



Mount Piper to Wallerawang Transmission Line Upgrade

Technical Report 13 – Social Impact Assessment

Transgrid

August 2025

→ The Power of Commitment



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Acknowledgement of Country

Transgrid and GHD acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country. We pay our respects to Elders of the past, present and future, as they hold the memories, knowledges and spirit of Australia. Transgrid and GHD are committed to learning from Aboriginal and Torres Strait Islander peoples in the work we do.



Executive Summary

The project

Transgrid proposes to deliver approximately eight kilometres (km) of new 330 kilovolt (kV) transmission line and double circuit transmission structures located between the Mount Piper and Wallerawang 330 kV substations (the project). The project would incorporate sections of an existing, single-circuit 132 kV transmission line, where the two transmission lines would share a widened easement and transmission structures. The project is located within the Central West region of NSW within the Lithgow Local Government Area (Lithgow LGA).

The project is identified in the NSW Network Infrastructure Strategy (EnergyCo, 2023) and also supports the key tenets of the NSW Electricity Infrastructure Roadmap (DPIE, 2020). The Roadmap identifies that the expansion of renewable generation must be accompanied by increased transmission capacity to transfer power from Renewable Energy Zones (REZ) in inland NSW to key demand centres. The Mount Piper to Wallerawang Transmission Line Upgrade Project would provide the additional capacity required to reliably transmit power from the Central West Orana REZ to the Greater Sydney region.

Purpose of this report

This Social Impact Assessment (SIA) has been prepared as part of the Environmental Impact Statement (EIS) to assess potential social impacts from the construction and operation of the project. The assessment has been undertaken in accordance with the Secretary's Environmental Assessment Requirements (SEARs).

Existing environment

The project is located in the Lithgow City Council LGA within the New South Wales Central-West region. The local study area of the project includes three communities: Blackmans Flat, Lidsdale and Wallerawang. Wallerawang is the largest locality, with a population of 2,019. The regional study area is the Lithgow LGA.

The local study area is characterised by a strong history of energy generation activities, with Mount Piper Power Plan, Wallerawang Power Station and several collieries currently or previously operating in the area. Large parts of the study area are reserved for conservation purposes, including Gardens of Stone State Conservation Area (SCA) in which a portion of the project is located in. Owing to its proximity to conservation areas, the environment is highly valued by residents of the local study area.

Key characteristics of the study area (both local and regional) are:

- Lithgow LGA has an ageing population, with the population expected to grow slightly in the coming decades.
- The study area has a higher-than-typical population of Aboriginal and Torres Strait Islander peoples.
- Mining is the biggest economic contributor to Lithgow LGA, contributing the most to gross regional product of any industry and also the third highest employer.
- Lithgow City Council is actively working to transition the economy from coal mining towards sustainable manufacturing, renewable energy generation, and tourism.
- Unemployment in the Lithgow LGA is similar to NSW and the Central-West region, with the labour force (percentage of population at working age), lower than both regional and state benchmarks.
- Housing is cheaper than NSW as a whole, and there is a low supply of rental housing and public housing.
- Several short term rental accommodation providers are available locally and regionally, however can sometimes experience shortage of supply when large infrastructure or construction projects are occurring, including focused periods of mining in the area.
- There is limited social infrastructure in the study area and local facilities often have limited opening hours in particular healthcare services.
- The local and regional area have historically been significant places for Aboriginal peoples, including the Gardens of Stone SCA and Cocks River.

Assessment methodology

This SIA has been prepared in accordance with the NSW *Social Impact Assessment Guideline* (DPE, 2023) and *Social Impact Assessment Guideline for State Significant Projects: Technical Supplement* (DPE, 2023).

A social impact scoping exercise was undertaken for the *Mount Piper to Wallerawang Transmission Line Upgrade Project Scoping Report* (Transgrid, 2024). This scoping exercise informed definition of the social locality/study area and criteria to use when establishing the social baseline.

Social impacts have been identified and described using a data triangulation method, whereby multiple sources of information have been used to confirm social impacts. Evaluation of the significance of social impacts followed a magnitude and likelihood rating, based on the methodology outlined in the *Technical Supplement* (DPE, 2023). Impacts were assessed based on whether they are likely to have a positive or negative impact on affected communities.

Impact categories outlined in the Technical Supplement were applied to assist in the identification and classification of social impacts, as well as consider their impact on communities. Impacts were grouped by these categories and the project phase during which they are likely to occur – construction or operation.

Construction impacts

Both positive and negative social impacts are likely to occur during the project construction phase. Key positive social impacts included:

- overall economic contribution to the region and state resulting from construction activities
- increased spending at local businesses, and procurement opportunities for local businesses including suppliers, labour hire, and accommodation venues
- employment and skill development opportunities for local personnel
- recovery and recording of Aboriginal and Torres Strait Islander cultural heritage artefacts identified during the project being managed in accordance with Traditional Owner preferences.

Key negative social impacts include:

- impacts to short term accommodation supply due to use by construction personnel, limiting availability of accommodation to visitors or other residents
- habitat loss and biodiversity impacts may impact communities which strongly value and care for the natural environment
- noise and vibration amenity impacts to residents located near the project footprint which may impact human comfort.

The majority of negative social impacts would be temporary in nature, with mitigation proposed to reduce or avoid any impacts. A number of supporting plans (e.g. Indigenous Procurement and Industry Participation plans) would be implemented by Transgrid to minimise the impact and enhance the benefits of the project.

Operational impacts

The nature of the project means that there would be fewer impacts likely to occur during operation, with impacts which do occur, both positive and negative. Key positive social impacts include:

- ongoing economic contribution to the region through maintenance work and supply.

Negative impacts which may occur during operation include:

- amenity impacts for residents close to the project footprint, resulting from changed landscape conditions or corona noise impacts

Due to the minimal operational requirements of the project and presence of existing transmission lines in the area, few operational impacts are expected.

Mitigation and management measures

Transgrid has proven experience in managing the delivery of transmission infrastructure projects across NSW, development and implementation of measures and policies to enhance positive social impacts as well as mitigate adverse impacts. Key mitigation measures are:

- continuing the engagement with communities and stakeholders prior to and during construction
- a workforce management plan, which includes an accommodation plan to manage the accommodation requirements of the non-resident project workforce, taking into account cumulative impacts of other major projects in the area
- industry and workforce participation strategies, to promote procurement of local industries, Indigenous-owned businesses, and employment and skills development of Aboriginal peoples
- workforce management strategies to manage the health and wellbeing of the workforce
- consultation and engagement with relevant stakeholders such as Lithgow City Council to understand opportunities for social benefit sharing, informed by Transgrid's Social Licence Program.

Conclusion

Social impacts will primarily occur during construction and will generally be temporary in nature and managed by recommended mitigation measures and policies and procedures. Fewer operational impacts are expected to occur with the project being similar to other existing transmission lines within the study area. Measures to mitigate negative social impacts have been recommended to manage impacts to accommodation availability, health and community wellbeing. Measures are also proposed to enhance positive impacts for the project.

Contents

Key terms, acronyms and abbreviations	vi
1. Introduction	1
1.1 Background	1
1.2 Location	1
1.3 The project	3
1.4 Environmental assessment requirements	7
1.5 Purpose and structure of this report	7
1.6 Authors of this report	7
2. Assessment approach and methodology	9
2.1 Legislative and policy context to the assessment	9
2.2 Approach to the SIA	11
2.3 Data and information limitations	17
3. Stakeholder consultation	18
3.1 EIS consultation	18
3.2 Consultation to inform the SIA	19
4. Existing environment	22
4.1 Project footprint and surrounds	22
4.2 Local study area	24
4.3 Regional study area	26
4.4 Key findings	32
5. Impact assessment	34
5.1 Construction impacts	34
5.2 Operational impacts	46
5.3 Cumulative impacts	52
6. Mitigation and management of impacts	58
6.1 Approach to mitigation	58
6.2 Community and stakeholder engagement plan	58
6.3 Workforce management plans	59
6.4 Local Industry and Aboriginal Participation Plans	59
6.5 Community benefits sharing	60
6.6 Summary of mitigation measures	61
7. Conclusion	63
8. References	64

Table index

Table 1.1	The project	3
Table 1.2	SEARs relevant to this social impact assessment	7
Table 1.3	Authors and qualifications	8
Table 2.1	Legislation and policy	9
Table 2.2	Legislation and policy	10
Table 2.3	Social locality	13
Table 2.4	Defining likelihood levels of social impacts	16
Table 2.5	Dimensions of social impact magnitude	16
Table 2.6	Defining magnitude levels for social impact	17
Table 2.7	Social impact significance matrix	17
Table 3.1	EIS consultation outcomes relevant to this SIA	18
Table 3.2	Summary of SIA consultation activities	19
Table 3.3	Key themes and issues raised in SIA consultation	19
Table 4.1	Key demographics, Lithgow LGA and Central West SA4 (Census 2021)	28
Table 4.2	RAI and median rent within Lithgow LGA, 2024 (Source: SGS Economics and Planning, 2024, NSW Department of Courts and Justice, 2025)	30
Table 4.3	Social housing applicants in Lithgow LGA, 31 January 2025 (NSW Department of Communities and Justice, 2025)	31
Table 4.4	Expected social housing waiting times for general applicant, by dwelling type (NSW Department of Communities and Justice, 2024)	31
Table 4.5	Estimate of short-term accommodation supply within one hour drive of the project footprint	32
Table 5.1	Summary of construction impacts	41
Table 5.2	Summary of operation impacts	49
Table 5.3	Potential cumulative impacts of relevant future projects	54
Table 6.1	Social mitigation and management measures	61

Figure index

Figure 1.1	Project location and regional context	2
Figure 1.2	Key features of the project	6
Figure 2.1	Social locality	14
Figure 4.1	Key features of the study area	23
Figure 4.2	Top industries of employment, 2021	29
Figure 5.1	Projects considered in cumulative assessment	53

Appendices

Appendix A	SIA review questions
Appendix B	Demographic data

Key terms, acronyms and abbreviations

Term	Definition
.id	.id community – Demographic Resources (also known as profile i.d. or economy i.d.)
ABS	Australian Bureau of Statistics
BESS	Battery Energy Storage System
Community infrastructure or social infrastructure	The Community Infrastructure Development Framework (City of Melbourne, 2014) defines community infrastructure facilities as ‘spaces that accommodate community infrastructure facilities and services and support individuals, families and groups to meet their social needs, maximise their potential and enhance community wellbeing’. Community infrastructure facilities can be provided by government, not-for-profit organisations and the private sector. Within this report, the following community infrastructure facilities have been included: education and child care facilities, health centres and services, disability services, emergency services, libraries, youth and community spaces, religious facilities, indoor and outdoor sport and recreation, and passive open space such as parks and gardens.
Community values	Community values, or a sense of community, are the social ties established within a community, in part based around the features and qualities of the built environment that encourage these social ties and contribute to quality of life and wellbeing. A project may impact on these aspects of a community for example through changes in noise and air quality, visual amenity, traffic and access, barriers to movement across the community, and use of enjoyable community spaces (Maller & Nicholls, 2014).
CSEP	Community and Stakeholder Engagement Plan
DPE	The former NSW Department of Planning and Environment. Split on 1 January 2024.
DPHI	NSW Department of Planning, Housing and Infrastructure
Easement	A legal property right attached to a parcel of land that enables the use of an identified part of the land by a third party other than the owner. For transmission lines, an easement defines the corridor area where the lines are located and that allows access, construction and maintenance work to take place. The easements for the 330 kV transmission lines would typically be 60 metres wide. The easement grants a right of access and for construction, maintenance and operation of the transmission line and other operational assets. For the project, some easements may overlap with existing easements such that the final easement width for the new easement would be narrower than 60 m (e.g. where paralleling the existing transmission line north of the Wallerawang 330 kV substation) and in other areas it may be wider to accommodate diverging transmission lines (eg in the area south of the Mount Piper 330 kV substation).
EIS	Environmental impact statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
GRP	Gross Regional Product – an estimate of each region’s unique contribution to the national Australian economy (Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts, 2025).
IAP2	International Association for Public Participation
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage
km	Kilometre
kV	Kilovolt
LGA	Local Government Area – LGAs are an approximation of gazetted local government boundaries as defined by each State and Territory.
Locality	Geographic area surrounding and impacted by the project – see also: Study area.
NPWS	National Parks and Wildlife Service
NSW	New South Wales
PAD	Potential Archaeological Deposit

Term	Definition
Project	The CSSI project “Mount Piper to Wallerawang Transmission Line Upgrade Project”, which is the subject of this Environmental Impact Statement. The project involves the construction and operation of high voltage transmission lines between the 330 kV Mount Piper and Wallerawang substations.
Project footprint	Area that is to be directly affected by the construction and operation of the project.
Proponent	Transgrid Pty Ltd is the proponent for the project
REZ	Renewable Energy Zone
SA4	Statistical Area Level 4 – SA4 regions are the largest sub-State regions in the Main Structure of the Australian Statistical Geography Standard (ASGS). SA4 boundaries represent labour markets and the functional area of Australian capital cities respectively (ABS, 2021).
SAL	Suburb and Locality – SALs are an approximation of the officially recognised boundaries of suburbs (in cities and larger towns) and localities (outside cities and larger towns) (ABS, 2022)
SCA	State Conservation Area
SEARs	Secretary’s environmental assessment requirements
Sensitive receiver	A location with the potential to be affected by noise or vibration from construction or operation of the project: this may include a dwelling, school, hospital, office or public recreational area.
SIA	Social impact assessment
Social cohesion	Social or community cohesion can be understood as ‘the bonds and relationships people have with their family, friends and the wider community. Day to day interactions between people in a community build trust and reciprocity and contribute to cohesion’ (ABS, 2010).
Socio-economic Indexes for Areas (SEIFA)	The ABS produces four socio-economic indices for areas (SEIFA) based on Census data, which identify areas of relative advantage and disadvantage. Socio-economic advantage and disadvantage are defined broadly by the IRSAD in terms of people’s access to material and social resources and their ability to participate in (ABS, 2023). To capture this broad definition, the IRSAD includes a range of data points, including income, education, employment, occupation, and housing. IRSAD scores are presented in quintiles and state rankings, with 1 being the lowest socioeconomic decile and the most disadvantaged and 5 being least disadvantaged.
SSD	State significant development
Stakeholder	Person or group affected by or concerned with an issue.
Study area	Geographic areas reviewed to inform the Social Impact Assessment
UCL	Urban Centre and Localities. Geographic division used by the ABS to represent areas of concentrated urban development with populations of 200 or more.
Vulnerable group	The inability of people to withstand or adapt to change due to characteristics of the group they are a part of. This report considers the following groups: socio-economically disadvantaged persons as identified by the Index of Relative Socio-Economic Advantage and Disadvantage, the elderly and very young, culturally and linguistically diverse people, people who need assistance with core activities such as self-care, movement and communication due to a severe or profound disability.

1. Introduction

1.1 Background

The Commonwealth and NSW governments have both established targets to achieve net-zero emissions by 2050. Achieving these targets requires low emissions technologies to be deployed at scale across all sectors of the economy, including the electricity generation sector, currently Australia's largest source of greenhouse gas emissions.

The NSW Transmission Infrastructure Strategy (DPE, 2018) aims to engage the private sector to invest in priority energy infrastructure projects, which can deliver low-cost, clean and reliable energy to consumers

As part of the Transmission Infrastructure Strategy, the NSW Government has developed a plan to establish five Renewable Energy Zones (REZs) to increase renewable energy generation, reduce carbon emissions, and help deliver lower wholesale electricity costs to consumers. The Central-West Orana REZ (CWO REZ), being the first REZ established, is planned to generate at least 4.5 gigawatt by the late-2020s.

The NSW Government's Electricity Infrastructure Roadmap (DPIE, 2020) identifies that the expansion of renewable generation must be accompanied by increased transmission capacity to transfer power from REZs in inland NSW to key demand centres. Interest in new energy generation projects in the CWO REZ is forecasted to exceed the existing transmission network capacity in several locations. The existing infrastructure located between the Mount Piper 550/330 kilovolt (kV) substation (Mount Piper 330 kV substation) and the Wallerawang 330/132 kV substation (Wallerawang 330 kV substation) has been identified in the NSW Network Infrastructure Strategy (EnergyCo, 2023) as requiring upgrades. The Mount Piper to Wallerawang Transmission Line Upgrade Project (the project) would provide the additional capacity required to reliably transmit power from the CWO REZ to the Greater Sydney region.

1.2 Location

The project is located within the Central West region of NSW within the Lithgow City Council Local Government Area (LGA). It is located approximately 14 kilometres (km) north-west of Lithgow situated on the western fringes of the Blue Mountains (Figure 1.1).

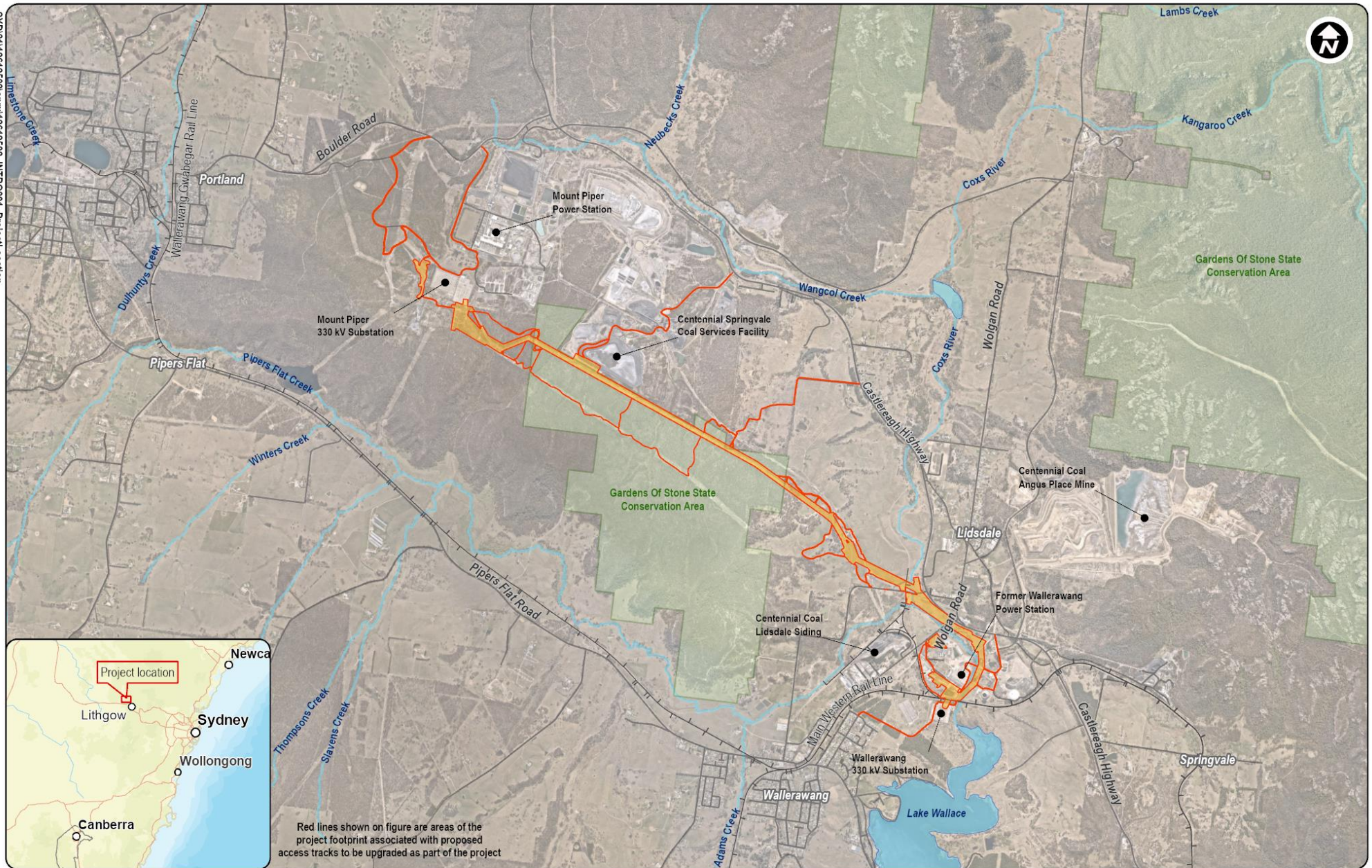
The area that is to be directly affected by the construction and operation of the project, is referred to as the project footprint and is shown in Figure 1.1. The project footprint is approximately 86.5 hectares in size and is generally bounded by the following:

- Castlereagh Highway to the north
- Former Wallerawang Power Station site to the east
- Gardens of Stone State Conservation Area (SCA) to the south
- Mount Piper Power Station to the north-west.

Land uses within and adjacent to the project footprint include:

- electricity generation at Mount Piper Power Station
- electricity transmission, including the Mount Piper and Wallerawang 330 kV substations, and associated transmission lines
- mining activities, with several Centennial Coal operations including the former Ivanhoe Coal Mine and Springvale Coal Services overlapping the project footprint
- agriculture, primarily livestock grazing
- conservation, notably the Gardens of Stone SCA
- state and local road reserves including the Castlereagh Highway, Boulder Road and Brays Lane
- rail corridors including the Main Western Rail Line and a disused railway line near Brays Lane.

A mixture land uses are proposed at the former Wallerawang Power Station site including predominately commercial land uses in the vicinity of the project. This may include redevelopment of the land for commercial and industrial land use and also the development of a Battery Energy Storage System (BESS).



Project components	Existing environment	Railway
Project footprint	Gardens of Stone SCA	Watercourse
	Roads	

Figure 1.1 Project location and regional context

Rev: A
 Date: 12/06/2025
 1:50,000 @ A4
 0 500 1,000
 Metres
 Grid: GDA2020 MGA Zone 56

1.3 The project

The project would involve construction and operation of approximately 8 km of new 330 kV transmission line between the Mount Piper and Wallerawang 330 kV substations as shown in Figure 1.2. The project would also include the replacement of transmission structures, partial adjustment of existing transmission lines, permanent and temporary access tracks, construction compounds and laydown areas.

