29%	↓	21%	22%	22%	—	19%	20%	↑
Proportion of the population living at a different address 1 year ago	14%	14%	10%	↓	8%	8%	—	6%	0%	↓	5%	4%	↓	15%	9%	7%	↓	4%	5%	↑
Proportion of the population living at a different address 5 years ago	34%	33%	33%	—	22%	23%	↑	9%	16%	↑	13%	28%	↑	29%	33%	29%	↓	29%	30%	↑
Proportion of the population living at the same address 5 years ago	62%	37%	56%	↑	60%	60%	—	39%	69%	↑	71%	56%	↓	64%	54%	57%	↑	45%	48%	↑
SEIFA- Socio-economic Disadvantage			3			1			3			3				2			1	
Economic Capital																				
Median Household income (weekly)	$836	$856	$1,113	↑	$1,125	$1,125	—	$724	$850	↑	$966	$1,312	↑	$906	$1,096	$1,637	↑	$924	$1,437	↑
Median monthly mortgage repayment ($/ monthly)	$1,387	$1,495	$1,300	↓	$1,600	$1,825	↑	0	$1,500	↑	$1,582	$1,509	↓	$1,733	$1,600	$1,700	↑	$1,391	$1,517	↑
% of population employed in mining	14.6%	11.2%	10.4%	↓	20.0%	28.6%	↑	0.0%	36.4%	↑	15.6%	15.6%	—	16.9%	19.3%	22.2%	↑	28.6%	30.3%	↑
% employment in mining (change)	-	-3.4%	+1.2%	↑		+8.6%	↑		+36.4%					-	+2.4%	+2.9%		-	+1.7%	
Labour force participation	53%	46%	49%	↑	51%	45%	↓	42%	31%	↓	43%	44%	↑	48%	49%	56%	↑	38%	43%	↑
Work full time	58%	57%	53%	↓	48%	65%	↑	38%	64%	↑	56%	61%	↑	53%	57%	55%	↓	31%	55%	↑
Work Part time	31%	31%	36%	↑	26%	14%	↓	0%	36%	↑	28%	33%	↑	36%	32%	34%	↑	31%	49%	↑
Unemployed	6%	8%	5%	↓	7%	9%	↑	19%	0%	↓	0%	0%	—	6%	4%	5%	↑	0%	0%	—

Indicators	Rylstone SAL				Cope SAL			Uarbry SAL			Turill SAL			Cooks Gap SAL				Bungaba SAL		
Year	2011	2016	2021	Change	2016	2021	Change	2016	2021	Change	2016	2021	Change	2011	2016	2021	Change	2016	2021	Change
Median House Price (July 22–June 23) (% 12-month change)			$482,500	-5.0%	Unavailable			Unavailable			Unavailable					$650, 000	-0.2%	Unavailable		
Median Rent / week (July 22–June 23) (% 12-month change)			$370	+2.1%	Unavailable			Unavailable			Unavailable			Unavailable				Unavailable		
Herfindahl Index of Industrial Diversity	-	-	0.0397		-	0.445		-	1		-	0.1841		-	-	0.0849		-	0.5312	
Index of economic resources			2			3			4			3				5			3	
Physical Capital																				
Travel to work by car	62%	66%	57%	↓	64%	62%	↓	21%	0%	↓	69%	38%	↓	70%	73%	69%	↓	33%	88%	↑
Total Occupied Dwellings	366	387	393	↑	36	46	↑	7	12	↑	36	35	↓	177	186	190	↑	32	35	↑
Rented	20.2%	24.3%	17.8%	↓	0%	0%	—	42.9%	0%	↓	25.0%	17.1%	↓	9.6%	15.1%	13.2%	↓	0.0%	11.4%	↑
Mortgage	29.2%	24.%	26.7%	↑	38.9%	39.1%	↑	0%	0%	↓	33.3%	22.9%	↓	37.6%	42.5%	48.4%	↑	34.4%	37.1%	↑
Owned	46.6%	48.1%	48.1%	—	63.9%	45.7%	↓	*	50%	↓	52.8%	54.3%	↑	49.4%	39.8%	34.7%	↓	53.1%	40.0%	↓

Source: (ABS, 2021; ABS, 2021; ABS, 2021; ABS, 2021; ABS Table Builder, 2021; realestate.com.au, 2023).

**Note that small random adjustments are made to ABS when there are small sample sizes.*

A.2 Provision of Medical Practitioners and Prevalence of Health Conditions

Table A.2 Provision of medical practitioners and prevalence of health conditions

Indicator	Mid-Western Regional LGA	Western NSW LHD	NSW
Provision of GPs (per 100, 000 people)	97.3	117.1	123.8
Provision of Nurses (per 100,000 people)	645.8	1,101.7	1016.0
Estimated number of people aged 18 years and over who were obese (ASR per 100) – 2017–18	41	42.5	30.9
People aged 15 years and over who reported they had heart disease (including heart attack or angina) (ASR per 100) – 2021	4.9	5.1	4.7
People aged 15 years and over who reported they had asthma (ASR per 100) – 2021	9.5	10.5	8.0
People aged 0–14 years who reported they had asthma (ASR per 100) – 2021	10.5	8.6	6.6
Estimated number of people aged 18 years and over who were current smokers (ASR per 100) – 2017–18	21	19.6	14.4
Estimated number of people aged 15 years and over who consumed more than two standard alcoholic drinks per day on average (ASR per 100) – 2017–18	21.9	21	15.5

Source: (PHIDU, 2021).

