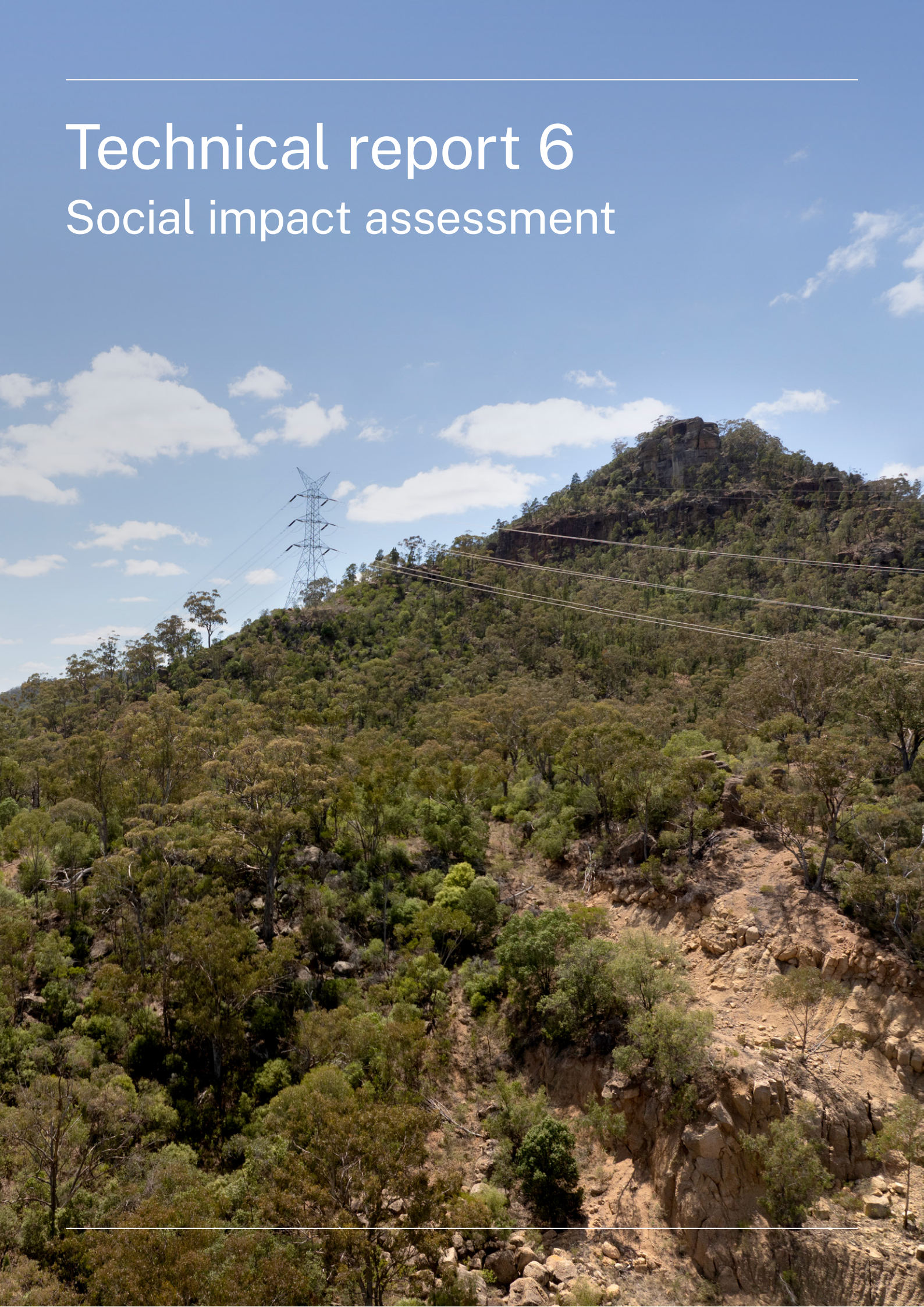
Technical report 6

Social impact assessment



Social impact assessment

Hunter Transmission Project

Prepared for the Energy Corporation of NSW

August 2025

Social impact assessment

Hunter Transmission Project

Energy Corporation of New South Wales

E220595 RP37

August 2025

Version	Date	Prepared by	Reviewed by	Comments
V1	16 January 2025	Melanie Rippon	Myf Jagger	Draft issued to EnergyCo
V2	13 March 2025	Melanie Rippon	Chris Mahoney	Revised draft issued to EnergyCo
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V5	17 July 2025	Melanie Rippon	Myf Jagger	Final draft issued to EnergyCo.
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Approved by

Myf Jagger
Associate Director
5 August 2025

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Declaration

This Social Impact Assessment (SIA) has been prepared and reviewed by suitably qualified and experienced practitioners in accordance with the requirements of the NSW SIA Guideline.

Development of the Hunter Transmission Project (HTP) SIA and the SIA engagement program has been undertaken by Melanie Rippon, Senior Associate Social Scientist and Engagement Practitioner at EMM Consulting Pty Limited (EMM). Melanie holds a Bachelor of Environmental Management, Land and Water Management (Honours) and a Master of Education for Sustainability, Social Sustainability, Griffith University, 2010. Melanie has over 18 years' professional experience in social impact assessment and stakeholder engagement in Australia and internationally and holds certifications under the International Association for Public Participation (IAP2).

Technical review and oversight of the SIA has been provided and authorised by Myf Jagger, Associate Director and Social Scientist at EMM. Myf holds a Bachelor of Arts and a Master of Environment, with 17 years of professional experience supporting major infrastructure and resource projects in New South Wales and Queensland. She is a professional member of the International Association for Impact Assessment (IAIA) with certifications also under IAP2.

Curricula vitae for both SIA authors are provided in Appendix F.

The authors declare that this SIA was prepared in accordance with the NSW Social Impact Assessment Guideline 2023 and Technical Supplement and completed in July 2025. The assessment contains all reasonably available information relevant to the social impact assessment and to the best knowledge of EMM Consulting Pty Limited, does not contain information that is false or misleading.

Assumptions and limitations of the SIA are outlined in Chapter 3 of this report.

Author: Melanie Rippon

Signed:

Date: 5/08/2025

Reviewer: Myf Jagger

Signed:

Date: 5/08/2025

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Acknowledgement of Country

We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We would like to respectfully acknowledge the Wonnarua, Awabakal and Darkinjung people as the Traditional Custodians of the land on which this project is proposed for development.

We pay our respects to Elders past, present and emerging and to all Aboriginal people of these communities.

We acknowledge the work that Aboriginal people have done to maintain land and water and would show respect through thoughtful and collaborative approaches to engage with the Aboriginal community to ensure local priorities and values inform and influence decision making.

We reflect on the continuing impact of government policies and practices and recognise our responsibility to work together, with and for Aboriginal and Torres Strait Islander peoples, families and communities towards improved economic, social and cultural outcomes.

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Executive Summary

ES1.1 Overview

The Hunter Transmission Project (HTP, the project) involves the construction of a new overhead 500 kilovolt (kV) transmission line of around 110 kilometres (km) connecting the existing 500 kV transmission line at Bayswater to the existing 500 kV transmission line in the Olney State Forest near Eraring in the Hunter region of New South Wales (NSW).

Due to its strategic importance, the NSW Minister for Planning and Public Spaces has declared the HTP to be critical State significant infrastructure (CSSI) under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

ES1.2 Purpose

This social impact assessment (SIA) has been prepared by EMM Consulting Pty Limited (EMM) and accompanies the environmental impact statement (EIS) for the HTP. This SIA addresses the Secretary's environmental assessment requirements (SEARs) issued on 13 August 2024.

The purpose of undertaking the SIA is to identify how the project's construction (including detailed design and enabling works), operation and decommissioning of the HTP is likely to affect local and regional communities, key stakeholders, and the surrounding social environment. It also identifies how the Energy Corporation of NSW (EnergyCo) will work with stakeholders to mitigate negative social impacts and enhance project benefits.

This assessment has been prepared in accordance with the *NSW Social Impact Assessment Guideline* (DPIE 2023), which has included direct engagement with impacted and affected people. Engagement has been undertaken in accordance with *Undertaking Engagement Guidelines for State Significant Projects* (DPHI 2024), and additional best practice community engagement frameworks.

ES1.3 Social context

To assess the potential social impacts of the HTP, a three-tiered social locality hierarchy was adopted. This framework recognises that impacts will be experienced differently across geographies, people and communities and includes:

- corridor social locality: the area and people within 1.5 kilometres either side of the 140-metre-wide HTP corridor. This area includes directly affected landowners and near neighbours most exposed to land use change, amenity impacts and access disruptions
- local social locality: the area and people generally within 10 kilometres of the HTP corridor and associated infrastructure such as construction support sites outside the corridor social locality. The local social locality includes townships and rural communities such as Broke, Pokolbin, Cooranbong, Martinsville and Millfield, where localised amenity, access and service pressures may be experienced
- regional social locality: the combined local government areas (LGAs) of Muswellbrook, Singleton, Cessnock, Central Coast and Lake Macquarie, which provide the broader social and economic context for assessment purposes. Regional impacts and opportunities such as workforce development, business participation and intergenerational energy benefits are considered at this scale

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The project spans the Hunter and Newcastle regions and intersects a range of land uses and settlement types across the five LGAs. These LGAs have a combined population of 655,007 (ABS, 2021). Land uses include coal mining, agriculture, industrial operations, State Forest, conservation areas, and rural and urban development.

The HTP runs mostly through energy, mining, agricultural and government land between Bayswater and Broke in the upper Hunter, and Pokolbin, Corrabare, Watagan and Olney State forests in the lower Hunter. The project corridor has been refined throughout route selection and early planning to avoid all major towns (Singleton, Cessnock, Maitland and Newcastle) and the villages of Jerrys Plains, Broke, Martinsville and Cooranbong, although social impacts have been considered in the context of the proximity of project activities to nearby local social localities.

The Upper Hunter region, including Muswellbrook and Singleton LGAs, is characterised by industrial and rural land use, with communities influenced by mining, energy generation, agriculture, and strong ties to rural amenity and land-based industries. The Cessnock LGA, in the central section of the corridor, is defined by a mix of rural charm and growing urbanisation. It is a key tourism gateway to the Hunter Valley wine region.

Further south, the Lake Macquarie and Central Coast LGAs are more urbanised, with a mix of coastal, residential and industrial land uses. These areas support diverse communities and economies, including tourism, logistics and manufacturing, and offer regional connectivity to Sydney and Newcastle.

ES1.4 SIA engagement insights

The SIA engagement program has incorporated input from participants across the corridor, local, and regional social localities. Engagement was undertaken with directly affected landowners, Aboriginal stakeholders and Aboriginal Focus Group members, local councils, community organisations, businesses and industry representatives, social infrastructure providers (including health, education and emergency services), and members of the broader public.

This program informed the identification and assessment of a wide range of social impacts and benefits. Key themes raised through engagement included:

- community stress and uncertainty, particularly in relation to acquisition processes and communication practices
- opportunities and expectations for employment, training, and benefit sharing, contingent on local participation targets and equity-focused strategies
- environmental and amenity concerns, especially in rural and forested areas affected by road changes, construction activity, and cumulative development pressures.

These insights, among many others, have directly shaped the SIA and an evaluation of significant and material social impacts and benefits. This assessment acknowledges that stakeholder inputs continue to shape project decision making throughout the project's planning phase, and subsequent delivery and operation. Stakeholder input has also directly informed the design of social impact management measures described within this technical report.

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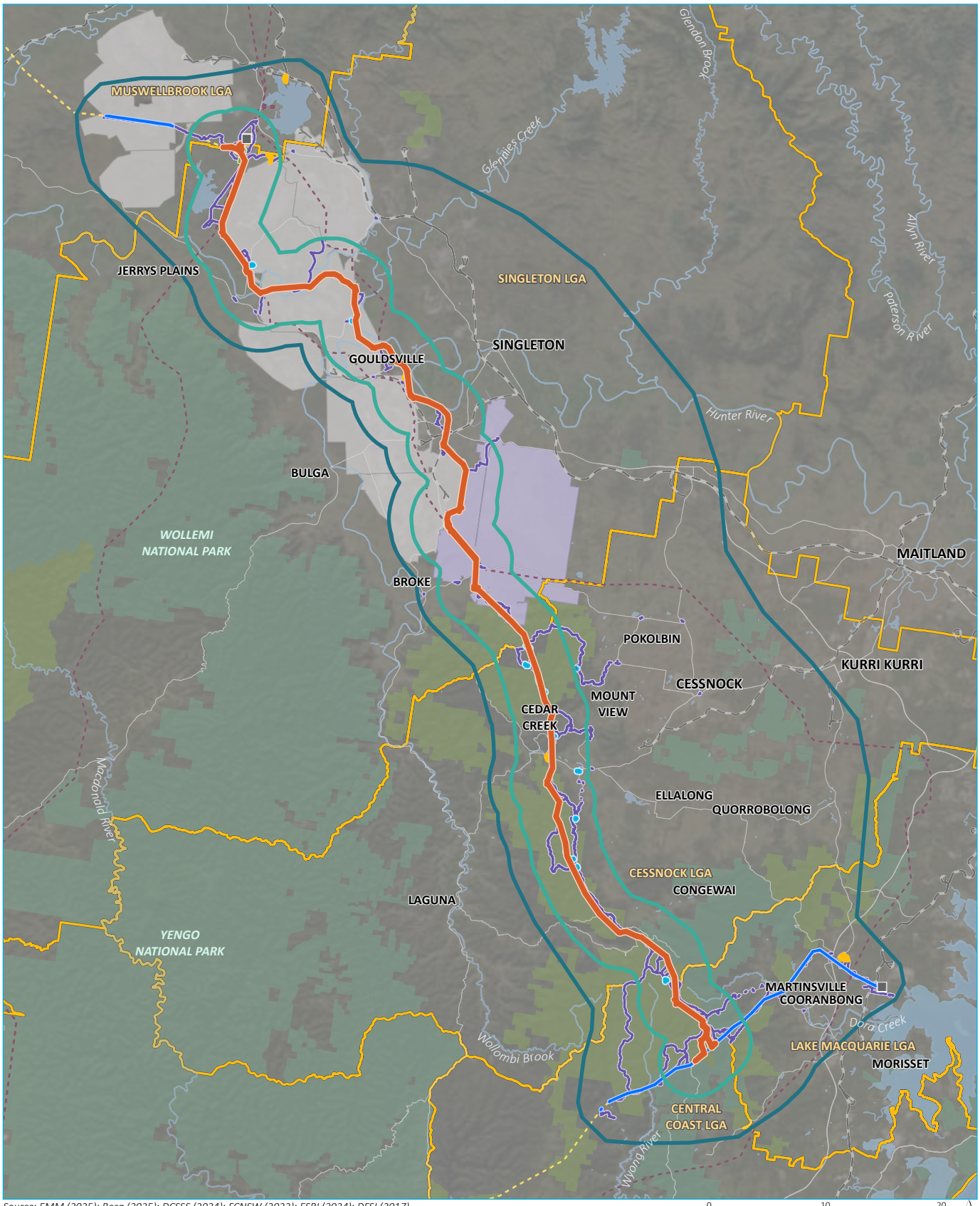

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KEY

- Corridor study area
- Local study area

Project impact area

- HTP corridor
- Switching station
- Construction support site
- Laydown area
- Adjustment to existing transmission line
- Upgrades to existing transmission line
- Access track

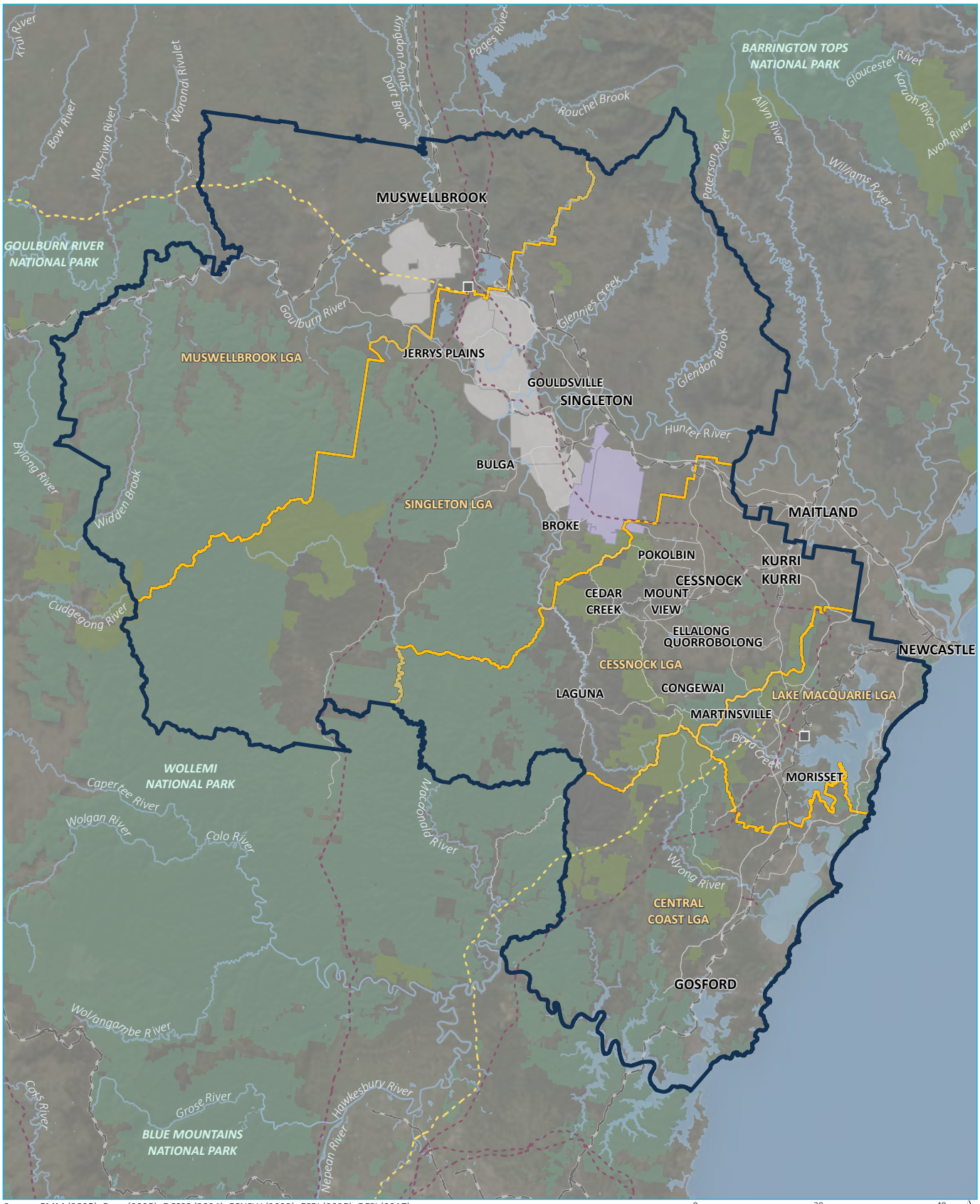
Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- State forest
- Mining
- Defence
- NPWS reserve
- Local government area

Corridor and local social localities

Hunter Transmission Project
Social Impact Assessment
Figure ES1

EMM
creating opportunities



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KEY

- Regional social locality

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- State forest
- Mining
- Defence
- NPWS reserve
- Local government area

Regional social locality

Hunter Transmission Project
Social Impact Assessment
Figure ES2

EMM
creating opportunities

ES1.5 Social impact and benefit identification and assessment

The SIA identified a range of potential positive and negative social impacts associated with the project, with consideration of project construction, operational and potential decommissioning activities. A detailed overview of identified social impact and benefits assessed for this project are presented in Table ES1. Key areas of social risk include impacts to way of life through land acquisition and relocation, residential amenity loss, and access constraints affecting housing, emergency services, and recreation.

Positive project impacts were identified in relation to employment and training opportunities, regional business participation, and benefit sharing. The project is also expected to support energy system reliability and intergenerational equity outcomes.

ES1.6 Management approach

Managing the potential social and environmental impacts of the HTP will be carried out in accordance with the approach as detailed in *Chapter 24 (Environmental management)* of the environmental impact statement (EIS).

This approach is iterative, adaptive, and guided by the principles of the NSW SIA Guideline, with management measures evolving over time in response to monitoring, stakeholder feedback, and emerging issues.

Drawing on SIA findings, the proposed social impact management framework seeks to minimise adverse social impacts and maximise social benefits across the project's delivery phases. This framework will be implemented following project approval and refined through ongoing consultation with stakeholders during detailed design and construction.

Key components include:

- Social Impact Management Plan (SIMP): An integrated approach to managing social impacts, enhancing benefits, and delivering responsive engagement. The SIMP will include actions to support community wellbeing, safety, residential amenity, accessibility, and perceptions of safety
- Community Communication Strategy: Mechanisms to ensure timely, transparent and accessible communication with the broader community and directly affected landowners throughout construction
- Landowner Engagement Strategy: Including Property Management Plans for directly affected landowners to support tailored engagement, compensation pathways, and long-term relationship management
- Local Business and Employment Strategy: Measures to identify skills gaps, promote local procurement and training partnerships (e.g. with TAFE NSW), and support workforce participation targets consistent with NSW Government policy
- Industry and Aboriginal Participation Plan: Tailored strategies to enhance Aboriginal business participation and strengthen culturally appropriate engagement
- Temporary Worker Accommodation Management Plan/s: To be prepared in accordance with the NSW Guideline for Construction Workers Accommodation (May 2025) and informed by consultation with councils, nearby residents, and health and emergency service providers.

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ES1.7 Residual social impacts and benefits

While this SIA identifies a suite of comprehensive mitigation and benefit enhancement strategies, a number of residual social impacts will remain as a result of the project. Assessment has particularly focused on social impacts that may be irreversible or relate to community wellbeing and perceptions. These have been evaluated across corridor, local and regional contexts, and post-mitigation significance ratings are presented in Table ES1 and *section 11* of the SIA.

Key residual social benefits include:

- regional employment and procurement opportunities, expected to deliver high positive residual impacts at the local and regional levels, conditional on targeted implementation of inclusive participation strategies
- the project's critical contribution and support of decarbonisation, delivering long-term intergenerational equity and improved energy reliability, with regional-level benefits.

Key residual negative impacts include:

- property loss and relocation affecting seven households subject to full acquisition, leading to ongoing emotional, social, and financial disruption. These are rated as high significance at the corridor level despite mitigation, due to their irreversible nature
- medium residual impacts from land use change, and ongoing biosecurity concerns for directly affected landowners
- community wellbeing and resilience may continue to be affected due to project-related stressors, and potential engagement fatigue both in a project-specific and a cumulative context
- residual concerns regarding the project's effect on local traffic conditions, connectivity and road safety
- regional and local businesses may face workforce availability challenges due to increased competition for skills and labour for the project and in a cumulative development context
- while mitigation is proposed, perceived impacts from the project on local biodiversity and ecological qualities as well as project effects on Aboriginal cultural landscapes remain a source of community concern and residual social risk.

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Table ES1 Summary of SIA evaluation

Impact/ benefit	Social Impact categories	Corridor (unmitigated)	Corridor (residual)	Local (unmitigated)	Local (residual)	Regional (unmitigated)	Regional (residual)
Construction phase							
6.1.1 Perceived lack of ability to influence project and government decision-making processes, eroding community trust	Decision making systems	High (negative)	Medium (negative)	Medium (negative)	Low (negative)	Negligible	Negligible
6.1.2 Legacy impacts of project engagement affecting enduring relationships, confidence and participation of Traditional Owners	Decision making systems	Medium (negative)	Low (negative)	Medium (negative)	Low (negative)	Low (negative)	Negligible
6.2.1 Land use changes due to full or partial land acquisition	Way of life	High (negative)	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
6.2.2 Loss of property and relocation of landowners due to full acquisition	Way of life	Very high (negative)	High (negative)	Low (negative)	Low (negative)	Low (negative)	Low (negative)
6.2.3 Loss of residential amenity (noise, vibration and dust) during construction including potential interruption of utilities	Way of life	High (negative)	Medium (negative)	High (negative)	Medium (negative)	Low (negative)	Low (negative)

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Impact/ benefit	Social Impact categories	Corridor (unmitigated)	Corridor (residual)	Local (unmitigated)	Local (residual)	Regional (unmitigated)	Regional (residual)
6.3.1 Workforce presence affecting perceptions of safety and community cohesion	Community	Medium (negative)	Medium (negative)	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)
6.3.2 Enhanced community services through community benefits investments	Community	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
6.3.3 Perceived unequal distribution of project benefits creating community strain	Community	Medium (negative)	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
6.4.1 Changed access arrangements for emergency services	Accessibility	Medium (negative)	Low (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
6.4.2 Reduced access to housing and short-term accommodation due to increased workforce demand	Accessibility	Medium (negative)	Low (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
6.4.3 Reduced access to health and other community services due to increase of the construction workforce	Accessibility	Medium (negative)	Low (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
6.4.4 Changed access to recreational infrastructure due to road network changes	Accessibility	High (negative)	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)

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Impact/ benefit	Social Impact categories	Corridor (unmitigated)	Corridor (residual)	Local (unmitigated)	Local (residual)	Regional (unmitigated)	Regional (residual)
6.5.1 Broad financial benefits through Benefit Sharing initiatives	Livelihoods	High (benefit)	High (benefit)	Unknown	Unknown	Unknown	Unknown
6.5.2 Generation of employment and training opportunities for local and regional residents.	Livelihoods	Medium (benefit)	High (benefit)	Medium (benefit)	High (benefit)	Medium (benefit)	High (benefit)
6.5.3 Increased regional business opportunities contributing to regional economic prosperity	Livelihoods	Medium (benefit)	High (benefit)	Medium (benefit)	High (benefit)	Medium (benefit)	High (benefit)
6.5.4 Increased competition for workers potentially affecting the operation of local and regional businesses	Livelihoods	Medium (negative)	Low (negative)	High (negative)	Low (negative)	Low (negative)	Low (negative)
6.5.5 Impacts on rural livelihoods and biosecurity risks	Livelihoods	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)	Low (negative)
6.5.6 Impacts on tourism operation and visitor economy	Livelihoods	Low (negative)	Low (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
6.6.1 Diminished mental health and wellbeing due to project-related stressors	Health and wellbeing	High (negative)	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)	Negligible
6.6.2 Impacts on environmental values	Health and wellbeing	High (negative)	Medium (negative)	High (negative)	Medium (negative)	Medium (negative)	Low (negative)

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Impact/ benefit	Social Impact categories	Corridor (unmitigated)	Corridor (residual)	Local (unmitigated)	Local (residual)	Regional (unmitigated)	Regional (residual)
6.6.3 Changes to traffic movements, potentially causing new road safety risks	Health and wellbeing	High (negative)	Medium (negative)	High (negative)	Medium (negative)	Medium (negative)	Low (negative)
6.7.1 Potential impacts to Aboriginal Cultural Heritage, cultural landscapes and wellbeing	Culture	High (negative)	Medium (negative)	High (negative)	Medium (negative)	High (negative)	Medium (negative)
Operational phase							
7.1.1 Enhancing intergenerational equity through contributing to energy system decarbonisation and improved energy stability	Way of life	Medium (benefit)	Medium (benefit)	Medium (benefit)	Medium (benefit)	High (benefit)	High (benefit)
7.2.1 Safety & wellbeing concerns related to electromagnetic fields (EMF), bushfire hazards and anti-social behaviours	Health and wellbeing	Medium (negative)	Low (negative)	Medium (negative)	Low (negative)	Low (negative)	Low (negative)
7.3.1 Changes to the natural character of landscape and altering sense of place	Surroundings	High (negative)	Medium (negative)	High (negative)	Low (negative)	Medium (negative)	Low (negative)
Decommissioning phase							
8.1 Social risks associated with decommissioning and resource recovery plans	Way of Life	Low (negative)	Low (negative)	Low (negative)	Low (negative)	Negligible	Negligible

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Impact/ benefit	Social Impact categories	Corridor (unmitigated)	Corridor (residual)	Local (unmitigated)	Local (residual)	Regional (unmitigated)	Regional (residual)
Cumulative							
9.3.1 Enhancing intergenerational equity through contributing to energy system decarbonisation and improved energy stability	Way of life	High (Benefit)	High (Benefit)	High (Benefit)	High (Benefit)	High (Benefit)	High (Benefit)
9.3.2 Increased opportunity for employment and training	Livelihoods	Medium (benefit)	Medium (Benefit)	High (Benefit)	High (Benefit)	High (Benefit)	High (Benefit)
9.3.3 Increased supply chain and regional business participation	Livelihoods	High (benefit)	High (Benefit)	High (benefit)	High (Benefit)	High (Benefit)	High (Benefit)
9.4.1 Increased competition for labour and skills	Livelihoods	High (negative)	High (negative)	High (negative)	High (negative)	High (negative)	High (negative)
9.4.2 Housing availability and affordability	Accessibility	High (negative)	Medium (negative)	High (negative)	Medium (negative)	High (negative)	Medium (negative)
9.4.3 Access to services and infrastructure	Accessibility	High (negative)	Medium (negative)	High (negative)	Medium (negative)	Medium (negative)	Medium (negative)
9.4.4 Impacts to surroundings and amenity	Surroundings	High (negative)	Medium (negative)	High (negative)	Medium (negative)	Low (negative)	Low (negative)
9.4.5 Impacts to land use and rural livelihoods	Way of life	High (negative)	Medium (negative)	Medium (negative)	Medium (negative)	Low (negative)	Low (negative)
9.4.6 Impacts to cultural values	Culture	Refer to *Chapter 23 (Cumulative impacts)* of the EIS					

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Impact/ benefit	Social Impact categories	Corridor (unmitigated)	Corridor (residual)	Local (unmitigated)	Local (residual)	Regional (unmitigated)	Regional (residual)
9.4.7 Effects on community wellbeing and resilience	Health and wellbeing	High (negative)	Medium (negative)	High (negative)	Medium (negative)	Low (negative)	Low (negative)
9.4.8 Impacts to environmental values due to biodiversity decline	Health and wellbeing	High (negative)	High (negative)	High (negative)	High (negative	Low (negative)	Low (negative)

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Glossary

Term	Definition
access tracks	Temporary and permanent access tracks used to access the project.
ancillary works	Temporary construction infrastructure including: • construction support sites (some with temporary workers accommodation) • laydown areas • stringing sites • helipad/helicopter facilities
adaptive management	An iterative, flexible approach to social impact management that allows for monitoring of actual impacts during a project's lifecycle and adjusting mitigation measures as new information emerges or community needs evolve.
amenity	the quality of a place that contributes to its character, liveability, and the wellbeing of people who live in or visit it. This includes factors such as noise levels, visual landscape, air quality, traffic, access to open space and recreation.
Bayswater Power Station	Existing power station at Bayswater owned by AGL.
Bayswater South switching station	The new switching station that would be constructed south of Bayswater Power Station.
community	Anyone affected by or interested in the project, including individuals, community groups, Aboriginal and Torres Strait Islander communities, culturally and linguistically diverse communities or, stakeholder groups
community strategic plan	The plan for a community's future which describes the community's vision and aspirations for a period of ten or more years. Community strategic plans relevant to the project are Muswellbrook Shire 2022-2032 Community Strategic Plan; Create Singleton 2032 Community Strategic Plan; Planning for our people, our place, our future Cessnock Community Strategic Plan 2036; Central Coast Community Strategic Plan; and Lake Macquarie City Community Strategic Plan 2022-2032.
construction impact area	This is a subset of project impact area. The area that would be directly impacted by the construction of the project, including (but not limited to) transmission towers and lines, stringing sites, access roads, access tracks, substations, switching stations, adjustments and upgrades to existing lines, communications infrastructure, worker accommodation, construction support sites, laydown and utility adjustments.
construction routes	Roads used by construction vehicles (light and heavy).
construction support site	An area used as the base for construction activities, usually for the storage of plant/equipment and materials, processing facilities (concrete batching, aggregate crushing, grinding and screening), maintenance facilities/workshops, staff facilities, firefighting equipment, helicopter landing pad and support facilities, access and parking and wastewater treatment. Some construction support sites would also include temporary workers accommodation.
corridor social locality	The corridor social locality includes the area and people within 1.5 kilometres either side of the 140-metre wide HTP corridor.
critical State significant infrastructure (CSSI) application area	The critical State significant infrastructure (CSSI) application for the HTP covers 5 local government areas (Muswellbrook, Singleton, Cessnock, Central Coast and Lake Macquarie).

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Term	Definition
cumulative impact	The combined impacts of the project on a matter with other relevant future projects.
directly affected landowner	A landowner whose property is directly affected by the project impact area typically through full or partial property acquisition, easement acquisition, temporary construction occupation, and required land access for the project.
disturbance area	This is a subset of the project impact area and used primarily to assess potential impacts on biodiversity values in the Biodiversity Assessment Development Report (BDAR). Includes the following categories: • Disturbance area A • Disturbance area A (centreline) • Disturbance area B • Disturbance area HZ
disturbance area A	The area where vegetation would be completely removed. It includes areas at and around transmission line towers (including tower pads and batters), stringing sites, laydown areas, switching stations, substations upgrades, construction support sites, new and upgraded access tracks and road upgrades. Impacts within this area would include sub-surface disturbance from construction activities such as grading, excavation, and full tree removal. With the exception of areas that only require temporary disturbance (i.e. temporary access tracks and stringing sites), this area would also be subject to ongoing maintenance during operation (including vegetation removal to ground level) for operational and safety requirements (including bushfire).
disturbance area A (centreline)	A 20 metre wide centreline area between transmission line towers where all vegetation would be removed to ground level during construction. This area would also be subject to ongoing maintenance during operation (i.e. removal to maintain vegetation clearance requirements) for operational and safety requirements (including bushfire).
disturbance area B	The area within the transmission line easement, excluding disturbance area A and disturbance area A (centreline), where partial clearing would be undertaken. Removal of vegetation (including trees) would be required if there is a risk of vegetation exceeding the designated clearance heights. These heights are set for operational and safety requirements, including bushfire risk management (indicatively 13.5 metres below the conductors at maximum operating temperature). This area would be subject to ongoing maintenance during operation.
disturbance area hazard tree zone (HZ)	A 10-metre-wide area located either side of the transmission line easement known as a hazard tree zone. Hazard trees are those that have the potential to pose a risk to safe operation of the transmission line by falling into the easement and contacting the conductors. The hazard tree zone would be inspected for trees in the height range of >20 metres, which is in the high-risk category. Those that meet the height category are subsequently considered for structural stability. A structurally sound tree with no obvious risk of falling is left standing. Trees with obvious defects that pose a risk would be removed.
Eraring Power Station	Existing power station at Eraring operated by Origin Energy.

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Term	Definition
EnergyCo	The Energy Corporation of New South Wales constituted by section 7 of the NSW *Energy and Utilities Administration Act 1987* as the NSW Government-controlled statutory authority responsible for the delivery of NSW's REZs. The proponent for the HTP.
HTP corridor	Comprises: • the transmission line corridor connecting Bayswater South switching station to Olney switching station • the transmission line corridor connecting the Bayswater South switching station to the existing 500 kV transmission line near Bayswater Power Station and the Olney switching station to the existing 500 kV transmission line between Eraring and Kemps Creek. The HTP corridor is around 140 metre wide. Both the construction impact area and operation impact area are within the HTP corridor.
indicative riparian zone	An area applied in this assessment to estimate the possible extents of riparian corridors across the project area. This definition varies from the term 'riparian corridor' as bed and banks have not been verified for individual watercourses.
laydown areas	Generally located along the HTP corridor to allow for flexibility in construction and to minimise the need for vehicle movements to and from the construction support sites. These would act as temporary staging, storage, and complex plant/equipment setup areas. They would also act as traffic control nodes during construction of the HTP.
local social locality	Includes the area and people generally within 10 kilometres of the HTP corridor and construction support sites. It also encompasses surrounding townships and settlements identified in section 3.4
mitigation	Actions or measures to reduce adverse social impacts of a State significant project. Mitigations may be performance based (achieve an appropriate social outcome without specifying how the outcome will be achieved) or prescriptive (actions or measures that must be taken, such as a known best-practice technology, design or management approach).
near neighbour	Neighbouring landowners whose property adjoins or is in close proximity to the project impact area but is not subject to direct acquisition or physical property disturbance.
Olney switching station	The new switching station that would be constructed in Olney State Forest.
operation impact area	This is a subset of construction impact area. The area that would be occupied by permanent components of the project and/or maintained, including transmission line easements, transmission lines and towers, substations, switching stations, communications infrastructure, maintenance facilities, permanent access roads to substations and switching stations and access tracks to easement.
oversize over mass (OSOM)	Non-standard or oversized and/or over mass loads which need to be carried by heavy vehicles on approved OSOM routes.
(the) proponent	The Energy Corporation of NSW (EnergyCo).
project impact area	The area that has been assumed for the purpose of this environmental impact statement (EIS) to be directly affected by the construction and operation of the project. It includes the indicative location of project infrastructure, the area that would be directly disturbed during construction and any easement required during operation.

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Term	Definition
pre-construction	Activities and mitigation measures that would be undertaken or implemented prior to (before) construction.
pre construction minor works	Minor works undertaken prior to construction that may include building and road dilapidation surveys; pre clearance surveys; investigative drilling, contamination investigations, excavation or salvage; installation of environmental impact mitigation measures; property acquisition adjustment works including installation of property fencing; archaeological testing; and maintenance of existing buildings or structures.
(the) proponent	The Energy Corporation of NSW (EnergyCo).
refinement	A change that fits within the limits set by the project description contained in the EIS for the HTP and does not change what the proponent is seeking approval for and/or does not require an amendment to the application for the HTP.
regional social localities	Covers the whole project and includes the corresponding LGAs of Central Coast, Lake Macquarie, Muswellbrook, Singleton and Cessnock.
Renewable Energy Zone (REZ)	A geographic area identified and declared by the NSW Government as a Renewable Energy Zone.
sensitive receivers	Land users such as residential dwellings that are sensitive to potential project impacts including noise, air, visual, and social impacts.
social baseline	Provides the benchmark against which potential social impacts are identified and assessed.
Social licence to operate	the ongoing acceptance or approval of a project or organisation by its stakeholders, particularly by community. It is not a formal or legal licence, but is granted by community based on trust, legitimacy and credibility.
social locality	Identifies the social and geographic areas of focus. Due to the complexity of impacts and benefits arising from the project, the social locality is defined at 3 levels – corridor, local and regional.
social impact assessment principles	The NSW Social Impact Assessment Guideline (2023) provides a list of thirteen principles to be adopted in social impact assessment practice. These include action oriented, adaptative, distributive equity, human-rights oriented, impartial, inclusive, integrated, life-cycle focus, material, precautionary, proportionate, rigorous and transparent. These principles are described in further detail in section 3.1.
socio-economic indexes for areas (SEIFA)	Provides indicators of relative disadvantage, with low decile scores reflecting higher disadvantage.
stakeholder	An individual, business, group, community, etc. who could be impacted positively or negatively by the project.
stakeholder group	A group or organisation that represents several people with an interest in the project.
stringing site	Used for the preparation, assembly and operation of stringing equipment to connect the transmission line to the towers. Stringing sites would be positioned along the HTP corridor.
substation	A facility used to increase or decrease voltages between incoming and outgoing lines (e.g. 330 kV to 500 kV).