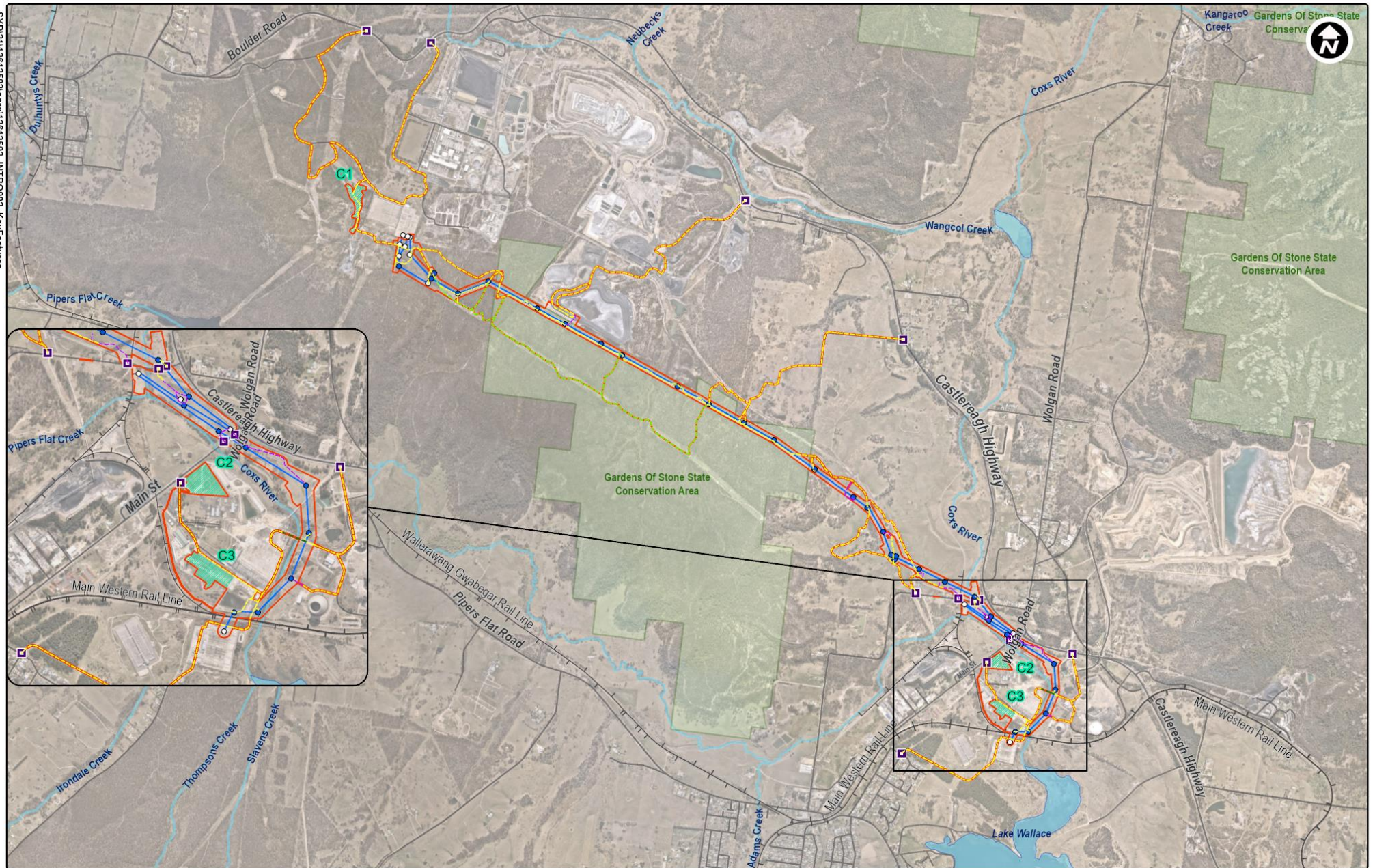
Table 1.1 outlines the key features of the project. The description of the project in Table 1.1 is based on the current concept design. Further detail is provided in Chapter 3 of the Environmental Impact Statement (EIS). The project will continue to be refined as part of detailed design.

Table 1.1 *The project*

Feature	Description
Design	
Transmission line and easement	Approximately 8 km of new 330 kV transmission line between the existing Mount Piper 330 kV and Wallerawang 330 kV substations that would include (from north-west to south-east): – widening of approximately 0.5 km of existing easements in the vicinity of the Mount Piper 330 kV substation by up to 40 metres (m) to accommodate the new 330 kV transmission line and adjustments to existing 132 kV and 330 kV transmission lines – widening of the existing 132 kV easement from 45 m to 60 m for 4.8 km to accommodate double circuit transmission structures for the existing 132 kV transmission line and the new 330 kV transmission line – installation of two 132 kV pole structures where the existing 132 kV transmission line is restrung onto the new double circuit transmission structures – construction of 1.2 km of new 330 kV transmission line from the existing 132 kV transmission line south-east to the intersection of Main Street and the Castlereagh Highway on a 60 m easement – construction of 1.5 km of new 330 kV transmission line on a 40 m easement running parallel to existing 330 kV transmission lines for approximately 1.1 km and then diverging and widening to 60 m for the remaining 0.4 km to the Wallerawang 330 kV substation. The standard easement widths for 132 kV and 330 kV transmission lines are 45 m and 60 m respectively. However, easements may vary in width where multiple transmission lines converge/ diverge or where they overlap with an existing easement.
Transmission structures	Transmission structures for the project include approximately 28 new steel lattice towers and four steel and/or concrete pole structures. Transmission structures would range in height from approximately 14 to up to 60 m, however these heights would be subject to detailed design. The image below presents an indicative illustration of the types of structures proposed for the project and their maximum heights. Figure not to scale. The steel transmission structures would generally be spaced between 100 m to 550 m apart and the pole structures about 30 m to 50 m apart. New conductors, earth wires and optical ground wire (OPGW) would be installed on the new transmission structures for the new 330 kV and existing 132 kV lines.

Feature	Description																																																																																																																														
	Local adjustment of existing transmission structures would be required in the vicinity of the Mount Piper 330 kV substation to minimise crossover of transmission lines. Redundant transmission structures, including the gantry immediately north of the Main Western Rail Line, would be removed and recycled, where possible.																																																																																																																														
Construction																																																																																																																															
Program	Construction of the project would commence once all necessary approvals are obtained. It is anticipated that construction would commence in late 2026. Construction would be undertaken in stages over a period of approximately 20 months. The key activities and their indicative durations shown in the below table. <table><tr><th>Activity</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th></tr><tr><td>Site establishment</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Civil works</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Assembly of structures</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Testing and commissioning</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>De-mobilisation</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Site establishment																					Civil works																					Assembly of structures																					Testing and commissioning																					De-mobilisation																				
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Construction methodology	Construction of the project would include: – site establishment including clearance of vegetation, construction compound establishment, access track construction and upgrade – removal of existing transmission structures where required – civil works involving earthworks and establishment of construction benches for each transmission structure, and establishment of brake and winch sites – construction of footings and foundation work for the new transmission structures – assembly and erection of new transmission structures – stringing of conductors.																																																																																																																														
Construction hours	The proposed construction working hours for the project are 7 am to 7 pm Monday to Sunday. Out-of-hours construction work will likely be required between 7 pm to 7 am Monday to Sunday and public holidays, to align with scheduled outages. Justification for the out-of-hours works includes: – proximity to live transmission lines requiring the work to be completed under a scheduled outage for network and worker safety – the need to complete works within a limited time window to meet a timeframe to re-energise the transmission line to avoid disruption to customers – minimising disruptions to the use of the Main Western Rail Line during stringing.																																																																																																																														
Construction workforce	Expected to peak at about 150 personnel and contractors, with an average workforce of about 60 personnel and contractors.																																																																																																																														
Construction compounds and laydown areas	A total of three construction compounds would support the construction of the project. One would be located at the western end of the project near the Mount Piper 330 kV substation and two located at the eastern end of the project within the former Wallerawang Power Station site. The locations of these compounds are shown in Figure 1.2. Laydown of materials (e.g. poles, cable drums, other large equipment, etc.) would also occur at specified locations along the easement within the project footprint, particularly at transmission structure locations.																																																																																																																														
Access	To facilitate efficient construction access, the following is required: – upgrading and widening of approximately 25 km of existing access tracks to at least 6 m, with some sections widened up to 10 m due to local topography – construction of approximately 2 km of new 6 m wide access tracks. In addition to those tracks, approximately 4 km of existing track would be used only by light vehicles. The light vehicle tracks may require minor repairs (for example, filling potholes), but would not be graded or widened. The project footprint would be accessed from public roads at 13 access points, with the majority of these being existing property access points.																																																																																																																														

Feature	Description
	Existing access tracks would be used in preference to new tracks wherever possible. Access track upgrades and widening would include required drainage. Access points and access tracks established for the construction of the project that are not required for future operation and maintenance activities would be returned to pre-project conditions, subject to agreement with landowners.
Utility adjustments and infrastructure crossings	The new transmission line would need to cross the following utilities and infrastructure: – water pipeline operated by WaterNSW – distribution lines operated by Endeavour Energy – rail signal power supply – council drainage and other assets – public roads at Brays Lane and Main Street – rail lines at the Main Western Rail Line and the disused rail line travelling north of Brays Lane. It is not currently anticipated that the project would require the adjustment of any nearby utilities. Further investigations and consultation with asset owners would be undertaken during detailed design.
Vegetation clearing	The project would require the clearance of vegetation for a number of activities including but not limited to building new access tracks and widening existing ones, establishment of construction compounds, laydown areas, and brake and winch sites, construction of the transmission structures, and establishing and maintaining the vegetation clearance requirement for the transmission lines. Vegetation clearing would be undertaken either with the use of machinery or manually, where it is unsafe to operate machinery, or when access is limited. Root balls would be retained where possible. Clearing methods would be determined with consideration to vegetation type or structure, slope and terrain, and environmental and ecological constraints. Removed vegetation, which is weed free, would be mulched for beneficial reuse, where appropriate. Areas cleared for construction, that are not needed for operation of the project, would be rehabilitated to a stable and weed free condition.
Testing and commissioning	Testing and structure checks would form part of the final construction and installation work. These activities would ensure the project has been installed in accordance with the design and statutory standards and is safe to proceed to commissioning which would include, but not be limited to: – transmission line cut-in and connection to the electrical network – protection, control and metering checks – high voltage equipment operation and energisation – post commissioning testing and verification.
Demobilisation and rehabilitation	Upon completion of the construction works, all construction equipment, temporary fencing and waste would be removed. All disturbed areas would be rehabilitated to a stable, weed-free condition, unless designated as a permanent access track. This would include spreading topsoil, cleared and stockpiled at the beginning of construction, across the disturbed area to stabilise it to a state where natural regrowth can occur.
Operation	
Design life	About 50 years.
Maintenance	All project infrastructure would require regular maintenance to maintain serviceability and maximise its operational life. Maintenance activities would include: – transmission structure monitoring – annual aerial inspection – routine vegetation management on the easement and in the hazard tree zone – access tracks would be maintained in a trafficable condition. Should any irregularities be identified following routine inspections, a work crew would be dispatched from existing Transgrid maintenance depots to rectify any defects found. Periodic inspection and maintenance work would be managed by Transgrid as part of existing operations, with no additional staff requirements.



- | | |
|--|--|
| Project components | Construction compounds |
| Project footprint | Access tracks - new |
| New and adjusted transmission line | Access tracks - minor upgrades as required (light vehicles only) |
| Proposed transmission structure | Access tracks - upgrade and widen |
| Existing transmission structure to be reused | Access tracks - existing (no change) |
| | Access point |

- Existing environment**
- Gardens of Stone SCA
 - Roads
 - Railway
 - Watercourse

Rev: A
Date: 7/07/2025
1:40,000 @ A4
0 500 1,000
Metres
Grid: GDA2020 MGA Zone 56

Figure 1.2 Key features of the project

1.4 Environmental assessment requirements

This Social Impact Assessment (SIA) has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs), which were issued on 22 May 2025. Table 1.2 outlines the requirements relevant to this assessment.

Table 1.2 SEARs relevant to this social impact assessment

Requirement	Where addressed in this report
An assessment of the social impacts or benefits of the project for the region and State as a whole in accordance with <i>Social Impact Assessment Guideline</i> (DPIE) and <i>SIA Guideline - Technical Supplement</i> (DPE) including consideration of any increase in demand for community infrastructure services, details of how the construction workforce will be managed to minimise local impacts and consideration of the need for construction workforce accommodation.	This report presents a SIA that has been prepared in accordance with the requirements of the <i>Social Impact Assessment Guideline</i> (DPE, 2023) ('SIA Guideline') and the <i>Technical Supplement Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2023). The assessment of social impacts and benefits is presented in section 5. The potential social impacts resulting from potential increased demand for community infrastructure services are discussed in sections 5.1.5 and 5.2.5. Information regarding how the construction workforce will be managed to minimise local impacts is discussed in section 6.6. Information regarding construction workforce accommodation is discussed in section 5.1.4.

1.5 Purpose and structure of this report

This report has been prepared by GHD Pty Ltd (GHD) as part of the Environmental Impact Statement (EIS) for the project.

The purpose of this report is to assess potential social impacts from the construction and operation of the project, and where required, identify feasible and reasonable mitigation and management measures.

The report is structured as follows:

- Section 1 – provides an introduction to the project and the assessment
- Section 2 – describes the assessment approach and methodology
- Section 3 – provides an overview of stakeholder consultation undertaken
- Section 4 – describes the existing environment
- Section 5 – assesses the impacts of the construction and operation of the project
- Section 6 – provides mitigation measures for the impacts identified
- Section 7 – conclusion
- Section 8 – provides a list of references used.

1.6 Authors of this report

The SIA Guideline (DPHI, 2023) requires a suitably qualified and experienced practitioner/s to be involved in the preparation of the SIA report. The personnel involved in the preparation of this SIA and their respective qualifications are provided in Table 1.3.

Table 1.3 *Authors and qualifications*

Name	Position	Project role	Qualifications	Professional memberships	Years of experience
Lauren Harding	Technical Director – Social Sustainability and Engagement	Technical reviewer	– M. Social Science (Social Planning) – B Arts (Anthropology)	Environment Institute of Australia and New Zealand International Association for Public Participation	15
Devon Sanson	Social Sustainability and Engagement Consultant	SIA support	– Bachelor of Arts (Development Studies)	International Association for Public Participation	4
Charlotte Barker	Graduate Social Sustainability and Engagement Consultant	SIA support	– M. Urban Planning – B. Science (Environmental Studies) and B. Arts (Anthropology)	International Association for Public Participation	1

I, Lauren Harding, declare that the *Mount Piper to Wallerawang Transmission Line SIA* contains all information relevant to the SIA for the project and that the information is not false or misleading. The assessment was completed on 20 August 2025.



Lauren Harding

2. Assessment approach and methodology

2.1 Legislative and policy context to the assessment

This section summarises the legislation, guidelines and/or policies driving the approach to the assessment.

2.1.1 NSW legislation and policies

Table 2.1 summarises NSW legislation and policies relevant to this SIA, including those related to regional and economic development, employment and supporting resilient communities.

Table 2.1 *Legislation and policy*

Title	Description and relevance to this SIA	Relevance to this report
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	The objectives of the EP&A Act relevant to this SIA include that the NSW Government aims (section 1.3): – <i>to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,</i> – <i>to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,</i> – <i>to promote the orderly and economic use and development of land,</i> – <i>to promote good design and amenity of the built environment,</i> – <i>to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,</i> – <i>to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,</i> – <i>to provide the opportunity for community participation in environmental planning and assessment.</i>	This SIA has considered these objects in the scoping and assessment of potential impacts of the project, including opportunities for communities and stakeholders to participate in the SIA consultation process. The SIA will assist the Minister when making a decision about the project.
<i>Social Impact Assessment Guideline for State Significant Projects (DPHI, 2023)</i>	The SIA Guideline was developed to provide a clear and consistent approach to assessing the social impacts of State significant projects. The SIA Guideline provides a framework to identify, predict and evaluate likely social impacts of major projects. It defines the required approach to social impact assessment for major projects. It establishes eight assessment categories to be used in the identification of social impacts. The aim of the categories is to ensure that projects are assessed from the perspective of people and that they deliver socially sustainable outcomes. The guideline is supported by the <i>Technical Supplement - Social Impact Assessment Guideline for State Significant Projects</i> (DPE, 2021) (Technical Supplement).	This SIA has been prepared in accordance with the requirements of the SIA Guideline and the Technical Supplement. Further information about the methodology for the SIA is provided in section 2.2.

Title	Description and relevance to this SIA	Relevance to this report
<i>Central West and Orana Regional Plan 2041</i> (NSW DPE, 2022)	The <i>Central West and Orana Regional Plan 2041</i> is informed by Local Strategic Planning Statements (LSPS) that set the 20-year vision for how Central West and Orana councils use land and enhance the character and values of communities. The plan leverages the region's central location and builds on its strengths to provide smart, efficient, and reliable connections that bring residents and visitors closer to jobs, centres, education, and the natural environment. The region's resilient and rapidly diversifying economy is faced with major investment opportunities, specifically the CWO REZ, which is relevant to this SIA.	This SIA considers how the project contributes to the regional plan objectives regarding economic development and employment opportunities (see section 4.3.4).

2.1.2 Local government strategies

The plans relevant to the Lithgow LGA and this SIA are outlined in Table 2.2.

Table 2.2 *Legislation and policy*

Title	Description and relevance to this SIA	Relevance to this report
<i>Our Place Our Future – Community Strategic Plan 2035</i> (Lithgow City Council, 2022)	<i>Our Place Our Future</i> is the Lithgow City Council's Community Strategic Plan (CSP) that defines the community vision for the future of the Lithgow Region to be a sustainable, economically viable and welcoming community which respects and retains its environment. The Plan is divided into five key themes and addresses social, environmental, economic and civic leadership issues. The plan acknowledges the key matters of concern within the community setting a direction from a coal-based economy. A key priority noted in the plan that relates to this SIA is to ensure the long-term sustainability of infrastructure and land that underpins and supports current and future industry and business. Recent extreme weather events and natural disasters in the region has highlighted significant failings in transport, water, sewer and stormwater infrastructure. The proposed infrastructure upgrade project is closely linked to key areas of focus within this plan.	The SIA considers and responds to strategic priorities for Lithgow City Council and local residents. It includes possible avenues for social benefits, as well as details regarding community concerns and priorities to assist in assessing the significance of social impacts. Addressed in sections 4 and 6.
<i>Lithgow 2040 Local Strategic Planning Statement</i> (Lithgow City Council, 2020)	The <i>Local Strategic Planning Statement</i> (LSPS) is the response of the Lithgow City Council to Part 3 of the EP&A Act and acts to provide direction on the community's social, environmental, and economic land use needs over the next 20 years. The LSPS identifies local issues and needs of the community and establishes priorities to which planning instruments will need to be amended or reinforced to facilitate future planning directions. The LSPS identifies the current backlog of infrastructure renewal in the region where elements of infrastructure are nearing end of life or require significant upgrades to meet current standards of operation and changing community expectations. The proposed infrastructure upgrade will contribute to Planning Priority 5 in aligning development with essential infrastructure.	The SIA considers potential social impacts relevant to the priorities of the LSPS, including renewal of critical infrastructure. Addressed in sections 4 and 5.1.5

Title	Description and relevance to this SIA	Relevance to this report
<i>Lithgow Regional Economic Development Strategy 2018-2022</i> (Lithgow City Council, 2018)	The <i>Lithgow Regional Economic Development Strategy</i> (REDS) articulates a framework for identifying actions crucial to achieving the regional vision. This strategy should be viewed as the first stage of a process that will assist those with an interest in the economic development of the region, particularly councils, communities, and local businesses. The plan identifies the presence of multi-national organisations including EnergyAustralia (Mount Piper power station) and the importance of ensuring the electricity generation sector remains supported during the transition period away from coal mining. The plan links the decline in employment in the energy sector in the region to the closure of the Wallerawang power station in 2015 and highlights the potential for the site to provide alternative power generation or redevelopment. The proposed infrastructure upgrade aims to address these issues and is relevant to this SIA.	This SIA considers how the project may support or enhance economic development priorities for the region. Addressed in sections 4.3.4, 5.1.3 and 5.2.3.

2.2 Approach to the SIA

The methodology for the SIA, which responds to the SEARs and is in line with leading practice for SIA, is consistent with the SIA Guideline and Technical Supplement and the following guidelines:

- *International Association for Impact Assessment International Principles for Social Impact Assessment* (Vanclay, 2003)
- *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects* (Vanclay, et al., 2015).

The SIA Guideline has a set of review questions to confirm that the requirements of the guideline have been met when considering the social impacts of a project. A response to the review questions is provided in Appendix A.

For the purposes of the SIA, social impacts are defined as the consequences that people and communities experience as a result of project-induced changes that affect the way they 'live, work, play, relate to one another, organise to meet their needs and generally cope as members of society' (Burge & Vanclay, 1996).

As outlined in the SIA Guideline, social impacts can involve changes to one or more of the following social values:

- **Way of life**, including how people live, how they get around, how they work, how they play, and how they interact each day.
- **Community**, including composition, cohesion, character, how the community functions, resilience, and people's sense of place.
- **Accessibility**, including how people access and use infrastructure, services and facilities, whether provided by a public, private or not-for-profit organisation.
- **Culture**, both Aboriginal and non-Aboriginal, including shared beliefs, customs, practices, obligations, values and stories, and connections to Country, land, waterways, places and buildings.
- **Health and wellbeing**, including physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, access to open space and effects on public health.
- **Surroundings**, including 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.
- **Livelihoods**, including people's capacity to sustain themselves through employment or business.
- **Decision-making systems**, including the extent to which people can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms.

A social impact can be direct, indirect or cumulative, and negative or positive. It can also vary according to the individual, community, or segment of a community by whom it is experienced.

The term 'community' refers to a network of people and/or organisations who are linked together by a web of personal relationships; cultural and political connections, shared identities and traditions, similar socioeconomic conditions, or common understandings and interests (Vanclay, et al., 2015). For the SIA, the term 'community' is used to refer to people residing in a shared discrete geographic location – for example, a rural town or regional centre. However, in select cases, it may also be used to describe a 'community of identity' or a 'community of interest'.

The following sections describe the steps undertaken to prepare the SIA.

2.2.1 Scoping of potential social issues

As per the SIA Guideline (DPHI, 2023), a social impact scoping exercise was undertaken for the *Mount Piper to Wallerawang Transmission Line Upgrade Project Scoping Report* (Transgrid, 2024). The purpose of the SIA scoping exercise was to undertake a preliminary assessment of the potential social impacts and benefits that may occur as a result of the project. The scoping process was undertaken to help focus the assessment, identify the potential social values that may experience change, the areas the SIA will focus on, and the level of assessment for potential social impacts.