A.3 Top Industries of Employment and Occupations

Table A.3 Top 3 Industries of Employment

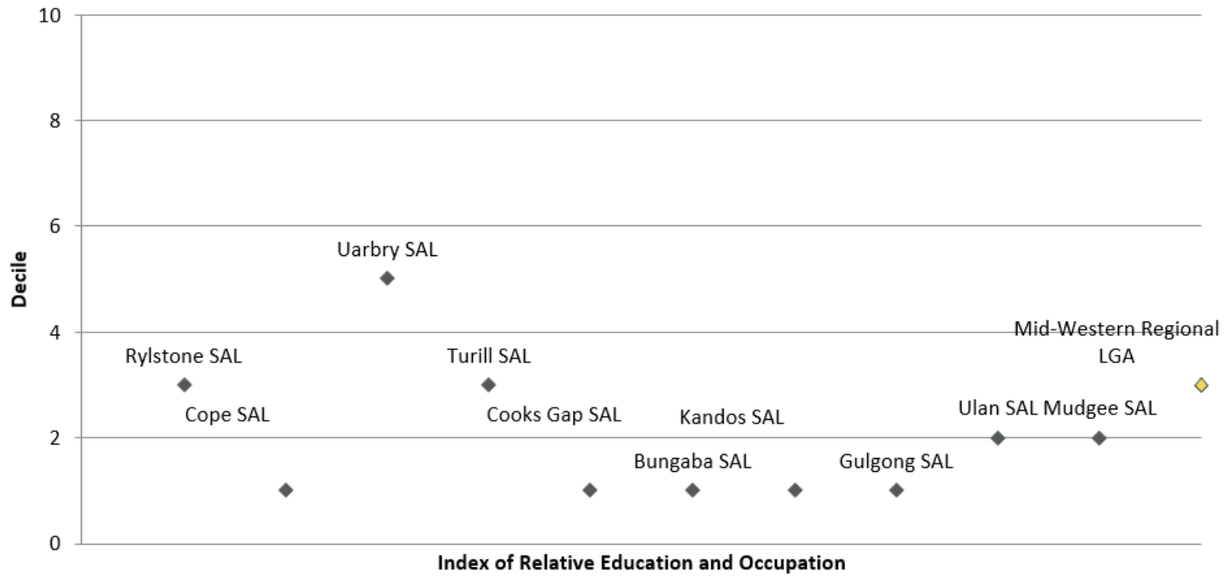
Top 3 Industries of employment	Cope SAL	Uarbry SAL	Turill SAL	Cooks Gap SAL	Bungaba SAL	Ulan SAL	Rylstone SAL	Kandos SAL	Gulgong SAL	Mudgee SAL	Mid-Western Regional LGA
1	Mining: 28.6%	Agriculture, Forestry & Fishing: 36.4%	Agriculture, Forestry & Fishing: 59.4%	Mining: 22.2%	Mining: 30.3%	Mining: 63.6%	Education & Training: 13.2%	Health Care & Social Assistance: 16.9%	Mining: 19.4%	Mining: 18.0%	Mining: 15.9%
2	Health Care & Social Assistance: 11.9%	Mining: 36.4%	Mining: 15.6%	Retail Trade: 13.3%	Retail Trade: 21.2%	Accommodation & Food Services: 22.7%	Health Care & Social Assistance: 10.7%	Retail Trade: 11.9%	Health Care & Social Assistance: 10.7%	Health Care & Social Assistance: 11.9%	Health Care & Social Assistance: 11.1%
3	Administrative & Support Service: 11.9%	-	Health Care & Social Assistance: 9.4%	Construction: 8.9%	Agriculture, Forestry & Fishing: 18.2%	Health Care & Social Assistance: 18.2%	Mining: 10.4%	Mining: 11.3%	Retail Trade: 9.6%	Retail Trade: 10.5%	Retail Trade: 9.2%

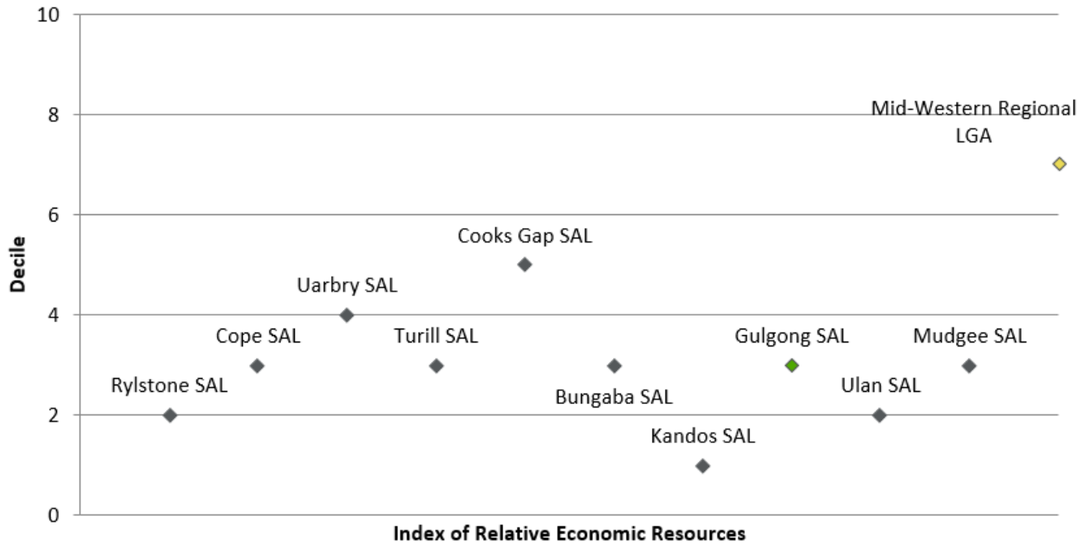
Source: (ABS, 2021).

Table A.4 Top 3 Occupations

Top 3 Occupations	Cope SAL	Uarbry SAL	Turill SAL	Cooks Gap SAL	Bungaba SAL	Ulan SAL	Rylstone SAL	Kandos SAL	Gulgong SAL	Mudgee SAL	Mid-Western Regional LGA
1	Machinery Operators & Drivers: 21.4%	Managers: 81.8%	Managers: 43.8%	Machinery Operators & Drivers: 19.0%	Technicians & Trades Workers: 30.3%	Technicians & Trades Workers: 40.9%	Technicians & Trades Workers: 17.0%	Technicians & Trades Workers: 16.0%	Technicians & Trades Workers: 19.2%	Technicians & Trades Workers: 18.4%	Technicians & Trades Workers: 25.8%
2	Community & Personal Service Workers: 16.7%	-	Community & Personal Service Workers: 21.9%	Technicians & Trades Workers: 16.9%	Machinery Operators & Drivers: 30.3%	Managers: 31.8%	Managers: 16.2%	Machinery Operators & Drivers: 15.0%	Machinery Operators: 18.0%	Professionals: 15.6%	Managers: 14.6%
3	Technicians & Trades Workers: 14.3%	-	Professionals: 12.5%	Labourers: 15.6%	Managers: 12.1%	Machinery Operators & Drivers: 27.3%	Professionals: 14.2%	Community & Personal Service Workers: 14.4%	Labourers: 13.4%	Machinery Operators & Drivers: 12.9%	Clerical & Administrative Workers: 13.0%

Source: (ABS, 2021).





