



APPENDIX **16**

Social Impact Assessment

ULAN COAL COMPLEX MODIFICATION 6

Social Impact Assessment

FINAL

Prepared by
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on behalf of
Ulan Coal Mines Pty Limited

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Document Status

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	Name	Date	Name	Date
Final	John Merrell	26 October 2022	Kirsty Davies	28 October 2022

Abbreviations

Abbreviation	Description
ABS	Australian Bureau of Statistics
ACHA	Aboriginal Cultural Heritage Assessment
AHIMS	Aboriginal Heritage Information Management System
AIA	Agricultural Impact Assessment
ALC	Aboriginal Land Council
BCD	Biodiversity Conservation Division
CCC	Community Consultative Committee
DAWE	Commonwealth Department of Agriculture, Water and the Environment
DFID	Department for International Development
DPE	NSW Department of Planning and Environment
DPIE	NSW Department of Planning, Industry and Environment (now DPE)
EIS	Environmental Impact Statement
EL	Exploration Lease
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPA	Environmental Protection Authority
GCAA	Glencore Coal Assets Australia
Glencore	Glencore Coal Assets Australia
The Guideline	Social Impact Assessment Guideline for State Significant Developments
GRP	Gross Regional Product
IEO	Index of Education and Occupation
IPC	Independent Planning Commission
IRSD	Index of Relative Socio-economic Disadvantage
LEC	Land and Environment Court
LGA	Local Government Area
LW	Longwall
MLA	Mining Lease Area
MLALC	Mudgee Local Aboriginal Land Council
Mt	Million tonnes
MWRC	Mid-Western Regional Council
NRAR	Natural Resource Access Regulator
NSW	New South Wales
PA	Planning Approval
PADs	Potential Archaeological Deposits
P&C	Parents and Carers
PCYC	Police and Community Youth Club

Abbreviation	Description
PHIDU	Public Health Information Development Unit
RAP	Registered Aboriginal Parties
RES	Renewable Energy Systems (company)
REZ	Renewable Energy Zone
SEIFA	Socio-economic Indices for Areas
SIA	Social Impact Assessment
SSC	State Suburb Code
TfNSW	Transport for New South Wales
UCC	Ulan Coal Complex
UCMPL	Ulan Coal Mines Pty Ltd
UCCO	Ulan Coal – Continued Operations
Umwelt	Umwelt (Australia) Pty Ltd
WHO	World Health Organisation

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Appendix A	Social Baseline Profile Data
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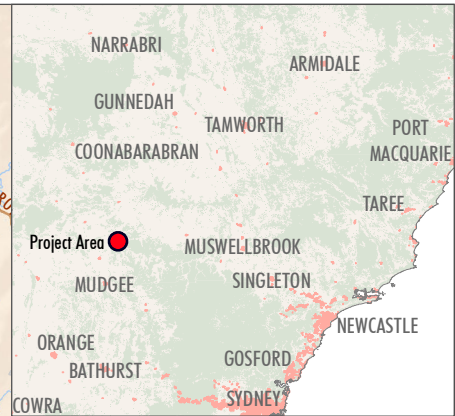
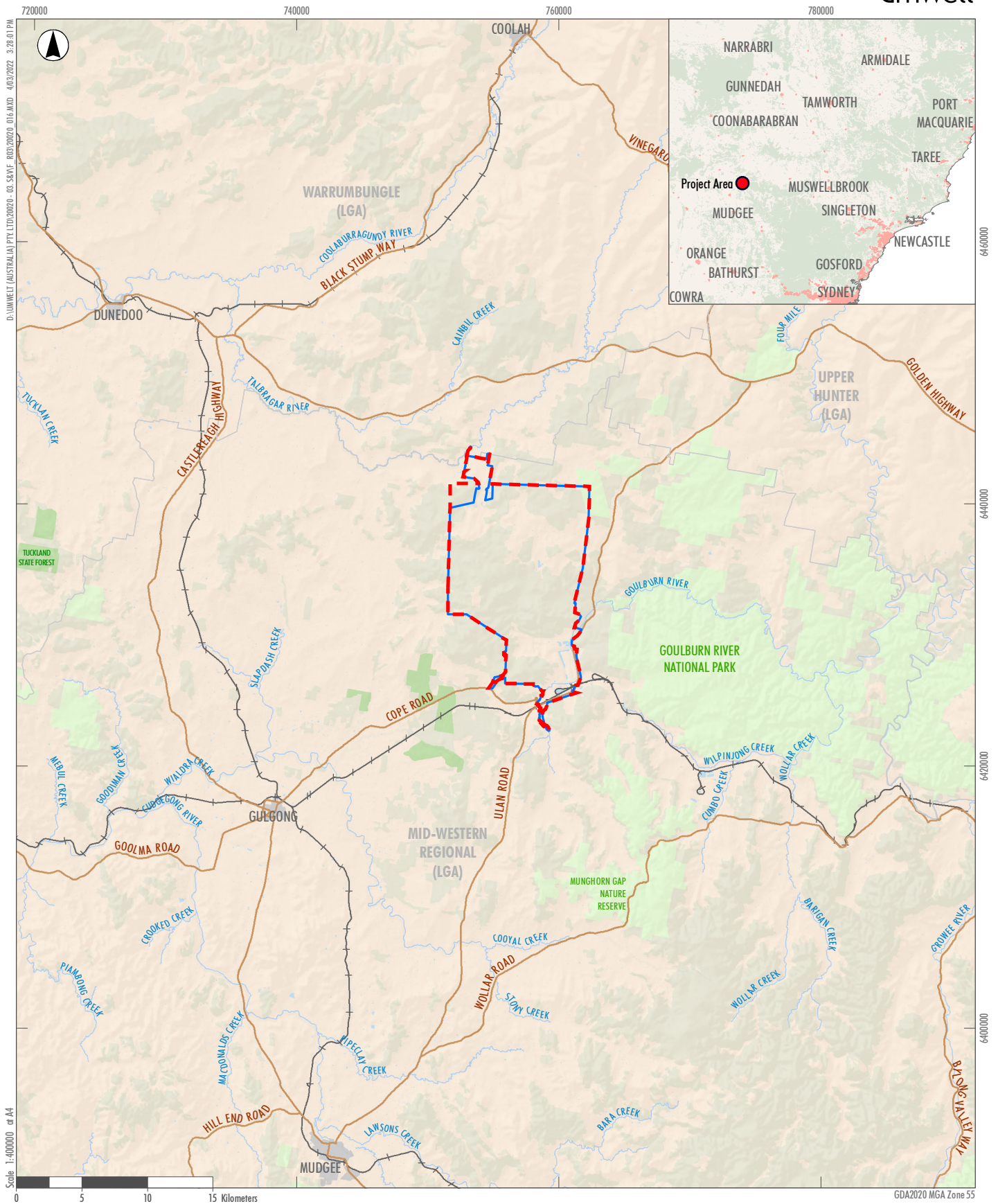
1.0 Introduction

The Ulan Coal Complex (UCC) is located approximately 38 km north-east of Mudgee and 19 km north-east of Gulgong in the Mid-Western Regional Local Government Area (LGA), New South Wales (NSW) (refer to **Figure 1.1**). UCC is operated by Ulan Coal Mines Pty Ltd (UCMPL), a subsidiary of Glencore Coal Assets Australia (Glencore). Coal mining has been undertaken in the Ulan area since the 1920s.

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). 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 and processing, and transport through to 30 August 2033. The open cut operations are currently in care and maintenance.

UCMPL is proposing a modification to Project Approval (PA) 08_0184 to maximise resource recovery from the existing underground mining operations within existing mining lease and exploration lease areas. In addition to identifying additional mineable resources within existing mining lease areas, UCMPL has determined that there is a valuable mineable resource within Exploration Lease (EL) 7542 and is seeking to modify PA 08_0184 to enable access to this coal resource by extending the currently approved longwall panels in these areas.

This Social Impact Assessment (SIA) has been prepared to assess the social impacts for the Proposed Modification 6 to PA 08_0184.



- Legend**
- Project Approval Boundary
 - Proposed Project Approval Boundary
 - Local Government Area (LGA)
 - Road
 - Railway
 - Watercourses
 - State Forest
 - NPWS Estate
 - Native Vegetation

FIGURE 1.1
Locality Map

1.1 Proposed Modification

The Proposed Modification relates to the extension of select longwall panels in the currently approved Ulan Underground and Ulan West mines, to enable access to the mineable resource identified in EL 7542. No changes to the approved open cut mining operations are proposed.

The Proposed Modification will maintain the currently approved coal extraction rate of up to 20 Mtpa of coal and will enable extraction of an additional 25 million tonnes (Mt) of product coal, extending the life of the existing operations by two years until 2035. The Proposed Modification generally comprises of:

- extension of Ulan Underground longwall (LW) panels LWW9 to LWW11 to the west
- widening of Ulan Underground LWW11 by approximately 30 metres
- extension of Ulan West LW9 to LW12 to the north.

There is an area within EL 7542 from which the coal may be extracted by either Ulan West Underground or Ulan Underground depending on timing of operations and mining conditions. The area referred to as the 'Longwall Option Area' is shown on **Figure 1.2**. The coal in the Longwall Option Area may be extracted by either a northern extension of Ulan West Underground LW9 or a western extension of Ulan Underground LWW9, 10 and 11 (refer to **Figure 1.2**). The Longwall Option Area has no material change to the potential impacts in relation to this SIA.

UCMPL is also proposing some minor changes to surface infrastructure to support underground mining activities including provision of:

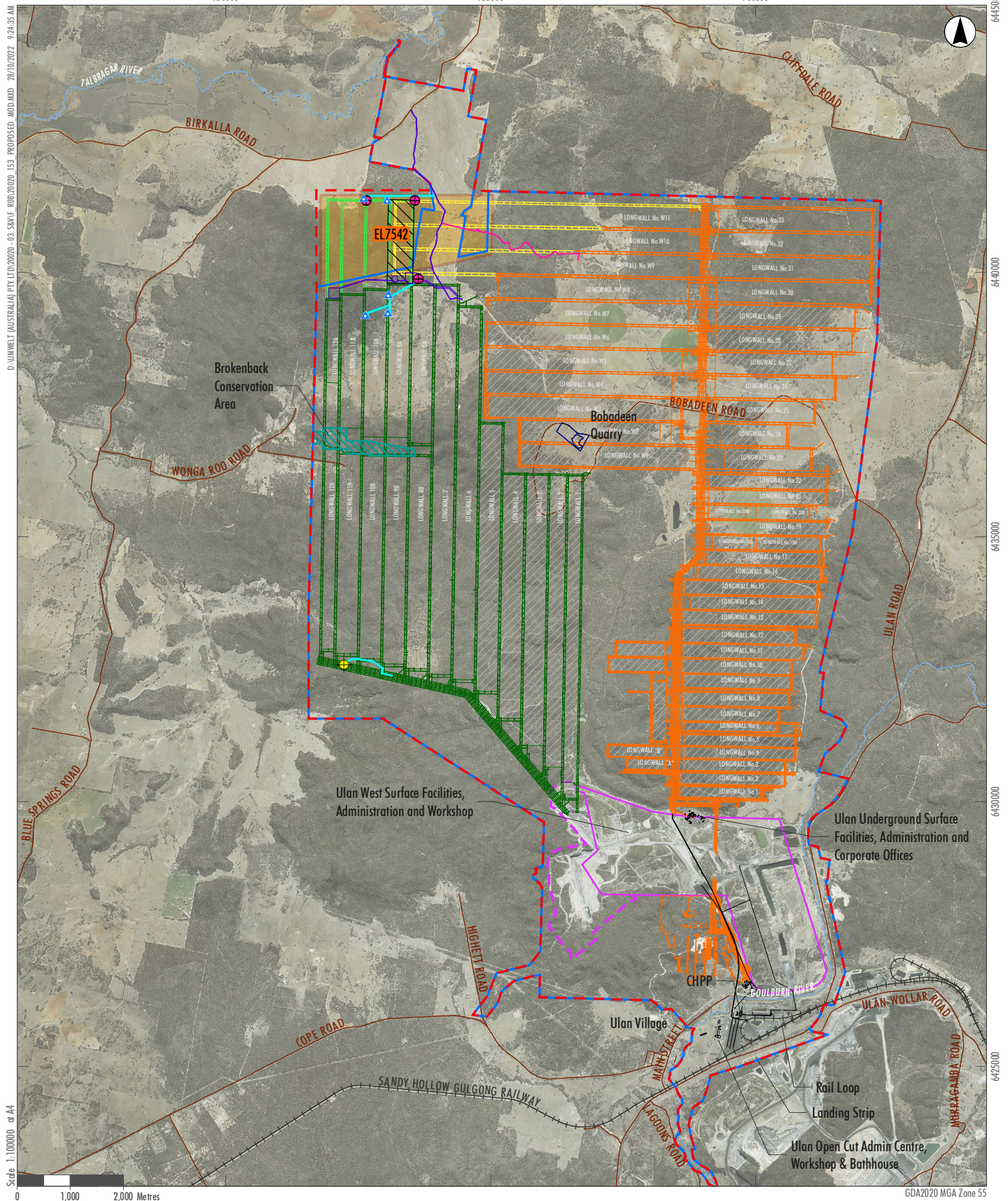
- three ventilation shafts and associated infrastructure corridors
- five dewatering bores and associated infrastructure corridors
- an alternate access track
- an infrastructure corridor and service borehole (to deliver gravel and other construction materials, and to provide access and power to the underground mine) to the south-west of Ulan West
- other associated infrastructure required to service the approved and proposed underground mining operations.

A comparison between the approved development under PA 08_0184 and the Proposed Modification is provided in **Table 1.1**.

Table 1.1 Comparison of Approved Operations and Proposed Modification

Key Project Component	Approved Development (PA 08_184)	Proposed Modification
Mine life	Mining operations until 30 August 2033	Extension of life of mine until 30 August 2035 (an additional two years).
Limits of extraction	20 million tonnes of coal per annum (including maximum of 4.1 Mtpa ROM from Open Cut)	No change to existing extraction rate. Additional approximately 25 Mt of product coal from the Proposed Modification.
Operating hours	24 hours per day, 7 days per week	No change.
Project boundary	As per PA 08_0184	Extension of Project Approval Boundary to include the northern part of EL 7542 (refer to Figure 1.2).
Mine plan	As per PA 08_0184	Extension of Ulan Underground LWW9 to LWW11, and Ulan West LW9 to LW12. Widening of Ulan Underground LWW11 (refer to Figure 1.2).
Mining method	Retreat longwall method	No change.
Surface infrastructure	As per PA 08_0184	Minor changes to infrastructure including dewatering bores, ventilation shafts and associated infrastructure to accommodate the proposed mine plan.
Coal Handling and Preparation Plant	As per PA 08_0184	No change.
Coal Transportation	All coal transported from the site by rail. No more than 10 laden trains leave the site each day.	No change.
Workforce numbers	Approximately 930 people (UCC)	No change.

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 minimising impacts on the environment and community. As discussed in sections of the Modification Report, the key learnings from the history of mining operations at the site; outcomes of the stakeholder engagement program; and the previous environmental and social impact assessments, have all been considered in the design of the Proposed Modification.



Legend

- | | | |
|--|-------------------------------------|---|
| Project Approval Boundary | Approved Ulan Underground Mine Plan | Proposed Borehole |
| Proposed Project Approval Boundary | Approved Ulan West Mine Plan | Proposed Vent Shaft |
| Brokenback Conservation Area | Previously Mined | Proposed Dewatering Bores |
| Bobadeen Quarry | Previous Ulan Open Cut Area | Proposed Infrastructure |
| Exploration Lease - EL7542 | Approved Ulan Open Cut Extension | Proposed Access Track Corridor |
| Roads | | Proposed Ulan Underground Mine Plan Modification |
| Railway | | Proposed Ulan West Underground Mine Plan Modification |
| Major Watercourses | | Longwall Option Area |
| Approved Infrastructure related to Mod 6 | | |

FIGURE 1.2

Proposed Modification

1.2 Report Structure

The SIA has been structured according to a number of key sections as detailed below:

- **Section 1:** Provides an introduction and background to the Proposed Modification, including a summary of key components.
- **Section 2:** Details the methodology employed as part of the SIA.
- **Section 3:** Comprises a socio-economic profile and demographic analysis of the Mid-Western Regional LGA and the key state suburbs of Ulan, Bungaba, Cooks Gap, Gulgong, Mudgee, Rylstone and Kandos.
- **Section 4:** Identifies the perceived positive and negative social impacts associated with the Proposed Modification, as identified through engagement with the community and key stakeholders and provides an assessment of impacts and opportunities associated with the Proposed Modification.
- **Section 5:** Discusses strategies to manage or mitigate the predicted social impacts identified during the assessment process and enhance the potential benefits and opportunities associated with the Proposed Modification.

2.0 Methodology

2.1 Assessment Requirements

A 'best practice' approach to SIA has been adopted and addresses the Department of Planning, Industry and Environment (DPIE) *Social Impact Assessment Guideline for State Significant Projects* (the Guideline) requirements (DPIE, 2021).

The SIA has involved key phases of work to inform project planning and design as outlined in **Figure 2.1** and has been conducted by qualified and experienced social scientists and SIA practitioners.

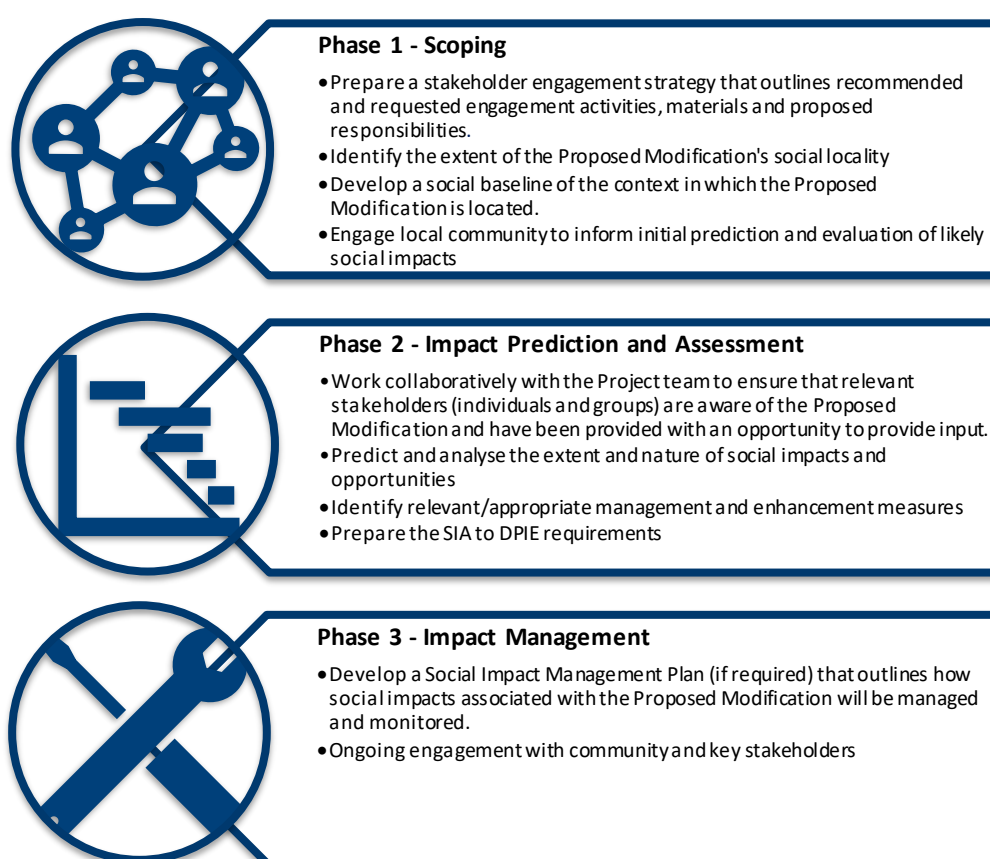


Figure 2.1 SIA Program Phases

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SIA Guideline (DPIE 2021)

As outlined in **Figure 2.1**, and consistent with the SIA Guideline requirements, the SIA process involves three key phases. Engagement should be a key component of a SIA program, commencing early in the scoping phase and affording input from near neighbours and local and regional stakeholders.

Commissioning of the SIA phases early in the assessment process, preliminary engagement with key stakeholders and regular meetings with the project team, has afforded opportunities to effectively integrate SIA outcomes with the broader Modification Report.

The SIA process has also included an assessment and prediction of social impacts and the development of relevant strategies to mitigate any negative social impacts and enhance positive impacts associated with the Proposed Modification.

According to the Guideline, social impacts can involve changes to people's:



Figure 2.2 Social Impact Categories

Source: Umwelt 2021 derived from: (Department of Planning, Industry and Environment [DPIE], 2021)

As is the case with any type of change, some individuals or groups within the community may benefit, while others may 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 social 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.

Monitoring and evaluation are also a key component of the SIA process and should identify any unanticipated impacts that may arise in the future, if the Proposed Modification is approved to proceed.

2.2 Social Baseline Profiling

A baseline social profile gathers knowledge from both primary and secondary data sources to develop an understanding of the existing social environment in which a project is proposed and of potentially affected stakeholders and communities that may be impacted (both positively and negatively).

The social baseline profile is a foundational component of a SIA as it provides the basis for which social impacts associated with the Proposed Modification may be predicted, assessed, monitored, and managed over time.

The Guideline (DPIE, 2021) outlines the key components of a social baseline study, as including:

- an understanding of the Proposed Modification's social locality (or area of social influence)
- initial analysis of the defining characteristics of the communities within the Proposed Modification's area of social influence, including identification of any vulnerable groups.

Profiling provides a comprehensive summary of the key characteristics of the people of a community or project area and is concerned with developing a detailed understanding of the social and economic context of potentially affected communities. The Guideline emphasises that the social baseline should be tailored to the specific project context and include meaningful data to inform the SIA. The baseline should also include analysis of any relevant data trends and provide a benchmark from which potential impacts can be assessed, and any change monitored.

2.2.1 Area of Social Influence

A social baseline profile has been developed for the Proposed Modification's social locality or 'area of social influence'. The Guideline states that 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*; 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 and connection to Country and value of stories within the cultural landscapes, community cohesion, and use of natural areas and resources
- *relevant social, cultural, demographic trends or social change processes* occurring now or 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 like rental affordability, employment, shifting land uses, or population and demographic; 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 reacted to early discussions; and how these discussions and other experiences affected the broader community; and the traditional Aboriginal use of the place, recent history of the place and people and any ongoing traumas.

The area of social influence for the Proposed Modification is defined as:

- the landholdings, property owners and residents situated on, or proximal to, the area of the Proposed Modification, as well as the UCC
- the State Suburbs (SSC) as per the Australian Bureau of Statistics' (ABS) statistical areas of Ulan, Bungaba, Cooks Gap, Gulgong, Mudgee, Rylstone and Kandos
- the host local government area (LGA) of the Mid-Western Regional Council.

Current employees of the UCC operations reside primarily in the townships of Mudgee and Gulgong and therefore these localities have been included in the profiling analysis of the region (refer to **Section 3.0**).

The area of social influence may extend beyond these boundaries at subsequent stages of project planning and assessment to include locations from which the workforce may be sourced and where materials may be supplied for the Proposed Modification. The townships of Kandos and Rylstone therefore have also been profiled as they are key townships in the region and could be potential locations of these workforces.

2.2.2 Data Sources

To gain an understanding of the demographic characteristics and composition of communities within the area of social influence, and to ascertain how the Proposed Modification may change or affect people, socio-economic and demographic data has been gathered and summarised from key publicly available datasets, including the ABS Census (2016)¹ and the Social Health Atlas of Australia (PHIDU, 2020), as well as through a review of local media, local and State government plans, and strategies.

Appendix A contains the community profile dataset that has been used to inform the social baseline. The data sources used and key indicators of interest, including a brief explanation of their relevance to the Proposed Modification, are outlined in **Table 2.1**.

¹ At the time of reporting the 2016 Census was the most recent available census data.

Table 2.1 Social Baseline Profile Indicators and Sources

Key Questions	Data Source	Indicators of Interest
<p>What is the demographic composition of the community?</p> <p>What is the proportion of the population that is vulnerable to the Proposed Modification/change?</p> <p>What skills exist in the region, are there relevant skill sets to enable the local and regional population to capitalise on employment opportunities during construction/operations?</p> <p>Is the Proposed Modification going to be of value to the local/regional community? Does the Proposed Modification align with community values, aspirations, needs?</p> <p>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?</p> <p>Are there any specific social trends evident in the region?</p>	<p>ABS Census (2016)</p> <ul style="list-style-type: none"> Mid-Western Regional LGA Ulan SSC Bungaba SSC Cooks Gap SSC Gulgong SSC Mudgee SSC Kandos SSC Rylstone SSC. 	<ul style="list-style-type: none"> Current population and trends Median age and age distribution Unemployment rate Key industries of employment Educational attainment Ownership and tenure of private dwellings Weekly household income Proportion of vulnerable groups (unemployed, low-income families, elderly, Aboriginal and Torres Strait Islanders) Cost of living (rental and mortgage payments).
<p>What is the socio-economic status of the community?</p> <p>What is the level of advantage / disadvantage in the community?</p>	<p>ABS Census of Population and Housing (2016)</p> <ul style="list-style-type: none"> Mid-Western Regional LGA. 	<ul style="list-style-type: none"> Index of Relative Socio-economic Disadvantage, 2016 Index of Economic Resources, 2016 Index of Education and Occupation, 2016.
<p>What is the level of health in the community?</p> <p>What are the main risk factors?</p>	<p>Social Health Atlas of Australia (PHIDU, 2020)</p> <ul style="list-style-type: none"> Mid-Western Regional LGA. 	<ul style="list-style-type: none"> Chronic diseases Risk factors.
<p>What has been the response of the community to similar Projects in the region?</p>	<p>Local media review</p> <p>Submissions reports (comparable projects)</p>	<ul style="list-style-type: none"> Level of support for similar projects Issues of concern relating to similar projects.

Key Questions	Data Source	Indicators of Interest
<p>What are the Council's key priority areas?</p> <p>Is the Proposed Modification aligned with the Council's strategic plan?</p> <p>Are community values, concerns and/or aspirations documented in the Community Strategic Plan?</p>	<p>Government strategic plans or policies:</p> <ul style="list-style-type: none"> Towards 2030, Mid-Western Region Community Plan (Mid-Western Regional Council, 2017) Central West and Orana Regional Plan 2036 (NSW Government, 2016) State of the Environment Snapshot 2018-19 (Mid-Western Regional Council, 2019). 	<ul style="list-style-type: none"> Support for and awareness of mining in the community.
<p>What are the attitudes and perspectives of local and regional residents – are they likely to be supportive of the Proposed Modification?</p> <p>What are the key concerns of the community in relation to the Proposed Modification?</p> <p>Are there any strategies on how to manage the impacts of the Proposed Modification?</p> <p>To what extent will the Proposed Modification support the community?</p>	<ul style="list-style-type: none"> Community and Stakeholder Engagement. 	<ul style="list-style-type: none"> Knowledge of the Proposed Modification Level of support for the Proposed Modification Community sentiment towards mining Concerns related to the Proposed Modification.

2.3 Stakeholder Identification and Preliminary Issues Analysis

2.3.1 Identifying Stakeholders

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 nearby the resource/project
- have an interest in the proposed action or change
- use or value a resource
- are interested in its use
- are forced to relocate due to a proposed change.

As part of the SIA for the Proposed Modification, key stakeholders have been identified to be involved in the engagement program across the following stakeholder groupings.



Figure 2.3 Stakeholder Groups

Source: Umwelt, 2022

Key stakeholder groups relevant to and potentially interested in the Proposed Modification are outlined in **Table 2.2**, with **Section 2.3.2.2** providing further detail on those stakeholders who were consulted as part of the Modification Report.

Table 2.2 Key Stakeholders

Stakeholder Group	Description
Near neighbours	Residents within and immediately surrounding the Project Area (n=9).
Wider community	Residents and landholders in the Mid-Western Regional LGA including the suburbs of Bungaba SSC; Ulan SSC, Cooks Gap SSC, Gulgong SSC, Mudgee SSC, Kandos SSC and Rylstone SSC.
Community Consultative Committee	Ulan Coal Mines CCC.
Political Members and Government Agencies	<p>Relevant Commonwealth, State and Local Government agencies and political members:</p> <ul style="list-style-type: none"> • Mid-Western Regional Council Mayor (Des Kennedy) • Mid-Western Regional Council General Manager (Brad Cam) • Member for Dubbo (Dugald Saunders, National Party of Australia) • Member for Upper Hunter (David Layzell, National Party) • Member for Calare (Andrew Gee, National Party) • Murray Darling Basin Authority • Department of Planning and Environment (DPE) • NSW Government Division of Mining, Exploration and Geoscience • DPIE Water • Transport for NSW (TfNSW) • Environment Protection Authority (EPA) • Biodiversity Conservation Division (BCD) • Resource Regulator • Natural Resources Access Regulator (NRAR) • Heritage NSW • DPIE- Crown Lands • Commonwealth Department of Agriculture, Water and the Environment (DAWE).
Media	<p>Local media services:</p> <ul style="list-style-type: none"> • Mudgee Guardian.
Community and Special Interest Groups	<p>Community and special interest groups in the local area or with an interest in the Proposed Modification, including:</p> <ul style="list-style-type: none"> • Mudgee District Environment Group • Bungaba Progress Association • Wollar Progress Association • Rotary Club of Mudgee Sunrise • Rotary Club of Mudgee • Mudgee Lions Club.
Neighbouring Mines	<ul style="list-style-type: none"> • Moolarben Mine • Wilpinjong Mine.

Stakeholder Group	Description
Local Business and Service Providers	Local businesses and service providers including: <ul style="list-style-type: none"> • Ulan Public School (Principal and P&C) • Ulan Village Green • NSW Rural Fire Service • GB Auto Group • Ulan Post Office Hotel.
Regional Business and Services	Businesses and service providers within the Mid-Western Regional LGA including: <ul style="list-style-type: none"> • Accommodation and Housing • Education • Health • Tourism • Community Services • Local Businesses.
Aboriginal stakeholders	<ul style="list-style-type: none"> • Registered Aboriginal Parties (RAP) • Native Title and Aboriginal Land Council claimants • Traditional Owners.
Employees, Contractors and Suppliers	Employees, contractors, and suppliers for UCMPL.
Environment Groups	<ul style="list-style-type: none"> • Inland Rivers Network (IRN) • Central West Environment Council • Hunter Environment Lobby • Upper Goulburn Water Users Association • Talbragar Landcare • Lock the Gate • Hunter Communities Network • National Parks Association of NSW (Hunter Branch).

2.3.2 Issues Analysis

2.3.2.1 Secondary Data Review

The identification and evaluation of potential issues/impacts associated with the Proposed Modification have been informed through a review of a number of sources as outlined in **Table 2.3**. This review has been further complemented by primary engagement with key stakeholders in relation to the current operations.

This information outlines key community and social issues identified by the community in relation to previous UCC consultation regarding environmental assessments and operational activities. Local media analysis has also assisted in highlighting key issues of public interest within the region.

Table 2.3 Preliminary Issues Analysis – Document Review Sources

Data Source	Description
UCCO Project (2009) consultation outcomes	<p>As part of the SIA for the UCCO Project, engagement was undertaken with 507 stakeholders, including landowners (71), employees and contractors (259), community members and groups (114), and service providers (63) (Coakes Consulting, 2009). Through this consultation process, stakeholders living in the townships of Ulan Village, Mudgee and Gulgong were asked to identify their key issues of concern and potential opportunities in relation to the UCCO Project. Salient issues and opportunities raised during this consultation included the following:</p> <ul style="list-style-type: none"> • Economic benefits and employment opportunities associated with the project. • Flow on benefits of continued and future employment, community investment and revenue. • Impacts on water availability, including bore accessibility and impacts on local waterways. • Increased traffic on local roads, contributing to poor road condition, congestion and road safety concerns. • General environmental concerns. • Operational noise disturbing residents' social amenity. • Increased pressure on health and youth services in the LGA. • A lack of professional services and a skilled workforce.
Glencore Coal Assets Australia (GCAA) Community Perception Survey (2018 and 2021)	<p>Surveys are conducted by Glencore every three years to understand community feedback and perceptions of the company.</p> <p>During the 2018 survey (Umwelt 2019), there was a total of 80 respondents to the Glencore community perception survey for the UCC operations including 19 landholders, 50 broader community residents of the Mid-Western Regional LGA, and 11 opinion leaders consisting of Aboriginal leaders, community group leaders and political leaders.</p> <p>During the 2021 survey (Voconiq, 2021), 239 participants from the Ulan region (Including Mudgee, Gulgong and Ulan) participated in the survey.</p>
CCC minutes	Review of minutes from the Ulan Coal Mines CCC meetings.
Local Media	Refer to Appendix A .
UCMPL Complaints	Analysis of complaints received for the UCMPL operations during 2019, 2020 and 2021.