The potential social impacts and benefits that may result from construction and operation of the project were identified through a review of the information presented in the Scoping Report, the understanding of the social locality/study area, and based on previous professional experience undertaking SIAs for state significant projects in NSW. The potential social impacts have been evaluated according to the characteristics of magnitude as defined in the SIA Guideline (DPHI, 2023). Potential impacts identified during the social impact scoping process are summarised below:

- Potential for construction activities to contribute to cultural or spiritual loss for local Aboriginal communities.
- Temporary and localised impacts to existing land use activities during construction with potential disruptions to landholder's daily activities and ability to undertake agricultural activities.
- Minor, short-term impacts on amenity including noise and vibration, dust and air quality, visual and traffic due to construction activities and associated equipment.
- Impacts to scenic values of the Gardens of Stone SCA from some viewpoints.
- Increased demand for temporary housing, accommodation, health services, retail, hospitality, emergency services and waste facilities for the construction workforce.
- Changes to community cohesion and sense of community due to the presence of construction personnel and contractors.
- Enhanced community social and economic livelihoods associated with Community Partnership Program (Transgrid's grant giving initiative).
- Potential for direct and indirect employment and business opportunities during construction for local residents and businesses.
- Restrictions and permanent change to land use activities during operation affecting how landowners are able to use their land.
- Permanent amenity changes for surrounding sensitive receivers during operation due to changes in scenic values, noise, or traffic.
- Potential economic and employment opportunities resulting from skills acquired, procurement opportunities, and direct employment.

The *Mount Piper to Wallerawang Transmission Line Upgrade Project Scoping Report* (Transgrid, 2024) informed the locality and indicators used in the social baseline (Section 4), identified social impact themes (Section 5), and aligns with the impact categories identified in the SIA Guideline (Section 2.2). Potential impacts identified during the scoping phase are used to inform the social impact study (described in Section 2.2.5) and may be considered to not be relevant during detailed assessment due to changes in the project.

2.2.2 Defining the social locality (study area)

The study area that is defined for an SIA needs to include the communities that are most likely to experience social impacts (both positive and negative) resulting from a project, as well as the extent and scale of potential impacts. The term social locality is defined in the SIA Guideline (DPE, 2023).

The social locality for this SIA was identified by considering the following factors:

- The people and communities most likely to experience changes to existing socio-economic conditions resulting from the construction or operation of the project, project infrastructure or land use changes.
- Areas that may potentially supply goods and services and labour to the project.
- Areas that may be located some distance from the project infrastructure but experience indirect or flow on impacts.

The social locality for this SIA includes the local and regional study area, as described in Table 2.3 and shown in Figure 2.1.

Table 2.3 *Social locality*

Study area	Interaction with the project	Area (ABS Census area)
Project footprint	The project footprint includes the construction footprint (i.e. the area directly impacted by project, including the removal of existing transmission structures, temporary compound areas, access tracks, and installation of structures) and the operational footprint (the area directly used by the project once operational). The identified locations of the compound areas are shown on Figure 2.1.	n/a
Local study area	The local study area includes the following communities in close proximity to the project footprint: – Blackmans Flat: The proposed transmission line originates at the Mount Piper 330 kV substation and traverses the southern portion within the suburb of Blackmans Flat. Several new and upgraded access tracks are also planned within the suburb, bordering the existing Mount Piper Power Station. There are several residences located within and nearby the project footprint as shown in Figure 4.1. – Lidsdale: The proposed transmission line and associated access tracks will intersect the southern part of Lidsdale suburb, coming within 1 km of nearby residents. – Wallerawang: The proposed transmission line will terminate at the Wallerawang 330 kV substation, which is located north of the town centre, in the northern part of the suburb.	Wallerawang Suburb and Locality (SAL) Blackmans Flat SAL Lidsdale SAL
Regional study area	The project footprint is located within the Lithgow LGA, which is the regional study area for this assessment. The town of Lithgow is the largest population centre closest to the project footprint (approximately 15km south-east). Communities across the LGA may experience some social impacts and benefits during construction and operation of the project. The broader Central West SA4 region may experience some benefits from investment in the region, and has been used as a point of comparison for some economic indicators.	Lithgow LGA

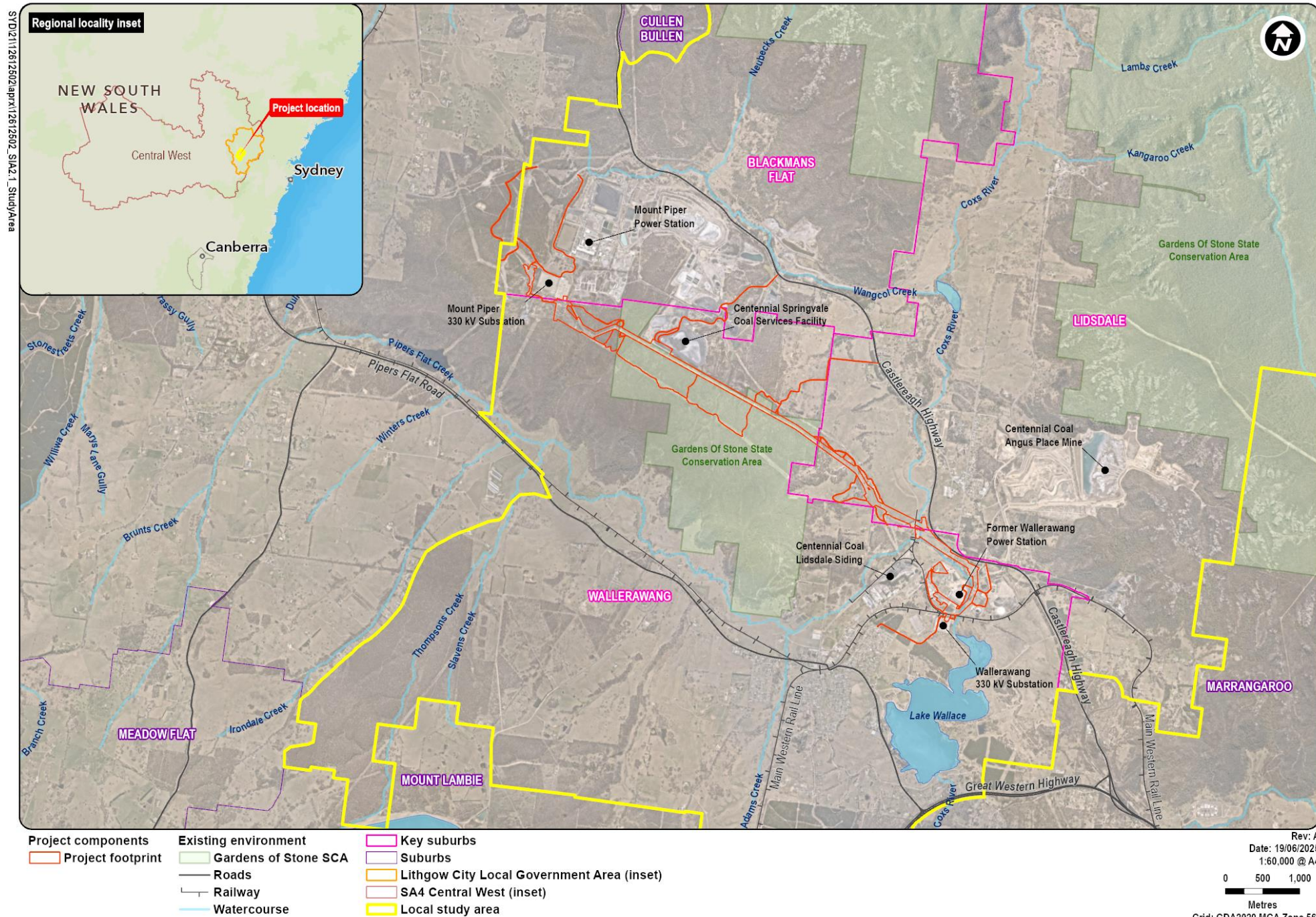


Figure 2.1 Social locality

2.2.3 Establishing the social baseline

The social baseline defines the existing social characteristics within the social locality (the local and regional study areas for the SIA as described in section 2.2.2). The social baseline is used as the basis against which the impacts are measured. A social baseline has been prepared for the local study area and regional study area.

The social baseline describes:

- the project footprint and immediate surrounds
- community values, opportunities and challenges
- key socio-demographic indicators
- economic and employment profile
- housing and accommodation availability
- social infrastructure and services
- access and connectivity.

Data to inform the social baseline has been gathered from the following sources:

- Australian Bureau of Statistics (ABS) Census 2021 and 2016
- Jobs and Skills Australia Small Area Labour Markets, Unemployment Rate (Australian Government, 2024)
- REMPLAN – a population and economic data resource (REMPLAN, 2024)
- Informed Decisions (profile.id and economy.id) – a population and economic data resource (Informed Decisions, n.d.)
- NSW Population Projections (DPE, 2024)
- local, State and Commonwealth Government websites and publications
- information from stakeholder consultation (refer to section 3.2).

The social baseline for the SIA is described in section 4. Detailed demographic data is provided in Appendix B.

2.2.4 Stakeholder consultation

Transgrid has been engaging with community and stakeholders throughout the project planning, scoping and design process. Chapter 5 of the EIS describes these activities and the stakeholders that have been consulted and provides a summary of the issues raised.

Targeted consultation was also undertaken to inform the SIA. The purpose of SIA consultation was to:

- validate and gather information to inform the development of the social baseline
- identify potential social impacts both positive and negative resulting from the project
- develop mitigation and management measures.

SIA consultation was undertaken by the SIA team between 12 August 2024 and 30 January 2025. This consisted of virtual interviews with local stakeholders. GHD and Transgrid contacted a total of 15 stakeholders to seek their interest in SIA consultation, with a total of seven stakeholders confirming their interest.

SIA consultation participants were identified by Transgrid and GHD. Stakeholders were categorised and evaluated based on the potential impacts they would experience, participation in other engagement activities and their interest in the project. Stakeholders were invited to participate over email or telephone, and consultation took the form of semi-structured interviews, with notes taken. Interviews were voluntary and confidential and undertaken by GHD staff.

Section 3.2 presents a summary of the consultation activities and outcomes relevant to this assessment.

2.2.5 Description and assessment of social impacts

Following the scoping of social issues described in section 2.2.1, social impacts have been identified and described using a data triangulation method, whereby multiple sources of information have been used to confirm social impacts. These information sources include:

- project description for the EIS (chapter 3) to understand the proposed activities that would influence social aspects
- baseline conditions against which the social changes / impacts were measured
- outcomes of community and stakeholder consultation activities to understand the existing environment and stakeholder views on potential social changes
- relevant literature and studies as referenced throughout the report
- technical studies prepared for the EIS to gather technically sound evidence to identify and assess the social changes resulting from the project.

The evaluation of identified social impacts was undertaken using a likelihood and magnitude significance rating, based on the significance criteria outlined in the Technical Supplement (DPE, 2023).

Likelihood refers to the level of certainty that an impact would occur and is defined in Table 2.4.

Table 2.4 *Defining likelihood levels of 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

Magnitude refers to the extent, duration, severity or scale, intensity or importance, and level of concern or interest, as described in Table 2.5.

Table 2.5 *Dimensions of social impact 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 reports of likelihood, duration and/or intensity.

The levels of magnitude are defined in Table 2.6.

Table 2.6 Defining magnitude levels for social impact

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 to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minimal	Little noticeable change experienced by people in the locality.

Table 2.7 is used to assess the level of significance of the potential impacts. This is done by combining the likelihood with the level of magnitude.

Table 2.7 Social impact significance matrix

			Magnitude level				
			1	2	3	4	5
			Minimal	Minor	Moderate	Major	Transformational
Likelihood Level	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

The risk rating then determines if mitigation or management actions are required to address the social impact. Negative social impacts with a risk rating of medium, high or very high require mitigation or management actions.

It should be noted that the degree to which community members would experience social impacts would vary based on factors such as perception and individual values, sensitivity to change, distance from the project, and duration people experience the impacts over. The assessment of risks takes this into consideration, and has applied a risk rating for the majority of stakeholders affected by the identified potential impact. However, the risk rating would likely be higher or lower for some stakeholders given the subjective nature of social impacts which varies based on a stakeholder's ability to adapt to impacts.

2.3 Data and information limitations

The following limitations to the assessment are noted:

- The assessment was undertaken based on publicly available information, consultation undertaken as part of the SIA assessment and broader EIS process.
- ABS census data was used to develop the social baseline profile of the study area. Census data is collected every five years, with the demographic data presented in this report including the most recent 2021 Census and 2016 Census, where relevant. Some of the data used in the existing conditions section of the report may not fully capture demographic change from this date. However, this information is sufficient for the purposes of understanding the potential beneficial and adverse effects of the project.
- Data collected from the ABS has been done so with the understanding that slight adjustments have been made throughout the dataset to ensure confidentiality is maintained. Small discrepancies are therefore expected.

The assessment has sought to mitigate the above limitations through the use of multiple data sources, which were cross-referenced in a process of triangulation to provide a more comprehensive and accurate analysis.

3. Stakeholder consultation

This section presents a summary of issues relevant to this SIA raised by stakeholders and community members during consultation undertaken by GHD for the Mount Piper to Wallerawang EIS, and for the SIA.

3.1 EIS consultation

Transgrid has conducted a thorough stakeholder engagement and consultation program prior to and during development of the EIS. A Community and Stakeholder Engagement Plan has been developed and updated throughout the EIS study period, outlining objectives and activities for community consultation. Objectives for EIS consultation include providing transparency around the project and giving the community opportunities to understand the project.

Transgrid have engaged with the general community, impacted landowners, near neighbours, First Nations representatives, government agencies, and local interest groups (e.g. environmental groups) to understand community perspectives of the project. Chapter 5 of the EIS describes the activities and stakeholders that have been consulted during the EIS and provides a summary of the issues raised. A summary of key issues and themes that are relevant to this SIA is provided in Table 3.1.

Table 3.1 *EIS consultation outcomes relevant to this SIA*

Key issue	Description	Where addressed in SIA
Jobs and training	Consultation indicated that community members have interest in the following areas: – Job creation and training – Diversification of the economy – Procurement and industry participation opportunities.	Employment opportunities, procurement and supply, and economic diversification impacts are discussed in sections 5.1.3 and 5.2.3.
Aboriginal Cultural Heritage and cultural values	Consultation with Aboriginal communities was completed as part of the Aboriginal Cultural Heritage Assessment Report. Key areas of interest for local Aboriginal communities include: – impacts to Aboriginal cultural heritage sites and objects – cultural knowledge of the local area and site – salvage and management of recovered archaeological material – the cultural heritage value of the Gardens of Stone SCA and other natural environment features. – support for ongoing consultation throughout the project.	Impacts to Aboriginal cultural heritage and values are described in sections 5.1.2 and 5.2.2.
Natural environment	During route refinement consultation, key concerns raised by the community included: – limiting impacts to the Gardens of Stone SCA – minimise vegetation clearing and overall environmental impacts – impacts to fauna habitats and the Cocks River Further consultation identified community interest and concerns regarding Biodiversity, and that the project should be delivered with as minimal impact to local flora and fauna as feasibly possible.	The natural environment is important to the local communities' identities and values. Impacts relating to this are discussed in sections 5.1.8 and 5.2.8. Changes to the natural environment may result in amenity impacts, particularly visual amenity. Potential amenity impacts are discussed in sections 5.1.6 and 5.2.6.
Easement impacted land	Throughout the consultation program, various stakeholders shared feedback regarding: – route selection which should avoid impacts to private land and minimise impacts to business operations – Transgrid access to land for construction – impacts to easement affected landholder operations.	Land use impacts are identified in sections 5.1.1 and 5.2.1. Potential impacts to access and connectivity are identified in sections 5.1.7 and 5.2.7.

Key issue	Description	Where addressed in SIA
Cumulative impacts/consultation fatigue	Consultation highlighted there was some confusion in the community about who was responsible for different projects in the area, and interest regarding other major works projects. This may indicate consultation fatigue and information saturation.	Potential cumulative impacts are identified and discussed in section 5.3.

3.2 Consultation to inform the SIA

3.2.1 Summary of consultation activities

A summary of stakeholder consultation and an overview of engagement activities undertaken for the SIA is provided in Table 3.2. As described in section 2.2.4, targeted stakeholder consultation was undertaken with identified stakeholders.

Table 3.2 Summary of SIA consultation activities

Stakeholders consulted	Timing and delivery
Wilderness Australia	12 August 2024, via MS Teams
Lithgow City Council	20 August 2024, via MS Teams
Seven Valleys Tourism	20 August 2024, via MS Teams
Bathurst Local Aboriginal Land Council	28 August 2024, via MS Teams
Lithgow Environment Group	9 September 2024, via MS Teams
Nature Conservation Council	21 January 2025, via MS Teams
Warrabinga Native Title Claimants Aboriginal Corporation	30 January 2025, via MS Teams

3.2.2 Key themes and issues

The key issues and themes raised by stakeholders consulted for the SIA are shown in Table 3.3.

Table 3.3 Key themes and issues raised in SIA consultation

Key issue	Description	Where addressed in SIA
Property and land use	- The transmission line will pass through former State Forest (now part of Gardens of Stone SCA), which is not commonly visited by tourists. - Most stakeholders understand that the project involves upgrades to the existing transmission line on previously disturbed land. - Some stakeholders expressed a preference that the route option for the transmission line should go through the already degraded land (e.g, EnergyAustralia and Centennial Coal) even if it is a less-direct option, as it would have a lesser environmental impact - Some stakeholders were interested in the extent of impact particularly for nearby or impacted residential properties.	Section 4.1
Environmental values and impacts	- Stakeholders noted the presence of a number of plant species, endangered plants, animals, ecological communities and significant Pagoda landforms in the Gardens of Stone SCA. - Several stakeholders noted that the Gardens of Stone SCA is a popular tourist destination. There are a number of multi-day walks and bike trails as well as access to the popular glow worm tunnels (located in a separate portion of the SCA and not within the project footprint). - Some stakeholders highlighted the importance of prioritising and minimising potential environmental impacts.	Sections 4 and 5.1.1.2

Key issue	Description	Where addressed in SIA
	- Some stakeholders noted the importance of water to endangered flora and fauna communities and that the water from the region flows into the Greater Sydney region catchment. - Stakeholders raised concerns of potential impacts on threatened species.	
Aboriginal cultural values and heritage	- Throughout the Gardens of Stone SCA, there are significant Aboriginal cultural places, however the majority of these are not publicly known. - Stakeholders noted that Wolgan Gap within the Gardens of Stone SCA is a known Aboriginal place which holds cultural significance. - Stakeholders indicated a need for cultural heritage training in workplaces, noting they feel like there is a lack of respect for Country in the region. - Stakeholders noted there would be interest and capacity with local Aboriginal businesses and workforce to participate in construction procurement and employment opportunities, specifically noting there are diverse skillsets and services available locally.	Section 5.1.2
Economy, business and employment	- Stakeholders noted there is a focus on attracting local businesses to Lithgow. - Several stakeholders noted that they would like to see the project bring casual employment to local workforce both during construction and operation. - Stakeholders indicated that there was a lack of employment opportunities for local personnel; personnel seem to be employed from outside the region. - Some stakeholders highlighted the importance of building adaptive capacity and skills transferability across the region. - Stakeholders noted that around 85% of the local workforce live locally and spend locally. - The region is experiencing a transition away from the mining industry / economy. It was noted that Council is currently in the process of developing a plan to diversity the economy of Lithgow. - Several stakeholders raised concerns that young people will move away from the region if there are no skills, training or jobs available.	Sections 4.3.4 and 5.1.3
Community perceptions, wellbeing and consultation	- Stakeholders noted that the local and regional community value the natural environment. - It was acknowledged that the Lithgow region is undergoing significant change both in terms of the economy and population. - Stakeholders noted the regions long history of industry, coal mining and related infrastructure, and acknowledged that the coal mining sector is seeing a gradual decline in the region. - The population of Lithgow is ageing and it was noted that in the coming years there will be a large proportion of retirees in the region - Several stakeholders were interested in understanding what community consultation has been completed to date. Some indicated it would be good to see what the general community think about the project and what the potential perceived impacts are. - Some stakeholders indicated they would like to be kept informed about upcoming community consultation for the project, not feeling like they had to chase people for communication. - One stakeholder noted that there are limited health care services in the region and those that are available lack quality.	Sections 4.3.2 and 5.1.5
Amenity impacts	- Most people recognise that the area that has existing transmission lines and electricity infrastructure so many wouldn't notice a visual difference. - Some stakeholders noted that transmission lines would be better placed along the road rather than being in the forest as that is already consistent with the visual amenity of the area.	Section 5.1.6
Housing and accommodation	- Stakeholders indicated that there are current challenges regarding the lack of supply for housing in Lithgow due to construction and industrial projects. - Several stakeholders noted that shut-down periods for surrounding mines can decrease availability of short-term accommodation in the region which can have flow on effects for local tourism.	Sections 4.3.5 and 5.1.4

Key issue	Description	Where addressed in SIA
Access	– One stakeholder noted that there are some people in the region who regularly access the areas surrounding the current transmission line site to find orchids and go plant hunting. – Several stakeholders noted suggested that Transgrid works with surrounding landowners to open the trails around the transmission line where possible for public recreational use.	Section 5.1.7
Cumulative impacts	– It was noted that there are a number of other projects including renewable energy projects and transport projects currently underway or in the pipeline across the region. – Stakeholders indicated that the number of projects occurring in the region is viewed as a collective, not just a singular project or company. There were concerns regarding the cumulative impact of projects occurring in the region impacting upon the availability of housing, healthcare, and short-term accommodation as well as increasing traffic. However, stakeholders also identified potential cumulative benefits for local businesses.	Section 5.3
Mitigation and management	– There was interest among some stakeholders about how this project can give back to the community, such as through a community benefit sharing scheme, community grants program or funding. – One stakeholder was interested in increasing the cultural heritage knowledge of personnel in the region, specific to this project. – One stakeholder noted that Local Aboriginal Land Councils and other Aboriginal Corporations could support and assist with reaching out to their established networks for employment opportunities specific for Aboriginal people. – Stakeholders were interested in understanding the offsets for infrastructure projects and if there would be potential community benefits. – Interest in potential revegetation of used areas following construction of transmission line. – Several stakeholders highlighted the importance of communicating the project timeline to allow enough time for the local community to prepare for the training and upskilling of personnel and apprenticeships. – Several stakeholders highlighted the importance and value of communication, and having a direct number to call that community members can keep in contact with. – Some stakeholders were interested in the potential for seed collection from vegetation removal at the project footprint and whether it would be possible for Transgrid to collect these and gift them to local nurseries. – Several stakeholders were interested in a community information day for Transgrid to better inform the community on what benefit sharing opportunities are available to them, opportunities for employment and general information. – One stakeholder suggested the potential for community groups, industry and Aboriginal organisations to partner with Transgrid for employment, training and scholarship opportunities.	Section 6

4. Existing environment

The following section describes the existing social and economic characteristics of the local and regional study areas. Detailed demographic data is presented in Appendix B.