Sensitive

Term	Definition
suburbs and localities	Suburbs and Localities, formerly State Suburbs, are an Australian Bureau of Statistics (ABS) Mesh Block approximation of the officially recognised boundaries of suburbs (in cities and larger towns) and localities (outside cities and larger towns) as defined by the State and Territory governments of Australia. Suburbs and Localities are created to enable the release of ABS data on areas that approximate the official localities. This allows for the comparison of ABS data with other data collected using localities as the geographic reference. ABS approximations of administrative boundaries do not match official legal boundaries and should only be used for statistical purposes.
switching station	A facility used to connect 2 or more distinct transmission lines of the same designated voltage.
temporary worker accommodation	Temporary accommodation that would be erected and used during construction to house the construction workforce. Worker accommodation would be located at some construction support sites.
Transgrid	The asset owner of the following existing transmission lines that would be adjusted/upgraded/crossed by the HTP: • Line 5A3: Bayswater – Mt Piper 500 kV • Line 5A4: Bayswater – Wollar 500 kV • Line 31: Bayswater – Regentville 330 kV • Line 32: Bayswater – Sydney West 330 kV • Line 81: 330 kV: Newcastle – Liddell 330 kV • Line 82: 330 kV: Tomago – Liddell 300 kV • Line 5A1 and 5A2: Eraring – Kemps Creek 500 kV.
transmission tower	A free-standing steel lattice tower (suspension or tension tower). Transmission towers would generally be up to 85 metres high.
transmission line easement	An area surrounding and including the transmission lines which is a legal 'right of way' and allows for ongoing access and maintenance of the transmission lines. Landowners can typically continue to use most of the land within transmission line easements, subject to some restrictions for safety and operational reasons.

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Abbreviations

Term	Description
ABS	Australian Bureau of Statistics
ACHA	Aboriginal cultural heritage assessment
ACHMP	Aboriginal cultural heritage management plan
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AFG	Aboriginal focus group
AHD	Australian height datum
APZ	asset protection zone
ASGS	Australian Geography Standard
B&B	bed and breakfast
BDAR	biodiversity development assessment report
CALD	culturally and linguistically diverse
CCG	community consultative group
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSP	community strategic plan
CSSI	critical State significant infrastructure
DIDO	drive-in, drive-out
DPHI	Department of Planning, Housing and Infrastructure (previously DPI, DPIE and DPE)
DPI	Department of Primary Industries
EIS	Environmental impact statement
EMF	electromagnetic fields
EMM	EMM Consulting Pty Ltd
EnergyCo	The Energy Corporation of New South Wales constituted by section 7 of the NSW *Energy and Utilities Administration Act 1987* as the NSW Government-controlled statutory authority responsible for the delivery of NSW's REZs. The proponent for the HTP.
EPA	Environment Protection Authority
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2021*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESD	ecologically sustainable development
FIFO	fly-in, fly-out
GP	general practitioner (medical doctor)
Ha	hectare

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Term	Description
HTP	Hunter Transmission Project (the project)
HVO	Hunter Valley Operations
IAP2	International Association of Public Participation
IEO	index of education and occupation
IER	index of economic resource
IRSAD	index of relative socio-economic advantage and disadvantage
IRSD	index of relative socio-economic disadvantage
IRZ	indicative riparian zones
ISP	integrated service plan
KFH	key fish habitat
km	kilometre
kV	kilovolts (1000 volts)
LALC	Local Aboriginal Land Council
LEMC	local emergency management committee
LEP	local environmental plan
LGA	local government area
m	metre
MNES	matters of national environmental significance
NHL	National Heritage List
NSW	New South Wales
PTIP	priority transmission infrastructure project
Q	quarter
RAP	registered Aboriginal party
REZ	Renewable Energy Zone
RFS	Rural Fire Service
RRG	regional reference group
SAL	suburbs and localities
SBP	strategic benefits payment
SCA	State conservation area
SEARs	Secretary's environmental assessment requirements
SEPP	State environmental planning policy
SEIFA	socio-economic indexes for areas
SIA	social impact assessment

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Term	Description
SMA	Singleton Military area
SSP	State significant projects
TAFE	Technical and Further Education
UCL	urban centre and locality
UNESCO	United Nations Educational, Scientific and Cultural Organisation

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1 Introduction

1.1 Purpose

The Hunter Transmission Project (HTP, the project) involves the construction of a new overhead 500 kilovolt (kV) transmission line of around 110 kilometres connecting the existing 500 kV transmission line at Bayswater to the existing 500 kV transmission line in the Olney State Forest near Eraring in the Hunter region of New South Wales (NSW).

Due to its strategic importance, the NSW Minister for Planning and Public Spaces has declared the HTP to be critical State significant infrastructure (CSSI) under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Under this process, the Energy Corporation of NSW (EnergyCo, the proponent) is required to prepare an environmental impact statement (EIS) in accordance with the NSW Environmental Planning and Assessment Regulation 2021.

This social impact assessment (SIA) accompanies the EIS for the HTP and addresses the Secretary's environmental assessment requirements (SEARs) issued on 13 August 2024 (see Table 1.1).

In addition to the SEARs, advice from several government agencies was received on the HTP. Agency advice relevant to and considered in this SIA is provided on the Major Projects website maintained by the NSW Department of Planning, Housing and Infrastructure (DPHI).

Table 1.1 HTP SEARs – social impact assessment

HTP SEARs:
Social Impact: • an assessment of the social impacts in accordance with the Social Impact Assessment Guideline (DPIE) and consideration of construction workforce accommodation.

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2 The Hunter Transmission Project

2.1 Overview

The Hunter Transmission Project (HTP, the project) is critical State significant infrastructure (CSSI). It must be built by the end of 2029 to protect energy security in NSW as the remaining coal-fired power stations close.

The project includes:

- a new overhead 500 kilovolt (kV) double circuit transmission line of around 110 kilometres
- 2 new switching stations (Bayswater South and Olney)
- upgrades to the existing Bayswater and Eraring substations
- adjustments and upgrades to existing transmission lines
- property adjustment works to facilitate access to the transmission lines and switching stations
- utility adjustments required for the construction of the transmission network infrastructure
- ancillary works to support construction including road upgrades, establishment of new access tracks and upgrades to existing access tracks, construction support sites (some with temporary worker accommodation), and other construction facilities such as laydown areas.

The new transmission line would transport electricity generated in the Central-West Orana and New England Renewable Energy Zones (REZs). It would connect the existing 500 kV transmission line at Bayswater to the existing 500 kV transmission line in the Olney State Forest near Eraring. This would strengthen the State's core electricity grid and supply clean and reliable energy to NSW consumers for generations to come.

The project involves development across 5 local government areas (LGAs) (Muswellbrook, Singleton, Cessnock, Central Coast and Lake Macquarie). Most of this development would be concentrated in and around the HTP corridor.

An overview of the project is provided in Table 2.1 and shown in Figure 2.1. The key project elements are shown in Figure 2.2.

Further details are provided in *Chapter 4 (Project description)* of the HTP environmental impact statement (EIS).

Table 2.1 Project overview

The project	• The critical State significant infrastructure application for the HTP covers 5 local government areas • Most development would be concentrated in and around the HTP corridor. Some ancillary development such as construction support sites and temporary worker accommodation, road upgrades and laydown areas would be outside the HTP corridor
Project impact area	• The area that has been assumed for the purpose of this EIS to be directly affected by the construction and operation of the project. It includes the indicative location of project infrastructure, the area that would be directly disturbed during construction and any easement required during operation.
Construction and operation	• Construction impact area around 2351 ha • Operation impact area around 1261 ha

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Disturbance area	• Disturbance area around 1266 ha • Disturbance area A around 683 ha • Disturbance area A (centreline) around 214 ha • Disturbance area B around 367 ha • Disturbance area HZ around 1.84 ha
New transmission line and transmission towers	• Overhead 500 kV double circuit transmission line of around 110 km • Steel lattice towers generally up to 85 m high and that are spaced anywhere between 75 m to around 1.3 km apart (typically between 300 m and 600 m) • 500 kV transmission lines with a minimum ground clearance of 13.5 m • Ancillary infrastructure such as earth wire and communications systems • Construction easement of around 140 m wide • Operational easement around 70 m wide
Switching stations/ substation works	• New Bayswater South 500 kV switching station – construction impact area around 26.6 ha • Modifications at the existing Bayswater 500 kV/330 kV substation within the existing footprint • New Olney 500 kV switching station – construction impact area around 20 ha • Augmentation and modifications at the existing Eraring 500 kV/330 kV substation, including installation of 2 new 1500 MVA transformers
Adjustments and crossings - existing transmission lines	• Adjustments to existing double circuit 500 kV transmission lines: – Line 5A1 and 5A2: Eraring – Kemps Creek 500 kV at Ravensdale to connect to the new Olney 500 kV switching station – Line 5A3: Bayswater – Mt Piper 500 kV at Bayswater to connect to the new Bayswater South 500 kV switching station – Line 5A4: Bayswater – Wollar 500 kV at Bayswater to connect to the new Bayswater South 500 kV switching station • Adjustments to existing double circuit 330 kV transmission lines: – Line 31: Bayswater – Regentville 330 kV – Line 32: Bayswater – Sydney West 330 kV – Line 81: Newcastle – Liddell 330 kV • Crossing of existing double circuit 330 kV transmission lines: – Line 31: Bayswater – Regentville 330 kV at Bayswater – Line 32: Bayswater – Sydney West 330 kV at Bayswater – Line 81: 330 kV: Newcastle – Liddell 330 kV at Lemington and again at the Singleton Military Area • Line 82: 330 kV: Tomago – Liddell 300 kV at Warkworth and again at the Singleton Military Area
Upgrades – existing transmission lines and towers	• Upgraded earth wire on Line 5A3 and Line 5A4 • Upgraded earth wire and communications systems on Line 5A1 and Line 5A2 • Tower strengthening on various existing towers on Line 5A1 and Line 5A2
Road works	• Modifications to the existing public road network • New and upgraded access tracks for construction and operation
Construction support sites	• Five construction support sites: Hebden Road, Pikes Gully Road, Gouldsville Road, Wollombi Road and Freemans Drive • Helicopter pads (helipads) indicatively at: Hebden Road, Pikes Gully Road, Gouldsville Road and Freemans Drive
Ancillary sites	• Laydown areas, which would be established to allow for flexibility in construction and to minimise the need for vehicle movements to and from the construction support sites
Utility adjustments	• Third party utility works including gas, telecommunications, water, sewer and stormwater
Timing	• Construction to start in 2027 • Operation by mid end of 2029

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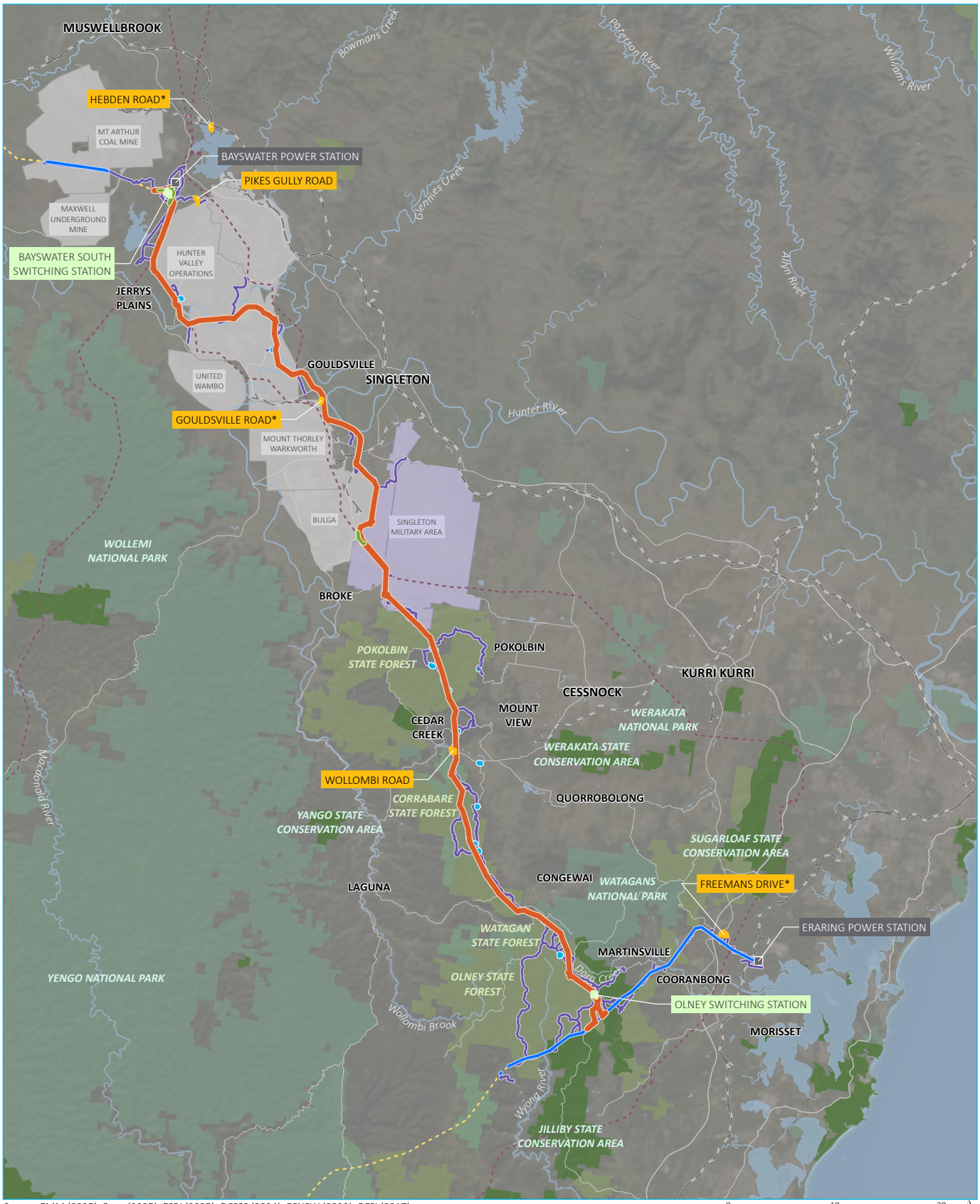

Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); DFSI (2017)

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GDA2020 MGA Zone 56

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KEY

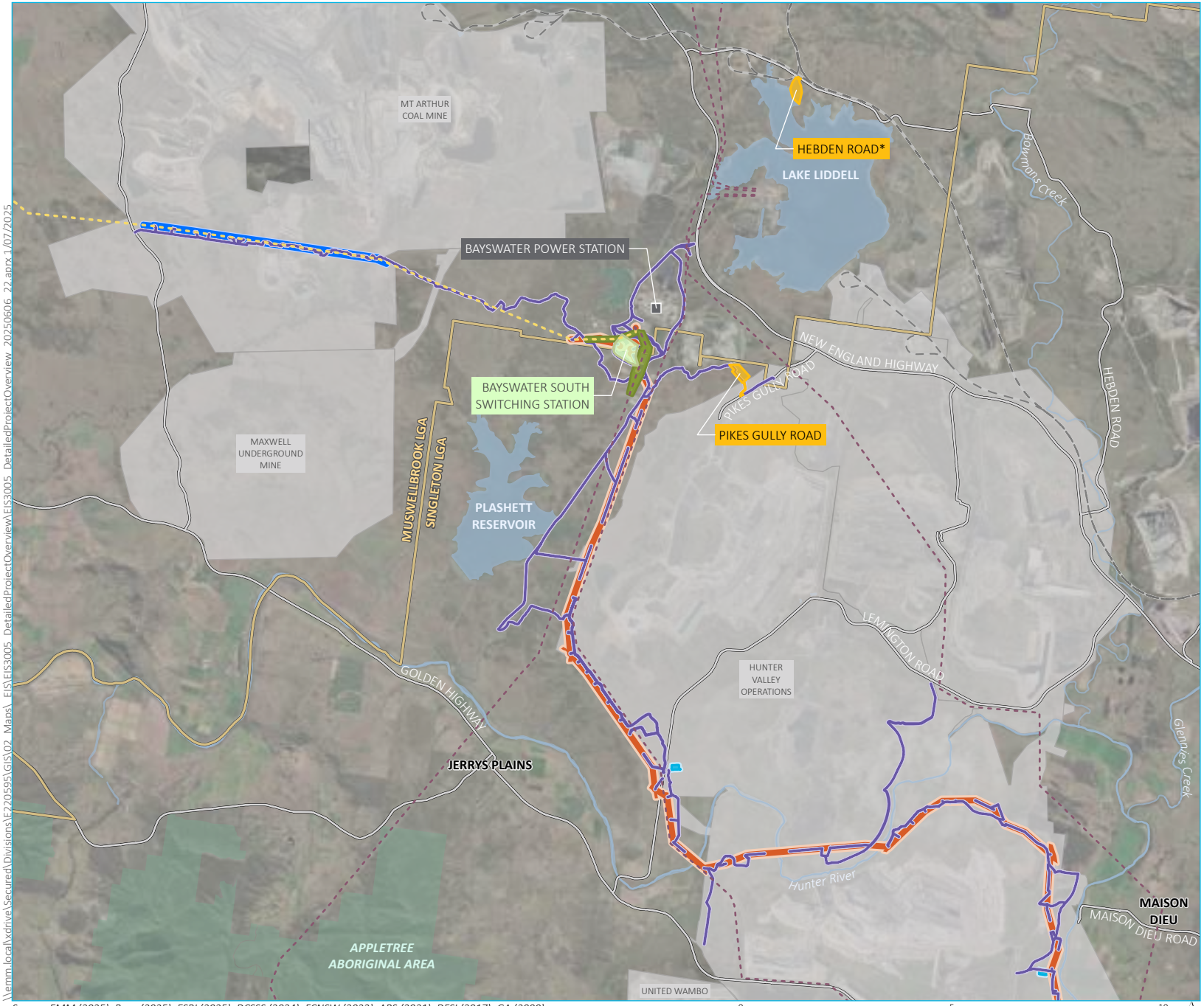
Project impact area
- HTP corridor
- Switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Adjustment to existing transmission line
- Upgrades to existing transmission line
- Access track

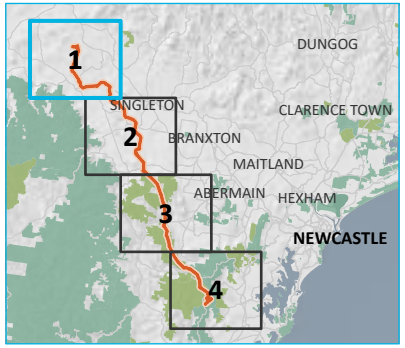
Existing environment
- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest
- Defence
- Mining

Project overview

Hunter Transmission Project
Social Impact Assessment
Figure 2.1

EMM
creating opportunities





KEY

Project impact area

- HTP corridor
- Bayswater South switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Adjustment to existing transmission line (lines 31 and 32)
- Upgrades to existing transmission line (lines 5A3 and 5A4)
- Access track

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- Mining
- Local government area

Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); ABS (2021); DFSI (2017); GA (2009)

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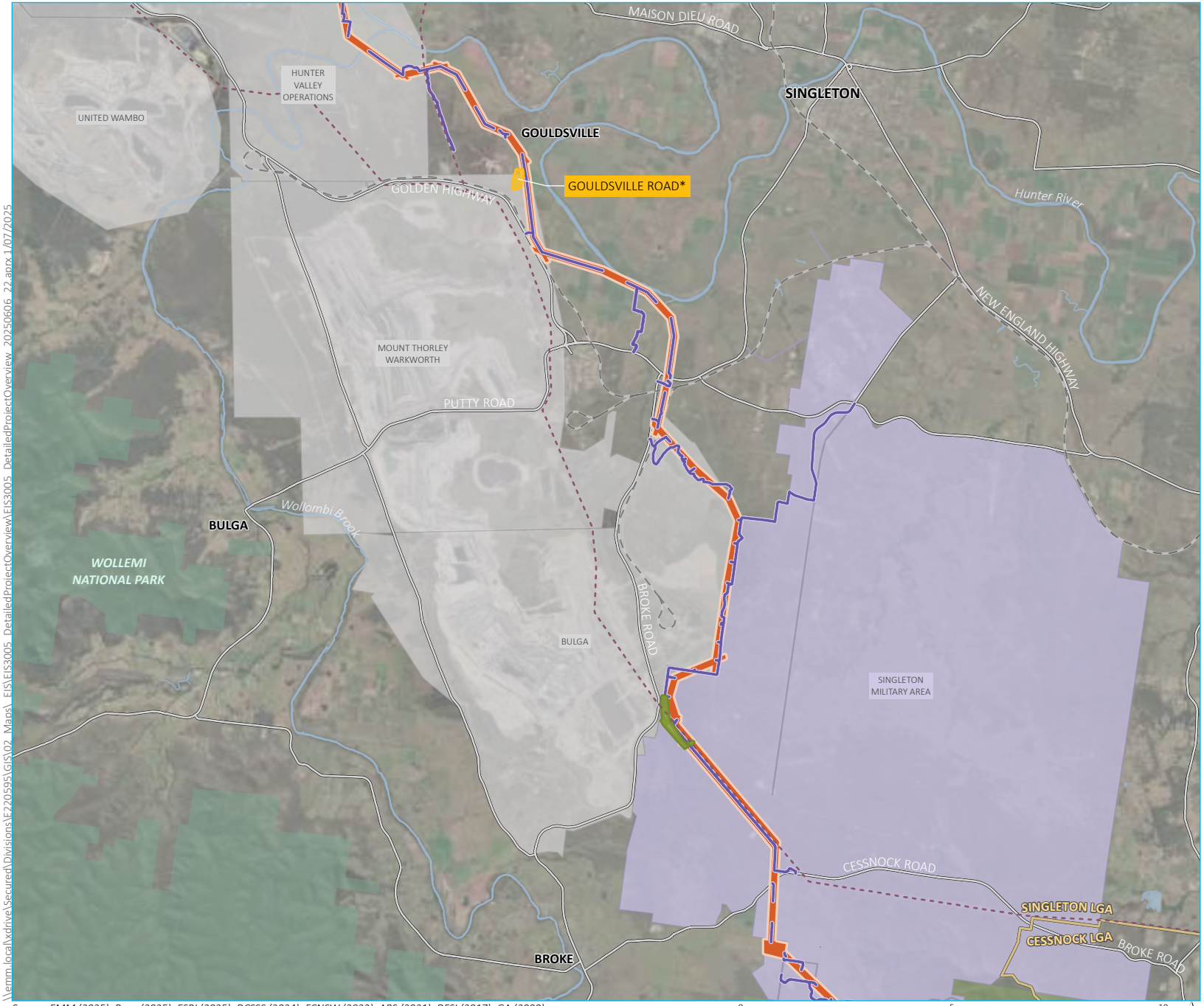
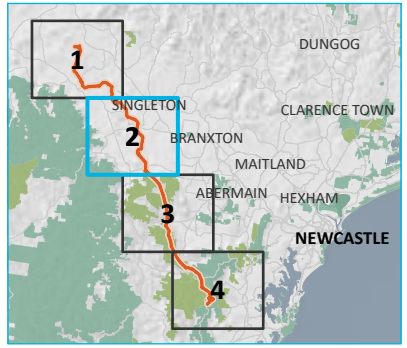
Detailed project overview
Map 1 of 4

Hunter Transmission Project
Social Impact Assessment
Figure 2.2

EMM
creating opportunities





KEY

Project impact area

- HTP corridor
- Construction support site (*with temporary worker accommodation)
- Adjustment to existing transmission line (line 81)
- Access track

Existing environment

- 330 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest
- Defence
- Mining
- Local government area

Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); ABS (2021); DFSI (2017); GA (2009)

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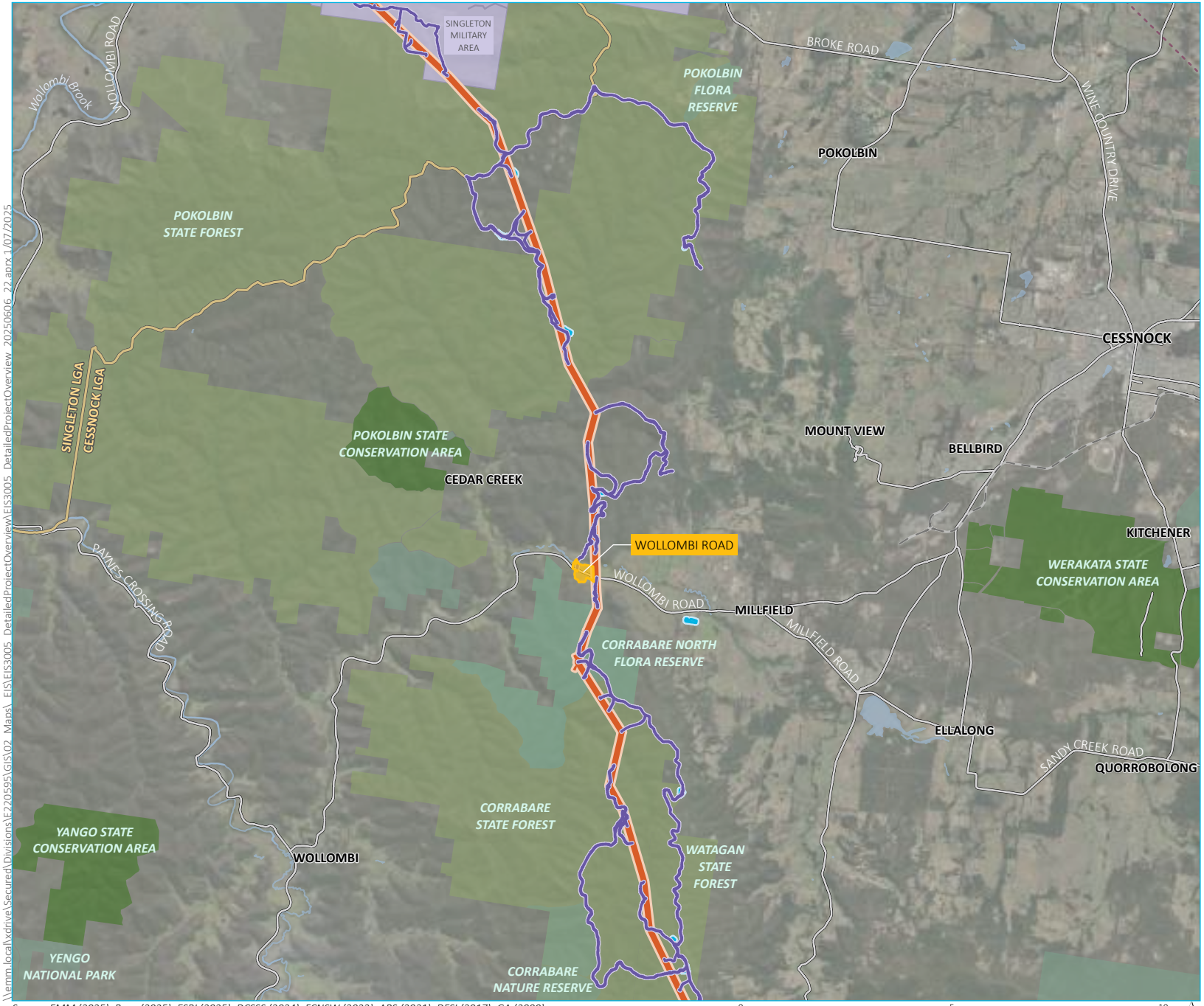
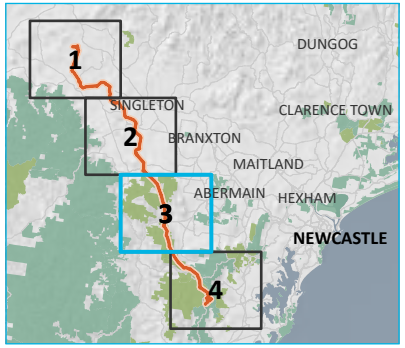
Detailed project overview
Map 2 of 4

Hunter Transmission Project
Social Impact Assessment
Figure 2.2

EMM
creating opportunities





KEY

Project impact area
- HTP corridor
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Access track

Existing environment
- 330 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest
- Defence
- Local government area

Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); ABS (2021); DFSI (2017); GA (2009)

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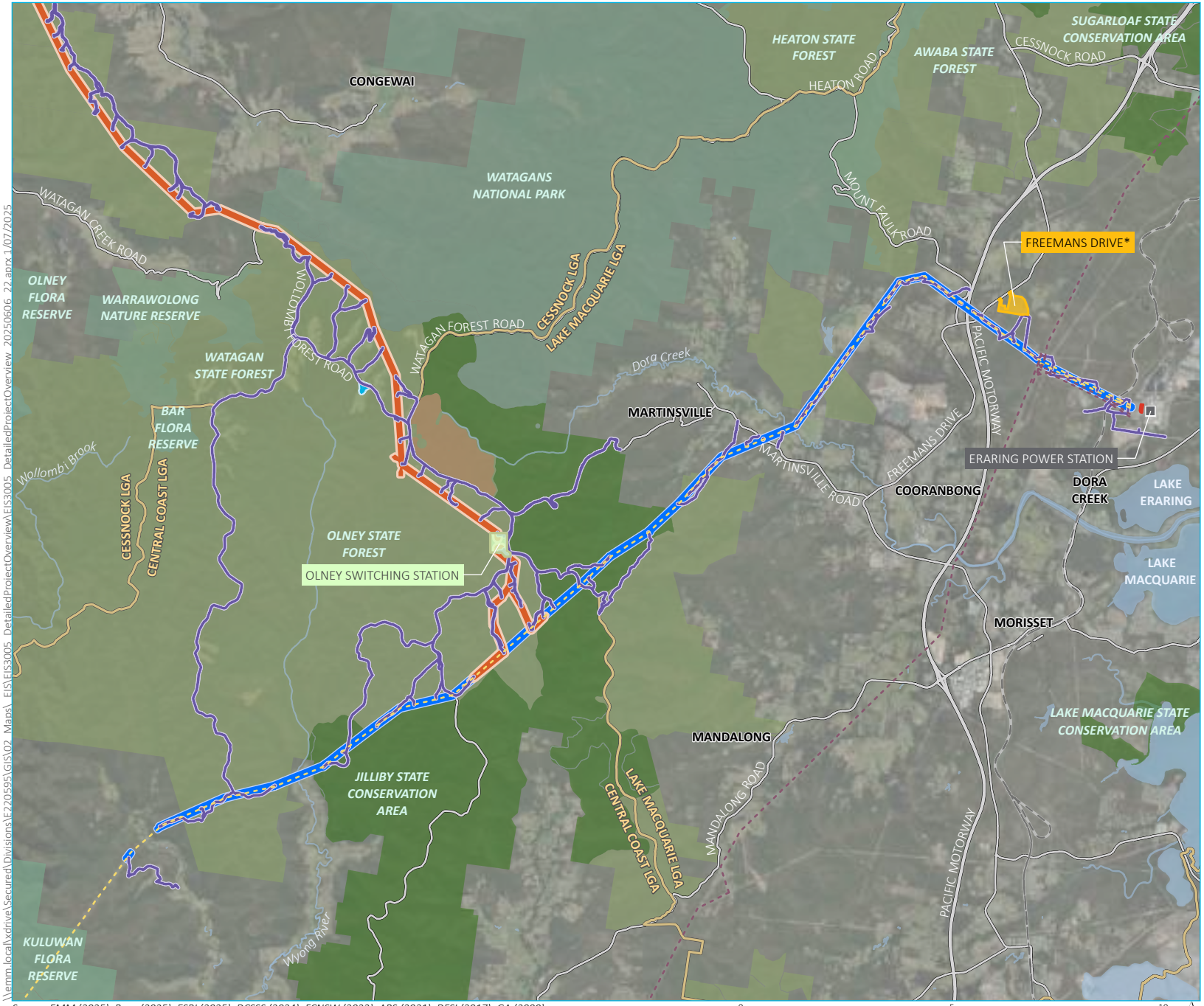
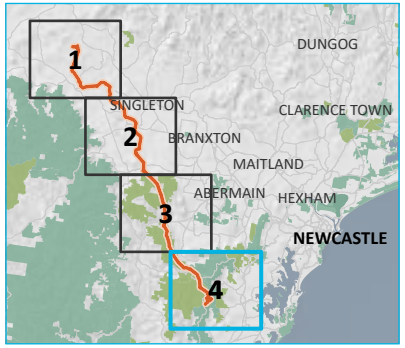
Detailed project overview
Map 3 of 4

Hunter Transmission Project
Social Impact Assessment
Figure 2.2

EMM
creating opportunities





KEY

Project impact area
- HTP corridor
- Olney switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment
- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest
- Recreation area
- Local government area

Detailed project overview
Map 4 of 4

Hunter Transmission Project
Social Impact Assessment
Figure 2.2

EMM
creating opportunities

Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); ABS (2021); DFSI (2017); GA (2009)

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3 Assessment methodology

3.1 NSW SIA Guideline

The NSW *Social Impact Assessment Guideline* (DPE 2023a, NSW SIA Guideline) provides direction on assessing the impacts of critical State significant infrastructure (CSSI) projects under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). This social impact assessment (SIA) addresses the provisions of the NSW SIA Guideline, including the application of the key principles detailed in Table 3.1.

Table 3.1 NSW SIA Guideline principles

Principle	Requirement	Section of SIA where applied
Action-oriented	Delivers outcomes that are practical, achievable and effective	*Chapter 11 (Social impact management)*
Adaptive	Establishes systems to actively respond to new circumstances / information and support continuous improvement	*Chapter 11 (Social impact management)*, including monitoring and engagement
Distributive equity	Considers how social impacts are distributed across vulnerable groups and between current and future generations	Assessment of impacts is included in *Chapter 6 (Operation impact assessment)* to *Chapter 9 (Cumulative social impacts)* and includes consideration of the Hunter Transmission Project (HTP, the project) corridor, local and regional impacts, over time, and variance in impact for vulnerable groups. Intergenerational equity benefits of enhanced energy network and resilience also addressed in *Chapter 7 (Operation impact assessment) and Chapter 9 (Cumulative social impacts).*
Life cycle focus	Seeks to understand potential impacts (including cumulative impacts) at all project stages, from pre-construction to post closure	*Chapter 6 (Operation impact assessment)* to *Chapter 9 (Cumulative social impacts)* present dedicated assessment of the project's social impacts and benefits across multiple defined project phases of the project's lifecycle including construction, operations, decommissioning, and cumulative development context.
Impartial	Is undertaken in a fair, unbiased manner and follows relevant ethical standards	*Chapter 1 (Introduction)* to *Chapter 12 (Conclusion)*; *Appendix A (SIA methodology statement)* and *Appendix B (Social baseline)* demonstrate assessment has been undertaken by triangulating multiple robust datasets. The impact significance evaluation has been undertaken in accordance with the NSW SIA Guideline to demonstrate a fair, unbiased appraisal of social impacts and benefits in line with agreed definitions for likelihood, magnitude and resultant significance.
Inclusive	Seeks to understand the perspectives of the potentially affected groups, informed by respectful, meaningful, tailored and effective engagement	*Chapter 4 (Stakeholder engagement)*, Appendix A *(SIA methodology statement)* and *Appendix B (Social baseline)* present inclusive SIA engagement program and integration of these results into the assessment
Integrated	Uses relevant information and analysis from other assessments and supports effective integration of social, economic and environmental considerations	*Chapter 5 (Existing environment)*, Appendix A *(SIA methodology statement)* and Appendix B *(Social baseline)* demonstrate a triangulation of primary and secondary data sources to support the assessment, including integration of environmental impact statement (EIS) findings, and broader EIS consultation results in this SIA.

Principle	Requirement	Section of SIA where applied
Material	Identifies which potential social impacts matter the most, and/or pose the greatest risk to those affected	The project's SIA scoping phase identified a broad range of potential impact pathways that have been refined and reassessed in Chapter 5 to Chapter 11 and include a summary of unmitigated and residual social impact significance in accordance with the NSW SIA Guideline.
Precautionary	If there is a threat of serious or irreversible damage to the environment, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental (including social) degradation	*Chapter 6 (Operation impact assessment)* to *Chapter 9 (Cumulative social impacts)*, *Chapter 11 (Social impact management) and Chapter 12 (Conclusion)* consider the implications of residual social risk associated with this project. The assessment relies upon all available information at the time of the assessment, including published scientific and academic research, to substantiate conclusions. The precautionary principle has been applied throughout the SIA, particularly in the identification and treatment of residual impacts and risks and associated management and mitigation measures. Application of the principle also occurred when complete data sets were not available at the time of assessment, e.g. final acquisition details and associated impact on landowner wellbeing, and localised accommodation capacity analysis and workforce assumptions.
Proportionate	Scope and scale of SIA should correspond to the potential social impacts	The project's SIA scoping phase identified a broad range of potential impact pathways that have been refined and reassessed in *Chapter 6 (Operation impact assessment)* to *Chapter 9 (Cumulative social impacts)* and include a summary of unmitigated and residual social impact significance in accordance with the NSW SIA Guideline.
Rigorous	Uses appropriate, accepted social science methods and robust evidence from authoritative sources	*Appendix A (SIA methodology statement)* documents the methods, evidence sources, assumptions and limitations associated with this SIA.
Transparent	Information, methods and assumptions are explained, justified and accessible, and people can see how their input has been considered	*Appendix A (SIA methodology statement)* documents the methods, evidence sources, assumptions and limitations associated with this SIA.

3.2 Legislation, policies, plans and guidelines

This SIA has been prepared with reference to plans, policies and guidelines presented in *Appendix C (Supporting information – planning and policy guidance)*. Findings of note are summarised below and include the application of the NSW SIA Guideline.

3.2.1 Alignment with State and regional strategies and objectives

Table 3.2 summarises the State, regional and local strategies and objectives relevant to the Hunter Transmission Project (HTP, the project).