2.3.2.2 Community Engagement

Table 2.4 provides an overview of the engagement and communication mechanisms used to inform the SIA and to provide information relating to the Proposed Modification.

Table 2.4 Key Engagement Mechanisms

Mechanisms	Description	Targeted Stakeholder Group
Project Briefings	Targeted meetings and briefings with key local, state and Commonwealth government agencies as required, including: <ul style="list-style-type: none"> • DPE • BCD • DAWE • Mid-Western Regional Council • Division of Mining, Exploration and Geoscience • EPA • Resource Regulator. 	Local Government. State Government. Commonwealth Government.
Key stakeholder meetings	Meetings and project briefings with key stakeholder groups.	CCC. Registered Aboriginal Parties.
Newsletter (February 2021, December 2021, March 2022 and August 2022)	Development and distribution of a Newsletter detailing the Proposed Modification and providing contact details for the project team and environmental assessment outcomes.	Distributed to the following number of businesses and households: <ul style="list-style-type: none"> • 157 in February 2021 • 143 in December 2021 • 224 in March 2022 • 223 in August 2022.
Ulan Internal Newsletter	Development and distribution of a Newsletter detailing the Proposed Modification and providing contact details for the project team.	All UCC Employees.
Interviews/ personal meetings (Round 1: December 2020 – January 2021 and Round 2: December 2021 – February 2022)	Individual meetings, held via telephone, videoconference and face-to-face (depending on the COVID-19 restrictions in place at the time), utilising a semi-structured interview guide. Participants were invited to be involved in interviews through the following: <ul style="list-style-type: none"> • Newsletter requesting that residents contact the Project team if they had any questions or would like to be involved in the SIA engagement program. • Proactive contact with near neighbours (telephone calls and emails). 	Near neighbours. Community and Specialist interest groups. Local businesses and service providers.

Table 2.5 provides a summary of the number of stakeholders engaged during Round 1 (December 2020–January 2021) and Round 2 (December 2021–February 2022). These stakeholders have directly participated in the formal engagement process to date via personal interviews, surveys (online and hardcopy) and CCC meetings. Other communication mechanisms utilised to inform stakeholders and the community about the Proposed Modification include website updates, newsletters and phone calls.

In addition to the meetings outlined below, UCMPL employees also held individual meetings with near neighbours to review the results of the assessment outcomes and discuss any concerns. The Proposed Modification is located within a rural area with limited proximity to other residences. There are nine (9) near neighbours within or proximal to the Project Area all of which were contacted to be involved in the SIA and / or meet with UCMPL employees regarding the Proposed Modification.

Table 2.5 Consultation Statistics – Round 1 and Round 2

Stakeholder Group	No. contacted via telephone call, email or letter invitation	No. consultations (meetings undertaken/ surveys completed)
Near neighbours – Round 1	9	6 participants representing 5 properties
Near neighbours – Round 2	10	5 participants representing 4 properties
Wider community	Newsletters distributed to the following number of businesses and households: <ul style="list-style-type: none"> • 157 in February 2021 • 143 in December 2021 • 224 in March 2022 • 223 in August 2022. 	2
Local Businesses, Service providers, community groups and special interest groups	9	4
Total	28 +	15

Note that some near neighbours were engaged in both Round 1 and Round 2.

Outcomes of this engagement have been used to identify community views in relation to the Proposed Modification and to inform the assessment of social impacts.

2.4 Social Impact Evaluation

The SIA has utilised data from a range of sources to develop a layered picture of the potential social impacts arising from the Proposed Modification. Social impacts associated with the Proposed Modification, have been ranked according to impact characteristics, as defined in the SIA Guideline (DPIE 2021). These criteria 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: SIA Guideline (DPIE, 2021).

To prioritise the identified social impacts, a risk-based framework has been adopted. Traditionally, the technical risk assessment process has not been greatly amenable to the inclusion of social impacts. One key adaptation of the approach is that both technical ratings and stakeholder perceptions of impacts are assessed. This approach is consistent with Sandman's risk equation ($\text{Risk} = \text{Hazard} + \text{Outrage}$) (Sandman, 1993), which acknowledges what are often low correlations between a risk's technical 'hazard' (how much harm it is likely to do) and its 'outrage' (how upset it is likely to make people).

Stakeholder perception of impact is considered an independent and no less valid component of risk. Stakeholder perceptions often vary between individuals and groups, with no single perception more important than another. However, for the purposes of this assessment, the most common, or what is judged to be the general perception/sentiment of a stakeholder group, has been used as a measure of perceived stakeholder risk or impact.

The integration of the outcomes of technical ranking (severity/scale) with stakeholder perceived ranking of impacts (intensity or importance), thus affords a true integration of expert and local knowledge in SIA and enables both types of risk to be addressed in the development of impact mitigation, amelioration and enhancement strategies. This approach is reflected in the new SIA guideline, where level of concern/interest and intensity or importance are considered (refer to **Table 2.6**).

Prioritising impacts in this integrated manner ensures that appropriate assessment and mitigation strategies can be developed to not only address impacts that may require more technical management, but also those impacts that are perceived by stakeholders as of high importance/concern. These perceived concerns are just as important to manage as they have the potential to result in elevated levels of community concerns, complaints and grievances if not addressed appropriately.

As outlined in **Section 4.0**, a range of social impacts have been identified in relation to the Proposed Modification that require prioritisation for assessment and appropriate management and/or enhancement. These impacts relate to a number of social impact categories and have been informed through engagement undertaken to support the SIA.

The impacts identified within these social impact categories are assessed in detail as part of the overarching risk-based framework in the following subsections. It should also be noted that social impacts are often not mutually exclusive, with higher order impacts such as population change resulting in second order impacts on sense of community and service provision.

Section 5.0 provides an evaluation of the significance of each potential negative and positive social impact. The assessment is undertaken using the impact characteristics noted above and through the application of a consequence and likelihood framework, as identified in the SIA Guideline (DPIE, 2021).

The social significance matrix (refer to **Table 2.7**), that considers both the magnitude of the potential social impact (minimal, minor, moderate, major and transformational) and the likelihood of the impact occurring (very unlikely, unlikely, possible, likely and almost certain) is then used to determine an overall evaluation of the social impact as 'low', 'medium', 'high' or 'very high'. **Table 2.8** and **Table 2.9** contain further details regarding magnitude and likelihood classifications.

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: SIA Guideline (DPIE, 2021).

Table 2.8 Defining Magnitude Levels for Social Impacts

Magnitude level	Meaning
Transformational	Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
Major	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
Moderate	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minor	Mild deterioration/improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.
Minimal	Little noticeable change experienced by people in the locality.

Source: SIA Guideline (DPIE, 2021).

Table 2.9 Defining Likelihood Levels for Social Impacts

Likelihood level	Meaning
Almost certain	Definite or almost definitely expected (e.g. has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

Source: SIA Guideline (DPIE, 2021).

Both positive and negative impacts are considered in this regard, with slight adjustments made to the approach to reflect positive impacts e.g., level of concern becomes level of interest, severity becomes scale of improvement or benefit, sensitivity becomes importance of the improvement or benefit and the equity of its distribution, etc.

As noted in the SIA guideline, the definitions and scale assigned to each of the likelihood and magnitude categories need to be relevant to the impact that is being evaluated, explained, and justified in the SIA; and where possible the consequence scale should be based on established measures and standards.

The evaluation of social impact significance has involved four main steps as outlined in **Figure 2.4**.



Figure 2.4 Social Impact Evaluation Process

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In line with the process defined above, the following sections assess the technical and perceived social concern/interest in relation to the positive and negative consequences that may be experienced by stakeholders due to anticipated impacts/changes associated with the Proposed Modification. These have been categorised in line with the social impact categories and characteristics outlined in the SIA Guideline (2021) and then further defined within impact themes and sub-impact issues.

In **Section 4.11**, a table is presented which summarises:

- the Proposed Modification aspect
- 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 based on perceived level of concern/interest (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 5.0**.

3.0 Social Baseline Profile

Profiling provides a comprehensive summary of the key characteristics of the people of a community or Project Area. The Guideline (DPIE, 2021) emphasises that the social baseline should be tailored to the specific project context and include meaningful data to inform the SIA. The baseline should also include analysis of any relevant data trends and provide a benchmark from which potential impacts can be assessed, and any change monitored.

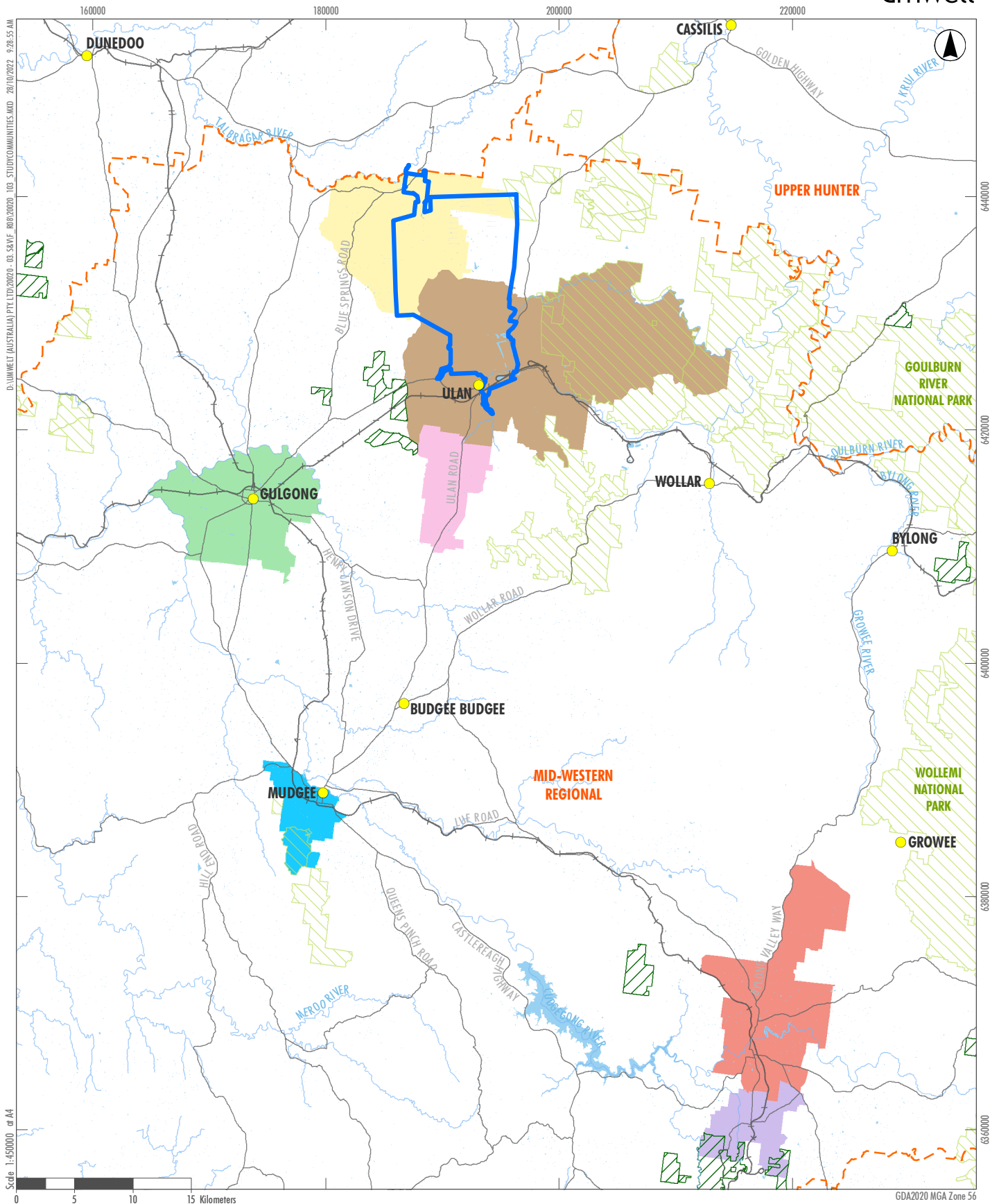
For this assessment, the following components have been considered in the development of the social baseline profile for the Proposed Modification, namely:

- geographic scope – identification of the communities of interest and key stakeholders relevant to the current assessment
- governance – outline of relevant governance structures at local, State and Commonwealth levels
- historical context – review of the history of local communities, including their culture and values
- community capital/assets – assessment of areas of vulnerability and resilience across the communities of interest
- key community values, issues, and concerns – documentation of current community issues in the Mid-Western Regional LGA, as identified in key planning documents, regional studies and the local media
- development context and response to change – assessment of development issues within the communities of interest and the response of local landholders and community residents to this change.

The social profile is a necessary component of the SIA and provides a foundation from which social impacts associated with the Proposed Modification may be predicted. A key component in the development of the social baseline profile for this assessment has been the collation, interpretation and analysis of demographic data.

Socio-economic characteristics of the relevant localities are largely based on SSC and LGA levels of analysis (Mid-Western Regional LGA), compared with NSW state data, and informed by data available from the latest 2016 Census and other social indicator data sources as relevant. The primary communities of interest for the purposes of the community profile are identified in **Figure 3.1** and include:

- Ulan SSC
- Bungaba SSC
- Mudgee SSC
- Gulgong SSC
- Rylstone SSC
- Cooks Gap SSC
- Kandos SSC
- Mid-Western Regional LGA
- NSW State (for comparative purposes).



Legend

- | | |
|---------------------------|---------------------------|
| Project Approval Boundary | State Suburb Class |
| NSW State Forests | Bungaba |
| NSW National Parks | Cooks Gap |
| Local Government Boundary | Gulgong |
| Road | Kandos |
| Creeks/ Rivers | Mudgee |
| Railway | Rylstone |
| | Ulan |

FIGURE 3.1

Study Communities

It is important to note that data for the Ulan SSC should be interpreted with a degree of caution due to low population sizes. As the ABS applies small random adjustments to cell values to protect the confidentiality of data, this can have slight impacts to data with small samples sizes i.e. counts of 20 or less.

It is also acknowledged that there are several additional suburbs surrounding the Proposed Modification. Given the number of small suburbs and localities within the LGA, this community profile has focused on a selection of localities proximal to the Proposed Modification and larger towns within the LGA.

3.1 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 Region is a large area encompassing 18 other 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 31 mining businesses continuing to operate within the region (ABS, 2016).

3.2 Governance

3.2.1 Local Governance



The UCC lies within the Mid-Western Regional LGA, which is governed by the Mid-Western Regional Council (MWRC, the Council). The Council is composed of nine Councillors, including the Mayor and Deputy Mayor, elected proportionally as a single ward for a fixed four-year term of office. The Mayor is Des Kennedy, who was elected by the Councillors at the first meeting of the Council in 2004.

The Council’s ‘Towards 2030 Community Plan’ outlines the strategic direction for the LGA. This plan was developed in collaboration with the local community and identifies five areas of focus which are outlined in the document, including:

- **Looking after our Community** – activities and initiatives that produce vibrant, healthy and proud towns
- **Protecting our Natural Environment** – conserving and promoting the natural beauty of the region



- **Building a Strong Local Economy** – a focus on industry diversification, employment and economic growth
- **Connecting our Region** – linking towns and villages and connection to the rest of NSW
- **Good Government** – ensuring Council is representative of the community and effectively meeting community needs.

Community consultation was undertaken with approximately 2,500 residents to inform the ‘Towards 2030 Community Plan’. Further discussion of the Plan, including a summary of the issues and opportunities identified for the LGA, is provided in **Appendix A**.

Council also released a Local Environmental Plan in 2012 that details a number of key objectives with regard to land use, including management and conservation of natural resources and heritage items of significance, securing the agricultural future of the region, and increased availability of urban and community services and infrastructure. Specifically, the plan also identifies the protection of the settings of Mudgee, Gulgong, Kandos and Rylstone through management of the urban and rural interface, limiting land use conflict and conserving key visual elements that contribute to the character of the towns.

The Council’s Comprehensive Land Use Strategy (2010, updated in 2017) provides a blueprint for the LGA to meet long term urban and rural growth needs. This plan positions Mudgee as the sub-regional service, commercial and tourism centre for the region, complemented by the smaller towns of Rylstone, Kandos and Gulgong, fourteen villages (including Ulan) and other rural localities.

The Strategy emphasises that extensive and intensive agriculture, mining, tourism and rural living would continue to be the key land uses across the LGA; and that sufficient land, services and facilities need to be available to support these industries. The Strategy also states that while mining currently has a relatively small percentage of land use (1%), exploration titles and applications² currently cover two-thirds of the LGA. Within the strategy, tourism is also considered an important and growing industry within the LGA. Mudgee is the primary visitor destination within the LGA; however, Rylstone and Gulgong are also receiving large visitor numbers. Gulgong for example, attracts visitors due to its heritage character – originally a 19th Century gold mining town home to a population of around 20,000, the town has over 130 heritage buildings.

3.2.2 State Government

The Ulan SSC lies within the Upper Hunter State electoral district, held by National Party MP David Layzell. The townships of Gulgong and Mudgee are within the State electoral district of Dubbo, west of Upper Hunter, which is currently held by National Party MP Dugald Saunders.

² Exploration licences are issued by the NSW Government to mineral exploration companies to explore for minerals that could potentially identify a mineral resource that could be mined, subject to the receipt of the necessary approvals.



The key NSW State Government policy of relevance to Mid-Western Regional LGA, and the Proposed Modification, is the 'Central West and Orana Regional Plan 2036' which outlines the goals and actions for the Central West and Orana Region to achieve a sustainable future. This plan applies to 19 local government areas that cover an area of 125,666 square kilometres, including the Mid-Western Regional LGA.

The vision for the Central West and Orana Region closely reflects the vision and priorities identified in the 'Towards 2030 Community Plan'. There are direct linkages between the goals and actions in both plans for the next 20 years. The four goals established by the Regional Plan include:

- a growing and diverse regional economy with significant industries of employment in the region include the extractives sector, agriculture, health and social care sectors, as well as emerging sectors such as renewable energy (refer to **Figure 3.2**)
- a region with strong freight transport and utility infrastructure networks that support economic growth
- a region that protects and enhances its productive agricultural land, natural resources and environmental assets
- strong communities and liveable places that cater for the region's changing population.

Table 2.1 in Appendix A provides a summary of the key issues and opportunities identified within this plan.

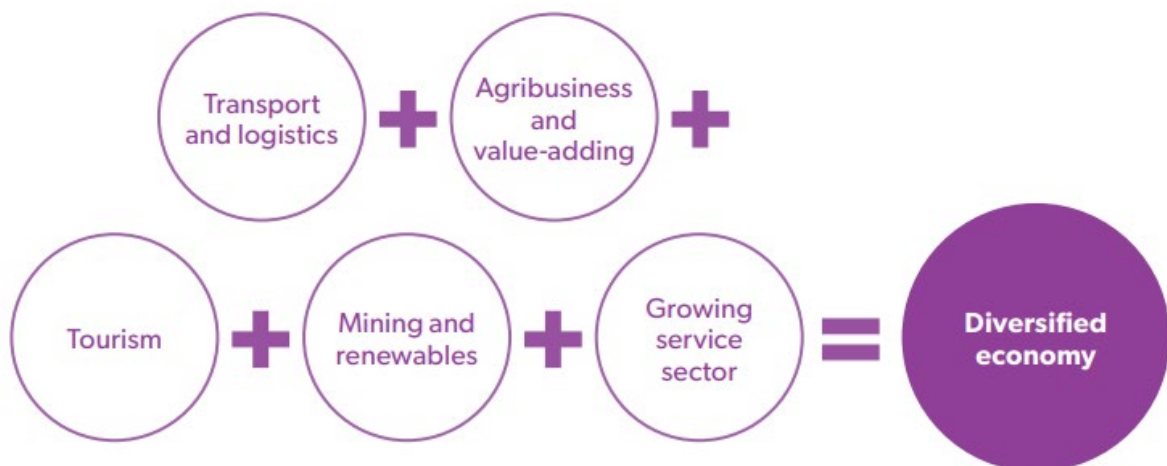


Figure 3.2 Economic Diversification Strategy for the Central-West Orana Region (DPIE 2016)

3.2.3 Commonwealth Government

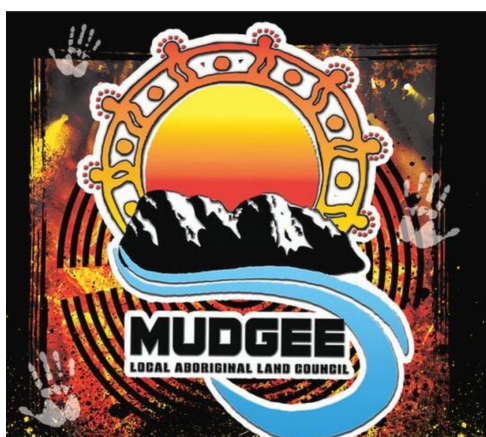
The Mid-Western LGA is within the federal electoral division of Calare which stretches from Mudgee, Gulgong, Dubbo and Wellington in the north-west, to Orange, Bathurst, Lithgow and Oberon in the south-east. Calare is represented by National Party MP Andrew Gee.

3.3 Native Title, Local Aboriginal Land Councils and Traditional Owners

The Proposed Modification is located within the traditional homelands of the Wiradjuri nation. The study communities for the Proposed Modification intersect the modern-day NSW Aboriginal Land Council (ALC) boundaries of the Central Region (Ulan, Bungaba, Cooks Gap, Mudgee and Gulgong) and the Wiradjuri Region (Kandos and Rylstone).

The current Councillor of the Central Regional is Grace Toomey, a Wiradjuri woman from Dubbo who is Secretary of the Dubbo Aboriginal Community Working Party of the Three Rivers Regional Assembly.

The current Councillor of the Wiradjuri Region is Leeanne Hampton, a descendant of the Wiradjuri and Ngiyampaa people. Councillor Hampton is from West Wyalong and was the first female Aboriginal Deputy Mayor of the Bland Shire Council.



The Proposed Modification is also within the Mudgee Local Aboriginal Land Council (MLALC) boundary and within the boundaries of a Native Title claim submitted in 2018 by the Warrabinga-Wiradjuri. This claim is for a large area of land that covers Bathurst Regional Council, Blue Mountains City Council, Dubbo Regional Council, Hawkesbury City Council, Lithgow City Council, Mid-Western Regional Council, Muswellbrook Shire Council, Singleton Council, Upper Hunter Shire Council and the Warrumbungle Shire Council.

Three native title claims have been submitted within the Mid-Western Regional LGA, with the Gomeroi People submitting a claim that intersects with the EL 7542 area. Two other Native title claims are pending in the Mid-Western Regional LGA; however, these claims do not include the area of the Proposed Modification.

3.4 Regional Development Context and Community Response to Change

This section utilises a number of data sources to build a picture of the development context of the assessment area and develop an understanding of the process of social change and community response to this change. Specifically, this section considers:

- community events and/or developments that have had a significant impact on the region including drought and infrastructure development
- the ongoing presence and development of mining in the region
- case studies on the response of communities to change.

Data utilised in this section has been sourced from:

- local, regional and State media (refer to **Appendix A**)
- assessment reports including SIAs and Environmental Impact Statements (EISs) and relevant communications for surrounding projects including Yancoal's Moolarben Coal Complex Open Cut Extension Project, Peabody Energy's Wilpinjong Coal Mine and KEPCO's Bylong Coal Project
- other relevant regional studies.

There have been a number of mining projects and modifications proposed in regional NSW that have received significant community feedback, which have been reviewed as part of this SIA to identify how relevant stakeholders and communities have responded to these proposed developments. Further detail of these case studies is provided in **Appendix A** and summarised below.

- The Wilpinjong Extension Project, located in the small community of Wollar, was approved by the NSW Planning Assessment Commission (PAC, now Independent Planning Commission (IPC)) in April 2017, resulting in a challenge by a group representing residents of Wollar in the Land and Environment Court. This challenge was not successful, with the Project approval upheld in June 2018.
- The Bylong Coal Project was referred to the PAC (now the IPC) by the Department of Planning and Environment (DPE), after the initial application was received in July 2016 on the grounds of 'uncertainty and incomplete information about the risks and benefits of the Project' (PAC 2017: i). Further investigations and development of a revised mine plan saw the application subsequently recommended for approval by DPE. The IPC determined to refuse the revised proposal on 18 September 2019. Amongst a number of environmental reasons, including the cumulative impact of the Project on greenhouse gas emissions, the IPC determination was based on the impact on the currently undisturbed landscape, citing doubt that the proponent could retain the aesthetic, heritage and natural values of the area; the unacceptable impact on the heritage significance of the Tarwyn Park Complex; and the inequity of the economic benefit predicted for the current generation when compared with the negative long-term environmental, heritage and agricultural impacts that would be borne by future generations. In March 2021 the Proponent appealed to the Land and Environment Court (LEC) regarding the IPC decision to reject the mine proposal, however the LEC dismissed the appeal. In early October 2021 the Proponent sought special leave to appeal the decision in the High Court however this was rejected by the High Court in early February 2022.

Further analysis of the predicted impacts associated with these projects, and strategies for mitigation and enhancement proposed by project applicants, are summarised in Table 1.6 of **Appendix A**. This information is based on review of the relevant EIS and SIA studies undertaken and other relevant planning documents e.g. Response to Submissions. Where possible, social impacts have been categorised according to the social impact factors outlined in the Guideline (DPIE, 2021).

In addition to the projects outlined above, Yancoal's Moolarben Coal Complex is located immediately south-west of UCC and comprises four open cut areas and two underground mining areas as well as associated infrastructure including coal processing and transport facilities (Moolarben Coal, 2021a). Moolarben is currently investigating options to expand two of its open cut areas and extend the operational mine life from 2038 to approximately 2045. An EIS for the project is currently being prepared with a scoping report submitted to DPIE in late 2021 (Moolarben Coal 2021b).

The closure of several resource extraction projects in the Mid-Western Regional LGA has also created key changes in the study communities. Specifically, the closure of the Cement Australia Kandos plant in 2011, the Charbon Coal mine in 2015, and the Sibelco Tallawang magnetite mine in 2016 have all led to a reduction in the availability of mining jobs in the Mid-Western Regional LGA, particularly for the communities of Kandos and Rylstone. These closures may have potentially led to increased unemployment and/or migration of skilled workers out of the region.

The Charbon Coal Mine was operated by Centennial Coal and closed in 2015 after over 90 years of mining, due to exhausted coal reserves. Following the planned closure of the mine, the majority of employees were able to be transferred to the nearby Airly mine approximately 13 km to the south in the Lithgow LGA (Centennial Coal, 2019). The mine is currently undergoing rehabilitation works, with work expected to be finished in 2022. Local contractors have been utilised during the rehabilitation phase, and ongoing monitoring work will need to be undertaken through to 2025 (Centennial Coal, 2017).

The Sibelco Mining operation in Tallawang, near Gulgong, was closed in 2016, following a high-level company review that found the Project was no longer commercially viable (refer to **Appendix A**). No information is available to indicate how job losses were managed. However, one source indicates that prior to closure, all employees working at the Project were based in Mudgee (MiningLink, 2019b).

Potential diversification of industry within the region has been seen by the recent proposal of two greenfield metalliferous mines in the Central West region. The McPhillamys Gold Project is a proposed greenfield gold mine located near Blaney. An EIS was submitted in 2019, with a Response to Submissions and Project Amendment Report submitted to DPIE in 2020. The Project is currently awaiting assessment by DPE. The Bowdens Silver Project, located near Lue in the Mid-Western Regional LGA is a proposed silver mine for which an EIS was lodged in 2020, with a Response to Submissions Report submitted in June 2021.

There has also been additional diversification via a renewable energy boom within the region. There is high-level support for renewable energy at a NSW Government level indicated by the Central-West Orana Renewable Energy Zone (REZ), being the State's first pilot REZ and one of five REZs planned by the NSW Government (refer to **Figure 3.3**). REZs co-locate renewable energy generation, energy storage and transmission lines with the aim of providing affordable, reliable and low-emissions electricity to the grid. REZs aim to install the transmission infrastructure required to attract private investment, and to enable the transition to an electricity network powered by renewable energy sources. The recent establishment of the Central-West Orana REZ is already attracting significant interest from renewable energy and storage developers (Energy NSW, 2020).

The NSW Government's Central-West and Orana Regional Plan (2017) notes in its vision for the region *'landmark solar, wind and bioenergy projects distinguish the region as a leader in renewable energy development.'* The Plan outlines the role renewable energy will have in creating a sustainable future for the region, particularly by promoting local jobs and development opportunities for associated industries. Specifically, Direction 9 of the Plan is aimed at increasing renewable energy generation across the region. **Figure 3.3** outlines the location of the Central-West Orana REZ and currently proposed, approved, or already developed renewable energy projects. These projects include:

- Tallawang Solar Farm, a 390 MW solar farm on approximately 920 hectares and the adjacent Barneys Reef Wind Farm Project, containing an estimated 60 wind turbines, both proposed by RES and currently in the assessment phase (RES, 2021).
- Spicers Creek Wind Farm, a 122 wind turbine wind farm, approximately 25 km north west of Gulgong, proposed with the scoping report submitted in April 2022 (NSW Government, 2022).
- Valley of the Winds Wind Farm, near Coolah, currently in the assessment phase.

- The 5 MW Avisford Mini Sustainable Energy Park by ITP Renewables close to the Gulgong township was unanimously refused by the Western Regional Planning Panel and received 445 public submissions; 439 of which were in opposition (Mid-Western Regional Council, 2020; Western Regional Planning Panel, 2020).
- The 220 MW Gulgong Solar Project by Vena Energy was opposed by local community groups and appears to have not proceeded to a Development Application stage (change.org 2019; solarquotes 2020).
- The 10 MW Burrundulla Mini Sustainable Energy Park by ITP Renewables, located approximately 6 km to the south-east of Mudgee town centre, was unanimously refused by the Western Regional Planning Panel and received 377 submissions in opposition to the project (ITP Renewables n.d.; Western Regional Planning Panel 2020).
- The 400 MW Stubbo Solar Farm, approximately 15 km west of Ulan, received 37 submissions, and was approved with Development Consent on 29 June 2021 (NSW Government 2021).
- The 55 MW Dunedoo Solar Farm, approximately 45 km north of Gulgong, received 20 submissions. The project received Development Consent on 2 September 2021 (NSW Government 2021).
- The 30 MW Wellington North Solar Farm, received 12 submissions and was approved by the Department in April 2021 (NSW Government 2021).
- A Scoping Report was submitted for the Central-West Orana REZ Transmission – Wollar Substation Project Upgrade in September 2021 to allow for the building and operation of upgraded high-voltage electricity transmission infrastructure for the Central-West Orana region of NSW. The new and upgraded infrastructure would enable electricity produced by new energy generation and storage projects located in the Central-West Orana REZ to be exported into the electricity transmission network (NSW Government, 2021).