4.1 Project footprint and surrounds

The project is located on Wiradjuri Country. The Wiradjuri people are the Traditional Owners of the area and hold deep cultural significance for the region. Wiradjuri Country stretches west from the Blue Mountains and includes land located along the Wambuul (Macquarie River), Kalari (Lachlan River) and Murrumbidgee (Murrumbidgee River) (Lithgow City Council, 2023). Key features of the study area are shown in Figure 4.1.

The project footprint extends from Mount Piper Power Station in the northwest, where the existing 330 kV substation is located, within the Blackmans Flat SAL. The proposed transmission lines traverse to the southeast via a section of the Gardens of Stone SCA and agricultural land to approach the Castlereagh Highway in the west, near the town of Lidsdale. The project footprint crosses the Lidsdale railway siding adjacent to the Castlereagh Highway and Coss River to the existing 330 kV substation, within the Wallerawang SAL, approximately 7 km southwest of the Mount Piper substation. Figure 4.1 shows the project footprint in relation to nearby localities and community/social infrastructure.

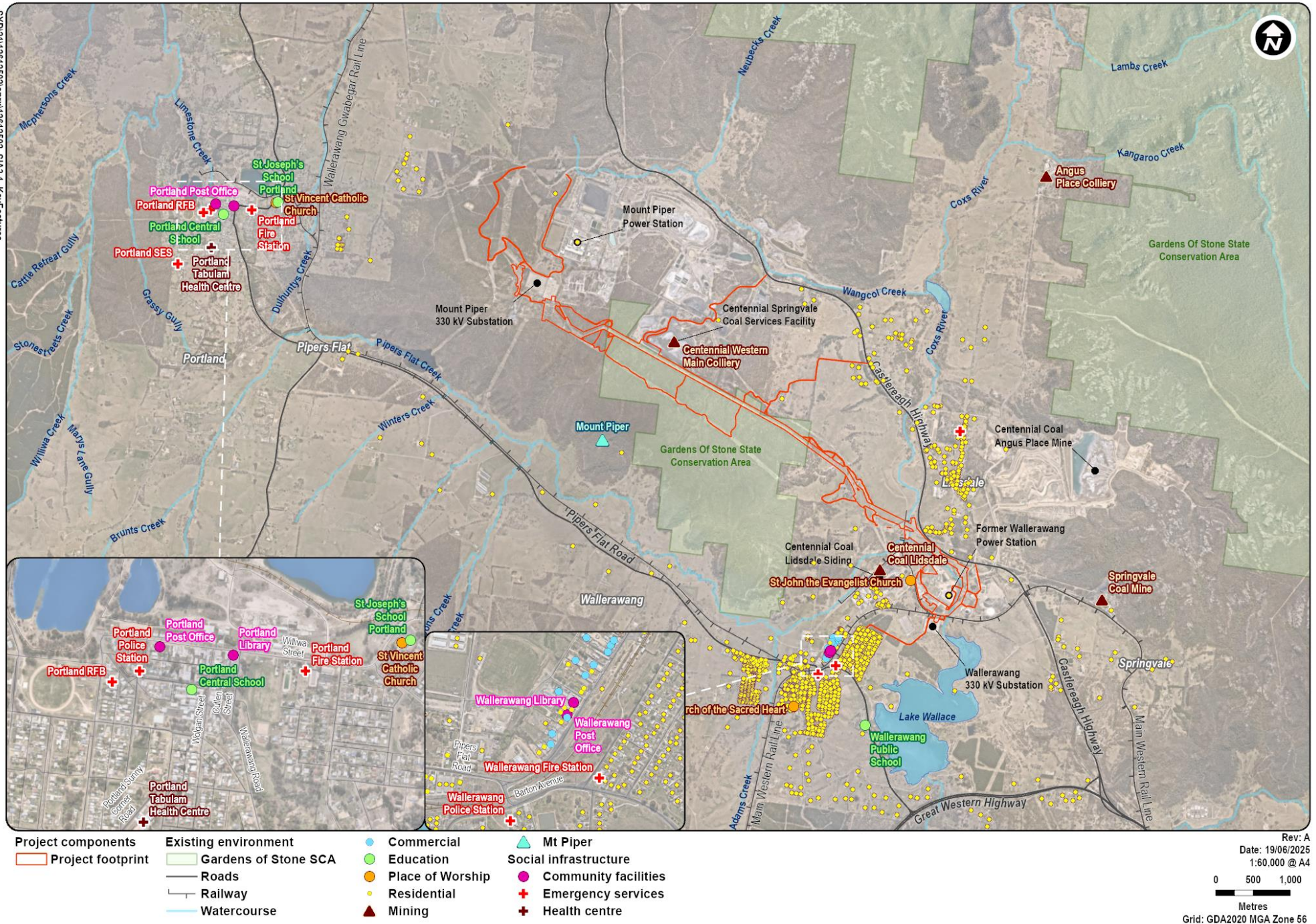
Key social and demographic characteristics of these localities are described in section 4.2.

Several access points would be required to construct and operate the transmission lines. Primary access is expected to be from Boulder Road, north of the Mount Piper Power Station, within Blackmans Flat SAL. Other access points and haulage routes would utilise Castlereagh Highway and local rural roads.

As described in section 2.2.2, the project footprint is located approximately 14 km north-west of Lithgow, which is the largest population centre in the LGA.

The project footprint and surrounding area include significant Aboriginal cultural places, located within the Gardens of Stone SCA. Consultation to inform the SIA highlighted that more well-known cultural sites are located within the wider SCA area, such as Wolgan Gap (7 km from project footprint), some sites are located closer to the project footprint and are not known to the public. The Cultural Values Assessment prepared for this project (Transgrid, 2024) has identified several areas of significance in the vicinity of the project. This includes Duiwan-Coss River, which is adjacent to the project footprint and will be crossed by the transmission lines. Duiwan-Coss River served as a traditional meeting place, provided corridors for traversing the Blue Mountains and the surrounding areas include traditional campgrounds, ceremonial sites and resource gathering sites. Duiwan-Coss River is represented in Dreaming stories, signifying its strong cultural importance to Aboriginal peoples (Transgrid, 2024).

The portion of the Gardens of Stone SCA the proposed transmission line is located on is former State Forest and is isolated from the majority of the SCA, without any dedicated access points or recreation areas. The *Gardens of Stone State Conservation Area Masterplan* produced in 2025 did not identify any existing or opportunities for visitor activities within the impacted portion of the SCA (NSW Department of Planning and Environment, 2025). Stakeholder consultation (refer to section 3.2) identified that a small number of community members do use this portion of the SCA despite there being no formal recreation areas. It was also noted that the wider Gardens of Stone SCA is a popular tourist destination, with a number of multi-day walks and bike trails, as well as access to other regional attractions, like glow worm tunnels in the Gardens of Stone and Wollemi National Parks. Stakeholders referred to increased visitor activity within the Gardens of Stone SCA since its declaration. Some stakeholders raised concerns about the potential impacts on threatened species within the conservation area.



4.2 Local study area

The local study area encompasses the rural townships of Wallerawang, Lidsdale and Blackmans Flat, as highlighted in Figure 2.1. An overview of each suburb within the local study area is provided below, with a detailed demographic profile provided in Appendix B.

4.2.1 Blackmans Flat

Power generation, transmission, and associated facilities are the main features of Blackmans Flat locality, including the Mount Piper Power Station, Centennial Western Main Colliery, and the Mount Piper 330 kV substation which is the western end of the project footprint. Primary access to the project footprint would be from Boulder Road and Castlereagh Highway, within Blackmans Flat. Other major features in Blackmans Flat are former state forest a portion of the Gardens of Stone SCA. The Ben Bullen Trail is a popular 4WD, mountain biking and horse riding trail located approximately 15 km north of the project within the portion of the SCA located to the north, which is accessed through Blackmans Flat (NSW National Parks and Wildlife Service, 2024).

Blackmans Flat had a very small residential population in 2021 at just 22 people, living in six dwellings (ABS, 2022). The only social infrastructure identified is the Blackmans Flat Rural Fire Service facility. There is no public transport service in the SAL. To access services, residents would likely travel to Wallerawang, approximately 7 km and a six minute drive time to the south; Portland, approximately 10 km (11 minute drive) to the west, or Lithgow, approximately 18 km (14 minute drive) to the southeast. Mount Piper Power Station is a major employer in Lithgow. According to media reports, the power station employs 250 people directly. The power station is planned to be operational until 2040 (Toscano & Foley, 2021).

4.2.2 Lidsdale

Transmission structures and access tracks are proposed in the southwest portion of Lidsdale SAL, between Coxs River and Mount Piper. The location of the new transmission structures would be approximately 2 km west of the Lidsdale village centre. Lidsdale is connected to the Castlereagh Highway at three locations, providing road links to Lithgow, Wallerawang, Blackmans Flat, and Portland. Only one public bus stops in Lidsdale, Route 600.

Lidsdale is a small village approximately 3 km north of Wallerawang's town centre. The two town centres are separated by the Castlereagh Highway and Coxs River. The population of Lidsdale was 471 at the 2021 Census.

A significant portion of Lidsdale SAL is occupied by the Gardens of Stone SCA (discussed in section 4.1), including visitor attractions such as Wolgan Gap. A significant Aboriginal heritage site – Maiyingu Marragu Blackfellows Hands Cave – is also located in a regional park adjacent to the SCA. These attractions are accessed through Wolgan Road, which bisects the Lidsdale village. Hiking, camping, canyoning and mountain biking are popular activities within the SCA (NSW National Parks and Wildlife Service, 2024).

There are two coal mines in Lidsdale: Springvale Mine in the east of the SAL; and Angus Place Colliery in the central west, which is currently non-operational and on care and maintenance (although there is a current application to reinstate works, see section 5.3). A large ash dam and repository associated with the former Wallerawang Power Station are also located immediately east of the village.

Mining, health care and social assistance were the equal-highest employing industries in 2021, at 12.9% of the labour force each. The median individual income in 2021 was \$774 per week, which is higher than neighbouring Wallerawang. There were 169 dwellings in Lidsdale in 2021, 155 of them occupied. 85.8% owned the house they lived in, with 11% of the population renting. 87.3% of Lidsdale residents were born in Australia, with 8.3% of people identifying as Aboriginal or Torres Strait Islander (ABS, 2022). Lidsdale is within the 3rd IRSAD quintile, indicating a moderate level of relative advantage and disadvantage. The SEIFA IRSAD score is 970 (ABS, 2023).

Due to the small size of Lidsdale and proximity to Wallerawang, there is very limited social infrastructure in the village, which includes:

- one recreation park: Maiyingu Marragu Blackfellows Hands Reserve
- one sports facility: Lidsdale Tennis Courts
- one emergency service facility: Wallerawang Rural Fire Brigade.

4.2.3 Wallerawang

The project would terminate at the Wallerawang 330 kV substation, adjacent to the former Wallerawang power station within the Wallerawang SAL. Wallerawang's town centre is located approximately 2 km south-west of the Wallerawang 330 kV substation, and approximately 3 km south of the proposed transmission lines where they are south of the Castlereagh Highway.

Wallerawang is located approximately 14 km (a 10-minute drive) northwest of Lithgow by road, and 152 km (a 2.5 hour drive) northwest of Sydney CBD by road. Bathurst is located 53 km west by road (a 40-minute drive) from Wallerawang.

Wallerawang railway station was closed in 1989; however, Transport for NSW is completing enabling works in 2025 to resume rail service (Transport for NSW, 2025). Routes and timetables are not finalised, but Transport for NSW currently operates the following services on the corridor:

- Blue Mountains Line between Bathurst and Sydney Central, via Lithgow and Paramatta
- Western Regional Line between Dubbo and Sydney Central, via Bathurst, Lithgow and Paramatta
- Western Regional Line between Broken Hill and Sydney Central, via Orange, Bathurst, Lithgow and Paramatta.

At the time of the 2021 Census, 2,019 people resided within the Wallerawang SAL. The median age was 39 years and the SAL had a dependency ratio (the proportion of population under 15 or over 64, considered economically dependent on working age people) of 65. This means Wallerawang is a slightly younger and less economically dependent population than Lithgow LGA (69) and the Central West region (68) as a whole.

Wallerawang is a Wiradjuri word, which is said to mean 'place near wood and water' (Arterra Interactive, 2024). Historical accounts of the area describe it as becoming a major stopover point for travellers between Sydney and rural areas in western NSW (Lithgow Tourism Information, n.d.). Establishment of the Wallerawang Gwabegar Rail Line in the 19th century enabled industrialisation of the area and encouraged a small settlement. Mining and power generation have supported the towns economy since, and Wallerawang experienced a second period of population growth with establishment of the Wallerawang Power Station in the 1950s (Sydney Morning Herald, 2008).

Lake Wallace is an artificial lake which was constructed to provide cooling to the power station. Since the power station closed in 2014, the lake is now host to water-based recreational activities such as sailing, fishing and canoeing (Energy Australia, 2014), (Lithgow Tourism Information, n.d.)). The historic St John the Evangelist Church was constructed in 1883 and is another key feature in the town, located approximately 600 m from the Wallerawang 330 kV substation.

Today, the town is still characterised by its agricultural and power generation history. Census data shows that 9.4% of Wallerawang's population works in Mining and 4.4% in Electricity, Gas, Water and Waste Services – both higher proportions than the Lithgow LGA, Central West region and NSW. The industry with the higher number of employees is Health Care and Social Assistance, at 13.4% of the labour force. Median individual income in 2021 was \$666 weekly – higher than Lithgow LGA (\$632), but lower than the median individual income of \$738 in Central West (ABS, 2022).

Wallerawang has a relatively secure housing market. There are 824 private dwellings, with a 90.3% occupancy rate at the time of the 2021 Census. 72.3% of residents own the home they live in, a higher ratio than Lithgow LGA, and Central West region.

Of Wallerawang's 2,019 residents, 88.2% were born in Australia. There is a relatively high proportion of people identifying as Aboriginal or Torres Strait Islander at 9.3%, which is higher than Lithgow LGA and Central West region. Most residents speak English, with 3.7% residents speaking a language other than English at home (ABS, 2022). Wallerawang is among the most disadvantaged suburbs in Australia, within the first IRSAD quintile. The 2021 SEIFA score was 903 (ABS, 2023).

A review of the Lithgow City Council website and online mapping services revealed the following social infrastructure is located in Wallerawang:

- Wallerawang Library
- Wallerawang Memorial Hall
- Two medical facilities: Wallerawang Community Health Centre; Dr S Kamalaharan & Associates

- Two emergency service facilities: Wallerawang Police Station; Wallerawang Fire Station
- Four recreation parks
- Two places of worship
- One sports park
- One public school: Wallerawang Public School
- One Early Childhood Education Centre.

As a small village, social infrastructure is somewhat limited in Wallerawang, often with restricted opening hours. For example, Wallerawang Community Health Centre operates with limited hours from Monday to Thursday; while Dr S Kamalaharan & Associates is open on weekdays between 9 am and 5 pm. Neither facility offers emergency medical treatment.

4.3 Regional study area

4.3.1 Overview

The Lithgow LGA is situated on the western edge of the Blue Mountains, 140 km northwest of Sydney. The LGA's population in 2021 was 20,824. The population is centralised in Lithgow and surrounding suburbs, with other minor activity centres in the hinterland. The remainder of the population lives in rural areas or small villages. ABS divides the country into Urban Centres and Localities (UCL), which represent areas of concentrated development. UCLs are classified as either Urban centres (population over 1,000) or Localities (population up-to 999) (ABS, 2022). UCLs in Lithgow LGA in 2021 had the following populations:

- Lithgow Urban centre: 11,197
- Wallerawang Urban centre: 2,079
- Portland Urban centre: 1,841
- Marrangaroo Locality: 297
- Cullen Bullen Locality: 117
- Rural balance: 5,306.

Lithgow LGA covers approximately 4,500 square km from the Capertree and Wolgan Valleys in the north, Little Hartley in the east, Tarana in the south and Meadow Flat in the west (Lithgow City Council, 2022). The Lithgow LGA is mostly within the Wiradjuri Aboriginal nation, while the southern region is within the Gundungurra nation's territory, and the eastern area falls under the Darug nation (Lithgow City Council, 2022).

The LGA is well serviced with road and rail infrastructure, which plays an important role in regional connectivity between the rural west and Greater Sydney. There are two major highways, with the Great Western Highway providing east-west connectivity and Castlereagh Highway providing north-south connectivity.

Lithgow LGA has multiple rail stations which connect with Sydney and west-bound services including Bathurst and Orange. Hourly rail services between Sydney CBD and Lithgow facilitate connection from Lithgow LGA to Greater Sydney (Transport for NSW, 2024), less-frequent intercity trains and coaches connect Lithgow to Broken Hill, Orange, Dubbo, Coonabarabran and Grenfell. Six bus routes are operated as part of the Transport for NSW network, connecting destinations within Lithgow as well as one route to Bathurst, however the timetable is infrequent, usually with hourly or two-hourly service schedules. Buses operate Monday to Saturday, excluding public holidays (Lithgow Buslines, 2025).

Community/social infrastructure and medical services, including a hospital, are concentrated in Lithgow. Increased demand on health services has the potential to exacerbate existing constraints on the healthcare system in Lithgow LGA, which is projected to face a shortfall of doctors and nurses in the future (Nepean Blue Mountains Primary Health Network, 2024).

4.3.2 Community values, opportunities, and challenges

Lithgow LGA was originally established as an inland mining and industrial centre, however recent developments have recognised the region as an important tourism destination, heritage centre, and desirable residential area (Lithgow City Council, 2022). The area comprises a series of small towns characterised by their heritage buildings, historical legacy, natural beauty and agriculture, identified in the Local Strategic Planning Statement (LSPS) as core community values of the region (Lithgow City Council, 2020). The towns are enveloped by pastoral landscapes of sheep and cattle farms, with larger farms subdivided into smaller holdings of various enterprises (Lithgow Tourism Information, 2024).

The importance of the natural environment is evident in the *Lithgow Community Strategic Plan 2035* (Lithgow City Council, 2022) as a key theme. There are many recreational opportunities in the region including bushwalking, mountaineering, camping, orienteering, hang gliding, horse riding, fishing, sailing, and water skiing. Lithgow City Council's local strategic plans aim to maintain these community values, whilst aiming to meet community needs, develop transport and freight connections and leverage opportunities to support the tourism industry.

Lithgow LGA's ageing population will change community needs and dynamics in the future. Planning for essential community services and facilities to attract and retain a younger population are priorities noted in the *Lithgow Community Strategic Plan 2035*, which outlines key values, opportunities, goals, and challenges for managing future growth over the next ten years. Health care and social assistance is the largest employment sector, which attracts young families to the region due to the continued ageing of the local population (Lithgow City Council, 2022). However, as this sector continues to grow, increases in the younger workforce associated with the health care and social assistance employment industry will increase demand for youth opportunities, services and facilities.

The LSPS also notes the strategic position of Lithgow as a key connection between the rural west of New South Wales and Sydney via the Great Western Highway. The reliance of roads in the region and demand for upgrading and maintaining road infrastructure is identified as a key challenge for the region.

Residents in the Lithgow LGA had both lower weekly median household and median individual incomes compared to averages for the Central West region and NSW. According to the 2021 SEIFA IRSAD, Lithgow LGA scored within decile 2 in NSW, indicating a high level of disadvantage.

As part of consultation for the 2022 Community Strategic Plan, Lithgow Council surveyed residents about a variety of issues. Consultation found that respondents are "fairly satisfied/very satisfied" with their quality of life in Lithgow. Respondents were asked to identify the aspects of living in Lithgow they most loved, and the following qualities were identified:

- Sense of community/friendly people
- Natural environment/beautiful area/scenery
- Relaxed lifestyle/peaceful
- Convenient/central location.

Respondents were also asked what they would like to see changed, and identified:

- Upgrading/maintaining roads
- Economic development and tourism/attract more business/job opportunities
- More/better shopping options (Lithgow City Council, 2022).

4.3.3 Socio-economic indicators

Table 4.1 provides a summary of key demographic and socio-economic indicators for Lithgow LGA and the Central West SA4 region. Data is sourced from the 2021 Census Usual Resident Population data, so may differ from more recent projections and estimates regarding population and workforce, such as those found in section 4.3.4.