Table 3.2 State, regional and local strategies and objectives

Level	Strategies, objectives and plans
State	• Integrated Systems Plan (ISP), (AEMO, 2024) • NSW Electricity Strategy (DPIE, 2019) • NSW Electricity Infrastructure Roadmap (DPIE, 2020a) • NSW Network Infrastructure Strategy (EnergyCo, 2023a) • NSW Energy Security Target and Safeguard (DPIE, 2020b) • Net Zero Plan Stage 1: 2020 – 2030 (DPIE, 2020c) • Delivering community benefits in NSW Renewable Energy Zones (EnergyCo, 2023b) • Employment, Skills, and Supply Chains: Renewable Energy in NSW (Briggs, et al., Employment, Skills and Supply Chains: Renewable Energy in NSW, 2022) • NSW Government Procurement Policy and Framework (NSW Government 2024) • NSW Climate Change Policy Framework (OEH, 2016) • Undertaking Engagement Guidelines for State Significant Projects (DPHI, 2024)
Regional	• Hunter Regional Economic Development Strategy – 2023 update (NSW Government, 2023) • 20-Year Economic Vision for Regional NSW 2018–2038 (NSW Government, 2018) • Hunter Regional Plan 2041 (DPIE, 2022) • Upper Hunter Strategic Regional Land Use Plan (DPI, 2012)
Local	• Muswellbrook Shire 2022–2032 Community Strategic Plan (CSP) (Muswellbrook Shire Council, 2022) • Muswellbrook Local Strategic Planning Statement (LSPS) 2020–2040 (Muswellbrook Shire Council, 2020) • Singleton Local Strategic Planning Statement (LSPS) 2041 (Singleton Council, 2020) • Create Singleton 2032 Community Strategic Plan (Singleton Council, 2022) • Our Plan, Our Future, Our Cessnock, Cessnock Local Strategic Planning Statement 2036 (Cessnock City Council, 2020) • Cessnock Community Strategic Plan 2036 (Cessnock City Council, 2022) • Central Coast Regional Plan 2041 (DPE, 2022) • Central Coast Community Strategic Plan (Central Coast Council, 2018) • Central Coast Local Strategic Planning Statement 2020 (Central Coast Council, 2020) • Lake Macquarie City Community Strategic Plan 2022-2032 (Lake Macquarie City Council, 2022) • Lake Macquarie City Local Strategic Planning Statement (Lake Macquarie City Council, 2020)

The project aligns strongly with relevant State and regional planning strategies and objectives. The project is a priority transmission infrastructure project under the *NSW Electricity Infrastructure Roadmap*, supporting the transition to renewable energy and contributing to the *Net Zero Plan Stage 1: 2020–2030* (DPIE, 2020c). The project is essential for:

- enhancing energy reliance and resilience: by providing the necessary transmission infrastructure that would connect renewable energy generation projects from the Central West-Orana and New England Renewable Energy Zones (REZs) into the national electricity market (NEM), it directly supports objectives under the *NSW Electricity Strategy* (DPIE, 2019) and the Integrated Systems Plan (AEMO, 2024) to meet growing demand and ensure system reliability as coal-fired power stations retire
- economic and workforce transition: consistent with the *Hunter Regional Economic Development Strategy* (NSW Government, 2023), the project would diversify the regional economy, create employment, and enhance workforce capabilities through renewable energy investments
- minimising local impacts: aligned with *Delivering community benefits in NSW Renewable Energy Zones* (EnergyCo, 2023b), the project integrates land-use conflict minimisation strategies, improves infrastructure, and ensures community engagement.

In alignment with State policies, the project facilitates the Hunter Region's transition to a diversified economy, supports climate action, and builds local resilience.

3.3 SIA study approach

A detailed method statement of this SIA process is provided in *Appendix A (SIA methodology statement)*.

The identification of the project's potential social impacts and benefits was undertaken through a combination of social research methods and the triangulation of findings to confirm accuracy. The identification and assessment of impacts was undertaken with consideration of the impact categories outlined in the NSW SIA Guideline. These categories consider the way a project has potential to change people's:

way of life: how people live, work, play, and interact

community: its composition, cohesion, character, how it operates, and sense of place

accessibility: how infrastructure provided by public, private or not for profit organisations, including services and facilities, is accessed and used

culture: shared beliefs, customs, values and stories, and connection to Country, land, places, waterways, and buildings, both Aboriginal and non-Aboriginal

health and wellbeing: physical and mental health

surroundings: access to and use of ecosystem, public safety and security, access to and use of natural and built environment, aesthetic value and/or amenity

livelihoods: how people sustain themselves through employment or business, their capacity to do so and whether disadvantage is experienced

decision-making systems: extent community can have a say in decisions that affect their lives, access to complaint, remedy, and grievance mechanisms.

3.3.1 Process

The social impact assessment (SIA) undertaken during the scoping phase served to identify potential social impacts and benefits to be further considered in this SIA. Those carried forward for detailed assessment are outlined in the Scoping Report, Hunter Transmission Project (EnergyCo 2024). As is the nature of social impact assessment, impacts are further refined throughout the assessment process. Key activities undertaken for this SIA in accordance with the NSW SIA Guideline included:

- preparation of a social baseline documenting conditions and trends without the project, with respect to the matters identified as material during the scoping phase of the project (see *Chapter 5 (Existing environment*) and *Appendix A (SIA methodology statement)*)
- engagement and representation of a range of stakeholder views (see *Chapter 4 (Stakeholder engagement)*)

- identification of impacts which are material (i.e. matter the most, and/or pose the greatest risk to those expected to be affected), and assessment which is proportionate to the scope and scale of potential social impact (see *Chapter 6 (Construction impact assessment)*, *Chapter 7 (Operation impact assessment)* and *Chapter 8 (Decommissioning impact assessment)*)

- assessment of social impact throughout the project life cycle, including the distributive equity of impacts and benefits (see *Chapter 6 (Construction impact assessment)*, *Chapter 7 (Operation impact assessment)* and *Chapter 8 (Decommissioning impact assessment)*)

- integration of other EIS findings with relevance to social values (see *Chapter 6 (Construction impact assessment)*, *Chapter 7 (Operation impact assessment)*, *Chapter 8 (Decommissioning impact assessment)* and *Chapter 9 (Cumulative social impacts*))

- development of action-oriented, adaptive impact management strategies (see *Chapter 11 (Social impact management)*)

- provision of a rigorous, impartial and transparent SIA (this assessment)

- consideration of potential social impacts including cumulative impacts (see *Chapter 6 (Construction impact assessment)*, *Chapter 7 (Operation impact assessment)*, *Chapter 8 (Decommissioning impact assessment)* and *Chapter 9 (Cumulative social impacts*))

- assessment of social impacts and benefits with potential for a material effect on social values, including integration of EIS results with a bearing on the social environment (see *Chapter 6 (Construction impact assessment)*, *Chapter 7 (Operation impact assessment)*, *Chapter 8 (Decommissioning impact assessment)* and *Chapter 9 (Cumulative social impacts*) and *Appendix B (Social baseline)*)

- significance assessment of identified social impacts and benefits, and justification of significance ratings (see *Chapter 10 (Significance evaluation)*)

- development of adaptive management and monitoring strategies, and determination of the residual social risk (see *Chapter 11 (Social impact management)*).

This SIA has used the social risk assessment matrix provided in the SIA Guideline Technical Supplement DPE 2023 and replicated in Figure 3.1. This matrix is applied to potential social impacts to understand the significance level of impacts before mitigation/enhancement measures. The matrix is applied again assuming the adoption of mitigation/enhancement measures, to determine the residual significance level of impacts.

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

Source: SIA Guideline Technical Supplement, Social impact significance matrix DPE 2023a

Figure 3.1 Social impact significance matrix

3.3.2 Data sources

This SIA draws upon a diverse range of data sources informing the project's social baseline and identification of impacts and opportunities. These data sources include:

- Australian Bureau of Statistics (ABS) Census of Population and Housing (2011–2021)
- Australian and State agency data, publications and resources:
  - Australian Department of Jobs and Small Business
- NSW Bureau of Crime Statistics and Research
  - NSW Department of Education and Communities
  - NSW Ministry of Health
  - NSW Department of Planning, Housing and Infrastructure
  - NSW Department of Trade and Investment, Regional Infrastructure and Services
  - NSW Department of Family and Community Services
  - NSW Housing
- local council publications and resources:
  - Cessnock City Council
  - Muswellbrook Shire Council
  - Singleton Shire Council
  - Lake Macquarie City Council
  - Central Coast Council
- specialist third party resources:
  - SQM Research[1]
  - Public Health Information Development Unit
  - other websites and documentation from key stakeholders and industries
  - qualitative data sourced through community and stakeholder consultation, which occurred from November 2024 to July 2025.
  - SIA survey.

[1] SQM Research is an online investment research house which specialises in providing accurate property research and data sqmresearch.com.au

i SIA survey

A social impact survey was developed to enable the broader community to participate in the assessment, and as an alternative for interested and impacted stakeholders who couldn't or preferred not to participate in the semi-structured interviews. The survey was shared with stakeholders identified in the social impact assessment (SIA) engagement plan and distributed to the HTP stakeholder database of over 800 members on 11 February 2025.

A total of 104 respondents participated in the survey, which ran from December 2024 to early March 2025. The community survey report outlining the approach and outcomes of the survey is contained in *Appendix E(Community survey report).*

3.3.3 Assumptions and limitations

i Assumptions

The SIA has been prepared based on the best available information at the time of assessment. The following assumptions underpin the analysis of impacts, opportunities, and mitigation measures presented:

- project information
    - project-related information provided to EMM including sequencing, workforce estimates, and stakeholder engagement feedback was current at the time of the SIA's preparation
    - social impacts identified during the planning and assessment phase of this project have been used to inform current project planning and engagement strategies (refer *section 4.5*), and are understood to influence the project beyond the EIS public display period, through construction, operations, and decommissioning
    - the SIA assumes that residual social impacts from the project's planning and assessment phase (e.g. trust, community perceptions, and relationships with affected stakeholders) (see *section 4.4.1*) would persist into construction, requiring assessment and ongoing targeted management (see *section 6.1.1*)
- SIA commitments
    - the SIA assumes that mitigation and management measures outlined in *Chapter 11 (Social impact management)* will be implemented fully and effectively
    - stakeholder engagement will continue throughout the project lifecycle and inform ongoing refinement and adaptiveness of the project's social impact mitigation strategies
    - monitoring mechanisms will be embedded within the Social Impact Management Plan (SIMP) to enable adaptive management
- construction schedule and workforce
    - the SIA refers to the project's most up to date, indicative construction schedule as issued on 8 July 2025 (see Figure 3.2), including updates to existing agreed and inferred workforce assumptions as follows:
        - pre-construction minor works (late 2027) is assumed for the purposes of assessment, to involve a progression of around 20-40 personnel supporting pre-construction minor works, with intermittent crews conducting early site preparation activities

- early works (early 2028) is assumed for the purposes of assessment, would involve a gradual workforce ramp-up from an average of 60-150 personnel distributed across work sites. This phase would involve the establishment of dedicated workforce accommodation facilities in readiness for main construction works

- main construction (mid 2028– end of 2029) is assumed for the purposes of assessment, would require a peak workforce of up to 830 FTEs, including 20% drawn from host LGAs (representing around 166 residential and 664 non-residential workers). This workforce would be primarily accommodated in three purpose-built accommodation facilities. Switching station and transmission line construction would occur in parallel. From mid-2028, the project's main construction program is likely to involve the following key components:

  Civil construction (up to 280 personnel at peak)

  Project and technical staff (up to 220 personnel)

  Transmission line teams (up to 320 personnel)

  Switching station and switching crews (and up to 80 personnel)

- testing, commissioning, and commencement of operations (late 2028–late 2029) is assumed for the purposes of assessment, would require 10-20 personnel, stabilising to around 10 operational personnel

- the project's workforce increase would be non-linear, with major ramp-up during early works and peak activity concentrated at construction support sites and sustained over around 2.5 years. Construction teams would be spatially distributed based on task (e.g. switching stations vs transmission lines), requiring varied technical skillsets

- the SIA assumes that 20% of the peak workforce would be sourced from within the project's host LGAs, and 80% from NSW and beyond

- the construction schedule and workforce requirements may shift due to approval delays, logistics and supply constraints, cumulative impact management and coordination with other projects

• workforce accommodation

- the SIA assumes the project's dedicated workforce accommodation facilities would be established and operational prior to the main construction works program, to ensure non-resident demand for accommodation does not have a significant adverse effect on local and regional housing conditions, including short-term accommodation capacity and existing local and visitor use.

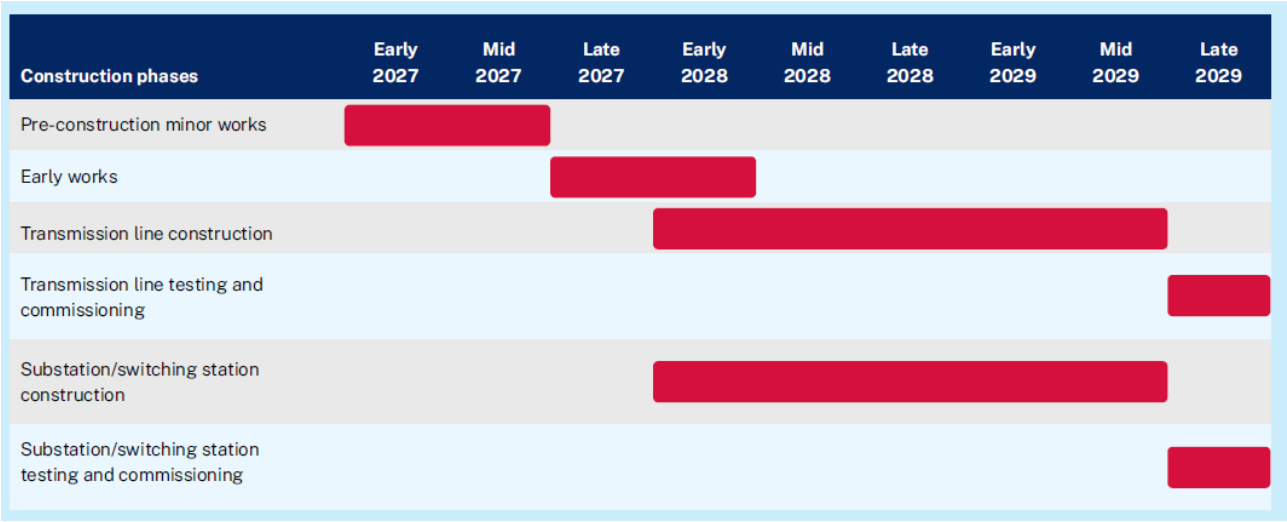


Figure 3.2 Indicative construction program

ii Limitations

While the SIA strives for comprehensive analysis, certain limitations are acknowledged:

- the assessment is based on the project's design at the time of SIA preparation. Subsequent refinements to the project's physical layout, workforce accommodation and/or workforce sequencing may alter the nature and extent of social impacts
- the dynamic nature of community perceptions and socio-economic conditions may affect the relevance of the findings over time. This SIA relies on data sources such as the ABS Census of Population and Housing (2021), which may not reflect recent changes in social characteristics. Additionally, data on private service providers and informal community services may be limited or unavailable
- given the voluntary nature of participation, the feedback obtained may not fully capture the diversity of perspectives within the affected communities. Some stakeholders were unavailable at the time of SIA consultation, despite multiple attempts to engage, and have been identified throughout this SIA as requiring further engagement
- unanticipated impacts may emerge during the project's lifecycle, necessitating ongoing monitoring and adaptive management strategies
- there may be cumulative impacts from concurrent projects in the region that are not fully captured.
- some project sentiment data received from EnergyCo, including the engagement outcomes report and detailed comments from Forestry Corporation of NSW, was received late in the final drafting of the SIA. Whilst every attempt was made to consider and integrate this information into the assessment and management measures, there was not sufficient time to consider this information in its totality.
- The study team relied on the 'Gold' draft of the Traffic & Transport Impact Assessment rather than the finalised version to inform the SIA. Therefore, some impacts to communities and road users may not be accounted for in this final SIA.

3.4 Social locality

The Hunter is a diverse region covering over 22,500 square kilometres. The HTP corridor crosses the local government areas (LGAs) of Muswellbrook, Singleton, Cessnock, Central Coast and Lake Macquarie. These LGAs have a combined population of 655,007 (ABS 2021). Key industries in the Hunter region (excluding Newcastle) include mining, social and health services and retail trade. Primary land uses in the project region include coal mining, industrial uses, the Singleton Military Area, urban residential developments (Singleton to Newcastle, and along the coast), rural and rural-residential areas, agricultural uses including cropping, viticulture and equine industry, State forests and conservation areas.

The HTP corridor avoids all major Hunter region towns including Singleton, Cessnock, Maitland and Newcastle, along with the villages of Jerrys Plains, Broke, Martinsville and Cooranbong. The HTP corridor traverses, or is near, the localities of Maison Dieu, Gouldsville, Mount Thorley, Cedar Creek, Millfield and Laguna.

The social locality identifies the social and geographical areas of focus and considers:

- the nature and scale of the project, including associated infrastructure
- the scope of potential social impacts throughout the project lifecycle
- the location and characteristics of potentially affected communities
- land use patterns, infrastructure, and urban/rural centres.

To define baseline characteristics, detailed demographic data has been collected with reference to applicable ABS statistical geographic areas which are detailed further in *Appendix D (ABS statistical geographies)*. These statistical geographic areas provide a framework for demographic classification, facilitating a thorough understanding of community characteristics and potential project impacts within the social locality.

Due to the complexity of impacts and benefits arising from the project, the social locality is defined at 3 levels:

- the corridor social locality (see Figure 3.3) includes people within 1.5 kilometres either side of the 140-metre wide HTP corridor[2]. This area encompasses those people and communities most likely to experience direct and/or material social impacts relating to amenity and visual change, land acquisition and land use, changes to sense of place and heritage
- the local social locality (see Figure 3.3), includes people generally within 10 kilometres of the HTP corridor. It also encompasses surrounding townships and settlements. This broader area includes consideration of changes to the road network during construction and operation, workforce impacts and effects on social infrastructure, businesses and industry. Where construction support sites are located outside of the defined corridor social locality, the associated social impacts are considered in the context of local area impacts
- the regional social locality (see Figure 3.4) includes the corresponding LGAs of Central Coast, Lake Macquarie, Muswellbrook, Singleton and Cessnock. This accounts for regional level impacts such as employment and training opportunities, benefit sharing, procurement and supply chains, transport and traffic, cumulative and broader intergenerational benefits. The key regional service centres of Newcastle and Maitland have also been included in the data analysis for regional context and benchmarking.

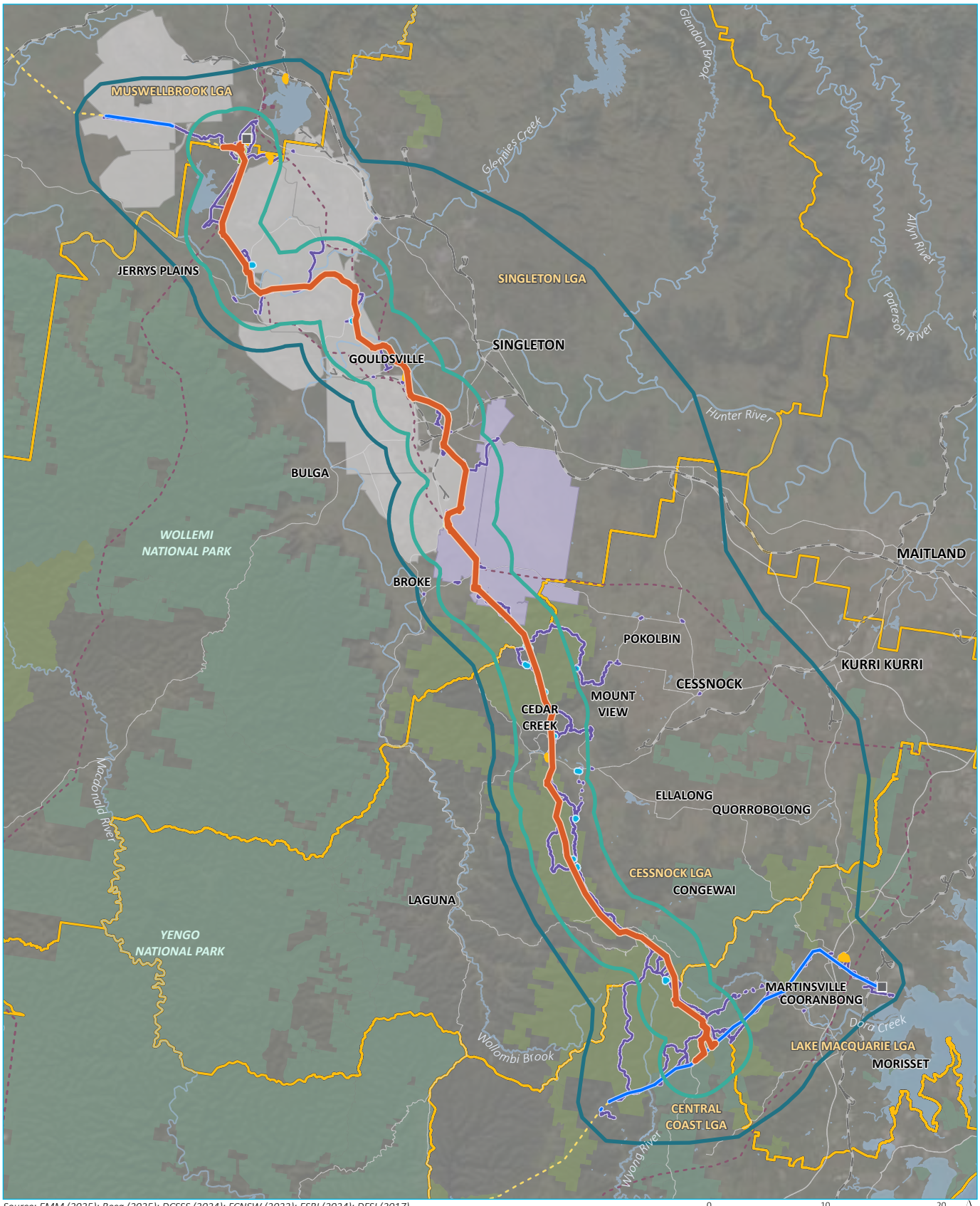
[2] 3.14 kilometres from the centre line

Social characteristics for each social locality were benchmarked against the Hunter region (including Newcastle) and NSW. Social characteristics also vary geographically across the project's social localities. As such, where appropriate the social characteristics of each social locality have been considered for the northern section (Bayswater to Broke), central section (Pokolbin to Corrabare) and southern section (Olney to Eraring). The geographic areas and Australian Statistical Geography Standard (ASGS) statistical area codes for the respective social localities are detailed in Table 3.3.

The social locality has also been defined with consideration to the specific social context of the project. This approach emphasises relationships and interactions among community members in addition to considering data available for pre-determined geographical boundaries. Key stakeholders include landowners, nearby neighbours, community members, visitors and tourists, businesses, service providers, vulnerable and marginalised groups, and Aboriginal groups who may be impacted by, or have an interest in, the project.

Table 3.3 Statistical geographic areas used to inform social locality

Social locality	Geographic area	ASGS statistical area code
Corridor social locality	See *Appendix D (ABS statistical geographies)* for complete list	Mesh blocks – see *Appendix D (ABS statistical geographies)*
Local social locality	See *Appendix D (ABS statistical geographies)* for complete list	Suburbs and Localities – see *Appendix D (ABS statistical geographies)*
	Muswellbrook	UCL113011
	Singleton	UCL113014
	Cessnock	UCL112005
	Broke	UCL1222026
	Millfield	SAL12631
	Cooranbong	SAL11052
	Martinsville	SAL12522
Regional social locality	Muswellbrook Shire LGA	LGA15650
	Singleton LGA	LGA17000
	Cessnock City LGA	LGA11720
	Central Coast	LGA11650
	Lake Macquarie LGA	LGA14650
Hunter region (including Newcastle and Maitland)	Hunter	SA4106
	Newcastle LGA	LGA15900
Area of reference	NSW	S/T1



Source: EMM (2025); Beca (2025); DCSSS (2024); FCNSW (2022); ESRI (2024); DFSI (2017)

0 10 20 km

GDA2020 MGA Zone 56

N

KEY

Corridor study area
Local study area

Project impact area
HTP corridor
Switching station
Construction support site
Laydown area
Adjustment to existing transmission line
Upgrades to existing transmission line
Access track

Existing environment
Power station
330 kV transmission line
500 kV transmission line
Railway
Major road
Named watercourse

Named waterbody
State forest
Mining
Defence
NPWS reserve
Local government area

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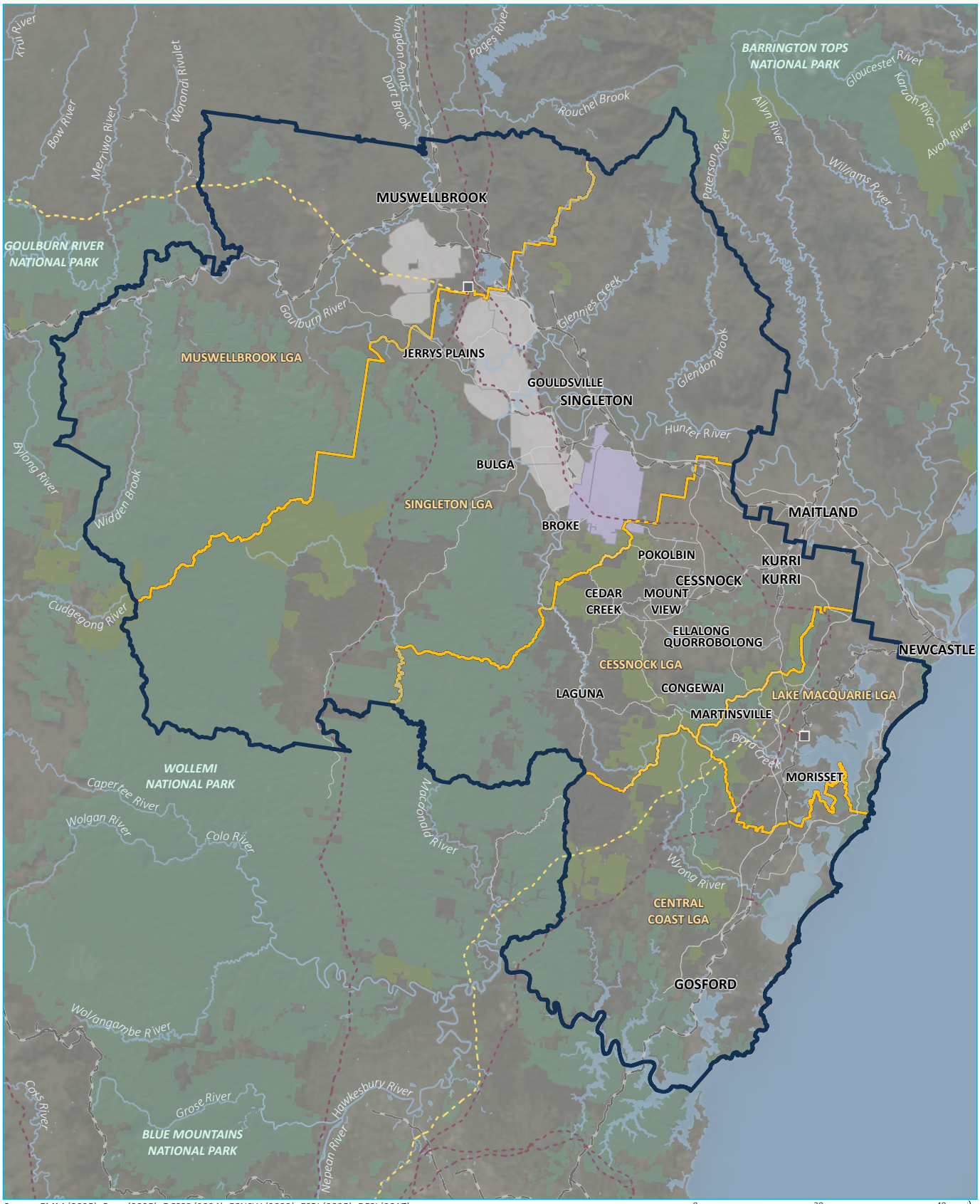
Corridor and local social localities

Hunter Transmission Project
Social Impact Assessment
Figure 3.3

EMM
creating opportunities



Source: EMM (2025); Beca (2025); DCSSS (2024); FCNSW (2022); ESRI (2025); DFSI (2017)

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KEY

- Regional social locality

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- State forest
- Mining
- Defence
- NPWS reserve
- Local government area

Regional social locality

Hunter Transmission Project
Social Impact Assessment
Figure 3.4

EMM
creating opportunities

4 Stakeholder engagement

This chapter summarises engagement activities that have informed this social impact assessment (SIA). Engagement activities include those carried out as part of broader project engagement, including engagement to inform the environmental impact statement (EIS), and also engagement activities that were carried out directly to inform this SIA.

SIA-specific engagement allowed for in-depth tailored discussions with key stakeholders, such as affected landowners, local government, elected representatives and State government to understand the Hunter Transmission Project (HTP, the project) impacts and benefits from their perspective.

An outline of the SIA engagement analysis methodology is provided in *Appendix A (SIA methodology statement)*.

Given the interpretive nature of qualitative research, coding and thematic categorisation have been conducted systematically while acknowledging some discretion is applied by suitably qualified social researchers in classification of themes, consistent with their direct involvement in consultations.

4.1 EIS and project engagement

EnergyCo has undertaken stakeholder engagement in line with the HTP Community and Stakeholder Engagement Plan (CEP) (EnergyCo 2024) and with reference to *Undertaking Engagement: Guidelines for State Significant Projects* (DPIE 2021b) and the International Association for Public Participation.

EnergyCo's approach has been to engage early and consistently, consulting a variety of stakeholders. This approach has seen involvement throughout the community and provided valuable feedback that has helped to refine and shape the HTP.

The engagement program for the project consists of 3 key phases aimed at ensuring meaningful engagement throughout the planning, assessment and delivery stages of the HTP:

- **Early engagement phase (late 2022 – May 2024):** to support route selection, inform corridor refinement and identify early issues and opportunities (see *Section 4.1.1*).
- **EIS engagement phase (May 2024 – Dec 2025):** to support and inform the preparation of impact assessments, identify local issues and refine mitigation approaches. This period included an increased focus on targeted engagement and the provision of clear information on issues identified as high impact or high interest to these stakeholders. This phase also supports EIS public exhibition and assessment process. Engagement will continue beyond this period to support detailed design, approvals and construction.
- **Project delivery phase (from 2026 onward):** to support detailed design, manage construction-related engagement, and maintain clear communication with stakeholders through project delivery.

The engagement carried out for the project to date, specifically engagement carried out between May 2024 and July 2025 to support the preparation of the EIS is summarised in *Chapter 6 (Engagement)* of the EIS and documented in detail in *Appendix D (Outcomes Report)* of the EIS. A summary of this engagement is provided in *Section 4.1.2* to *Section 4.1.5.*

4.1.1 Project refinements due to early project engagement

Information gathered through consultation with local and regional communities, landowners and stakeholders has directly influenced the design and refinement of the HTP. This feedback was considered alongside technical studies including geotechnical, biodiversity, Aboriginal cultural heritage and land use assessments to refine the corridor and minimise potential impacts.

Local community and landowner feedback played a key role in early corridor refinements, resulting in the removal of several privately owned properties in the southern part of the HTP corridor. These refinements were also enabled through effective engagement with government agencies, including Forestry Corporation of NSW, and with mining and power station operators.

Key project refinements and commitments have resulted from this feedback including:

- reduction in private property impacts from 78 directly affected properties to about 20 at EIS stage
- relocation of the switching station to Olney State Forest (removing more than 30 private properties from the corridor in HTP South)
- corridor adjustments to avoid sensitive properties, cultural heritage sites and areas of high biodiversity value
- visual and landscape mitigation including adjusted tower siting off ridgelines
- biodiversity offsets and mitigation commitments
- strengthened traffic and access management measures
- enhanced cultural heritage protection
- ongoing improvements to engagement materials, mapping and transparency.

A detailed description of project refinements made in response to community feedback and further technical and environmental investigations is provided in *Chapter 3 (Alternatives and options)* of the EIS. EnergyCo has also published feedback reports *Shaping the Hunter Transmission Project* in May 2024 and an updated report *Refining the Hunter Transmission Project* in December 2024 to outline the refinement process for the HTP.

4.1.2 EIS engagement principles and objectives

EnergyCo developed guiding principles for the HTP. These set the scene for early engagement and continue to govern the way interactions have been undertaken with the community and stakeholders during the environmental impact assessment process for the project.

The engagement approach was underpinned by the following principles:

- respectful and inclusive engagement that recognised different community needs
- proportionality—focusing effort based on likely project impacts and levels of community interest
- transparency about what could and could not be influenced
- multiple pathways for participation (digital, face-to-face, written).

The engagement objectives for the EIS are guided by the values developed for the HTP. They are to:

- keep stakeholders informed – provide accurate, timely and clear information about the project, keep stakeholders informed of project progress
- create opportunities for engagement – ensure affected landowners and community members can interact with the project team, ask questions, and provide feedback to help refine the project

- make engagement proportionate – tailor engagement efforts to reflect the project's potential impacts and the level of community interest, ensuring efforts are focused where they matter most
- ensure engagement is effective – facilitate meaningful participation by providing clear, accessible information and demonstrating how feedback has influenced project outcomes – offer multiple platforms and tools for stakeholders to share their feedback
- be clear about influence – clearly communicate which aspects of the project are open to community input and which are not.

4.1.3 EIS engagement activities

Communication and engagement activities to date include meetings/briefings, information sessions, workshops, phone calls, letters, emails, website updates and newsletters. These have been supported by community feedback channels, including a project-specific phone number and email address. A summary of the communication and engagement activities undertaken since May 2024 through to finalisation of the outcomes report is provided in Table 6 of the Outcomes Report (see *Appendix D (Outcomes Report)* of the EIS).

4.1.4 Regional Reference Group (RRG)

In addition to tailored engagement, EnergyCo has established a dedicated forum to support ongoing regional collaboration: the Regional Reference Group (RRG).

The RRG was established in 2023 to ensure that local knowledge and community priorities were integrated into the planning and mitigation of the Hunter Transmission Project. It provides a forum for strategic input and two-way dialogue between EnergyCo, local councils, community representatives and regional stakeholders.

The group was formed after consultation with local councils and regional organisations. It initially comprised ten members: An independent Chair, three local Mayors (Singleton, Cessnock, Lake Macquarie), one community representative each from the north, central and southern areas of the HTP corridor, and a regional business, environment and Aboriginal representative.

The RRG has provided input into route refinement, mitigation measures, communication approaches and regional benefit opportunities.

In May 2025, membership was expanded to 12 members to strengthen regional representation, adding the Mayor of Muswellbrook and a community representative from the Newcastle local government area.

The group was recently renamed the Hunter-Central Coast Regional Reference Group (HCCRRG), facilitated by EnergyCo to support coordination and engagement across the portfolio of EnergyCo's projects in the region. The RRG's evolution reflects the region's growing role in NSW's energy transition and the importance of coordinated and transparent engagement across projects.

4.1.5 Themes raised in EIS and project engagement

An overview of relevant key themes raised during stakeholder engagement is provided in Table 4.1.

Table 4.1 Project engagement themes and issues raised

Key themes	Matter raised
Land use and property	Property access, acquisition, compensation
Community engagement process	Consultation process (transparency, responsiveness, and adequacy of engagement activities)
Environmental impacts	Biodiversity impacts (including vegetation clearing and threatened species) and biodiversity offsets
Project justification and alternatives	Strategic need, justification and alternatives
Construction impacts	Traffic and access (road upgrades, haulage routes, and safety/amenity concerns during construction)
Design and route selection	Corridor options, tower placement, undergrounding
Visual and landscape	Visual impact (changes to rural and forested landscapes from transmission infrastructure)
Cultural heritage	Aboriginal heritage (sites, cultural values and culturally significant view-lines)
Cumulative impacts	Impacts to and interactions with other planned projects in the region.
Social and economic	Employment, community benefit, and local economic impacts
Strategic context	Cumulative and regional planning issues

4.1.6 Project engagement records informing this SIA

The themes raised in *Section 4.1.5*and also themes raised in other project community consultation records made available to the SIA team were analysed as part of this SIA. Themes and sub themes identified relevant to this SIA are outlined in Table 4.2.

Table 4.2 Project engagement – community views relevant to this SIA

Stakeholder group	Theme/s	Sub-themes	Frequency
Broad community	Construction and maintenance	• Construction activities would harm wildlife • Repair/upgrade existing corridor/co-locate instead of building a new line • Noise impacts in a rural/natural setting • Roads not able to withstand heavy traffic	19

Stakeholder group	Theme/s	Sub-themes	Frequency
	Community engagement	• Engagement time too short • Differing answers received from staff members at information sessions / lack of consistency • Lack of community awareness about public information sessions • Concerned about perceived lack of consultation with community groups in the area • Wants to see further engagement with local groups centred on outdoor activities • Would like interested locals to be involved further in the process • Not enough information provided to be able to give feedback • Consultation was inadequate due to the engagement activities scheduling and also there not enough prior advertisement	19
	Energy transition	• Support for energy transition • Concerns renewable energy increases the cost of energy and reduces reliability • Renewable does not mean sustainable • Consider undergrounding	13
	Impacts on rural livelihoods	• Land use restrictions in easement • Fear of increased illegal and anti-social behaviours due to project • Loss of privacy/screening	7
	Land value	• Concerns regarding de-valuing of properties either through acquisition or reduced amenity	6
	Benefits	• Decarbonisation benefits acknowledged	5
	Cultural heritage	• Concern about destruction of culturally significant sites • Concerns regarding engagement process for broader Aboriginal community beyond those directly impacted	4
Affected landowners	Environmental values	• Concerns on impacts to native wildlife, fragment habitat and introduce invasive species • Concerns the project would impact ecosystem processes and services • More weight should be given to the future value of the State forests for biodiversity and carbon storage	12
	Rural livelihoods	• Impacts to farm-based incomes and other rural livelihoods e.g. accommodation and tourism	11
	Energy transition	• Support for transition from fossil fuels but concerns that environmental impacts remain • Understand benefits of project but corridor does not benefit landowners, residents, wider Hunter community	8
	Community engagement	• Concerns engagement was lacking and rushed • Requests for more collaborative discussions	7
	Construction and maintenance	• Construction on steep hillsides presents risks and could make the land unstable • Re-developing existing easements less likely to create environmental impacts	5
	Acquisition	• Consider an alternate route to minimize impacts on landowners • Concerns land acquisition would result in significant financial losses for landowners	5

Stakeholder group	Theme/s	Sub-themes	Frequency
	Historic heritage	• Loss of intergenerational properties • Impacts to farming operations	4
	Visual and amenity impacts	• Concerns the corridor would be visible from Singleton • Reduced aesthetic of the landscape	3
Regional Reference Group	Community engagement	• Mixed sentiment – positive and negative • Continued engagement of stakeholders is important, including disclosure of project details	14
	Construction and maintenance	• Mix of issues and concerns relating to road access, route impacts and corridor route options • Potential for undergrounding the infrastructure	11
	Benefits	• Importance of biodiversity offsets • The Hunter region is hosting a critical State infrastructure project for the benefit of the entire State, delivering outcomes for the region. Local benefit sharing is critical	10
	Acquisition	• Impacts associated with specific landowners and questions of what alternate routes EnergyCo is proposing • Issues raised also mentioned concerns related to property value and land use	4
Forestry Corporation of NSW	Social value	• The State Forests of the Watagans highlighted as an important destination for nature-based recreation and enjoyment. High social and cultural value. Award winning tourism destination. • Popular with communities in the social localities, and beyond to the major population centres of Sydney & Newcastle. Importance of protecting high-use infrastructure, such as The Pines Forest Park • Forest visitation exceeds value of timber production	1 *
	Cultural heritage & biodiversity	• Safeguarding Aboriginal heritage • New roads and trails to be protected to minimise damage and erosion • Fire management around powerlines • Protecting threatened species habitat, in particular threated frog ponds	1 *
	Impacts and investments	• Concerns visitation base may be negatively impacted during construction. Important to ensure continued recreation access and safety planning for visitors and workers during construction. • Concerns for campers and recreation users enjoyment of the reserves during construction, particularly if extended hours are implemented. • Concerns reduced access could impact the health and wellbeing benefits of access to nature • There are opportunities for offset activities or compensatory upgrades to visitor infrastructure, notably enhancements to The Pines precinct during construction disruptions	1*

Note * input provided by one round of engagement with one agency representative for multiple stakeholder groups.