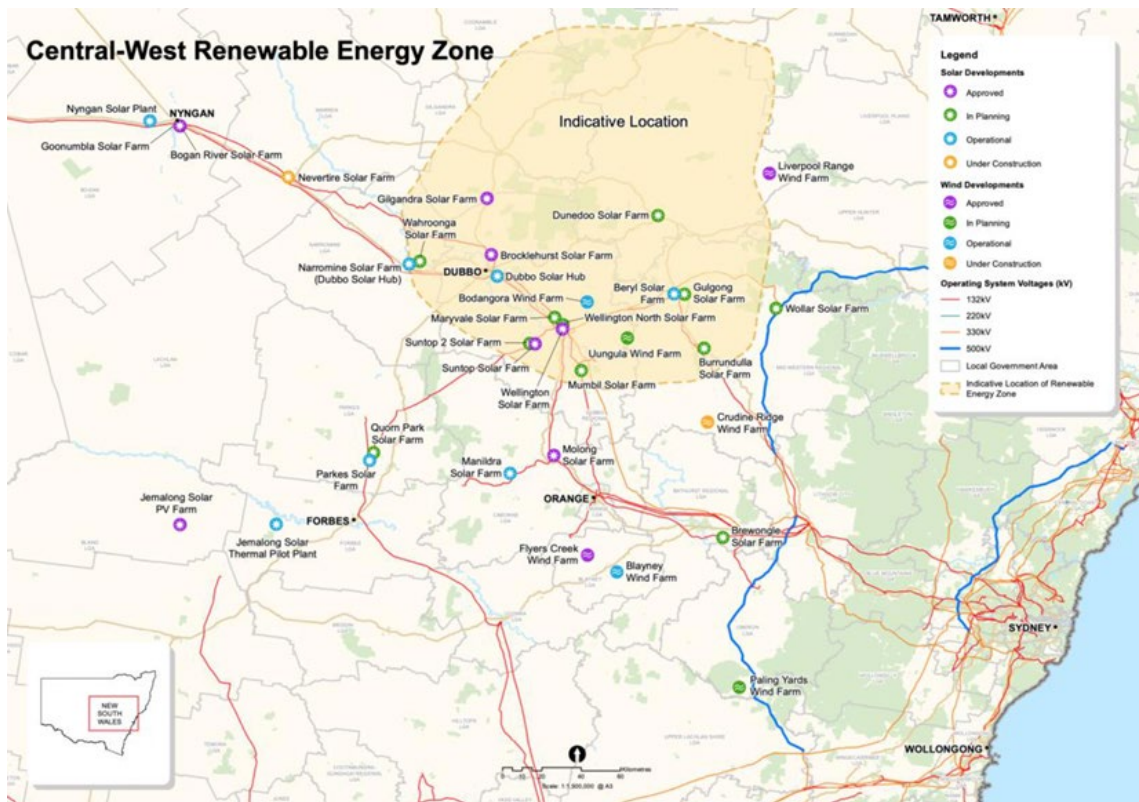


Figure 3.3 Central-West Renewable Energy Zone

Source: (Energy NSW, 2020)

3.4.1 Lessons Learned for the Proposed Modification

The process and outcomes relating to the above projects provide key insights for the Proposed Modification. High levels of community involvement in and in some cases opposition to projects indicates that communities and landholders proximal to projects are increasingly aware of the planning process; and where they have concerns, have a strong desire to be involved in assessment studies. This is particularly true for stakeholders living near a project, who may feel that they do not have an adequate voice. Overall, these outcomes reinforce the need to engage early with stakeholders and maintain regular contact throughout the assessment so that the community is fully informed of the Proposed Modification and can participate meaningfully in the identification of impacts and proposed strategies.

Historically the region has been impacted by the closure of a number of industries, resulting in job losses and higher levels of unemployment across specific communities. However, the presence of the mining industry has continued to provide employment for regional residents, significantly contributing to the local and regional economy. More recently, the region is experiencing a development boom in the renewables sector, with a range of solar and wind farms proposed or being developed as part of the Central-West Orana REZ. Such activity also results in social impacts and, akin to the social impacts related to mining development, challenges relating to service provision particularly in the construction phases.

However, a key issue that requires noting is the cumulative nature of development activity in the Mid-Western Regional LGA and the likely interactions associated with significant project development timing should such projects proceed.

3.5 Community Capitals Analysis

In the development of the social baseline profile, the Sustainable Livelihoods Approach (Department for International Development (Department for International Development (DFID), 1999) has been utilised to provide a comprehensive understanding of the relevant communities proximate to the Proposed Modification and to evaluate their resilience and sensitivity to change (Coakes, 2011).

According to the framework, people seek to maintain their livelihood within a context of vulnerability. Specifically, threats to their livelihood include shocks (such as sudden onset 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’ (Department for International Development (DFID), 1999).

The DFID approach draws on broad categories of community capitals as a fundamental basis to identifying and further enhancing community capacity and resilience. This methodology has been further developed by Coakes and Sadler (Coakes, 2011) to reflect the five capitals approach - human, social, natural, physical and economic/financial. The vulnerability of each capital area can be assessed through the selection of a suite of socio-economic indicators specific to each capital area to assess a community’s vulnerability to change or conversely their adaptive capacity; and has been widely applied within a natural resource management context, including mining. Elements of each capital area are further outlined in **Figure 3.4**. In preparation of the SIA, the collection, collation, and analysis of social indicators is combined, where relevant, with primary data, collected through stakeholder interviews.

The following sections summarise key community strengths and vulnerabilities within the Project Area, with additional information provided in **Appendix A**.

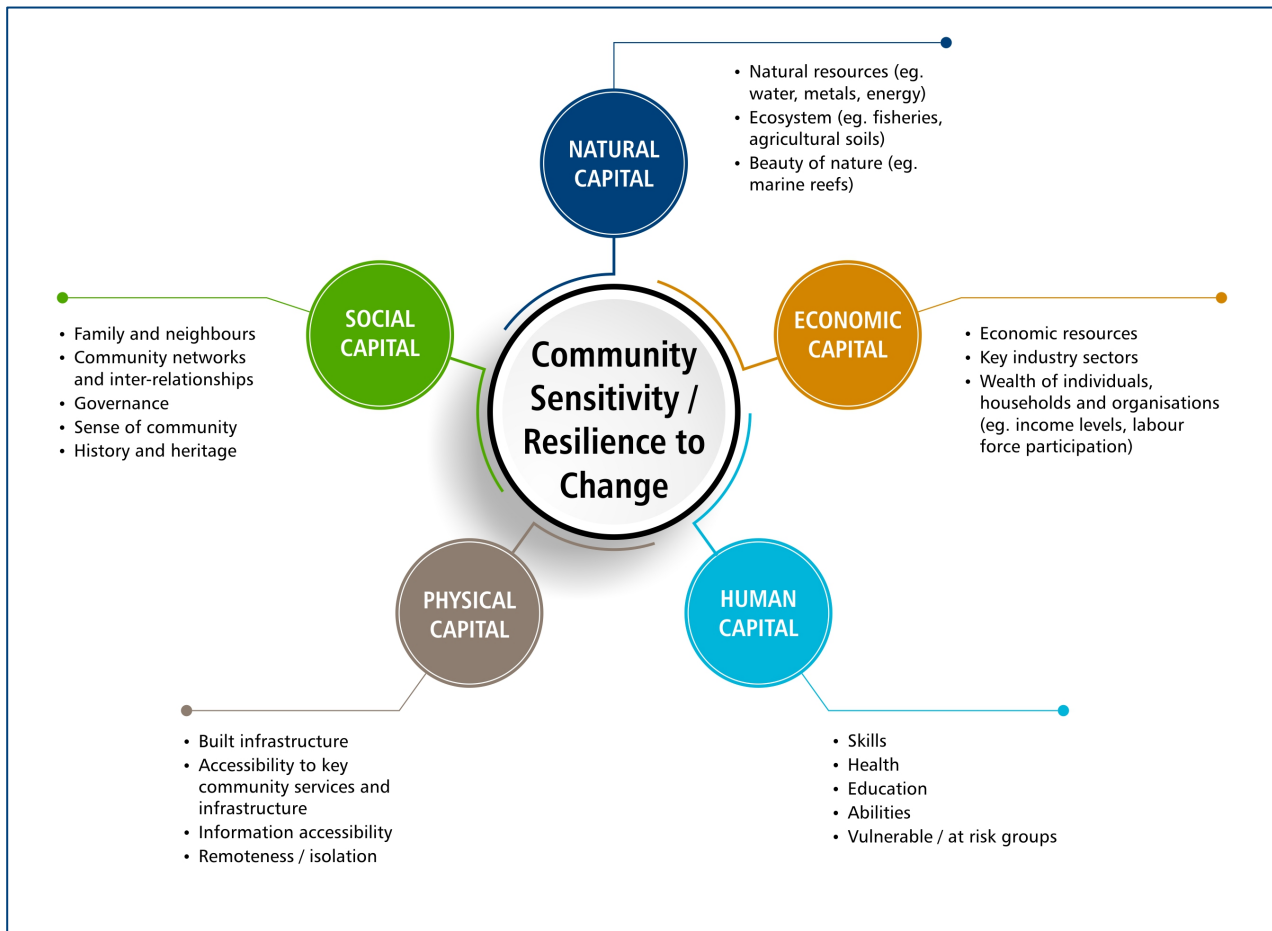


Figure 3.4 Capital framework

Source: Adapted from Coakes and Sadler (2011)

3.5.1 Natural Capital Summary

Natural capital refers to the natural assets and resources that contribute to community strength and sustainability. Natural capital can include resources such as minerals, productive agricultural soil, presence of oil and gas and forests which provide commercial and practical benefit to the community, as well as solar and wind resources. Natural capital can also include other environmental assets that generate tourism or provide other social, cultural, and recreational value, such as waterways or lakes. Further detailed information on the natural capital associated with the Proposed Modification can be found in **Appendix A**.



The LGA has a variety of **nature reserves and national parks**, including the Goulburn River National Park, Munghorn Gap Nature Reserve, Durridgere State Conservation Area and Wollemi National Park.

The Drip is a natural sandstone formation situated on the Goulburn River (in the Goulburn River State Conservation Area) near Ulan that is a popular spot for bushwalking, swimming, camping and photography. The Drip is a significant place for the local Wiradjuri People, with important Aboriginal rock art site, Hands on Rock, located to the north of The Drip.

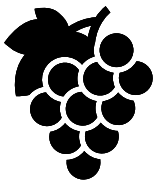




The **Great Dividing Range** extends through the centre of the UCC area.

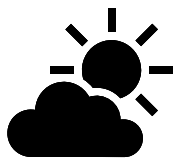
The UCC is located within the catchment of the **Goulburn River**, which originates to the south of Ulan village and flows approximately east into the Hunter River near Denman.

Agriculture, forestry and fishing is a key industry of employment (accounting for 9 % of workers, compared to 2 % in NSW), with the majority of these workers employed in the sheep and cattle industry (69.0 %), followed by grape growing (4.8 %), horse breeding (4.2 %) and grain production (to support the sheep and cattle industry – 3.9 %) (ABS, 2016, refer to **Appendix A**).



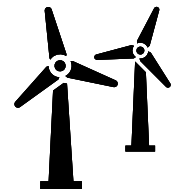
The LGA has a strong history of **viticulture**, with winemaking dating back to the 1850s. Mudgee is a well-known food and wine destination amongst tourists and features an annual Food and Wine Festival.

The region is rich in **coal and minerals** including silver ore, clays and sandstone, with mining (predominantly coal mining) contributing \$390 million direct spent to the local economy in 2019–20 according to the NSW Mining Industry Expenditure Impact Survey (NSW Minerals Council, 2021). According to the ABS (2016) there were 31 mining businesses in the LGA, with 15 % of the population employed in mining.



The region has in recent years experienced a prolonged period of **drought** that has negatively affected communities reliant on agriculture. Whilst above average rainfall and effects of La Nina saw drought conditions easing in 2020-2021, farmers are still impacted by lower commodity prices across NSW (Department of Agriculture, Water and Environment 2021). Extended drought conditions and large-scale bushfires have negatively affected agricultural communities in recent years (BOM, 2021).

As discussed in **Section 3.4** the region has been identified as an important site for renewable energy generation, with a range of wind and solar projects being proposed or developed as part of the Central-West Orana REZ.



3.5.2 Human Capital Summary

Human capital refers to the skills, education and abilities possessed by an individual or community, as well as the health and wellbeing of a community, and populations within a community that may be considered vulnerable or at risk. Shortfalls in human capital can greatly impact a community's adaptive capacity, i.e., the ability of the community to respond to change. The status of a community's human capital is assessed by considering population size, age distribution, education and skills, general population health and the prevalence of at-risk groups within the community.

The following provides a summary of the key characteristics of the study areas from a human capital perspective (for detailed information refer to **Appendix A**). Key to assessing the Proposed Modification's impacts related to human capital is an understanding of the population growth over the life of the Proposed Modification. Population growth predictions for the Mid-Western Regional LGA are depicted in **Figure 3.5**.



The **Mid-Western Regional LGA population** has been growing since 2006, with the LGA having a similar growth rate to NSW between the period of 2006 to 2016 (12.42 % to 12.45 % respectively). Population growth projections predict that the growth of the Mid-Western Regional LGA will remain consistent (9.69 % growth between 2016 and 2041); however, the growth predictions for the state of NSW for the same period are comparably higher (58.69 % between 2016–2041).

As outlined in **Figure 3.5**, the population is expected to age, with an increase in the proportion of those aged 65 years and over. Similarly, all study communities have an **older median age** than the NSW average (38 years), except for Bungaba (38 years) and Mudgee (37 years). Kandos and Rylstone have the highest median age with 52 and 50 years respectively.

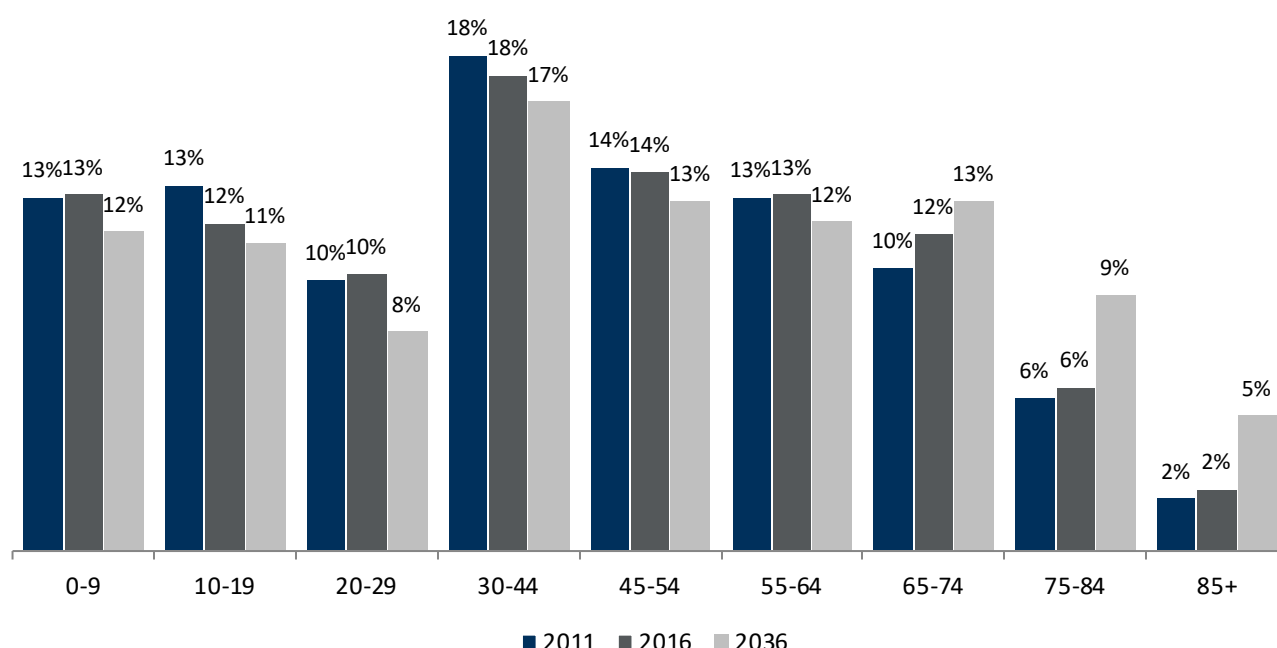


Figure 3.5 Mid-Western Regional Population Projections

Source: Umwelt - utilising data sourced from NSW Government Planning & Environment, 2016 New South Wales State and Local Government Area Population and Household Projections and Implied Dwelling Requirements.



All study communities have a higher proportion of **Indigenous population** than the state average (3%), with the exception of Ulan. Cooks Gap and Gulgong have the highest proportion of Indigenous Australian residents with 9 % and 8 % respectively. Across the LGA, the proportion of Indigenous population has increased since 2006.

There are lower levels of secondary and tertiary education across the communities in comparison to NSW. This may be due to historic employment in mining in the region, that has provided apprenticeship or traineeship opportunities resulting in a higher number of certificate level qualifications.



The most common field of tertiary study within the Mid-Western Regional LGA was engineering and related technologies (19.6 %), followed by management and commerce (13.6 %).



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 consuming more than two standard alcoholic drinks per day on average (15.5 and 21.9 ASR per 100 respectively).

Interestingly, a lower number of residents in the Mid-Western Regional LGA experienced barriers to accessing healthcare (3.9 ASR per 100 transport difficulties; 2.1 ASR per 100 barrier accessing health care) in comparison with NSW state (4.3 ASR per 100 transport difficulties; 2.5 ASR per 100 barrier accessing health care) (PHIDU, 2020).

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 high levels of skills. The LGA falls in the third decile compared with other LGAs within Australia, indicating an overall low level of Educational and Occupational advantage across the LGA (refer to **Figure 3.6**).

A comparison of the IEO SEIFA Index for each of the study communities indicates that Ulan, Bungaba, Cooks Gap, Kandos and Gulgong have particularly low status, falling within the lowest index decile, while Rylstone and Mudgee are slightly higher (but still well below average) in the third decile.

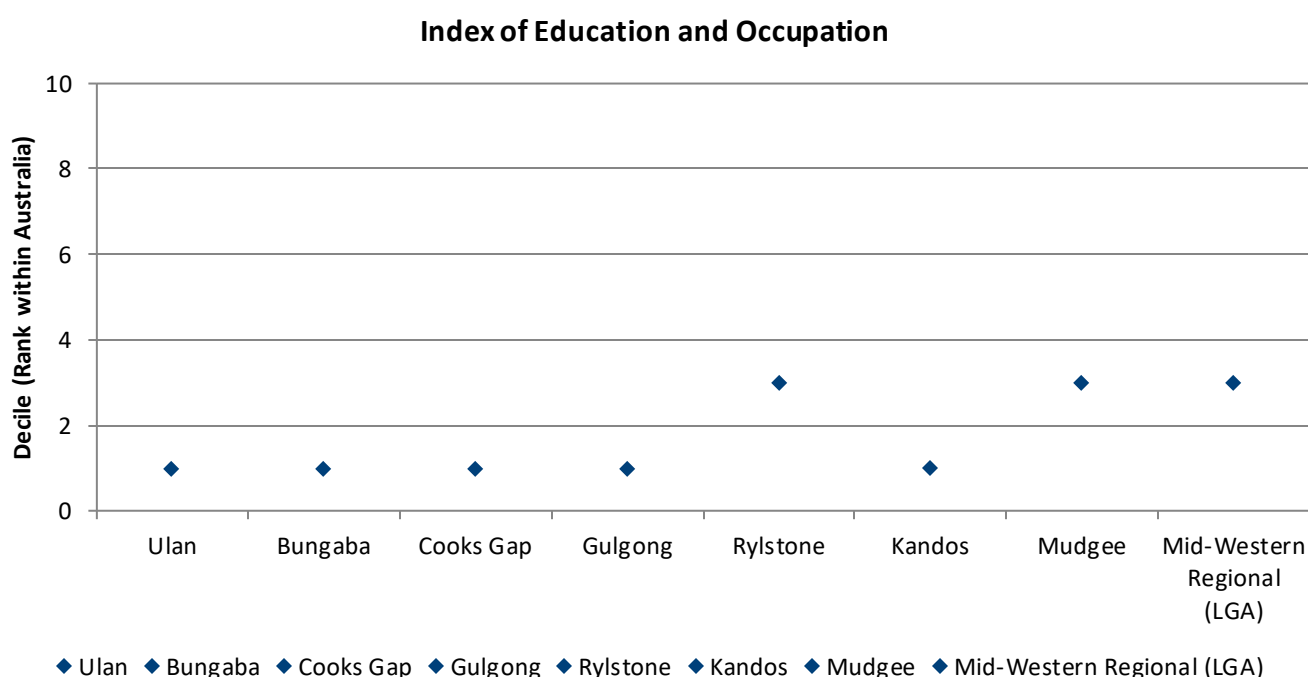


Figure 3.6 SEIFA Index of Education and Occupation

Source: ABS, SEIFA Indexes (2016).

3.5.3 Social Capital Summary

Social capital is the composition and social cohesiveness of a community, generally measured by a community's network of relationships between individuals, groups, organisations and institutions. Various indicators can be used to assess social capital, such as the level of volunteering, population mobility, crime rates, and the demographic composition of the community including the percentage of people born overseas and language proficiency.

The following provides a summary of the key characteristics of the study areas from a social capital perspective (refer to **Appendix A** for detailed data).

Family composition differs from NSW with the study localities generally having larger proportions of families with no children and single parent families. The exception is Ulan, which is reported to have lower than state average proportions of families without children and single parent families. However as previously noted, the data for Ulan should be interpreted with a degree of caution due to the small population size.



Across the LGA, and in Kandos, Rylstone, Mudgee and Gulgong, there are higher proportions of single or lone households compared to NSW. There are also lower proportions of family households across the study communities except in Cooks Gap and Bungaba.

Aside from Mudgee and Ulan, people within the study communities tend to remain living in their same place of residence, as indicated by low mobility rates in the last five years (as of the 2016 ABS).

With the exception of Cooks Gap, Ulan and Bungaba, the study communities had higher volunteering rates than the NSW average (18 %).



Sexual assault (202 per 100,000) and domestic violence related crimes (586 per 100,000) within the Mid-Western Regional LGA have increased over the past 5 years and remain higher compared to NSW (92 and 401 per 100,000, respectively) (BOSCAR, 2021), when The LGA had considerably lower rates of homicide, theft, drug offences and robbery, than the state average (7.9 to 26.2 per 100,000 population

respectively).

Figure 3.7 provides the overall socio-economic status and level of disadvantage within each community, as determined by the Index of Relative Socio-economic Disadvantage (IRSD) – a SEIFA score prepared by the ABS which ranks areas in Australia according to relative socio-economic disadvantage. A low score indicates a greater degree of disadvantage, with the lowest 10 % of areas receiving a decile of one, and the highest, ten.

A comparison of the IEO SEIFA Index for each of the study communities indicates that Ulan and Kandos, have particularly low status, falling within the lowest index decile, while Rylstone and Mudgee have the highest status (but still below average) in the third decile.

Compared with other LGAs within Australia, the Mid-Western Regional LGA exhibits an average level of socio-economic disadvantage, falling within the fifth decile.

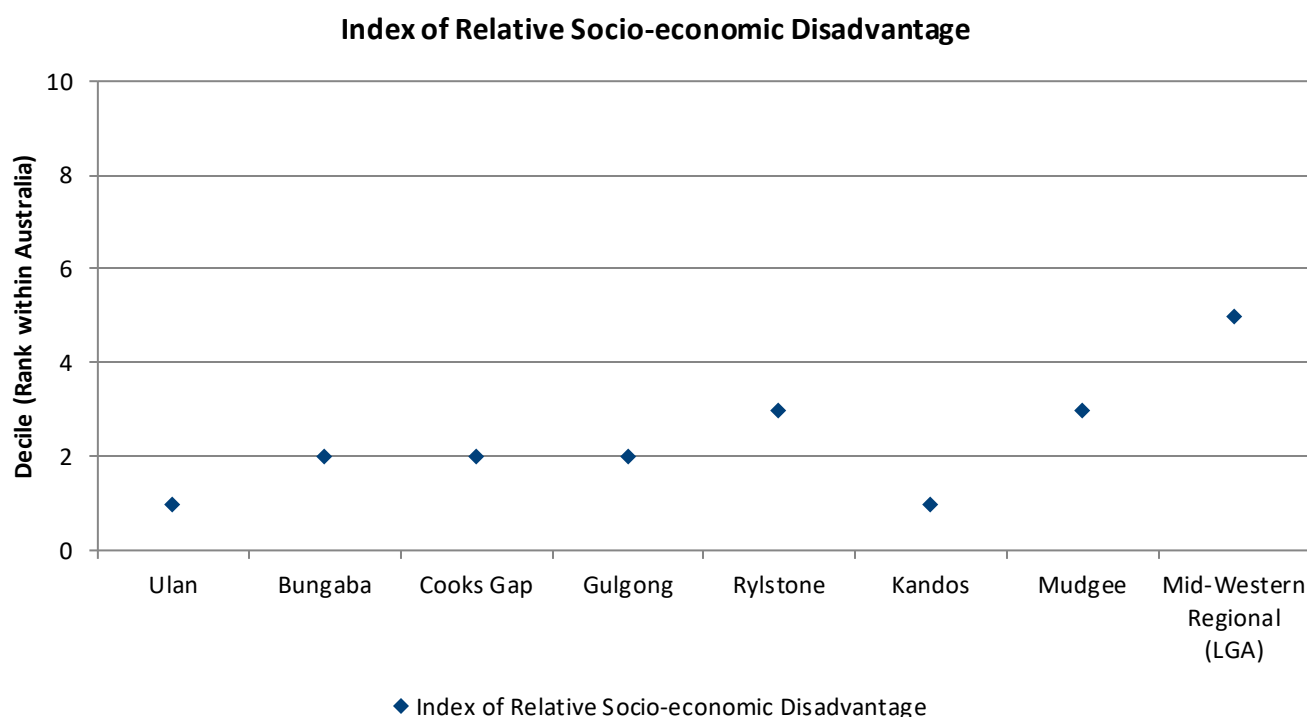


Figure 3.7 SEIFA Index of Relative Socio-Economic Disadvantage

Source: ABS, SEIFA Indexes 2016.

3.5.4 Economic Capital Summary

Economic capital refers to the economic and socio-economic indicators that underpin the financial stability of a community or township and the individuals that reside there. Examining a community's economic capital involves consideration of several indicators, including industry and employment, 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 study areas from an economic capital perspective (refer to **Appendix A** for detailed data).

In the Mid-Western Regional LGA there has been considerable variation in the unemployment rate however, there has been an overall decline between 2010 and 2022 (refer to **Figure 3.8**). More recently, the unemployment rate increased from 3.1 % in December 2019, to 4.7 % in December 2020, then decreasing to 2.4 % in December 2021. Based on the 2016 ABS data, unemployment rates are comparable to, or higher than, NSW (6.3 %) in all communities except Cooks Gap (4.3 %). These observations are consistent with an ageing population.

Kandos (16.5 %) and Ulan (12.5 %) had the highest unemployment rates in 2016. The unemployment rate for the Indigenous population for the LGA (15 %) is consistent with the NSW average (15.3 %), but higher than the ABS reported unemployment rate across the LGA (6.5 %).

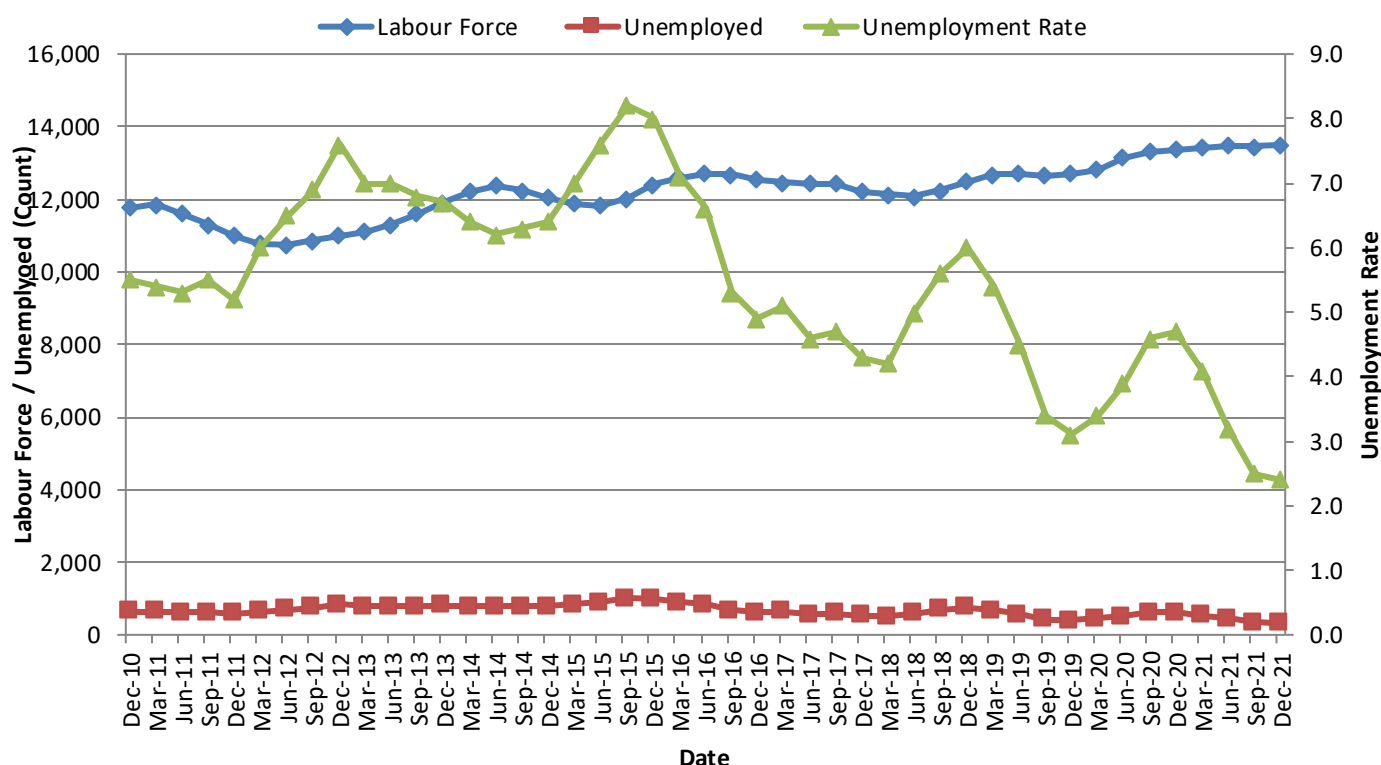


Figure 3.8 Mid-Western Regional LGA Unemployment Rate December 2010–December 2021

© Umwelt, 2022

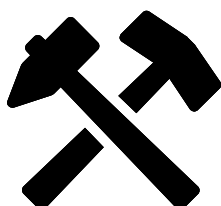
Source: *Small Area Labour Markets, Department of Jobs and Small Business, Australian Government (2022).*

All study communities have a lower) than state average median weekly personal income (\$664), ranging between \$417 to \$623.

Mudgee has the highest median monthly mortgage repayment of all the study communities (\$1,733 compared to \$1,986 in NSW), consistent with being the largest town in the study area. All other communities also have monthly mortgage repayments below the NSW average.



Median weekly rental costs across all suburbs are lower than the NSW average of \$380. Rental and mortgage costs have risen in the LGA between 2006 and 2016 (by 86 % from \$145 to \$270). Household income also increased during that same ten-year period (55 %). Living costs have risen at a higher rate than household income, resulting in a rise in the cost of living in the LGA (i.e., the proportion of the median weekly rent cost compared to median weekly household income).



Top industries of employment within the LGA include mining, retail trade, healthcare and social assistance and agriculture, forestry, and fishing (refer to **Figure 3.9**).

Employment in mining in the area has increased since 2006 and as of 2016 (ABS) represented approximately 15 % of employment in Mid-Western Regional LGA (refer to **Figure 3.10**). Between 2006 and 2011, the proportion of employment in mining doubled (7 % to 14 %).