Table 4.1 *Key demographics, Lithgow LGA and Central West SA4 (Census 2021)*

Key indicator	Description
Demographic profile	
Population	– Lithgow LGA had a population of 20,842 people in 2021. – Lithgow LGA recorded a decrease in population at a rate of -0.6% between 2016 and 2021. Prior to this, the region experienced consistent growth averaging 0.6% per year between 2011 and 2016.
Population projection	– From 2021 to 2041, the population is expected to increase by 0.2% annually, from 20,842 persons to 21,163 persons (748 persons) (NSW DPIE, 2024).
Aboriginal and/or Torres Strait Islander population	– The Aboriginal and/or Torres Strait Islander population was 1,621 persons, representing 7.8% of the population, which was higher than whole NSW (3.4%)
Age profile	– Lithgow LGA had a median age of 46 years in 2021, which is higher than NSW at 39 years. – A high proportion of the population over 65 years (24.5%) compared to NSW (17.6%). – There was a lower proportion of the population classified as young workforce (25-34 years) at 10.9% compared to 14.1% in NSW. – The figures are indicative of an older population profile in Lithgow when compared to NSW, in alignment with the higher median age for the area.
Cultural diversity	There is a significantly lower level of cultural diversity in Lithgow LGA compared to NSW, indicated by: – a lower proportion of people born in non-main English-speaking countries (5.3%) compared to NSW (23.0%). – the proportion of people who speak another language at home was lower in Lithgow LGA (4.3%) compared to NSW (26.6%).
Family and housing	
Family and household composition	– In 2021, Lithgow LGA had a higher proportion of couple families without children (44.1%) compared to NSW (37.9%) and a lower proportion of couple families with children (35.0%) compared to NSW (44.7%). – The average household size in Lithgow LGA in 2021 was 2.3 persons per household which was similar to the NSW average at 2.6 persons per household
Dwellings	Dwelling types in Lithgow LGA in 2021 suggested significantly lower levels of settlement density than the state, with: – In Lithgow LGA, 1.6% of dwellings were apartments, flats, or units, 7.7% were semi-detached, and 89.6% were separate houses. – In NSW, 21.7% of dwellings were apartments, flats, or units, 11.7% were semi-detached, and 65.6% were separate houses.
Economic profile	
Labour force	– In 2021, 94.5% of the labour force in Lithgow LGA was employed which was slightly lower than that of Central West SA4 (95.9%) and NSW (95.1%). The proportion of unemployed persons in Lithgow LGA was 5.5%. – Lithgow LGA had a labour force participation rate of 50.4%, which was lower than the rate in both Central West and NSW (58.0% and 58.7% respectively).
Industry of employment	– Health care and social assistance was the top industry of employment in Lithgow LGA, accounting for 12.7% of the workforce. This is consistent with the Central West, where health care and social assistance was the largest sector in terms of employment, accounting for 14.9% of the labour force. – Public administration and safety was also a significant sector of employment in the Lithgow LGA accounting for 10.1% of the labour force, which was higher than Central West (7.0%). – 9.0% of the Central West labour force were employed in the education and training sector, which was higher than Lithgow LGA (7.0%). A breakdown of the top industries of employment is provided in Figure 4.2.

Key indicator	Description																											
	<table><tr><th>Industry</th><th>Lithgow LGA</th><th>Central West (SA4)</th></tr><tr><td>Health Care and Social Assistance</td><td>12.7%</td><td>14.9%</td></tr><tr><td>Public Administration and Safety</td><td>10%</td><td>7%</td></tr><tr><td>Education and Training</td><td>7%</td><td>9%</td></tr><tr><td>Retail Trade</td><td>9.0%</td><td>8.9%</td></tr><tr><td>Accommodation and Food Services</td><td>8.3%</td><td>6.7%</td></tr><tr><td>Mining</td><td>8.0%</td><td>6.0%</td></tr><tr><td>Agriculture, Forestry and Fishing</td><td>2.6%</td><td>8.6%</td></tr><tr><td>Construction</td><td>7.4%</td><td>7.8%</td></tr></table> <i>Figure 4.2 Top industries of employment, 2021</i>	Industry	Lithgow LGA	Central West (SA4)	Health Care and Social Assistance	12.7%	14.9%	Public Administration and Safety	10%	7%	Education and Training	7%	9%	Retail Trade	9.0%	8.9%	Accommodation and Food Services	8.3%	6.7%	Mining	8.0%	6.0%	Agriculture, Forestry and Fishing	2.6%	8.6%	Construction	7.4%	7.8%
Industry	Lithgow LGA	Central West (SA4)																										
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Mining	8.0%	6.0%																										
Agriculture, Forestry and Fishing	2.6%	8.6%																										
Construction	7.4%	7.8%																										
Primary occupation	– In 2021, the most reported occupation in Lithgow LGA was technicians and trades, accounting for 16.6% of employed persons. This was higher than Central West SA4 where technicians and trades made up 14.6% of the labour force, and the top occupation was professionals (17.0%). – Community and personal service was identified as the second most common occupation (14.0%), which was higher than Central West at 12.5%.																											
Income	– The median weekly household income in Lithgow LGA in 2021 was \$1,196 per week which was lower than that of the SA4 at \$1,434 per week.																											
Socio-Economic Indexes for Areas (SEIFA)	– The 2021 socio economic indices for areas (SEIFA) Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD), placed Lithgow within decile 2 in NSW, with a SEIFA score of 912, which indicates a high level of disadvantage.																											
Education																												
Education	– In 2021, the proportion of people aged 15 years and over that had completed Year 12 (or equivalent) was significantly lower in Lithgow LGA (34.8%) compared to NSW (58.9%). – Of Lithgow LGA who have a post-school qualification, 50.7% have achieved a Certificate Level as the highest qualification; compared to NSW where a 32.3% achieved a Certificate Level qualification, with a Bachelor degree being the most common qualification at 32.9%.																											

4.3.4 Economy and industry

The Lithgow LGA economy includes a diverse range of industries, such as health care, social assistance, public administration and safety, mining, construction, education and training, retail trade, accommodation and food services, and manufacturing (Economy.id, 2023).

The Lithgow LGA's gross regional product (GRP) was estimated to be \$1.75 billion in the year ending June 2023, a 7.9% increase from 2022. The Lithgow GRP represents 0.2% of NSW gross state product (Economy.id, 2025). Mining is the highest grossing and most productive industry in Lithgow. Gross output in 2022/3 was \$1.34 billion, contributing 42.3% to the total output of all industries in Lithgow; while total value added in the same period was \$534.2 million, contributing 40.2% to all value added in Lithgow. The next highest output industry was Electricity, Gas, Water and Waste Services (\$317.5m, 10.1), however Public Administration and Safety had the second highest value added (\$99.4m, 7.5%). (Economy.id, 2025).

In the year ending June 2023, the top industries for employment in Lithgow LGA were health care and social assistance (12.8% of personnel), public administration and safety (11.6%) mining, (10.9%) and construction (10.3%). (ABS, 2022). Despite having the second highest output in the LGA, electricity, gas, water and waste services is the 10th highest-employing industry, accounting for 4% of personnel (Economy.id, 2025).

The strategic position of Lithgow LGA linking the rural west of NSW to Sydney CBD presents unique opportunities for residents in the area due to its proximity to the Greater Sydney region. Potentially due to its age demographic, the LGA reports a lower labour force participation rate compared to the Central West region and NSW. While this is likely indicative of the ageing population, it may reflect a population with stay-at-home parents, disenfranchised unemployed, or people reliant on disability support. Most developed nations see a labour force participation rate between 60% to 80% with identified age and society-wide effects (culture, laws), and a limited number of other variable characteristics (such as education level) (Gustafsson, 2021; Araki, 2023).

The Lithgow Emerging Economy Plan (LEEP) has produced a Transition Plan to reinvent and invigorate Lithgow's economy in the face of the expected decline in coal mining and coal-fired power generation activities. The LEEP identifies priority sectors for the future of Lithgow's economy as Renewables Energy, Manufacturing, and Tourism. To achieve this transition, Lithgow Council has identified the need to attract new industries to the region through improved infrastructure and marketing, upskill and retrain personnel so they remain in Lithgow, and engage with communities, personnel and industry to ensure the transition to a diversified economy is equitable and considered (Lithgow City Council, 2023).

4.3.5 Housing and accommodation

At the 2021 Census, there were 8,319 occupied dwellings recorded in Lithgow LGA, which equated to 86.8% of the 9,585 dwellings being occupied. The majority of dwellings were separate houses (89.6%), with just 7.7% recorded as semi-detached, terrace house, townhouse and 1.6% recorded as flat, unit or apartment.

Homes are typically large in the Lithgow LGA. It was reported that 41.7% of dwellings had three bedrooms, and 22.5% of dwellings had four bedrooms. This compares to 4% of dwellings with one bedroom and 19% of dwellings with two bedrooms.

Most residents owned their own home, either fully or with a mortgage, with 71.4% identifying themselves as a homeowner. Rental households accounted for 24.1% of households, with most of these in the private rental market. Of the rented households, a combined 21.7% rented their home from the State or territory housing authority (19.5%), or Community Housing Provider (2.2%). Homeownership rates in Lithgow LGA are higher than NSW as a whole (64%), while the number of renters who lease from the State or territory housing authority is also higher than NSW (9.8%).

The rental market appears to be concentrated in Lithgow. Of the 1,623 bonds held within the LGA during Q2 2024, 1,340 (82.6%) of these were in the Lithgow and surrounds postcode area; similarly, of the 110 sales in the year-to June 2024, 81 (73.7%) of these were within Lithgow and surrounds (NSW Department of Courts and Justice, 2025).

4.3.5.1 Rental availability and affordability

Rental affordability is tracked by SGS Economics in their quarterly Rental Affordability Index (RAI) report. The report compares median rents within a postcode against average rental household income. Median rent is collected by NSW Department of Courts and Justice, based on quarterly bond lodgements (SGS Economics and Planning, 2024). Table 4.2 provides the most recent RAI for postcodes within the Lithgow LGA, against the median rent for Q2 2024, the most recent median rent data applicable to the RAI.

Table 4.2 RAI and median rent within Lithgow LGA, 2024 (Source: SGS Economics and Planning, 2024, NSW Department of Courts and Justice, 2025)

Postcode	RAI score (relative unaffordability)	Median rent Q2 2024
2845 (Wallerawang and surrounds)	144 (acceptable)	\$360
2847 (Portland and surrounds)	137 (acceptable)	\$380
2790 (Lithgow and surrounds, incl. Lidsdale and Blackmans Flat)	127 (acceptable)	\$415
Lithgow LGA total	n/a	\$410

The RAI for all three postcodes has been declining since 2020, where rentals were most affordable. RAI data for Postcode 2845 is not available each quarter for Wallerawang and tends to fluctuate – reaching a low of 98 in 2023 Q1, before rebounding to 136 in 2023 Q3. This indicates that there are very few new bonds being lodged in the area each quarter, meaning that data is not reliably or consistently provided.

Median rent across NSW during Q2 2024 was \$650. When excluding the Greater Metropolitan Region (including Sydney, Newcastle, Wollongong, and Blue Mountains), the median rent at the same point in time was \$480 (NSW Department of Courts and Justice, 2025). Median rent in Lithgow LGA is slightly less than equivalent areas in regional NSW, however this does not necessarily mean it is more affordable.

A search of realestate.com.au during March 2025 found there were 26 properties available for rent in the Lithgow LGA.

4.3.5.2 Home-ownership affordability

Home ownership costs can be considered in two ways: first, as the total house price; second, as mortgage costs. High house prices reduce the ability of populations to climb the property ladder, means prospective home-buyers are required to save more and can increase competition in the rental market, while mortgage costs can be indicative of housing stress for homeowners who may struggle to make mortgage repayments.

The median sale price in Q2 2024 in Lithgow LGA was \$510,000. This was a -0.97% change from the median price a year earlier (NSW Department of Courts and Justice, 2025). The most recent household income data for Lithgow is from the 2021 Census, so it is not possible to accurately estimate current house price affordability. Assuming the median annual household income had remained steady at \$62,192, the price-to-income ratio or 'median multiple' in Lithgow LGA is 8.2. A median multiple above 5.1 is generally considered severely unaffordable (Cox, 2024).

Mortgage affordability has been calculated by profile.ID using Census 2021 data. At that time, 12.3% of Lithgow LGA households with mortgages were paying \$600-999 per month – the most common repayment band in the LGA (profile.ID, 2025). When breaking into repayment quartile groups, almost 45% of households were within the lowest repayment quartile (\$0-\$1,381 in 2021), compared to 41.4% of the Central West Region. Interest rates during Census 2021 were at record lows in Australia and have been increasing since. Therefore, it is likely that the number of households within the lowest mortgage repayment quartile has decreased (profile.ID, 2025).

A search of realestate.com.au during March 2025 showed there were 151 properties for sale within the Lithgow LGA (realestate.com.au, 2025).

4.3.5.3 Social housing

Social housing in NSW is delivered by the state government, community housing providers, the Aboriginal Housing Office, and Aboriginal community housing providers. The Department of Communities and Justice (DCJ) administers social housing and divides NSW into 'districts' to provide services. Lithgow LGA is located in the Nepean Blue Mountains District, which also includes Greater Sydney areas such as Penrith, Blue Mountains, and Hawkesbury. Within the Nepean Blue Mountains District, there are 6,100 social housing units (NSW Department of Communities and Justice, 2024). The distribution of units across LGAs is not published, however Census 2021 data indicates there are 437 homes owned by either the State or a community housing providers in Lithgow LGA.

The DCJ also publishes information pertaining to social housing applicant waitlists. Applicants are split into allocation zones, representing the nearest population centre. As of January 2025, there were approximately 233 applicants on the social housing waitlist in Lithgow LGA, as shown in Table 4.3:

Table 4.3 Social housing applicants in Lithgow LGA, 31 January 2025 (NSW Department of Communities and Justice, 2025)

Allocation zone	Total applicants (Priority and general)
S46 Lithgow	118
S80 Portland	<5
S88 Wallerawang	10
Total in Lithgow LGA	<233

Data also published by DCJ indicates that social housing applicants in these allocation zones face significant wait times for properties. Table 4.4 details estimated wait periods for general social housing applicants within each allocation zone.

Table 4.4 Expected social housing waiting times for general applicant, by dwelling type (NSW Department of Communities and Justice, 2024)

Expected waiting times for general applicants	S46 Lithgow	S80 Portland	S88 Wallerawang
Studio/1 bedroom property	10+ years	No properties	No properties
2-bedroom property	10+ years	5 to 10 years	5 to 10 years
3-bedroom property	5 to 10 years	2 to 5 years	Up to 2 years
4+ bedroom property	5 to 10 years	No properties	5 to 10 years

4.3.5.4 Short term accommodation

Most short-term accommodations facilities in Lithgow City Council LGA are located around the Lithgow city centre. As of May 2025, there were over 20 hotels, motels, serviced apartments, and campgrounds around Lithgow, as well as approximately 140 properties available as short-term rental accommodation as listed on Airbnb.

Based on a review of the online accommodation reservation service TripAdvisor in May 2025, it is estimated there are approximately 530 hotel, motel, hostel, holiday park and serviced apartment rooms in Lithgow LGA. All accommodation providers in the LGA are within a one-hour drive of the project footprint.

Extending the review to other LGAs within a one-hour drive of the project footprint, such as localities within Bathurst, Blue Mountains, Hawkesbury and Oberon local government areas, an estimated total of 3,103 hotel, motel, hostel, holiday park and serviced apartment rooms are located within a one-hour drive of the project footprint. When extending to Airbnb listings, there is a total of 4,637 rooms or properties with a one-hour drive. A full breakdown of estimated accommodation supply within one-hour drive of the project footprint is included in Table 4.5.

Table 4.5 Estimate of short-term accommodation supply within one hour drive of the project footprint

Accommodation type	LGA					
	Lithgow	Bathurst	Hawkesbury	Blue Mountains	Oberon	Grand Total
Caravan/holiday park	28	0	0	12	0	40
Hotel/motel	470	773	6	1,460	161	2,870
Apartment/unit	29	71	0	0	0	200
Hostel	0	0	0	57	0	57
Self-catered house (AirBnb) ¹	140	350	0	1,000	80	1,500
Grand total	667	1,194	6	2,529	241	4,637

Note: 1. Search of AirBnB completed on 23 May 2025, with numbers based on all potential regardless of nature of accommodation (e.g. single room or whole home) available at that time

SIA consultation indicated that short term accommodation in Lithgow is often used by workforces of local mining and power industries and construction projects, which can place strain on motels and hotels at times, particularly during shutdowns at local mines and power stations. According to stakeholders, this has resulted in tourists and visitors to Lithgow having to book accommodation outside of the LGA at times.

4.4 Key findings

The findings from the social baseline most relevant to this SIA include:

- The local study area is characterised by its relationship to both the natural environment and energy generation. Mount Piper Power Station, several coal mines, and the former Wallerawang Power Station represent the mining and power generation history of the area, while the Gardens of Stone SCA provides recreation, access to nature and is home to several sites significant to Wiradjuri peoples.
- Lithgow is preparing to transition its economy from its historical reliance on coal mining and coal-fired power generation, intending to grow the renewable energy, manufacturing, and tourism sectors. Communities may be responsive to opportunities to upskill and retrain.
- There are very few community/social infrastructure assets in the vicinity of the project footprint.
- Lithgow LGA recorded a decrease in population between 2016 and 2021. The population is expected to increase slightly to 21,603 by 2041, driven largely by migration.
- Lithgow LGA has an ageing population, with a median age of 46 and a high proportion of the population over the age of 65.
- Significantly lower levels of settlement diversity in the LGA, with the majority of dwelling types being separate houses with three or more bedrooms.
- A less culturally and linguistically diverse population living in Lithgow LGA compared to the state.

- A relatively high proportion of Aboriginal and Torres Strait Islander peoples living in the local study area.
- Areas with significant importance to Wiradjuri people occur in the local study area, including heritage sites within the Gardens of Stone SCA and Coss River.
- A higher proportion of couple families without children than couple families with children in the study area.
- Lithgow LGA had a lower labour force participation rate and higher unemployment rate compared to the Central West region and NSW, potentially indicating a higher level of socioeconomic disadvantage.
- The top industries of employment were health care and social assistance, public administration and safety, and mining.
- Mining accounts for over 40% of total economic output and value add in Lithgow, despite its lower levels of employment in the region (10%).
- Housing is moderately affordable in Lithgow LGA, with lower rents than comparable areas, and a stable but unaffordable home ownership market. Low dwelling diversity, lower incomes, a small rental market, and long wait times for public housing could contribute to significant housing stress.
- There are several hundred short term accommodation rooms within Lithgow, and thousands within a one-hour drive. However, stakeholders noted that during peak construction and visitor periods there can be shortages in suitable visitor accommodation.
- According to the 2021 SEIFA IRSAD, Lithgow LGA scored within decile 2 in NSW, indicating a high level of disadvantage.
- The community may be more vulnerable to changes to the natural landscape of the area due to the importance placed on these values in existing strategic plans and previous engagement activities.

5. Impact assessment

5.1 Construction impacts

This section assesses the potential social impacts arising from construction of the project on local and regional communities. A summary of construction impacts, social impact responses and residual impacts is presented in section 5.1.9.

5.1.1 Property and landowners

A large portion of the project would be located within existing Transgrid easements, which grant rights to Transgrid to access property and undertake maintenance of their existing infrastructure. The easements are generally 45 m and 60 m wide. To accommodate new 330 kV transmission lines, the project includes the widening of 4.8 km of an existing easement from 45 m to 60 m, as well as widening 0.5 km of an existing easement by 40 m to accommodate both 330 kV and 132 kV transmission lines. This would result in restrictions to the land use for impacted landowners. The primary land-uses within the project footprint are agriculture and conservation (Gardens of Stone SCA). The eastern portion of the project footprint is located within the former Wallerawang Power Station site, which is planned to be re-zoned to a commercial and industrial multi-use site.

5.1.1.1 Nearby landowners

Approximately 38.2 hectares (ha) of the project footprint is used as agricultural land and would be impacted by construction (see Technical Report 4 – Land use and Agriculture). Of the 38.2 ha of agricultural land, about 23.2 ha would occur in areas which are currently not located in Transgrid's existing transmission line easements. Agricultural land impacted by the project is located within three private properties including one owned by Centennial Coal but leased for grazing. Temporary changes to property may be necessary during construction, including temporary exclusion zones for livestock and personnel, earthworks to construct or upgrade access tracks or to established level work areas at transmission structure locations, adjustments to fences, and removal of vegetation.

Risks to ongoing agricultural activities include livestock straying, impacts to planned breeding programmes, introduction of pests or diseases, deterioration of soil quality and/or reduction of yield and livestock production resulting in revenue impacts for directly affected landowners. Loss of income, along with demand on time to liaise with Transgrid about project impacts, have the potential to lead to wellbeing effects for directly affected landowners.

Impacts to agricultural land and directly affected landowners during construction will be managed through engagement between Transgrid and affected landowners. Transgrid will prepare Property Management Plans in consultation with landowners to identify and understand individual needs. These plans may include measures to reduce property impacts and impacts on operations, adjustments or replacement of affected structures and biosecurity or rehabilitation methods. Property management plans will be developed which define works required and the impacts on properties.

5.1.1.2 Conservation land

A total of 19.2 ha of land within the Gardens of Stone SCA will be required for construction of the project, with 5 ha of this area consisting of land not already impacted by a Transgrid easement.

Construction activities would potentially impede access to parts of the SCA within the project footprint through use of tracks currently used by NPWS and other visitors to the SCA. Access to the project footprint would be limited to the public. Consultation will occur with NPWS to confirm access requirements to and within the SCA.

A review of NPWS's website and AllTrails reveals that there are no formal publicly accessible trails in the portion of the SCA within the project footprint. Anecdotal evidence provided during stakeholder consultation revealed that some people use existing transmission corridor access trails for hiking and biking or to gather plants such as orchids. While these access tracks are infrequently used, there is potential for recreational users of these tracks to be disrupted by loss of access due to construction activities.

Procedures would be implemented to ensure access to the SCA is maintained for NPWS staff, particularly in the event of emergency situations. Land access agreements with NPWS have been negotiated to facilitate site access during assessment, construction, and maintenance.

5.1.2 Aboriginal cultural values and heritage

Technical Report 5 – Aboriginal Cultural Heritage Assessment Report (ACHAR) (OzArk Environment & Heritage, 2025) identified six Aboriginal cultural heritage sites within the project footprint, one of which had not been previously recorded. The identified sites consisted of two isolated finds (one of which is newly recorded), one artefact deposit site, two potential archaeological deposit (PAD) sites, and one artefact scatter with PAD. Consultation with Registered Aboriginal Parties conducted for as part of the ACHAR indicated that all sites identified within the project footprint have high cultural value.

The ACHAR identifies that access track construction/maintenance, laydown areas, vegetation management and brake/winch activities are likely to take place in the vicinity of all identified cultural heritage sites. Two identified archaeological sites will be directly impacted by construction activities, resulting in “total loss of value” for one site, and “partial loss of value for the other.” Respectively, these sites are the newly recorded isolated find containing a quartz flake and artefact scatter with PAD containing quartz flakes and shatter.

Salvage of surface artefacts is proposed for sites on two existing tracks which would be used during the project. Salvage and long term management of salvaged artefact would be in accordance with an Aboriginal Cultural Heritage Management Plan.

Impacts on the four remaining sites would be avoided through methods outlined in Technical Paper 5 – Aboriginal Cultural Heritage Assessment Report. An unanticipated finds protocol would also be established to deal with any sites not previously identified.

As identified in section 4.1, Duiwan – Cocks River and associated water ways holds significant cultural importance for Indigenous people around the project footprint. Technical Report 1 – Water Impact Assessment identifies risks of erosion and sedimentation during construction of the transmission structures and waterway crossings. No alterations to streamflow are likely as part of construction.