4.2 SIA engagement

4.2.1 SIA engagement overview

The SIA team conducted two rounds of engagement targeting all key project stakeholders to ensure opportunities to seek feedback were maximised. Table 4.3 details engagement activities undertaken with interested and

impacted stakeholders for the assessment. A number of proposed stakeholders chose not to participate either due to an unwillingness, disinterest or engagement fatigue. Names, addresses and other identifying information have been removed where necessary to preserve the anonymity and privacy of the participants.

Table 4.3 SIA specific engagement activities and participants

Stakeholder type	Stakeholder	Engagement activity	Number of participants	Dates
Directly affected landowners (acquisition)	Private landowners – northern section	In person semi-structured interview	2	11/12/2024
		In person semi-structured interview	1	11/12/2024
		In person semi-structured interview	3	6/12/2024; 7/12/2024 & 11/12/2024
	Private landowners – central section	In person semi-structured interview	1	10/12/2024
		Semi-structured interview via Teams	1	12/12/2024
		Semi-structured interview via Teams	1	12/12/2024
		In person semi-structured interview	2	12/12/2024
		In-person semi-structured interview	2	20/02/2025
		In-person semi-structured interview	2	19/02/2025
		In-person semi-structured interview	1	19/02/2025
		In-person semi-structured interview	2	19/02/2025
Construction traffic affected / near neighbours	Pokolbin Mountain Road Residents	In person semi-structured interview	3	5/12/2024 & 11/12/2024
	Pokolbin Mountain Road Residents Group	In person semi-structured interview	2	12/12/2024
	Vineyard farmers and business operators	In person semi-structured interview	2	12/12/2024
	Private landowner – Wollombi Road Resident	Semi-structured interview via mobile phone	1	13/12/2024
State Government	Forestry Corporation of NSW	Semi-structured interview via Teams	1	22/11/2024
	Forestry Corporation of NSW	Semi-structured interview via Teams	1	28/11/2024
	State Member for Cessnock	Semi-structured interview via Teams	1	3/12/2024
Aboriginal stakeholders	Forestry Corporation of NSW	Semi-structured interview via Teams	1	28/11/2024
	Singleton Aboriginal Focus Group	In-person meeting	4	27/02/2025
	Cessnock Aboriginal Focus Group	In-person meeting	8	27/02/2025
Local Government	Cessnock City Council - Mayor	Presentation and discussion via Teams	1	2/12/2024 & 20/02/2025
	Singleton City Council - Mayor	Presentation and discussion via Teams	1	2/12/2024
	Lake Macquarie City Council - Mayor	Email correspondence	1	2/12/2024 & 30/04/2025

Stakeholder type	Stakeholder	Engagement activity	Number of participants	Dates
	Cessnock Local Emergency Management Committee (LEMC)	Presentation and discussion via Teams	16	19/02/2025
	Cessnock Council Director of Works & Infrastructure	Semi-structured interview via Teams	1	2/12/2024
Local community	HTP RRG representative	Semi-structured interview via Teams	1	9/12/2024
	Councillor – Cessnock City Council	Semi-structured interview via Teams	1	4/12/2024
	HTP RRG meeting	Presentation and discussion via Teams	16	2/12/2024
	Singleton community representative - RRG	Presentation and discussion via Teams	1	2/12/2024
	Cessnock community representative - RRG	Presentation and discussion via Teams	1	2/12/2024
	Lake Macquarie community representative - RRG	Presentation and discussion via Teams	1	2/12/2024
Businesses & industry	Vineyard farmers and business operators	In person semi-structured interview	2	12/12/2024
	Business Hunter Representative	Semi-structured interview via Teams	1	28/11/2024
	Regional business representative - RRG	Presentation and discussion via Teams	1	2/12/2024
	Hunter Valley Wine and Tourism Association	Semi-structured interview via Teams	1	27/03/2025
Community / special interest groups	Hunter Wildlife Rescue representative	Semi-structured interview via Teams	1	20/11/2024
	Rural Fire Service - Hunter	In person semi-structured interview	2	12/12/2024
	Environment representative - RRG	Presentation and discussion via Teams	1	2/12/2024
	Lake Liddell Recreation Reserve	Semi-structured interview via Teams	1	28/01/2025
Broad community & stakeholders – interested and impacted	Affected landowners, near neighbours, Traditional Owners, Local residents, Business owners, community service providers and community organisations.	Online survey	104	02/12/2024 – 25/02/2025
Total number of engaged participants				**197**

i Social impact survey

A social impact survey was developed to enable the broader community to participate in the SIA engagement, and as an alternative for interested and impacted stakeholders who couldn't or preferred not to participate in the semi-structured interviews. The survey was shared with stakeholders identified in the SIA engagement plan and distributed to the project's stakeholder database of over 800 members on 11 February 2025.

A total of 104 respondents participated in the survey, which ran from December 2024 to early March 2025. All questions were optional except for locality of residence, and consequently response tallies for some questions do not add up to the total response pool of 104.

ii Secondary engagement data

Additional documents provided by stakeholders through the engagements have also been included in the thematic analysis for the SIA engagement include:

- written correspondence received from the Pokolbin Mountain Road Lobby Group including:
  - ministerial inquiry letter sent to the NSW Energy Minister
  - meeting minutes 'Residents, Landowners and Utilisers of Pokolbin Mountains Road', 3 December 2024
  - EIS informing document sent to EnergyCo
- private impact submissions prepared by individual landowners and provided to the study team
- relevant legal correspondence
- meeting records and field notes from engagement with Traditional Custodians as part of *Technical Report 2 – Aboriginal Cultural Heritage Assessment*.

4.2.2 SIA engagement outcomes

This section provides a summary of outcomes from SIA specific engagement, showing key themes and issues that emerged for each stakeholder type.

i Directly affected landowners

Eleven interviews were held with directly affected landowners within the corridor social locality. Interviews were carried out in person, via Microsoft Teams or over the phone. Table 4.4 provides a summary of the feedback received in these interviews.

Table 4.4 Directly affected landowners - SIA engagement outcomes

Theme	Sub-themes	Frequency
Engagement and planning processes	• Most landowners cited a lack of information and transparency during engagement processes. More detailed project information requested • Some landowners cited a reasonable and respectful engagement process • Uncertainty about project details considered important (e.g. tower locations, easement widths, access routes) • Information not provided when promised and/or expected • Engagement process had been confusing and protracted, causing uncertainty and stress • Confusion about staff roles and responsibilities • Perceived lack of empathy and respect for rural livelihoods • Changeable, inconsistent messaging • Sense that community values were not well understood • Views that the decisions were made before consultation with landowners begun. Consultation and SIA a 'Tick box' exercise • Concern that there has not been enough 'on the ground' planning and engagement. Overreliance on desktop assessments • Engagement processes reported to not cater for some participant needs (e.g. disabilities and health conditions) • Requests for change – improve transparency, engagement staff trained to work empathetically, knowledge and respect for rural livelihoods • Concerns regarding the RRG recruitment and meetings process, although acknowledgement that this forum has also improved • A small number of landowners applauded the EnergyCo project team for moving the corridor away from tourism destinations • Overall, low trust in project • Concerns regarding route selection and planning process. Preference for co-location with existing infrastructure through valley floor	98
Environmental impacts and values	• Landowners place high value on the environmental and lifestyle attributes of their properties: – Nature-based recreation – Biodiversity conservation and natural environment (central and southern portions of the HTP corridor) • Landowners identify as 'custodians' of the land. Land conservation, weed management and ecological agriculture initiatives undertaken on properties • Concerns regarding land clearing, loss of mature trees, erosion, habitat loss and impacts on listed species (e.g. Koalas, Quolls, Glossy Black Cockatoos, rare frog species, Platypus) • Concerns regarding biosecurity and the introduction of weeds and feral animals • Concerns that the biosecurity plans would not be effective enough • Concerns that the infrastructure would increase fire hazard risks	27
Rural identity and livelihoods	• Strong sense of identity and pride as farmers in contributing to wider society through food security • Concerns that farmers and farming lifestyles are in decline • Sense of responsibility to pass legacy and livelihood onto children and grandchildren • Uncertainty of current and future farming activities, particularly what operations are and are not safe underneath powerlines • Changes to current operations due to uncertainty in timeframes, resulting in lower productivity and returns (e.g. crops not planted, herd size reduced) • Concerns regarding loss of productive agricultural land and impacts to regional food security, including in the context of the broader energy transition and the impacts on (loss of) productive agricultural land across NSW • Concerns about the integrity of the route planning process	23

Theme	Sub-themes	Frequency
Mental health and wellbeing	• Stress amongst directly affected landowners heightened due to: – Acquisition, land valuation and relocation process (for full acquisition) – Loss of intergenerational land – Lack of information – Protracted and changeable timeframes – Stress of acquisition process – Impacts on environmental values • Some landowners cited chronic and terminal health issues and vulnerabilities which they believe are being exacerbated by the project • Landowners requested a more empathetic, human centred engagement approach supported by tailored mental health resources • Loss of sleep due to concerns of acquisition and livelihoods • Cumulative impacts of acquisition process and relocation on top of existing work and carer responsibilities	21
Project responsiveness	• Perceived failure to close the loop (e.g. asset replacement negotiations, information requests) • Breakdown in communications or negotiations between staff changes • Sense that community are required to drive the engagement and disclosure processes	14
Visual and amenity	• Concerns about visual impacts and changes to the natural and rural landscape • Crackling noise from corona discharge – impacts on wildlife and stock • Impacts of construction vehicles near homes (i.e. dust, noise, safety) • Concerns creation of access tracks and easements could encourage anti-social and environmentally damaging behaviours (e.g. outdoor parties, illegal use of 4WD/trail bikes)	17
Physical safety and wellbeing	• Concerns of increased bushfire risk • Concerns regarding the negative health impacts of electromagnetic fields (EMF) from powerlines being in close proximity to residential dwellings and farming operations • Distrust in information provided by proponent and publicly available information • Concerns relate to cancer risks and reproductive issues in humans and cattle • Particular concerns for young children and adults that live, visit and work on the properties	13
Acquisition effects	• Difficulty to find replacement properties like-for-like given land value offers • Protracted timeframes of process • Perceptions of insufficient land valuation offers • Requests for fair and timely compensation across a range of impact types beyond acquisition (e.g. loss of tourism income, additional biosecurity requirements, rubbish management, fencing, etc.)	12
Community cohesion	• Increased family pressure, stress and conflict • Drivers of uncertainty for community related to relocation impacts, land valuation process and impacts to intergenerational properties • Changes in family planning and livelihood decision making	10
European heritage values	• Loss of or perceived threats to the loss of intergenerational farming properties • Landowners reported feeling a connection to the land that cannot be compensated through financial means	8
Energy transition	• Mixed support for the energy transition. Majority of landowners acknowledge and understand the need to decarbonise • Concerns regarding the quality and integrity of engagement and planning processes to achieve decarbonisation • Some concerns raised on circular economy/end of life plans for renewables and transmission infrastructure	7

Theme	Sub-themes	Frequency
Financial strain	• Cost of legal fees has been a financial burden on landowners, compounding the stress and health impacts • Loss of farm incomes and productivity	7
Benefits	• Short term employment and procurement benefits acknowledged • More assistance and engagement needed with local businesses and suppliers to help them take advantage of the economic opportunities that may arise from the project • Benefits for urban population acknowledged • Limited views that local communities would benefit into long term	5
Road safety & suitability	• Rural roads in their current state are unable to facilitate construction traffic • Safety and congestion concerns • Concern road deterioration would not be adequately fixed post construction	5
Aboriginal cultural heritage	• Concerns about the impacts of the development on Aboriginal cultural values	3

ii Near neighbours and traffic affected stakeholders – summary

Four interviews were held with near neighbours and residents along proposed construction routes. Interviews were carried out in person, via Microsoft Teams or over the phone. Table 4.5 provides a summary of the feedback received in these interviews.

Table 4.5 Near neighbours and traffic affected stakeholders - SIA engagement outcomes

Theme	Sub-themes	Frequency
Engagement and planning process	• Perceived lack of information leading to stress and angst • Feelings of being undervalued in planning process • SIA engagement viewed as tokenistic and rushed given lack of information and limited ability to influence outcomes • Uncertainty about local impacts due to absence of information • Respectful land acquisition processes reported on lower impact acquisitions • Frustrations around feedback not being actioned or further considered • Lack of consultation with appropriate emergency services	16
Impacts on rural livelihoods	• Views that farming livelihoods are being undervalued • Farming lifestyle holds strong values and is intrinsically part of a farmer's local identity	5
Construction	• Concerns for safety and congestion on small rural roads during construction • Concerns for speeding trucks on forestry roads (i.e. existing issue on Wollombi Road)	5
Project induced stress	• Community concern with respect to construction traffic given local roads are experiencing safety issues (e.g. Pokolbin Mountains Road, Wollombi Road) • Concerns for impacts on other landowners who are vulnerable • The planning and engagement process to date has negatively impacted some people's health	4
Tourism	• Concerns that construction activities could negatively impact holiday accommodation and winery businesses if not managed properly in advance • More detailed information is needed by tourism operators well in advance of operation so they can undertake business planning • Concerns regarding the impacts on the wine tourism industry from construction traffic impacts, including delays, safety, congestion and competition for parking, particularly in peak picking season when seasonal workers park their cars along roadways	5

Theme	Sub-themes	Frequency
Issues specific to stakeholders on Pokolbin Mountains Road include: • Road safety/unsuitability of road - insufficient drainage, an unsealed surface, steep vertical drop offs (western side), landslides and flooding, narrow width and poor visibility • Concerns for delays and congestion • Concerns for residents if emergency response or evacuations are required, particularly for vulnerable people living on the mountain • Requests to disclose more information, work with local residents and consider alternative routes • Lack of proactive engagement and unmet expectations e.g. promises of meetings • Strain of process causing health and wellbeing decline and community conflict (i.e. within the Pokolbin Mountains Road)		

i Aboriginal stakeholders – summary

Five interviews were held with Aboriginal stakeholders within the regional social locality including the Forestry Corporation of NSW, Singleton Aboriginal Focus group (AFG) and Cessnock AFG. Interviews were carried out in person, via Microsoft Teams and over the phone. Table 4.6 provides a summary of feedback received from these interviews.

Table 4.6 Aboriginal stakeholders SIA engagement outcomes

Theme	Sub-themes	Frequency
Cultural heritage – sites and landscapes	• The Watagan State Forest, mountain ranges and ridgelines hold important cultural landscape values • Sites and artefacts avoided but the infrastructure would still impact landscape values • Some engagement processes have caused strain on relationships between some Traditional Custodians, EnergyCo and Forestry Corporation of NSW • Important to protect rock shelters even if there is no artwork • Community feeling resigned to the project occurring	19
Investment initiatives	• A number of project investment ideas were posed by the groups including: – Aboriginal ranger programs – Culturally safe places – Cultural education and awareness programs, interpretation and story telling – Upgrades to local park infrastructure (e.g. lookouts) – Upgrades to forest amenities • Interagency collaboration on such initiatives welcomed • Long term benefits to community questioned. Short term jobs through pit excavations	9
Engagement process	• Some stakeholders expressed concern being able to access and walk on Country as part of investigations due to age and health • Engagement approaches inaccessible for some Traditional Owners • The engagement planning and approach was viewed as divisive for the community at times, with some stakeholders outside of the formal ACHA process feeling as though processes could have been more inclusive and respectful	8
Environmental values	• Concerns raised regarding environmental vandalism and management of easements in the future • Long term fire risks of the infrastructure raised as a concern • Potential impacts and management of biodiversity	7

Additionally, records from the Aboriginal Cultural Heritage meetings conducted as part of the ACHA studies were also analysed. These were carried out in person by the ACHA study team on the 9/08/2024 and 09/10/2024. Table 4.7 provides a summary of feedback received from these meetings.

Table 4.7 Aboriginal stakeholders - ACHA engagement outcomes

Theme	Sub-themes	Frequency
Cultural heritage - sites and landscapes	• Dissatisfaction with parts of the alignment, notably within Corrabare Flora Reserve and Watagan State forests, where there are significant cultural sites and landscapes • Concerns about specific sites or places potentially adversely affected, including laydown areas and other ancillary activities • Concerns about indirect impacts to sites in poor condition from potential vibration and other construction activities • Potential impact to sightlines and the broader cultural landscape • Sites were identified as having connection to Dreaming stories, and as such must be avoided	16
Engagement program	• Discussions around 'who speaks for Country' and the exclusion of some organisations and/or individuals • Participants raised that inputs for mitigation measures need to be raised • Onboarding and induction procedures for the project has been a barrier to some individuals • Concerns about management of cultural heritage following project approval	13
Project benefits	• Benefits to occur during construction, not just during operation • Reinstating connection to Country through consultation • Discussions around Aboriginal employment opportunities • Opportunity to organise a bus tour of the project for those unable to attend fieldwork to get some familiarisation of the project	4

ii Local and State government – summary

Six interviews and 1 workshop were carried out with relevant local and State government departments and representatives, including representatives (officers and elected representatives) from the affected councils of Cessnock, Singleton and Lake Macquarie. An interview was also carried out with one State MP. All relevant Mayors, State MPs and the Federal MP were offered one-on-one interviews however a number did not participate including representatives from Muswellbrook.

Table 4.8 provides a summary of feedback received from these interviews.

Table 4.8 Local and State government - SIA engagement outcomes

Theme	Sub-themes	Frequency
Community engagement and planning	• Greater disclosure on potential impacts required • More education and support for the acquisition process is needed for directly affected landowners • Some government agencies who are providing project support through advice and planning assistance requested funding/per diems for these positions/roles due to the time and resources required to provide the support • Effectiveness of broad communications program lacking – message needs to be clearer and 'upfront' • Targeted engagement with government officials viewed positively • Some negotiation processes have stalled with change in EnergyCo staff • Positive interactions with project team • Majority of community members are not aware of the project, or do not understand the significance • Improved communications and access to information is needed	19

Theme	Sub-themes	Frequency
Benefits	• Opportunity for local government to receive substantial investments in critical infrastructure (e.g. roads, community facilities) • Opportunity to leverage workforce in existing industries to support training and procurement	10
Aboriginal impacts	• Impacts to cultural heritage broadly acknowledged as a key issue • Importance of respectful engagement emphasised	5
Road safety and quality	• Concerns regarding the impact of increased and heavy construction traffic on local roads. Road safety and congestion highlighted • Roads require investment and improvement in general and for the project. Calls for project to invest in this • Pokolbin Mountain Road safety issues highlighted • Proactive agreement making between proponent and local governments on road management and maintenance desired • Mandalong Road identified as needing upgrades due to capacity restraints	9
Visual and amenity impacts	• Concern for environmental vandalism and anti-social behaviours as easements and access tracks are created • Minimise the aesthetic impact in popular recreational and tourist areas	4
Fire risk	• Project is occurring in high bushfire hazard area. Terrain difficult to access • Stakeholders questioned how the infrastructure would be protected, and by whom, during fire outbreaks • Investment in enhanced bushfire hazard reduction and response measures would be welcomed. • Relevant departments are not resourced to adequately mange and/or respond to this risk	3

iii Business and industry – summary

Four local business representatives (from Business Hunter, winery estates and a tourist accommodation provider) via 3 interviews were engaged for this SIA. Table 4.9 provides a summary of feedback received from these interviews.

Table 4.9 Businesses & industry - SIA engagement outcomes

Theme	Sub-themes	Frequency
Tourism industry – Hunter region	• Lack of information on project construction timeframes and other details causing anxiety and limiting the ability for long-term forward planning • Additional construction traffic, potentially resulting in congestion, delays and reduction of amenity, could negatively impact the tourism economy (e.g. Broke Road) • Business operators requested more project details so they can prepare in advance. • Protecting the land to ensure the Hunter region remains a productive wine tourism region • Concerns about changes to aesthetics	6
Construction	• Concerns that the construction management plans would not set out sufficient measures to protect livelihoods and the broader tourism industry • Concerns that the short construction timeframe is going to cause greater amenity impacts, such as dust, noise and congestion	3
Workforce demand/competition	• Workforce availability and labour competition is a persistent challenge in the Hunter • Local businesses unable to compete with mining wages • Construction workforce may be difficult to source	3

Theme	Sub-themes	Frequency
Economic benefits	• Hunter Valley businesses keen to be involved and benefit • Continue engaging with business community. Work on how local businesses can benefit. Need more support to understand how they can service the project • Some uncertainty around details such as when, where, how and would the project happen • Would like more information around community benefit sharing and how it can be accessed	3
Roads – safety and suitability	• Concerns around safety of the road for the workforce • Concerned about visitor experience and safety regarding roads, including Pokolbin Mountains Road	4

iv Community / special interest groups – summary

Four representatives from 3 community/special interest groups participated in Microsoft Teams and in-person interviews. Table 4.10 provides a summary of feedback received from these interviews.

Table 4.10 Community/special interest groups - SIA engagement outcomes

Theme	Sub-themes	Frequency
Environmental Impacts and Values	• Concerns for habitat clearing and wildlife loss • Concerns for increased risk of bushfires and adverse effects of fire and heat on wildlife • Cumulative development impacts in the region adversely impacting biodiversity	6
Project and EIS engagement	• Acknowledgement that EnergyCo has tried to 'do things differently' this time with respect to engagement • Calls for greater collaboration with wildlife carer community during the project land clearing process (e.g. spotter catcher requirements) • Engagement program has attempted to connect with the local community but more efforts required to broaden knowledge and awareness of project	5
Project induced stress	• Stress due to the anticipated impacts on wildlife of project land clearing that would occur • Some directly affected landowners are feeling quite distressed	4
Strain on services	• Demand on volunteers for wildlife rescues likely due to increase, and in more remote areas than currently serviced • Project construction and operation would create additional burden on volunteer time, resources and capacity (such as for the Rural Fire Service (RFS))	4

v Broad community

Views from the broader community and its representatives were gained through engagement with the RRG, community representatives and the SIA survey, which was distributed to the project communications database of over 800 people. Table 4.11 provides a summary of feedback from the interviews and RRG engagement.

Table 4.11 Broad community SIA engagement outcomes

Theme	Sub-themes	Frequency
Construction impacts and activities	• Questions related to size and location of accommodation facilities, travel arrangements of workforce, general community safety during construction, oversize over mass (OSOM) vehicle movements • Concerns regarding increase in construction traffic through 'wine country' (e.g. Pokolbin area)	9
Engagement and communications program	• Inconsistent and changeable messaging observed by participants • Low trust towards project due to perceived lack of disclosure • Broad community unaware of project, while those directly impacted are highly aware	7
Benefits and offsets	• Importance of biodiversity offsets due to vegetation clearing • Community seeking benefit sharing for road upgrades/repairs • EnergyCo looking to establish benefit agreements with impacted local government areas (LGAs) • Some view economic benefits as minimal and would take time to be realised	6
Acquisition affects	• Directly affected landowners are experiencing loss of land, an impact to connection to place/land would result in challenges in adapting to different livelihood practices • Some people directly affected are not able to easily adapt to the impacts of acquisition due to their vulnerabilities	3
Community tension	• Community perception that construction and mining workers do not give back to local community • Construction and mining accommodation facilities tolerated but not well accepted • Parts of the community are experiencing unprecedented stress from the project	3
Feedback and submissions	• Concerns the submission timeframes are too short • Participation channels/opportunities clarified	3

A total of 104 respondents participated in the survey, which ran from December 2024 to early March 2025. The age range most represented was 50 to 64 year olds, comprising 36% of all respondents. The majority – 77% - of respondents resided in the social study area[3]. The most represented stakeholder groups included local residents (41%), community organisation/groups (30%) and project near neighbours (19%). Table 4.12 provides a summary of the survey results and Figure 4.1 summarises general sentiment towards the project from respondents. *Appendix E (Community survey report)* provides a comprehensive survey report, the detail of which has been considered in the relevant impact evaluations.

[3] Includes the corridor, local and regional social localities

Table 4.12 Survey respondents – summary of results

Theme	Sub-theme or result	Frequency
Community values	• The top four most valued community assets in the Hunter region are the natural environment (86%), strong sense of community (54%), lifestyle (49%), and local identity and character (42%)	-
General project awareness	• 22% of respondents stated their level of project awareness as 'very good', 29% stated it was 'good' and 39% stated it was 'decent'. Ten percent (10%) of respondents rated a 'poor' or 'very poor' understanding of the project	-
Potential impacts	• 85% of respondents stated they were 'extremely concerned' about the impact of the project on the natural environment	-
	• Respondents re-emphasised the importance of biodiversity conservation to the Hunter community in their commentary	37
	• Ideas for environmental investment initiatives include: – Native wildlife conservation and Landcare groups – Investment in nearby national parks – 'Proper' restoration of existing coal and mining projects	6
	• 72% of respondents stated they were 'extremely concerned' about the impact of the project on change in land use	-
	• 67% of respondents stated they were 'extremely concerned' about the impact of the project on environmental amenity	-
	• Respondents emphasised concerns regarding road safety, poor road quality and congestion resulting from project construction	10
	• Respondents raised issues of stress, decline of mental health and wellbeing due to a lack of project information, acquisition processes and engagement approaches to date	26
	• The potential impacts of least concern to respondents included 'access to services', 'access to housing and/or short-term accommodation', 'reduced property prices' and 'changes to industries', with 18%, 18%, 9% and 16% of respondents rated 'not at all concerned' for these impacts, respectively	-
Potential benefits	• 37% of respondents strongly agreed that the project would contribute towards income diversification for affected landowners	-
	• 30% strongly agreed it would contribute towards the reliability and stability of the network	-
	• 27% strongly agreed it will create local business opportunities	-
	• 37% either disagreed or strongly disagreed that the project will contribute towards the stability of the energy network and 33% either disagreed or strongly disagreed that it would abate climate change	-
	• Suggestions offered for community investments included local hall upgrades, education programs and facilities, children's play facilities, development and capacity building for Aboriginal businesses	4
	• 61% of respondents added they believed there would be no benefits for the local community	23
	• 21% of respondents suggested using existing infrastructure/co-location and/or alternative routes	8
Investment initiatives	• 12% of respondents invested in local environmental initiatives / land restoration projects	12
	• 11% of respondents stated the project won't result in any new initiatives or investments	11
	• 6% of respondents hope for investment in social infrastructure and community amenities	6

Theme	Sub-theme or result	Frequency
Mitigation strategies	The top suggestions included:	
	• Use existing transmission corridors for the project	21
	• Improve the communication and collaboration with the local community	9
	• Change the direction of the corridor	8
	• Improve or revise compensation for affected landowners	7
Other issues of concern	Importance of environmental conservation in the Hunter region, including replacement of affected wildlife rescue release site and conservation initiatives	13
	Improve the quality of the community engagement and communications program	7
	Emphasis on the mental health and wellbeing impacts of affected landowners	6

4.3 Sentiment analysis

A sentiment analysis was conducted against all open-ended response comments whereby each respondent comment was read and then coded as either positive, negative, neutral or mixed. The frequency of each comment was tallied and charted. This analysis was conducted for the primary[4] and secondary data as well as for the overall sentiment aggregation.

Sentiment results for the survey are outlined in Figure 4.1, in which 63% of responses were negative, 26% neutral, 8% were positive and 3% were mixed (see *Appendix E(Community survey report)*).

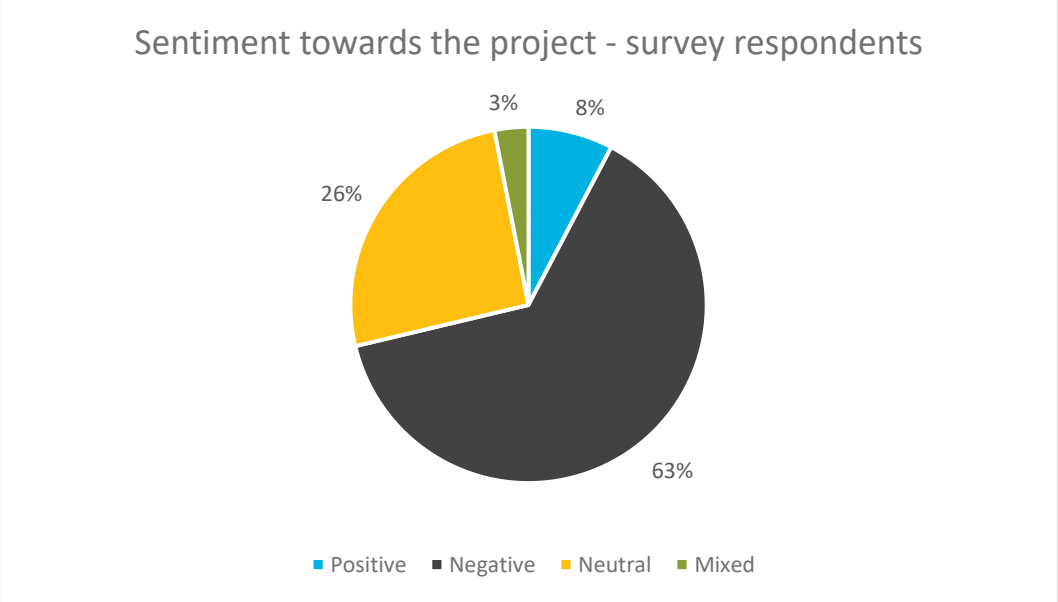


Figure 4.1 Sentiment towards project – survey respondents

[4] Data gathered specifically for this project by the EMM team

Regarding the SIA specific engagement: 52% of the responses were negative, 26% were neutral, 17% were mixed and 5% were positive (Figure 4.2).

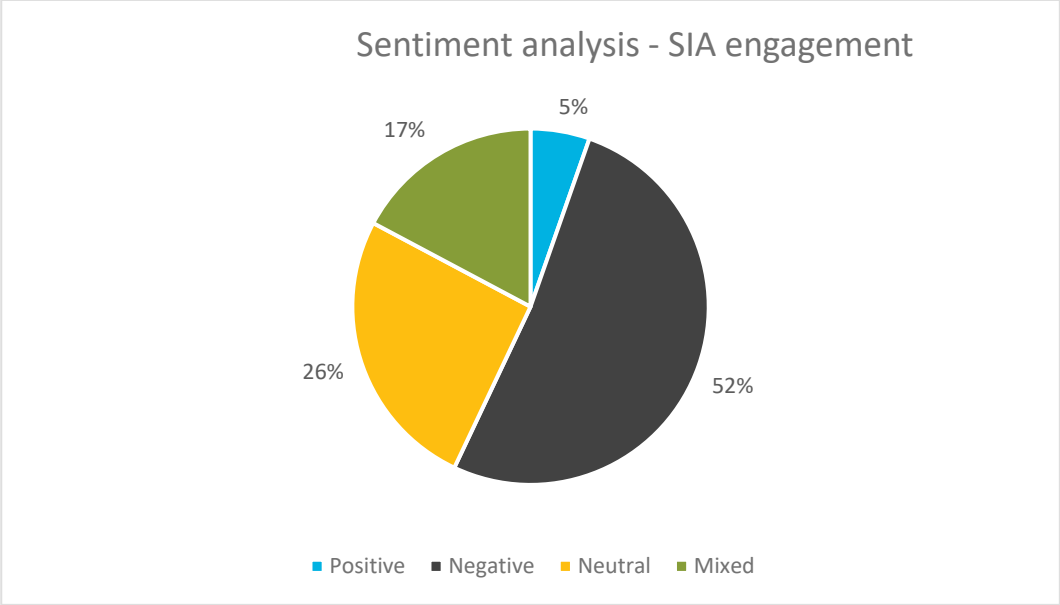


Figure 4.2 Sentiment analysis – SIA engagement

Regarding the project engagement at the time the sentiment analysis was conducted (March 2025): 53% were negative, 26% of the responses were neutral, 19% were mixed and 3% were positive (Figure 4.3).

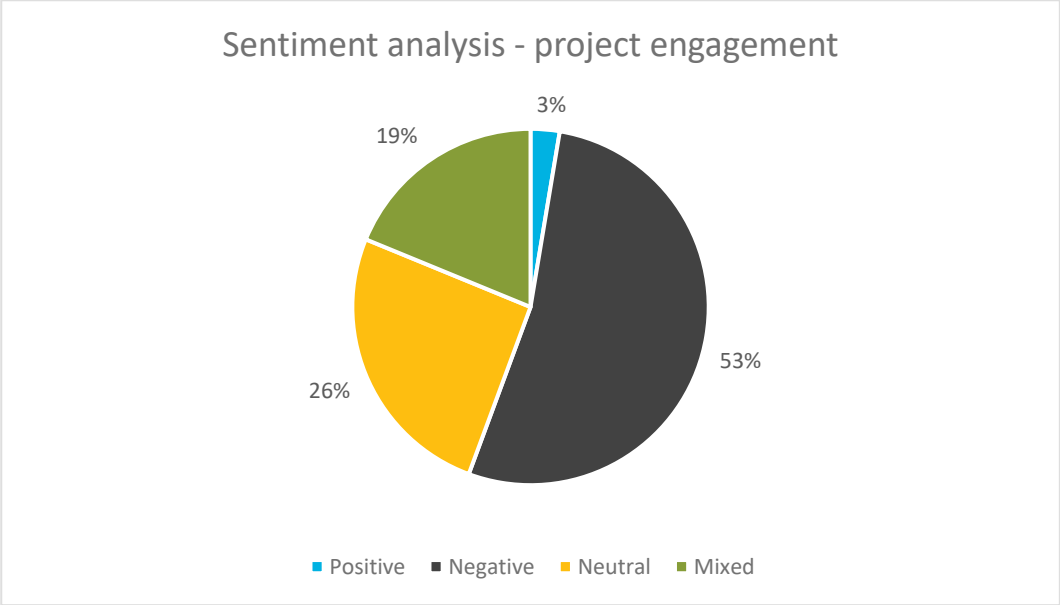


Figure 4.3 Sentiment analysis – project engagement

4.4 Summary of SIA engagement findings

Key themes and findings emerging from all SIA engagement outcomes are summarised below.

4.4.1 Engagement approach and activities

- The most frequently raised theme across all stakeholder groups was the perceived poor quality of the early engagement programs and planning/EIS process.
- There are high levels of project awareness in directly impacted areas, but low levels of awareness across the broader community. There is a good level of project awareness within key stakeholder groups such as government and elected officials.
- Most landowners expressed a nuanced understanding of the project's drivers, including an understanding and acceptance that large projects need to happen to ensure future energy security, but expressed frustrations at the way in which the planning processes and engagement have been undertaken to date.
- There is a belief amongst some that the SIA and EIS is a 'tick box' effort and that the SIA process is being rushed through.
- There is a perception by some of a lack of empathy and respect towards rural livelihoods and lifestyles, and lack of transparency and disclosure.
- There have been requests to adopt a more sensitive, transparent and human-focussed engagement approach.

4.4.2 Aboriginal cultural heritage

- Traditional Owners place value on the cultural landscapes in the vicinity of Lizard Rock, Mount Sugarloaf, Mount Yengo, Mount Warrawolong and Martinsville. While located some distance from the project, a small number of Awabakal Traditional Owners have raised concerns about the adverse impacts of the project on the view-lines, connections, and the broader cultural landscape.
- Other Aboriginal representatives outside of the registered Aboriginal parties (RAP) process have conveyed that the ridgelines of the Watagan State Forest are culturally significant and consequently a higher number of people are unsupportive of the project due to the impacts on cultural landscape values.
- Some representatives of the Traditional Owners reported a sense of hopelessness and lack of control over decision making processes. However, it was noted that relationships between Traditional Owners and the project have improved over time.
- Improved confidence in project processes (from early 2025) among many representatives of the project's Aboriginal Focus Groups, reflecting positively on the project's responsiveness to concerns raised in previous engagements

4.4.3 Mental health and wellbeing

- Directly affected landowners reported feeling high levels of stress, anxiety and burn-out, primarily due to the way the engagement and acquisition process have been carried out.

- Several vulnerable individuals directly affected by land acquisition requested the engagement approaches be tailored and more empathetic to account for their needs and to minimise further mental health pressures.

- Representatives from the wildlife carer community also indicated the carer community were experiencing stress in anticipation of the impacts to wildlife and increase in demand for rescue/caring roles they are likely to be required to undertake.

4.4.4 Environmental values

- A high proportion of stakeholders expressed concern regarding the anticipated impacts of the project on the natural environment, predominantly habitat and biodiversity loss. Stakeholders in the central and southern sections of the HTP corridor in particular expressed values around the preservation of the natural environment.

- Many stakeholders recognise and broadly support the energy transition, but do not support the level of ecological impact on the State forests of the Watagans to achieve this.

4.4.5 Intergenerational properties

- Multiple properties (7 were identified through interviews) impacted by acquisition or construction activities have been owned, farmed and managed by families for generations, providing feedback that the acquisition and development process stressful for them and an impact that cannot be compensated for financially.

4.4.6 Business and livelihood

- There are concerns regarding the potential impact of project construction activities on land management practices affecting operation, productivity and income.

- Businesses and farmers requested more detailed information regarding construction activities, timeframes and operational implications to enable them to plan for potential temporary construction impacts they may face.

- Business representatives were hopeful of securing supply opportunities through the project, but indicated that more information and support is needed to understand how to do this.

4.4.7 Traffic and access

- Widely held concerns for the suitability of the road network in the region to handle construction traffic. Numerous participants raised concerns about existing safety issues along Pokolbin Mountains Road.

- Views that roads require upgrades prior to construction commencing and are expected to be left in the same or a better state after construction is complete. Local government emphasised that they are not able to fund road improvements.

- Concerns that traffic volume, congestion and delays could negatively impact the tourism trade in the Hunter winery region (e.g. Pokolbin area).

4.4.8 Project employment, procurement, and training

- There was some acknowledgement that the project would bring jobs and business opportunities, but this would take time, and the community and businesses do not fully understand the specifics and extent of this.
- There are concerns about labour force competition due to existing mining and renewable projects in the area. While businesses view themselves as adaptable, they require ongoing engagement from the project to understand how they can benefit from supply and procurement opportunities.