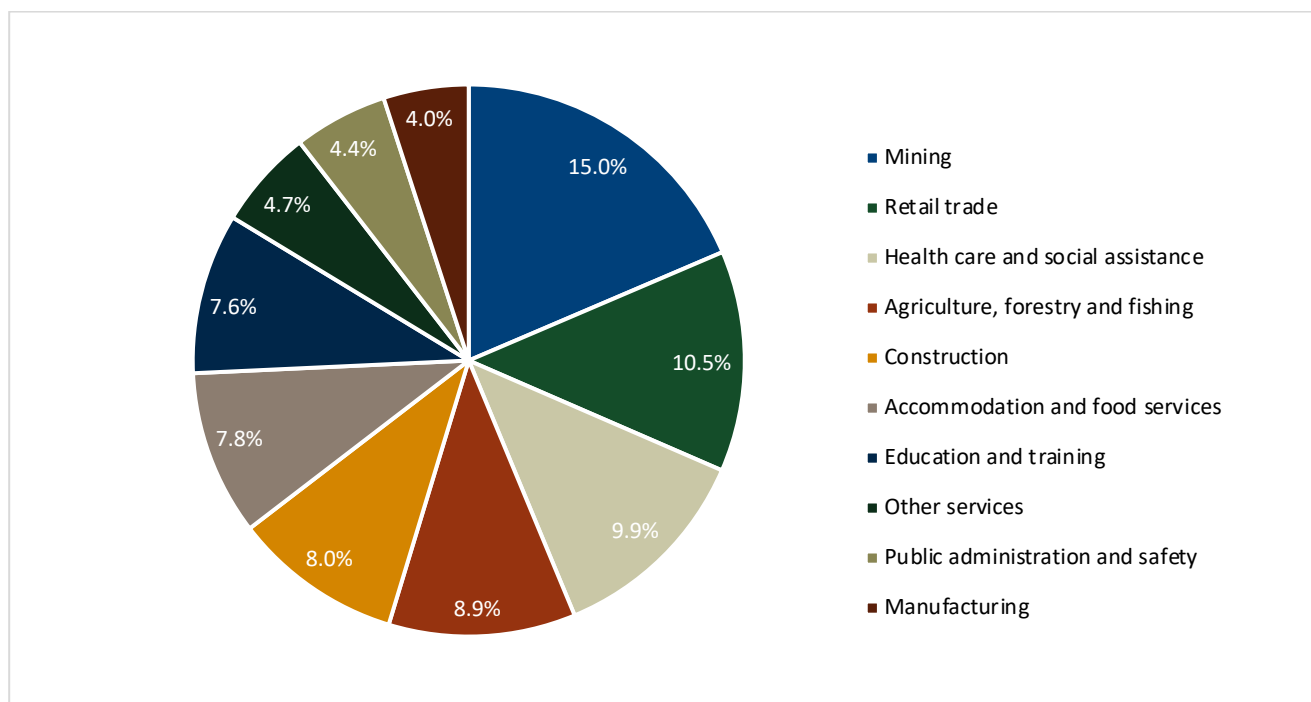


Figure 3.9 Top Ten Industries of Employment – Mid Western Regional LGA (ABS 2016)

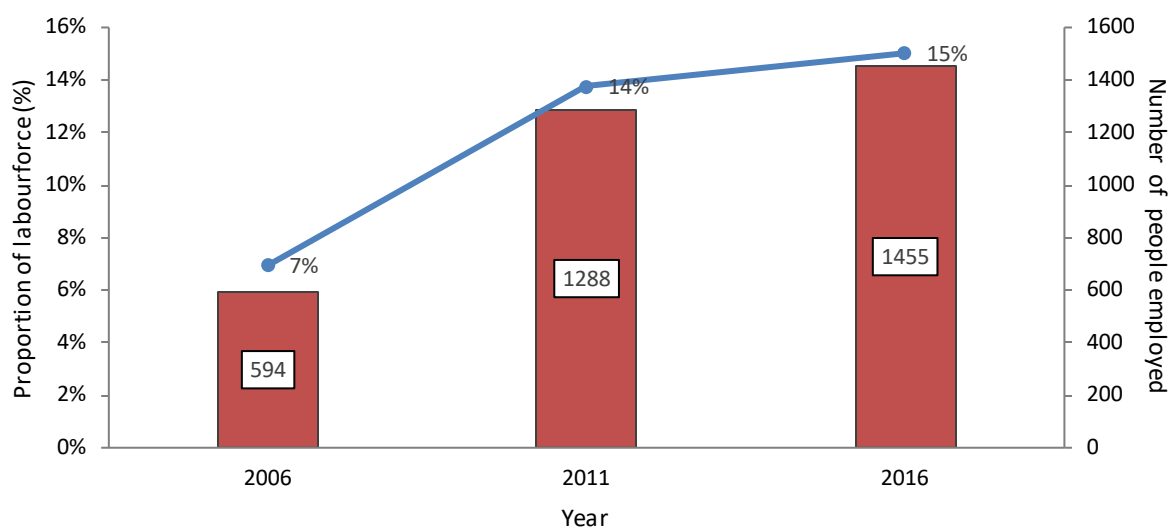


Figure 3.10 Labour force employed in Mining – Mid-Western Regional LGA

© Umwelt, 2020; ABS census (2006, 2011, 2016) – Community Profiles.

According to the NSW Mineral Council's 2020 Annual Expenditure Survey (NSW Minerals Council, 2021), mining represents over half of the Gross Regional Product (GRP) of the Mid-Western Regional LGA. Tourism is an important and increasing industry in the LGA. The Mid-Western Regional LGA attracts over 573,000 visitors each year through its viticulture, food, sporting and cultural events.

Across the LGA technicians and trades workers are the top occupation, followed by managers and professionals (refer to **Figure 3.11**).

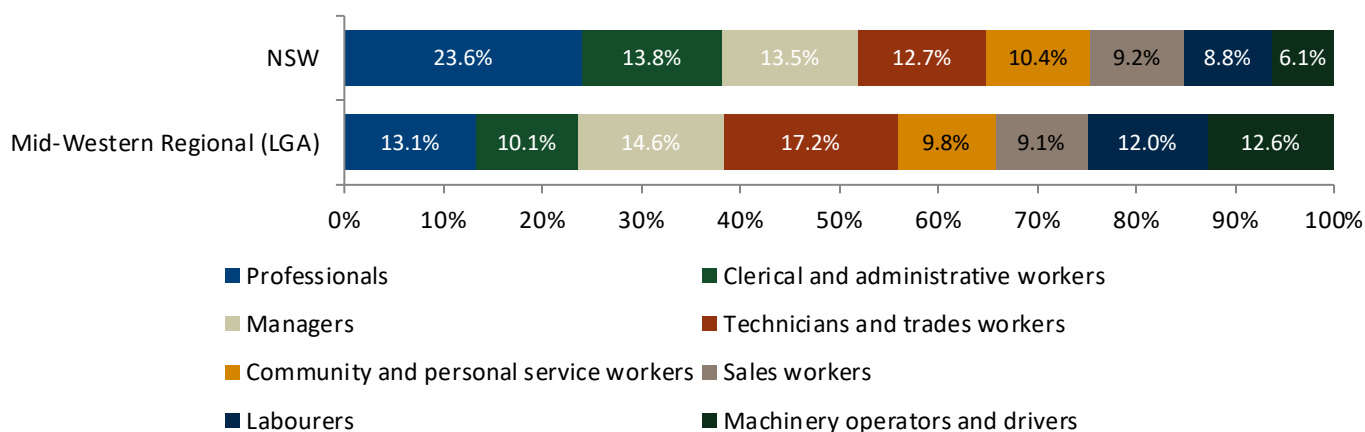


Figure 3.11 Occupations – Mid Western Regional LGA

Source: (ABS 2016).

The SEIFA Index of Economic Resources (IER) reflects the economic resources of households within an area and includes variables such as household income, housing expenditure (e.g., rent) and wealth (e.g., home ownership). A low score indicates a relative lack of access to economic resources in general, while a high score indicates greater access to economic resources.

When considering the communities within the social area of influence, Kandos is considered the most disadvantaged, whereas Cooks Gap is considered to have the highest access to economic resources (refer to **Figure 3.12**).

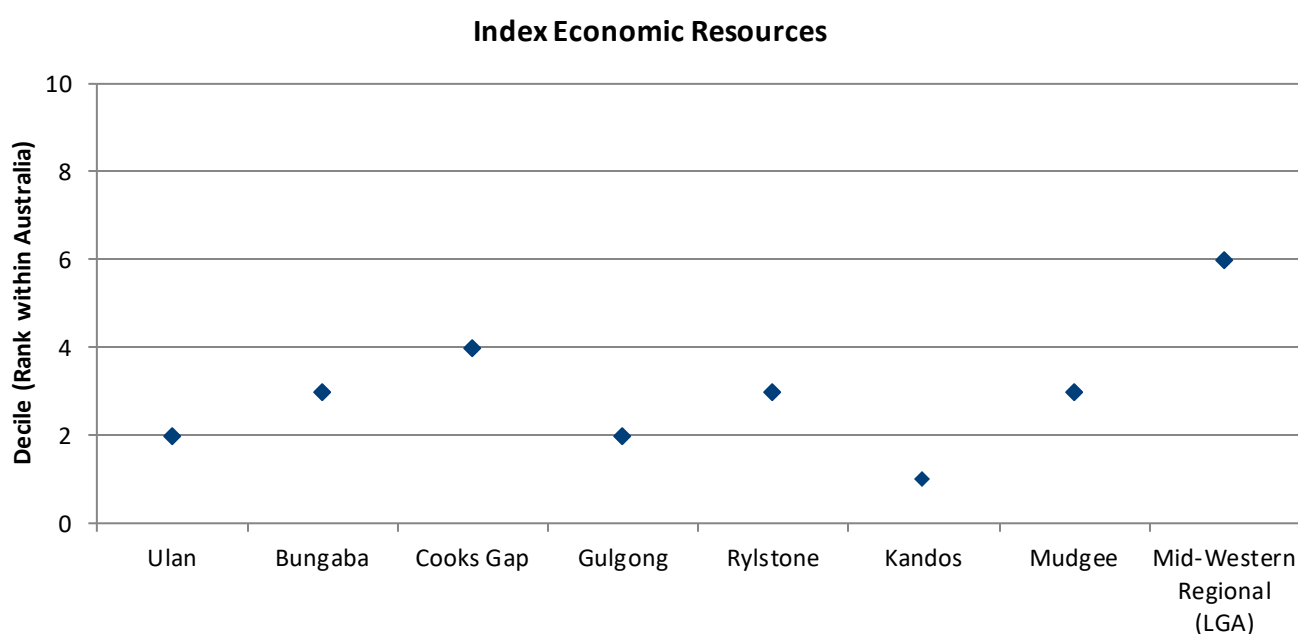


Figure 3.12 SEIFA Index of Economic Resources

Source: ABS, SEIFA Indexes 2016.

3.5.5 Physical Capital Summary

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

The following provides a summary of the key characteristics of the study areas from a physical capital perspective (refer to **Appendix A** for detailed data).

The Mid-Western Regional LGA has well-developed physical capital, with a number of recreational and open spaces, schools and four libraries (refer to Table 1.5 in **Appendix A**). There is considered sufficient primary and secondary educational facilities – one primary school for every 1,490 private dwellings and one high school per 2,610 dwellings. This is within the benchmark standards developed by the NSW Growth Centres Commission and the NSW Department of Planning for the provision of social infrastructure (Department of Planning and Environment, 2016).

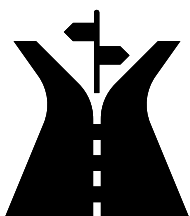


The study communities have experienced modest house price growth over the last eight years, with increased growth since 2017 indicating a general up-turn in the housing market within the Mid-Western Regional LGA.



Most of the study communities have lower proportions of rentals (0–29.3%) compared to the NSW average (31.8 %). Both Mudgee and Ulan were the exception to this trend with 36.5 % and 85.7 % respectively.

The current rental market has limited stock within the study communities (42 dwellings). Similarly, there are very few properties available for sale (179 properties) (realestate.com.au; accessed May 2022).



In general, the Mid-Western Regional LGA is well connected to the State via two main routes:

- the Castlereagh Highway - which connects the region to Sydney, and
- the Golden Highway – which connects the region to the Hunter Valley/Newcastle.

The Gwabegar railway line also runs through the Mid-Western Regional LGA, however, the portion of the railway between Kandos and Gulgong has not been operational for several years. Transport for NSW have been investigating reopening the line, with a feasibility study published in August 2020 outlining positive economic benefits. The project is now in the design and planning stage.



Public transport is adequate within Mudgee, but the smaller townships and villages have limited public transport. Major road upgrades on Ulan Road have made the area more accessible and safer to access by car.



The Mid-Western Regional LGA is underserved when it comes to health services. There are much lower rates of GPs and health specialists providing services in the region compared to NSW. However, the Mudgee Hospital has recently received a major redevelopment involving the upgrade of outdated facilities and inclusion of a new emergency department, in patient unit, operating theatres, maternity unit and a range of outpatient services including community, mental and occupational health (NSW Health, 2021).

3.6 Summary of Strengths and Vulnerabilities

The information contained in this profile section has been gathered from a review of secondary data sources, including the ABS and PHIDU, NSW Health, local government strategic and action plans, and State government department plans. This data has been used to provide a well-informed understanding of the social context in which the Proposed Modification is located, including the Mid-Western Regional LGA, and the townships of Ulan, Bungaba, Cooks Gap, Mudgee, Gulgong, Rylstone and Kandos. **Table 3.1** summarises the key strengths and vulnerabilities identified from the capital's assessment.

Table 3.1 Summary of Strengths and Vulnerabilities – Mid-Western Regional LGA and Study Communities

Theme	Strengths	Vulnerabilities
Natural Capital	<ul style="list-style-type: none"> The region is rich in minerals including coal, gold and silver Rich agricultural land including fertile land for viticulture Natural environment formally protected in several reserves Developing renewables zone. 	<ul style="list-style-type: none"> Area affected by flood and drought Potential for land-use conflicts Key industries are putting stress on water supply.
Human Capital	<ul style="list-style-type: none"> Increasing population Larger Aboriginal population (6 %), compared to the State average (3 %) Engineering and related technologies the top field of study Lower rates of people experiencing barriers to health care. 	<ul style="list-style-type: none"> Ageing population - the median ages for Kandos, Gulgong, Rylstone and Ulan were all significantly above the State mean age of 38 years A decreasing proportion of working age population (expected by 2026) Consistently low levels of bachelor's degree levels of study for all surrounding areas compared with NSW Similarly, low rates of year 12 completion Rates of asthma and obstructive pulmonary disease, obesity, excessive consumption of alcohol and smoking are all higher in the LGA than the State average Health services under pressure from increasing population.
Social Capital	<ul style="list-style-type: none"> Higher proportion of volunteering for all areas compared with NSW Lower rates of mobility (proportion of persons living at a different address five years prior). 	<ul style="list-style-type: none"> People in the study areas appear more isolated within their households with: <ul style="list-style-type: none"> Larger proportion of single parent families and families with no children Larger proportions of single or lone person households Large proportion of elderly families e.g. Bungaba.
Economic Capital	<ul style="list-style-type: none"> Diverse and growing economy Growing tourism and renewables industry Lower costs of living, including rental and mortgage rates compared with the State average The mining and agricultural industries are strong economic contributors and remain significant employers in the LGA. 	<ul style="list-style-type: none"> High unemployment in Gulgong, Mudgee, Rylstone and the LGA Increasing retirement age population leading to decrease in skilled employee base Potential for over dominance of mining industry Median personal income below NSW average, particularly in Kandos, Bungaba, Rylstone and Ulan.

Theme	Strengths	Vulnerabilities
Physical Capital	<ul style="list-style-type: none"> • Redevelopment of Mudgee hospital to provide better and more diverse health services • Higher than State average home ownership in Bungaba, Kandos, Gulgong and Rylstone • K-12 education infrastructure sufficient to attract young families to the region • Highways provide good connection throughout NSW, including major centres of Sydney and Newcastle. 	<ul style="list-style-type: none"> • No options for tertiary or higher education outside of TAFE in the LGA • Much lower ratios of GPs and specialists to population to service the LGA compared with NSW • The smaller surrounding towns are lacking in public transportation access • Transport infrastructure identified as requiring upgrade • Limited public transport across the region • Higher than State average levels of unoccupied dwellings.

4.0 Perceived Social Impacts

This section documents the likely and perceived impacts (both positive and negative) in relation to the Proposed Modification, as identified through engagement with key stakeholders and the community. Consultation occurred over two main rounds, with Round 1 undertaken during December 2020–January 2021 and Round 2 in December 2021–February 2022. A summary of the likely and perceived social impacts identified through the SIA is provided at **Figure 4.1**.

In addition, this section provides an evaluation of the social impacts identified in relation to the Proposed Modification utilising the methodology outlined at **Section 2.4** which assesses the anticipated changes to the current baseline social environment as a result of the Proposed Modification proceeding. A summary of the evaluation of likely social impacts is provided in **Section 4.11**.

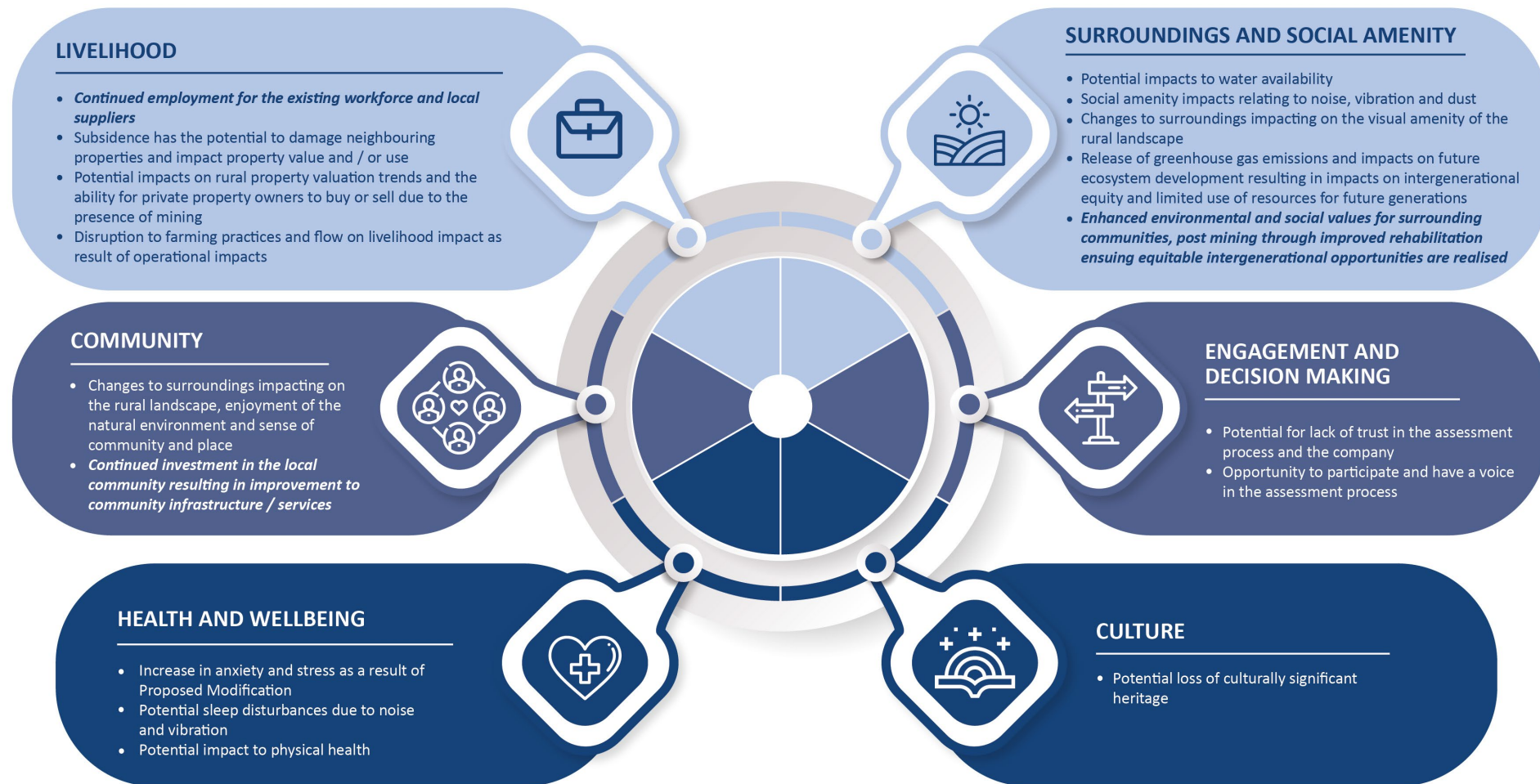


Figure 4.1 Summary of Perceived and Potential Social Impact

Note: Positive impacts are identified in italics.

4.1 Existing Operations and Perceptions of the Company

Prior to being asked their views specifically with regards to the Proposed Modification, participating stakeholders were asked to identify any issues or impacts being experienced with the current operations at UCC, with both positive and negative impacts raised during discussions.

Near neighbours and other stakeholders engaged during Round 1 of consultations were generally supportive of mining within the area, particularly the positive impact it has on the provision of employment for local people and ongoing economic contributions to the regional economy. The positive impacts in this regard provided by UCC were also acknowledged. However, it was also felt that mining operations did have some negative impacts specific to those landholders in close proximity to the operations.

All of the work for the locals and it's good for the economy. I am not against mining; I just don't like it near me. The current operation is not impacting me. – Near neighbour, Round 1

Normally pretty good, the employment is helpful but when it's in my backyard that is different. – Near neighbour, Round 1

I am not against mining; I just don't like it near me, but it is great for the economy and good for people to have jobs. – Near neighbour, Round 1

Don't have a problem with mining. I'm aware that it creates pollution, but we have to power the cities. As long as they are doing what is legal as of today. Australian ownership would be good to see though. The government should really be owning and operating the mines, but they don't. – Near neighbour, Round 1

Specific concerns about negative impacts were raised with regards to noise, groundwater, subsidence and property values/intergenerational equity. These concerns were also raised in relation to the Proposed Modification and will be further discussed in the sections below.

There's always negativity around neighbouring country to the mine e.g., devaluation of the land due to the uncertainty associated with the mine. Why would someone want to buy into our land, when they could go somewhere that there wasn't a mine? – Near neighbour, Round 1

Another unknown. What will happen with the groundwater? We have to go on the results of the monitoring that Ulan [UCMPL] do, and we have reasonable faith that it will be fine but future generations or buyers may not and we just don't know for sure despite the predictions. – Near neighbour, Round 1

Subsidence may impact the water. They don't have any facts or figures regarding the impacts, therefore there is the uncertainty of not knowing. – Near neighbour, Round 1

I talked to them about the value of the property, and Ulan tells me it won't be impacted, but how do they have the audacity to tell me that it won't be impacted? – Near neighbour, Round 1

During Round 1, one near neighbour noted difficulties dealing with UCMPL including an apparent lack of transparent communication and timeliness on resolution of issues.

I wish they would say what they mean and mean what they say

Just want honest and transparent [communication]

Treat your neighbours with dignity when they have a complaint just acknowledge it and address it – it shouldn't take months.

The 2018 and 2021 GCAA Community Perceptions Surveys (Umwelt, 2019; Voconiq, 2021) outlined at **Table 2.3** identified that the community were largely concerned with increased traffic and congestion related to mining activities in the region and impacts on Aboriginal heritage was also raised by the broader community. During the 2021 GCAA Community Perceptions Survey (Voconiq, 2021), a total of 64 % of participants disagreed that Glencore’s activities increase the amount of noise and 51 % disagreed that there is an increase in dust in their communities. Participants rated their overall trust and acceptance of Glencore’s operations as 3.4 and 3.8 out of five, respectively. Community members saw the strengths and opportunities in the relationship with Glencore, with 73 % agreeing that the social investment activities by the company have had a positive impact on the community, with 75 % also agreeing that Glencore’s activities will support the future prosperity of the region.

A total of 20 complaints were received for the UCMPL operations between January 2019 and December 2021. Of those, 15 were in relation to social amenity issues such as noise and air quality. Eleven were concerned about the noise impacts relating to general mining noise and the constant hum from machinery, with an additional four complaints in regard to air quality, including dust impacts from mine traffic, and odour emanating from the mine. Concerns surrounding exploration were directly related to the Bungaba exploration program occurring in 2021.

The number of complaints has remained similar across the three years, only seeing a slight increase in 2020 from six complaints to eight, to seven in 2021.

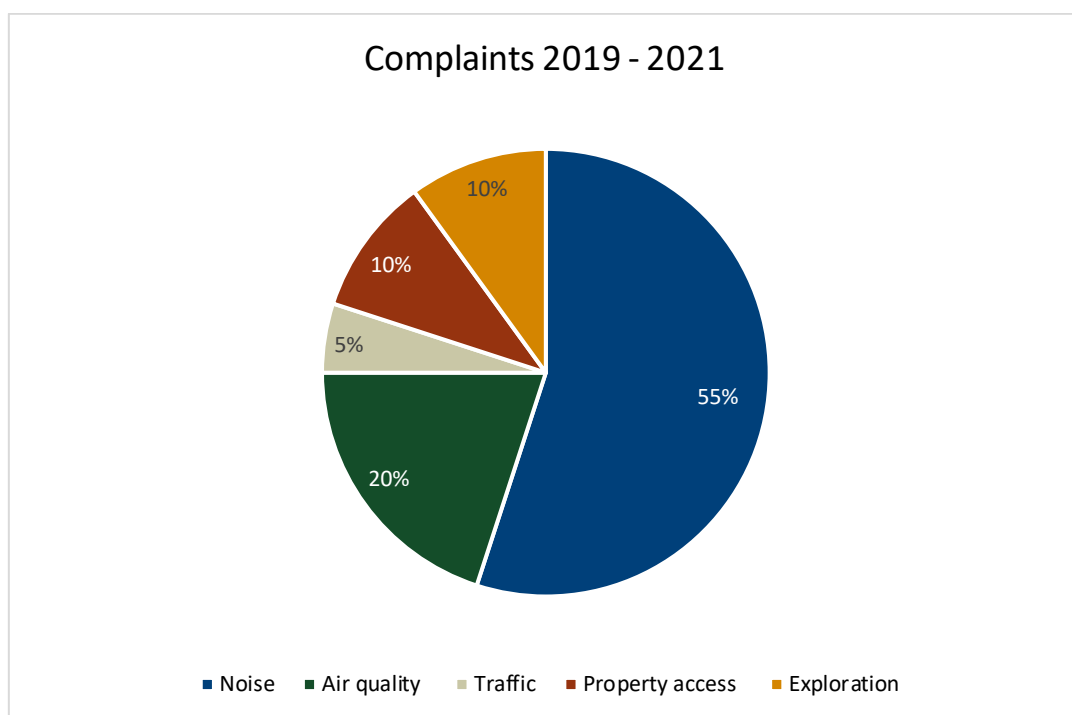


Figure 4.2 Complaints Received January 2019 – December 2021

Source: UCMPL 2022, compiled by Umwelt.

According to the 2021 GCAA Community Perceptions Survey (Voconiq, 2021), 69 % of participants who did lodge an issue in the previous 12 months were satisfied with how the issue had been dealt with and 51 % agreed that Glencore always tries to address concerns raised by the community.

4.2 Community

As outlined in the SIA Guideline, impacts to community can relate to change in community composition, cohesion, character, how the community functions, resilience, and people's sense of place, because of a project.

During engagement for the SIA, participants were asked about what they value about the area where they live and what they saw to be the key assets of their community. Stakeholders tended to focus on the social and natural capital present within the area. Also noting that the sense of community has developed around the agricultural and farming lifestyle of the area.

A good community. People are all in agriculture as their business, so we all have similar/familiar interests. I've lived here all my life and have known everyone since I was a kid. – Near neighbour, Round 1

Great area, good people, good farming land, it's a good spot. Great access to good quality groundwater.. – Near neighbour, Round 1

Because all the people, like any small country town it's just a good community. If you drive up the street you will know half the people, they will wave to you it's a good community like any rural community. In those smaller communities, people know you. – Near neighbour, Round 2

I love the rural amenity and lifestyle. – Service Provider, Round 2

The strong **sense of community** was reiterated by various stakeholders when considering the key strengths/assets of the community.

Small country town living tends to generate friendliness and a sense of community. It's the attraction of the area. We don't lock our house on the property. It's a friendly country life. It's the peace and quiet, you can't hear anything, and you can see the stars at night. – Near neighbour, Round 1

Great coming together of mining and community with great people that work together. – Service provider, Round 2

It's nice to be out and away from crowded cities and large towns. A little bit of isolation and we're not too far from places (either on the coast at Sydney or Newcastle). And the roads are getting better to make the trip easier. It's a quiet area to live in, only certain times have a lot of traffic - when people are going to and from work - so it's easy to get around. – Service Provider, Round 2

The close community. – Wider community, Round 2

Close farming community – we all help each other if needed – Near neighbour, Round 2

Multiple stakeholders also spoke favourably with regards to the availability of services and natural amenities.

Everything, sandy but good country. Rock faces. Wife likes bushwalking, photography. – Near neighbour, Round 1

We live in a private area – its nice quiet farming area. – Near neighbour, Round 2

Down on the river country – highly fertile land, highly suited to intensive agriculture. – Near neighbour, Round 2

In contrast to this, a number of stakeholders noted that they do not see any particular strengths within their local community.

We keep to ourselves, don't really associate with too many other people. – Near neighbour, Round 1

Not anything in particular. Not many people here. – Service provider, Round 2

We enjoy living on our property, but do not enjoy the human/social aspects of the area. – Near neighbour, Round 1

A number of the community members and near neighbours were also not specifically concerned about the Proposed Modification impacting the sense of community and place particularly as mining is already occurring at the operation. One local landholder commented on the potential impact of migratory workers changing the sense of community. Another was concerned with the increased industrialisation of the area changing the sense of place.

I don't live out there, but the mine is already happening so I can't imagine there will be a big difference. – Wider community, Round 2

Not much community in Ulan for it to impact. – Service Provider, Round 2

It was already a nice quiet area and now it's becoming industrialised. It's not the same, not quiet neighbours anymore – it was quite private. Our family has been on the property for [generations]. – Near neighbour, Round 2

It's a very strong rural community, all the people in the area are farming or winery. Employment – some of those people may live in the Hunter [Valley] and work here for a week and then leave. So you don't have a sense of community – whereas if they are working for a local business then you get friendly with them and get to know them – Near neighbour, Round 2

The area has a long history of mining. Mining has been occurring at the UCC site since the 1920s, with several other mining operations located in the area. As previously mentioned, there is no expected workforce change for the Proposed Modification. UCC (including Ulan Underground, Ulan West and Ulan Surface Operations) currently employs approximately 930 employees, over 90% of whom reside in the Mid-Western Regional LGA.

Proposed mitigation and enhancement measures in relation to the sense of community and place are outlined in **Table 4.1**.

Table 4.1 Proposed Mitigation and Enhancement Measures – Sense of community

Social Impact	Proposed Mitigation and Enhancement Measures
Impacts to sense of community / sense of place	<p>Ongoing engagement with local community and near neighbours as outlined in the UCMPL Stakeholder Engagement Plan to addresses community information requirements and preferences for engagement</p> <p>Continued contribution to the UCMPL Community Investment Strategy to facilitate investment opportunities in the local area</p>

Considering the above, impacts to sense of community as a result of the Proposed Modification are considered unlikely to occur, with a minor magnitude, resulting in a low social impact.

4.2.1 Community Sponsorship and Investment

The ongoing contribution to the community sponsorship and investment program was identified as a positive impact of the Proposed Modification and the presence of UCC more generally. Whilst some stakeholders engaged during both rounds of consultations were aware of UCMPL investing in the local community, many could not recall specific projects, groups or organisations. Others noted that whilst they were not aware of local community investment, this did not mean that this investment was not taking place.

Not anything in particular, but I have heard things on the radio. – Service Provider, Round 2

I hear of them, but don't take any notice – Near neighbour, Round 2

I can't think of many at the moment, but I know they give tens of thousands of dollars to the community. – Wider community, Round 2

Some stakeholders noted their support of the contribution UCMPL had been making within the community through particular programs, initiatives, groups and sponsorships.

The Max Potential program has been going for about 15 years and for the first maybe 5 years they [UCMPL] were big sponsors. The program is youth leadership program that involves students from local high schools in years 10 usually, and they are paired with a mentor from the community (Ulan have provided staff members) over a period of 6 months to learn leadership qualities. It is run by Club Mudgee. – Wider community, Round 2

Yes they have supported the community in many ways. Like I said they have supported the Carols. And I do know they support the Max Potential program. And every year they have a budget for community grants which is shared around. – Wider community, Round 2

Max Potential program. Pink Up Mudgee. 200 bails drought relief. – Service provider, Round 2

Wide range of community sponsorship for all areas – Service provider, Round 2

Can't knock them for that [their investment program], anything to help the community is good – Near neighbour, Round 1

Some stakeholders however did not believe that UCMPL's community investment and sponsorship is well targeted, rather it is unevenly distributed across communities and businesses, and ultimately seen as an attempt to *buy the community's* following:

I just see it as buttering up the community that's all. – Near neighbour, Round 1

If only local meant Bungaba. You only seem to refer to in town. Only see money/projects in town. Nothing to service us out of town. - Near neighbour, Round 2

They target and do things for Mudgee (40 km), and a little bit in Gulgong where the majority of people live that work there, but there isn't anything done at Ulan. There isn't even a public toilet. They could have something done at Ulan, they could do more in the future. I don't know what, but it could be thought about and looked into. – Service provider, Round 2

I think Mudgee is awash with coal money... It is an attempt by the coal mining industry to buy the community with small projects, which are nice to have, but it splits the community and is quite inconsequential. Long term legacy projects that respond to a community need are what is required. Ulan and the smaller localities should get together and identify what they need long term that will

benefit the community. Not annual grants of \$5,000, but creative and innovative ways to create long term sustainability. The smaller things do benefit, I don't want to down-play those, but they are really just a product of how the mines have operated over the last 30 years, it does not necessarily contribute to what the community really want. – Community group, Round 2

Sort of a positive impact for some local business – but larger businesses not so much. – Landholder, Round 1

One community group suggested a community forum to discuss the needs of the community together.