Potential impacts affecting water quality or ecological habitats from project construction activities could affect local waterways, which may affect cultural values associated with waterways. To avoid or minimise impacts, a Construction Soil and Water Management Plan and Erosion and Sediment Control Plans would be developed and implemented to minimise soil erosion and stormwater runoff during construction and manage the risks of spills and leaks. With the implementation of mitigation measures impacts to surface water quality are considered to be negligible.

SIA consultation revealed a desire from local Aboriginal representatives to establish a closer relationship with Transgrid, and that cultural heritage and on-site training occur with construction personnel. Registered Aboriginal Parties would be engaged in artefact salvage work and additionally through the Indigenous participation plan that would be developed and implemented.

5.1.3 Economy, businesses and employment

5.1.3.1 Economic contribution

According to Technical Report 12 – Economic and Employment Assessment, the project would contribute \$38.4 million to the Lithgow economy, averaging \$9.6 million per year during construction.

The project responds to the decarbonisation and skills transition priorities identified in Lithgow Emerging Economy Project (Lithgow City Council, 2023), described in section 4.3.4, by increasing capacity for renewable energy generation within the region, and providing jobs in construction.

5.1.3.2 Opportunities and impacts for local and regional businesses

Construction of the project would result in direct and indirect procurement opportunities for businesses in the local and regional study area, including Indigenous businesses. Supplies and service industries required during the project's construction would include construction, transport and logistics, and accommodation. This would lead to an increase in revenue for those engaged on the project, as well as support direct and indirect employment.

Most of the project workforce are likely to be employed from outside of Lithgow LGA. An increase in non-local personnel may benefit the local economy through increased spend at retail and hospitality businesses, particularly in areas where personnel are likely to be accommodated.

5.1.3.3 Employment and training opportunities

Economic modelling based on the total project expenditure estimates that the project would create a total of 548 full time equivalent jobs both directly (162) and indirectly (386) during the construction period, with a peak employment period of 213 full time equivalent (FTE) personnel during the final year of construction (Technical Report 12 – Economic and Employment Assessment). However, the contractor's estimate suggests that a lower number of jobs would be created. Based on their estimate, the project is expected to require a peak workforce of about 150 workers, with an average workforce of about 60 workers depending on the stage of construction. The contractor's estimate is used throughout the EIS and technical reports.

Over the construction period, the project would contribute \$56.2 million in income to the NSW economy (\$8 million in Lithgow), with average salaries expected to be higher than the average salaries in both NSW and Lithgow.

The social baseline (section 4.3.4) found that Lithgow has a labour force with skills in the mining, public administration and support service sectors. The unemployment rate in 2021 was low, in line with the NSW and Central West Region levels. However, the labour force is also relatively small, with a smaller proportion of the population who are in the labour force. While mining and construction skills are likely to be useful in the context of this project, much of the workforce would need to be sourced from outside the Lithgow LGA due to the limited availability of people in the Lithgow LGA with these skills (Technical Report 12 - Economic and Employment Assessment).

Based on the economic modelling of the project's expenditure, the assessment estimates there would be approximately 30 direct jobs created within Lithgow LGA during the construction of the project, with an additional 39 indirect jobs. The remaining 132 direct and 347 indirect jobs are expected to be sourced from across NSW. As with the modelled outputs for total employment, modelled outputs for local employment during construction are considered to be overestimated.

Stakeholders consulted for the SIA identified that there is a need to create more jobs in Lithgow LGA, particularly for young people. Concern was also expressed that most personnel seem to be employed from outside of the region, contributing to a perception that local personnel are overlooked. Transgrid proposes to implement local and Indigenous industry participation plans which aim to increase local workforce participation in the project and opportunities for local businesses.

5.1.4 Housing and accommodation

Based on the modelled estimates of the project's expenditure in Technical Report 12 - Economic and Employment Assessment, approximately 132 construction personnel and contractors will be sourced from outside of the Lithgow LGA and will require accommodation. Non-resident personnel would most likely be accommodated in short term accommodation such as hotels, motels, holiday parks, and private holiday rentals. Despite there being limited availability (discussed in section 4.3.5.1), there is potential for some personnel to rent long-term rental accommodation on the private market.

The social baseline (section 4.3.5) identified that the local housing market is relatively stable, with house prices and rental affordability stable. However, there are vulnerabilities in the market, such as low rates of rental turnover and high house prices compared to median household incomes. Long waiting periods for social housing indicate that an unexpected increase in demand for rental properties could acutely impact low-income households or people who do not have housing. Use of short-term rental accommodation would avoid this potential impact.

The social baseline (section 4.3.5.4) found there are approximately 530 hotel, motel, hostel, serviced apartment and holiday park rooms and approximately 140 holiday rental providers located in the Lithgow LGA. Stakeholder consultation also found that use of these facilities by personnel of local industries and projects can lead to periods of high demand, which can reduce availability for tourists. As discussed in section 4.3.5.4, there are several hundred rooms available in localities outside of Lithgow LGA within a one-hour drive of the project footprint. Overall, there is estimated to be a total of 4,637 rooms across all short-term accommodation types within one hour driving distance of the project footprint. As identified in sections 3.2.2 and 4.3.5.4, SIA consultation indicated that demand for short-term accommodation fluctuates depending on other projects and industries, which can reduce availability for tourists.

The peak construction workforce would generally be up to 150 personnel and contractors, with an average of approximately 60 personnel and contractors over the 20 month construction period (refer to Table 1.1); most of these personnel and contractors being sourced from outside of Lithgow and requiring accommodation.

Although it is expected there would be sufficient availability of short-term accommodation rooms for both the average and peak non-resident construction workforce, there is potential for cumulative demand from other projects to reduce availability (discussed in section 5.3). This has the potential to exacerbate existing constraints in the short-term accommodation market.

A plan for workforce accommodation will be prepared prior to construction which would (refer to section 6.3):

- identify preferred workforce accommodation options
- consider the cumulative accommodation impacts associated with other major projects in the area
- review accommodation supply and availability, including a review of peak visitor periods to the area
- be developed in consultation with local government
- include a program to monitor and review the effectiveness of the strategy over the life of the project, including regular development and review.

Although there is potential for the use of short-term accommodation by the project construction workforce to reduce availability for visitors to the area, accommodation providers may also benefit from increased revenue (discussed in section 5.1.3.2).

5.1.5 Social infrastructure and services

During the construction period, the temporary increase of non-resident personnel and contractors could increase demand for social infrastructure and services, particularly in locations where the workforce would be accommodated. Social infrastructure and services would most likely be sought in Lithgow where most personnel and contractors are likely to be accommodated. Non-resident personnel would likely continue to access services in their home location, however, may use some facilities during their roster, such as healthcare services, or wellbeing services including gyms or sports fields. The impacted region has several recreation and sports facilities that could serve recreational needs of personnel, as well as good access to the Gardens of Stone SCA, Marrangaroo National Park and Turon National Park.

Construction projects and an increased temporary population create a potential for an increase in emergencies (e.g. road traffic incidents, workplace injuries or illnesses), which would increase demand for healthcare and emergency services. Wallerawang has two small clinics for general health purposes, which do not offer emergency care (described in section 4.2.3). As described in section 4.3.1, Lithgow has a hospital but is vulnerable to increases in demand. A Workforce Management Plan, which safeguards mental and physical wellbeing of personnel, would be developed and implemented to mitigate increased demand on existing health services.

5.1.6 Changes to local amenity

Construction activities would result in increased noise, vibration and dust, as well as changes to the visual landscape. These changes would temporarily reduce local amenity for community members in close proximity to construction works.

5.1.6.1 Noise and vibration

Noise and vibration impacts of the project were assessed as part of Technical Report 10 - Noise and Vibration Impact Assessment.

Due to the proximity to existing transmission lines, much of the work would need to be conducted under an outage for the existing transmission lines. To complete the works within the scheduled outage, the proposed project construction hours are 7 am to 6 pm Monday to Sunday. The need for evening or night work would be driven by constraints such as outage recalls or work in a rail corridor.

Construction noise

It is predicted that sensitive receivers would be affected by construction noise during all phases of construction. The activities associated with the greatest noise impacts were identified as vegetation clearing, access track upgrades, demolition and piling.

During standard construction hours, the highest noise impact activity is predicted to be impact piling for transmission structure footing construction. This activity is predicted to affect up to 450 receivers, with two receivers potentially being highly noise affected (noise levels above 75 dBA). However, bored piling is the preferred method and, if used, would decrease the number of noise-affected receivers to 167 with no highly noise affected receivers. The most affected residents for these works are located around Duncan Street, Lidsdale. While piling activities would result in the overall greatest number of receivers impacted, vegetation clearing and access track upgrade activities are predicted to result in the greatest noise impact with five highly noise affected receivers for both activities.

During the out of hours day period where works are required as part of the proposed project construction hours, similar impacts are expected as during standard hours with impact piling works with the highest impact. During the out of hours day period up to 939 receivers are predicted to exceed criteria for impact piling as the highest impact activity. This includes 17 receivers to experience highly intrusive noise (levels 25 dBA or greater above the criteria) with the majority of these located in the vicinity of Duncan Street. With the use of the preferred bored piling methods, the number of impacted receivers would drop to 334 receivers, with only seven experiencing highly intrusive noise. All other activities occurring during this period would result in exceedances of the criteria albeit to a lesser degree than piling activities. Up to 11 residents in the vicinity of Duncan Street would experience highly intrusive noise due to a number of other scenarios during the out of hours day period, including site establishment, earthworks and civil works, structure assembly and erection and stringing the transmission line. Highly intrusive noise would also be experienced for up to 8 receivers located near the intersection of Karawatha Drive and the Castlereagh Highway in Lidsdale as a result of access track upgrades and the associated vegetation removal.

Works outside the proposed project construction hours (that is during the out of hours evening and night periods) would be limited to transmission structure assembly, the stringing of transmission lines and the use of compounds to support these activities. Exceedance of criteria would be experienced for these receivers with the majority of receivers experiencing impacts less than 15 dBA above the criteria. Up to 11 receivers would experience highly intrusive noise as a result of stringing activities, with seven receivers experiencing such impacts for structure assembly activities. All these receivers are located in the vicinity of Duncan Street, Lidsdale. Impacts on receivers during this period would generally be limited to recall periods which are expected to be no longer than 72 hours and are unlikely to occur in more than a few instances at any one receiver during the construction period.

All impacts outlined above are worst case and for any one receiver the impacts would decrease as the works increased their distance from the receiver.

Construction vibration

The project is not expected to result in extensive vibration impacts due to the separation between work areas and nearby receivers. Where impacts are predicted, they are limited to a small number of receivers as follows:

- Seven residential receivers near intersection of Karawatha Drive and Castlereagh Highway due to access track works
- One commercial receiver near intersection of Wolgan Road and Castlereagh Highway due to access track works
- Three residential receivers and one commercial receiver at Duncan Street and intersection of Wolgan Road and Castlereagh Highway respectively in Lidsdale due to earthworks along the easement
- Two residential receiver and one commercial receiver at Duncan Street and intersection of Wolgan Road and Castlereagh Highway respectively in Lidsdale due to demobilisation and rehabilitation activities.

Construction traffic

Construction traffic noise is not expected for movements along the Castlereagh Highway, however there is potential for construction traffic noise impacts along local roads to be used for access to the project footprint. Impacts would potentially occur at the following locations due to the increase in traffic resulting from construction:

- One receiver near Boulder Road, Blackmans Flat during the day and night
- Up to six receivers near Karawatha Drive and Castlereagh Highway intersection at night and two receivers during the day
- Up to five receivers at Duncan Street due to movements along Brays Lane near Castlereagh Highway at night
- Up to 20 receivers around Duncan Street and Wolgan Road due to movements along Main Street at night.

Technical Report 10 – Noise and Vibration Impact Assessment recommends several mitigation measures that will be implemented, including a Construction Noise and Vibration Management Plan and an Out of Hours Work Protocol, which will consider appropriate mitigation measures.

5.1.6.2 Air quality

Dust would be generated primarily during vegetation clearing, civil works, and assembly of transmission structures. Construction dust is most likely to affect sensitive receivers in close proximity to construction activities in Wallerawang and Lidsdale. This includes 10 residences located 30-50 m from the project footprint, and 27 residences and two non-residential receptors within 50-100 m of the project footprint.

Measures will be implemented to reduce dust including stop work protocols during times of high wind and activities generating visible dust.

5.1.6.3 Visual amenity

Community members near construction areas (mainly residents of Duncan Street, Lidsdale) may also experience reduced amenity due to views of construction activities, including construction of new steel lattice towers, up to 60 m high. Other activities would include vegetation clearing and the presence of machinery. Technical Report 7 – Landscape and Visual Impact Assessment identified that, taking into account the presence of the existing transmission lines, two viewpoints would experience a moderate visual impact due to the presence of new steel lattice structures and potential visibility of construction activities. One viewpoint is located in a suburban street in Lidsdale, the other at a rural property in Wallerawang. Although views of construction activities may reduce enjoyment of views from nearby properties for some community members, it is expected that most people would adapt to these changes, particularly since they have existing views of transmission infrastructure. Permanent changes to visual amenity due to views of project infrastructure are discussed in section 5.2.6.

Opportunities to minimise visual amenity impacts will be considered during the detailed design phase. Vegetation clearing would be minimised to the extent practicable and screening opportunities discussed with the most affected receivers as outlined in Technical Report 7 – Landscape and Visual Impact Assessment.

5.1.7 Access and connectivity

Traffic would be generated during construction and would include the haulage of materials, delivery of goods and services to site, and movement of personnel from accommodation facilities to different areas of the project footprint. Technical Report 8 - Traffic and Transport Assessment found that construction vehicle movements would have a relatively small impact on the road network, with peak vehicle movements being within acceptable ranges for the local roads. The assessment also found that the project would not impact the overall vehicle composition of local traffic, as there are existing heavy vehicle movements due to nearby land uses.

Despite this, construction projects are often associated with an increase in heavy vehicle movements, and potential traffic congestion. There is potential for local community members and road users to notice an increase in traffic as a result of the project's construction, particularly if traffic leads to delays and increased travel times. This may cause frustration for some community members.

The Traffic Impact Assessment identified visibility issues at multiple intersections that are likely to be used by construction vehicles. Sight distance issues can reduce visibility for drivers and increase risk of accidents. Proposed mitigation includes improved signage on intersections, left in/left out protocols for project vehicle movements at the intersection of Castlereagh Highway and Karawatha Drive, and Traffic Management Plans to limit site access to certain times or areas.

5.1.8 Community wellbeing, cohesion and values

5.1.8.1 Community wellbeing and cohesion

As described in section 5.1.3, up to 150 personnel and contractors are likely to be required from outside the Lithgow LGA for the construction period. An influx of non-resident personnel can impact community cohesion, due to changes to community composition, and community concerns about potential anti-social behaviour of personnel. As discussed in section 5.1.4, most non-resident personnel would likely be accommodated in short term accommodation in locations close to the project footprint. This is likely to include motels, hotels, and campground accommodation in Wallerawang and Lithgow. Some personnel may also choose to rent houses during the construction period. This influx of personnel may be noticeable to some community members in these locations, where communities are most likely to interact with personnel. However as discussed in section 5.1.4, local communities are expected to be somewhat accustomed to the presence of non-resident personnel due to the established mining, power generation, and construction industries.

5.1.8.2 Community values

Construction of the project has the potential to affect community values associated with environmental conservation and protection due to removal of vegetation to widen the transmission corridor, particularly removal of vegetation in the Gardens of Stone SCA. As outlined in section 3.2.1, the local community strongly value the natural environment and the diversity of flora and fauna within the and the Gardens of Stone SCA. Some stakeholders raised concern about the potential for habitat loss due to removal of vegetation. Due to the already impacted landscape and conservation areas, some community members are particularly sensitive to further environmental impacts.

As detailed in Technical Paper 2 -- Biodiversity Development Assessment Report, about 17.5 ha of vegetation requires removal within the SCA to maintain the easement and to construct/upgrade access tracks within the project footprint.

While most of the footprint within the SCA consists of an existing transmission line easement near the boundary with Centennial Springvale Coal Service facility and there are no designated public access points to this portion of the SCA or recreational facilities, some members of the local community expressed concerns about potential impacts to biodiversity and the environmental character.

The project route has been selected to minimise vegetation losses. Further opportunities to avoid vegetation removal would be undertaken during detailed design. Avoid of biodiversity impacts in particular will focus on areas where canopy vegetation does not need to be removed and can improve connectivity values and/or minimise impacts on threatened species. A Biodiversity Management Plan will be prepared for the project and will outline the requirements to minimise biodiversity impacts during construction. Potential impacts to community values can be managed through Transgrid communications about the project and its overall environmental impact. Further consultation will be undertaken with relevant environmental stakeholders to determine viability of seed collection for local nurseries, as suggested by a stakeholder in section 3.2.1.

Transgrid's Community and Stakeholder Engagement Plan (CSEP) developed for the project includes a commitment to 'close the loop' with communities, to feedback on what has been heard, and how Transgrid has responded. Community information events provide residents with insights into project progress and ongoing impacts. Strategies within the CSEP are important to aid the community's understanding of the project and manage concerns. Transgrid will continue to consult with local communities and stakeholders to understand and address concerns regarding the project.

5.1.9 Summary of construction impacts

The assessment of potential social impacts during construction is summarised in Table 5.1. It is based on the significance assessment methodology described in section 2.2.5.

Mitigation measures outlined in this table include those identified as part of other technical reports being prepared as part of the EIS. Table 5.1 includes a reference to the mitigation measures identified in Appendix D of the EIS where they have been identified as part of other technical reports.

Table 5.1 *Summary of construction impacts*

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Property and landowners									
Transgrid use of property, disrupting livestock movements, and impacting land use capability. Potential loss of income and consultation burden could lead to wellbeing effects for some individuals.	Directly impacted landowners	Way of life	Minor	Possible	Medium Negative	Property management plans (measure LU1 in EIS)	Minor	Unlikely	Low Negative
Reduced access to parts of the Gardens of Stone SCA for NPWS staff and recreational users during construction.	Users of Gardens of Stone SCA	Access	Minimal	Likely	Low Negative	Access for NWPS staff (measure LU4 in EIS)	Minimal	Likely	Low Negative
Aboriginal cultural values									
Potential to damage Aboriginal cultural heritage sites, or sites with cultural value.	Local and regional Aboriginal communities including Traditional Custodians	Culture	Major	Unlikely	Medium Negative	Aboriginal Cultural Heritage Management Plan (measure H1 in EIS) Salvage of artefacts at directly impacted sites (measure H3 in EIS)	Minor	Unlikely	Low Negative

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
						Avoidance of identified artefact or PAD sites (measure H2 in EIS) Ongoing engagement with Registered Aboriginal Parties and Aboriginal communities			
Economy, business and employment									
The project would make an economic contribution, increasing the total output and value added within Lithgow and the wider-NSW economy.	Local and regional communities	Livelihoods	Moderate	Almost Certain	High Positive	No additional mitigation proposed	N/A	N/A	N/A
Opportunity for local procurement and labour-hire businesses, as well as increased spend at retail and hospitality venues.	Local business owners	Livelihoods	Minor	Possible	Medium Positive	Workforce Management Plan	Moderate	Likely	High Positive
Employment opportunities throughout Lithgow and NSW, opportunities to develop new skills, and earn salaries above the regional median.	Local personnel Non-local personnel	Livelihoods Way of life	Minor	Unlikely	Low Positive	Local Industry and Aboriginal Participation Plans	Minor	Likely	Medium Positive

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Housing and accommodation									
Competition for rental and short-term accommodation. This could affect vulnerable sectors of the community and reduce accommodation availability for tourists and visitors.	Local communities Tourists and visitors	Livelihoods Community	Moderate	Possible	Medium Negative	Workforce management plans	Moderate	Unlikely	Medium Negative
Strain on social infrastructure services, including emergency services, and health services.	Local and regional emergency and health services General community	Community Access	Minor	Possible	Medium Negative	Workforce Management Plan	Minor	Unlikely	Low Negative
Changes to local amenity									
Increased noise and vibration may disrupt lifestyles and affect human comfort. A small number of structures may also be affected by vibration.	Residents in close proximity to construction activities	Surroundings Health and wellbeing	Moderate	Possible	Medium Negative	Construction noise and vibration management plan (measure NV1 in EIS) Out of hours work protocol (measure NV5 in EIS)	Minor	Possible	Medium Negative
Increased dust may disrupt lifestyles.	Residents in close proximity to construction activities	Surroundings	Minor	Possible	Medium Negative	Construction dust control protocol (measure AQ1 in EIS)	Minor	Unlikely	Low Negative

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Visual amenity may be reduced in specific locations.	Residents in close proximity to construction activities	Surroundings	Minimal	Almost certain	Low Negative	Avoid and minimise vegetation removal (measure B01 in EIS) Investigation of screening for moderately impacted residents (measure LV3 in EIS)	Minimal	Likely	Low Negative
Access and connectivity									
Construction traffic may cause frustration due to potential delays or increased travel times.	General community and road users	Accessibility	Minor	Very Unlikely	Low Negative	Construction Traffic Management Plan (measure T1 in EIS)	Minimal	Very Unlikely	Low Negative
Community values and cohesion									
Influx of non-resident construction personnel may contribute to a change in social cohesion due to changes in community composition and perceptions of anti-social behaviour.	General community	Community Culture	Minor	Unlikely	Low Negative	Workforce Management Plan	Minor	Very unlikely	Low Negative

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Impacts to community values associated with environmental protection due to vegetation loss and/or habitat loss.	Local and regional communities	Community Surroundings	Minor	Possible	Medium Negative	Avoid and minimise vegetation removal (measure B01 in EIS) Biodiversity Management Plan (measure B02 in EIS)	Minor	Unlikely	Low Negative
Community members may have concerns regarding construction or expectations about Transgrid's contribution to community.	General community	Community	Minor	Possible	Medium Negative	Community and Stakeholder Engagement Plan	Minor	Unlikely	Low Negative

5.2 Operational impacts

This section identifies the potential social impacts arising from operation and maintenance of the project on local and regional communities. A summary of operational impacts, social impact responses and residual impacts is presented in section 5.2.9.