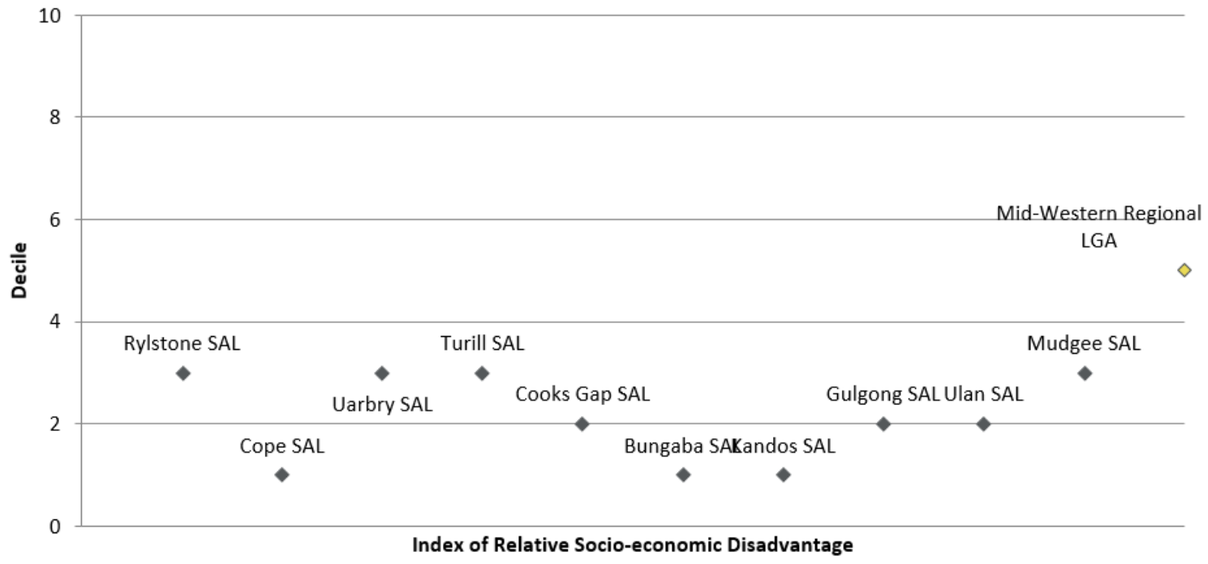


Figure A.1 SEIFA

A.4 Crime Statistics

Table A.5 Crime Statistics

	Mid-Western Regional LGA	New South Wales	LGA Trend[1]
Assault (Non-domestic violence)	**433.6**	391.2	Stable
Assault (Domestic violence related)	**634.7**	420.3	Stable
Homicide	**3.9**	0.2	-
Robbery	11.8	**23.3**	-
Sexual Offences	**118.3**	92.2	-46.4%
Theft	859.4	**1,539**	-
Malicious damage to property	**823.9**	604	-
Disorderly conduct	**264.1**	231.8	Stable
Drug Offences	**563.6**	542.4	Stable

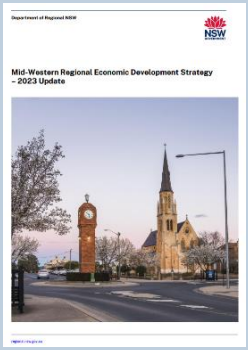
Source: (BOSCAR, 2023).

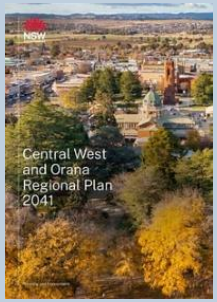
**Crime statistics for Mid-Western Regional LGA (per 100,000 population) Red highlighted cells indicating the higher amount.*

[1] 24 month trend.

A.5 Regional and Local Issues and Aspirations

Table A.6 Strategic Plan Summaries

Strategic Plan	Description
Mid-Western Regional Economic Development Strategy – 2023  	**Update:** The update to the original Mid-Western Region Economic Development Strategy 2018 is due to regional NSW experiencing multiple factors which have affected the direction of the economic strategy. These challenges and trends have altered the landscape of economic development in many regions and created new opportunities for growth. The update highlights the change in the region from dependency on coal mining into the economy to the new opportunities that come with the CWO-REZ and shift to renewable energy sources. The plan further highlights vulnerabilities and opportunities associated with the mining industry in the region. **Mining Key points:** • Mining remains the dominant engine industry in the Mid-Western region's economy, driven by its key specialisation in coal mining. **Vulnerabilities** • While investment in coal mines continues to occur, future expansion may be impacted by the industry responding to changing consumer demand and the broader shift towards net zero. • Challenges also lie in gaining or holding land rights in the face of increased competition for land use as the region's population grows. • The mining industry supports a substantial workforce of 1,820 people in the Mid-Western region. Major decline of the industry will require appropriate retraining, upskilling or other workforce transfer arrangements to retain the local workforce. • The decline of the region's manufacturing sector may also have negative impacts on the mining industry if value-add processing needs to be relocated out of region. **Opportunities** • In the short-term, the region's coal mining sector stands to benefit from increasing bulk commodity prices driven by global supply chain uncertainties. • There is a growth in demand for critical (rare/precious) minerals, and deposits of these exist in the region. There is an opportunity to capitalise on coal mining skills and develop critical minerals that provide inputs for renewables and other global manufacturing needs. • The Royalties for Rejuvenation Fund provides opportunities to support economic diversification, including by the funding of infrastructure, training services, programs and other activities.