Give people time and a forum to brainstorm ideas together, involving landholders, community groups and council representatives. – Community Group, Round 2

During the 2021 GCAA Community Perception Survey, participants were asked about investment priorities. At the time support for the rescue helicopter services, disaster response and recovery, and mental health were identified as key priorities (refer to **Figure 4.3**).

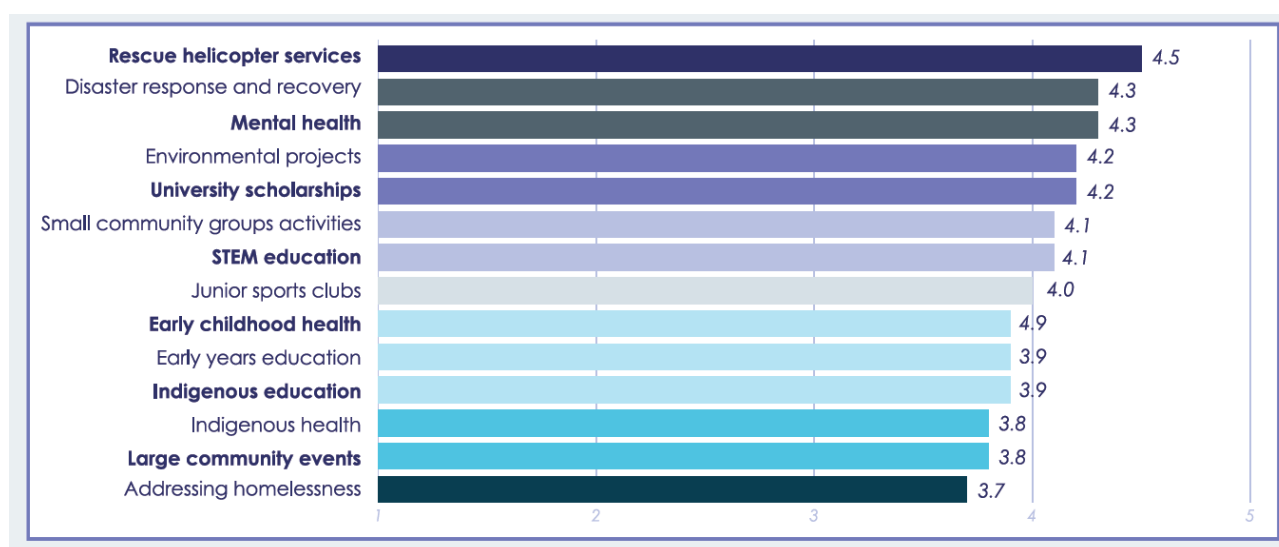


Figure 4.3 Community Investment Priorities – GCAA Community Perception Survey

Source: Voconiq (2021).

Glencore continues to partner with local organisations to promote sustainable development in education, health, environment, identified local needs and enterprise development (Glencore, 2022), for example, the now completed Mudgee \$ Doctors program attracted and retained 11 new General Practitioners to the region and funding was provided for the construction of Mudgee Orchard, a facility for women and children escaping domestic violence. The Mudgee Link program at Mudgee High School targeted year 9 participants to reengage in school, employment or vocational training and Glencore provided first year university scholarships to Mudgee and Gulgong school leavers.

The 2021 Ulan Coal Community Investment Program has seen UCMPL continue to contribute to a range of programs within the community including the Ulan Coal 2021 Education Grant, Max Potential, several Junior Sports Development Programs throughout the Mudgee region, Mudgee Fine Foods, Mudgee and Gulgong Shows, North East Wiradjuri Rock Art Protection Program, Mudgee PCYC, Ulan Complex Community Fundraisers and community support through Ulan Coal Mines Waste Reduction Initiative. These programs have been identified as local community priorities via a collaboration between Ulan Coal CCC Members and the Bungaba Progress Association The outcomes of which were used to direct community investment for the 2021 community investment program.

Between 2019 and 2021 Glencore and UCMPL contributed \$355,427 towards community investment projects. If the Proposed Modification is approved, UCMPL would continue to provide community investment for the operational term.

Proposed mitigation and enhancement measures in relation to community investment are outlined in **Table 4.2**.

Table 4.2 Summary of Mitigation and Enhancement Strategies – Community Investment

Social Impact	Proposed Mitigation and Enhancement Measures
Investment in the local community	<p>Continued investment in the UCMPL Community Investment Strategy with investment targeted in the communities surrounding the operation.</p> <p>Undertake a strategic review of current investment opportunities to ensure consistency with community values/needs. Consideration should be given to community-identified suggestions and priorities for investment (e.g., through engagement activities including 2021 GCAA Community Perception Survey and community group collaboration).</p>

The economic benefits of continued community investment as a result of the Proposed Modification, are considered likely to occur and of a moderate magnitude, resulting in a high positive social impact for the local area. For the wider LGA community this impact is considered to be likely to occur with a minor magnitude, resulting in a medium positive social impact.

4.3 Access to Services and Infrastructure

During the consultation activities there were mixed views regarding access to community services and infrastructure with some respondents noting existing pressures on services, particularly health services, while others identified their level of access to services and facilities as a strength of the area.

For example, when asked about the key assets and strengths of the community and the area in which they live, some participants particularly noted valuing the location and proximity to services and facilities.

I like the landscape, the close community, the variety of shopping (that's different to the city) and the peace and quiet. And all the facilities for sport that are available if you have children. – Wider community, Round 2

There are good sporting grounds (Glen Willow) where the different football codes play from time to time. The new art gallery extension is a good addition because they have temperature controls so they can attract very good arts shows which is something my wife and I are very interested in. – Wider community, Round 2

Similarly, when considering the key needs and challenges of the community some stakeholders did not see any with regards to access to services.

We have everything that we need. Its proximity to Sydney is great. – Near neighbour, Round 1

None, I'm happy the way it is. We have a school bus that comes past our back door. – Near neighbour, Round 1

No – nothing lacking – Near neighbour, Round 2

We have just had a new hospital [in Mudgee], I don't know of much. The size of the town it has all the stuff – it's a thriving town, real estate prices are increasing – Near neighbour, Round 2

Others however commented on the limited availability of services and amenities (particularly health services), and the need for road improvements.

Health Services - always need more medical staff, but who is going to pay them to come and work rural? – Near neighbour, Round 1

A public toilet [in Ulan] would be handy for those driving past. They all want to use the facilities at the pub, but won't spend money here because they say they are going to spend it somewhere else. – Service Provider, Round 2

More planes would be good as that would allow more specialist doctors to come to Mudgee so elderly people don't have to travel to Sydney or Dubbo, which they do at the moment. Planes were scaled back during COVID (understand that you can't expect the airline to keep it open, its only open now because the council support it). It is definitely a need but might not be an economically viable thing. The new hospital is great. – Wider community, Round 2

Road grading – road grading stops at the 'no through road' sign. Acknowledge that this isn't Ulan Coal's responsibility but is needed as it's a safety issue – Near neighbour, Round 1

Improvements in roads. Always pretty bad after rain, Council are doing the best they can but more could be done. – Wider community, Round 2

Roads are an issue – Near neighbour, Round 2

According to the 2021 GCAA Community Perception Survey 'comments suggest that the community in the Ulan region is observing increased traffic and congestion due to mining activities in their region. In addition, some commented on hazardous driving behaviour from some mine workers in general, including speeding' (Voconiq, 2021).

As identified in **Section 3.5.5**, the Mid-Western Regional LGA is currently under serviced for health services and is currently facing issues with road maintenance and road use. However, there are a number of State and local government initiatives that are seeking to address these issues. For example the Western NSW Health District has made plans to increase the number of rural GPs and rural generalist training roles offered across the district which, in conjunction with the redevelopment of the Mudgee Hospital, could potentially alleviate some of the identified capacity issues within the health sector (Health Western NSW LHD, 2020). In addition, a key focus area for the Mid-Western Regional Council's 'Towards 2030' Community Plan is to promote safe and efficient road use with minimal congestion (Mid-Western Regional Council, 2017).

In 2013, UCMPL along with Moolarben Coal Mines, Wilpinjong Coal Mines and the Mid-Western Regional Council developed the Ulan Road Strategy which provides for the upgrade and maintenance of Ulan Road between Mudgee and the entrance to the underground surface facilities at the UCC over the next 21 years (UCMPL 2020). In addition, UCMPL have implemented a Voluntary Planning Agreement with the Mid-Western Regional Council to assist in the provision of local infrastructure and services and maintenance of Cope Road.

Increased stress on infrastructure, services and facilities and resulting reduced access for the community, are predominantly associated with changes to population from an additional workforce influx to the area. As the Proposed Modification is not expected to result in any additional workforce, it is not expected that the Proposed Modification will specifically cause additional stress on existing infrastructure and services and is considered a low social impact (unlikely/minimal). Similarly, the Proposed Modification is considered unlikely to cause any additional health and safety concerns relating to driver behaviour on local roads, and is considered a low social impact (unlikely/minimal).

4.4 Livelihoods

Livelihood impacts relate to people's capacity to sustain themselves through employment or business, when they experience financial disadvantage, as well as the distributive equity of impacts and benefits resulting from a project. In relation to the Proposed Modification, key perceived livelihood impacts raised by participants related to:

- continued/sustained employment for workers
- property value and damage
- impacts on farming practices and land use for near neighbours.

4.4.1 Property Values and Damage

During engagement activities, community members indicated that they perceived that the increased presence of mining operations in the locality could potentially make selling homes more difficult and cause property values to decrease.

Subsidence, and potential damage to property, was noted as a negative impact associated with the Proposed Modification. Some nearby landholders held specific concerns relating to the impact it would have on residential housing. Multiple other stakeholders were concerned about the impact subsidence would have on the landscape, farming infrastructure and personal safety.

Yes – concerned about the impacts to the house and the impacts to paddocks, fences and sheds [as a result of subsidence]. – Near neighbour, Round 2

Impact to property (land) from subsidence and impacts to family and stock safety due to subsidence – Near neighbour, Round 1

Concerned about subsidence. Don't want to be out bushwalking or have stock that will fall down a crack. – Near neighbour, Round 1

Subsidence impacts won't be near my house, but concerned about the impacts to the landscape and farming practices if it subsides – Near neighbour, Round 2

Not going to affect me at all. Unless some shaking of the ground cracks and breaks brickwork. – Service provider, Round 2

Whilst one stakeholder noted subsidence 'shouldn't be too much of an issue', another also noted their concern about the impact subsidence would have on the ability of landholders to sell.

If they want to sell, any potential buyer will look at the damage and they won't be able to sell. – Community group, Round 2

Similarly, community members also noted concerns about the potential for a decline in property values due to mining operations which were reiterated by local landholders.

Concerned about that – who wants to buy a farm that’s near a big coal mine – Near neighbour, Round 2

I wouldn’t want to buy a property with a mine underneath it – Near neighbour, Round 2

That is a concern because if we have still have water the value won’t change but it’s a perceived value, people don’t want to buy land near a mine. Land values are going up, and it’s becoming a larger investment, and people don’t want to buy with any uncertainty. People want security and certainty. They won’t want to buy with that level of uncertainty. That’s just a fact. – Near neighbour, Round 2

You cannot change people’s perception of uncertainty. The mine will just dismiss it, it’s not something they have to deal with its something I have to deal with. They are still making billions. – Near neighbour, Round 2

Serious concerns we are not able to sell and move on (we are stuck). – Near neighbour, Round 2

Property access and security was an issue for some near neighbours in relation to UCMPL accessing their properties.

... once you allow access, you have basically given people the ability to come on your land for [a long time] – basically you’re imposing this impact on future generations. They ring and get permission and all of that before they come on the property, but we would rather just wake up and there was no one wanting access. – Near neighbour, Round 2

The Proposed Modification will result in a change to the dimensions of the approved longwalls and subsequently, changes to the current predicted subsidence impacts. A subsidence assessment has been undertaken for the Proposed Modification, with the approach to estimating the subsidence effects incorporating the outcomes of extensive monitoring and site experience over more than 40 longwall panels at the UCC.

Over most of the Proposed Modification extension areas, vertical subsidence is expected to be less than about 1.8 m for a 3.0 m mining height, with maximum subsidence typically in the range of 1.3 to 1.7 m. Maximum vertical subsidence of up to 2.1 m is forecast for the shallowest areas of the Proposed Modification extensions. The shallowest areas are located above the northern ends of Longwalls 11A and 12A.

Maximum vertical subsidence of up to 1.9 m is forecast for the Mona Creek valley above Longwalls W9 to W11, where the overburden depth is approximately 145 m and includes up to 20 m of colluvium at the surface in this depth.

Strain and surface cracking was noted as an issue of concern for a particular landholder. Tension cracks are expected to be most perceptible in the vicinity of edges of the panels, at the start of each panel and at the top of steep slopes and sandstone cliff formations that are directly mined below. The majority of mining panel edges for the Proposed Modification are beneath UCMPL owned land, with the exception of Ulan West Longwalls 11A and 12A, where one additional private landholding will be undermined by the additional underground mining area that was not previously within approved mining areas.

Impacts to areas of land not owned or leased by UCMPL above the Proposed Modification longwall extension areas, are expected to be minor and generally imperceptible and are expected to be manageable via provisions of subsidence management plans for private property, public safety, built features and water.

The subsidence assessment has recommended an ongoing subsidence monitoring program to monitor and address any issues.

It is difficult from a social impact perspective, to specifically ascertain the risks of the Proposed Modification on property values, and the direct impacts of the operation, however recent assessments of property values (TEW Property Consultants, 2019), for other mining project assessments e.g., Mangoola Continued Operations Project (MCOP EIS/SIA), indicate that while there is evidence to suggest that detrimental impacts on property prices may occur as a result of mining operations, impacts appear to be limited to the areas where factors such as noise and air quality exceed environmental standards and criteria, thus necessitating acquisitions by the relevant company under the Voluntary Land Acquisition and Mitigation Policy (VLAMP) for State Significant Mining, Petroleum and Extractive Industry Developments (NSW Government 2018). Given the Proposed Modification is an underground mine, it is expected that these impacts will be minimised.

A review of property prices in the area surrounding UCC suggest that property prices have been increasing. For the 2850 postcode, which includes Ulan, property prices have seen an overall median increase from May 2009 from \$340,000 to \$632,000 in January 2022 (SQM Research, 2022). Over a 10-year period, this represents a 5.1 % per annum increase. The NSW Valuer General Report on NSW Land Values (NSW Government Valuer General, 2020), states that in the 12 months prior to 1 July 2020, rural land values for the Central Tablelands saw an increase of 4.9 %.

Impacts of the Proposed Modification on property damage from subsidence are considered:

- *Possible* to occur with a *minor* magnitude, resulting in a **medium social impact** for four private landholdings.
- *Unlikely* to occur with a *minimal* magnitude for wider community members, resulting in a **low social impact**.

Any potential impacts of the Proposed Modification on property values relative to approved operations would largely be limited to the extension of the mine life for an additional two years and the movement of underground operations into a new area. Considering property data trends for proximal residents and residents in surrounding suburbs, impacts to property values from the Proposed Modification are considered unlikely, with a minor magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures in relation to property impacts are outlined in **Table 4.3**.

Table 4.3 Summary of Mitigation and Enhancement Strategies – Property Impacts

Social Impact	Proposed Mitigation and Enhancement Measures
Property damage caused by subsidence	Continued subsidence remediation and monitoring programs to manage potential subsidence impacts. Provision of subsidence monitoring outcomes to affected landowners.
Decline in property values (due to mining operations)	Ongoing contributions to the Ulan Coal Community Fund. Communication and engagement with landholders regarding subsidence impacts.
Decreased property security and increased property access	Communication and engagement with landholders regarding property access. Land Access Agreements negotiated with landholders contain access and security provisions as agreed with the landholder (e.g. Ulan Coal must provide the agreed notice via the agreed communication method prior to entry. Ulan Coal have previously used combination locks to maintain property security during the term of the access agreement as agreed with the landholder. Ulan Coal are only to access the agreed work areas and via the agreed paths of entry as per the access agreement).

4.4.2 Continued Employment

The continued employment of the mining workforce was seen as a positive impact of the continued operations by multiple stakeholders, with three service providers noting the positive impacts this would have on their business, and other small businesses within the area.

Positive impact for our business – Service provider, Round 2

Continued support of small business in area - Service provider, Round 2

That is an issue for me because now our business relies on a lot of the mine workers so if the mine closes downs so will our business. If there is no mine workforce there is no community. We would like the mine to continue on. – Service provider, Round 2

In addition, one local community member saw the benefit of continued employment within the mining industry, however some stakeholders suggested that there would be continued employment within the town, regardless of whether mining was to continue.

Yes, very keen to for mining to continue in the long term in Mudjee. My husband and two sons are employed in coal mining. It has been our income for many years, and I think it has been great for Mudjee and employment opportunities in the community. – Wider community, Round 2

If the mine wasn't there, people would have other employment. Of course, they [UCMPL] are employing people, but the world won't stop just because those people aren't working at the mine. There is other work out there if people want it, its not like they are saving the town by employing people – if it wasn't there people would do other. It's a positive but not that huge. – Near neighbour, Round 1

The strength of the Mudjee community is in its versatility. There are so many parts of Mudjee, so it's not reliable on one industry alone. There is tourism, fine wool, mining. Even when 500 people didn't have a job when the abattoir shut down (plus 200 associated jobs in the broader community) [Mudjee] didn't even feel a ripple because there are so many aspects to it. You can walk out of one job and into another. It isn't reliant on one industry alone. – Wider community, Round 2

Whilst there are no proposed changes to the workforce or operating hours under the Proposed Modification, the proposed extraction of an additional 25 Mt of product coal will add an additional two years to the mine life seeing the continued employment of the current mining workforce.

As previously mentioned, UCC currently has approval to employ up to 930 employees. Over 90 % of current employees reside within the Mid-Western Regional LGA.

An economic assessment has been conducted for the Modification Report. The Proposed Modification has been assessed to provide a net benefit to NSW, estimated to be \$315.7 million in net present value (NPV) terms. The Local Effects Analysis also shows an estimated net benefit of \$45.2 million to the Lithgow-Mudjee region in NPV terms. This is driven largely by:

- benefits to local workers of \$15.4 million in NPV terms, as most of the employees at the UCC live around the Lithgow-Mudjee region
- benefits to local suppliers of \$29.8 million in NPV terms, based on the assumption that 19 per cent of the inputs to production are from the region.

Considering the above, continued employment for the mine workforce and flow on economic contributions is considered:

- *Likely* to occur with a *moderate* magnitude for existing employees, contractors and suppliers, resulting in a **high (positive) social impact**
- *Likely* to occur with a *minor* magnitude for local businesses and the wider community, resulting in a **medium (positive) social impact**.

Proposed mitigation and enhancement measures in relation to employment are outlined in **Table 4.4**.

Table 4.4 Summary of Mitigation and Enhancement Strategies – Employment

Social Impact	Proposed Mitigation and Enhancement Measures
Continued employment for the mine workforce	Continued employment of local workforce and procurement of contractors/suppliers

4.4.3 Impacts to Farming Practices

The potential for impacts on farming practices was identified as a concern for local landholders and residents. These concerns were centred around water access and the impacts of subsidence (which are further discussed in **Section 4.5.1** and **Section 4.4.1** with landholders stating that these impacts could cause flow-on effects to how they farm and could in turn impact on them financially. One survey participant (Round 2) stated that any activity of the Proposed Modification *has potential to increase obnoxious weeds, animal stress and create disturbance* to their farming practices, specifically if property access is required.

Concerned about the impact of subsidence on fencing and stock going down cracks and water supply – Near neighbour, Round 2

This is my main concern – if I run out of groundwater then I will be out of business in two days. There isn't much surface water around so we are dependent on groundwater for our livelihoods. I run cattle on my property. – Near neighbour, Round 2

An Agricultural Impact Assessment (AIA) was prepared by Minesoils in accordance with the Strategic Land Use Policy for Agricultural Statements (NSW Department of Trade, Investment, Regional Infrastructure and Services, 2012). The AIA identified potential risks to agricultural production including the decreased productivity of agricultural land including potential impacts on water and other potential impacts. The AIA concluded the Proposed Modification would have a low-risk impact to agricultural resources, and it is not anticipated to have any impact on existing agricultural enterprises within the Project Area and broader region.

In addition, as further discussed in **Section 4.4.1** the Proposed Modification is not expected to impact on access and use of ground and surface water for near neighbours.

Considering the above, impacts to farming practices are considered *unlikely* to occur with a *minor* magnitude, resulting in a **low social impact**.

4.5 Surroundings and Social Amenity

As outlined in the SIA Guideline, impacts to surroundings include ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity.

For the Proposed Modification the perceived or potential surroundings and social amenity impacts relate to:

- access and use of water – groundwater and surface
- impacts to social amenity from noise, air quality/dust and visual impacts
- land management and final landform.

4.5.1 Water

Impacts relating to the quality and access to groundwater and surface water, was raised as a key concern during both rounds of consultation, amongst various stakeholder groups. Concerns related to the potential of the Proposed Modification to reduce access to bores and surface water (e.g. dams), particularly in relation to farming practices. In addition, concerns were raised about the potential impacts to local waterways including the Talbragar and Goulburn Rivers.

We have struggled through the drought to keep water. I have spoken to others who have put a bore in and it has dried up. Concerned about the same thing happening here – Near neighbour, Round 1

This is my major concern. There is a hole 1 km from my place, they will be drilling. I think it's called a dewatering station, about 1 km from where my groundwater comes out. Concerned about losing access to ground water from my bores. – Near neighbour, Round 2

We need certainty about the quality of available water. We use the water for farming and household. Bores and dams on the property - Near neighbour, Round 2

If they suck out the groundwater there's the possibility, it's going to run me out of groundwater. I'll have over 3,000 head of cattle without water. Our dams are solely dependent on groundwater. I am not sure that the studies they do are conclusive. – Near neighbour, Round 1

Will there be any losses to the Talbragar River? No one knows what will happen. You think you know what will happen (modelling/predictions) but you don't. I am less than one kilometre from the river. – Near neighbour, Round 1

Concerned with it drying up and lack of accountability by Ulan Coal – Near neighbour, Round 2

Local landholders were also concerned about the impact a reduction in groundwater would have on their livelihoods and way of life, both now and in the future. This was also seen to have intergenerational impact for future generations. Access to water was seen as particularly important to maintain farming livelihoods and given recent drought conditions.

It's the same with the groundwater, more mining activity in the future may have so many unknowns. My son might say to me 'Dad, why did you let that happen?' We have water at the moment, through our irrigation licence and bores, but what if I wanted to sell? Would someone want to buy if they weren't certain that they could access the water? – Near neighbour, Round 1

It's the long-term effects. We have to think about [the future generations] who will live there but we don't know what the impacts will be long-term if we say yes. How can we make that decision for them? – Near neighbour, Round 1

Concerned that could waste money if were to put a bore in, as mining operations may cause the groundwater to reduce. Want to know more about the agreements/compensation that would be in place to prevent this. – Near neighbour, Round 1

Stakeholders suggested a number of potential mitigation strategies to ensure local landholders have continued and uninterrupted access to groundwater.

Water agreement with Ulan Coal to say that if there is any impact to ground water access then they need to provide an alternative source of water, e.g. a pipeline in case of emergencies. – Near neighbour, Round 2

Water security agreement. To have some peace of mind – Near neighbour, Round 2

A detailed Groundwater Impact Assessment has been undertaken for the Proposed Modification. Groundwater modelling indicates that minor incremental drawdown impacts are predicted for two private bores (up to 0.18 m) already impacted by the approved operations.

The currently approved Groundwater Management Program outlines a monitoring program to collect groundwater levels and quality measurements and allow actual impacts to the local groundwater system to be compared against those identified in the environmental assessments. This program will continue to be implemented to monitor and manage any impacts due to the Proposed Modification. In addition to the groundwater monitoring network, annual voluntary monitoring of groundwater levels and water quality for privately owned bores within the area is undertaken. This monitoring program extends to approximately 12 kilometres away from the approved mine footprint.

If an exceedance of any groundwater impact assessment criteria is identified, then the Surface Water and Groundwater Response Plan is activated. In the event of loss of yield to privately owned bores, UCMPL will develop and implement a remedial action plan which may include increasing the monitoring frequency for the bore, provision of an alternative water supply for existing usage (if UCMPL operations are found to be the cause of depressurisation), lowering or replacement of borehole pump, or replacement of the entire bore if required.

A Surface Water Impact Assessment was also prepared to assess the key surface water interactions of the Proposed Modification. This assessment noted that the Proposed Modification is not expected to have an impact on basic landholder rights as predictions show no change to baseflows in Mona Creek. The potential surface water take and downstream impacts following subsidence in watercourses and out of channel areas is expected to be negligible within the closest neighbouring private property and all other neighbouring properties.

Considering the above, impacts to water access and use:

- For near neighbours is considered *unlikely* to occur with a *moderate* magnitude, resulting in a **medium social impact**.
- For water users in the wider community is considered *unlikely* to occur with a *minor* magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures related to water use and access are outlined in **Table 4.5**.

Table 4.5 Proposed Mitigation and Enhancement Strategies – Water Access and Use

Social Impact	Proposed Mitigation and Enhancement Measures
Impact to water access and use (surface and groundwater)	<p>Continued use of subsidence remediation methods and associated erosion and sediment control measures and monitoring programs to manage potential subsidence impacts on watercourses.</p> <p>Continuation of the annual private bore monitoring and expansion of monitoring network if requested.</p> <p>Implementation of the Surface Water Groundwater Response Plan where impacts are identified.</p> <p>Reporting of groundwater monitoring results annually in the Annual Review.</p> <p>Update of the Water Management Plan (and sub plans) to accommodate the Proposed Modification. Continued implementation of the Surface Water and Groundwater Trigger Action Response Plans.</p> <p>Agreement of a monitoring program for private bores with potentially impacted landholders, and agreement of an alternative water supply agreement where required (already a consent condition of the existing mine project approval).</p>

4.5.2 Social Amenity – Noise

Social amenity impact from noise was raised as a point of interest by stakeholders, in particular the noise emanating from surface infrastructure for near neighbours.

We are going to have a couple of air vents near our boundary – don't know the impact of the noise.
– Near neighbour, Round 2

What will the noise be like? I don't know anything about decibels? – Near neighbour, Round 1

Not to me personally, but others in the house hear buzzing or monotone noise from the vents. –
Near neighbour, Round 2

Uncertain about what the noise impact will be from the new vent shafts – Near neighbour, Round 1

Noise impacts from traffic and transport infrastructure was also noted by residents, community groups and service providers as an issue of concern. As the Proposed Modification will see an extension of project life for two years, it was noted that this would see a continuation of existing noise impact from traffic and transport.

Security trucks drive out the road at 1:30 am and you get up to see who is here as it's a no through road – don't want security or monitor trucks coming along the road late at night – Near neighbour, Round 1

The continued noise will be less from the construction and extension of the longwalls, but rather will be more above ground noise from the coal trains heading to Newcastle for an additional two years. It will be more of the same as we experience now and we don't need that. – Community Group, Round 2

We can hear trucks on the highway at night, its 4-5 kms away. With the inversion and a still night, so I won't know what the fan will be like. They go off the Australian standards, but I want to know what it sounds like in night – that's the unknown. Some people can hear the trucks reversing. That would drive you to the edge. – Near neighbour, Round 2

When we purchased it was very quiet and private, now it feels like Glencore is taking over our own property. – Near neighbour, Round 2

Some stakeholders held no concerns regarding noise impacts from construction and continued operations.

It is important, but I think it would be minimal. There is very little housing around there and properties are spaced apart. Don't think there would be much more impact than there is already. – Wider community, Round 2

At the moment I don't have any impacts from noise, and I don't think that will change. But can see it would be a concern for some. – Near neighbour, Round 2

It doesn't bother me. We have noise from workshops, trucks going past the main road. – Service Provider, Round 2

A Noise Impact Assessment has been prepared to assess the potential noise impact of the Proposed Modification. Noise levels were predicted for both the construction and operational phases. The assessment indicated that:

- the construction phase activities are temporary and will only establish the surface infrastructure for the Proposed Modification
- construction activities undertaken during standard construction hours (i.e., Monday to Friday 7 am to 6 pm, Saturday 8 am to 1 pm and no work on Sundays or Public Holidays) will comply with the Noise Management Level (calculated according to the NSW Interim Construction Noise Guideline) of 45 dB(A) during standard meteorological conditions.
- construction activities undertaken outside standard construction hours (during evening and night) could exceed the Noise Management Level of 35 dB(A) during standard meteorological conditions at one receiver location
- construction activities undertaken outside standard construction hours (during evening and night) could exceed the Noise Management Level of 35 dB(A) during noise-enhancing meteorological conditions at two receiver locations
- the results indicate that operational noise levels will comply with the existing operational noise criteria/limits during both standard and noise-enhancing meteorological conditions.

The NIA recommends construction work is scheduled during standard construction hours. Where this is not possible and work is required outside recommended standard hours, clear justification for reasons other than convenience, such as to sustain operational integrity of construction activity are required, as is the application of all feasible and reasonable work practices to meet the Noise Management Level.

Considering the above, temporary impacts to social amenity from construction noise:

- For near neighbours is considered *possible* to occur with a *minor* magnitude, resulting in a **medium social impact**.
- For the wider community, impacts are considered *unlikely* to occur with a *minimal* magnitude, resulting in a **low social impact**.

During operation, impacts to social amenity from operational noise (from surface infrastructure):

- For near neighbours is considered *possible* to occur with a *minor* magnitude, resulting in a **medium social impact**.
- For the wider community, impacts are considered *unlikely*, with a *minimal* magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures in relation to noise are outlined in **Table 4.6**.

Table 4.6 Summary of Mitigation and Enhancement Strategies – Noise

Social Impact	Proposed Mitigation and Enhancement Measures
Social amenity impact from noise	<ul style="list-style-type: none"> • The management of construction activities will aim to avoid construction activities outside recommended standard hours (i.e. Monday to Friday 7 am–6 pm, Saturday 8 am–1 pm and no work on Sundays or public holidays). Where this cannot be avoided the noise impact of the construction activities will be managed via a construction noise management plan with mitigation specified for any works in noise-enhancing conditions in consultation with affected landholders. • Implementation of all reasonable and feasible noise mitigation strategies, ongoing noise monitoring and provision of noise monitoring data on UCMPL website. • Continuation of the 24/7 community complaints line. • Engagement with near neighbours regarding construction.

4.5.3 Social Amenity – Visual

During initial consultations, impact to visual amenity was not raised by landholders, however it was an issue of concern for multiple stakeholders in the second round of consultations. This was regarding night lights associated with existing operations, surface infrastructure and the associated glare, as well as the impact it will have on the natural amenity of the area.

We can see lights at night, it's like a glow. And when you go driving at night you can see the light flash. – Near neighbour, Round 2

Air vents you will be able to see them, and the other thing people don't factor in – but you get sun reflection off metal objects and you can't ignore it. Would you rather look at the green paddock and scrub or a metal object – don't know what it will look like – Near neighbour, Round 2

It says it will impact 17 hectares of plant types, which in turn impacts the visual amenity of bird watchers, people who drive in the country. We are going to have more subsidence and coal trains going for another two years more, which will all be continued visual impacts. Why? To what benefit? – Community group, Round 2

Yes, well you can see where mines have been cutting away at the mountain, but I'm not a big person on worrying about looking at the mountain tops. There's plenty of them and we have to have mining as an industry, otherwise our society won't live. We need to have a bit of compromise.
– Service provider, Round 2

The focus of the Proposed Modification involves underground mining, which has very little surface visibility, other than relatively minor surface infrastructure components required to support underground mining, such as ventilation shafts, dewatering boreholes and a service borehole.

The visual impact assessment found that based on topography alone, views of the proposed infrastructure will not occur at sensitive viewing locations other than three private residences. It is expected that views of the infrastructure during construction and operation from these residences would likely be obstructed or screened by vegetation over distances between approximately 1.4 and 4.0 km, therefore reducing impacts upon visual amenity at these locations.