5.2.1 Property, landowners and land use

Operational impacts to landowners are expected to be minimal. Recreational and agricultural activities, such as grazing, cropping, irrigation, bushwalking, and vehicle movements, would continue beneath the transmission line, in accordance with Transgrid's Easement Guidelines (Transgrid, 2024). Certain development and activities such as drone operation or use of certain materials such as metallic piping or fuel storage are restricted (Transgrid, 2024). There is a risk that maintenance activities and access could introduce pests, weeds, or interfere with livestock movements. However, these would be mitigated as part of Transgrid's standard biosecurity protocols, land access protocols, as well as individual agreements with landowners.

5.2.2 Aboriginal cultural values and heritage

Operation is unlikely to disturb any Aboriginal cultural heritage items, as no land disturbing activities are likely to be required. In line with Transgrid's Stretch Reconciliation Action Plan, there is potential for long term benefits for local Aboriginal stakeholders, as Transgrid will provide any spatial data mapping of cultural artefact finds (including those repatriated) following construction.

5.2.3 Economy, businesses and employment

5.2.3.1 Economic contribution

Technical Report 12 - Economic and Employment Assessment found that the ongoing economic contribution of the project is expected to be minimal. The operational phase of the project will involve only routine inspections and maintenance where required. Economic modelling estimated the following economic contributions to the Lithgow LGA from the project's maintenance costs:

- Total output totalling approximately \$5 million, representing the increased economic activity in the Lithgow region relating to all direct, supply-chain and consumption effects of total value of goods and services required for the project.
- Value add of approximately \$1.9 million, representing the net increase in the value that economic activity creates in the Lithgow LGA across all local producers of goods and services.
- Total annual salary contribution of \$994,000.

This project will increase electricity transmission capacity in the region. Chapter 2 of the EIS describes the need for increased transmission capacity to link the Central West Orana REZ to demand centres and unlock capacity for renewable energy generation. Local and regional policies identify the need for infrastructure to support renewable energy generation in Lithgow and the Central West regions (see section 2.1). Construction of the project would enable renewable energy generation within the local area in coming decades, contributing to the transition from a coal-dependent economy in Lithgow.

5.2.3.2 Opportunities for local and regional business

There may be a small number of procurement opportunities for local and regional businesses to support maintenance activities during operation, which would benefit these businesses. There may also be ongoing indirect benefits for local businesses due to the increased capacity and development of skills and services needed during construction.

5.2.3.3 Employment and training opportunities

Existing Transgrid personnel will conduct inspections and manage maintenance requirements. No impacts to employment and training opportunities are expected to occur during the operational phase.

5.2.4 Housing and accommodation

No impacts to housing and accommodation resulting from project operation are expected to occur as no additional operational jobs are anticipated.

5.2.5 Social infrastructure and services

No impacts to social infrastructure or services resulting from project operation are expected to occur as no additional operational jobs are anticipated.

5.2.6 Changes to local amenity

High voltage transmission lines can produce an audible corona noise while operational. Described as a crackling or hissing sound, corona noise can be disruptive to nearby residents' quiet enjoyment of their home. Corona noise can become worse during wet periods.

5.2.6.1 Noise

Maintenance activities

Transgrid would undertake ongoing maintenance activities for the transmission line, transmission structures and the easement, ensuring the reliability and safety of the infrastructure. Routine maintenance would include aerial and ground inspections, reactive repairs as needed, and vegetation management. As maintenance works are infrequent and proposed to occur during the daytime periods, noise impacts are expected to be minimal. Similar impacts are already experienced in the area with the maintenance of existing transmission lines.

Corona noise from transmission line operation

Corona noise impacts are predicted to occur during periods of light rain for the operation of the existing transmission line. Such impacts are expected in the vicinity of Duncan Street, Wolgan Road and Skelly Road in Lidsdale. With the addition of a new transmission line, three additional receivers would be impacted during the evening and night time period. Impacted receivers during the daytime period would not change from the existing situation.

No receivers are expected to exceed the operational noise criteria during fair weather. Compliance noise monitoring within six months of commencement of operation has been recommended to confirm modelled noise levels.

5.2.6.2 Radio interference and electric and magnetic fields

Some interference with radio equipment using the AM band may occur as a result of corona discharge. However very few complaints of radio interference have occurred over recent years of operation of the existing infrastructure. Transgrid has consulted with stakeholders that use radio equipment in the vicinity of the project footprint and existing transmission lines and no concerns were raised.

The Electric and Magnetic Fields Report (available in Technical Report 9 - Hazards and Risk Assessment) concluded that both electrical and magnetic field levels are within the International Commission on Non-Ionising Radiation Protection guidelines for general public exposure. This indicates that there will be no interference with implanted medical devices (e.g. pacemaker) or long term health effects associated with potential exposure (Aurecon, 2025).

5.2.6.3 Visual amenity

Long-term visual impacts would result following construction of the project. New transmission structures would be visible with moderate impacts at one suburban street in Lidsdale and one rural property in Wallerawang. Mitigation through screening vegetation will be considered in consultation with landowners.

5.2.7 Access and connectivity

Operation of the project would not impact access to the Gardens of Stone SCA for recreational activities and NPWS staff. Access tracks will be maintained during operation to provide access for Transgrid maintenance staff. This would improve accessibility for NPWS staff, and members of the public who access this portion of the SCA using these access tracks.

5.2.8 Community wellbeing, cohesion and values

5.2.8.1 Community wellbeing and cohesion

During consultation (section 3.2), it was noted that the local and regional study areas have a history associated with coal mining and energy generation and this project represents part of the transition to renewable energy generation. Through consultation with communities, Transgrid will explore opportunities for community benefit sharing and securing the long-term legacy of the project.

Transgrid will continue to engage with Lithgow City Council regarding community benefits from this project.

5.2.8.2 Environmental values

As identified in sections 3.2 and 4, the community strongly values the environment in the area surrounding the project footprint. Most environmental impacts would occur during the construction phase (see section 5.1), however some environmental impacts would occur during operation, through activities like vegetation maintenance to maintain minimum safety clearances. As discussed in section 5.1.8.2, the Biodiversity Management Plan will include a rehabilitation management plan to guide rehabilitation of areas not used for the operation phase; this would include monitoring and maintenance of rehabilitated areas.

There is a very low risk of bushfire resulting from the project. However, during engagement supporting Lithgow's CSP, most respondents were concerned about bushfire risk (Lithgow City Council, 2022) The study area was impacted by the Black Summer Bushfires during 2019/20, but not impacted within the project footprint. These factors indicate the community remain concerned about bushfire risk, and may perceive an increased risk. Transgrid's existing procedures would be adopted by Transgrid to minimise the risk of bushfire during operation.

5.2.9 Summary of operational impacts

The assessment of potential social impacts during operation is summarised in Table 5.2. It is based on the significance assessment methodology described in section 2.2.5. Mitigation measures and their corresponding EIS reference number (e.g. B13, LU1 etc) are also listed in Table 5.2.

Table 5.2 Summary of operation impacts

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Property, landowners and land use									
Potential disruptions to landowners, such as interference with livestock movements or introduction of pests to agricultural lands.	Directly impacted landowners	Livelihoods	Minor	Unlikely	Low Negative	Transgrid biosecurity protocol (measure B13 in the EIS) Property management plans (measure LU1 in EIS)	Minor	Very unlikely	Low Negative
Aboriginal cultural values									
Enhanced records, recovery and protection of Aboriginal cultural artefacts.	Local and regional Aboriginal communities including Traditional Custodians	Culture	Minor	Possible	Medium Positive	Transgrid Stretch Reconciliation Action Plan Aboriginal Cultural Heritage Management Plan (measure H1 in EIS)	Minor	Almost Certain	Medium Positive
Economy, business and employment									
Ongoing economic contribution of project contributing to regional economy.	Personnel General community	Livelihoods	Minor	Likely	Medium Positive	N/A	N/A	N/A	N/A
Opportunities for further development of renewable energy projects.	Local businesses Personnel	Livelihoods Way of life	Minor	Possible	Medium Positive	N/A	N/A	N/A	N/A

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Changes to local amenity									
Potential for perceptible increase in corona noise and interference with radio transmissions for nearby residents.	Residents in close proximity to transmission lines	Surroundings	Minor	Unlikely	Low Negative	Communication with impacted landowners in line with Community and Stakeholder Engagement Plan	Minimal	Very unlikely	Low Negative
Changed views from specific locations may result in reduced visual amenity.	Residents in close proximity to construction activities	Surroundings	Minimal	Almost certain	Low Negative	Consultation with affected stakeholders regarding screening vegetation (measure LV3 in EIS)	Minimal	Possible	Low Negative
Access and connectivity									
Improved access and ease of movement for NPWS staff and members of the public accessing Gardens of Stone SCA using existing access tracks due to upgrade	NPWS staff General community	Access	Minimal	Likely	Low Positive	N/A	N/A	N/A	N/A
Community values, health and wellbeing									
Potential for enhanced community wellbeing and cohesion	Local communities	Community	Minor	Very Unlikely	Low Positive	Engagement with Lithgow City Council in line with the Community and Stakeholder Engagement Plan	Minor	Unlikely	Low Positive

Potential impact description	Stakeholders affected	SIA Guideline social impact category	Magnitude	Likelihood	Pre mitigation significance	Mitigation measures	Magnitude	Likelihood	Residual significance
Community perceptions of environmental risks due to presence of infrastructure, such as fauna collision or bushfire. Perceptions may contribute to unease or impact community environmental values.	Local and regional communities	Surroundings	Minor	Unlikely	Medium Negative	Community and Stakeholder Engagement Plan Biodiversity Management Plan (measure B2 in EIS) Emergency Management Plan (measures W2 and HR4 in EIS)	Minor	Very Unlikely	Low Negative

5.3 Cumulative impacts

Section 21.2 of the EIS outlines the assessment methodology for cumulative impacts including the methods for identifying what projects have been considered as part of the issue-specific cumulative impact assessments for the project. The assessment has been undertaken in accordance with the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPIE 2022).

A total of 10 projects within 20 km of the project footprint were identified for consideration as part of the cumulative impact assessment and are shown in Figure 5.1. The following projects have been considered:

- Wallerawang Battery Energy Storage System
- Mount Piper Battery Energy Storage System
- Great Western Battery Energy Storage System
- Pinecrest Battery Energy Storage System
- Lake Lyell Pumped Hydro Energy Storage
- Ben Bullen Wind Farm
- Sunny Corner Wind Farm
- Wallerawang Power Station Ash Dam
- Wallerawang residential subdivision (DA226/22)
- Wallerawang Railway Station upgrades.

Table 5.3 outlines the potential cumulative impacts relevant to each assessment.

As highlighted in Table 5.3, there are several projects which may result in cumulative social impacts. Three of these projects have approval and are located directly adjacent to the proposed transmission line site. There is potential for the following cumulative social impacts in the local and regional area:

- Reduced availability of short-term accommodation and overall housing affordability and availability. Up-to 1,977 personnel may be required in the area in a worst-case scenario of construction peaks coinciding. Most personnel of reviewed projects will require accommodation – potentially simultaneously or over a sustained period – as they are likely to be non-resident personnel. There are over 4,000 short-term rental accommodation rooms within one-hours' drive of the project footprint (refer to Table 4.5), so accommodation needs are manageable with existing supply, however the reduced overall availability may impact visitors.
- Ongoing impacted access to agricultural and employment lands.
- Competition for local labour.
- Increased intensity and duration of traffic and noise impacts, particularly for residents of Lidsdale, where multiple projects are occurring near residential areas.
- Increase in temporary populations and resulting impacts on community cohesion.
- Increased demand for social infrastructure and services including health care and emergency services.
- Impacts to community values associated with natural and rural character.
- Impacts to community wellbeing and social cohesion due to differing views about the projects and impacts to community character.
- Cumulative growth in renewable energy jobs and skillsets.
- Cumulative community benefit contributions supporting local community needs.

Mitigation and management strategies identified in section 6 will consider the potential cumulative social impacts that result from the construction and operation of these projects, particularly regarding workforce management, procurement and accommodation.

Intangible social impacts, such as impacts to community cohesion or diminishing community values can be difficult to manage, particularly for individual projects. Transgrid's Communication and Stakeholder Engagement Plan considers the potential cumulative impacts of projects and seeks to ensure that potential community impacts are understood and addressed early.

Addressing cumulative impacts will be a shared responsibility between Transgrid, Lithgow City Council and other project proponents. Sharing information about construction and operation timeframes, activities, accommodation and workforce needs will assist in managing potential cumulative impacts.

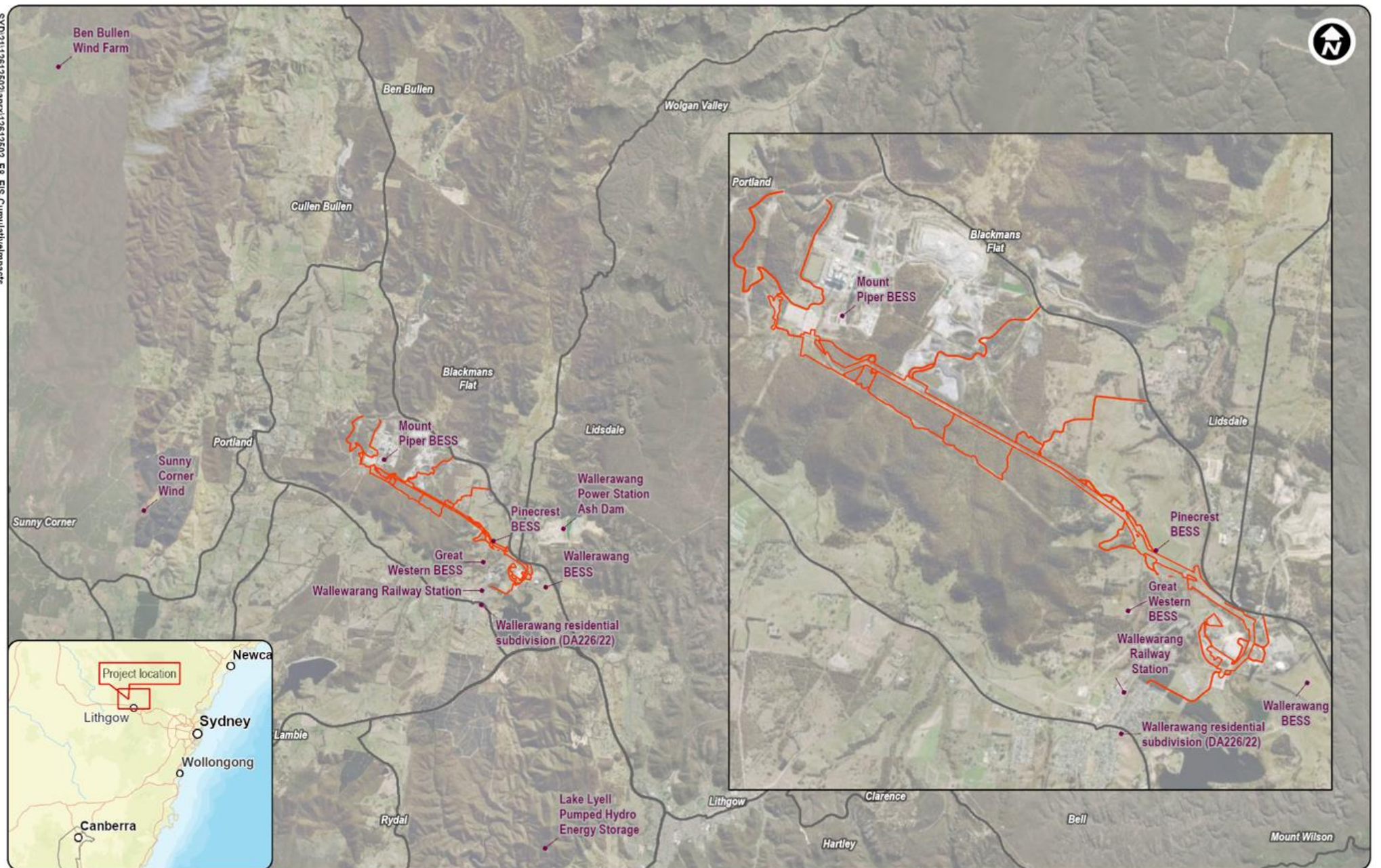


Figure 5.1 Projects considered in cumulative assessment

Table 5.3 *Potential cumulative impacts of relevant future projects*

Relevant future project	Scope	Approximate location	Status/timeframe/ operational period	Potential for cumulative impact
Wallerawang BESS	Design changes to optimise the layout of the approved Wallerawang BESS (500 MW and 1,000 MWh of battery storage capacity)	500 m east of the project footprint	Approved 4/8/2022 Current modification at response to submissions stages Construction period of 1 to 2 years, expected to commence from 2025, construction does not appear to have commenced Operational period unchanged	The Wallerawang BESS would be located approximately 500 m east of the project footprint with some overlap in transmission crossings. Construction is expected to take up to two years, with a peak workforce of around 100 people per day. The project has been approved since 2022, however has applied for modifications to the original site plan. The project modifications are in the Response to Submission phase as of March 2025. The project has been approved since 2023. There may be cumulative impacts to accommodation supply in Lithgow and the local area. Nearby residents may experience cumulative amenity impacts such as construction noise or visual impacts. Residents may notice increased traffic, however movements are expected to be within acceptable levels. Agricultural landowners may experience cumulative impacts resulting from a change in land use and limited access to their landholdings.
Mount Piper BESS	Development of a grid-scale BESS with a capacity of up to 500 MW	Immediately north of the project footprint	Approved 15/11/2024 Construction period of 18-24 months expected to commence from mid-2026 at the earliest Potentially operational by 2027/2028 and would operate for about 20 years	The proposed Mount Piper BESS would be located immediately north of the project footprint with some overlapping access tracks and compounds. Construction of the project is expected to begin as early as 2025 and will take approximately two years to complete. The proposed project would be operational for around 20 to 25 years. At its peak, the construction workforce is expected to reach up to 177 people. The project was approved in November 2024. The project has been approved since 2023. There may be cumulative impacts to accommodation supply in Lithgow and the local area. There are few nearby residents, however some sensitive receivers may experience cumulative amenity impacts such as construction and traffic noise within acceptable levels or dust. Residents and personnel may notice increased traffic, however movements are expected to be within acceptable levels. Agricultural landowners may experience cumulative Impacts resulting from a change in land use and limited access to their landholdings.

Relevant future project	Scope	Approximate location	Status/timeframe/ operational period	Potential for cumulative impact
Great Western BESS	Development of a 500 MW / 1,000 MWh BESS and associated infrastructure	300 m west of the project footprint	Approved 2/11/2023 Project has not yet commenced construction and construction start date is not known however is expected to occur over 12-14 months once the modification is approved The BESS is intended to have an operational life of up to 20 years	The proposed Great Western BESS would be located approximately 260 m west of the project footprint. Construction is expected to take up to 14 months, and the facility is anticipated to have an operational lifespan of up to 20 years. During peak construction, the workforce is expected to reach up to 250 personnel and contractors, with an average of about 50 personnel and contractors per day. The project has been approved since 2023. There may be cumulative impacts to accommodation supply in Lithgow and the local area. Nearby residents, particularly at Brays Lane may experience cumulative amenity impacts such as construction noise, low-levels of dust, or visual impacts. Residents may notice increased traffic, particularly around Brays Lane, however movements are expected to be within acceptable levels. Agricultural landowners may experience cumulative Impacts resulting from a change in land use and limited access to their landholdings.
Pinecrest BESS	Development of 500 MW battery storage capacity and 1,000 MWh of storage with (2-hour duration) connecting to the grid via underground cabling	Layout shown in scoping report is located within project footprint, with Transgrid undertaking ongoing consultation with Banpu Energy regarding positioning of the site.	Scoping report prepared with SEARs not yet issued EIS is expected to be submitted in early 2026 Construction period of 18 months commencing in late 2026 if approved. Operations proposed to start in 2028	Construction period may overlap with project and other projects. Limited information regarding workforce requirements or other construction impacts is available online. Based on impacts from other BESS developments of this size, workforce may be approximately 100-150 personnel and contractors at peak periods. Workforce is likely to be sourced from outside of Lithgow. Accommodation providers may be impacted by cumulative non-resident workforce impacts. Agricultural landowners may experience ongoing property and access track limitations throughout construction. Other nearby residents, such as those in Lidsdale may experience concurrent or consecutive amenity impacts such as noise, dust or visual impacts.
Lake Lyell Pumped Hydro Energy Storage	Development of 500 MW battery storage capacity and 1,000 MWh of storage with (2-hour duration) connecting to the grid via underground cabling	Layout shown in scoping report is located within project footprint, with Transgrid undertaking ongoing consultation with Banpu Energy regarding positioning of the site.	Scoping report prepared with SEARs not yet issued EIS is expected to be submitted in early 2026 Construction period of 18 months commencing in late 2026 if approved. Operations proposed to start in 2028	Construction timeframes are likely to overlap. Non-resident workforce is expected to be required, who will most likely be accommodated in Lithgow. This may impact the availability of visitor accommodation in the area.

Relevant future project	Scope	Approximate location	Status/timeframe/ operational period	Potential for cumulative impact
Ben Bullen Wind Farm	Construction of approximately 64 wind turbine generators, a BESS and ancillary infrastructure	20 km north-west of the project footprint	EIS in preparation Construction in 2028 for 18-24 months Operational life of 35 years+	Approximately 200 personnel and contractors are expected to be required for construction of the windfarm, some of which will be non-resident personnel. Non-resident personnel will be hosted in short term rental accommodation. The proponent (Tetris Energy) has received strong support and interest from accommodation providers in Wallerawang. This may impact the availability of worker accommodation in Wallerawang and Lithgow.
Sunny Corner Wind Farm	Construction of approximately 80 wind turbine generators, a BESS and ancillary infrastructure	6 km west of the project footprint	EIS in preparation Construction in 2030 for 36 months Operational life of 30 years	Construction of the wind farm is expected to require approximately 475 FTE personnel during its peak operation. An accommodation strategy has not yet been developed, in case project worker accommodation is not provided, non-resident personnel are likely to be housed within the Lithgow and Bathurst LGA. There may be limited visual amenity impacts for some residents of Wallerawang resulting from the wind farm. Most residents who are impacted by Mount Piper to Wallerawang are beyond the 8,160 m setback for the Sunny Corner Wind Farm, where it is estimated the 265 m wind turbines will have a negligible impact. There are likely to be procurement opportunities and direct and indirect economic impacts for businesses within the region resulting from both projects. Large portions of the Sunny Corner State Forest will be cleared or result in biodiversity impacts, this has the potential to compound concerns in the community about impacts to the natural environment, or diminished access to natural and recreational spaces.
Wallerawang Power Station Ash Dam	Use of part of the lands lying north of the Castlereagh Highway that were once used by the former Wallerawang Power Station as coal ash dam repositories	Immediately north of the project footprint	Approved 13/10/2023 The modification proposes an additional ten years for the importation of capping material	The project is the extension of existing operations and therefore there is no expected change to the impacts on the Lidsdale community around Wolgan Road as a result of the modification, with these impacts all being existing. No expected change from existing staffing numbers with the modification only extending the existing operations.