Strategic Plan	Description
Central West and Orana Regional Plan 2041 	The Central West and Orana Region Plan outlines the alignment of state and local government strategic plans for the next 20 years into 2041. The plan establishes a strategic framework, vision, and direction for land use, addressing future needs for housing, jobs, infrastructure, a healthy environment, access to green spaces and connected communities. The plan identifies the region strong economic reliance on mining and agriculture as they remain in the top 5 regional industries, together creating 28% of the region's economic output. Manufacturing and construction also being high contributors with 23% of the region's economic output. The plan identifies the region change in moving towards reliance on renewable energy sources as the REZ will bring further investment into the region. The transition to Net Zero by 2050 has highlighted the 8.76 million tonnes of CO2-e emissions created by the energy, agriculture and transport sector due to the o the region's coal dominated power supply, agricultural activity, energy-intensive mining activities, growing logistics and freight activities, value-adding manufacturing and high car-dependent travel. The region and NSW Government has still identified opportunities associated with mining which will see the continued growth of the mining sector but also diversify the economy.
Towards 2030: Mid-Western Region Community Plan (Mid-Western Regional Council) 	The Mid-Western Regional Council's Community Plan identifies the community's aspirations for the area. The Vision of the Plan is: A prosperous and progressive community that we are proud to call home The Plan identifies the following key community priorities: 1. Strong budget and economy. 2. Building infrastructure. 3. Protecting the vulnerable. 4. Better services. 5. Safer communities. A number of strategies are identified to achieve the community priorities. Key priorities of interest to the Project include: • Ensure land use planning and management enhances and protects biodiversity and natural heritage. • Support the attraction and retention of a diverse range of businesses and industries. • Encourage the development of a skilled and flexible workforce to satisfy local industry and business requirements. • Support projects that create new jobs in the Region and help to build a diverse and multi-skilled workforce. • Build strong linkages with institutions providing education, training and employment pathways in the Region. • Provide a roads network that balances asset conditions with available resources and community needs.

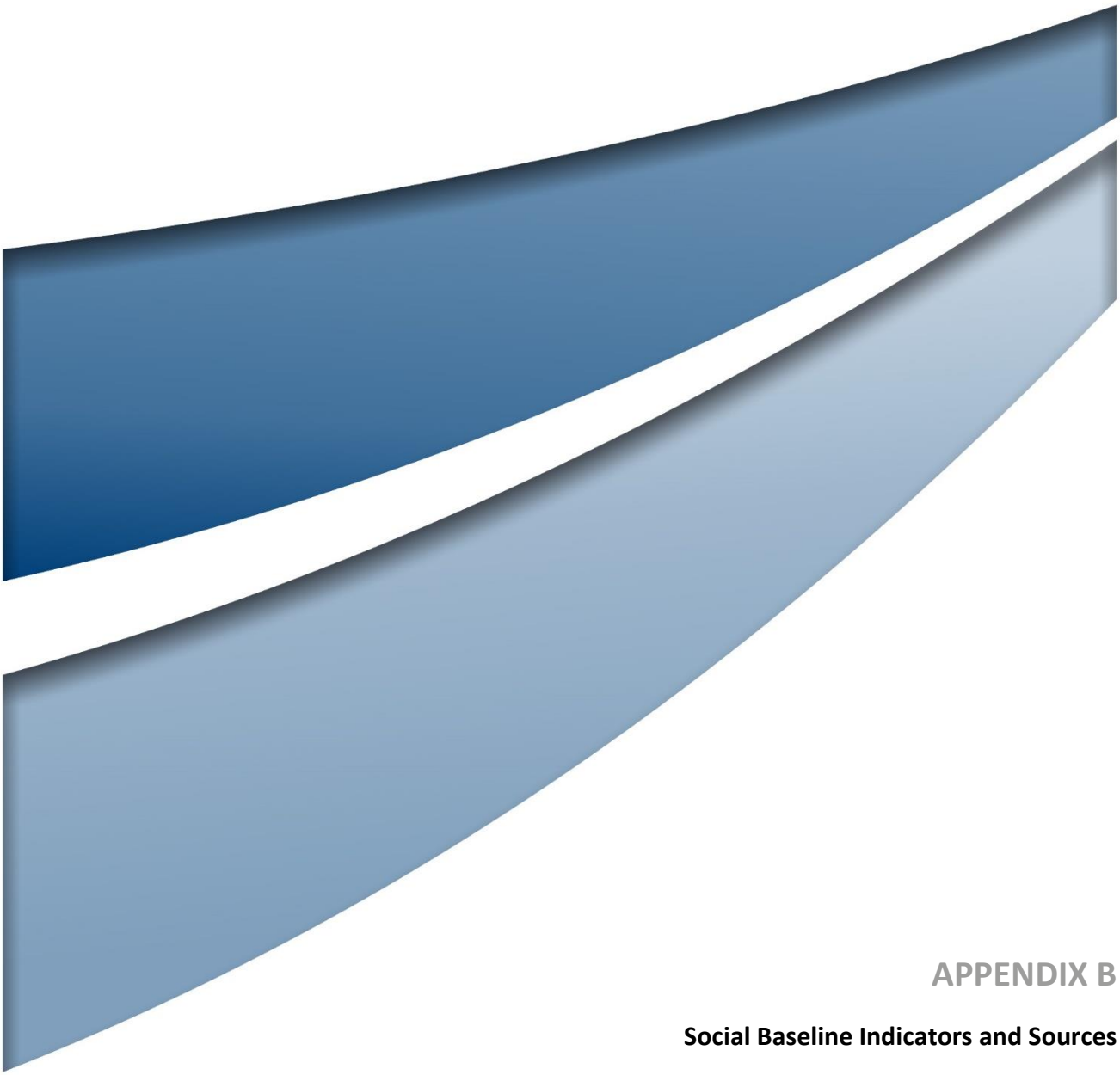
Strategic Plan	Description
Our Place 2040: Mid-Western Regional Local Strategic Planning Statement (Mid-Western Regional Council, 2020) 	The Mid-Western Regional LSPS sets out the 20-year vision for land use planning in the Mid-Western Regional Council LGA. The vision for the plan is: *To provide for 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 following planning priorities are identified: • Maintain and promote the aesthetic appeal of the towns and villages within the Region. • Provide infrastructure and service to cater for the current and future needs of our community. • Minimise the impact of mining and other development on the natural environment. • Support the attraction and retention of a diverse range of businesses and industries. • Identify resources and infrastructure required to drive investment and economic growth. • Support the expansion of essential infrastructure and services to match business and industry development. • Develop a regional transport network. Renewable energy development is considered within the planning framework where it is proposed in appropriate areas that avoids impacts on the scenic rural landscape and preserves valuable agricultural land. Regarding workforce provision, future growth and development in the region will drive the demand for a new skilled workforce. Skilled workers such as engineers, builders, tradespeople, child and health professionals, are expected to be in highest demand over the near future to cater for new major projects.