Current controls used for the management of visual impacts will continue to be implemented by UCMPL should approval be granted. These include:

- 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 after infrastructure is removed.

Considering the above, impacts to visual amenity are considered *unlikely* to occur with a *minor* magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures in relation to visual amenity are outlined in **Table 4.7**.

Table 4.7 Summary of Mitigation and Enhancement Strategies – Visual Amenity

Social Impact	Proposed Mitigation and Enhancement Measures
Impact to aesthetic value or visual amenity	<p>Use of suitable non-reflective, natural tones for infrastructure such as shafts and bores that will be visible to the public.</p> <p>Progressive decommissioning of infrastructure that no longer supports mining operations (or relocation if required).</p> <p>Progressive rehabilitation of disturbed areas that have had infrastructure removed.</p>

4.5.4 Social Amenity and Health and Wellbeing - Air quality

While the majority of stakeholders were not concerned about dust and air quality as a result of mining operations, the impact of dust from traffic were noted.

Don't think so we are too far away from the open cut I assume no dust will be coming out of the air vents but don't know. – Near neighbour, Round 2

One night my husband woke up and said he could smell coal. – Near neighbour, Round 2

Minimal, wouldn't expect it to be too bad as its not open cut. It would just be the dust from the vehicles that would be the worst. – Near neighbour, Round 2

Haven't noticed a great deal with dust and air quality. We get a bit of coal dust, but a lot comes from farmers as well. – Service provider, Round 2

A number of stakeholders did not express concern as the Proposed Modification is underground, however one community group raised air quality concerns relating to the contribution to greenhouse gases, as well as dust from conveyor belts and train movements.

It seems to be with longwall mining underground, that they allow it to collapse and the overlying rock collapses and settles. I don't think they realise that the methane escaping from this is adding to greenhouse gases. There is an element of the unknown there. There is dust from the conveyor belts, from loading trains and train movements. – Community Group, Round 2

The predicted air quality impacts from the Proposed Modification have been determined by assessment against the air quality criteria set by the NSW Environment Protection Authority (EPA) as part of its Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (Approved Methods) (Environment Protection Authority, 2016).

Emissions to air at the UCC may arise from a variety of activities including coal handling, coal processing, wind erosion from exposed areas and venting of air from the underground operations. The Proposed Modification will involve minor changes to surface infrastructure, and in terms of the potential to affect current air quality outcomes, the most significant change will be the construction and operation of three ventilation shafts, and associated infrastructure corridors, to the north-west of the existing project approval boundary.

Dust emissions from construction works have the potential to cause nuisance impacts if not properly managed. Air quality impacts during construction would largely result from dust generated from work associated with additional infrastructure and upgrades to existing infrastructure that would be required to support the Proposed Modification. The potential air quality impacts of the construction works are expected to be well within the approved impacts of operations.

Nevertheless, the assessment noted that it will be important that exposed areas be stabilised as quickly as possible and that appropriate dust suppression methods be used to keep dust impacts to a minimum.

Modelling of particulate matter and deposited dust concentration indicate that the Proposed Modification will not cause exceedances of the EPA criteria. The current Air Quality Management Plan will be reviewed and revised where necessary, should the Proposed Modification be approved. The modelling results show that the concentrations of key air quality indicators due to the Proposed Modification would be relatively minor.

Considering that the Proposed Modification is an underground extension with minimal changes to surface infrastructure, impacts to social amenity and health and wellbeing from dust are likely to be limited to the construction of surface infrastructure and the continuation of existing impacts from surface operations and product transport. Impacts to social amenity as a result of dust from the Proposed Modification are considered *unlikely* with a *minimal* magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures in relation to air quality are outlined in **Table 4.8**.

Table 4.8 Summary of Mitigation and Enhancement Strategies – Air Quality

Social Impact	Proposed Mitigation and Enhancement Measures
Social amenity - dust	<p>Continue current air quality management and monitoring regime.</p> <p>Continuation of the 24/7 community complaints line.</p> <p>Engagement with near neighbours regarding construction.</p> <p>Continue to implement a Trigger Action Response Plan that identifies specific meteorological conditions that, upon measurement, require action for managing dust.</p>

4.5.5 Final Land Use

When asked about the final land use after operations have ceased, consulted stakeholders suggested a range of purposes. Some wished to see the land returned to agricultural production. Others wished to see the land remediated back to its original landform or used for recreational purposes.

If it is complying with local land council regulations, then most of it is scrub and grazing country. Back to or closest to its original form e.g., scrub, farming and native habitat. – Near neighbour, Round 1

Not sure what it could be used for. Can't build on it. It's a nice area to live in. It's quite a bit of land that is owned by Ulan Coal, but it can't be farmed. – Near neighbour, Round 1

Back to farming or grazing. I've seen examples of where Ulan have restored the land once it has been mined. They do a much better job than when it first started. Regeneration of the land would be fine, to bring it back to at least as good as it was. – Wider community, Round 2

What it has always been – rural farming and grazing. Probably will be more trees planted. It will become more and more environmentally sustainable, better condition than it was 50-100 years ago. – Near neighbour, Round 2

It would be good to have a water park like they have down at Penrith. Water resources are always an attractive thing for tourists. – Service provider, Round 2

Nature walks and picnic area/camping – Service provider, Round 2

National Park – Service Provider, Round 2

Concerns were also raised as to how effective remediation might be.

There isn't much you can do with it, once the subsidence takes place – it will take 1,000 years to be water tight and to become properly compact – Near neighbour, Round 1

Supposedly there is remediation in their approvals but most companies go broke just before it is the time to rehabilitate, so reparations of the surface lands do not happen as was expected by the community over 30 years ago when the Project was approved. A reparation fund should be mandate and added to by the company each year so that whatever happens at the end, there is money available to assist landholders with any of the impacts from underground mining on their land. – Community Group, Round 2

I do see damage to rock formations, you cannot replace or repair cracks in cliff faces. That is going to be a dilemma. We have a large cliff face with a nice visual aspect from the view, and I don't know what the impact of that will. You know it's going to happen but by how much? – Near neighbour, Round 2

The Proposed Modification will extend the life of the operation until 2035. It is recommended that UCMPL engage with the local community and key stakeholders regarding any closure and final land use plans. A detailed closure planning process will be undertaken five years prior to the cessation of mining. Progressive decommissioning of mining operations and surface facilities will continue to occur throughout the life of the project.

UCMPL is committed to meeting all of their rehabilitation commitments and liabilities. To provide surety, all mining title holders are required to lodge a security deposit with the NSW Government that covers full rehabilitation costs. This requirement ensures that the NSW Government or community does not incur financial liabilities in the event of a title holder defaulting on their rehabilitation obligations. Considering the above, it is possible that the environmental and social values for surrounding communities may be enhanced, post mining through improved rehabilitation. At a minimum, positive impacts relating to rehabilitation are considered *possible* with a *minimal* magnitude, resulting in a **low positive social impact**.

Proposed mitigation and enhancement measures in relation to final land use are outlined in **Table 4.9**.

Table 4.9 Summary of Mitigation and Enhancement Strategy – Final Land Use

Social Impact	Proposed Mitigation and Enhancement Measures
Final Land use	<p>Continue monitoring and maintenance programs for rehabilitated areas until relinquishment.</p> <p>Engagement of key stakeholders and community residents in closure planning.</p> <p>Ongoing implementation of the progressive rehabilitation program.</p> <p>Continued development of Private Property Subsidence Management Plans detailing subsidence impacts, mitigation, remediation and compensation.</p>

4.6 Health and Wellbeing

The World Health Organisation (WHO) defines health as ‘a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity’ (World Health Organisation, 2022).

The health status of an individual and/or a community is therefore determined by a range of interactions between human biology and the environment.

It is important to note that these determinants of health are interconnected, and that the health status of an individual and a community is typically due to the combined effect of health determinants and their composite factors. Understanding health determinants can help to identify why certain populations and environments may be healthier than others, and this information can then be used to predict health trends within and across populations.

According to the SIA Guideline, health and wellbeing impacts include impacts to both physical and mental health and may include psychological stress resulting from financial and/or other pressures, and changes to individual and public health. During the engagement process, multiple stakeholders held no concerns in relation to their physical health.

No, not that I can think of – Near neighbour, Round 2

Can't see how it would affect that. – Near neighbour, Round 2

Not concerned – Wider community, Round 2

I don't think that it is hurting anyone. Coal miners might get injured at work but that's about it. – Service provider, Round 2

However, some stakeholders noted health concerns relating to subsidence and potential safety concerns, and cumulative impacts on health from air quality. Noise and vibration impacts causing sleep disturbances was also raised by stakeholders as a concern.

Not really – but could have impacts if you were riding across the subsidence and could be injured especially after a rain event. – Near neighbour, Round 2

They separate air quality from greenhouse gases, but there is too much unknown on air quality, and it is very fine dust, which gets into the lung tissue and into blood stream. You can't get away from it. The finer it is the less knowledge you have of being infected with it. – Community Group, Round 2

I don't think it would be a problem, maybe only when they're blasting. I do know they give notice of that though which is fine. – Near neighbour, Round 2

Don't have that and it won't happen here, but others might be worried about that – Near neighbour, Round 2

One local service provider reported no concerns associated with the potential impact on their business.

I live 8 km up the road and I don't have any impacts. I have slept at the pub as well and it didn't impact me there either. There is a slight drone that you can hear of a night but if you lived next to a highway or train track you would get more noise from that. – Service provider, Round 2

Regarding physical health impacts, the outcomes of the air quality assessment are consistent with the desired performance outcome for the Proposed Modification which, for air quality, is to minimise air quality impacts to reduce risks to human health and the environment to the greatest extent practicable through the design and operation of the Proposed Modification. It is also noted that the open cut operation is currently in care and maintenance, therefore there are limited air quality impacts and no blasting activities occurring presently. Recommencement of open cut mining operations could occur in the future under the existing project approval, however is unlikely to occur; there is no change to open cut mining as a result of this modification.

A number of stakeholders also held concerns relating to stress and anxiety/mental health and wellbeing resulting from continued expansions, engagement, and negotiations.

Well, I am fairly relaxed and stress-free person but it does warrant thinking about unnecessarily, when you shouldn't have to. You know it's going to happen; they just keep wearing you down. They want to get it approved and mine the coal, all the uncertainty you have to deal with the stress of that. – Near neighbour, Round 2

Yes, we have just built a house and don't know how it will stand up to the subsidence. And then there is the constant phone calls and negotiating [relating to the project]. And there is no gain from it. – Near neighbour, Round 2

Has caused great depression in our household and family and marital strain. We don't wish to see any further expansion and the stress it has caused us and will continue to cause us is detrimental to us living a long and happy life. – Near neighbour, Round 2

Whilst stress and frustration alone do not constitute mental illness, they affect quality of life, and for individuals with an existing vulnerability to mental health issues, are added stressors. Regular sleep disturbance is also known to affect health and wellbeing. The mental health of one person also has flow on effects to their partners and family, with some stakeholders reporting concern for their significant others.

Research confirms that the impacts of major projects for people who oppose them can also include increased stress levels, a sense of things happening beyond one's control and distress induced by change (Albrecht, 2007).

While not discounting the lived experiences of people, it is noted that the assessment of noise impacts associated with the Proposed Modification (and existing approved operations) indicates that the Proposed Modification is unlikely to be the source of sleep disturbance.

The Proposed Modification will not result in undermining of any additional private residences than is currently approved.

Considering the above, impacts to health and wellbeing as a result of the Proposed Modification are considered *unlikely* to occur with *minor* magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures in relation to health and wellbeing are outlined in **Table 4.10**.

Table 4.10 Summary of Mitigation and Enhancement Strategy – Health and Wellbeing

Social Impact	Proposed Mitigation and Enhancement Measures
Impacts to health and wellbeing	<p>Continue to implement on site management measures to reduce dust including conveyor systems, enclosed conveyor transfer point, watering of exposed areas and stockpiles, and chemical suppressants on unpaved roads.</p> <p>Ongoing monitoring of air quality.</p> <p>Continuation of the 24/7 community complaints line.</p> <p>Publish environmental monitoring results on website.</p> <p>Ongoing engagement with key stakeholders and local community addresses community information requirements and preferences for engagement.</p>

4.7 Culture

Aboriginal cultural heritage was recognised as an issue of concern for local community groups and residents.

The assumption is that subsidence is the only end result, but it affects Aboriginal Cultural Heritage and biodiversity, and the mod just shouldn't be there. It's crazy to let the ground collapse in behind. The effects on Aboriginal song lines and the ridges that are pathways also collapse. Changes to the landform destroy Aboriginal Culture, regardless if there are any artefacts present. – Community group, Round 2

If there is, it's always a concern until they find something. There is Aboriginal Cultural heritage everywhere, there is stuff under the soil that we haven't discovered yet. As far as I know we don't have any noted items on our property but that's not to say they aren't there. They might find stuff when they start digging. – Near neighbour, Round 2

Others however held no concerns, noting that consultation with local Aboriginal groups is undertaken as a part of the assessment process, and existing operations aren't impacting any identified sites.

I'm not worried about it. I do know they always involve Aboriginal groups to do surveys if there was to be any impact on any sites. – Wider community, Round 2

They had a lot of people, Aboriginal people, come out and look at different sites and things. There is the Dripping Rock and a few hands-on rocks, but they seem to be staying away from them. – Service provider, Round 2

The UCC lies within the north-eastern portion of the territory of the Wiradjuri people as defined by Tindale (Tindale, 1940) and Horton (SV, 1994), close to the boundary with the Kamilaroi people to the north and the Geawegal and Wonnarua people further east.

An Aboriginal Cultural Heritage Assessment (ACHA) was undertaken, building on previous Aboriginal heritage studies that have identified numerous archaeological sites.

Desktop reviews of the Heritage Aboriginal Heritage Information Management System (AHIMS) and the UCMPL Aboriginal Site Database was followed by a detailed archaeological survey. The ACHA for the Proposed Modification also involved a comprehensive program of consultation with the Aboriginal community that complies with the policy requirements of Heritage NSW to identify contemporary values/associations and the impacts of the Proposed Modification on intangible cultural heritage values.

An additional 51 Aboriginal sites/Potential Archaeological Deposits (PADs), comprising of 26 artefact scatters, 12 isolated finds, seven rock shelters with artefacts, three potential grinding grooves, two rock shelters with PADs and one rock shelter with art were identified.

With respect to the identified Aboriginal sites located within the surface impact area, the Proposed Modification would result in an increase of surface impacts to five open artefact sites. One site of moderate to high significance would be subject to total impact under the Proposed Modification and the other four sites would only be partially impacted, including impacts to relatively small portions of the sites.

As a result, the potential increase in surface impacts associated with the Proposed Modification was assessed by the ACHA as minor in extent and can be adequately mitigated consistent with established procedures documented in the UCMPL Heritage Management Plan.

The primary potential impacts of the approved operations and the Proposed Modification on Aboriginal heritage relate to underground mining-induced subsidence with the Proposed Modification potentially resulting in a relatively small overall increase in subsidence impacts to Aboriginal heritage compared to the approved operations. The Proposed Modification is not anticipated to result in any impacts to any other Aboriginal sites of high heritage significance. There will be no impacts to Aboriginal heritage conservation areas across the UCC.

Notwithstanding that the Proposed Modification itself would result in a relatively small net overall increase in impacts to Aboriginal heritage at a local level, the assessment concluded that in a broader regional context the overall impacts of the UCC operations incorporating the Proposed Modification would remain relatively low subject to the implementation of appropriate management and mitigation measures.

Considering the above, potential loss of culturally significant heritage as a result of the Proposed Modification is considered *unlikely* to occur with a *minor* magnitude, resulting in a **low social impact**.

Proposed mitigation and enhancement measures in relation to culture are outlined in **Table 4.11**.

Table 4.11 Summary of Mitigation and Enhancement Strategy – Culture

Social Impact	Existing Mitigation and Enhancement Measures
Impacts to Aboriginal Cultural Heritage	<p>Management strategies for individual sites as outlined in the ACHA.</p> <p>Continue to implement the UCMPL Heritage Management Plan.</p> <p>Revision of the Heritage Management Plan within three months of any approval of the Proposed Modification and ongoing implementation of the plan.</p> <p>Addition of sites to the UCMPL Aboriginal Site Database.</p> <p>Heritage survey prior to any impacts for the areas not previously sampled (subject to landowner agreement).</p> <p>Ongoing engagement with local Aboriginal stakeholders.</p>

4.8 Engagement and Decision-Making Systems

As outlined in the SIA guideline, the decision-making systems category of social impacts relates to whether people have the opportunity to participate in the assessment process, are able to make informed decisions about a project, can meaningfully influence decisions, and can access complaint, remedy, and grievance mechanisms. While some stakeholders noted they had no concerns about the engagement process or the decision-making processes regarding the approvals process, others noted their distrust in these processes.

Landholders raised serious concerns about the engagement and assessment process and the conduct of UCMPL. They noted a lack of trust and transparency in the information provided by UCMPL and the assessment progress being undertaken for this Proposed Modification and previous assessments. One landholder noted that they were not provided adequate information to make an informed decision regarding the Proposed Modification and that relationships between near neighbours and UCMPL had broken-down due to inadequate engagement and treatment of near neighbours. It was also noted that complaints were not managed by UCMPL in a satisfactory way.

Don't fully trust the approval process, assume that some things may be made up as they need to be so that the project is approved. – Near neighbour, Round 2

I don't know that, the state government, making lots from this project – if 2 or 3 farmers got impacted would they really care? I'd like to think that wasn't the case. Money means everything. To government and big business money means all. They are in the business of making money out of coal at as little of costs they can incur. – Near neighbour, Round 2

Don't trust it [the assessment process] – lots of money involved and money talks – Near neighbour, Round 2

There is distrust in everything. Anything that someone is making money from there will always be distrust. When people think someone is getting more than someone else there is always distrust. That is our society. Everyone has their hand in the jar. – Service provider, Round 2

All landholders consulted for the initial round of consultation had previous contact with a representative from UCMPL. The nature of this contact varied and included discussion of landholder's water access and use, exploration operations and noise. One stakeholder commented that UCMPL 'answer all my questions the best they can'. Others however were apprehensive towards the engagement.

They only contact us when they want something. We're uncertain which direction they will go, and we only get told what Glencore wants us to know. – Near neighbour, Round 1

When asked if they felt there was a good level of engagement with the company, multiple stakeholders were satisfied with the companies' engagement to date, also noting a preference for engagement to not increase.

We don't need any more engagement. We only want to know information if it relates to our property or our country. – Near neighbour, Round 1

Yes, I don't want any more as I am very busy with farming. I just want to stay here, and Ulan stay there. I'm happy with the level of engagement to date. – Near neighbour, Round 1

Less contact, would prefer to be left alone. Would prefer not to be contacted unless need to. – Near neighbour, Round 1

In addition, whilst some landholders believed communication to be sufficient and beneficial, other stakeholders noted concern that engagement and communication regarding the Proposed Modification was not genuine or meaningful.

They are always very good at communicating. When they want something, they will be very forthcoming and communicating whatever is necessary to get those boxes ticked. All friendly decent people, they have a job to do. – Near neighbour, Round 2

You doing this survey is making sure there is communication and engagement so that's all good. – Service provider, Round 2

I do feel that sometimes we don't get the whole story. – Near neighbour, Round 2

We are never shown or told the whole truth of project in one go. You only drip feed info to us! – Near neighbour, Round 2

To my knowledge, no direct approach from the company, or its parent company, to the local group or other groups I am involved in, have occurred ever. They have another exploration licence under Bungaba Swamp to the west and I only became aware of that through a community newsletter and we will get involved in that to look after that wetland and the landholders in that area. Underground mining with potential impacts on water are unpredictable and irreversible. – Community group, Round 2

Major thing is all the time that I put in on phone calls and engagement is for nothing. No monetary compensation for our time spent dealing with this project. We need to show people drill locations and show them around the property with no compensation for the time taken. – Near neighbour, Round 2

Regarding future engagement, email (12) was the preferred method of receiving information as a part of the Proposed Modification. Personal meetings (4) and phone calls/texts (5) were also identified as a preferred way of receiving information as were newsletters (4). Websites, letters, radio, social media, and CCC minutes were preferred methods for some stakeholders. One stakeholder also suggested ways in which engagement could be enhanced.

Promote newsletter is available on website to increase visibility and accessibility to the public, present a summary of the CCC minutes in the local paper – Community group, Round 2

UCMPL has an existing Stakeholder Engagement Strategy that guides the approach to engaging with the local community and key stakeholders. UCMPL's goal under this Strategy is to:

- be a valuable member of the community
- be acknowledged for good performance and achievements
- be a good corporate citizen
- assist and benefit the community
- show the community that we know what we are doing
- be fair and active in our community
- be responsive
- be proactive and transparent within the community.

Key mechanisms used to achieve this goal include:

- regular face to face consultation with local landholders and key stakeholders
- biannual community newsletter distributed to the community, employees and other relevant stakeholders
- Community Consultative Committee who meets quarterly
- regular Aboriginal heritage meetings with Registered Aboriginal Parties and other Aboriginal stakeholders
- 24-hour community information/complaints line
- community education strategies including open days, participation in school or university excursions or teacher training programs
- UCMPL website
- media statements on an as needs basis
- internal and contractor communications
- community survey undertaken every three years to better understand community perceptions
- consultation regarding the Community Investment Strategy (which is discussed in **Section 4.2.1**).

Social impacts relating to engagement and decision making (including potential for lack of trust in the assessment process and the company, and feelings of an inability to participate and have a voice in the assessment process) as a result of the Proposed Modification are considered *possible* to occur with a *minor* magnitude, resulting in a **medium social impact**.

Proposed mitigation and enhancement measures in relation to community engagement and decision making are outlined in **Table 4.12**.

Table 4.12 Summary of Mitigation and Enhancement Strategy – Engagement and Decision-making

Social Impact	Proposed Mitigation and Enhancement Measures
Engagement and decision making	Continuation of the 24/7 community complaints line. Ongoing engagement with local community and key stakeholders as outlined in the UCMPL Stakeholder Engagement Plan, including keeping them informed of the progress of the approval process for the Proposed Modification.

4.9 Cumulative Impacts and Intergenerational Equity

During engagement some participants noted cumulative impacts relating to other mining operations and developments including renewables and infrastructure in the area, suggesting that this was causing additional stress on the community. In addition, as previously noted, some concerns were raised about the potential for any long-term environmental impacts of the Proposed Modification (such as impacts to groundwater, **Section 4.5.1**) and the impact this would have for future generations (including access to environmental resources).

We are significantly swamped by mines and renewable projects. It is exhausting and confusing to keep up with all these projects. Ulan is the most westerly mine, then there is Wilpinjong and Moolarben and they are all doing extensions and modifications. Then we have Transgrid's proposed transmission lines and the multiple renewable projects at various stages of consultation, it is just ludicrous... [With the Proposed Modification] we will have another two years more of it [mining], which is contrary to every global initiative and the state's intentions to reduce fossil fuel sources – Near neighbour, Round 2

The only reason for digging up coal is to burn it; this is the only purpose for the product. The whole process produces [greenhouse gases] GHG and should not be permitted. We must follow advice and recommendations given by international bodies. NSW Government must act to ensure its own targets are met – Community group, Round 2

However, another participant noted that extensions to existing mines, such as the Proposed Modification, were preferable to greenfield mines. It was suggested that the development of new renewable projects in the area would help the transition away from fossil fuel use and could provide additional benefit to the community including employment.

The four coal mines in the area have been operating for decades, and this extension isn't a big deal because of the coal in the Ulan seam, and the Gunnedah seam which also has a lot of mining, this just seems like the natural progression. I am in favour of renewable energy, and eventually coal will be phased out, but at the same time we are still users of electricity so while renewable energy is being developed and until it gets to a point we can all use it we can't stop using coal. We need it for energy. What I do object to is new coal mines being developed (like Adani). It is irresponsible of our Government... The transition from working in the [mining] sector into the renewable sector shouldn't be that hard for workers... Quite happy with what's going on, we live in a great a community. – Wider Community, Round 2

Concerns relating to climate change and greenhouse gases are also often connected to ideas of intergenerational equity which is the idea of 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).

The Greenhouse Gas and Energy Assessment undertaken for the Proposed Modification notes that the forecast energy use intensity is considered to fall below the normal range when compared with other underground coal mining operations across Australia and as such, the Proposed Modification is expected to be very energy efficient for a coal mine.

During 2021 Glencore strengthened its commitment to reducing its total emissions footprint which underpins its ambition to be a net-zero emissions company by 2050. Glencore's approach to coal assets is to continue to operate coal mines until they reach the end of their lives. Through responsible stewardship of these assets and a managed decline of the coal portfolio, Glencore will deliver near- and medium-term energy needs, essential to the advancement of developing economies and the delivery of the United Nations' Sustainability Development Goals.

Considering the scale of the Proposed Modification and the level of environmental impact identified within the Modification Report, it is considered that the Proposed Modification could have a **low social impact** (possible/minimal) on intergenerational equity and the ability of future generations to access environmental services and resources.

In addition, with regard to potential cumulative impacts (including additional stress on the community), the contribution of the Proposed Modification is considered *unlikely* with a *minor* magnitude, resulting in a **low social impact**.

4.10 Community Identified Mitigation Measures

Table 4.13 provides further detail on community-identified strategies to mitigate negative impacts and enhance positive impacts identified by stakeholders during engagement for the Proposed Modification. These suggestions have been considered by UCMPL, with **Table 4.13** also outlining a summary of their response. Additional proposed and existing mitigation measures have been identified throughout **Section 4.0**.

Table 4.13 Community Suggested Mitigation and Enhancement Strategies

Social Impact	Strategy Identified	UCMPL's Response
Community and Accessibility	All investment contributions made publicly available. Investment to include long term legacy projects that respond to a community need.	All investment contributions are currently reported in Annual Reviews available via the UCMPL website via https://www.glencore.com.au/operations-and-projects/coal/current-operations/ulan-coal/reporting-documents UCMPL will collaborate with the CCC and Bungaba Progress Association on local needs for community investment, including legacy projects such as mine closure and other long-term community need projects.
Livelihood	Utilise local businesses and services including accommodation providers. Compensation agreements with local landholders for ongoing impacts.	UCMPL will continue to commit to giving preference to utilising local businesses and services, including accommodation providers as outlined in existing Policies including the Procure to Payment Policy. Compensation is developed as part of Land Access and Impact Agreements (such as subsidence and noise). Compensation is developed through negotiation with landowners and is based on the level of impact associated with the activities proposed.

Social Impact	Strategy Identified	UCMPL's Response
Surroundings and Social Amenity	<p>Water security agreements with near neighbours.</p> <p>Bore monitoring results to be provided to nearby landholders.</p> <p>Reduce the movement of security trucks at night.</p> <p>Improvements to local roads.</p>	<p>UCMPL will develop Alternative Water Supply Agreements in consultation with the landholder, in advance of impacts occurring for any landholders where impacts are predicted to occur.</p> <p>Private bore monitoring results are provided to the landholders following annual monitoring.</p> <p>UCMPL will expand on the existing private bore monitoring network where new residents/bores are identified.</p> <p>Security patrols are conducted randomly including day and night, they infrequently travel on rural roads at night. If there are specific concerns from neighbours Ulan Coal will consider this upon a landholder request. UCMPL will continue to make contributions toward the maintenance of local Roads as agreed in the Ulan Road Strategy and Voluntary Planning Agreement with the Mid Western Regional Council.</p> <p>UCMPL will continue to work with neighbouring mines to identify and address common issues contributing to cumulative impacts on local roads.</p> <p>UCMPL will maintain publicly accessible roads, including Bobadeen and Walkerville roads as approved by the Mid-Western Regional Council.</p>
Health and Wellbeing	<p>Decrease engagement to minimise mental health stressors for near neighbours.</p>	<p>UCMPL will continue to liaise and engage with neighbours, as necessary to reduce the impacts of mining on neighbouring properties. Levels and the method/s of engagement will be developed in consultation with individual landholders to suit individual landholders needs.</p>
Engagement and Decision-Making	<p>Compensation for continuous engagement.</p> <p>Open and honest communication, including a public forum to ascertain the needs and wants of local community.</p>	<p>UCMPL will offer compensation for Land Access Agreements, compensable to the level of impact on the relevant property and based on the level of landholder engagement required.</p> <p>UCMPL will communicate in an open and honest manner with stakeholders, via public forums, such as the Bungaba Progress Association and other community meetings.</p> <p>UCMPL will seek feedback via newsletters and offer further information based on feedback provided.</p>

4.11 Social Impact Summary

Table 4.14 provides a summary of the evaluation of social impacts for the Proposed Modification, summarising the outcomes from the sections above.