4.4.9 Volunteer services

- Concerns within community and volunteer organisations that the project would increase demand on services which they are not currently set up to service.
- Concerns for the stress levels within volunteer originations, particularly the wildlife carer community, due to anticipated fauna casualties.

4.5 Response to SIA engagement

Input received during the SIA and EIS consultation period has directly influenced both the SIA team's approach to the study, as well as EnergyCo's approach to project planning and engagement. Key examples of how engagement has been addressed in this SIA include:

- while the SIA engagement program was designed on the principles of access and inclusion and to ensure a diversity of views are reflected within the study, this program was iterative to respond to additional and specific requests for interview in 2025
- stakeholder requests for targeted and tailored engagement have been incorporated into the proposed mitigation measure S02 Community Communications Strategy (see *section 11.2*) that will be implemented during detailed design and construction.

Additional feedback received during the SIA consultation period informed a number of procedural improvements and initiatives to address the needs of directly affected and neighbouring landowners, local communities and Aboriginal focus groups. Key responses include:

- strengthened mental health support, with free, publicly available services extended and promoted for local use
- independent engagement review, commissioned by EnergyCo in early 2025, to ensure continuous improvement. The review's recommendations are being integrated into ongoing engagement strategies to increase transparency, cultural and local literacy, and community influence over project decisions
- Aboriginal collaboration, ensuring community values and heritage are reflected in project outcomes. Engagement records from February 2025 indicate improved confidence in project processes among many RAPs who participated in the project's Aboriginal Focus Groups, reflecting positively on the project's responsiveness to concerns raised previously in July 2024 and prior engagement events
- EnergyCo continues to communicate the ways that community engagement processes have directly influenced project design changes. Ongoing communication about these outcomes, not only demonstrates how the engagement process has helped to minimise the project's impacts but also contribute to the rebuild of trust with affected stakeholders

- continual promotion of a human-centred approach to community engagement i.e. culturally appropriate, respectful, transparent, empathetic, proactive and well-informed focussing on building trust
- ongoing provision of timely information to landowners, informing them of the decision-making process and directing them to appropriate support during negotiations
- ensuring project staff, particularly engagement personnel, are adequately qualified, have a solid understanding of community values and demographics, particularly strongly held values associated with farming, rural lifestyles and environmental conservation. Employing suitably qualified staff who are local and/or have a strong understanding and respect for rural and conservation values.

5 Existing environment

This chapter provides an integrated analysis of existing socio-economic characteristics across the Hunter Transmission Project (HTP, the project). Specifically, this baseline assessment aims to:

- define and describe the existing social characteristics prior to project development
- provide a foundation for analysing likely changes to the baseline environment and quantifying the significance of resulting impacts.

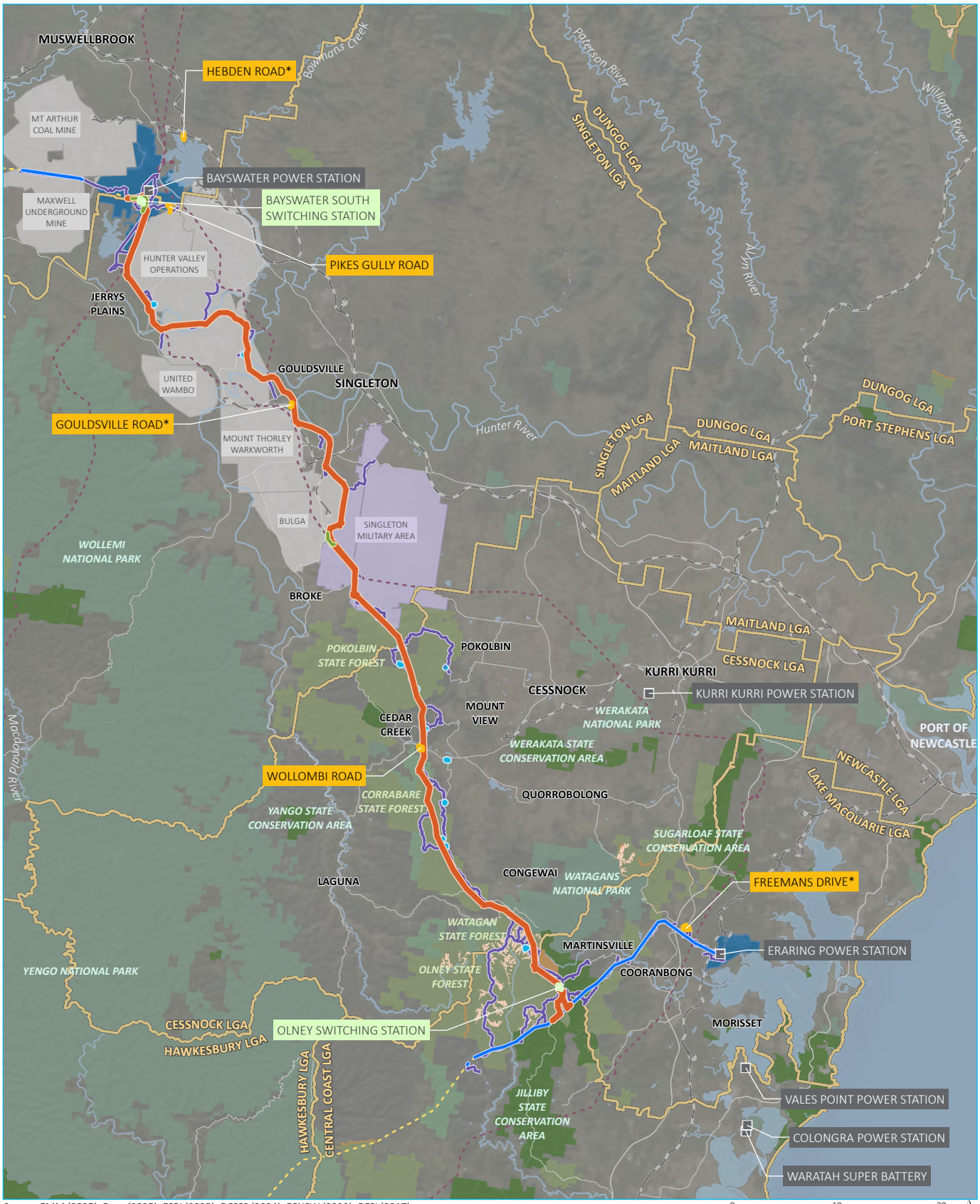
The study area hierarchy, as defined in *section 3.4*, has been applied. Social characteristics for these social localities are benchmarked against the Hunter region (including Newcastle) and the broader New South Wales (NSW) context. Where available, baseline data is supplemented with consultation insights to enhance local relevance.

A number of social characteristics are depicted in terms of broad sections of the corridor due to the divergent nature of communities along the corridor. These included the northern section (Bayswater to Broke), central section (Pokolbin to Corrabare) and southern section (Olney to Eraring).

The detailed baseline characterisation of the HTP corridor, local and regional social localities is provided in *section 5.3 (Social baseline)*.

5.1 Land use and settlement

The HTP corridor spans diverse landscapes that support traditional cultural and native title interests encompassing industrial, rural, and natural environments (see Figure 5.1).



Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); DFSI (2017)

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GDA2020 MGA Zone 56

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KEY

Project impact area

- HTP corridor
- Switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Adjustment to existing transmission line
- Upgrades to existing transmission line
- Access track

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest
- Harwood plantation
- Recreation area
- Energy
- Defence
- Mining
- Local government area

Regional context

Hunter Transmission Project
Social Impact Statement
Figure 5.1

EMM
creating opportunities

5.1.1 Traditional ownership

Most of the study area is associated with the Wonnarua people of Hunter Valley and the Awabakal and Darkinjung people of the Lake Macquarie and Newcastle coastal regions (Figure 5.2). Table B.1 summarises the Native Title claims in the study area to date. If

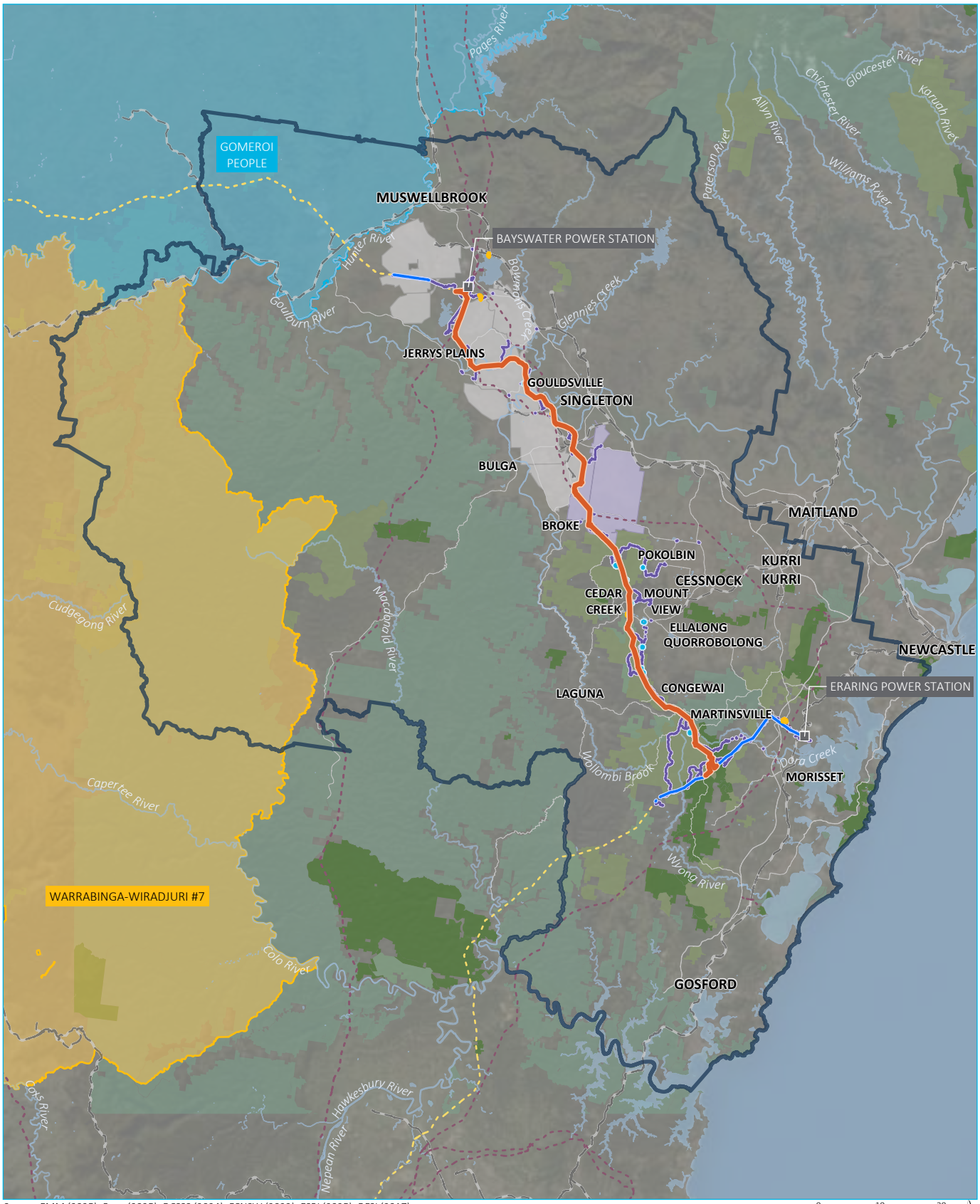
Traditional Owners have deep historical ties to the landscapes, reflected in sacred sites and cultural traditions. Key towns within the local social locality feature significant cultural heritage, with Aboriginal sites located near Muswellbrook, Singleton and Cessnock.

Across the Hunter region, Aboriginal sites such as ceremonial grounds, scarred trees, and trading routes demonstrate the enduring presence and influence of Aboriginal communities (Cessnock City Council 2023).

Aboriginal representation is discussed in *section 5.5.3*, ranging from 6% to 12% across the project's local social locality, exceeding the NSW average of 3.4%.

While there are currently no active native title claims in the corridor or local social locality, there are two claims in the north-west portion of the regional social locality as shown in Figure 5.3.

Figure 5.2 The AIATSIS map of Aboriginal Australia



Source: EMM (2025); Beca (2025); DCSSS (2024); FCNSW (2022); ESRI (2025); DFSI (2017)

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KEY

- Regional social locality

Project impact area
- HTP corridor
- Switching station
- Construction support site
- Laydown area
- Adjustment to existing transmission line
- Upgrades to existing transmission line
- Access track

Register of Native Title Claims
- NC2011/006 - Gomeroi People
- NC2018/002 - Warrabinga-Wiradjuri #7

Existing environment
- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve
- State conservation area
- Mining
- Defence

Native Title

Hunter Transmission Project
Social Impact Assessment
Figure 5.3

EMM
creating opportunities

5.1.2 Settlement patterns

Settlements across the social localities range from rural and resource-based communities to urban growth corridors and emerging residential hubs. Population density is highest in the southern section of the project aligning with NSW urban growth trends. The northern and central sections of the HTP corridor retain rural character, with land-use patterns shaped by mining, tourism and agriculture.

Appendix C (Supporting information – planning and policy guidance) documents the State, regional and local planning and policy context with particular reference to land use planning, managing and coordinating cumulative impacts and benefits from roadmap projects[5].

i Regional social locality

The regional social locality comprises the following 5 local government areas (LGAs): Singleton, Muswellbrook, Cessnock, Lake Macquarie and Central Coast. Strategic state and local plans aim to manage growth sustainably, ensuring adequate infrastructure provision, including pursuing opportunities from renewable energy investment. A brief profile of each individual local government area, their settlement history and unique characteristics are described below.

- **Singleton LGA**: Settled in the 1820s and originally named 'St Patrick's Plains,' Singleton was officially gazetted in 1836, honouring explorer Benjamin Singleton (Coalfields Local History Association, n. d.). The arrival of the railway that same year boosted growth by connecting the region's agriculture and coal to broader markets. In 1893, the St Clair Mission was established to relocated Wonnarua, Darkinjung, Worimi and Awabakal peoples, later renamed Mount Olive Reserve before closing in 1923 (Find & Connect, 2011). Today, Singleton is transitioning from a mining-heavy past towards a diversified economy, focusing on sustainable growth, tourism, agriculture and community development (Singleton Council, 2020).

- **Muswellbrook LGA**: Established in the 1820s, Muswellbrook is a key regional centre of the Upper Hunter region. The area's primary township was originally gazetted 'Muscle Brooke' in 1833, said to be derived from mussels discovered in the local creek. The name was later altered to Muswellbrook. The construction of the Great Northern Railway in the 1860S enhanced connectivity, promoting further growth and development of the region. Historically reliant on agriculture and coal mining, the area, like Singleton, is currently navigating economic transition and responding to mine closures. Strategic planning objectives for the Muswellbrook LGA include promoting renewable energy, agriculture, tourism, and sustainable community development (Muswellbrook Shire Council, 2020).

- **Cessnock LGA:** European settlement of this area began in the 1820s influenced by a land grant to Scottish settler John Campbell named 'Cessnock Estate' in 1826. The township of Cessnock developed from the 1850s, and the discovery of the Greta coal seam by Professor Edgewood David in the late 1880s spurred significant social and economic change. Development of the coal mining industry shaped the area's urban development, transport routes and industrial landscape from the early 1900s. The area continues to be centred on coal mining as well as viticulture (Coalfields Local History Association, n.d.) (Cessnock City Council, 2020).

[5] In November 2020, the NSW Government released the NSW Electricity Infrastructure Roadmap (the Roadmap). The Roadmap is the state's 20 year plan to transform the electricity system into one that provides affordable, clean and reliable energy for everyone.

- **Lake Macquarie LGA:** Lake Macquarie and surrounds was traditionally inhabited by the Awabakal people and carried a traditional place name of Awaba (Miromaa ALTC, n.d.). European settlement began in the 1800s and Lake Macquarie's development specifically revolved around coal mining and maritime activities. Temporarily named 'Reid's Mistake' by Captain William Reid on his search for the Hunter River, the lake was formally named in honour of Governor Lachlan Macquarie in 1826. In 1825, Reverand Threlkeld established a Mission, under the auspices of the London Missionary Society, at Bahtaba (present day Belmont) on the eastern shore of Lake Macquarie, which was later relocated to the western shore of the lake (present day Coal Point and Toronto) (Coalfields Local History Association, n.d.). During this period, an Awabakal Leader called Biraban worked with Rev Threlkeld to document the Awabakal language, producing some of the earliest linguistic records of an Aboriginal language in Australia (Coalfields Local History Association, n.d.) . Lake Macquarie and its surrounds has a rich history and is now a thriving region balancing residential growth and environmental sustainability (Lake Macquarie City Council, 2019).

- **Central Coast LGA:** Traditionally inhabited by the Guringai and Darkinjung people, European settlement occurred as with other areas around the 1820s. Land grants issued in 1825 to William Cape at Wyong and Percy Simpson at Cooranbong fostered growth in agriculture and mining economies, as did essential infrastructure like the Great Northern Road connecting the Hunter region to Sydney (Wyong Shire Council, 2010). The Central Coast has emerged as a coastal settlement blending rural, urban and natural features. The area's planning focuses on sustainable urban development, protecting sensitive ecosystems, and improving infrastructure to keep pace with a growing population. Tourism, health services and advanced manufacturing are among its key economic drivers (Central Coast Council, 2018).

ii Local social locality

The local social locality extends 10 kilometres around the HTP corridor and captures several nearby towns and villages. These settlements range from rural communities to local and regional service centres. The population within the local social locality is more concentrated than the corridor social locality. Local amenities support broader communities needs and include more schools, health care and recreational facilities. Infrastructure is more developed, with greater access to services and transport networks.

- **Muswellbrook and Singleton**: As primary service centre and hubs for Muswellbrook and Singleton LGAs, the history of these townships is described in the preceding *section 5.1.2* as settled and developed in the 1820s, and driven by mining, agriculture and viticulture industry. At the 2021 Census, Muswellbrook was home to 10,901 residents, and Singleton home to 14,299 residents.

- **Jerry Plains**: Jerrys Plains is a small, historic village located about 33 kilometres west of Singleton on the Golden Highway. The area has a rich history, with early European exploration dating back to 1820. The town has been home to various industries including horse breeding, viticulture, and coal mining. At the 2021 Census, it had a population of 447 people with 92 families living in 148 private dwellings.

- **Bulga**: Bulga is situated southwest of Singleton with a population of 354 people as of the 2016 Census. The name is derived from an Aboriginal word meaning 'mountain' or 'isolated hill'. The village has been at the centre of protests regarding the expansion of the nearby Warkworth open-cut coal mine, with residents raising concerns about noise, coal dust, and road closures. In 2017, a $6.6 million Bulga Community Project Fund was established to support the sustainability of the area.

- **Pokolbin**: Pokolbin is best known as the heart of the Hunter region wine country, featuring some of the oldest and most prestigious vineyards in Australia. The name is believed to have originated from the Wonnarua language, meaning 'very hot place' or 'big hill'. As of the 2021 Census, Pokolbin had a population of 1,049 people with a mature population. Photograph 5.2 is a beef cattle property near Pokolbin Mountains Road and Photograph 5.3 is Broken Back Road, a proposed construction road which runs through farmland and forested areas.

- **Cessnock:** Cessnock is known for its connection to the Hunter region vineyards, with significant historical and cultural ties. This history is described in the preceding *section 5.1.2*, as Cessnock serves as the main centre for the Cessnock LGA. At the 2021 Census, Cessnock was home to 23,211 residents.

- **Mount View:** Mount View is a picturesque locality known for its stunning views and tranquil atmosphere. and is part of the Hunter region wine country. It is a small locality with a population of 114 people as of the 2021 Census.

- **Broke:** A small rural township Broke has a settlement history rooted in agriculture and viticulture. Located on the traditional lands of the Wonnarua people, European settlement commenced in the early 19th century, drawn to the fertile alluvial plains to support farming and livestock activities. Over time, Broke has become known for its contributions to the viticulture industry with vineyards and wine production playing a central role in its economy and identity. Today, Broke maintains a rural and community-focused lifestyle underpinned by natural beauty and its role in the Hunter Valley wine region. At the 2021 Census Broke had a population of around 231 (ABS, 2021); (DPIE, 2022).

- **Millfield:** Located in the Cessnock City LGA, Millfield was developed in the 1830s with farming and coal mining, and connected by the Great North Road to Cessnock, Maitland and Newcastle (DAFF, 1999). The Rising Sun Inn, constructed between 1831 and 1832 is a notable historical building in Millfield, functioning as accommodation, a general store, post office, and residence over the years, and currently operating as a museum, gallery and craft shop (The Sydney Morning Herald, 2008). At the 2021 Census, Millfield had a population of 1071 residents. Wollombi Road is the main road through Millfield, shown in Photograph 5.1.

- **Ellalong:** Ellalong is a small village located nestled at the foot of the Watagan Mountains. It is home to the Ellalong Lagoon which holds Aboriginal cultural significance. Ellalong offers a peaceful rural lifestyle with a strong sense of community. Ellalong had a population of 1351 people as of the 2021 Census.

- **Quorrobolong:** Quorrobolong is a small locality located about 11 km southeast of Cessnock adjacent to the Watagans National Park, the name comes from an Aboriginal word meaning ‘a low line of hills’; the area is part of the traditional lands of the Wonnarua people. Surveys have identified ceremonial grounds and burial sites in the region, highlighting its cultural significance. Quorrobolong had a population of 573 people as of the 2021 Census.

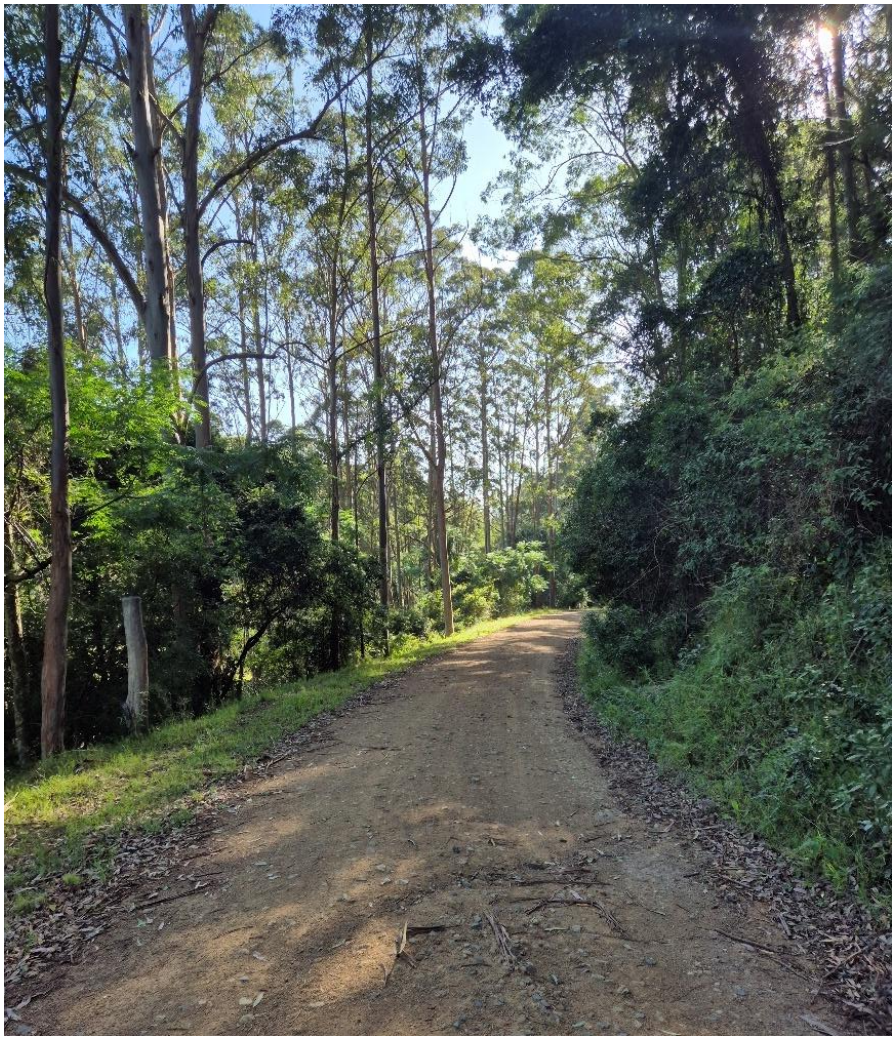
- **Congewai:** Congewai is a peaceful rural locality situated near the Watagan Mountains. It is known for its scenic beauty, rolling pastures, and tranquil atmosphere, making it a haven for outdoor enthusiasts. The locality has a strong connection to its agricultural roots, with many properties still operating as working farms. Congewai had a population of 206 people as of the 2021 Census.

- **Cooranbong**: Located in the Lake Macquarie region on the traditional lands of Awabakal Peoples, Cooranbong’s European settlement began in the early 19th century. Agriculture and timber harvesting were the area’s main economic activities. The establishment of Avondale College, a prominent Seventh-day Adventist institution shaped the township’s identity and contributed to the development of Cooranbong as a centre for both education and community, as it known today. Cooranbong is also known for its proximity to Watagans National Park, and its tranquil rural setting. At the 2021 Census, Cooranbong had a population of around 7077 people.

- **Martinsville**: A small rural township in Lake Macquarie, Martinsville has a settlement history with strong connections to forestry and agriculture. Traditionally inhabited by the Awabakal people, the area holds cultural and environmental significance due to its natural surroundings. European settlement began in the mid-19th century, driven by an abundance of timber in the Watagan Mountains which underpinned a thriving logging industry. Over time, Martinsville transitioned into a quiet residential area, characterised by a strong community focus and a commitment to preserving the natural environment. Its proximity to the Watagans National Park underscores its connection to nature as well as rural heritage. At the 2021 Census, Martinsville had a population of around 389 people.

Photograph 5.1 Wollombi Road Millfield

Photograph 5.2 Beef cattle grazing near Pokolbin Mountains Road



Photograph 5.3 Broken Back Road

iii Corridor social locality

The corridor social locality is the total land area directly affected by the construction and operation of the project and encompasses a 3.14-kilometre-wide area (~1.5 kilometres either side of the HTP corridor).

For the purposes of this study, directly affected landowners are landowners of property directly affected by the project footprint typically through full or partial property acquisition, easement acquisition, temporary construction occupation, and required land access for the project. Directly affected landowners and near neighbours in the corridor social locality are also expected to experience the most direct change as a result of the project, including visual impacts. The corridor traverses a predominantly rural landscape and features a mix of public and privately owned land (Figure 3.3). Settlements within the corridor social locality are generally sparse comprising scattered farmhouses, small rural settlements and forested areas. The corridor also traverses the Singleton Military Area and significant transport routes like the Golden Highway. Detailed information on property ownership is detailed in *Chapter 12 (Land use and Property)* of the environmental impact statement (EIS). Table 5.1 presents land ownership type by area and land parcels within the SIA corridor social locality.

Table 5.1 Land ownership - SIA corridor social locality

Ownership	Area (ha)	Land parcels (count)
Freehold	5514.64	217
Local Government	89.56	50
State Government*	10935.34	50
Commonwealth Government	3723.34	39
Mining Company	11160.32	363
Other	2484.37	94

Note *including State Conservation Areas, State Forests, State Rail Authority and State Transport Authority, and Crown Land

A number of small localities are in proximity to the corridor social locality. A summary of settlement patterns and history across these localities are provided below to give further context to historic land use and settlement of the corridor social locality:

- **Maison Dieu:** located in the Singleton LGA and Hunter region and home to 175 residents at the 2021 Census (ABS, 2021). European settlement is likely to have occurred from the 1820s as with other parts of the now Singleton LGA, with property granted to the Nowland brothers in 1824 and the locally significant Hambledon Hill House completed in 1865. The surrounding gardens and trees are also of local historical significance. Maison Dieu is surrounded by mining industry operations and rural land use and was reported as part of the Patrick Pains Mine Subsidence District in 2017 (DFSI, 2017).

- **Gouldsville**: a small locality with historic ties to the diary and farming industry, with industry bodies such as the Gouldsville Agricultural Bureau operating as recently as the 1950s and 1960s (TerryCallaghan, 2025). Recent population data is not reported for Gouldsville due its small geographic area and sample size.

- **Mt Thorley:** once described as part of a 'triangle of country living' (National Library of Australia, 2010), together with Gouldsville and Long Point, Mount Thorley is one of Singleton's heavy industrial and engineering sectors. Settled by the pioneer Philip Thorley, a member of the exploration party which discovered St Patrick's Plains in 1820 (Singleton Council, 2025).

- **Cedar Creek**: located near Singleton has a rich history consistent with the broader Hunter region. Its abundant cedar and rosewood trees led to a thriving timber industry in the 19th century and contributed to the naming of the locality (Cessnock City Library, 2025). Following the timber industry, settlers cultivated crops such as maize, barley, oats, wheat, tobacco and potato using the Great North Road as the primary trade route linking to larger markets in Sydney (Cessnock City Library, 2025). Today, Cedar Creek is recognised for its historical significance, character and natural features. Efforts to preserve the history of areas like Cedar Creek are evidence in local historical societies (Singleton Museum, 2025).

5.1.3 Transport and connectivity

Key transport infrastructure within the corridor social locality includes:

- Golden Highway: a State-significant freight route connecting Dubbo to the New England Highway
- Putty Road, Wollombi Road and Cessnock Road: important local road arteries
- Hunter Valley Coal Rail Network: a major regional rail asset supporting the mining industry.

While these routes facilitate industrial and freight connectivity, the corridor social locality has limited public transport options which is likely attributed to the social locality's low population density.

At the local level, key centres like Singleton, Muswellbrook and Cessnock are also key transport hubs connected by:

- New England Highway: a critical arterial road for regional travel and economic activity
- Denman Road: supporting access to Muswellbrook.

Both Muswellbrook and Singleton are identified as regionally significant centres under the *Hunter Regional Plan 2041* (DPIE 2021), underscoring their importance as transport nodes for freight, tourism, and daily commutes.

Public transport services have a limited frequency and coverage across the local social locality, which restricts mobility for non-driving populations, including youth and elderly residents.

At the regional scale, transport infrastructure supports broader economic activities covering the Central Coast, Lake Macquarie, Muswellbrook, Singleton, and Cessnock LGAs.

Multiple community stakeholders and representatives spoke about the poor and declining quality of the region's roads. One of the key challenges for the region being insufficient infrastructure to meet the population growth. One council explained the largest challenge it has is to maintain and upgrade the road network stressing it could not take on any additional costs that may result from project traffic impacts.

Members of the Pokolbin Mountains Road Lobby Group elected representatives and local government representatives all expressed serious concerns over the safety and suitability of Pokolbin Mountains Road and Broken Back Road to be used for construction traffic. Currently these roads are often steep, narrow, with sheer drop offs, unsealed, easily congested and have a history of accidents. Speeding is also known to be an issue on Watagan Forest Road. Participants also advised that Broke Road and other roads in the Pokolbin region are frequented by tourists, and during peak grape harvesting season (January to March) many of the road verges are used by seasonal pickers to park their vehicles.

5.1.4 Environmental features and landscape qualities

Environmental features and landscape qualities underpin local quality of life, including air quality, ambient noise, and water sources. The HTP corridor traverses varied landscapes of high environmental and social value, including:

- floodplains surrounding Hunter River (shown in Photograph 5.4)
- flora and nature reserves such as Corrabare and Warrawolong
- State Forests such as Pokolbin, Watagans, and Olney
- environmentally sensitive watercourses, Wollombi Brook and Loders Creek.

Scenic vistas, particularly in the central section of the HTP corridor, contribute to the area's eco-tourism appeal. Photograph 5.4, Photograph 5.5 and Photograph 5.6 represent the scenic quality of the local area, representing the mountainous terrain of Pokolbin. Local environmental features include protected forests, National parks, and vineyards that define the Hunter region's landscape character. Key environmental corridors, such as those linking Watagans National Park to State forests, enhance biodiversity and recreation (Cessnock City Council, 2020) (Singleton Council, 2020). At the regional scale, the landscape is shaped by expansive national parks (e.g. Wollemi), major watercourses (e.g. Hunter River), and world-renowned vineyards. These features support diverse ecosystems, tourism, and agricultural activities (see Figure 5.1). However, competing land uses, including mining, create pressures on environmental integrity requiring strategic management (DPIE, 2022).

Photograph 5.4 Hunter River Floodplains

Photograph 5.5 Scenic vistas towards the Watagans Mountains from Pokolbin

Photograph 5.6 Pokolbin Mountains Lookout

5.2 Community values

Community values encompass the shared beliefs, priorities and cultural attributes that bond members of a community and guide their responses to external developments (Vanclay, 2003).

The HTP social locality is characterised by diverse communities with a strong value placed on connection to place, heritage and the natural environment. These values are rooted in the region's history, economic drivers, natural environment, and cultural heritage and reflected in local and regional plans (documented in *Appendix C (Supporting information – planning and guidance))* that emphasise the protection and enhancement of social and cultural values, such as community cohesion, environmental stewardship, and recognition of Aboriginal heritage.

Relevant insights gained from the SIA engagement are summarised in Table 5.2.

Table 5.2 SIA engagement insights

Consultation theme-	Insight
Cultural Heritage – Aboriginal	Traditional Custodians place value on the cultural landscapes in the vicinity of Lizard Rock, Mount Sugarloaf, Mount Yengo, Mount Warrawolong and Martinsville While some distance from the project, a small number of Awabakal Traditional Owners have raised concerns about the adverse impacts of the project on the view-lines, connections, and the broader cultural landscape
Cultural Heritage - European	Much of the region are working-class communities characterised by a high work ethic, strong social bonds and tight knit relationships These were developed throughout the history of mining and are noticeably still held strongly by the older generation and intergenerational families There is a long history of mining and power generation in the Hunter region, and it is acknowledged that this has built prosperity There is strong affinity to this industry and the transition requires a respectful approach
Energy transition	There are mixed views towards the energy transition Construction jobs and procurement opportunities from the transition are viewed positively Most participants held the view that the way the transition is being undertaken, particularly the community engagement, is of a poor standard and requires improvement
Engagement approaches	Community engagement and interactions, which are open, honest and transparent are highly valued Community representatives repeatedly emphasised the importance of 'straight up' conversations (i.e. complete honesty) and doing what is promised Trust in 'outsiders', particularly people from urban areas, takes a long time to build
Land use	The region is characterised by a large number of intergenerational farming and lifestyle properties Landowners describe having a strong connections to the land and many see themselves as stewards of the land
Farming culture	There is a high level of pride within farming and other rurally based families due to their ongoing connections to the land, voluntary land conservation practices and their role in providing regional food security and interactions are expected to be respectful and well informed in acknowledgement of this service In general, farmers interviewed have a sense that their role in the modern economy and the Hunter region are undervalued, particularly in the context of the energy transition
Distributional equity	There is a view that the regions, including the Hunter, do not receive as much investment as the urban centres and cities but are expected to provide essential resources such as food, water, minerals and energy
Recreational values	The recreational and ecotourism values of the Watagan Mountains are recognised by the community as State significant, particularly due to their close proximity to the large urban populations in Sydney, Newcastle and the Central Coast
Environmental values	Ecological conservation values are high along the corridor, particularly in the central and southern sections of the HTP corridor Rural residential lifestyle properties are common with people seeking to live there due to the environmental values and natural scenery The wildlife carer community is a noticeable cohort of the larger community
Winery tourism	The community prides itself on the world-renown tourism destination of the Hunter region wineries, particularly in the Pokolbin region The region's unspoilt natural setting is viewed as essential to maintaining the industry's brand and productivity

Consultation theme-	Insight
Non-local mining and construction workforces	Non-local mining and construction workers (housed in accommodation facilities), in general, not widely accepted by local communities as they are viewed as not substantial contributors to the local community
Social infrastructure	Access to schools, healthcare, and recreational facilities is viewed as critical to community well-being
Community safety	Residents emphasised the importance of maintaining low crime rates and supporting vulnerable populations
Vulnerable groups	Support needed for marginalised and traditionally underrepresented groups is a recurring theme, including Aboriginal communities and low-income households

5.3 Demographic overview

This section examines the existing demographic characteristics within the social localities, focusing on population trends, age distribution, and Aboriginal populations.

5.3.1 Population trends

The regional social locality is characterised by diverse population dynamics, shaped by unique economic, geographic, and social characteristics. The total population and rates of population change across the corridor, local and regional social localities relative to the State average are provided in Appendix B *(Social baseline),* Table B.2.

During the SIA engagement, participants spoke of the changing nature of the Hunter region's community profile, characterised by high population growth of predominantly young families and people, attracted by the relative affordability of housing compared to Sydney, Newcastle and the Central Coast. The change in the region's demographic was also attributed to the closure of the mines, growth of the tourism industry, 'tree change' movement[6] to areas such as Millfield, Paxton and Pokolbin, and the expansion of business and employment opportunities in greater Newcastle.

In the local social locality, population trends from 2016 to 2021 show contrasting dynamics. Singleton Urban Centre and Locality (UCL) experienced a population increase of 7.7%, to a total population of 14,229 persons in 2021. This rate of change was slightly below the average growth of populations across NSW for the same period. In comparison, Muswellbrook UCL grew modestly with a 4.8% increase over the same period, reaching 10,901 people in 2021.

The Australian Bureau of Statistics (ABS) uses mesh blocks to describe the smallest geographical units at a statistical level. The mesh blocks in the corridor social locality have been used to construct data for larger statistical areas and regions, representing the closest geographic match to the HTP corridor. Data reported at this smallest geographic scale and with small population samples can have limitations, such as small populations or incomplete data sets. Mesh blocks for the southern section of the HTP corridor do not include a residential population, and therefore the population analysis for the corridor social locality is largely influenced by features of the central and northern sections of the corridor.

The total population in the corridor social locality (based on population data from the northern and central sections) grew from 454 in 2016 to 543 in 2021, an 18.3% increase over 5 years, well above the 8.1% NSW average.