A.6 Comparable Developments

Table A.7 Comparable Developments

Project	Assessment Phase	Distance from UWCO
Mining Projects		
Bowdens Silver	Determination – Approved (Construction-2024)	55 km South
Moolarben Coal Operations	Operational	15 km Adjacent South
Wilpingjong Mine	Operational – 7x Modifications	28 km Southeast
Bylong Coal Project	Determination- Refused	50 km Southeast
Renewable Energy Projects		
Narragamba Solar Farm	In Planning and Assessment	9 km South
Barneys Reef Wind Farm	In Planning and Assessment	11 km Northwest
Ulan Solar Farm	In Planning and Assessment	11 km South
Birriwa Solar Farm	In Planning and Assessment	16 km Southwest
Mayfair Solar Farm	In Planning and Assessment	19 km South
Bellambi Heights Battery Energy Storage System	In Planning and Assessment	23 km West
Valley of the Winds Wind Farm	In Planning and Assessment	25 km North
Orana Wind Farm	In Planning and assessment	25 km Northwest
Beryl Battery Energy Storage System	In Planning and Assessment	25 km West
Cobbora Solar Farm	In Planning and Assessment	36 km West
Sandy Creek Solar Farm	In Planning and Assessment	38 km West
Dapper Solar Farm	In Planning and Assessment	41 km West
Spicers Creek Wind Farm	In Planning and assessment	43 km West
Burrendong Wind Farm	Response to Submissions	59 km South
Merriwa Solar Farm	In Planning and Assessment	72 km East
Goulburn River Solar Farm	Response to Submissions	
Orana BESS	Approved	76 km Southwest

Project	Assessment Phase	Distance from UWCO
Wellington South BESS	Approved	75 km Southwest
Aquila Wind	In Planning and Assessment	90 km South
Tallawang Solar Farm	Response to Submissions	11 km North
Dunedoo Solar Farm	Approved	32 km Northwest
Liverpool Range Wind Farm	Approved	35 km Northwest
Apsley BESS	Approved	82 km Southwest
Maryvale Solar Farm	Construction to commence late 2023	76 km Southwest
Stubbo Solar Farm	Under Construction	3 km Northwest
Wollar Solar Farm	Under Construction	37 km Southeast
Wellington North Solar Farm	Under Construction	45 km Southeast
Uungula Wind Farm	Under Construction	61 km Southwest
Beryl Solar Farm	Operational	25 km South
Bodangora Wind Farm	Operational	68 km West
Wellington Solar Farm	Operational	72 km Southwest
Crudine Ridge Wind Farm	Operational	80 km South
Suntop Solar Farm	Operational	92 km Southwest