Table 4.14 Evaluation of Likely Social Impacts

Social Impact Theme	Project Aspect	Social Impact Description	Duration	Extent / Affected Parties	Perceived Significance (Level of concern/ interest)	Significance rating ³			Project Refinements/Management Measures	Residual Impact Significance
						L	M	S		
Community	Presence of the operation	Changes to surroundings impacting on the rural landscape, enjoyment of the natural environment and sense of community and place.	Ongoing	Local community (proximal to Proposed Modification and operation)	Medium	D	2	L	Update to Stakeholder Engagement Strategy that addresses community information requirements and preferences for engagement. Continued contribution to the Ulan Coal Community Investment Program to facilitate investment opportunities in the local area.	Low
	Presence of the operation	Continued investment in the local community resulting in improvement to community infrastructure and services and improved social outcomes for local communities	Life of operation	Community residents – proximal to operations	Medium (+)	B	3	M (+)	Continued investment in the Ulan Coal Community Investment Program with investment targeted in the communities surrounding the operation.	
				Wider community	Medium (+)	B	2	M (+)		
Accessibility	Workforce	Additional strain on infrastructure, services and facilities	Life of operation	Wider community	Low	D	1	L	Engagement with service providers as required.	Low
Livelihood	Underground mining causing subsidence impacts	Subsidence has the potential to damage neighbouring properties and impact property value and/or use (i.e. farming and safety concerns)	Project life	Residents within the Project Area	High	C	2	M	Negotiation and implementation of Extraction Plan-Land Management Plan monitoring and control measures for subsidence impacts, including Private Property Subsidence Management Plans prepared in consultation with landholders. Monitoring outcomes provided via the annual subsidence report.	Low
				Wider community	Low	D	1	L		Low
	Presence of the operation and operational impacts (including visual, noise, dust, subsidence)	Impacts on rural property valuation trends and the ability for private property owners to buy or sell due to the presence of mining.	Project life	Residents within the Project Area Community residents – proximal to operations	High	D	2	L	Ongoing engagement with near neighbours to address any concerns.	Low
	Presence of the project	Continued employment for the existing workforce and local suppliers can improve personal livelihoods and the broader community's human and economic capital over time.	Project life (additional 2 years)	Employees, contractors and suppliers	High (+)	B	3	H(+)	Continued employment of local workforce and procurement of contractors/suppliers.	
				Local businesses	Medium (+)	B	2	M(+)		
				Wider community	Medium (+)	B	2	M(+)		
	Presence of the operation and operational impacts (including visual, noise, dust, subsidence)	Disruption to farming practices and flow on livelihood impact as result of operational impacts	Ongoing	Residents within the Project Area Local farmers	High	C	2	L	Ongoing engagement with near neighbours to address any concerns.	Low

³ L = Likelihood (A: Almost Certain, B: Likely, C: Possible, D: Unlikely, E: Very Unlikely); M = Magnitude (1: Minimal, 2: Minor, 3: Moderate, 4: Major, 5: Transformational); S = Significance rating (L: Low, M: Medium, H: High, VH: Very High)

Social Impact Theme	Project Aspect	Social Impact Description	Duration	Extent / Affected Parties	Perceived Significance (Level of concern/ interest)	Significance rating ³			Project Refinements/Management Measures	Residual Impact Significance
						L	M	S		
Surroundings and social amenity	Underground mining operations	Impacts to levels of water availability and quality	Ongoing	Residents within the Project Area Local water users	High	D	3	M	Continued use of subsidence remediation methods and associated erosion and sediment control measures and monitoring programs to manage potential subsidence impacts on watercourses.	Low
				Wider community	Medium	D	2	L	Continuation of the annual private bore monitoring and expansion of monitoring network if requested. Continued implementation of the Surface Water and Groundwater Trigger Action Response Plans. Alternative water supply agreements where impacts are identified. Investigation if proposed triggers are exceeded or if a compliant is received. Update of the Water Management Plan to accommodate the Proposed Modification. Reporting of groundwater monitoring results annually in the Annual Review. Agreement of a monitoring program for private bores with potentially impacted landholders, and agreement of an alternative water supply agreement where required (already a consent condition of the existing mine project approval).	Low
	Construction of surface infrastructure	Loss of social amenity due to noise from construction and installation activities	Construction	Residents proximal to surface infrastructure	Low	C	2	M	Engagement with near neighbours regarding construction.	Medium
				Wider community	Low	D	1	L	Management of construction activities to avoid work outside standard hours and noise enhancing conditions. Where this cannot be avoided noise impacts will be managed via a construction management plan, developed in consultation with affected landholders.	Low
	Addition of surface infrastructure	Loss of social amenity due to operational noise and vibration	Project Life	Residents within the Project Area	High	C	2	M	Implementation of reasonable and feasible noise mitigation strategies.	Medium
				Wider community	Low	D	1	L	Continuation of the 24/7 community complaints line. Continue to publish noise monitoring data on the company website.	Low
		Changes to surroundings impacting on the visual amenity of the rural landscape		Residents within the Project Area Wider community	Low	D	2	L	Continued maintenance of vegetation plantings to screen views of mining operation as part of the progressive rehabilitation program. 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.	Low

Social Impact Theme	Project Aspect	Social Impact Description	Duration	Extent / Affected Parties	Perceived Significance (Level of concern/ interest)	Significance rating ³			Project Refinements/Management Measures	Residual Impact Significance
						L	M	S		
	Ongoing Underground operations	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	Project life	Residents residing in proximity surface infrastructure Wider community	Low	D	1	L	Continue current 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.	Low
	Product haulage and mine related traffic	Public safety concerns relating to increased road traffic Cumulative dust impacts from traffic impacting on amenity and health and wellbeing	Project life	Community residents – proximal to operations Road users	Low	D	1	L	Ongoing engagement with near neighbours to address any concerns. Continue current air quality and dust emissions monitoring regime. 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.	Low
	Presence of the operation and continued supply of coal	Release of greenhouse gas emissions and impacts future ecosystem development resulting in impacts on intergenerational equity and limited use of resources for future generations	Ongoing	Wider community	Low	C	1	L	Continued implementation of energy efficiency measures. Commitment to managed decline of coal portfolio.	Low
	Final land use and rehabilitation	Enhanced environmental and social values for surrounding communities, post mining through improved rehabilitation ensuing equitable intergenerational opportunities are realised.	Ongoing	Community residents – proximal to operations	Low	C	1	L(+)	Continue monitoring and maintenance programs for rehabilitated areas until relinquishment. Engagement of key stakeholders and community residents in closure planning. Ongoing implementation of the progressive rehabilitation program. Continued development of Private Property Subsidence Management Plans detailing subsidence impacts, mitigation, remediation and compensation.	
				Wider community	Low	C	1	L(+)		
Health and wellbeing	Presence of the Project and operational impacts	Increase in anxiety and stress as a result of Project continuation (e.g. uncertainty and perceived inability to control one's surroundings or futures)	Project life	Residents within the Project Area	High	D	2	L	Publish environmental monitoring results on website. Ongoing engagement with near neighbours to address any concerns.	Low
				Wider community	Low	D	2	L	Access to 24/7 complaints/information line.	Low
	Presence of the project and operational impacts	Sleep disturbances due to noise and vibration	Project life	Residents within the Project Area	Medium	D	2	L	Ongoing engagement with near neighbours to address any concerns.	Low
				Local community	Low	D	1	L	Implementation of noise mitigation strategies in accordance with the UCMPL Noise Management Plan. Continuation of the 24/7 community complaints line. Continue to publish noise monitoring data on the company website.	Low
	Presence of the operation and operational impacts	Impact to physical health from exposure to dust / dust inhalation Contribution to cumulative air quality impacts on health	Project life	Residents within the Project Area Local community Wider community	Medium	D	1	L	Continue to implement on site management measures to reduce dust in accordance existing Air Quality and Greenhouse Gas Management Plan.	Low

Social Impact Theme	Project Aspect	Social Impact Description	Duration	Extent / Affected Parties	Perceived Significance (Level of concern/ interest)	Significance rating ³			Project Refinements/Management Measures	Residual Impact Significance
						L	M	S		
Culture	Subsidence	Potential loss of culturally significant heritage	Ongoing	Aboriginal community, local and wider community	High	D	2	L	Ongoing implementation of the Heritage Management Plan. Ongoing engagement with local Aboriginal stakeholders.	Low
Engagement and decision making	Engagement process	Potential for lack of trust in the assessment process and the company Opportunity to participate and have a voice in the assessment process	Project life	Residents within the Project Area Local community	High	C	2	M	Continue to provide updates on the modification and approval pathway in the UCMPL Newsletters and community meetings.	Low
				Community residents – proximal to operations	High	C	2	M	Ongoing engagement with local community and key stakeholders. Continued contribution to the Community Fund. Regular newsletters distributed to the community and available on the website. Continuation of the 24/7 community complaints line.	Low
Cumulative impacts	Presence of the operation and continued supply of coal	Potential cumulative impacts on the community given the other developments in the area (including additional stress on the community)	Project life	Residents within the Project Area Local community	Low	D	2	L	Ongoing engagement with local community and other local mines and development projects. Continuation of the 24/7 community complaints line.	Low
		Release of greenhouse gas emissions and impacts future ecosystem development resulting in impacts on intergenerational equity and limited use of resources for future generations	Ongoing	Wider community	Low	C	1	L	Distribute information on Ulan Coal emissions, i.e. low gas mine, and groundwater monitoring and modelling via UCMPL newsletters. As above.	Low

5.0 Recommendations and Conclusions

This section provides further detail on the proposed strategies to be implemented in response to the predicted social impacts associated with the Proposed Modification and relates to those impacts that have been evaluated as significant and ranked as moderate as a result of their respective likelihood and consequence social impact ratings.

While the section focuses on the mitigation of negative social impacts, strategies to enhance positive social impacts in relation to the Proposed Modification, particularly in the local community and surrounding area, are also presented where they have been identified. The strategies proposed also include measures to address any impacts that are of 'high' concern to potentially affected people and groups, but which are not considered significant from a technical perspective.

As noted in the SIA Guideline, strategies need to be developed to ensure that there is a clear connection between the measure proposed and the significant social impact being mitigated or enhanced. Strategies to be implemented may differ in their effectiveness and/or ability to alleviate impacts, with some residual social impacts remaining, in the case of negative impacts. Furthermore, certain measures may collectively address several different negative social impacts and potentially enhance positive impacts.

The SIA Guideline (DPIE, 2021), outlines that mitigation measures may be:

- *Performance-based* – identify performance criteria that must be complied with to achieve an appropriate outcome, but do not specify how the outcome is to be achieved, demonstrating why the performance criteria are appropriate.
- *Prescriptive* – that outlines actions that need to be taken or things that must be done, with justification as to why this approach is appropriate by providing scientific evidence or referencing relevant guidelines or case studies.
- *Management-based* – where potential impacts can be satisfactorily avoided or mitigated by implementing known management approaches.

Table 5.1 outlines the recommended management and enhancement strategies, further to existing strategies, to address social impacts in relation to the Proposed Modification; however, it is acknowledged that there are a range of other management and mitigation strategies already implemented by UCMPL and/or proposed in the Modification Report that will also assist in this regard. A number of these existing and proposed management strategies that relate to social impacts have been identified in **Section 4.2** to **Section 4.9**.

Table 5.1 Recommended Mitigation and Enhancement Strategies

Impacts Addressed	Enhancement Strategy
Engagement and decision making	<p>Continue to implement the Stakeholder Engagement Strategy, with key objectives:</p> <ul style="list-style-type: none"> • focus current engagement activities within the community on issues of key concern to the community (as identified through the SIA consultation program) • align with community identified preferences for engagement and information requirements i.e. as nominated by neighbours and in general from the 2021 GCAA Community Perception Survey

Impacts Addressed	Enhancement Strategy
	<ul style="list-style-type: none"> • track and monitor community issues and perceptions of the operation over time and evaluate the success of strategies to manage and/or enhance social impacts • ensure near neighbours are kept informed of mining activities • provide access to monitoring data and detail of management strategies to reduce impacts.
Community	<p>UCMPL's existing Community Investment Program provides substantial benefit to the surrounding local communities. Further investment initiatives to be developed in consultation with community and key stakeholders that focus more specifically on the Ulan/Bungaba localities.</p> <p>An evaluation of current investment opportunities has recently been completed by reviewing community-identified suggestions and priorities for investment that have been noted in engagement activities including 2021 GCAA Community Perception Survey.</p>
Impacts to residents in Project Area including potential loss of water access, noise, property damage	<p>Early and ongoing engagement with potentially impacted landholders and communication of eligibility for relevant management/mitigation measures and to discuss any concerns.</p>

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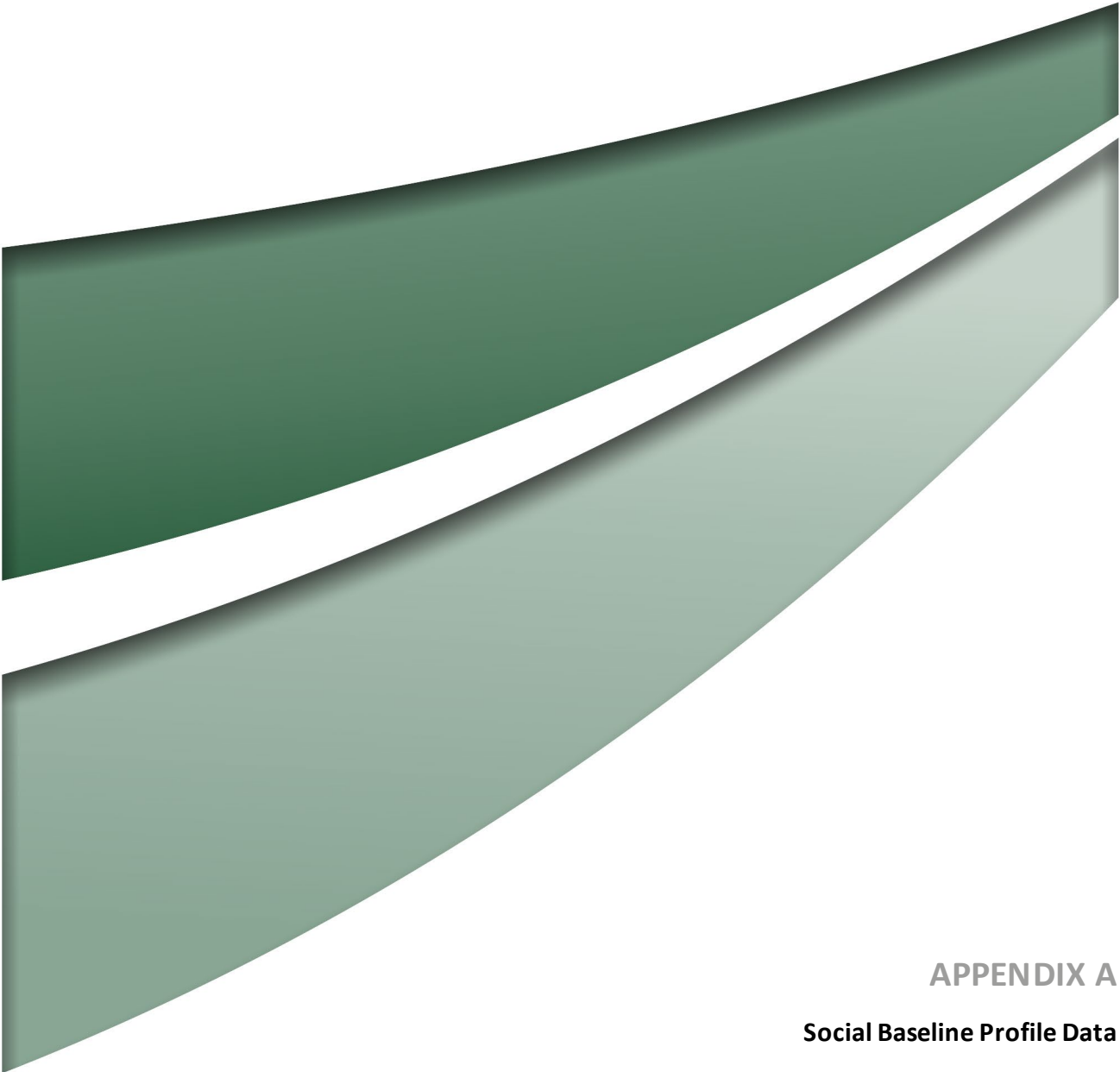
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APPENDIX A

Social Baseline Profile Data

Appendix A

1.0 Social Baseline Profile

Using the capitals framework, the following **Table 1.1** summarises key statistics sourced from the ABS census general community profiles for 2006, 2011 and 2016, as well as PHIDU reports 2020. Additional data is provided below to support the Social baseline profile in **Section 3.0**.




Table 1.1 Key Social Indicators by Capitals

Indicator	Ulan SSC	Bungaba SSC	Cooks Gap SSC	Mudgee SSC	Gulgong SSC	Rylstone SSC	Kandos SSC	Mid-Western Regional LGA				NSW
Year	2016							2006	2011	2016	Change	2016
Human Capital												
Population	58	93	540	10,927	2,518	920	1,318	21,085	22,318	24,074	↗	7,480,231
% Indigenous	0	4	9	6	8	4	5	3	4	5	↗	3
Median Age (years)	43	38	43	37	41	50	52	41	41	42	↗	38
Year 12 or equivalent (%)	46	24	32	42	33	35	24	30	35	39	↗	59
Bachelor's degree level (%)	0	9	10	16	10	14	7	14	15	14	—	26
Earning or learning ¹ (%)	-	-	-	-	-	-	-	-	-	77.2	—	85

¹ Learning or Earning at ages 15 to 24

Indicator	Ulan SSC	Bungaba SSC	Cooks Gap SSC	Mudgee SSC	Gulgong SSC	Rylstone SSC	Kandos SSC	Mid-Western Regional LGA				NSW
Year	2016							2006	2011	2016	Change	2016
Social Capital												
Families with children (%)	23	12	38	40	40	30	31	41	40	41	<div></div>	46
Families with no children (%)	31	60	40	37	40	49	47	43	43	42	<div></div>	37
Single parent families (%)	0	16	20	18	18	18	21	15	15	16	<div></div>	16
Family households (%)	57	78	72	67	66	65	54	71	70	69	<div></div>	72
Group households (%)	0	0	4	3	2	4	3	-	3	3	<div></div>	4
Single or lone households (%)	21	19	22	29	31	31	42	-	27	29	<div></div>	24
Proportion living at a different address 1 year ago (population mobility) (%)	5	4	9	17	13	14	12	14	16	14	<div></div>	14
Proportion living at a different address 5 years ago (population mobility) (%)	53	29	33	45	34	33	28	40	37	37	<div></div>	39
Proportion who volunteer for an organisation or group (last 12 months) (%)	15	12	16	20	21	25	21	24	21	22	<div></div>	18
Economic Capital												
Unemployment (%)	12.5	0	4.3	5.8	8.6	8.4	16.5	7.3	5.7	6.5	<div></div>	6.3
Unemployment Indigenous (%)	-	-	-	-	-	-	-			15.0	<div></div>	15.3

Indicator	Ulan SSC	Bungaba SSC	Cooks Gap SSC	Mudgee SSC	Gulgong SSC	Rylstone SSC	Kandos SSC	Mid-Western Regional LGA				NSW
Year	2016							2006	2011	2016	Change	2016
Technicians and trades workers (%)	0	14.3	19.3	18.2	18.8	16	18.7	16.3	16.6	17.2	↗	12.7
Labourers (%)	19.0	14.3	14.4	11.6	13.4	11.2	17.8	14.1	12.2	12	↘	8.8
Machinery operators and drivers (%)	33.3	28.6	15.8	12.6	16.9	10.3	14.3	9.6	12.7	12.6	↘	6.1
Employment in mining (%)	42.9	28.6	19.3	16.9	19.6	11.2	8.9	6.9	13.8	15	↗	0.9
Median total personal income (\$/weekly)	462	417	491	623	523	474	420	353	449	547	↗	664
Median mortgage repayment (\$/monthly)	-	1,391	1,600	1,733	1,517	1,495	867	1,083	1,551	1,690	↗	1,986
Median rent (\$/weekly)	210	-	240	300	250	220	190	145	200	270	↗	380
Physical Capital												
Total occupied dwellings (%)	54	94	81	88	89	82	87	-	81	84	↗	90
Rented (%)	87.5	0	15.1	36.5	28.2	24.3	29.3	25.5	26.5	27.4	↗	31.8
Mortgage (%)	0	34.4	42.5	31.5	30.5	24.8	18.7	27.9	29.3	30.6	↗	32.3
Owned (%)	21.4	53.1	39.8	28.2	37.3	48.1	47.6	42.8	40.5	38.0	↘	32.2
Access to internet (from dwelling) (%)	64	55	75	78	76	75	64	51	72	77	↗	85

Indicator	Ulan SSC	Bungaba SSC	Cooks Gap SSC	Mudgee SSC	Gulgong SSC	Rylstone SSC	Kandos SSC	Mid-Western Regional LGA				NSW
Year	2016							2006	2011	2016	Change	2016
Travel to work as a driver – Car (%)	57	110*	73	69	67	66	63	-	61	66		58
GPs per 100,000 Population	-	-		-	-	-	-	-	-	257.5		420.6
Specialists per 100,000 Population	-	-		-	-	-	-	-	-	37.4		172.9

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

Table 1.2 Average Annual Population Change (Estimated Resident Population)

	Mid-Western Regional LGA			NSW		
	Estimated Resident Population*	Annual Increase	Proportion Change (%)	Estimated Resident Population*	Annual Increase	Proportion Change (%)
2006	21,641	-	-	6,742,690	-	-
2007	21,887	246	1.1	6,834,156	91,466	1.4
2008	22,186	299	1.4	6,943,461	109,305	1.6
2009	22,469	283	1.3	7,053,755	110,294	1.6
2010	22,774	305	1.4	7,144,292	90,537	1.3
2011	23,020	246	1.1	7,218,529	74,237	1.0
2012	23,343	323	1.4	7,304,244	85,715	1.2
2013	23,742	399	1.7	7,404,032	99,788	1.4
2014	24,059	317	1.3	7,508,353	104,321	1.4
2015	24,374	315	1.3	7,616,168	107,815	1.4
2016	24,546	172	0.7	7,732,858	116,690	1.5
2017	24,827	281	1.1	7,867,936	135,078	1.7
2018	25,086	259	1.0	7,988,241	120,305	1.5
Average Annual Change		287	1.2		103,796	1.4
* ERP is an estimate of actual population calculated annually by the ABS, which takes into account a range of factors including Census numbers, annual growth rates, births and deaths, and migration.						
Source: ABS Stat Beta, 2018; Estimated Resident Population (ERP)						

1.1 Skills, Education and Training

Primary and secondary education facilities, available within the study communities, are summarised in **Table 1.3** including available information via the MySchool website operated by the Australian Curriculum Assessment and Reporting Authority (ACARA), that relates to:

- proportion of students that are either Indigenous and/or from non-English speaking backgrounds
- attendance rates; and school positioning on the Index of Community Socio-Educational Advantage (ICSEA) scale. This scale represents levels of educational advantage.

In summary, the data collected from MySchool, and relevant information from the Mid-Western Regional Council strategic planning documents, indicates the following.

- All schools, except for one, have high proportions of students in the lower percentiles of the Index of Community Socio-Educational Advantage (ICSEA) scale.
- Attendance rates drop from primary school to high school – falling below 90 %. The lowest rates of attendance (for Semester 1, 2019) were recorded in Kandos (84 %), Mudgee (86 %) and Gulgong (88 %) high schools.
- Student to teacher ratios range from 7 to 18, suggesting that some schools are above the National average teacher-student ratio of 13.5 students per teacher (ACARA, 2019).

The small primary school in Ulan (K-6) is the closest in proximity to the Proposed Modification, with 16 students enrolled in 2019. Of these students, 19 % of students were Indigenous, and 81 % fell within the bottom quarter of the ICSEA scale, indicating very low levels of socio-educational advantage. Attendance rates were on par with higher attendance schools in surrounding localities, at 92 % for all students (ACARA, 2019). A full-time equivalent teaching staff of 1.4 equates to 11 students per teacher, a relatively low ratio.

Table 1.3 Educational Facilities in Mid-Western Regional LGA

School / Facility	Level	Enrolments (2020)	Proportion Aboriginal Students (%)	FTE Teaching Staff	Student Attendance Rates (2019) ² (%)	Students per Teacher (FTE)	Other Relevant Information (2020)
Ulan Public	K-6	14	29	1.4	95	11	63 % in the bottom quarter of the ICSEA 0 % Language background other than English
Rylstone Public	K-6	78	4	4.9	91	18	34 % in the bottom quarter of the ICSEA 6 % Language background other than English
Kandos Public	U, K-6	143	24	12.8	90	11	70 % in the bottom quarter of the ICSEA 7 % Language background other than English
Mudgee Public	U, K-6	670	17	41.5	93	16	50 % in the bottom quarter of the ICSEA 5 % Language background other than English
Gulgong Public	U, K-6	315	18	20.5	90	17	68 % in the bottom quarter of the ICSEA 2 % Language background other than English
Cudgegong Valley Public School, Mudgee	K-6	546	12	30.2	92	18	43 % in the bottom quarter of the ICSEA 4 % Language background other than English
All Hallows Catholic Primary School, Gulgong	K-6	102	13	10.1	92	12	41 % in the bottom quarter of the ICSEA 0 % Language background other than English
Mudgee High School	U, 7-12	815	13	66.8	86	12	51 % in the bottom quarter of the ICSEA 5 % Language background other than English
Kandos High School	U, 7-12	191	13	26.3	84	7	56 % in the bottom quarter of the ICSEA 4 % Language background other than English
Gulgong High School	U, 7-12	302	20	32.3	88	9	60 % in the bottom quarter of the ICSEA 4 % Language background other than English
St Matthew's Catholic	K-12	974	5	75.5	92	16	16 % in the bottom quarter of the ICSEA 3 % Language background other than English

² As at Semester 1, 2019.

Table 1.4 Key Health Indicators

Indicator	Mid-Western Regional LGA	Western NSW LHD	NSW
Estimated number of people aged 18 years and over who were obese (ASR per 100) – 2017–18	41	42.5	30.9
Estimated number of people with chronic obstructive pulmonary disease (ASR per 100) – 2017–18	2.8	2.7	2.2
Estimated number of people with asthma (ASR per 100) – 2017–18	13.7	14.2	10.6
Current asthma, persons aged 16 years and over (%) – 2018	-	13.6	10.5
Asthma by LHD, children aged 2–15 years (%) – 2017–18	-	22.8	21.3
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 (2020); NSW HealthStats (2020).

Table 1.5 Crime statistics for Mid-Western Regional LGA (per 100,000 population) Red highlighted cells indicating the higher amount

	Mid-Western Regional LGA	New South Wales	LGA Trend
Assault	1041.5	791.5	Stable
Homicide	0	1.2	Stable
Robbery	7.9	26.2	Stable
Sexual Offences	384.1	185.6	Stable
Theft	2055.4	2204.9	Stable
Malicious damage to property	843.5	658.3	Stable
Disorderly conduct	392.1	228.5	Stable
Drug Offences	522.8	641.1	Stable

Table 1.5 Key Community Services

Current Service Infrastructure	Kandos	Gulgong	Ulan	Cooks Gap	Mudgee	Rylstone
Community	Catholic Church Anglican Church Christian Fellowship Returned Services Community Club Library Kandos Hall Men's Shed Country Women's Association	Presbyterian Church Catholic Church Memorial Hall Rotary Club RSL Club Showgrounds Library Men's Shed Gulgong Memorial Hall	Last church is Ulan was moved in 2014, now closest in Gulgong	Closest church is in Gulgong "Cooks Gap RFS" community group on social media	Catholic Church Baptist Church Frontline Christian Church Baptist Anglican Church Uniting Church OneLife Church Presbyterian Church Showgrounds Town Hall Theatre The Stables Community and Cultural Centre Library Lions and Rotary Clubs Police Community Youth Club Country Women's Association Men's Shed Various social and hobby groups	Catholic Church Uniting Church Anglican Church Library Men's Shed Rotary Rylstone Hall
Arts, Culture and History	Museum	Prince of Wales Opera House Gulgong Pioneer Museum Henry Lawson Society of NSW	Hands on the Rock, Aboriginal rock art & Drip Gorge walking trail Ulan post office attraction – opened in 1893	Ruwenzori Retreat: accommodation built from 100-year-old railway carriages	Colonial Inn Museum Motorcycle Museum Observatory The Mud Factory	Wollemi Standing Stones Rylstone and District Historical Society Gallery 47

Current Service Infrastructure	Kandos	Gulgong	Ulan	Cooks Gap	Mudgee	Rylstone
Education	Public Primary School (U, K-6) and High School (U, 7-12) Further details in Table 1.2	Public Primary School (U, K-6) and High School (U, 7-12) All Hallos Catholic Primary School (K-6) Further details in Table 1.2	Public Primary School (K-6) Further details in Table 1.2	Nearest school is Ulan Public. Further details in Table 1.2	2 Public Primary School (U, K-6) and High School (U, 7-12) St Matthew's Catholic School (K-12) Further details in Table 1.2	Public Primary School (K-6) Further details in Table 1.2
Emergency Services/Policing	Police station Fire station (no rostered staff, covers Kandos and Rylstone) Ambulance coverage is based in Rylstone	Police Station Local Court Fire Station (new build, no rostered staff) Ambulance Station	There are no police, fire or ambulance stations in Ulan. The nearest are in Mudgee, Rylstone or Kandos.	There are no police, fire or ambulance stations in Cooks Gap. The nearest are in Mudgee, Rylstone or Kandos.	Police Station Fire Station (no rostered staff) Cudgegong Rural District Fire Control Centre Ambulance State Emergency Services Mudgee Health Service (Hospital Service)	Police Station Fire coverage is based in Kandos Ambulance (covers Kandos and Rylstone) Hospital
Local businesses and other facilities/services	A range of businesses listed in the Rylstone Kandos Business and Tourism Directory	A range of businesses listed in the Chamber of Commerce publication 'Gulgong Gossip'	The few businesses located in Ulan include a hotel, post office, accommodation village and a mechanic	The few businesses located in Cooks Gap include two accommodation places, a timber lot, post office and an installation service SolarSat	Mudgee is the largest of the towns within the Mid-Western Regional LGA with a wide range of businesses and services to support the wider LGA	A range of businesses listed in the Rylstone Kandos Business and Tourism Directory

Current Service Infrastructure	Kandos	Gulgong	Ulan	Cooks Gap	Mudgee	Rylstone
Accommodation and tourism	Kandos Motel Railway Hotel Kandos Fiveways Motel Wollemi Adventure Resort Kandos Serviced Apartments	Options in town and rural retreats including: Ten Dollar Town Motel Centennial Hotel The Prince of Wales Hotel Gulgong Motel Owl Head Lodge Spring Creek Cottage B&B Didgy Ridge Gulgong Accommodation	Post Office Hotel Ulan Village Green GB Auto Group Pty Ltd	Accommodation: Ruwenzori Retreat; attraction accommodation in train carriages and Didgy Ridge Hotel	There are over 30 accommodation options in Mudgee and its surrounds including town-based and rural retreats. Furthermore, a search of the real estate brokerage site Airbnb found approximately 300 listings for short stay accommodation options in the Mudgee area	Rylstone Hotel The Globe Hotel Rylstone Caravan Park Old Mill Accommodation Bridge View Inn apartment + 6 more self-contained apartments, cottages and retreats
Transport	Kandos coach stop – three coaches daily from Lithgow to Gulgong stopping at Kandos Railway no longer in operation Community transport for aged, and people with disabilities (volunteer-based)	Three coaches daily from Lithgow to Gulgong Railway no longer in operation Community transport for aged, and people with disabilities (volunteer-based)	Yarrawonga and Blue Springs school bus service nearby The closest main bus station is Gulgong Sandy Hollow – Gulgong Railway coal transport Recent Ulan Road Capital Upgrades	Yarrawonga school bus services goes through the town The closest main bus station is Gulgong	Community transport for aged, and people with disabilities (volunteer-based) Mudgee coach stop – three coaches daily from Lithgow to Gulgong stopping at Mudgee Airport Mudgee Cabs Railway no longer in operation	Community transport for aged, and people with disabilities (volunteer-based)

Current Service Infrastructure	Kandos	Gulgong	Ulan	Cooks Gap	Mudgee	Rylstone
Recreational Facilities/ Services	Swimming Pool Golf Club Kandos Sports Ground Darton Park Simkins Park Waratah Park	Gulgong Sports Council Golf Club Bowling and Sporting Club Rugby League Swimming Pool Tennis Courts 24/7 Gym Billy Dunn Oval Victoria Oval 12 Recreational parks	Recreation room and gym located in accommodation village Basketball court and playground at public school Community Centre	Cooks Gap Community Hall	Mudgee Sports Council Glenn Willow Regional Sports Stadium Cahill Park Jubilee Oval Victoria Park Walkers Oval Skate Park Westend Complex Swimming pool PCYC Two 24-hour gyms Tennis courts Squash courts	Rylstone Sports Council Rylstone Club (Bowls, Golf, Squash) Kandos Rylstone Fitness Centre KR Gym Connection Tennis Club

1.2 Regional Development Context and Community Response to Change

Table 1.7 below is an outline of other projects in the region to understand the regional development context and community response to change. The table briefly describes each project, and the various identified impacts associated with the project, such as the community identified impacts and the SIA identified impacts. The table also summarises the Projects SIA proposed mitigation strategies, and what key information came from the community consultation and submissions, with the outcomes of each Project below,

Table 1.6 Case Studies Relevant to the Proposed Modification

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Peabody Energy's Wilpinjong Coal Mine Project – Wollar, NSW <ul style="list-style-type: none"> Existing open cut mine Thermal coal 505 employees in 2018 Project related to the 7th expansion of the mine in 2017 Wollar residents argued that the DPE didn't take greenhouse gas emissions into consideration and stressed the social impacts of the Project. Mine life until 2033.					
Population	Way of life Community Personal and property rights	Peabody has reportedly offered acquisitions to remaining residents although noise modelling did not suggest the properties would be impacted. This was seen as a possible cause for further decreases in local population.	Population decline (locally and regionally). Depressed property market due to mining in region and lack of habitable properties. Inability to attract new population to the area.		In preparation of the SIA: 11 current landholders, 4 former landholders 51 online community surveys 325 surveys from WCM employees 7 key stakeholders - service providers/ businesses, Mid-Western Regional Council
Housing	Personal and property rights Surroundings Way of life Community	All but 4 homes in Wollar owned by Peabody – population decline from 175 private dwellings in 2011 to 25 in 2015. Derelict houses. Residents describe the acquisition process as	Construction phase: up to 50 beds may be needed to accommodate workers. Operational phase: 10–18 dwellings needed to house 'new local' employees in Mudgee or Gulgong (not Wollar).	Stakeholder engagement to communicate any expected changes.	756 submissions received (716 general public and 40 organisations/groups). Approximately 14 % of submissions were in support of the Project, all