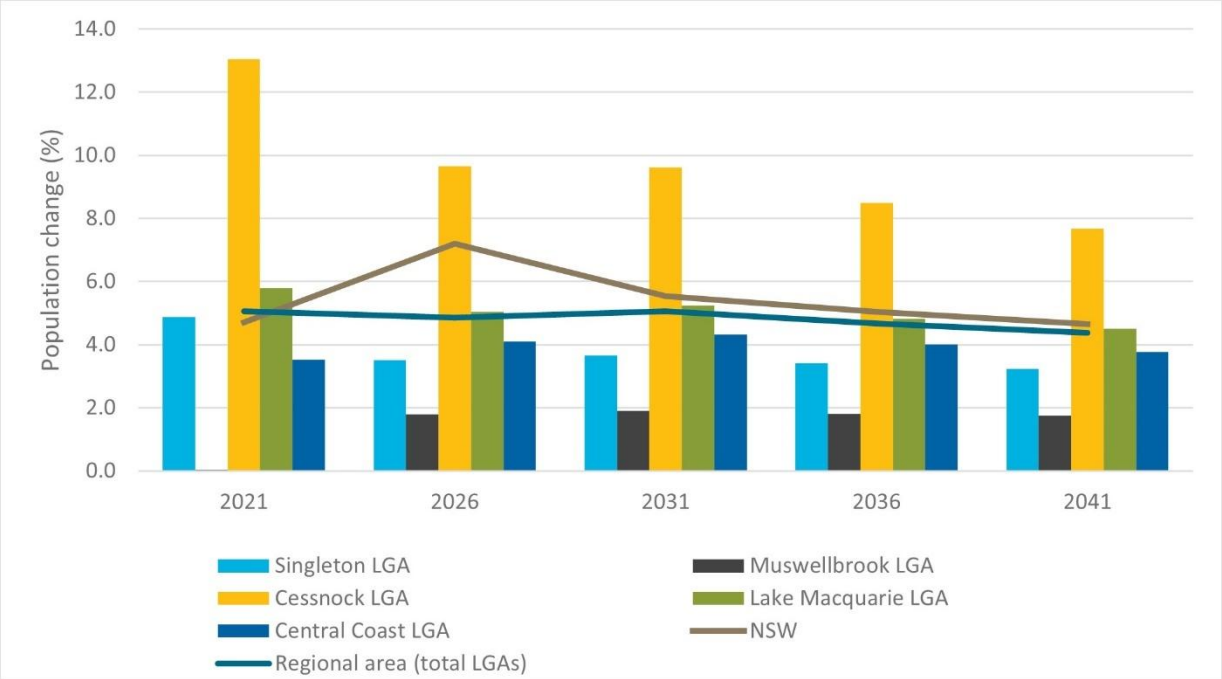
[6] The process of giving up a fast-paced city life and moving to a regional setting to live a simpler life with nature.

Population growth in the local social locality increased by 16.2% between 2016 and 2021, significantly exceeding the NSW average, and was strongly influenced by the southern section of the local social locality which recorded the fastest growth over the 5-year period (21.5%). Rapid growth in the southern section of the local social locality may be driven by urban in-migration. The central section of the local social locality has also experienced strong growth over the last decade (18.4% since 2011, and 10.7% in the 5-year period to 2021). Growth in the central section of the local social locality aligns with its role as an economic hub, while the northern section of the local social locality demonstrates more stable, incremental growth likely attributed to the economic transition, mine closures, and shift in new economic drivers. For more information specific to the project section, refer to *Appendix B (Social baseline)*.

5.3.2 Population projections

Figure 5.4 presents population projections for the regional social locality, comparing LGAs to the projected growth rate of NSW.

Table B.3 reports on the projected population numbers for each LGA and annual growth rate between 2021 and the upper projection limit of 2041. This data illustrates diverse growth trajectories across the regional social locality, but slower growth for the combined total of these LGAs compared to the NSW average.



Source: Population projections (DPI, 2024)

Figure 5.4 Population growth, 5-year intervals from 2021-2041

In the northern section of the regional social locality, the Muswellbrook population is projected to grow from 16,469 in 2021 to 17,696 by 2041, with steady but modest increases over the years. Growth is expected to be slow during the period most likely to coincide with the lead up to the project's construction period (2027), with an increase to 16,802. This may be a reflection of economic transition. For Singleton LGA, the projected population growth is more dynamic, with the population expected to increase from 24,725 in 2021 to 28,321 by 2041. By 2026, the population will rise to 25,644, reflecting greater population resilience compared to Muswellbrook.

Significant growth is predicted in Cessnock LGA (see Figure 5.4), with the population projected to increase from 64,120 in 2021 to 90,019 by 2041. By 2026, the population will reach 70,772, reflecting its status as a growth hub due to urban expansion and tourism-driven development.

Consolidated projection data for the regional social locality is provided in Table B.3 in *Appendix B (Social baseline)*.

5.3.3 Population characteristics

The following analysis focuses on select population characteristics within the corridor social locality, the local social locality and the regional social locality (see Table B.4 in Appendix B *(Social baseline)* for a consolidated overview of population characteristics for the social localities).

i Age distribution

The corridor social locality comprises a predominately working-age population of 15 to 54 years (62.4%) although slightly below the NSW average. The corridor social locality also has a higher proportion of children aged under 15 years (20%, high than the NSW average of 18%) reflecting the presence of families with children in the corridor social locality requiring access to childcare, schools and recreational facilities. Older people (65+ years) represent 17% of the population mix in the corridor social locality, which aligns with the State average.

Age distribution in the local social locality varies by section. The northern section has a younger population profile with 21.8% aged 14 or under. Singleton UCL and Muswellbrook UCL have above average youth representation (with around 12% to 13% aged 15 to 24 years).

By contrast, the central and southern sections have a higher proportion of older people (26.4% aged 65+) compared to the NSW average. These variations reflect the likelihood of different values and needs across the local social locality, with more family-oriented services required to support community in the north and potentially greater need for aged care services in the south. Cessnock UCL shows a balanced demographic with 18.3% under 14 and 19.4% over 65.

ii Aboriginal populations

The number and percentage of residents who identified as Aboriginal at the last census, across the social localities is presented in Table B.4 in *Appendix B (Social baseline)*.

Key findings across this data include:

- 8.0% of the population in the northern section of the corridor social locality identify as Aboriginal, well above the NSW average (3.4%)
- Muswellbrook UCL has an above average representation of Aboriginal populations (13.1%), while Cessnock UCL is also significant at 11.8%. These characteristics influence the higher representation of Aboriginal people in the local social locality (central section with 10.7% and northern section with 10.4%). The stronger representation of Aboriginal residents indicates a unique socio-cultural landscape and underscores the importance of incorporating Aboriginal perspectives and interests in project planning.

Analysis across the entire corridor social locality was not possible. Data for Aboriginal populations should be approached with caution due to well documented problems with quality and quantity of data, including limitations to population data (ABS, 2015).

iii Other select characteristics

Demographic indicators such as unemployment, housing stress, and cultural diversity provide insights into socio-economic conditions. These are presented in Table B.4 in *Appendix B (Social baseline)*.

Key findings across this data include:

- higher unemployment rates are observed in Muswellbrook UCL (6.1%) and Singleton UCL (4.7%) compared to the NSW average (4.9%)

- households in rental stress (paying over 30% of income on rent) are prevalent in Cessnock UCL (43%) and Millfield suburbs and localities (SAL) (50%); these areas are more vulnerable to economic shifts
- households speaking non-English languages are more common in urbanised areas of the regional study, but relatively low across the corridor and local social locality (0.5% to 0.9% speak little or no English).

iv Vulnerability indicators

Vulnerability relates to a group's capacity to adapt to, or cope with, changes to their social environment (Cutter, et al., 2008). In defining potential project impacts on surrounding communities, it is important to understand the presence of more vulnerable sectors of society as they are likely to experience an impact differently or may be less adaptable to changes. Social indicators associated with vulnerability include:

- age, such as the very young and the elderly who are more likely to require care and may be financially dependent on the working population (people aged 15 to 64)
- socio-economic status, such as people who are recipients of welfare, reside in social housing, or who are unemployed
- people with a need for assistance, such as people with mobility issues or disabilities, long-term health conditions, or old age
- culturally and linguistically diverse (CALD) populations, such as those who live in households where a non-English language is spoken.

The distribution of vulnerability indicators across the social localities is provided in Table B.4 in *Appendix B (Social baseline*). Cessnock UCL and Muswellbrook UCL report higher proportions of single-parent families (27.3% and 21.3%, respectively) compared to NSW (15.8%). Social housing is also prevalent in Cessnock UCL (14.8%), as well as Singleton UCL (21.3%), indicating a concentration of lower-income residents. People requiring assistance are most concentrated in central section of the local social locality (9.1%) and Singleton UCL (6.5%). These reported figures are above NSW averages, suggesting greater service needs within central section of the local social locality, and potential needs for diverse and accessible approaches to project engagement.

Figure 5.5 presents vulnerability indicators across the local social locality, including single parent families, Aboriginal residents and elderly populations. It suggests the central section of the local social locality has a diversity of needs and potentially requires additional considerations for project engagement and impact management.

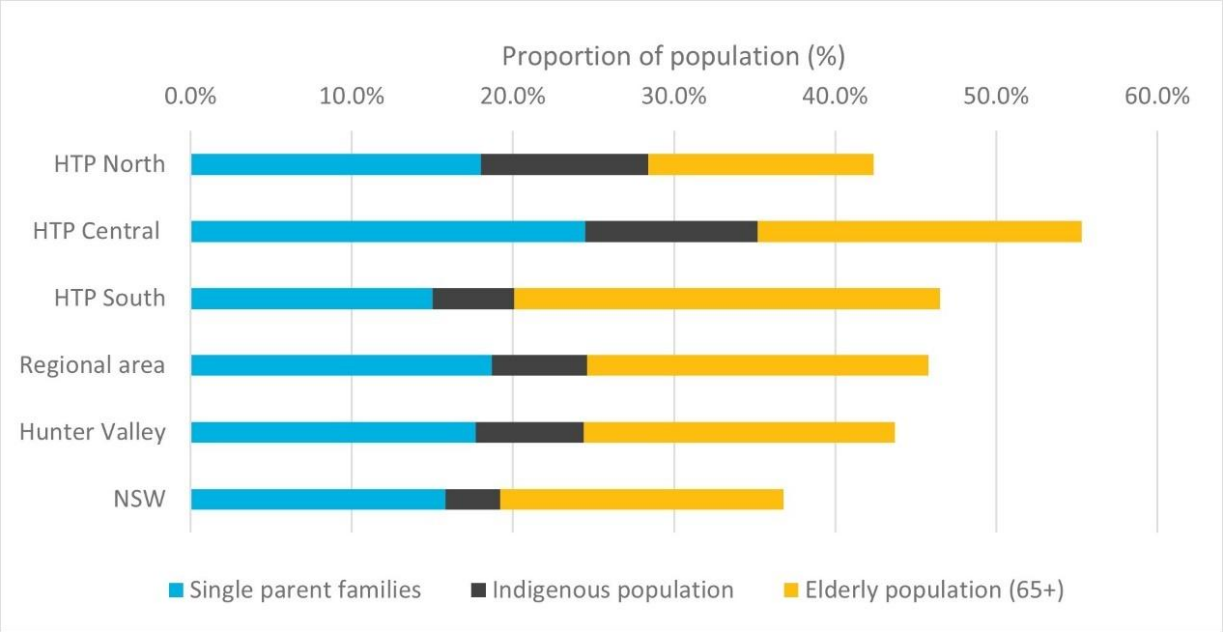


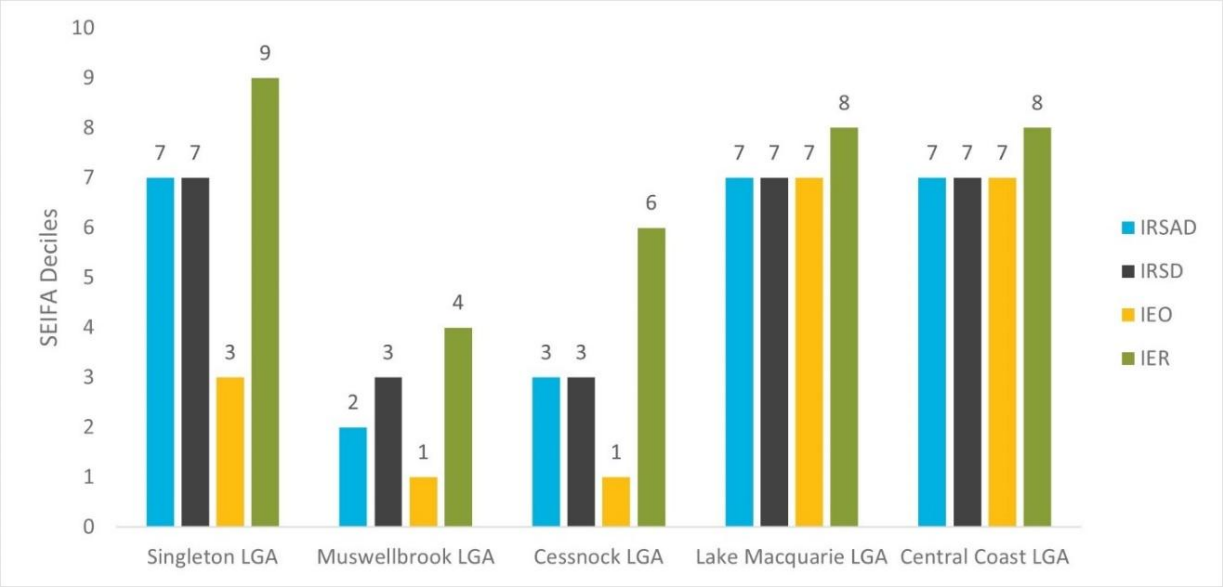
Figure 5.5 Vulnerable groups health and wellbeing

5.3.4 Socio-economic disadvantage

The socio-economic indexes for areas (SEIFA) provides indicators of relative disadvantage, with low decile scores reflecting higher disadvantage. Analysis of SEIFA data show notable disparities across the regional social locality, likely driven by varying levels of employment, income, and access to education.

Singleton, Lake Macquarie and Central Coast LGAs have a ranking in the 7th decile (less disadvantaged), shown as influenced by a significantly higher ranks on the index of economic resources (ranked in the 9th decile for Singleton and 8th for Lake Macquarie and Central Coast) (see Figure 5.6),. Overall levels of socio-economic disadvantage within the regional social locality are shown in Figure 5.7.

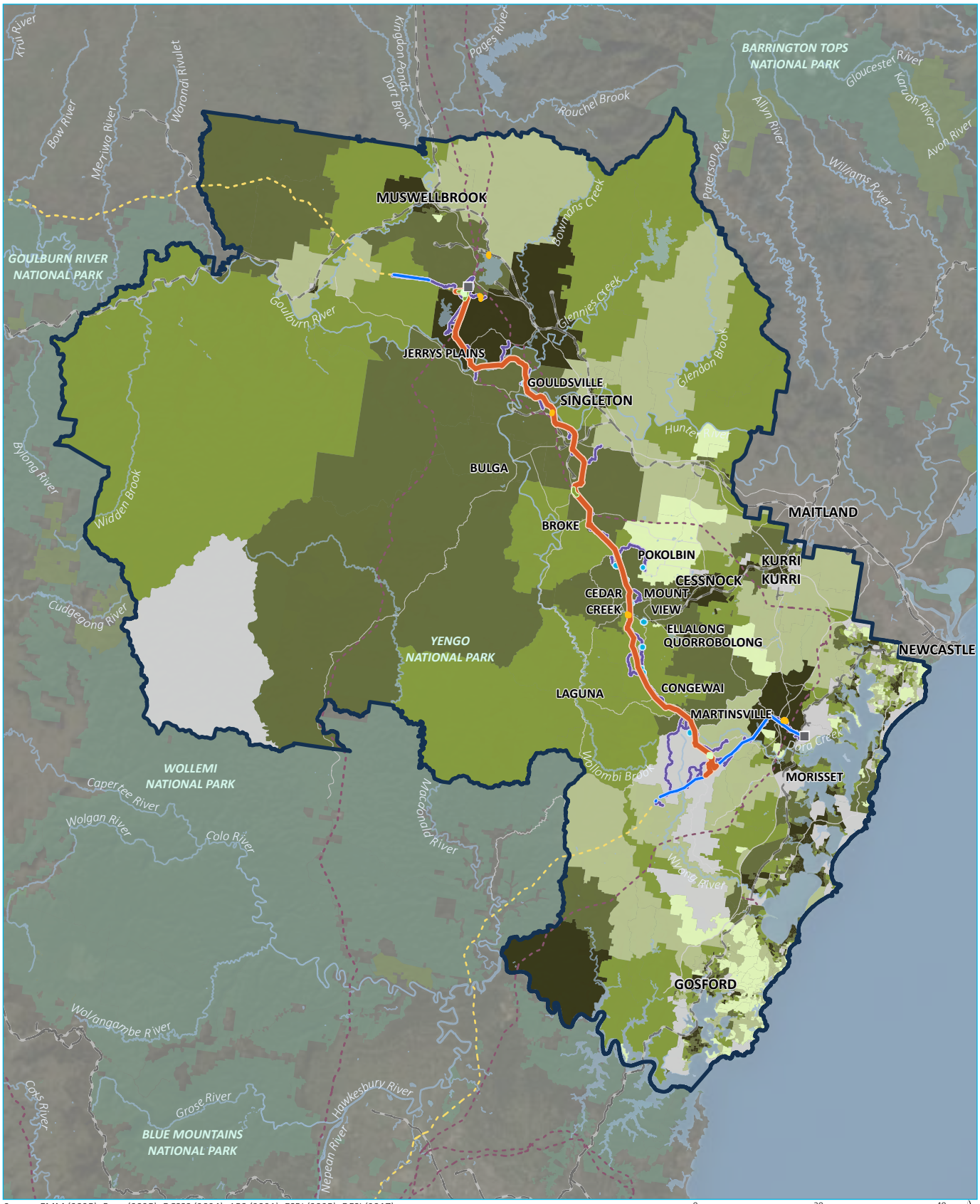
By contrast, Muswellbrook LGA is in the 2nd decile, placing it among the most disadvantaged LGAs in the State, followed by Cessnock LGA, also exhibiting greater levels of disadvantage (3rd decile).



Source: ABS 2021, Socio-Economic Indexes for Areas (SEIFA), Australia

*IRSAD (Index of Relative Socioeconomic Advantage and Disadvantage); IRSD (Index of Relative Socioeconomic Disadvantage); IEO (Index of Education and Occupation); IER (Index of Economic Resources).

Figure 5.6 SEIFA deciles for regional area, 2021



Source: EMM (2025); Beca (2025); DCSSS (2024); ABS (2021); ESRI (2025); DFSI (2017)

0 20 40 km

GDA2020 MGA Zone 56

N

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KEY

- Regional social locality

Index of relative socio-economic advantage and disadvantage (SA1)

- 1 (most disadvantaged)
- 2
- 3
- 4
- 5 (most advantaged)
- No data

Project impact area

- HTP corridor
- Switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Adjustment to existing transmission line
- Upgrades to existing transmission line
- Access track

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- State forest
- NPWS reserve

Levels of socio-economic disadvantage within regional social locality

Hunter Transmission Project
Social Impact Assessment
Figure 5.7

EMM
creating opportunities

5.3.5 Population health status – chronic illness

Mental health is defined by the Australian Bureau of Statistics (ABS) as 'whether a person has been told by a doctor or nurse that they have a mental health condition (including depression or anxiety).' It does not measure the severity of the condition or if a person has multiple conditions and excludes self-reported psychological distress (ABS, 2021).

Chronic health conditions such as mental health disorders, asthma, and diabetes are prevalent across all social localities, with mental health and asthma reported as the most predominant. A consolidated overview of select population health characteristics in the social localities is provided in Table B.5 in *Appendix B(Social baseline)*. Prevalence rates reported can be compared against the Hunter region and NSW benchmarks.

Available data on the prevalence of select population health characteristics (see Table B.5 in *Appendix B (Social baseline)* shows the highest rates of mental health conditions in the southern section of the local social locality (12.7%), and in Cessnock UCL (14.2%), which may suggest greater demand and need for tailored service provision. Asthma is also notably prevalent with rates above NSW in the northern section of the corridor social locality, influenced by Muswellbrook UCL (11.5% in tthe localsocial locality and 11.6% in the Cessnock UCL). Diabetes and lung conditions show moderate variability, with some areas like Cessnock LGA reporting elevated rates. Overall, the local and regional social localities have higher proportions of individuals with at least one long-term health condition, notably Muswellbrook LGA (31.6%) and Cessnock LGA (35.3%) compared to NSW (27%).

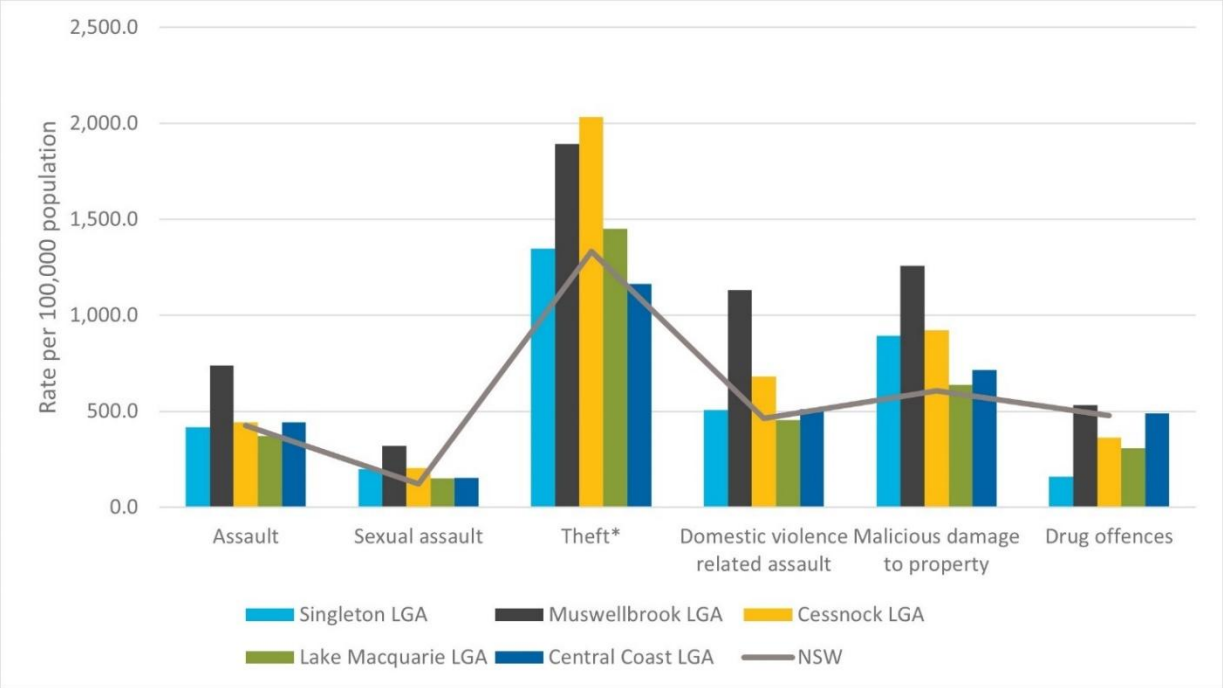
These findings suggest that the areas the project may intersect has communities already experiencing significant health vulnerabilities. Mental health concerns, exacerbated by potential project-related stressors such as land acquisition, construction, or perceived disruptions must be carefully managed to mitigate further average impacts. Similarly, asthma prevalence and other respiratory conditions may heighten sensitivity to changed air quality and local environmental conditions during construction.

5.3.6 Crime and community safety indicators

Data from the NSW Bureau of Crime Statistics and Research (2024) shows that theft was the most prevalent offence type across the regional social locality, particularly across the Cessnock and Muswellbrook LGAs (2034 and 1892 incidents, respectively, per 100,000 population) recorded in the year to September 2024 (see Figure 5.8 and *Appendix B (Social baseline)*.Comparison to NSW shows that these rates are relatively high, with a rate of 1331 theft incidences across NSW.

Domestic violence incidents have shown an upward trend over the past 24 months, with a 25% increase in Singleton LGA and a 27.8% increase in Muswellbrook LGA. The Muswellbrook LGA recorded the highest proportion of offenses across all categories (per 100,000 population) of the LGAs within the regional social locality, including a rate of 1130 domestic violence related offences, 1892 theft-related offences and 1257 malicious damage to property offences. Cessnock LGA also recorded relatively high proportions in these categories, particularly theft, which was higher than that in Muswellbrook LGA with a rate of 2034 per 100,000 population. Crime rates were higher across the regional area when compared to NSW, except for rates of assault, sexual assault and drug offences, which were relatively aligned with NSW rates.

The rising rates of domestic violence in Singleton and Muswellbrook LGAs may indicate an underlying social risk within the regional social locality. This is counter to NSW overall whereby incidents remain stable over the past 12 months.



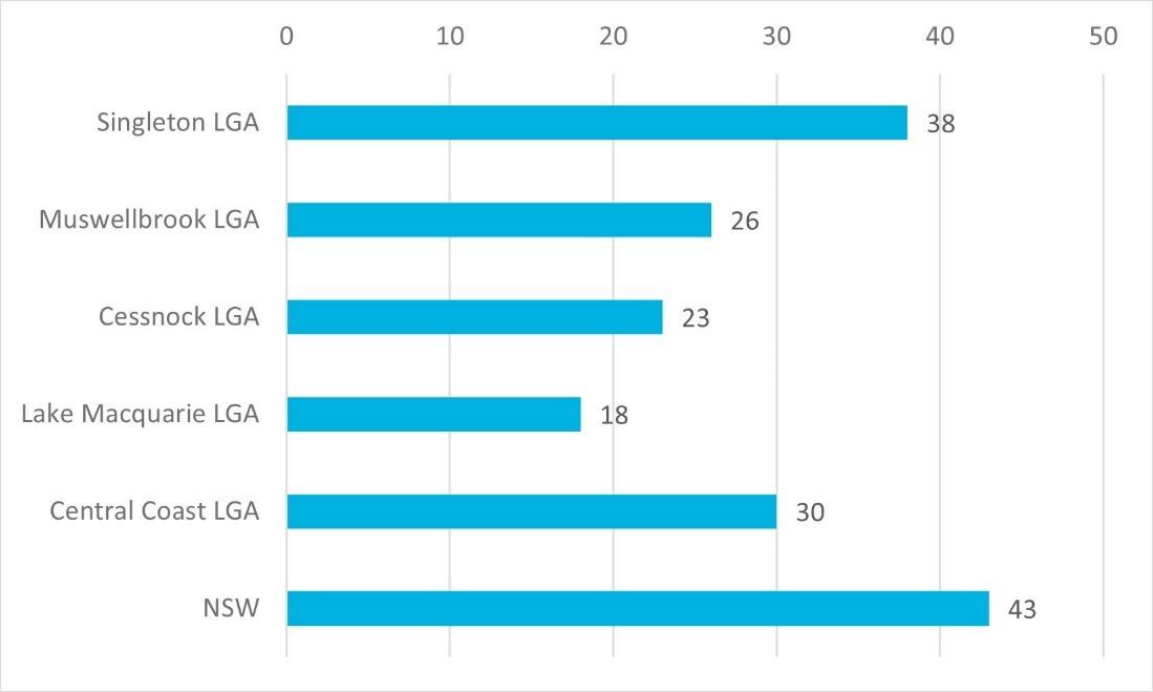
Note: *sum of all theft related categories (including motor vehicle theft, steal from motor vehicle, steal from retail store, and other stealing offences)

Source: NSW Bureau of Crime Statistics and Research, Crime Statistics by LGA, December 2024 (BOCSR, 2024)

Figure 5.8 Crime rate per 100,000 persons

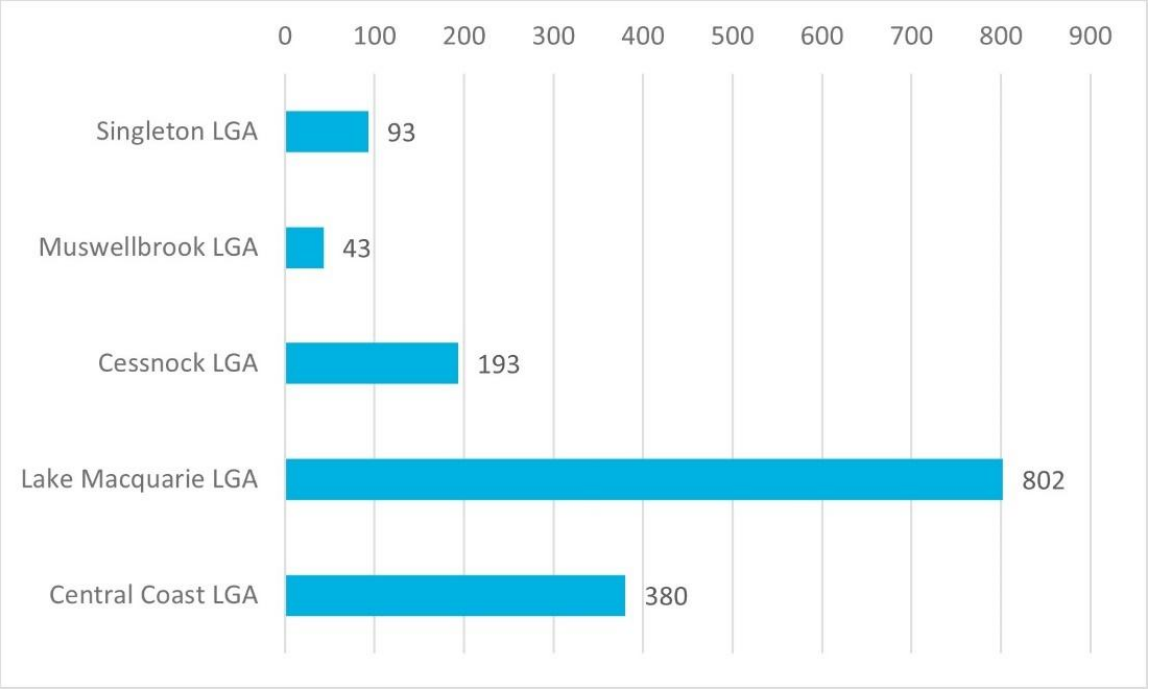
5.3.7 Homelessness

Homelessness is defined by the ABS using 6 different operational groups to estimate persons who are homeless or marginally housed (Flatau & Lester, 2023). Homelessness rates in the Singleton and Muswellbrook LGAs remain below the NSW average of 43 persons per 100,000 (see Figure 5.9 and Figure 5.10). Singleton recorded 38 persons per 100,000, while Muswellbrook recorded 26 persons per 100,000. In numbered estimates, the 2021 Census identified 93 homeless individuals in Singleton and 43 in Muswellbrook; however, due to the mobile nature of this population group, numbers may be higher.



Source: ABS 2021, Estimating Homelessness: Census

Figure 5.9 Homelessness rate per 10,000 persons



Source: ABS 2021, Estimating Homelessness: Census

Figure 5.10 Number of homeless people in regional area

5.3.8 Voluntary work

Volunteering rates can provide an indication of social cohesion and resilience in a community and the willingness of people to help each other. Higher rates of volunteerism are also associated with older age groups, households with higher incomes, and couples with children (AIHW, 2021b).

Volunteerism rates in the social localities reflect strong social capital (see Table B.7 in *Appendix B (Social baseline)*). Nearby regional communities such as Cooranbong SAL and Martinsville SAL reported notably higher volunteerism rates of 18.7% and 27.2%, respectively, with Singleton LGA achieving the highest rate among the regional social locality at 14.7%, surpassing both the Hunter region/Newcastle regional average (13.1%) and the NSW average (13.0%).

5.4 Labour force and employment

5.4.1 Labour force

At the 2021 census, the corridor social locality had a higher proportion of employed residents than the Hunter region SA4/Newcastle LGA region. However, youth unemployment is slightly above regional levels. Specific corridor-level unemployment rates are not provided.

The northern section of the corridor social locality reported a labour force participation rate of 41.1%, while participation in the central section was notably lower with a participation rate of 25.1%, reflective of the ageing population, with many residents likely to have retired. Data for southern section is not reported as there are no residents living within the southern section of the corridor social locality.

Labour force participation varies significantly across the local social locality as does unemployment. Key findings include:

- labour force participation in the local social locality is 62.5% in the northern section, 49.1% in the central section and 52.6% in the southern section compared to 66.1% overall in NSW
- unemployment in the northern section was 4.7% (compared to 4% in NSW) and youth unemployment, 10.2% (7.5% in NSW)
- higher unemployment was recorded in the central section at 6.2% and youth unemployment at 11.8%
- in the south, the unemployment rate was 4.6% and youth unemployment at 9.8%.

Youth unemployment is a consistent issue across the regional social locality with an average rate of 9.6%, and notably for Cessnock UCL (12.2%), Cessnock LGA (11.2%) and Muswellbrook LGA (10.1%). The Aboriginal unemployment rate is also higher in Muswellbrook LGA (10.7%) and Cessnock LGA (9.6%) compared to Singleton LGA (8.0%) as well as the NSW rate of 9.8%.

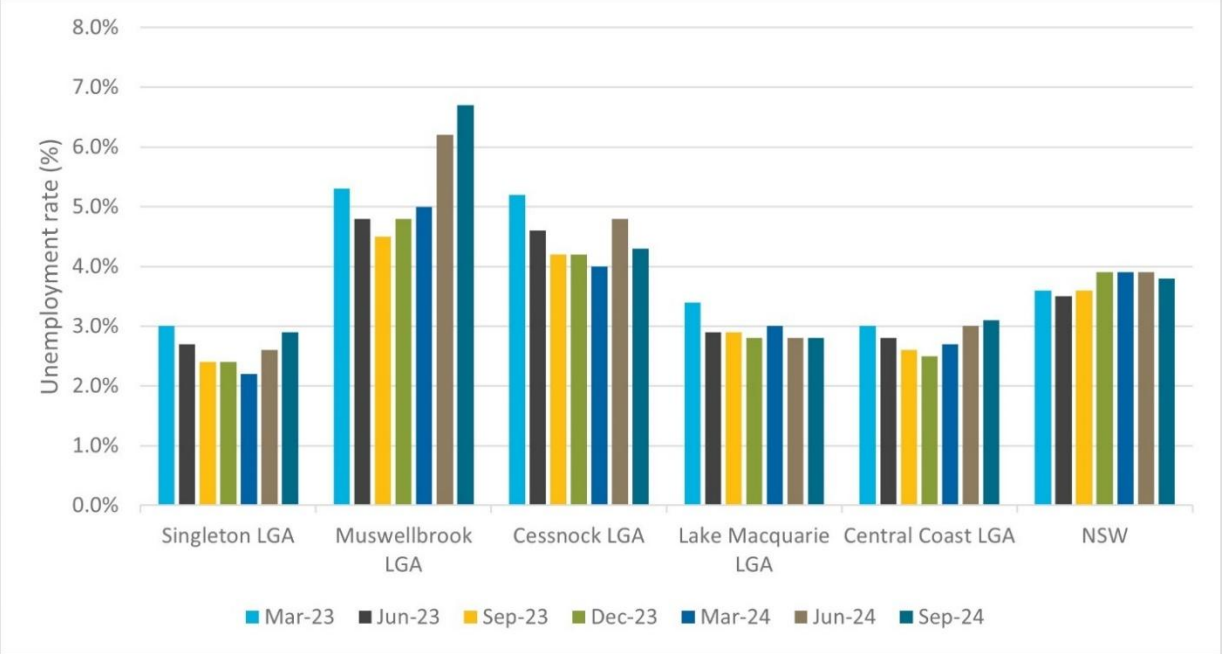
Key considerations for this SIA include:

- exploration of project opportunities to enhance skill development initiatives that prioritise participation of young people, unemployed and Aboriginal residents of Muswellbrook and Cessnock
- exploration of barriers to labour force participation in Cessnock LGA
- collaboration opportunities with local industries to create job opportunities and apprenticeships.

Unemployment and labour force data is not available at the corridor social locality level due to low data availability.

Figure 5.11 displays quarterly unemployment rates for the LGAs in the regional social locality. From March 2023 to March 2024, unemployment fell in the Singleton LGA, edging higher to 2.9% in Q3 of 2024. In Muswellbrook LGA, unemployment rates in March 2024 were consistent with the previous year's record but has increased to a high of 6.7% in September 2024, indicating increasing availability of labour looking for employment (relative to other regional social locality LGAs), that could potentially be utilised by proposed developments, such as the Project. Across the remainder of the LGA social locality unemployment rates in September 2024 were consistent or better than reports for the previous 12 to 18 months.

Unemployment and labour force participation rates for the social locality are presented in Table B.8 in *Appendix B (Social baseline)*.



Source: Small Area Labour Market (National Skills Commission, 2024)

Figure 5.11 Unemployment over time across the social locality LGAs

5.4.2 Occupation and skills

Predominant occupations in the northern section of the corridor social locality include sales workers (23.2%), machinery operators and drivers (15.5%), and managers (14.8%).

In the local social locality, key occupations reflect the influence of the mining industry including technicians and trades workers (18.9%), and machinery operators and drivers (17.4%). Within Singleton and Muswellbrook townships, the highest proportions of workers are similarly employed as technicians and trades workers (18.2% and 20.6%, respectively) and machinery operators and drivers (17.5% and 18.1%, respectively), indicating a pool of skilled labour available within these townships which broadly aligns with skillsets required to support development of renewable energy projects.

Across the regional areas, occupations are reflective of urban counterparts with the highest proportion of workers employed as technicians and trades workers, followed by machinery operators and drivers. Sales workers also feature prominently, particularly in urban centres, reflecting their broader retail presence.

The proportion of key occupations across the social localities is presented in Table B.9 and Table B.32 in *Appendix B (Social baseline).*

The transition to renewable energy in NSW and across Australia is driving unprecedented demand for skilled workers, intensifying competition across industries. The Australian Electricity Workforce for the 2024 Integrated System Plan (AEMO, 2024) estimates that Australia's clean energy workforce must nearly triple within 5 years to meet national targets. Meanwhile, the Employment, Skills, and Supply Chains in NSW report (Briggs, et al., 2022) highlights critical labour shortages in regional REZs, where low unemployment rates and tight labour markets make it difficult to source skilled workers.

The Australian Renewable Energy Agency (2023) recently published the Skilling Australian Industry for the Energy Transition report. This report suggests that up to 194,000 workers will require training in new energy-specific skills and emphasises the need for significant upskilling in emerging energy technologies and grid integration. Across all reports, electricians, mechanical tradespeople, and engineers are identified as the most in-demand professions. Addressing these shortages will require urgent investment in education and training, particularly in regional areas, to ensure local communities can benefit from REZ projects.

The renewables sector is competing directly with infrastructure and mining for skilled labour, particularly in electrical trades, mechanical trades, and engineering. The NSW Employment, Skills, and Supply Chains report highlights the competition between renewables and traditional industries such as agriculture and mining, especially in regional areas. Meanwhile, the Clean Energy Council Workforce Study notes that urban-based infrastructure projects, such as transport and construction, are also drawing skilled workers away from renewable energy jobs.

5.4.3 Income

In the northern section of the corridor social locality, households recorded lower incomes than other areas of corridor social locality. A high proportion (20.2%) earn less than $650 per week, with the NSW rate for this income bracket at 15.3%. This suggests a significant portion of the population in the north may be facing or be at risk of economic hardship compared to that of the other social localities and the NSW population.