APPENDIX B

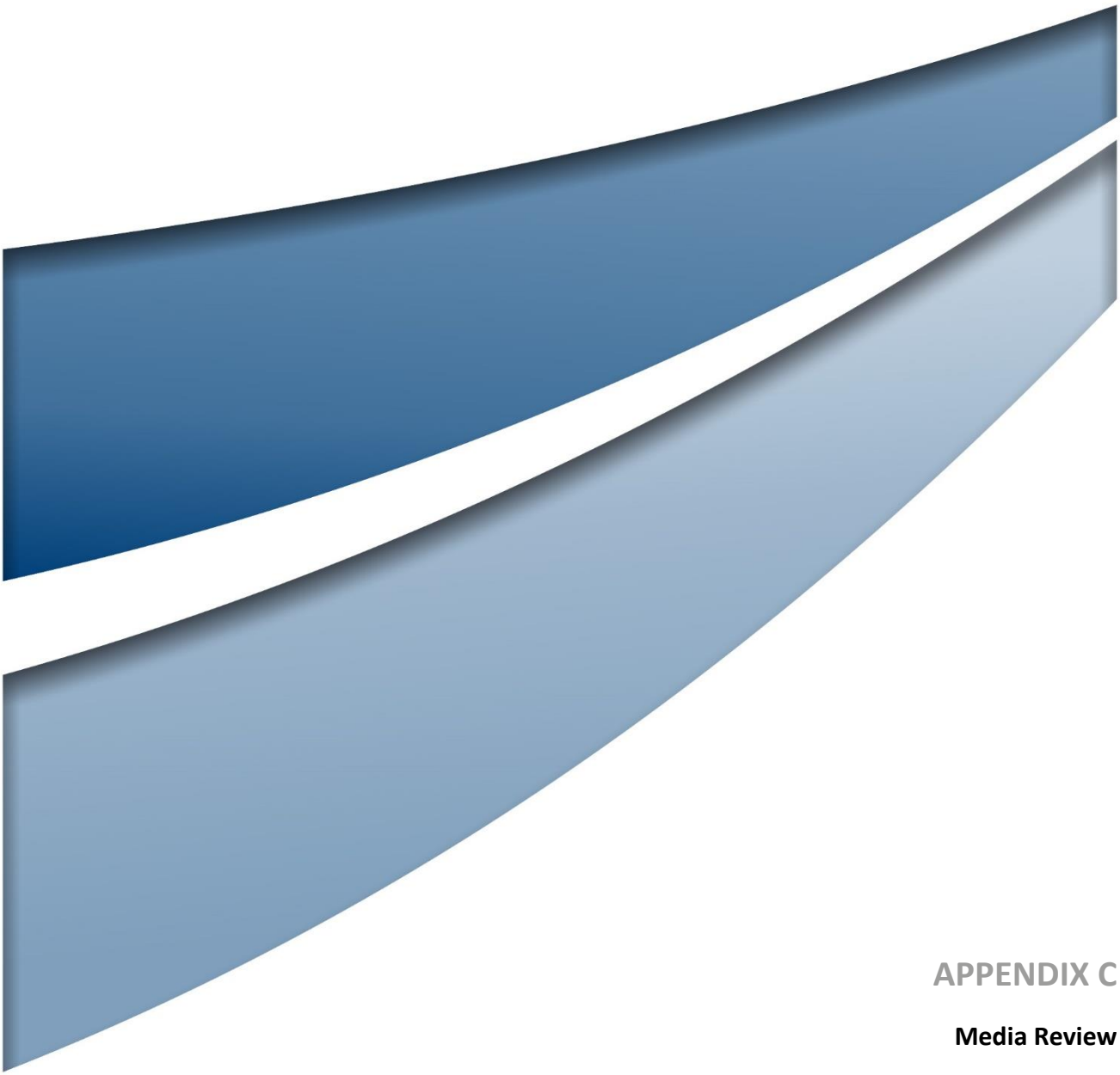
Social Baseline Indicators and Sources

B.1 Social Baseline Indicators and Sources

Table B.1 Social Baseline Indicators and Sources

Key Questions	Data Source	Indicators of Interest
Is the proposed extension going to be of value to the local/regional community? Does the proposed extension align community values, aspirations, and needs? **Are there any groups that will require a particular engagement approach to facilitate their involvement and participation? i.e., languages or cultural/ educational barriers, vulnerabilities?** **Are there any specific social trends evident in the region?** **How has the region changed since the opening of the Ulan Mine?**	Previous Mod 6 SIA ABS Data- 2011, 2016, 2021 • NSW (Benchmark) • Mid-Western Regional LGA • Ulan SAL • Bungaba SAL • Gulgong SAL • Mudgee SAL • Kandos SAL • Rylstone SAL • Cope SAL • Uarbry SAL • Turill SAL • Cooks Gap SAL	Current population and trends Median age and age distribution Key industries of employment and occupations Ownership and tenure of private dwellings Cultural artefacts and sites
What is the socio-economic status of the community? **What is the level of advantage / disadvantage in the community?**	SEIFA	Index of Relative Socio-economic disadvantage, 2021 Index of Economic Resource, 2021 Index of Education and Occupation, 2021
What has been the response of the community to similar Projects in the region? **Have community values changed during the duration of the Ulan Mine opening to currently?**	Engagement with workers Local Media Review Submissions reports (comparable projects)	Level of support to previous modification to the project Level of support for similar projects Issues and concerns relating to similar projects.

Key Questions	Data Source	Indicators of Interest
What are the Council's key priority areas? **Is the proposed extension aligned with the Council's strategic plan?** **Are community values, concerns and/or aspirations documented in the Community Strategic Plan?**	Local Council Strategic policies	Any changes in governance? Any changes to priorities since the opening of the Mine.
The history of mining in the region **What are the attitudes and perspectives of local and regional residents – are they likely to be supportive of the proposed extension?** **What are the key concerns of the community in relation to the proposed extension?** **Are there any strategies on how to manage the impacts of the proposed extension?** **To what extent will the proposed extension support the community?**	Community and Stakeholder Engagement	Knowledge and awareness surrounding the project. Key stakeholder's previous opinions on the project and the extension
What is the provision of health care providers in the social localities?	Social Health Atlas of Australia (PHIDU, 2020)	Has there been an increase/decrease of health care workers in the area?



APPENDIX C

Media Review

C.1 Media Review

An analysis of local, state and national media articles was conducted to understand the current context and community outlook towards 'mining' and 'Ulan' as well as the local and regional context of the community.

Table C.1 Media Analysis

Date	Source	Headline	Description	Link
05/11/2023	**ABC News**	Clean energy industry a drawcard for women formerly in the mining industry	A report commissioned by the Clean Energy Council found women make up 39 per cent of the clean energy workforce in Australia. Dr Talberg said many people in the traditional energy sector are making a similar move. "I'm really heartened to see that there are more and more examples of people applying the skills they learnt in coal or oil or gas and bringing them across to renewable energy," she said.	Clean energy industry a drawcard for women formerly in the mining industry - ABC News
30/10/2023	**Financial Review**	'No choice' over renewable energy zones despite resistance	NSW has "no choice" but to build the new transmission lines needed to support renewable energy zones despite fierce pockets of resistance from local communities	Energy transition: 'No choice' over renewable energy zones despite resistance (afr.com)
20/09/2023	**ABC News**	Rural communities feeling anxious as NSW government pursues Critical Minerals Strategy	The Bowdens Silver project was approved by the NSW Independent Planning Commission (IPC) in April. The commission said the project "can meet all relevant requirements for protecting human health and safety".	Rural communities feeling anxious as NSW government pursues Critical Minerals Strategy - ABC News
22/08/2023	**ABC News**	Argent Minerals to do more exploratory drilling for potential zinc, lead and silver mine in Central West NSW	Argent Minerals has been granted an assessment lease to drill further across their exploration licence area, approximately 7 kilometres north-west from the village of Trunkey Creek.	Argent Minerals to do more exploratory drilling for potential zinc, lead and silver mine in Central West NSW - ABC News

Date	Source	Headline	Description	Link
08/08/2023	**ABC News**	Calls for overhaul of mine regulations after heavy metals found in residents' blood, rainwater	The Environment Protection Authority's (EPA) chief executive with figures showing high levels of lead, nickel and selenium which they believe originated from Cadia gold mine, operated by Cadia Valley Operations, near Orange. NSW EPA is urging the state government to tighten its planning and monitoring of the mining industry	Calls for overhaul of mine regulations after heavy metals found in residents' blood, rainwater - ABC News
06/04/2023	**Mudgee Guardian**	No car? No job, no life for young people in regional NSW ahead of election	Lack of public transport in Mudgee prompting young adults to drive more	No car? No job, no life for young people in regional NSW ahead of election | Mudgee Guardian | Mudgee, NSW
25/01/2023	**ABC News**	Australia Institute among dozens to oppose 40 million tonne open cut expansion of coal mine in NSW central west	Australia Institute slammed the proposed expansion of a New South Wales Moolarben Coal Complex near Mudgee, saying the cost of emissions to the climate would exceed any economic benefit.	Australia Institute among dozens to oppose 40 million tonne open cut expansion of coal mine in NSW central west - ABC News
05/12/2022	**Mid-Western Regional Council**	Mudgee Water Supply update	Council is aware that residents in Mudgee are experiencing odour and/or taste issues in their water supply. NSW Health and DPIE have been contacted and are working closely with Council to resolve the issue.	Mudgee Water Supply update Mid-Western Regional Council (nsw.gov.au)
01/07/2022	**Mudgee Guardian**	Housing Plus in discussions with state government after identifying dozens of potential affordable housing sites in Mudgee area	Redevelopment of land to be used for affordable housing in Mudgee.	Housing Plus in discussions with state government after identifying dozens of potential affordable housing sites in Mudgee area | Mudgee Guardian | Mudgee, NSW