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
		'destabilising' and 'divisive'. Concern for state of mine-owned houses in the village, and housing stress caused by inability to rent, re-mortgage etc as a result of proximity to the mine.			others were not supportive of the Project.
Employment	Way of life Personal and property rights		Project predicted to create 73 jobs between 2018 and 2024 and sustain employment until 2033.	Advertisement of jobs and supplier/ contractor opportunities to facilitate local opportunities. To maintain good relationships with employees, operate induction programs, implement WHS procedures, implement a self-reporting program to identify and manage incidents of workforce behaviour and encourage employees to contribute to the community.	
Wollar Area Businesses	Access to and use of infrastructure Way of life Surroundings		Further population decline seen to negatively impact local businesses and supporting services in Wollar. Wollar General Store likely to close.	Community investment for services.	
Social Infrastructure	Access to and use of infrastructure Surroundings Community	Residents of Wollar have experienced a reduction in village amenity and social infrastructure.	Construction phase: potential demand for health care. Operational phase: potential small increased demand for child-care, hospital services, education, training and emergency services.	Communication with emergency services and other service providers to ensure adequate resourcing and continuation of services.	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Social sustainability	Access to and use of infrastructure Surroundings Way of life Community	Loss of services. Strain on community to keep the village going.	Community decline due to further property purchases in Wollar relating to the Project. General store and school already operating below viable thresholds, further reduce ability to sustain local services.	Social/Community investment program. Community investment and encouragement of Project workforce participation in local activities and events.	
Amenity	Community Surroundings Access to and use of infrastructure Way of life	Residents suggest population loss as the biggest cause of change in the village in the past 10 years impacting service use, community cohesion, sense of place and residential amenity. Noise and dust as a result of increased rail movements. Residents of Wollar have experienced a reduction in village amenity and social infrastructure.	Residential amenity impacts due to increased traffic, operational noise, blasting and closer proximity to dust sources. Property acquisitions resulting in decreased activity in Wollar and loss of services.	Property valuations to consider lifestyle values and afford a second landholder valuation.	
Quality of life and wellbeing	Health and wellbeing Way of life Surroundings	Strain on community to keep village due to population decline and loss of services. Residents describe the acquisition process as 'destabilising' and 'divisive'.	Stress and anxiety from the Project. Sleep disturbance. Community isolation. Noise and dust impacts on social amenity.	To counteract stress from acquisition process – property valuations compared with similar properties and second registered valuer chosen by property owner. Stakeholder engagement to keep community up to date with decisions.	
Sense of place	Community	Strains on relationships between those for and	Loss of sense of place due to Project related changes to	Stakeholder engagement relating	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
	Way of life Surroundings	against the mine.	landscape (demolition of unsafe vacant houses & proximity of mine) and population change.	to which houses to be demolished. Encouragement of Project workforce to participate in local activities and events.	
<p>Outcome/ Consequence: Wilpinjong Extension Project approved in June 2018.</p> <p>KEPCO's Bylong Coal Project – Bylong NSW</p> <ul style="list-style-type: none"> • Open cut and underground mine • Mine life of 25 years • First applied in 2014, many changes made to the application triggered by the community and protests to the application. <p>The Department of Planning (now DPIE) recommended the Project be approved.</p>					
Population Change	Way of life Community Access to and use of infrastructure and services Fears and aspirations	The community is worried about the cumulative impact of property acquisitions in the Bylong Valley.	Increase in non-resident population in site establishment and construction stage causes pressure on accommodation services. Population increases throughout operational phase. Temporary reduction in resident population due to Project related property acquisitions. Reduction in resident population due to mine closure.	KEPCO to provide Council with an annual workforce report that details the current and anticipated workforce numbers to allow them to proactively plan for anticipated population changes. KEPCO to assess suitable Project-owned houses for habitation by Project employees. KEPCO to consider developing and implementing an Employee Incentive Scheme detailing a range of incentives to encourage relocation to the Bylong Valley. KEPCO to undertake a closure-related SIA for the mine five years prior to envisaged closure date.	In preparation of the SIA: 29 landholders, property managers and farmhands 18 service providers Local government State government Reportedly 336 out of 364 residents against the mine, from the response to submissions received from the EIS exhibition.
Economic	Personal and property rights	Population increase that will double the town's	Economic benefits to the LGA during Project construction and	Local Content Plan to encourage participation of local and under-	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
	Way of life Fears and aspirations	population as it will support local businesses.	<p>operation.</p> <p>Increased revenue for LGA due to growth in population and household numbers during operational phase.</p> <p>A potential 36 % increase in number of people employed in coal mining in the LGA.</p> <p>Potential impacts to non-mining sectors of the economy during peak operational phase.</p> <p>Potential impacts to agricultural sector as a result of land use changes within the Project Disturbance Boundary.</p> <p>Potential visual impact of the Project on the 'tourist experience'.</p> <p>Reduction in economic activity as a result of mine closure.</p>	<p>represented groups in the Project's workforce and supply chain.</p> <p>Projects that support the economic diversity of the LGA may be suitable for funding from the Community Investment Fund.</p> <p>KEPCO would return appropriate areas within the Project Disturbance Boundary to agricultural land use practices as soon as possible after achieving rehabilitation goals.</p> <p>KEPCO would retain the services of a professional Farm Manager to oversee use and management of KEPCO owned land.</p> <p>KEPCO would contribute to the beautification of the location through the Community Investment Fund.</p> <p>KEPCO to undertake a closure-related SIA for the mine five years prior to envisaged closure date.</p>	
Labour Market	Way of life Personal and property rights Fears and aspirations		<p>Creation of direct and indirect employment opportunities during the construction and operation phases of the Project.</p> <p>The Project would directly increase the labour force of the LGA by 2.1 %.</p> <p>Potential for labour draw from</p>	<p>Local Content Plan and Indigenous Participation Plan to encourage participation of local and under-represented groups in the Project's workforce and supply chain.</p> <p>KEPCO to encourage all non-local hires and their families to locate permanently to the LGA. Labour force would benefit from an</p>	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
			<p>the non-mining sector in Mid-Western Regional LGA with resulting impacts to local service provision.</p> <p>Potential increase in demand for labour with certificate level qualifications in the LGA.</p> <p>Creation of employment opportunities for young people in the LGA.</p>	<p>addition of a sizeable population between 15 and 65 years.</p> <p>KEPCO to encourage provision of education and training opportunities in the non-mining sector should this be identified as a community need.</p> <p>KEPCO to liaise with local schools and education providers to identify opportunities for supporting the delivery of training programs in mining and other skillsets in demand in the LGA.</p> <p>KEPCO would seek to provide part-time and/or flexible employment opportunities to encourage a higher rate of labour force participation, particularly among disadvantaged groups.</p> <p>KEPCO would encourage the Council to establish an annual scholarship program offering financial support to local students seeking to study a university degree in a primary industry related course.</p> <p>KEPCO would investigate opportunities for mentoring and career development services to secondary schools in the LGA.</p>	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Housing/ Accommodation	Way of life Community Access to and use of infrastructure, services and facilities Culture Surroundings Fears and aspirations Decision making	<p>The PAC criticised the Department of Planning (DOP) (now DPIE) for not considering the social impact the expansion would have on the town of Bylong, saying that ‘the Department of Planning appear to “accept a degree of inevitability,” when it comes to the loss of community around Hunter Valley mining Projects.’</p> <p>The DOP (now DPIE) was also rebuked for taking the view that mine acquisitions occurred under ‘open market conditions’. Reflecting the perception of ‘forced acceptance’ of offers on property.</p> <p>‘The mining company has spent more than \$700 million developing the Project, which includes buying up many historic homes and farms in the Bylong Valley area, as well as thoroughbred studs and even the local school.’</p> <p>Stress and family tension felt as a precursor to the acquisition process.</p>	<p>Potential increase in demand for short-term accommodation during site establishment and construction stage and decommissioning.</p> <p>Increased housing demands in Mudgee during the operational phase (up to 186 additional dwellings).</p> <p>Project induced housing demand during the Operations Phase would impact on residential land supply in Mudgee.</p> <p>Potential adverse changes in housing and rental costs in Mudgee due to a fluctuating demand for housing by the Project workforce.</p> <p>Potential increase in the demand for social housing due to the displacement of lower socio-economic groups out of the public housing market in Mudgee during peak operations.</p>	<p>KEPCO to encourage workers in the operational phase to use the Worker Accommodation Facility while they transition to permanent housing if local short-term accommodation is in high demand.</p> <p>KEPCO to communicate with the Council regarding the Project schedule and any anticipated recruitment periods or changes in the size of the workforce.</p> <p>KEPCO would monitor housing affordability and availability in the LGA and report in the Annual Review.</p> <p>Actions to address the crisis housing deficit in the LGA would be discussed with Council.</p> <p>Engagement with key stakeholders such as Housing Plus, Barnados and Council on the provision of crisis housing.</p>	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Community Liveability	Community Way of life Culture Surroundings Fears and aspirations	<p>The Bylong Valley is a 'fractured community' due to population decline over the past 10 years and impacts of the Project.</p> <p>Local resident 'In my opinion, there's not enough water here for farming and mining. I've told them that it's either one or the other.'</p>	<p>Potential adverse changes to the character and amenity (including visual amenity) of Bylong Valley and Bylong.</p> <p>Potential change in the identity of the Bylong Valley as a result of Project induced changes in character and amenity.</p> <p>Potential loss of connection to rural industry as a result of changing landscape character.</p> <p>Increase in the pool of available volunteers in the Bylong Valley and broader LGA.</p> <p>Potential changes in property accessibility and accessibility to Bylong.</p> <p>Enhanced social capital in the Bylong Valley through the introduction of new residents to the Bylong Valley.</p> <p>Potential for reduced road safety due to Project related changes.</p> <p>Potential changes in employee and family health and wellbeing due to Project employment conditions i.e. shift arrangements.</p> <p>Potential adverse changes in residential amenity.</p>	<p>KEPCO to contribute to a Community Investment Fund.</p> <p>KEPCO to encourage employees to remove their high-visibility mining work wear when visiting public places and towns / villages before and after work.</p> <p>KEPCO to contribute to the beautification and enhancement works in the Bylong Valley.</p> <p>KEPCO would retain the services of a professional Farm Manager to oversee the use and management of all Proponent owned land in the Bylong Valley.</p> <p>KEPCO is committed to supporting the participation of the Operations Phase workforce in volunteer roles across the LGA.</p> <p>KEPCO would keep landholders in the Bylong Valley informed of decisions in relation to the timing of the closure of Upper Bylong Road and the proposed alternative access route.</p> <p>KEPCO would assist new residents and families to integrate into their host community through a number of methods.</p> <p>KEPCO would develop and implement a Project Fatigue Management Policy.</p>	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
				<p>Logistics scheduling would ensure vehicle movements are undertaken to be outside school drop off and pick up periods.</p> <p>A construction Traffic Management Plan would be prepared detailing traffic management.</p> <p>A comprehensive stakeholder engagement plan would be prepared and implemented for the site establishment and construction and operation stages of the Project.</p> <p>A voluntary acquisition policy would be established.</p> <p>At-site mitigation to be offered to those outside of the acquisition zone.</p>	
<p>Outcome/ Consequence:</p> <p>Recommendation made to IPC then IPC recommended further consultation be undertaken regarding the Project's impact on Tarywn Park due to GML Heritage's conclusion that Tarywn Park was eligible for listing on the State Heritage Register.</p> <p>The DPE then advised KEPCO that revisions to the mine plan would be required to minimise potential impacts on Tarywn Park.</p> <p>DPE recommended the revised mine plan for approval by the IPC.</p> <p>The IPC determined to refuse the Project in September 2019 with intergenerational equity, impacts on the historic Tarywn Park and the cumulative impacts on GHG amongst the cited resources.</p> <p>KEPCO appealed to the Land and Environment Court in late 2020 and were dismissed. KEPCO has appealed to the High Court in October 2021.</p>					

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Regis's McPhillamys Gold Project near Blayney NSW Proposed greenfield open cut gold mine and water supply pipeline with a total project life of 15 years (including one-to-two-year construction and three-to-four-year closure), to produce up to 250,000 ounces per year of gold.					
Population change	Way of life Community Personal and property rights		<p>Increase in non-resident population in site establishment and construction phase puts pressure on accommodation services.</p> <p>Population increases through operational phase potential 1.5–3.4 % population increase.</p> <p>During construction phase estimated 319 non-local hires will need rooms, and 52 non-local hires during operations phase.</p>	Voluntary Planning Agreement being negotiated as a mechanism to manage socio-economic impacts associated with the project.	<p>In preparation for the SIA: 43 people participated in round one of consultation, including near neighbours and local council</p> <p>179 people participated in round two of consultation,</p> <p>115 people participated in round three of consultation including landowners, nearby and broader LGA residents and health services.</p>
Housing/Accommodation	Personal and property rights Surroundings Way of life Community	Concerns that project related workforce accommodation demands will destabilise the housing market, and displacing rental households in favour of mining tenants.	<p>Impacts on housing market and increase in demand for short-term accommodation.</p> <p>Potential for landlords to shift low rent tenants out of private rental accommodation and increase weekly rents to capitalise on demand.</p> <p>Blayney does not have the capacity to meet the construction workforce accommodation demands.</p>	<p>Workforce Accommodation and Workforce Management Framework developed.</p> <p>Construction Workforce Accommodation Strategy (CWAS) developed to manage accommodation demand.</p> <p>Portion of non-local hires must seek accommodation in areas outside of the Blayney LGA.</p> <p>Support.</p>	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Employment	Way of life Personal and property rights	Local based employment generator to attract labour back into Blayney and for existing school leavers.	Project will provide direct employment for up to 71- workers at peak construction with 55 % assumed to already reside in the local area. Direct employment at peak operations with an average annual direct workforce of approximately 260 with 80 % assumed to already reside in the local area. Total estimate of 1,289 direct and indirect jobs.	Majority of direct and indirect employees predicted to reside locally.	
Private property impacts	Personal and property rights Decision-making systems	Perception that the project will impact private property values, or fear of property damage.			
Amenity	Community Surroundings Access to and use of infrastructure, services and facilities	Significant concern in relation to impact on pedestrian and driver safety on local road networks. Additional financial burden due to cost of maintaining local roads. Potential for improvements and/or expansion in local community services and facilities with Regis investment.	Increased background traffic volumes on the surrounding road network for the 15-year project life. Potential road incidents with combination of workers changing shifts, school bus routes, trucks all using local road network.	Near Neighbours Impact Management Framework developed for project. Traffic Management Plan developed. Establishment of alternate route to project area. Financial contribution to road maintenance.	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Quality of life and wellbeing	Health and wellbeing Way of life Surroundings	Fear in relation to the use of cyanide in the mine development, and TSF wall breach. Fear of health issues due to air quality.	Minimal risk associated with chemicals used and stored in the area.	Cyanide and other reagents and dangerous goods will be transported in accordance with Australian codes and standards, and risk assessments conducted regularly.	
Social cohesion/community liveability	Community Way of life Surroundings	Concern that influx of temporary workers would adversely impact the community. Potential increase in anti-social behaviour. Potential reduction in personal safety. Potential tension between temporary workforce and permanent residents. Development may detract from the rural character of the LGA.	Temporary workforce has potential to impact community image and social cohesion. Creation of an 'us versus them' mentality. Connectivity and engagement within communities.	Provide opportunities for temporary residents to come together. Development of corporate volunteer programs to help improve relationships between workers and community residents. Requiring employees to sign social contracts that link to employment and specify a standard of behaviour. Treatments to be applied to the mine project area to reduce views from the Mid Western Highway.	
Economic	Personal and property rights Way of life Fear and aspirations	Impact on local tourism industry sector by reducing accessibility to short-term accommodation for visitors to the LGA. Potential to drive economic growth in the Blayney LGA, but concern that benefits will be for the broader/nearby LGAs.	Economic benefits to the LGA during construction and operation. Increased revenue for LGA due to growth in population and household numbers. Increased regional output or business turnover. Increased regional value-added.	Voluntary Planning Agreement being negotiated as a mechanism to manage socio-economic impacts associated with the project.	

Identified Impacts	SIA Category	Community Identified Impacts	SIA Identified Impacts	SIA Proposed Mitigation Strategies	Community Consultation/ Submissions
Access to and use of ecosystem services	Surroundings	Residents place high value on access to water, particularly Belubula River – leading to agricultural impacts.	Impacts on surface water and groundwater as a result of the project are predicted to be minimal and impacts to downstream water users are predicted to be minor.	Design of the water management system for the mine development has been optimised to minimise disruption of surface water systems. Construction of pipeline to supply majority of water to project area, to avoid reliance on local ecosystem services.	
Aboriginal Culture	Community Culture	Local Aboriginal people concerned that development might impact upon Aboriginal heritage and other values. Concern for cumulative loss of connection to country resulting from local and regional changes in land use and tenure.	Disturbance of 23 Aboriginal cultural heritage sites and indirect disturbance of a further 10 in close proximity to project. Cultural Heritage Assessment indicates the Aboriginal cultural heritage sites located within the mine project area are not of high scientific, social or cultural value.	Stakeholder Engagement Framework developed for project. Involving local Aboriginal community as integral participants in the management of Aboriginal cultural heritage values in the mine project area. Any recording, collection, storage of Aboriginal objects must occur with the invited participation of local Aboriginal community representatives.	
Outcome/ Consequence: Response to Submissions has been submitted. Status: More Information Required					

2.0 Issues and Opportunities

Table 2.1 summarises the outcomes of a review of relevant Regional strategic plans and documents to highlight central challenges and opportunities for the Central West and Orana Region and the Mid-Western Regional LGA into the future. Due to the geographic extent of the Central West and Orana Region, some of the issues and opportunities outlined below are not directly relevant to the Proposed Modification. However, given the shared planning context from a State Government perspective, these impacts form part of the broader development scope for the Proposed Modification, provide insight into current planning directions for the Region, and illustrate potential influences on future funding and planning decisions at the Mid-Western Regional LGA level.

Table 2.2 summarises the outcomes of a review of relevant Council strategic plans and documents to highlight the challenges and opportunities relevant to the Mid-Western Regional LGA as identified by Council.

Table 2.1 Summary of Issues and Opportunities – Central West and Orana Region

Theme	Issues/Barriers /Restraining Factors	Opportunities
Human Capital	<ul style="list-style-type: none"> Ageing population. Additional housing stock required to accommodate additional population. Health services to come under increasing pressures as population ages. Shortage of skilled workers which would impact on ability to meet future workforce demands. Additional education and training services required. 	<ul style="list-style-type: none"> By 2036, the region's population is expected to increase to more than 300,000 people. Charles Sturt University at Bathurst, offering additional courses including more online options. Plans to increase housing stock diversity, especially for seniors.
Social Capital	<ul style="list-style-type: none"> Areas of high growth can have a cumulative impact on Aboriginal cultural heritage values and historic place. Transient population relating to industries such as mining and agriculture (during harvesting periods). 	<ul style="list-style-type: none"> Region home to a number of key tourist attractions and events e.g. Western Plains Zoo and Bathurst 1000. Areas of important cultural heritage.
Natural Capital	<ul style="list-style-type: none"> Use of water by key industries. Risks associated with climate change – drier and warmer climate, resulting in increased evaporation, more heat waves, extreme winds and fire risk. Water supply deficiencies are expected to increase. Highly productive agriculture requires ready access to water, high quality soils and suitable climates. While the total area of land available for agriculture is large, comparatively few locations have access to all these characteristics. 	<ul style="list-style-type: none"> Rich mineral resources and agricultural land. Significant and internationally recognised landscapes, including the Blue Mountains, the western plains and expansive river systems and wetlands.

Theme	Issues/Barriers /Restraining Factors	Opportunities
Economic Capital	<ul style="list-style-type: none"> • Industry reliant on road and rail infrastructure to transport goods and access markets. • Agricultural industry threatened by biosecurity issues and other incompatible land uses which fragment productive land use. • Specific operational needs associated with mining activities. • Regional communities would need support to diversify and transition their economy as mineral extraction diminishes. 	<ul style="list-style-type: none"> • One of NSW's most diverse regional economies. • Mudgee identified as a strategic centre. • Strong mining industry accounting for \$2.5 billion and 5 % of jobs in the region. • Strong agricultural, forestry and fishing industry accounting for \$1.3 billion and 11 % of jobs in the region. • Alternative energy projects emerging across the region. • Growing tourism industry.
Physical Capital	<ul style="list-style-type: none"> • Highway upgrades required to improve efficiency. • Growth in export industries would increase pressure on road and rail networks. Parts of these networks are already failing under pressure from freight movements due to their condition or alignment. • Limited public transport options. • Waste management systems predicted to come under increasing pressures as population and waste increases. • Unreliable telecommunications in some areas including phone blackout areas and delays in NBN rollout. 	<ul style="list-style-type: none"> • Increased capacity of freight and logistics infrastructure – making the region a nationally significant freight hub. • Road, rail and telecommunications investments. • Increased road and rail connectivity to major cities including Sydney, Canberra and Newcastle.
Source: NSW Government, Central West and Orana Regional Plan 2036.		

Table 2.2 Issues and Opportunities – Mid-Western Regional LGA

Theme	Issues /Barriers /Restraining Factors	Opportunities
Human Capital	<ul style="list-style-type: none"> Limited health services. Difficulties in attracting and retaining General Practitioners (GPs). Limited tertiary education options. Aging population. 	<ul style="list-style-type: none"> Mudgee Hospital redevelopment. Population increasing.
Social Capital	<ul style="list-style-type: none"> Isolation, substance abuse, family breakdown, lack of youth awareness of existing support services and facilities, under-utilisation of existing facilities, lack of regular recreational events especially in outlying areas, youth access to existing recreational/cultural activities. Shortage of short and long-term accommodation, seen to be connected to increase in mining industry. Temporary workers accommodation facilities are available, however can have unintended detrimental social consequences, such as segregation from the existing community. 	<ul style="list-style-type: none"> Support arts and cultural development across the Region. Council's plan to increase housing options in the Region. Thriving tourism, arts and cultural sectors. A new Art Gallery facility being developed. Tight-knit community.
Natural Capital	<ul style="list-style-type: none"> Water supply. Impacts of mining on natural environment require management and regulation. 	<ul style="list-style-type: none"> Area has quality agricultural land. Community values the beautiful natural environment. Area has rich mining resources.
Economic Capital	<ul style="list-style-type: none"> Potential for labour force competition due to mining activity. Increasing retirement age population leading to decrease in skilled employee base. 	<ul style="list-style-type: none"> Region has strong and diverse industries including mining, tourism and agricultural. Council to support Projects that create new jobs in the Region and help to build a diverse and multi-skilled workforce. Council supports the expansion of essential infrastructure and services to match business and industry. Strong business services sector.

Theme	Issues /Barriers /Restraining Factors	Opportunities
Physical Capital	<ul style="list-style-type: none"> Traffic congestion. Road infrastructure and road surfaces require upgrades. Lack of public transport options. Waste and sewer systems require upgrade e.g. Kandos. Broadband and mobile coverages need upgrading. Expansion of the mining industry – potential strain on infrastructure. Limited commercial flights per week. Waste services (including kerb side pickup) are reaching capacity. 	<ul style="list-style-type: none"> Continued investment in road upgrades including Wollar Road. Historic character of region. Upgrades and development of recreational infrastructure for our youth including a water park, skate park upgrades and district adventure playground. Stormwater drainage improvements e.g. Mudgee. Improvement in footpaths and shared cycleways. Food and Garden Waste collection service being implemented.
Source: Compiled by Umwelt from the following sources: MWRC Community Plan Towards 2030, 2017; MWRC Delivery Program 2017/18 – 2020/21 Operational Plan 2018/19; MWRC Workforce Strategy 2017/2021; MWRC Asset Management Strategy 2017/2021; MWRC Community Engagement Summary of Findings, 2017.		

3.0 Media Review

Date	Source	Headline	Description	Link
9/01/2015	Mudgee Guardian	Mid-Western Region mines contribute \$320 M to the region	A NSW Minerals Council survey has found Mudgee is weathering the mining downturn, creating more than 200 mining jobs in 2013/14. The mines paid \$170.2 million in wages and salaries to 1434 full-time employees and spent \$150.2 million in purchases with 297 Mid-Western Region business, as well as making community contributions and payments to local government.	https://www.mudgeeguardian.com.au/story/2805087/mid-western-region-mines-contribute-320m-to-the-region/
4/06/2017	Mudgee Guardian	96.3 % of respondents want a Mudgee – Sydney train service	Last week saw the NSW Government announced a new Lithgow-Sydney express train, to run each weekday. The reaction of Mid-Western region residents however has been thoughts of Mudgee, and why a train line isn't allowing them to access the state's capital too. In the article 'What about us? New express train from Lithgow to Sydney' on the Mudgee Guardian website, a poll saw that the interest is overwhelmingly positive – just 3.7 % of respondents weren't interested in the service, and 96.3 % said that they wanted a train line.	https://www.mudgeeguardian.com.au/story/4706573/region-wants-mudgee-sydney-train-service-video/
10/03/2019	Mudgee Guardian	NSW Drought: Record hot summer's impact on our farmers	Weatherzone meteorologist Scott Morris said records were broken in Bathurst, Dubbo and Orange this summer.	https://www.mudgeeguardian.com.au/story/5945516/sizzling-summers-a-record-breaker-and-farmers-are-doing-it-tough/
1/04/2019	Pedestrian	Why Mudgee Is The Perfect Weekend Escape From City Slicker Bullshit	Mudgee: it's fun to say, a good spot to play and – if you're the thirsty type – a truly scenic place to call it a day.	https://www.pedestrian.tv/travel/mudgee-nsw-what-to-do/
26/04/2019	Mudgee Guardian	Central West tourism: National Visitor Survey highlights tourist boom	The fact that almost three million overnight visitors stayed in the Central West last year who spent upwards of \$1.2 billion is absolutely no accident, tourism experts say.	https://www.mudgeeguardian.com.au/story/6089547/almost-three-million-visitors-spent-12b-in-the-central-west/

Date	Source	Headline	Description	Link
20/09/2019	Mudgee Guardian	Mining jobs, Central West: Worker numbers increase due to strong demand for coal	A "STRONG demand for NSW coal" has created more jobs in the Central West's mining sector during the past financial year, NSW Mining says.	https://www.mudgeeguardian.com.au/story/6394386/mining-jobs-on-the-rise-thanks-to-strong-demand-for-coal/?cs=1485
10/03/2020	Western Magazine	Successful grant application leads to 48 bales of Hay from Glencore	Application to 'Smarty grants' program sees Ulan Coal Mine's community investment program purchase 48 bales of hay, to be distributed by 200 bales to registered eligible farmers within the Mid-Western Regional LGA.	https://www.mudgeeguardian.com.au/story/6666056/48-bales-of-hay-to-200-bales-thanks-to-glencore/
10/04/2020	Singleton Argus	How damaged are our lungs?	Increasing levels of dust in the Upper Hunter from bushfires and nearby coal mines, mentions Moolarben, Mt Owen, Hunter Valley, Bulga and Bengalla's contribution to increasing dust levels damaging community lungs.	
17/04/2020	Mudgee Guardian	'Mining over half of Mid-West's gross regional product', Minerals Council survey	Mining represents over half of the Gross Regional Product (GRP) of the Mid-Western local government area, according to the NSW Minerals Council's annual Expenditure Survey.	https://www.mudgeeguardian.com.au/story/6726214/minerals-council-survey-reveals-mining-over-half-of-mid-wests-gross-regional-product/
23/06/2020	Mudgee Guardian	Mining bright spot in economic outlook	Mining is one of the rare bright spots as the coronavirus hammers the Australian economy.	https://www.mudgeeguardian.com.au/story/6846490/mining-bright-spot-in-economic-outlook/
30/06/2020	Mudgee Guardian	Five new mines to provide up to 2500 jobs across Central West	Up to 2500 jobs will be created at five new mines in the Central West, the NSW Minerals Council has claimed.	https://www.mudgeeguardian.com.au/story/6856066/jobs-to-flow-from-nsw-central-west-mine-projects/
28/09/2020	Mudgee Guardian	Push to improve mine sites rehabilitation under proposed reforms	Mining companies would be required to improve the standard of mine site rehabilitation under a series of proposed reforms.	https://www.mudgeeguardian.com.au/story/6944280/push-to-improve-mine-sites-rehabilitation-under-proposed-reforms/

Date	Source	Headline	Description	Link
29/10/2020	Mudgee Guardian	The Campaign to Save The Drip Gorge in New South Wales has been running for years, but the women on the front line still aren't satisfied	Up until now, Phyllis Setchell says, mining has been far enough away that visible impacts on this stretch of the Goulburn River have been limited, although "the subtle impacts have been gradually increasing as it's come closer, and as the mining has become a larger enterprise than what it used to be I think the combined effect of the Ulan mine and the Moolarben mine on the river is obvious now." "They've already got evidence their underground mining at the Ulan and Moolarben mines is having a drawdown effect on groundwater up to two kilometres away from the active face of the longwall," Dr Julia Imrie says.	https://www.mudgeeguardian.com.au/story/6988862/is-the-drip-safe/
9/11/2020	Mudgee Guardian	Letter to the editor: mining is 'relentless'	There appears to be no end to the relentless expansion of coal mining in our area. As reported in Mudgee Guardian (Tuesday, November 7), Peabody Energy has lodged an application for the release of a new exploration area over 16, 760 ha of farmland to the east of Wollar.	https://www.mudgeeguardian.com.au/story/5044765/letter-to-the-editor-mining-is-relentless/
20/11/2020	Mudgee Guardian	Water restrictions lifted for Rylstone and Kandos, while Mudgee and Gulgong to remain 'vigilant'	Water Restrictions have been lifted in Rylstone and Kandos following a decision by Mid-Western Regional Council at its November Meeting.	https://www.mudgeeguardian.com.au/story/7020401/water-restrictions-lifted-for-rylstone-and-kandos-while-mudgee-and-gulgong-to-remain-vigilant/
1/12/2020	Mudgee Guardian	Gulgong-Maryvale rail line may finally be completed, feasibility study findings 'positive'	After more than a century of work starting and stopping, there's a possibility the Sandy Hollow-Maryvale rail line might finally be completed, with the release of a feasibility study into completing the final missing link (Gulgong to Maryvale) showing positive economic benefits.	https://www.mudgeeguardian.com.au/story/7035646/gulgong-maryvale-rail-line-may-finally-be-completed-feasibility-study-findings-positive/

Date	Source	Headline	Description	Link
31/03/2021	Mudgee Guardian	Mining companies inject \$1 billion into Central West economy: NSW Minerals Council	New figures reveal the staggering economic impact the mining industry had on the Central West in the last financial year, despite the COVID-19 pandemic's reverberation, as the wider community continues to reap the benefits.	https://www.mudgeeguardian.com.au/story/7191125/higher-spending-more-jobs-what-is-mining-worth-to-the-central-west-economy/
22/04/2021	Mudgee Guardian	Royalties for rejuvenation fund to help coal-dependent communities after mines close	NSW Government will set aside \$25 million every year to help coal-dependent communities rebuild their economy when a local mine closes. Deputy Premier John Barilaro said the new fund would help build a future for communities after coal.	https://www.mudgeeguardian.com.au/story/7220128/new-fund-to-help-coal-dependent-communities-after-mines-close/?cs=9676
4/05/2021	Singleton Argus	Environmental bonds totally inadequate to rehabilitate the Hunter's mine voids	Current environmental bonds will be totally inadequate to fully rehabilitate the Hunter's 23 final voids left once open cut mining ceases. "The fact that the Hunter's coal mines are producing nearly 100 million tonnes per year less than they are approved to, shows there is absolutely no need for any new coal mines," said Rod Campbell, Research Director at the Australia Institute. "This research undermines the case for new coal projects as existing approvals can easily meet existing and likely future demand. The key reason for this gap is that the world is not demanding all this coal.	https://www.singletonargus.com.au/story/7238032/billions-more-need-to-rehab-mine-voids/?cs=1534
12/05/2021	7 News	New South Wales mouse plague spreads as sightings are reported in state's south	Rapidly developing mouse plague tormenting New South Wales farmers. Farmers are pleading with the New South Wales Government for pesticide rebates to help them control the infestation.	https://7news.com.au/news/animals/new-south-wales-mouse-plague-spreads-as-sightings-are-reported-in-states-south-c-2819009

Date	Source	Headline	Description	Link
19/05/2021	Mudgee Guardian	Mudgee Airport upgrades set boost the local economy, according to Andrew Gee	Mudgee Airport is currently in the process of undergoing significant upgrades as a result of recent Federal Government funding.	https://www.mudgeeguardian.com.au/story/7259829/nationals-mp-andrew-gee-announces-a-raft-of-funding-for-local-projects-including-a-new-road-at-glen-willow/?cs=1485
25/05/2021	Newcastle Herald	Buses replace trains on Hunter Valley line between Newcastle and Ulan	The shutdown will run from Tuesday May 25 and is expected to be completed at 8.30pm on Thursday May 27.	Buses replace trains on Hunter Valley line between Newcastle and Ulan Newcastle Herald Newcastle, NSW
6/10/2021	ABC News	South Korean utilities giant KEPCO considers hydrogen project for Bylong Valley	KEPCO's open-cut coal mine proposal for the NSW Bylong Valley was knocked back three times, but to the surprise of local farmers, it is now exploring a hydrogen opportunity.	South Korean utilities giant KEPCO considers hydrogen project for Bylong Valley - ABC News
14/10/2021	ABC News	KEPCO to seek leave to appeal Bylong Valley coal mine refusal in High Court	KEPCO believes that the NSW Court of Appeal made errors in its decision and has filed a special leave application to the High Court seeking proper legal interpretation.	KEPCO to seek leave to appeal Bylong Valley coal mine refusal in High Court - ABC News