The local social locality recorded relatively high levels of income inequality with a notable proportion of households on low end incomes:

- households in Muswellbrook have a median weekly income of $1628, which is below both the Hunter region average ($1659) and the State average ($1829)
- households in Singleton LGA benefit from relatively higher median weekly household incomes ($2016), significantly above those in Muswellbrook. The proportion of households earning more than $3000 per week is 26.9%, which is the highest proportion among households in the regional social locality
- households in Cessnock LGA earn a lower median income of $1,493 compared to Singleton LGA ($2016) and Muswellbrook LGA ($1628), with a higher proportion of households (17.2%) earning less than $650 per week
- in the Lake Macquarie LGA, the median weekly household income was $1623 compared to the Central Coast LGA which was $1507. This is slightly below the New South Wales State median of $1829. Central Coast LGA had the highest proportion of households in the regional area earning less than $650 per week (18.4%).

The social locality's median household incomes and income range are presented in Table B.10 in *Appendix B (Social baseline).*

5.5 Local business and industry

Land uses in the northern section of the corridor social locality include dairy and beef cattle farming, horse breeding and broadacre cropping. This occurs in close geographical proximity to mining, Defence activities and other industrial land use activities. Farmers interviewed in northern sections expressed strong value in the land for its fertile alluvial soils and water security sourced from the Hunter River, the intergenerational nature of many properties and the importance of preserving this land for intergenerational food security and continuation of farming livelihoods.

In the central sections of the corridor social locality, farming is dominated by the wineries of the Pokolbin region and beef cattle. Being naturally picturesque and in the heart of wine country, the region also features bespoke accommodation and dining offerings. Landowners are highly aware of the world class reputation the region has for its wine exports and natural beauty. Farmers and business operators are mindful that the core brand of the region is tied to its natural beauty, clean environment and high-quality products and are focussed on preserving this for their livelihoods.

A notable number of directly affected landowners in both the northern and southern sections of the corridor social locality own and farm multigenerational faming/forest properties and have strong connections to the land, often referring to themselves as 'stewards' of the land. This is evidenced by several land conservation and eco agricultural practices observed such as riparian restoration and revegetation projects, weed management/removal in non-productive areas and cell grazing practices.

Pokolbin Mountains Road also features a unique soft wallaby release facility, managed by Hunter Wildlife Carers, which was purpose built and is the only one of its kind in the region. This facility and the importance of it emphasised by the wildlife carer community again reflects the strong environmental values held by residents.

The project area includes around 764 hectares of land across four State forests, which are managed by the Forestry Corporation of NSW. Two of these include the Watagan State Forest, covering around 3230 hectares, and is located between Corrabare State Forest to the north, and Olney State Forest to the south. The Watagan State Forest forms the northern extent of a line of State forest reserves (including Olney State Forest) with significant recreations facilities and opportunities. In addition, the Watagan State Forest has both areas under current harvest management, as well as areas of plantations and reforestation, mostly within its southern extent. The Watagan State Forest encompasses over 4000 hectares, and as part of the State forest reserve, has been shaped by the timber industry for many decades, with many being harvested for over 150 years. The forests today are regrowth forests with recent forest management practices addressing the protection of biodiversity, soil and water quality, and cultural heritage sites, while also allowing for sustainable timber production. The Watagan State Forest offers significant recreational facilities and opportunities. Olney State Forest, to the immediate south of Watagan State Forest, covers around 17,500 hectares and contains free picnic, camping areas, and walking trails, mountain bike roads and hunting opportunities. The State forest contains areas under permanent conservation, as well as areas of plantation forests.

5.5.1 Industry of employment

The top 3 industries of employment in the corridor social locality include transport, postal and warehousing (5.1%), agriculture, forestry and fishing (4.1%) and mining (3.6%). Within the local social locality, mining is the dominant industry of employment, accounting for 22.8% of workers. Mining is a dominant industry and it offers competitive wages. Jobs and skills Australia determines that the median weekly earnings in the mining industry is $2649 per week and is considerably higher than the median weekly earning of all industries of $1700 per week nation-wide. Retail trade and accommodation and food services are the next highest employing industries at 8.4% and 7.3% respectively.

In nearby townships, the dominant industry of employment in both Singleton and Muswellbrook township is mining which employs 23.2% and 22.1% of local residents respectively. Health care and social assistance, and retail trade are other significant industries in Singleton and Muswellbrook townships.

In the regional social locality, mining was the primary employer in Singleton and Muswellbrook LGAs, employing 21.6% and 21.5% respectively of local residents. Health care and social assistance was the second largest industry of employment with 8.8% and 9.0% respectively.

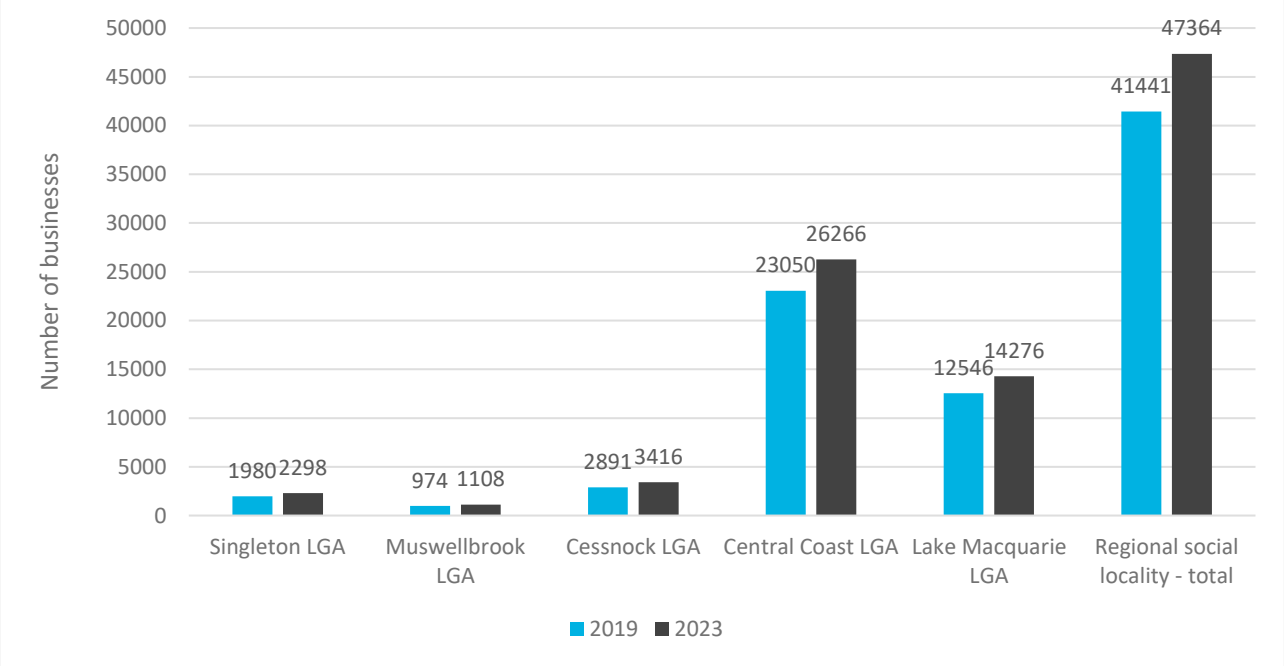
The reported data on industries of employment proportions for each social locality at the 2021 census is presented in Table B.11 in *Appendix B (Social baseline)*.

5.5.2 Local business

In 2023 there was a total of 47,364 businesses in the regional social locality, with 26,266 businesses in the Central Coast LGA hosting the primary share, followed by 14,276 businesses in Lake Macquarie LGA. A further 3416, 2298 and 1108 businesses were registered in the Cessnock, Muswellbrook and Singleton LGAs, respectively. Almost one-third of businesses in the regional social locality are in the construction industry, indicating existing availability/capacity of goods and services that potentially could be utilised in supply chain opportunities such as those that may be generated through the Project.

The most prevalent businesses in the southern section of the regional social locality were construction, professional scientific and technical services, and rental, hiring and real estate services. This is characteristic of larger and coastal centres, while businesses in the central and northern sections of the regional social locality serviced the agriculture, forestry and fishing sector and the construction sector.

Figure 5.12 displays number of businesses in the regional social locality. Further detail is available in Table B.12 in *Appendix B (Social baseline)* which identifies the more prevalent local businesses by industry in the regional social locality.

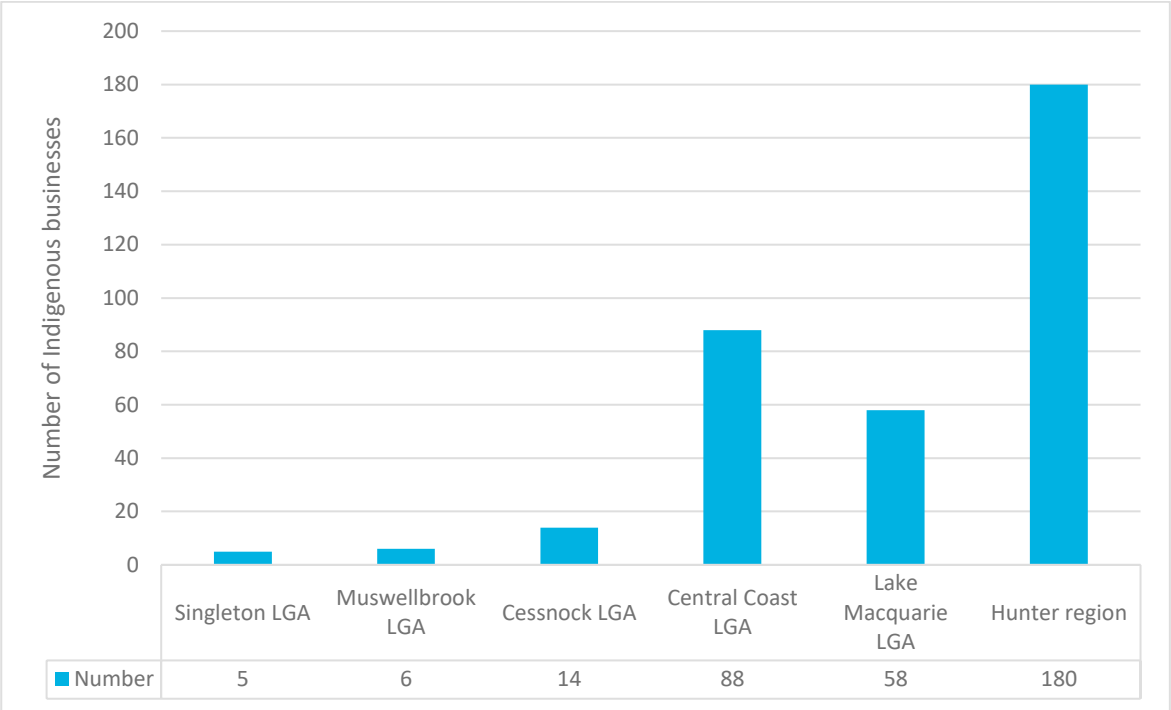


Source: ABS 2023, Data by region

Figure 5.12 Number of businesses in the regional area

5.5.3 Aboriginal-owned business

In 2024 there were 180 Aboriginal businesses across the Hunter region registered on Supply Nation, with 88 registered to the Central Coast LGA and 58 registered to Lake Macquarie LGA (see Figure 5.13). Just 6 Aboriginal-owned businesses were registered from Muswellbrook LGA and 5 from Singleton LGA. Services provided by Aboriginal and Torres Strait Islander businesses in the LGAs of Singleton, Muswellbrook and Cessnock include (but not limited to) recruitment and cultural awareness training, vocational education and training, community and social services, security and screening systems, transportable and demountable buildings, machinery and equipment hire, vehicle repairs, marketing and graphics design, and electrical services (Supply Nation, 2024).



Source: Supply Nation, Search Aboriginal business direct

Note: Based on data available from Supply Nation in August 2024, and as such is only inclusive of Aboriginal businesses in the regional area who are registered with Supply Nation

Figure 5.13 Count of Aboriginal businesses in the regional area

5.5.4 Tourism

Tourism plays a vital role in supporting employment, enhancing economic growth, and leveraging cultural and natural assets (see *Appendix B (Social baseline)*). While each LGA has distinct attributes, there are several commonalities in the role that tourism plays in the regional social locality, of note:

- Nature-based tourism: all LGAs capitalise on nature-based tourism linked to walking trails, National parks and State forests, and prominent water bodies. For the Singleton and Muswellbrook LGAs, the focus is on National parks, Lake St Clair and Lake Liddell particularly through recreational activities including walks/hikes, mountain bike riding and camping. The council also has plans to develop camping and caravan tourism as well as developing Lake St Clair as an adventure tourism precinct (Singleton Council 2024). In Cessnock LGA, activities are tied to the Greater Blue Mountains UNESCO World Heritage Area. For the Lake Macquarie and Central Coast LGAs, strong tourism value is derived from the coastal environment, Lake Macquarie recreational opportunities and park-based recreation in the Watagans through the promotion of mountain biking.

- Cultural and heritage-based tourism: several LGAs are enhancing cultural and heritage-based tourism alongside natural tourism attractions. Singleton and Cessnock councils for instance, aim to promote local heritage as part of the broader visitor economy strategies.

- Wine and agri-tourism: Viticulture is a major drawcard in Singleton, Muswellbrook and Cessnock with internationally recognised wine production and wine tourism experiences. Photograph 5.7 is of a winery in the central portion of the local social locality, with tourism being a key aspect of the business.

- Economic base: Tourism supports a significant share of local employment, ranging from 3.6% in Muswellbrook and 13.9% in Cessnock LGA. In the Singleton LGA, an estimated 739 jobs or 4% of total employment, are supported by tourism (REMPLAN, 2023).

- Strategic goals: Singleton Council seeks to double its visitor economy by 2036. Strategic planning for Muswellbrook and Cessnock has a focus on enhancing tourism assets and increasing visitation. Central Coast and Lake Macquarie councils are focused on strengthening and sustaining their reputation as holiday and day trip destinations.

Tourism across the Singleton and Muswellbrook LGAs is focussed on nature including walking trails, wineries and horse-based activities.

In Singleton LGA, an estimated 739 jobs or 4% of total employment, are supported by tourism. Singleton Council considers tourism an important growth industry and its vision for tourism is to 'double the value of the Singleton Visitor Economy by 2036'. The Singleton Economic Development Strategy aims to build on its reputation and attraction as one of Australia's premier visitor destinations, offering a high value experience.

In Muswellbrook LGA, an estimated 411 jobs, or 3.6% of total employment, are supported by tourism (REMPLAN, 2024). A large proportion (43.0%) of the LGA's around 3400 square kilometre area is designated as national park. The viticulture industry in the area is also internationally renowned for the quality and quantity of wine production and processing, and as a wine tourism destination.

Photograph 5.7 Viticulture in Pokolbin

5.6 Housing and accommodation

This section provides an integrated analysis of housing and accommodation characteristics, including availability and affordability indicators, for the project and across the local social locality relative to the regional and State average. Where possible, nuances relating to specific localities are noted.

During the SIA engagement, several participants commented that the changes in demographics (i.e. in migration of young families) was primarily driven by the availability of affordable housing in the region compared to Newcastle, Sydney and Central Coast regions.

5.6.1 Housing stock and occupancy

The northern section of the local social locality had 12,782 private dwellings and an occupancy rate consistent with the NSW average (90.4%). The central section of the local social locality had less stock with 10,150 private dwellings and a below average occupancy rate (88.7%). The southern section also has a relatively small housing stock with 6907 private dwellings, but an above-average 91.6% occupancy rate, suggesting strong demand relative to supply.

This variation in demand and supply is also evident across nearby regional communities of Singleton (with 5698 dwellings and a high occupancy rate of 93.1%) compared to Muswellbrook (with 4675 dwellings and a lower 88.7% occupancy). This highlights the varied impact of economic transitions tied to the mining industry, with Singleton showing higher utilisation currently. Cessnock UCL had the largest housing stock of all nearby regional communities (8936 private dwellings) and a strong 91.5% occupancy rate, showcasing its role as a regional growth hub. Smaller communities, such as Broke (104 dwellings, 80.8% occupancy) and Martinsville (149 dwellings, 88.6% occupancy), show under-utilised housing stock, reflecting rural dynamics and lower levels of demand.

At the regional level, Singleton LGA (9255 dwellings, 91.2% occupancy) and Cessnock LGA (24,664 dwellings, 91.5% occupancy) align with local trends while Muswellbrook LGA (6802 dwellings, 88.2% occupancy) mirrors the moderate underutilization of Muswellbrook.

Notably, Lake Macquarie LGA (86,059 dwellings, 93.7% occupancy) leads in housing demand and utilisation, driven by its coastal appeal. Regionally, the Hunter region features 191,878 dwellings with 90.3% occupancy, closely mirroring the State average of 90.6%.

The integrated results of housing stock and occupancy rates for the social localities at the 2021 census is presented in Table B.13 in *Appendix B (Social baseline)*.

5.6.2 Housing tenure

Home ownership rates (owned outright or mortgage) are strong across the local social locality, with the southern section featuring highest rate of homes owned outright (36.2% compared to 31.5% for NSW). Martinsville SAL, in particular shows a strong prevalence of outright ownership (53.8%) reflecting an older and more established resident base, while Cooranbong SAL has moderate outright ownership (29.0%) and a notable rental proportion (21.3%).

Central sections in the local social locality demonstrates a balanced tenure structure, with 33.7% outright ownership, 33.4% mortgage holders and 29.4% renters. Cessnock UCL reflects similar dynamics (31.6%, 31.1% and 34.1%, respectively).

In the northern section of the local social locality, homes owned with a mortgage represent 37.2% of the tenure mix while 28.1% were owned outright. These trends align with Singleton UCLs 28.1% outright ownership and 38.5% mortgage rate, driven by an older, more established population.

While rental rates in the northern section of the local social locality (32.1%) reflect a balance with the Hunter regional average (30.5%), this rate is influenced by Muswellbrook UCL which exhibits a significantly higher rental proportion (35.8%) indicative of a younger, transient workforce tied to local industries.

Regionally, the LGAs show varying tenure dynamics. Singleton LGA has high mortgage proportions (40.8%) while Muswellbrook LGA reflects elevated rental rates (34.2%). In contrast, Lake Macquarie LGA and Central Coast LGA showcase significantly higher outright ownership levels.

5.6.3 Housing and rental availability

This section on housing and rental availability provides an overview of residential stock on market, highlighting trends in house and unit availability over 3 years to December 2024. It offers insights into potential shifts in housing supply, as well as trends in the social locality's rental market. Data tables supporting this analysis are available in to Table B.18 in *Appendix B (Social baseline)*.

iii Residential stock on market

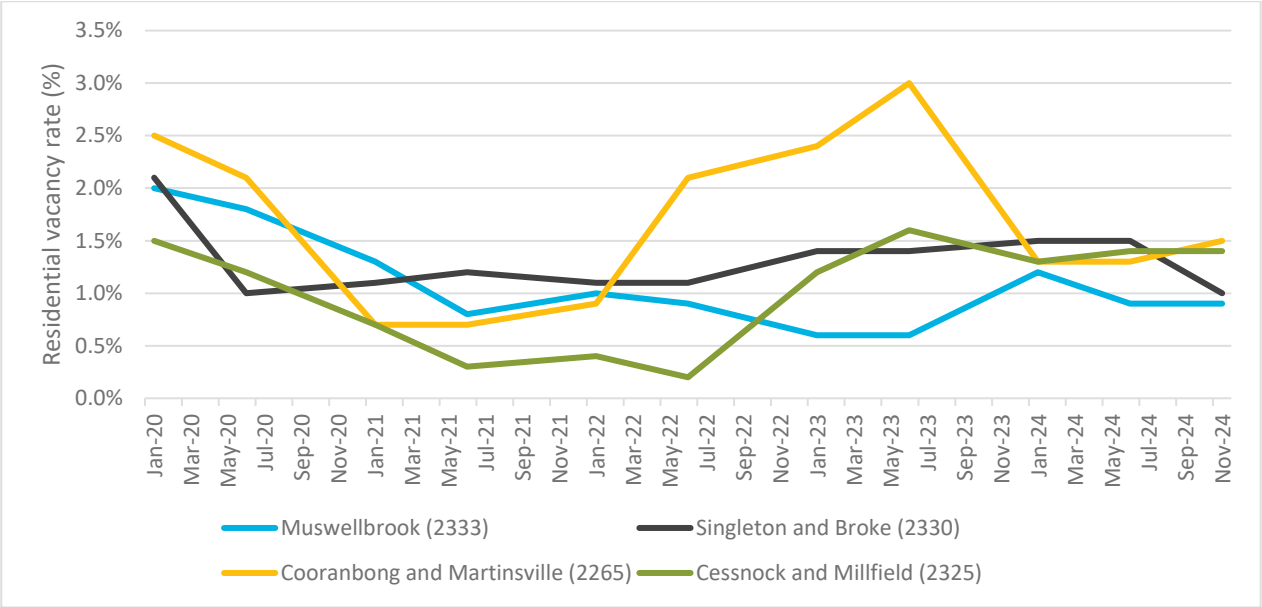
Analysis of residential stock on market over a 3-year period to December 2024 shows:

- a decline of stock on market in Muswellbrook from 160 houses in December 2022 to 121 in December 2024, reflecting reduced market availability. This is contrast with the growth of available houses for purchase in Singleton and Broke postcode area increasing from 150 in December 2022 to 251 in December 2024, potentially reflecting broader development and supply coming to market in 2024
- for Cessnock and Millfield, housing stock increased from 2022 to 2023 before decreasing in 2024 signalling a responsive market
- for Cooranbong and Martinsville, housing and units on market showed little change in availability.

iv Residential vacancy rates

Figure 5.14 reports rental vacancy rates across the various postcodes in the regional social locality over 4 years to November 2024. Overall, rental vacancy rates across the regional social locality indicate a consistently constrained rental market characterised by limited supply but strong demand, with vacancy rates at November 2024 ranging from just below 1.0% to 1.5% across the social locality postcodes. Over the four-year period, rental vacancy rates have consistently remained at 2.5% or below, demonstrating ongoing and constrained conditions (i.e., tight rental market with greater demand than supply available) likely to also be affecting rental affordability (Real Estate Institute of Queensland, 2023).

In November 2024, Muswellbrook postcode had a rental vacancy rate of 0.9%, Singleton/Broke postcode had 1%, Cessnock/Martindale postcode area had 1.4% and Cooranbong/Martinsville had 1.5%. In absolute numbers (see Figure 5.15), these vacancy rates translate to very limited rental supply and options available, with less than 20 properties available in Muswellbrook, Singleton and Broke while Cooranbong and Martinsville recorded less than 10. The Cessnock and Millfield postcode area, with more rental stock on market, advertised 43 properties.



Source: SQM Research, 2024

Figure 5.14 Residential vacancy rates

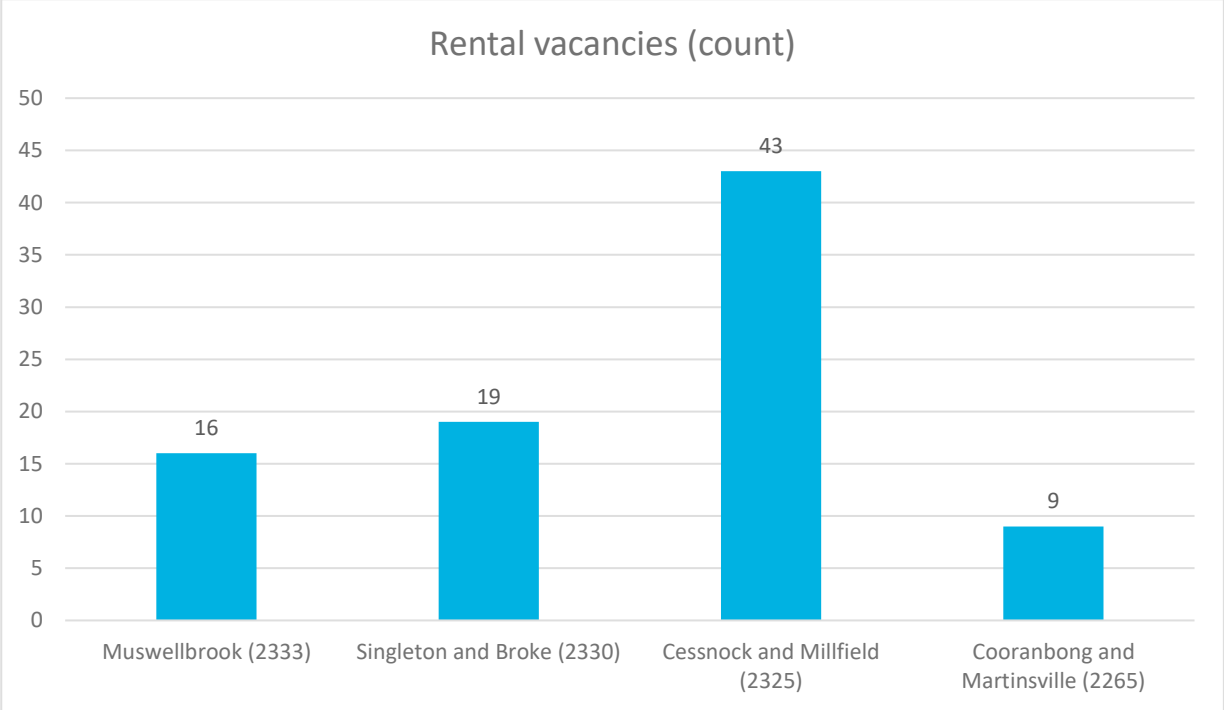


Figure 5.15 Rental vacancies at November 2024

v Short-term accommodation

Analysis of short-term accommodation (see Table B.50 in *Appendix B (Social baseline)*) in the regional social locality highlights the highest number of hotels/motels are located within Muswellbrook and Singleton (13 each), and likely a reflection of demand for short-term accommodation from transient populations including workers. Notably, Singleton also has a large number of holiday homes /Airbnb options (17) indicating a stronger reliance on this accommodation type.

Broke offers very limited hotel/motel accommodation (see Table B.50 in *Appendix B (Social baseline)*) but maintains a reasonable number of Airbnb properties which may indicate a stronger focus on private rental options for short-term stays in this area. Cessnock has a moderate number of hotels/motels, and like Broke, stronger reliance on holiday homes/Airbnb.

In the southern section of the regional social locality, Millfield lacks hotels/motels, but offers a combination of cottages/retreats and a significant number of Airbnb. Cooranbong has no hotels/motels or camping grounds but there is a small selection of bed and breakfast and Airbnb accommodation.

Stakeholders engaged as part of the SIA note a decrease in tourism activity in most regional areas due to adverse economic conditions since 2023. Occupancy data reveal an oversupply of tourism accommodation in general indicating some short-term accommodation capacity within the region.

Stakeholders engaged as part of the SIA noted a decrease in tourism activity in most tourism areas since 2023 due to adverse economic conditions, with a general oversupply of tourism accommodation, indicating some short-term accommodation capacity within the region.

Across the regional social locality, greater short-term accommodation capacity is likely to be sourced from Singelton, Muswellbrook and Cessnock through the availability of hotels/motels, which typically comprise more beds (relative to other accommodation options), but may be occupied for longer periods of time. In contrast, other short-term options in the regional social locality (i.e. holiday home, Airbnb, and bed and breakfast) may feature less bed capacity but include greater occupancy capacity due to underutilization outside of the weekend or peak tourism (e.g. school holiday) periods.

5.6.4 Housing affordability

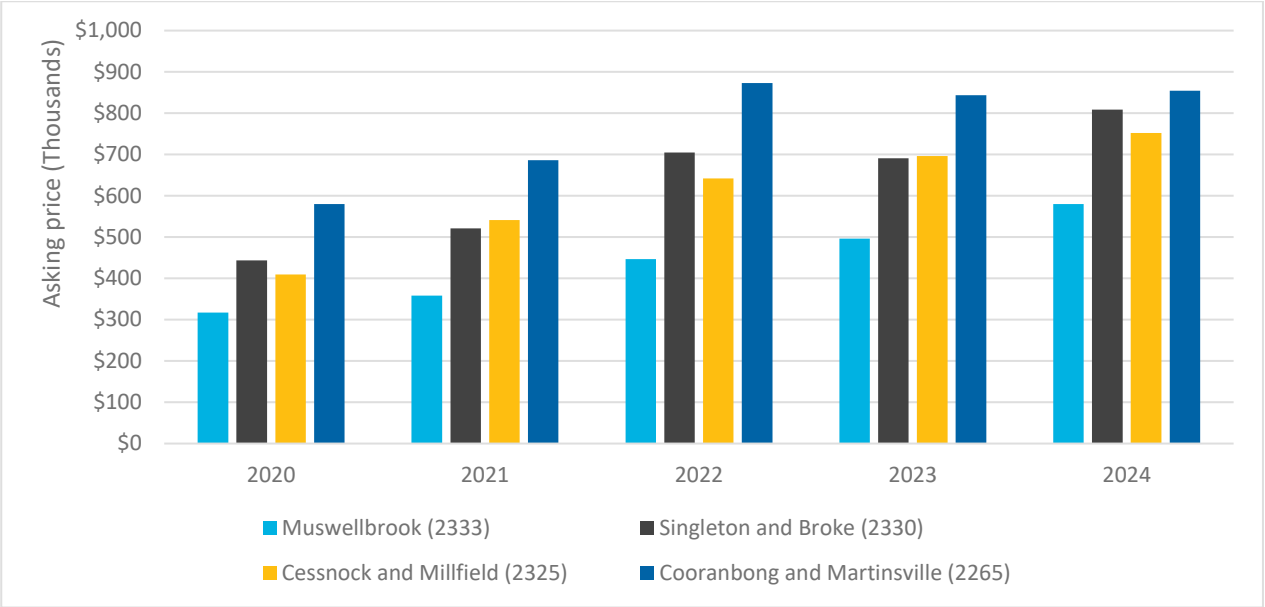
During the SIA engagement, several participants commented that the change in demographics was primarily driven by the availability of affordable housing in the region compared to Newcastle, Sydney and the Central Coast regions. The opening up of new greenfield developments were referenced as supporting affordable housing. Some participants also expressed concerns that the increase in construction and other project workers could create negative impacts on housing affordability (inflation) if not managed carefully.

i Property prices and trends

Figure 5.16 shows the trend of rising property prices between 2020 and 2024 for the postcode areas of Muswellbrook, Singleton, Cessnock and Millfield, Broke, and Cooranbong and Martinsville. As further detailed in *Appendix B (Social baseline)*, property prices in the northern section of the regional social locality have grown steadily, reaching a high in average asking prices of $580,277 in 2024, driven by proximity to Newcastle. Singleton's prices are slightly higher than Muswellbrook, reflecting its larger workforce and tourism potential.

The Cessnock and Millfield area leads in property price growth in the central section, with values averaging $610,000 in 2024. New residential developments in Millfield have driven price increases by over 27% since 2020.

Prices remain more stable in the southern section, averaging $575,000 in 2024, though demand for family homes in Eraring has spurred a 15% increase over 5 years. Overall, property prices within the regional social locality have progressively increased over the four-year period to 2024, with potential implication on changes to housing affordability within the region.



Source: SQM Research, 2024

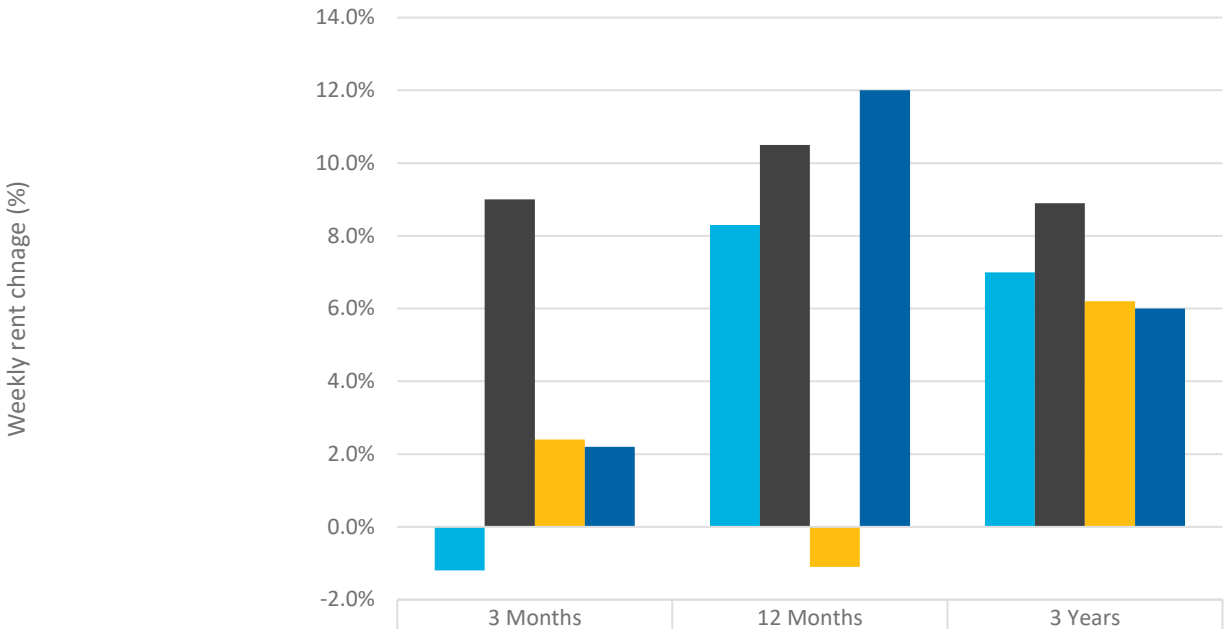
Figure 5.16 Property asking prices, August 2020 to August 2024

ii Rental costs

According to recent data from SQM Research, rental costs in the regional social locality vary. In January 2025, the combined asking rents for all property types (houses and units) showed variance, with rental prices in the northern section averaging $337 per week, central section averaging $353 and southern section slightly higher at $364 per week (see *Appendix B (Social baseline)*).

Figure 5.17 illustrates the change that has occurred in median asking rents, highlighting that Singleton/Broke postcode area has experienced strong and consistent growth in asking rents over 3 years, 12 months and 3 months to date (8.9%, 10.5% and 9% respectively).

For Muswellbrook postcode area, there has been some monthly fluctuation, but asking rents continue to increase (8.3% in 12 months and 7% in 3 years). Cooranbong and Martinsville postcode area has experienced the strongest increase in asking rents (12% in 12 months, 8.9% in 3 years). By contrast, Cessnock and Millfield postcode area shows no change in 12 months (-1.1%) and modest change in 3 years.



	3 Months	12 Months	3 Years
Muswellbrook (2333)	-1.2%	8.3%	7.0%
Singleton and Broke (2330)	9.0%	10.5%	8.9%
Cessnock and Millfield (2325)	2.4%	-1.1%	6.2%
Cooranbong and Martinsville (2265)	2.2%	12.0%	6.0%

Source: SQM Research, (2025), asking rent week ending 4 January 2025

Figure 5.17 Asking rent

iii Mortgage and rental stress

The ABS classifies 'housing stress' as households where 30% or more of pre-tax income is spent on housing costs, whether this be rent or mortgage payments, due to the fact that households spending more 30% on housing costs may experience difficulties affording other living expenses, such as food and utilities (ABS, 2022). The following insights are based on a selection of relevant indicators for the social locality (see Table B.29 in *Appendix B (Social baseline)*).

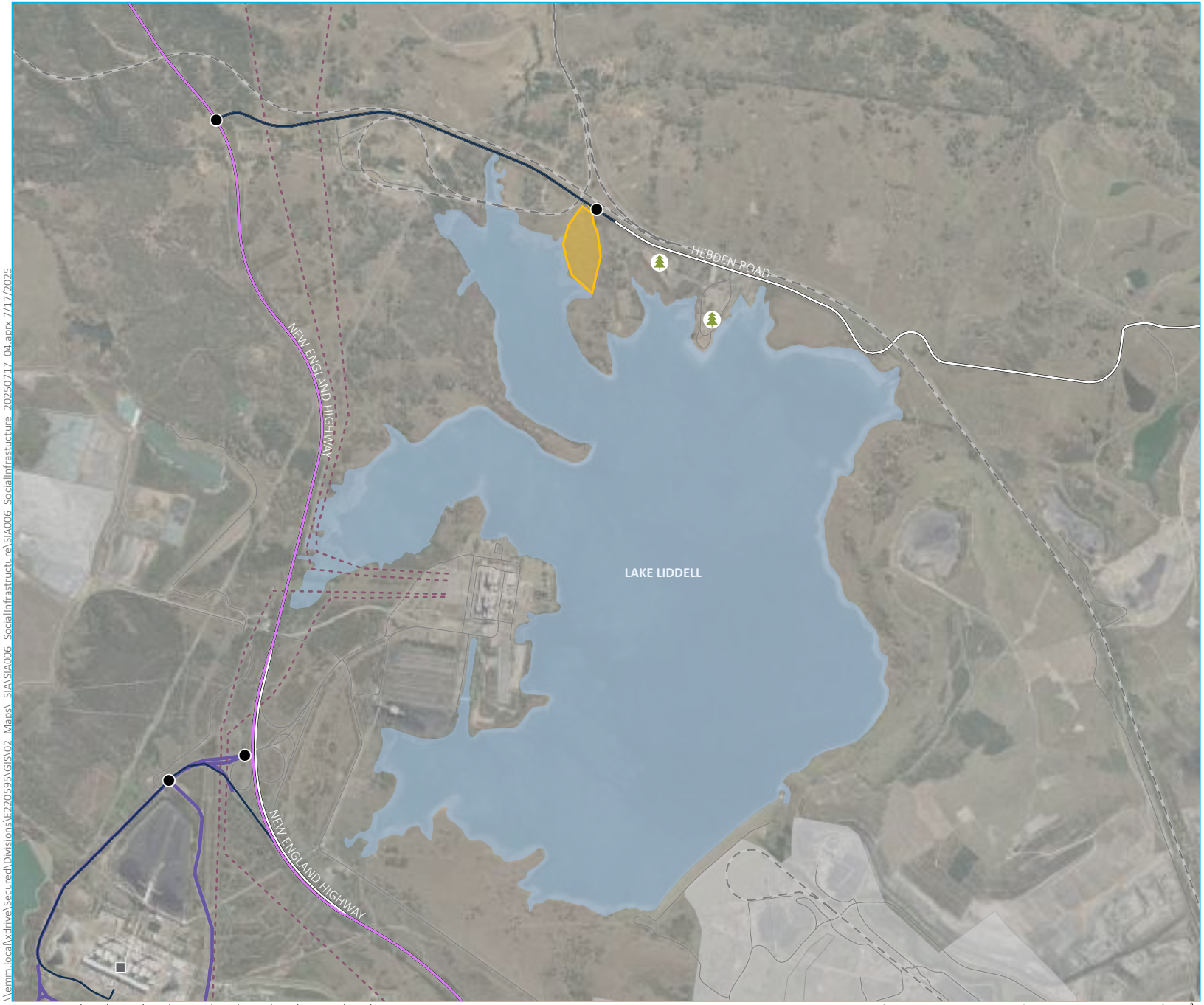
The local social locality and key townships and the regional social locality all had lower median rental values compared to the Hunter region ($375/week) and NSW ($420/week).