Date	Source	Headline	Description	Link
10/05/2022	**ABC News**	Nurses at understaffed Rylstone hospital stabbed with forks and sprayed with urine, union says	Nurses at a small hospital in regional New South Wales have written to management about being attacked with forks, pens, landline telephones and sprayed with urine, only to be told they have the same staffing levels as similar facilities.	https://www.abc.net.au/news/2022-05-10/rylstone-hospital-nursing-staff-shortages/101049518
17/03/2022	**Australian Drinking Water Map**	Mid-Western Regional Council lift boil water alert after days of sampling	A Boil Water Alert for Rylstone, Kandos, Charbon and Clandulla has been lifted after testing confirmed the water supply is safe to drink. The townships were placed on a Boil Water Alert on Thursday 10 March following a storm event that increased turbidity of water entering the Rylstone Water Treatment Plant.	March 2022: Kandos (NSW). Boil Water Alert Lifted - Australian Drinking Water Map (australianmap.net)
02/12/2021	**ABC News**	Gulgong fails to recruit second doctor despite year-long advertising campaign	A rural community in the New South Wales Central West says its shortage of doctors is the perfect example of how the state's rural healthcare model is flawed, as it fails to recruit help.	Gulgong fails to recruit second doctor despite year-long advertising campaign - ABC News
02/10/2020	**ABC News**	Western NSW Local health District under fire as Gulgong forced to rely on telehealth	Regional towns in New South Wales have lost face-to-face access to doctors, with the Department of Health failing to renew contracts with visiting medical officers (VMO).	https://www.abc.net.au/news/2020-10-02/nsw-communities-fight-to-keep-doctors-in-regions/12726500
12/06/2020	**Mudgee Guardian**	BOCSAR March 2020: Crime data shows rise in domestic assault in Mid-Western Region	Domestic violence related assault is up by 23.7 per cent in the Mid-Western Regional Council area, according to the data in the NSW Bureau of Crime Statistics and Research's latest report.	BOCSAR March 2020: Crime data shows rise in domestic assault in Mid-Western Region | Mudgee Guardian | Mudgee, NSW

Date	Source	Headline	Description	Link
20/05/2020	**Mudgee Guardian**	'Mining over half of Mid-West's gross regional product', Minerals Council survey	Reliance on mining in the Mid-western region	'Mining over half of Mid-West's gross regional product', Minerals Council survey | Mudgee Guardian | Mudgee, NSW
29/01/2018	**The Land**	More than 30 years after it was diverted to a mine's boundaries, the Goulburn River is being remediated	The bigger battle for the Goulburn River continues, with groups increasing their demands for a full and independent study of the river headwaters in the Ulan area to include the impact of mining.	More than 30 years after it was diverted to a mine's boundaries, the Goulburn River is being remediated | The Land | NSW
21/01/2011	**ABC News**	Environment lobby group challenges Ulan Mine expansion	A community group based in the Hunter Valley is appealing the state government's approval of an $880m expansion of the Ulan Coal Mine.	https://www.abc.net.au/news/2011-01-21/environment-lobby-group-challenges-ulan-mine/1913006

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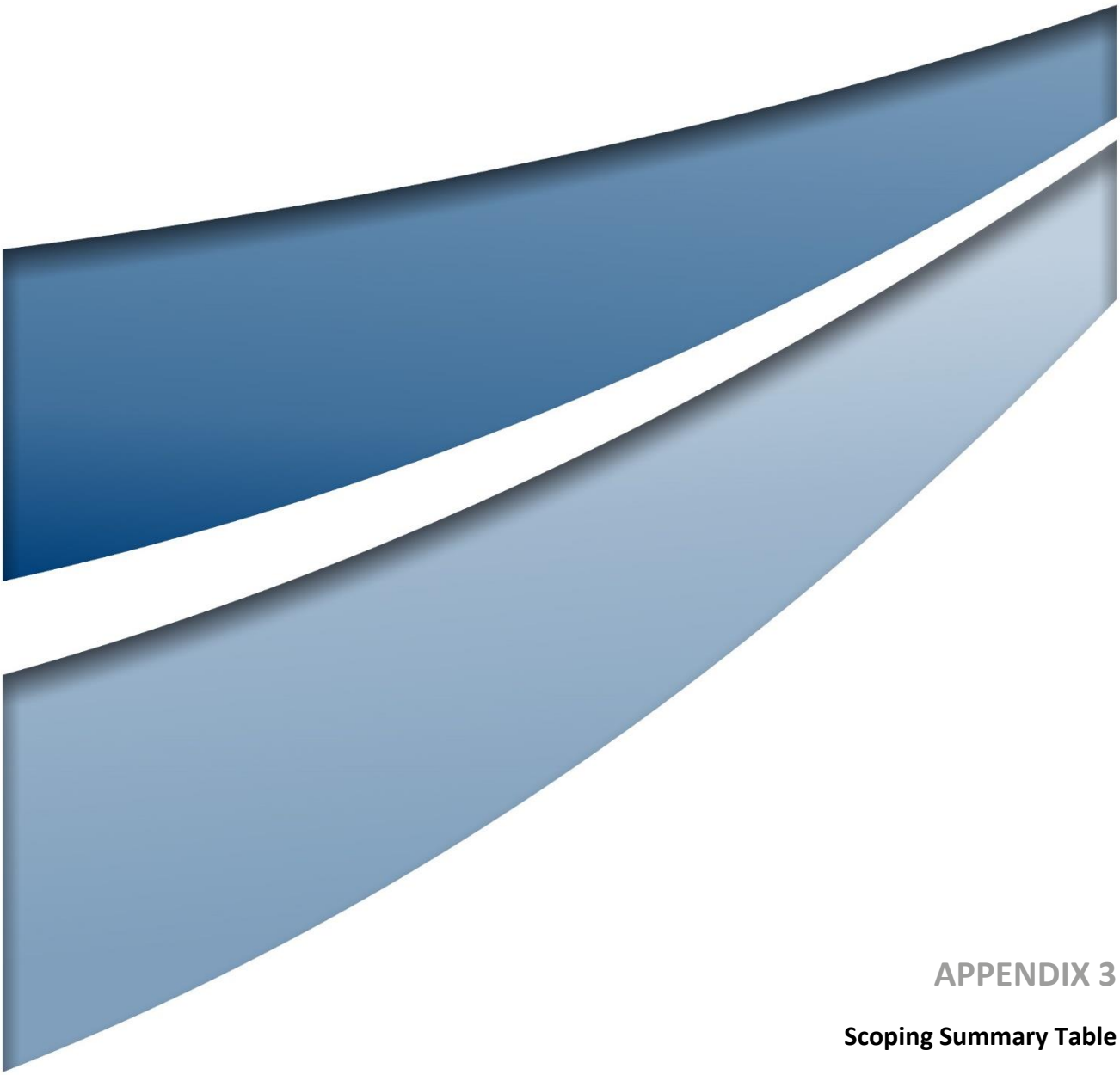