Relevant future project	Scope	Approximate location	Status/timeframe/ operational period	Potential for cumulative impact
Residential subdivision DA226/22	Torrens Subdivision - 1 Lot into 54 Residential Allotments, 4 New Roads, 2 lots for drainage and public reserve Allotment	19 Barton Avenue Wallerawang 2 km south-west of the project footprint	Currently being re-exhibited till 13 June 2025	Insufficient information to determine cumulative impacts, however location and nature of the project indicate it is unlikely there will be interaction between these projects resulting in cumulative impact. No worker information is available however it is expected to have a relatively small workforce which would only contribute to the cumulative impact on accommodation in the Lithgow area.
Wallerawang Railway Station upgrades	Works to upgrade the existing station, closed in 1989, so that passenger services can be restated.	850 m southwest of project footprint	Project has been announced on Transport for NSW website Early enabling works will be carried out from March to August 2025. Once the design is finalised, construction will commence later in 2025, with re-opening of the station planned for late 2026	Proposed works are contained to a small site and not likely to interact with the project. No worker information is available however it is expected to have a relatively small workforce which would only contribute to the cumulative impact on accommodation in the Lithgow area.

6. Mitigation and management of impacts

6.1 Approach to mitigation

Transgrid is committed to maximising potential positive social impacts and opportunities and reducing potential negative impacts associated with the project. Where impacts could not be avoided, mitigation measures to minimise or manage impacts on the community are detailed in section 6.6.

The recommended mitigation measures to minimise or manage impacts on the community are detailed in Table 6.1. They are recommended in addition to the mitigation measures provided in other technical reports for the EIS.

Transgrid has proven experience in managing the delivery of transmission infrastructure projects across NSW. Through this experience, Transgrid has been engaging with local and regional communities to understand community concerns, needs and aspirations, and opportunities to support community benefits.

The recommended measures to manage social impacts and enhance benefits for local and regional communities, described in the sections below.

6.2 Community and stakeholder engagement plan

Comprehensive and appropriate communication and engagement with the community and other key stakeholders will play a key role in managing potential social impacts during construction and operation. Effective communication and engagement are fundamental to reducing risk and minimising potential impacts. Identifying, engaging and effectively communicating with stakeholders is critical to the successful delivery of the project. Transgrid maintains a Community Engagement Policy (Transgrid, 2022), which outlines principles for all engagement activities undertaken and has been developed as part of Transgrid's membership of the Energy Charter.

Transgrid has engaged with the community throughout the development process and will continue to do so prior-to and during construction. The CSEP for the project outlines how Transgrid will engage with stakeholders and is developed in accordance with IAP2 principles.

The overarching objectives of the engagement program are:

- ensure community and stakeholder engagement and communication support efficient project delivery and complies with regulatory requirements
- ensure that the engagement and communication process provides stakeholders with just and fair opportunities to understand and provide input into transmission planning, through the provision of consultation outputs
- ensure that potential community and social impacts are identified early, understood and included in balanced route and corridor selection process
- engage early to allow potential issues to be identified, avoided or managed without significant cost or delay
- establish a reputation for transparency and two-way communication by providing clear information about:
 - the project, the need for the project and community benefits
 - how the transmission route identification process factors in social, environmental and engineering information.

Actions and collateral developed as part of the program include:

- media releases
- project newsletter
- fact sheets and maps
- website, social media, online videos
- key stakeholder briefings
- calls, letters and emails

- on-property meetings
- 1800 number and email
- webinars, information sessions and public displays.

Transgrid has established a complaints management system, with a Complaints and Enquiries Policy (Transgrid, n.d.) and published Complaints and Enquiries Guidelines (Transgrid, 2024) to assist communities when contacting Transgrid. Transgrid has dedicated community information 1800 numbers and emails and aims to respond to any complaint or enquiry within 10 days of receipt.

6.3 Workforce management plans

Transgrid will prepare a workforce management plan, to manage potential impacts and the wellbeing of the construction workforce. The workforce management plan will include measures to provide sufficient accommodation for the workforce, manage potential impacts arising from the project's workforce as well as impacts to them, and to enhance the potential benefits of project employment and training. Key elements of the plan include:

An accommodation strategy which will:

- identify preferred workforce accommodation options
- consider the cumulative accommodation impacts associated with other major projects in the area
- review accommodation supply and availability, including a review of peak visitor periods to the area
- be developed in consultation with local government
- include a program to monitor and review the effectiveness of the strategy over the life of the project, including regular development and review.

Management measures will set out an approach to:

- enhancing employment opportunities for local and regional communities
- training and development initiatives to improve local and regional skills and capacity including, where relevant, initiatives for traditionally underrepresented groups
- programs to support the physical and mental health and well-being of personnel
- measures to manage workforce behavioural standards and the safety of the broader community
- measures to manage and monitor use of local accommodation by personnel.

Transgrid has personnel Code of Conduct, which will be applicable to all employees, contractors, subcontractors and consultants working on the project at all times when on duty and/or attending work related functions. The Code of Conduct will be linked to employee contract conditions.

6.4 Local Industry and Aboriginal Participation Plans

Transgrid is committed to providing full, fair and reasonable opportunities for local, regional and Indigenous businesses to participate in the project supply chain. Transgrid will develop a Local Industry Participation Plan and an Aboriginal Participation Plan to facilitate the involvement of local, regional and businesses in supply chain opportunities.

Transgrid's Aboriginal and Torres Strait Islander Engagement and Participation Policy (Transgrid, 2023) and Stretch Reconciliation Action Plan (Transgrid, 2023) outlines the commitment to increasing Indigenous suppliers and improving organisation-wide awareness to procuring Indigenous services. Elements of this policy will be incorporated into the Local Industry and Aboriginal Participation Plan.

The Local Industry Participation Plan and Aboriginal Participation Plan would include the following measures as a minimum:

- Provide local and regional businesses with full, fair and reasonable opportunity to participate in the project's supply chain
- Implement a clear and efficient process for businesses to source information about the project and potential supply opportunities, including regular information releases to industry publications and media

- Appoint a point of contact for procurement, and advertise the contact details on the project website
- Develop a project-specific supply chain register that categorises interested local, regional, and Indigenous businesses
- Host briefings with industry associations on project opportunities, pre-qualification requirements and bid processes at the start of the procurement phase
- Set appropriate targets to utilise local and Indigenous businesses in all contracts.

6.5 Community benefits sharing

Transgrid maintains a Social Licence program to facilitate Transgrid's ability to deliver and maintain projects. The program aims to build community trust, and creates guidelines for Transgrid to engage with communities and make decisions about investments in social outcomes. Transgrid uses this approach to build relationships and trust with stakeholders and communities by engaging, consulting and collaborating with them and taking into account their needs, aspirations and concerns.

During the project planning phase implementation of the Social Licence program included Transgrid undertaking the Community Partnerships Program to support continued delivery of community-led wellbeing, environmental, sustainability and education services in Lithgow. This program included three rounds of funding since March 2023 with each grant recipient being awarded approximately \$5,000.

During consultation, stakeholders emphasised that the project should benefit local community through:

- local employment opportunities
- targeted upskilling and skills transfer programs
- utilising local suppliers within the LGA.

This would contribute to the future prosperity of the region and prepare local suppliers for emerging energy technologies directly impacting them.

Transgrid is working with the construction contractor to realise these objectives and to deliver lasting benefits to the local community. Transgrid and the construction contractor are:

- undertaking business and skills mapping to understand where the opportunities for participation align with local capability
- consulting with Aboriginal businesses to develop the Aboriginal Participation Plan to maximise opportunities
- engaging directly with Lithgow Council to understand key target areas.

Aboriginal participation and local business participation targets apply across Transgrid's scope for network upgrades for CWO REZ, which includes the Mount Piper to Wallerawang Transmission Line Upgrade (this project).

Transgrid's Stretch Reconciliation Action Plan requires the construction contractor to allocate at least 2.5% of the project expenditure towards Aboriginal procurement and participation. The project's Aboriginal Participation Plan would aim to meet this with at least 30% of the allocation spent on direct and indirect employment and training cost for Aboriginal employees, trainees and apprentices employed by the contractor for the project.

The Local Industry Participation Plan, as described in section 6.4, would set out a commitment to support local industry involvement through the construction phase and would establish a minimum target for local industry participation and detail how this would be achieved. The Local Industry Participation Plan would identify relevant local Small and Medium Enterprises for potential participation in the supply chain for the project and actively alert these relevant enterprises of potential tenders and supply opportunities for the project. There would also be targets for training initiatives such as apprenticeships, which would prioritise local workers.

Transgrid will continue to engage with the community and Lithgow City Council to investigate how the project can deliver community benefits and enhancements to leave a lasting legacy in the area.

6.6 Summary of mitigation measures

The recommended mitigation measures to minimise or manage impacts on the community are detailed in Table 6.1.

Table 6.1 Social mitigation and management measures

Impact	Environmental safeguard	Timing
Social impacts, communication and engagement and monitoring	An overarching CSEP will be developed to guide delivery of engagement throughout all phases of the project, to ensure that: – accurate and accessible information about the project is provided – feedback from the community is encouraged – opportunities for input are provided – community members and stakeholders with the potential to be affected by construction activities are notified in a timely manner about the timing of activities and potential for impacts – enquiries and complaints are managed, and a timely response is provided for concerns raised. The aims and outcomes of the CSEP will be reviewed and monitored to ensure effectiveness and that the plan adapts to any specific and changing circumstances. Communications and engagement activities will include approaches and protocols to: – communicate with potentially affected residents, other community members, businesses and other key stakeholders to provide information about the project, and the likely nature, extent and duration of changes during construction – share information about the project with other regional stakeholders to assist with managing cumulative impacts on local and regional communities.	Pre-construction, construction, operation
	An enquiries and complaints management system will be developed and outlined in the CSEP and implemented during all phases of the project. The complaints management systems will be maintained throughout the construction period and for a minimum of 12-months after construction finishes.	Pre-construction, construction, operation
Accommodation and housing impacts	Transgrid will prepare and implement a Workforce Management Plan (WMP), which will: – propose measures to ensure there is sufficient accommodation for the project workforce – identify preferred workforce accommodation options – consider the cumulative accommodation impacts associated with other major projects in the area. – include a program to monitor and review the effectiveness of the Plan.	Pre-construction, construction
Workforce management	The WMP will be developed in consultation with Lithgow Council and service providers, including local and regional health and emergency services providers to manage the potential impacts of the non-resident construction workforce. The Plan will include: – strategies to promote wellbeing of the workforce – a code of conduct for personnel, policies relating to antisocial behaviour – health and wellbeing service needs of the temporary construction workforce, including medical, allied health and wellbeing services – information to the workforce on community services, recreation facilities, events, tourism activities and how to access health services.	Pre-construction, construction
Local employment and training opportunities	Transgrid will investigate options for prioritising the employment of local personnel for the construction phase where possible. This will include consideration of requirements for : – recruitment, skills and training measures, including identification of skills and qualifications required, and training targets. – how the contractor will work with regional stakeholders to upskill local residents, including Indigenous and culturally diverse communities.	Pre-construction, construction

Impact	Environmental safeguard	Timing
	Transgrid's Local Industry Participation Plan and Aboriginal Participation Plan have been developed and will be implemented to ensure opportunities for local, regional and Indigenous businesses to participate in the project's supply chain. The plans will include: – a process for local businesses to source information about supply opportunities for the project – host business information evenings – maintain a local supply chain register – step appropriate targets for local and Indigenous business procurement.	Pre-construction, construction
Community benefits	Transgrid will continue to promote and engage with the community, interest groups and Lithgow City Council during all stages of the project to identify methods and opportunities to maximise community benefits and enhancements to leave a lasting legacy in the area.	Pre-construction, construction, operation

7. Conclusion

This SIA has assessed the potential social impacts resulting from the construction and operation of the project, proposed by Transgrid. Stakeholder consultation conducted for this SIA revealed that stakeholders are broadly supportive of the project, however there are concerns regarding opportunities for local employment, impact on environmental values and opportunities to protect and enhance Aboriginal cultural heritage.

The project will take place within the Wallerawang, Lidsdale and Blackmans Flat SALs located in Lithgow LGA. The characteristics of the project footprint are largely rural and industrial, with significant tracts of conservation land within the locality, supporting the strongly held environmental values of the community. Local industry and the economic history of the area has been largely reliant on coal mining and coal-powered electricity generation. This project, which will enable development of future renewable energy sites, represents a transition from the industrial heritage of Lithgow to the renewable-energy focus outlined in the Lithgow Emerging Economies Project (Lithgow City Council, 2023).

There is a high level of employment in the area, with most people who have necessary skills already employed and therefore not available for the project. This means that most of the workforce will be sourced from outside of the local area.

During the project's construction phase, potential social benefits include:

- direct and indirect employment opportunities in the local area
- direct and indirect procurement opportunities in the local area
- opportunities for the sharing and education of Wiradjuri cultural values.

Various negative impacts may occur during construction activities, including:

- Displacement of Aboriginal cultural heritage artefacts within the project footprint.
- Increased demand for local accommodation. This may be exacerbated through cumulative impacts of several projects occurring simultaneously or in succession.
- Impact to local environmental values through biodiversity impacts within the Gardens of Stone SCA.
- Reduced amenity for residents near construction areas due to noise.

During operation, negative impacts could include:

- heightened risk of bushfire and potential heightened bushfire anxiety among local residents
- possible perceptible corona noise impacts for residents living within 500 m of transmission lines
- risk of interference to livestock movements and other agricultural activities during maintenance.

These impacts will be mitigated through various strategies and are expected to have low significance to the community as they impact only a small number of people or are unlikely to occur. Some positive impacts will also occur during operation:

- ongoing development of the renewables sector within Lithgow and the wider Central West Region
- indirect economic benefits resulting from training and experience gained by local workforce during construction.

Mitigation measures and a management framework have been recommended to minimise potential negative social impacts, enhance positive impacts, and track the overall social impacts of the project. These measures include development of a, Workforce Management Plan (including accommodation plan), a Local Industry Participation Plan and an Aboriginal Participation Plan. This is supported by implementation of the project CSEP and Transgrid policies such as Indigenous Procurement.

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Appendices

Appendix A

SLA review questions

Table A.1 *SIA review questions*

General	
1. Does the lead author meet the qualification and experience requirements?	Yes – refer to section 1.6
2. Has the lead author provided a signed declaration?	Yes – refer to section 1.6
3. Would a reasonable person judge the SIA report to be impartial, transparent and suitably rigorous given the nature of the project?	Yes – The SIA has been prepared by social research and social performance specialists with proven experience in SIA. The SIA has been prepared using proven social science research methods relevant to the nature of the project.
Projects social locality and social baseline	
4. Does the SIA report identify and describe all the different social groups that may be affected by the project?	Yes – section 4 provides a description of the social locality/study area, including the different social groups who may be affected by the project.
5. Does the SIA report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Yes – section 4 provides a description of built or natural features that have value for people in the study area, as relevant to the scope of the assessment.
6. Does the SIA report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	Yes – section 4 describes historical, current and expected social trends or social changes for people in the study area, as relevant to the scope of the assessment. Section 3 reports findings from consultation which includes local stakeholders' concerns about this project and other major development projects in the region.
7. Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the diversity of views and likely experiences?	Yes – the elements and indicators discussed in Section 4 (the social baseline) are justified in the SIA scoping exercise (see Section 2.2.1). Section 2.1 has been informed by relevant literature and data as referenced throughout. The EIS and SIA consultation activities reported in Section 3 and throughout Sections 4 to 6 sought to understand the views of a diverse range of local stakeholders, and how they expect to be affected by the project.
8. Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes – section 4 describes the SIA methodology including the social science research methods implemented, and the data limitations and explained in Section 2.2.
Identification and description of social impacts	
9. Does the SIA report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of SIA scoping and initial assessment, has the plan for the SIA report been detailed?	Yes – sections 5.1 and 5.2 describes the potential social impacts of the project, including the concerns of local communities based on outcomes of consultation activities described in Section 3. Section 2.2.1 presents the SIA scoping exercise, which justifies the focus areas for the social baseline (Section 4) and assessment of impacts (Section 5.1 and 5.2).
10. Does the SIA report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	Yes – sections 5.1 and 5.2 describes the potential social impacts of the project on local communities and stakeholders, and considers how different groups in the community, particularly vulnerable community members, may experience the impacts differently.
11. Does the SIA report describe how the preliminary analysis influenced project design and EIS engagement strategy?	Outcomes from the SIA consultation activities informed the approach to EIS consultation.
Community engagement	
12. Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Yes – the SIA consultation activities were planned to target stakeholders relevant to the scope of the assessment and key social issues. The EIS consultation activities sought inputs from a broader range of stakeholders.

13. How have the views, concerns and insights of affected and interested people influenced both the project design and each element of the SIA report?	Consultation findings have informed the social baseline (Section 4), impact identification and assessment (sections 5.1-5.2) and identification of mitigation measures (section 6).
Predicting and analysing social impacts	
14. Does the SIA report impartially focus on the most important social impacts to people at all stages of the project, without any omissions or misrepresentations?	In line with the principles for SIA of being 'impartial' and 'inclusive' the SIA focuses on the concerns expressed by stakeholders and communities during SIA and EIS consultation activities (reported in Section 3).
15. Does the SIA report analyse the distribution of both positive and negative social impacts, and identify who will benefit and who will lose from the project?	Yes – sections 5.1 and 5.2 identify positive and negative impacts and who is affected.
16. Does the SIA report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including 'worst-case' and 'no project' scenarios where relevant)	Yes – sensitivity analysis is presented as relevant throughout Sections 5.1 and 5.2.
Evaluating significance	
17. Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the project, including any cumulative effects?	Yes – sections 5.1 and 5.2 recognise that different groups in the community may experience impacts differently. Cumulative impacts are discussed in Section 5.3.
18. Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Yes – the evaluations of significance in Sections 5.1 and 5.2 consider the different experiences of different groups, including vulnerable groups.
Responses, monitoring and management	
19. Does the SIA report propose responses that are tangible, deliverable, likely to be durably effective, directly related to the respective impact(s) and adequately delegated and resourced?	Yes – section 6 demonstrates how the recommended social impact mitigation and enhancement measures directly respond to the impacts and benefits identified in the SIA, along with the residual impact rating based on their effective implementation. Section 6 provides more detail about the recommended social impact mitigation measures, who is responsible, and how they will be monitored and measured over time.
20. Does the SIA report demonstrate how people can be confident that social impacts will be monitored and reported in ways that are reliable, effective and trustworthy?	Yes – section 6 describes the approach to monitoring and reporting of social impact management.
21. Does the SIA report demonstrate how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	Yes – section 6 describes the approach to adaptive management in response to complaints.

Appendix B

Demographic data

Table B.1 Demographic data, 2021

Indicator	Wallerawang SAL	Lidsdale SAL	Blackmans Flat SAL	Lithgow LGA
Population and Demography				
Total persons	2,019 persons	471 persons	22 persons	20,842 persons
Population change (2016-2021)	1.9%	-9.7%	-21.4%	-1.2%
Under 18 years	25.1%	24.2%	0.0%	19.7%
Over 65 years	18.0%	16.3%	31.8%	24.5%
Median age (years)	39	38	38	46
Aboriginal and/or Torres Strait Islander population (%)	9.3%	8.3%	0.0%	7.8%
Family Characteristics				
Total families	538	138	8	5,397
Couple families with children	42.6%	53.6%	37.5%	35.0%
Couple families without children	37.0%	34.8%	0.0%	44.1%
One parent family	19.1%	15.9%	0.0%	19.2%
Population Mobility				
Lived at the same address as one year ago (%)	85.9%	81.9%	77.3%	79.8%
Lived at the same address as five years ago (%)	63.8%	64.9%	33.3%	59.5%
Culture and diversity				
Born in non-main English-speaking country	4.0%	0.6%	0.0%	5.3%
Languages spoken at home other than English	3.7%	1.3%	0.0%	4.3%
Employment and Economy				
Top industry of employment	Health Care and Social Assistance (13.4%)	Health Care and Social Assistance (12.9%) Mining (12.9%)	N/A	Health Care and Social Assistance (12.7%)
Labour force participation	57.6%	64.7%	75.0%	50.4%
Unemployment	5.3%	2.8%	0.0%	5.5%
Median individual income per week (\$)	\$666	\$774	\$537	\$632
Median household income per week (\$)	\$1,424	\$2,083	\$2,250	\$1,196
Dwelling Structure				
Housing (total private dwellings) (number)	824	169	6	9,585
Separate House (%)	94.0%	100.0%	83.3%	89.6%
Semi-detached, terrace house, townhouse (%)	3.6%	0.0%	0.0%	7.7%
Flat, unit or apartment (%)	0.5%	0.0%	0.0%	1.6%
Median persons per household	2.6 persons	2.9 persons	3.8 persons	2.3 persons
Tenure Type				
Owned (fully or with a mortgage) (%)	72.3%	85.8%	150.0%	71.4%
Rented	25.4%	11.0%	0.0%	24.1%
Weekly median rent (\$)	\$275	\$313	\$360	\$270

Indicator	Wallerawang SAL	Lidsdale SAL	Blackmans Flat SAL	Lithgow LGA
Education				
Completion of Year 12 (or equivalent) (%)	31.7%	29.7%	18.8%	34.8%
Completion of Year 10 (or equivalent) (%)	38.3%	43.4%	37.5%	33.7%
Bachelor degree level (%)	12.8%	9.0%	0.0%	17.4%
Certificate level (%)	65.4%	70.2%	100.0%	57.1%
Advance diploma and diploma level (%)	14.9%	13.5%	0.0%	16.4%
Socio-economic disadvantage				
SEIFA IRSAD decile (2021)	Within NSW: 2	Within NSW: 5	Within NSW: 5	Within NSW: 2
	Within Australia: 2	Within Australia: 6	Within Australia: 6	Within Australia: 3

Source: (ABS, 2022)



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