APPENDIX 3

Scoping Summary Table

Table A3.1 Scoping Summary Table

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
Detailed	**Subsidence**	Yes	General	EDG 17 Guideline for Applications for Subsidence Management Approvals (NSW Department of Mineral Resources, 2003)	**Section 6.2.1**
Detailed	**Groundwater**	Yes	General	NSW Aquifer Interference Policy (DPI Office of Water, 2012) Information guidelines for proponents preparing coal seam gas and large coal mining development proposals (IESC, 2018) Australian Groundwater Modelling Guidelines (National Water Commission, 2012)	**Section 6.2.2**
Detailed	**Surface water**	Yes	General	Water Reporting Requirements for Mines (NSW Office of Water (NOW), 2009) Guidelines for Management of Stream/Aquifer Systems in Coal Mining Developments – Hunter Region (Department of Water and Energy (DWE), undated) River Hydrology and Energy Relationships – Design Notes for the Mining Industry (DWE, 2007) Significant Impact Guidelines 1.3: Coal Seam Gas and Large Coal Mining Developments - Impacts on Water Resources (DoE, 2013).	**Section 6.2.3**
Detailed	**Biodiversity**	Yes	General	Biodiversity Assessment Method (DPIE, 2020a) Biodiversity Assessment Calculator Version 1.4.0.00 Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (Department of Environment and Conservation (DEC) 2004) NSW Guide to Surveying Threatened Plants (DPIE, 2020b) Species Credit threatened bats and their habitats: NSW Survey Guide for the BAM (OEH 2018) Protected Matters Search Tool for known/predicted EPBC Act-listed TECs (Department of Agriculture, Water and the Environment (DAWE 2021a) Threatened Biodiversity Data Collection (TBDC) (DPE 2022a) Vegetation Information System (VIS) (DPE 2022b) BioNet Atlas of NSW Wildlife (DPE 2022c) Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DEC 2004) Surveying threatened plants and their habitats (DPIE 2020c) Species Credit threatened bats and their habitats: NSW Survey Guide for the BAM (OEH 2018)	**Section 6.2.4**

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
				NSW Survey Guide for Threatened Frogs – a guide for the survey of threatened frogs and their habitats for the BAM (DPIE 2020d) Hygiene protocol for the control of disease in frogs (DECC 2008) Draft Survey Guidelines for Australia's Threatened Orchids (Department of Environment, 2013) Survey Guidelines for Australia's Threatened Birds (DEWHA, 2010a) Survey Guidelines for Australia's Threatened Mammals (DSEWPC, 2011) Survey Guidelines for Australia's Threatened Frogs (DEWHA, 2010b) Survey Guidelines for Australia's Threatened Bats (DEWHA, 2010c)	
Detailed	**Aboriginal cultural heritage**	No	General	Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010a) Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010b) The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance (ICOMOS, 2013)	**Section 6.2.5**
Standard	**Historic heritage**	No	General	NSW Heritage Manual Relevant Heritage Council of NSW guidelines	**Section 6.2.6**
Detailed	**Noise and vibration**	No	General	NSW Noise Policy for Industry 2017 (EPA, 2017) Interim Construction Noise Guideline 2009 (DECC, 2009) NSW Road Noise Policy 2011 (DECCW, 2011) Assessment Vibration: A Technical Guideline 2006 (DECC, 2006)	**Section 6.2.7**
Detailed	**Air quality and greenhouse gas emissions**	No	General	The Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2016) The Greenhouse Gas Protocol Australian National Greenhouse Accounts Factors National Greenhouse and Energy Reporting System Australian Greenhouse Emissions Information System	**Section 6.2.8** and **Section 6.2.9**

Level of Assessment	Matter	CIA	Engagement	Relevant Government Plans, Policies and Guidelines	Scoping Report Reference
				NSW EPA's Draft Climate Change Assessment Requirements and Draft Guide for Large Emitters	
Detailed	**Agriculture and land**	No	General	Interim Protocol for Site Verification and Mapping of Biophysical Strategic Agricultural Land (OEH and DPI-OAS&FS, 2013) The land and soil capability assessment scheme: second approximation (OEH, 2012) Strategic Land Use Policy Guideline for Agricultural Impact Statements (DTIRIS, 2012) Agricultural Impact Statement technical notes (DPI, 2013)	**Section 6.2.10**
Detailed	**Social**	Yes	Specific	Social Impact Assessment Guidelines for State Significant Projects (DPIE, 2021d) Undertaking Engagement Guidelines for State Significant Projects (DPIE, 2021e)	**Section 6.2.11**
Detailed	**Economic**	No	General	Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals (NSW Government, 2015) Technical Notes Supporting the Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals (DPE, 2018)	**Section 6.2.12**
Standard	**Cumulative**	N/A	General	NSW Cumulative Impact Assessment (CIA) Guidelines for State Significant Projects (DPIE, 2021c)	**Section 6.2.13**
None	**Traffic and transport**	No	None	N/A	N/A
None	**Odour**	No	None	N/A	N/A
None	**Coastal hazards**	No	None	N/A	N/A

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