Rental stress in Singleton (33.5%) and Muswellbrook (34%) aligns with NSW benchmarks (35.5%); however, mortgage stress is notably lower at 9.7% and 8.3%, respectively, reflecting lower housing costs. Rental stress in the central section of the local social locality was the lowest (30%), supported by affordable rents in Millfield ($300/week). Mortgage stress is also minimal (12.5%) due to smaller average mortgage repayments.

In southern section of the local social locality, rental stress peaks at 38.2%, driven by limited housing availability in urban centres like Eraring. Mortgage stress may also be also high (18%) due to rising property values.

Social infrastructure

Central to supporting the quality of life and well-being of communities, social infrastructure can be defined as the 'community and individual support services and resources such as health, education, early childhood, community support, community development, culture, sport and recreation, parks and emergency services' (Australian Urban Observatory, 2020). The location of social infrastructure in towns, villages and localities in the vicinity of the project impact area and adjacent to the project's proposed construction traffic routes are shown in Figure 5.18 to Figure 5.22. Due to the project's proximity to popular forests and reserves, forest-based recreation facilities and trails are also outlined in Figure 5.23.



KEY

- Impacted intersection

Social infrastructure

- Park

Construction traffic route (by NSW road classification)

- Local Road
- State Road

Project impact area

- Construction support site
- Access track

Existing environment

- Power station
- 330 kV transmission line
- Railway
- Major road
- Minor road
- Named waterbody
- Mining

INSET KEY

- HTP corridor

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Source: EMM (2025); Beca (2025); DCSSS (2024); ESRI (2025); NSWSS (2025)

0 1 2 km

GDA2020 MGA Zone 56

N

Social infrastructure in Lake Liddell

Hunter Transmission Project
Environmental Impact Statement
Figure 5.18

EMM
creating opportunities

KEY

- Impacted intersection

Social infrastructure

- Park
- Place of worship
- School or education facility

Construction traffic route (by NSW road classification)

- Regional Road

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest
- Mining
- Defence

INSET KEY

- HTP corridor

Source: EMM (2025); Beca (2025); DCSSS (2024); ESRI (2025); NSWSS (2025)

0 1 2 km

GDA2020 MGA Zone 56

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Social infrastructure in Broke

Hunter Transmission Project
Environmental Impact Statement
Figure 5.19

EMM
creating opportunities

KEY

- Impacted intersection

Social infrastructure

- Park
- Place of worship
- School or education facility

Construction traffic route (by NSW road classification)

- Local Road
- Regional Road

Project impact area

- Laydown area
- Access track
- Railway
- Major road
- Minor road
- Named waterbody
- NPWS reserve
- State forest

INSET KEY

- HTP corridor

Source: EMM (2025); Beca (2025); DCSSS (2024); ESRI (2025); NSWSS (2025)

0 1 2 km

GDA2020 MGA Zone 56

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Social infrastructure in Millfield

Hunter Transmission Project
Environmental Impact Statement
Figure 5.20

EMM
creating opportunities

KEY

- Impacted intersection

Social infrastructure

- Child care centre
- Hospital or medical facility
- Park
- Place of worship
- Shopping centre
- School or education facility

Construction traffic route (by NSW road classification)

- Local Road
- Regional Road
- State Road
- Railway
- Major road
- Minor road
- Named waterbody
- NPWS reserve
- State conservation area

INSET KEY

- HTP corridor

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Source: EMM (2025); Beca (2025); DCSSS (2024); ESRI (2025); NSWSS (2025)

0 1 2 km

GDA2020 MGA Zone 56

N

Social infrastructure in Cessnock

Hunter Transmission Project
Environmental Impact Statement
Figure 5.21

EMM
creating opportunities

KEY

- Impacted intersection

Social infrastructure

- Child care centre
- Park
- Place of worship
- School or education facility

Construction traffic route (by NSW road classification)

- Local Road
- State Road

Project impact area

- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- 330 kV transmission line
- 500 kV transmission line

Existing environment

- Major road
- Minor road
- Named watercourse
- Named waterbody
- State forest

INSET KEY

- HTP corridor

Social infrastructure in Coorabong

Hunter Transmission Project
Environmental Impact Statement
Figure 5.22

EMM
creating opportunities

Source: EMM (2025); Beca (2025); DCSSS (2024); ESRI (2025); NSWSS (2025)

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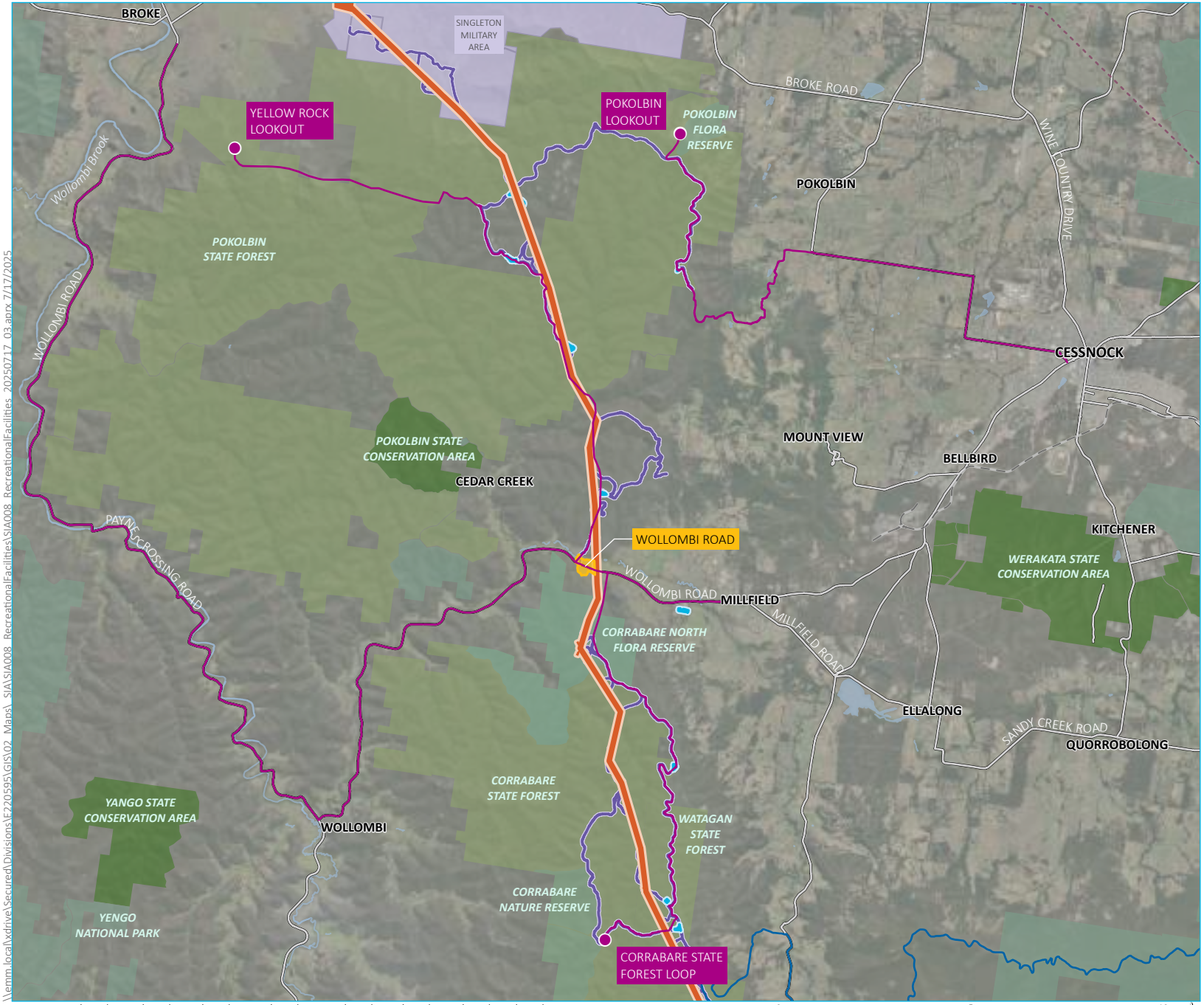

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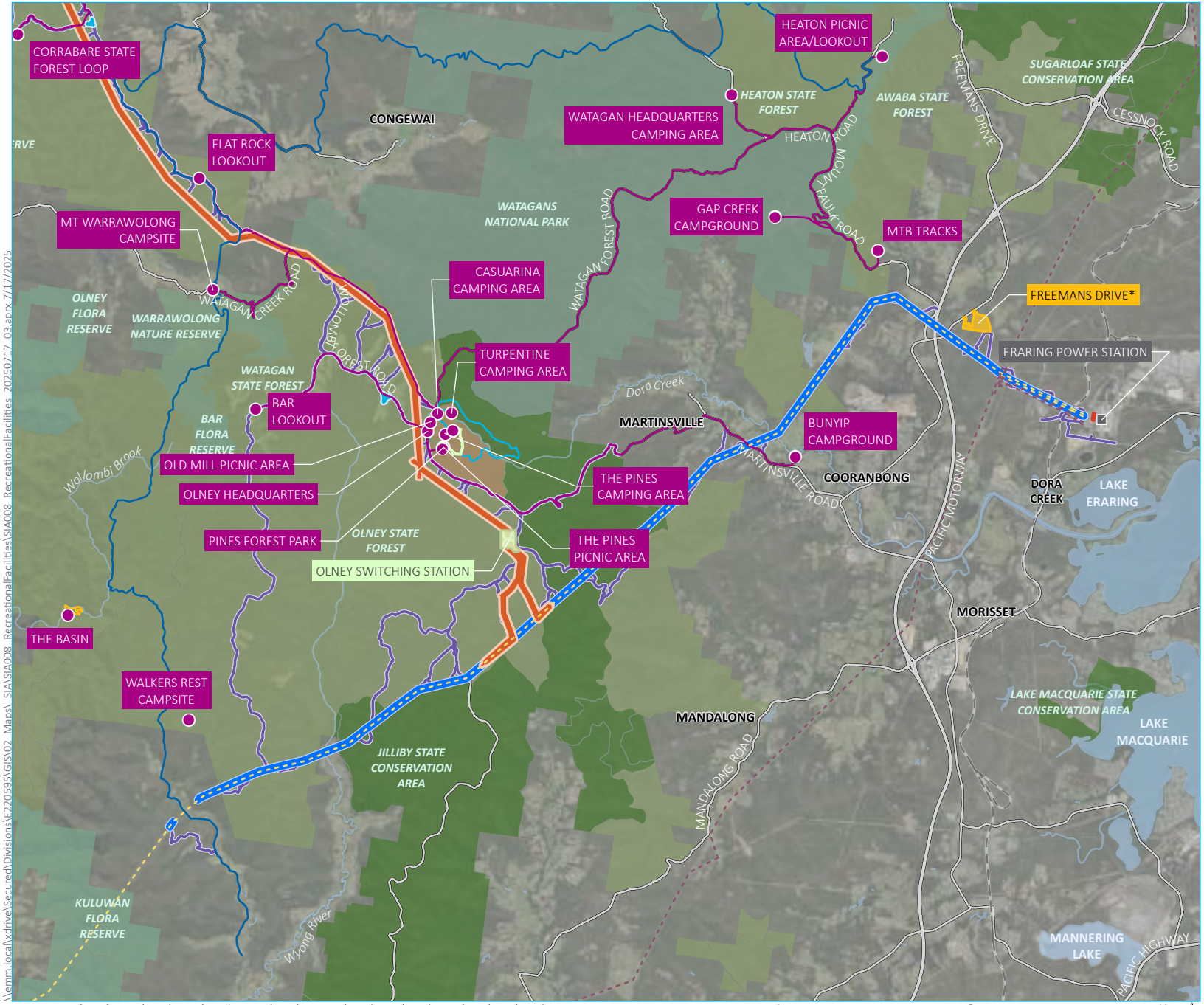
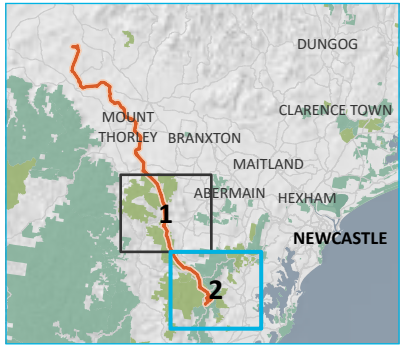
Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); ABS (2021); DFSI (2017); GA (2009)

Recreational facilities in National Parks, State Forests and Conservation areas Map 1 of 2

Hunter Transmission Project
Social Impact Assessment
Figure 5.23

EMM
creating opportunities





KEY

- Recreational facility
- Abbotts Falls Walking Trail
- Access road to recreational facility
- Great North Walk
- Rock Lily Walking Trail
- The Pines Walking Trail

Project impact area

- HTP corridor
- Olney switching station
- Construction support site (*with temporary worker accommodation)
- Laydown area
- Eraring Substation upgrade
- Upgrades to existing transmission line (lines 5A1 and 5A2)
- Access track

Existing environment

- Power station
- 330 kV transmission line
- 500 kV transmission line
- Railway
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest
- Recreation area

Recreational facilities in National Parks, State Forests and Conservation areas Map 2 of 2

Hunter Transmission Project
Social Impact Assessment
Figure 5.23

Source: EMM (2025); Beca (2025); ESRI (2025); DCSSS (2024); FCNSW (2022); ABS (2021); DFSI (2017); GA (2009)

0 5 10 km

GDA2020 MGA Zone 56

N

creating opportunities

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5.6.5 Education and training

The education and training profile for the social localities shows varying levels of access and participation across education levels. The regional social locality shows higher attendance at Technical And Further Education NSW (TAFE) institutions and lower university attendance (see Table B.19 in *Appendix B (Social baseline)*). This suggests a reliance on vocational training pathways over academic university degrees. Pre-school, primary and secondary school attendance is comparable to the regional average, but slightly below the State average.

a Primary and secondary schools

Broad access to primary and secondary education is available across the local social locality, with secondary and combined K-12 schools more concentrated in key urban centres such as Singleton, Muswellbrook and Cessnock (see Table B.20 in *Appendix B (Social baseline)*). These schools support larger cohorts of students drawn from surrounding rural and smaller township areas. Singleton High School and St Catherines High School have over 900 enrolments each.

vi Tertiary and vocational

Information on tertiary and vocational institutions in the regional social locality (along with Newcastle) is provided in Table B.21 in *Appendix B (Social baseline).* TAFE campuses in Muswellbrook, Singleton and Cessnock offer a variety of foundational courses like carpentry, career preparation and engineering. There are limits within the course offerings relative to larger urban centres, with local course offerings more tailored to surrounding industry needs. As the energy transition evolves, it is likely to influence the courses available to support local industry needs; however, early engagement and planning will be fundamental to the ability of regions to keep pace with the skills and workforce needs.

A new education precinct is planned for Cessnock, focusing on vocational training and early education to meet the growing demands of the local population. The project is in the planning stage, with delivery expected by 2028 (NSW Department of Education, 2025).

5.6.6 Health and emergency services

Analysis of the existing capacity of health and emergency services across the regional social locality is detailed in *Appendix B (Social baseline)*. Table B.22 details the rate of provision of general practitioners (GPs) and total health professionals and Table B.22 shows the health and emergency services across the regional social locality.

The local social locality has been identified as facing challenges in terms of local-level access to health professionals and services, with notable gaps within the central and southern sections of the local social locality. Emergency services coverage also varies significantly, with reliance on urban centres for adequate response times for small communities and more remote areas of the central and southern sections of the local social locality. Key differences across the regional social locality include:

- In the northern section: health service provision includes higher order services at Muswellbrook Hospital and Singleton Hospital, together with several GP clinics and aged care facilities. Similar to many rural and regional Australian communities, the Singleton and Muswellbrook LGAs features fewer GPs (24 per 100,000 people and 13 per 100,000 people, respectively) and total health professionals (43 per 100,000 people and 25 per 100,000 people, respectively) compared to NSW which features 122.6 GPs per 100,000 people and 419.8 total health professionals per 100,000 people (see Table B.36 in *Appendix B (Social baseline)*). Singleton serves as a central hub for emergency services in the northern section of the regional social locality, with police, fire service, and ambulance coverage.

- In the central section: the Cessnock LGA features fewer GPs (47 per 100,000 people) and total health professionals (82 per 100,000 people) compared to NSW which features 122.6 GPs per 100,000 people and 419.8 total health professionals per 100,000 people.

- In the southern section: the Lake Macquarie and Central Coast LGAs have a lower proportion of GPs (116.3 per 100,000 and 116.0 per 100,000, respectively) compared to NSW (122.6 per 100,000). The same trend exists for total health professionals (419.8) per 100,000 people.

Identified healthcare needs across Singleton and Muswellbrook include (but not limited to) GP, maternity, obstetric, paediatric, and adult and youth mental health services. The Singleton Community Development Strategy 2022/2026 identifies mental health as a priority area of focus for council, with access to direct support outside of businesses hours and mental health services for chronic or severe conditions key service gaps currently experienced in the LGA (Singleton Council, 2023). Long travel distances and costs to access specialised mental health care as well as disruptions to service continuity (i.e., frequent changes in health workers) have also been identified through community consultation by the Mental Health Commission of New South Wales in Singleton (Mental Health Commission of New South Wales, 2020). In Muswellbrook, publication from Council has identified that health facilities/the hospital is currently under resourced and serviced to address increasing mental health stressors associated with socio-economic impacts from mine and powerplant closures (Muswellbrook Council, 2024)

Research of available health and emergency service facilities in the local social locality (see Table B.32 in *Appendix B (Social baseline)*) shows limited emergency response infrastructure in the northern section, with only 2 ambulance stations and 3 police stations supporting a broad geography. The central section of the local social locality has moderate emergency service availability with additional coverage from Cessnock. The southern section of the local social locality is comparatively better equipped, with 12 ambulance stations, 6 police stations and 17 fire services and facilities across the combined LGAs of Central Coast and Lake Macquarie.

Ambulance services within the Lower Hunter SA3 (inclusive of Singleton, Cessnock, and Broke) had an incident rate of 34.8 per 1,000 people in the final quarter of 2024 (October-December) (Bureau of Health Information, 2024).This is aligned with the NSW rate of 34.9. The median response time for urgent cases was 30.9 minutes, and 10.5 minutes for life threatening cases, with 66% of cases waiting greater than 15 minutes. These wait times are higher than the NSW average, where 55.7% of cases waited greater than 15 minutes (Bureau of Health Information, 2024).

Overall, access to emergency and health services within the local social locality local social localities is constrained, with limited service provision particularly in the northern section. With the existing constrained service capacity of health and emergency services supporting a growing population, any influx of people to the local social locality (even if temporary such as those required to support project construction) could have major implications on the accessibility of services by local residents.

5.7 Recreation

5.7.1 State Forests of the Watagans

i Infrastructure

The State Forests of the Watagans (the Watagans), including Awaba, Heaton, Olney, Ourimbah, Watagan and Wyong State forests provide a range of facilities which attracts visitors from the region and surrounds. This includes campgrounds, waking tails and picnic areas. A number of these State forests fall within the project area, including Olney, Watagan and Wyong State forests.

Within the Watagans there are ten key visitor sites, as well as 4WD tracks, barbeque facilities, toilets, caravan/camper van access, and information shelters (FCNSW, 2025). Each site and provided facilities are listed in Table 5.3.

Table 5.3 Key visitor facilities, State Forests

Visitor facility/site	Key characteristics	Facilities
Camping		
Casuarina Camping Area	A camping area which is suited to caravans, trailers and individual campers. The area is a five-minute walk from the Pines Forest Park and walking tracks.	• Camping • Barbeques • Picnic area • Toilets • Walking track
The Basin	The camping area is characterised by open areas and a nearby creek, suited to large groups. Nearby creeks can be used for swimming.	• Camping • Barbeques • Picnic area • Toilets
The Pines Camping area	The camping area is positioned under pine trees, which are a result of trial planting in the 1920s and 1930s. The camping area also has access to three walking trails via a short walk.	• Camping • Barbeques • Picnic area • Toilets
Turpentine Camping Area	This camping site is ideal for smaller groups and families, located among turpentine trees.	• Camping • Barbeques
Olney Headquarters	This camp site is located along Watagan Forest Road and is the location of a previous forestry building, suited for day use or overnight camping.	• Camping • Barbeques • Picnic area • Toilets (accessible) • Wheelchair access
Watagan Headquarters	Located in Heaton State Forest, Watagan Headquarters is the location of a previous camp site for workers constructing forest roads.	• Camping • Barbeques • Picnic • Walking track
Walking and Biking		
Abbots Falls Walking Track	An around 7 km walking track which forms a circuit, starting at the Pines Picnic Area and including a stop at Abbots Falls lookout.	• Walking track
Rock Lily Walking Track	An around 1.3 km walking track, starting at the Basin Camping Area.	• Walking track
The Pines Walking Track	An around 1.7 km walking track which follows Dora Creek and leads to a small swimming hole.	• Walking track
Mountain Biking	The Hunter Mountain Bike Association (HMBA) manages a 5 km mountain bike track in Olney State Forest under a Forest Permit.	• Bike Track

Visitor facility/site	Key characteristics	Facilities
Littlejohns Walking Trail	Opened as a collaboration between the Forestry Corporation of NSW and University of Newcastle, the walking trail is located in conjunction with frog rehabilitation ponds. The man-made ponds were designed to support threatened frog species through providing breeding opportunities.	• Walking trail
Picnic area		
Old Mill Picnic area	This picnic area is located along Watagan Forest Road and is host to a large grassed area, suited to sport.	• Picnic area (day use only)
The Pines Picnic Area	This is considered the most popular site in State Forests of the Watagans. The picnic area has a range of amenities and is the starting point of three walking tracks.	• Barbeques • Toilets • Picnic area • Walking tracks

Source: Forestry Corporation of NSW (Olney State Forest, 2025).

ii Visitation

According to the Forestry Corporation of NSW (FCNSW), the Watagans sees around one million annual visitors, representing a significant community and recreational asset. The high volume of visitors represents the social value associated with nature based recreation among local and regional users.

Further, the FCNSW indicated that half of the visitor base to the Watagans self-identifies as locals, with the remaining half of visitors coming from the regional area (Central Coast and Newcastle) as well as Greater Sydney. Visitors to the Watagans generally a consist of groups of family or friends due to the large capacity of the campgrounds. State Forests are preferred to National Parks as they provide flexible and socio-economically accessible recreation options, whereas National Parks are often paid and require pre-booking. The Watagans was rated above average for visitor satisfaction by 98% of visitors surveyed (Forestry Corporation of NSW, issued correspondence, 2025). The FCNSW also allows for forest use for uses outside of camping through permits, with activities including mountain biking events, 4WD events, and weddings.

Additionally, the high visitation of the Watagans provides economic benefit to the region. In 2014, the Watagans contributed an annual visitor spend of $36 million in the Lower Hunter/Central Coast area.

5.8 Regional energy transition developments

5.8.1 Regional Renewable Energy Zones

NSW has established several Renewable Energy Zones (REZs) as part of its strategy to transition to clean and reliable energy. These zones are designed to group renewable energy projects into specific areas where they can be efficiently connected to the electricity grid. A number of REZs are relevant to the HTP including:

- The New England REZ is a significant initiative aimed at transitioning to clean energy being developed by EnergyCo. Centred around Armidale, it is designed to harness the region's abundant solar, wind, and pumped hydro resources. Its key features include an intended network capacity of 8 gigawatts, which is expected to deliver up to $24 billion in private sector investment. It is projected to create around 6000 construction jobs and 2000 operational jobs and includes new transmission lines, energy hubs, and enabling infrastructure to connect renewable energy projects to the electricity grid. The region was chosen due to its excellent renewable energy potential, proximity to existing transmission lines, and strong investor interest. It also offers opportunities for pumped-hydro development, enhancing energy storage and reliability. HTP would connect the New England REZ to the electricity grid.

- The Central-West Orana REZ is designed to harness renewable energy resources like solar, wind, and battery storage centred around Dubbo, Dunedoo, and Mudgee, covering an area of over 20,000 square kilometres. It aims to generate over 6 gigawatts of renewable energy, and is expected to attract $20 billion in private investment and create around 5000 construction jobs at its peak. It includes new transmission lines, energy hubs, and enabling infrastructure to connect renewable energy projects to the electricity grid. The region was chosen for its excellent renewable energy potential, proximity to existing transmission lines, and strong community and investor interest. It is also part of the NSW Government's broader strategy to transition to a clean energy future. HTP would connect the Central-West Orana REZ to the electricity grid.

- The Hunter-Central Coast REZ encompasses the LGAs of Muswellbrook, Singleton, Cessnock, Lake Macquarie, and the Central Coast. This REZ capitalizes on the area's renewable energy resources and existing infrastructure, including power stations, rehabilitated mining land, and electricity networks. It aims to support economic growth in sectors such as green hydrogen, ammonia and metal production, offshore wind, and electrification of industrial processes. EnergyCo is collaborating with network operators like Ausgrid to develop the necessary infrastructure.

SIA engagement revealed mixed and generally nuanced views towards the energy transition and rationale driving the project. Some stakeholders indicated growing tension between the broader energy transition in NSW and farming. In the context of both energy generation and transmission projects, there were concerns regarding a lack of strategic rural / regional land use planning and resultant loss of high quality agricultural land. Concerns for future regional food security and the decline of farming livelihoods were commonly discussed.

5.8.2 Cumulative projects

The NSW Government is actively pursuing several State significant infrastructure (SSI) projects to enhance regional development within the LGAs of Muswellbrook, Singleton, Cessnock, Central Coast, and Lake Macquarie (NSW Major Projects). Other projects which have been identified for the project's EIS and cumulative impact assessment are outlined in *Chapter 23 (Cumulative impacts)* of the EIS. The construction schedule overlap and potential social impacts of these projects are analysed in *Chapter 9 (Cumulative social impacts)*.

5.9 Summary of baseline and engagement findings

Table 5.4 provides a summary of the existing social environment across the social impact categories. The summary of key charactersitics and trends within the existing social environemtn informed the impact assessment detailed in the subsequent section.

Table 5.4 Summary of existing social environemnt

Social impact category as per NSW SIA Guideline	Summary of key characteristics and trends
Way of life	The corridor social locality comprises low-density rural land, with dispersed farmhouses and small settlements. Predominant land uses include dairy and beef farming, cropping, viticulture, and horse breeding. Many affected properties are multigenerational, indicating strong land stewardship and identity ties. local social locality communities (e.g. Singleton, Muswellbrook) offer broader services and infrastructure.
Community	Community characteristics and change across the project area is ongoing and uneven, influencing service needs, cohesion and cultural identity. The local social locality population grew by 16.2% between 2016-2021, double the NSW average (8.1%), particularly in the south due to urban in-migration. Cessnock is projected to see the highest future growth. Corridor communities show high working-age populations, more children under 15, higher Aboriginal representation (6-12%), and elevated volunteerism relative to NSW.

Social impact category as per NSW SIA Guideline	Summary of key characteristics and trends
Accessibility	Transport network includes State freight routes and rail for mining, but public transport is limited. Roads such as Pokolbin Mountains Road and Watagan Forest Road were flagged during consultation as unsafe for heavy construction traffic. Housing pressure is acute: very low vacancy rates, high rents, and risk of displacement in lower-income areas like Singleton. Health service access is patchy, especially in the central and southern sections; emergency response capacity is lower in the north. Short-term accommodation is limited, with supply concentrated in Muswellbrook and Singleton. Pre-existing service and infrastructure constraints mean the community has limited capacity to absorb project-related pressures. Detailed analysis of short-term accommodation in proximity to construction support sites once timing of accommodation camps and potential for temporary in-community demand is known.
Livelihoods	Livelihoods are under pressure from structural economic shifts and labour competition. Labour force patterns are mixed: high participation in the north, elevated unemployment in the central section, and high youth unemployment across all areas. Mining is the leading employer, accounting for over 20% of jobs locally and regionally. Over 36,000 businesses operate in the regional social locality (2023), one-third in construction. Tourism is strong, linked to nature and wine regions. ~180 Aboriginal businesses are active regionally, with the greatest cluster in Central Coast LGA. Workforce competition is intensifying between renewables, mining, and infrastructure sectors, particularly for trades and engineering skills.
Health and wellbeing	Existing health and social vulnerabilities can affect community resilience and ability to cope with temporary change to the social environment (e.g. heightened vulnerability to effects of project noise, dust, traffic, and increased workforce visibility changing existing conditions). 2021 Census data shows above-average levels of long-term health conditions, including high mental health rates in the south and asthma prevalence in the north. Crime trends show theft as the most recorded offence (2024), and rising domestic violence in Cessnock and Muswellbrook. SEIFA indexes show relative disadvantage in Muswellbrook and Cessnock (lower deciles), while Singleton, Lake Macquarie, and Central Coast LGAs perform better (higher deciles).
Culture	The project social locality traverses the traditional lands of the Wonnarua people of Hunter Valley and the Awabakal and Darkinjung people of the Lake Macquarie and Newcastle coastal regions. There are Aboriginal sites located near the key towns of Muswellbrook, Singleton, and Cessnock within the local social locality. Across the project's local social locality, Aboriginal and Torres Strait Islander representation amongst the resident population ranges from 6% to 12% which is notably higher than the State average of 3.4%. Stakeholder feedback highlighted several culturally significant landscapes across the project social locality including in the vicinity of Lizard Rock, Mount Sugarloaf, Mount Yengo, Mount Warrawolong and Martinsville, as well as the ridgelines of the Watagan State Forest.
Surroundings	The corridor social locality traverses various landscapes of high environmental and social value including floodplains, flora and nature reserves, State Forest, and environmentally sensitive watercourses. Scenic vistas, particularly in the central section of the local social locality, contribute to the area's eco-tourism appeal. The regional social locality comprises extensive national parks, major water ways, and world-renowned vineyards which are key features in supporting diverse ecosystems, tourism, and agricultural activities. A high proportion of stakeholders engaged for the SIA expressed concern regarding the anticipated impacts of the project on the natural environment, predominantly habitat and biodiversity loss. Many landowners in the central and southern sections of the HTP corridor respect the intrinsic value of the natural environment.

6 Construction impact assessment

This chapter assesses the likelihood and magnitude (significance) of identified social impacts during construction, inclusive of resultant and ongoing social impacts that have followed the project's planning, approvals and acquisition process. The assessment reflects a number of key assumptions (refer Section 3.3.3), including the staged ramp up of the construction workforce from late 2027, reaching a peak of 830 FTE from late 2028. The assessment also assumes the implementation of fully self-contained workforce accommodation by mid-2028. The construction impact assessment is structured in accordance with the following social impact categories as defined by the *NSW Social Impact Assessment Guideline* (DPIE, 2023).

- decision making systems
- way of life
- community
- accessibility
- livelihoods
- health and wellbeing
- culture.

Additional social impacts identified specifically as part of the project's operation have been assessed in *Chapter 7 (Operation impact assessment)* of this social impact assessment (SIA).

6.1 Decision-making systems

6.1.1 Perceived lack of ability to influence project and government decision-making processes

Between November 2024 and April 2025, extensive engagement undertaken for this SIA revealed persistent themes of disempowerment and dissatisfaction with EnergyCo's planning and consultation processes. This was one of the most frequently raised issues during SIA engagement, where matters relating to engagement and relationships were raised 98 times. Concerns of relevance to this impact assessment include:

- a perceived lack of transparency in decision-making and route selection (also discussed at *section 4.4*)
- inconsistent messaging and unmet commitments around information provision
- limited opportunities for meaningful input, with some viewing the consultation process as a 'tick box' exercise.

Participants in SIA interviews, as well as the broader community survey, have expressed views describing a perceived lack of empathy and respect for rural livelihoods and values. These sentiments have been heightened by stressors such as uncertainty over easement widths, tower placements, and the acquisition process and timeframes. Similar themes were echoed by broader community participants, with several noting low awareness of the project outside directly affected areas, and a desire for more accessible information and locally tailored engagement approaches.

Consultation input to the project's SIA, together with the project's broader EIS consultation process, has helped to inform EnergyCo's adaptive management throughout the project's planning phase, with associated outcomes reported in *section 4.4*.

However, this SIA notes that without tailored and ongoing management measures in place it is likely this perceived lack of agency and transparency in decision-making will continue to affect social dynamics and potentially erode social licence among directly affected landowners during the project's construction.

As such, EnergyCo has committed to a S01 Social Impact Management Plan, S02 Community Communication Strategy, S03 Complaints Management System and S04 Landowner Engagement Strategy. These management measures are detailed in *Chapter 11 (Social impact management)*.

For directly affected landowners within the corridor social locality, the pre-mitigated significance of this impact is rated as **High (negative)**. With a sustained effort to implement the existing mitigation measures over time, the post mitigation significance rating is reduced to **Medium (negative)**. For local communities, the pre-mitigated significance of this impact is rated as **Medium (negative)**. With a sustained effort to implement the mitigation measures over time, the post mitigation significance rating is reduced to **Low (negative)**.

Table 6.1 Impact evaluation: Perceived lack of ability to influence project and government decision-making processes

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly impacted landowners Near neighbours	Corridor	High (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy S03 Complaints Management System S04 Landowner Engagement Strategy	Medium (negative)
Community Business operators Traditional custodians	Local	Medium (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy S03 Complaints Management System	Low (negative)
NA	Regional	Negligible	NA	Negligible

6.1.2 Legacy impacts of project engagement affecting enduring relationships, confidence and participation of Traditional Owners

The ability of the project and NSW Government to maintain enduring relationships, confidence, and fair representation with Traditional Owners and/or endorsed Aboriginal parties is part of the project's social and cultural licence. The sentiment toward the project has been shaped by legacy concerns among Traditional Owners regarding their limited involvement in early corridor selection decisions, compounding past expressed experiences of limited representation in the planning of State significant infrastructure (SSI) in NSW. These longstanding issues are highly likely to have contributed to initial low levels of confidence that the project's Registered Aboriginal Parties (RAPs) and other Traditional Owners have carried into their engagement with the project.

The views captured during SIA consultation have been considered together with insights from *Technical Report 2 - Aboriginal cultural heritage assessment*, and consultation records with AFGs. The project's AFGs were established in 2023 and designed to better inform project planning across distinct sections of the project in the north, central and southern extent.

Concerns of relevance to this SIA include:

- procedural clarity and ongoing disputes regarding who speaks for Country
- risks that Aboriginal involvement and commitments could be diminished during post-approval and construction
- concern that cultural values would be diminished across the project's lifecycle, without strong Traditional Owner and associated governance roles.

Without measures in place, there is potential of medium significance that the project could negatively affect enduring relationships between Traditional Owners, the project and NSW government.

Management measures have been designed by EnergyCo to maintain enduring relationships, confidence and representation throughout the project's lifecycle, from planning to detailed design, construction and through to agreed governance roles post-construction. These are reported at *Chapter 11 (Social impact management)*, and are considered in the context of mitigation measures set out and agreed between relevant parties and EnergyCo within the *Technical Report 2 - Aboriginal cultural heritage assessment*. With these mitigation measures in place — including formalised governance structures (see *Technical Report 2 - Aboriginal cultural heritage assessment and AH1 Aboriginal Cultural Heritage Management Plan)*, culturally responsive engagement (S02 Community Communication Strategy under *Chapter 11*), and ongoing participation and cultural safeguards established for the duration and post-construction (S06 Industry and Aboriginal Participation Plan under *Chapter 11) (Social impact management,*) — the likelihood of a relationship breakdown is substantially reduced.

Minor residual concerns may persist, particularly among a smaller group of stakeholders, and in the context of legacy perceptions from past project outcomes, affecting engagement with the project. Accordingly, post-mitigation impact significance is expected to be **low to medium** for directly affected stakeholders.

Table 6.2 Impact evaluation: Legacy impacts of project engagement affecting enduring relationships, confidence and participation of Traditional Owners

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Traditional Owners Endorsed Aboriginal Parties	Corridor	Medium (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy AH1 Aboriginal cultural heritage management plan (*Appendix E (Proposed mitigation measures)*)	Low (negative)
	Local	Medium (negative)		Low (negative)
	Regional	Low (negative)		Negligible

6.2 Way of life

The project would bring a noticeable change to the daily lives of directly impacted landowners, adjacent landowners, and key social localities within the corridor and local social locality. Some of these impacts would be temporary in nature, and some impacts – both positive and negative – would be experienced on a permanent basis commencing with the project's construction. Within the corridor and local social localities, the most notable effects would result from land acquisition, changed land use patterns and temporary effects on residential amenity and social values.

6.2.1 Land use changes due to full or partial land acquisition

The project would result in changes to the use of land within the project impact area. The construction and operation of the project would have similar types of property and land use impacts, however in most cases the spatial extent and intensity of impacts, while temporary, would be greater during construction. At the start of construction, the current land use within the project's defined construction impact area would cease, either permanently in locations where permanent infrastructure is being constructed (e.g. switching stations, transmission towers and new access roads) or temporarily while construction activities take place (e.g. at construction support sites and in areas where laydown and stringing activities would occur).

Construction activities would require the movement of workers, machinery, and vehicles across farming properties, prompting a number of concerns to be raised by directly affected landowners and near neighbours. It is assumed (see *Section 3.3.3*) for the purposes of this assessment, that the most significant social land use impacts would occur during the main construction period from mid-2028 to late-2029.

Findings from the community survey undertaken for the SIA highlighted that 72% of respondents (n=104) reported being 'extremely concerned' about the project's change to existing land uses. During consultation with directly affected landowners during one-on-one SIA engagement sessions, key concerns raised included:

- loss of access to agricultural land during construction
- spread of invasive weeds, pests and livestock disease
- increased stress and uncertainty regarding land management during the construction and subsequent operation of the project (see also *Chapter 8 (Operation impact assessment)*).

All farmers and land managers interviewed for the SIA reported feeling uncertain regarding what farming operations could and could not be safely undertaken in and around the proposed construction activities and infrastructure (permissible activities are defined and set out by the Energy Corporation of NSW's (EnergyCo) *Living and Working near transmission line easements fact sheet* (EnergyCo, 2022)). All of the 8 landowners consulted in the central and southern sections of the corridor and one elected representative also reported similar feelings of frustration due to anticipated project impacts on the natural environment, a dominant landscape feature in these sections of the corridor.

Chapter 12 (Land use and property) of the environmental impact statement (EIS) identifies that construction would impact around 2351 hectares of land, including 874 hectares of agricultural land, 764 hectares of State forest land and 93 hectares of land managed under the *National Parks and Wildlife Act 1974.* The project would also require the permanent full acquisition of freehold land (including for construction support sites) affecting 7 private landowners, permanent easement acquisitions for the transmission line (following temporary construction easement acquisitions) affecting 12 private landowners, permanent easements for access roads (affecting 2 private landowners) as well as temporary construction leases for access road/track upgrades and laydown areas) affecting 16 private landowners (14 access road upgrades and 2 laydown areas) . In addition, the project would require temporary and permanent easements through State forests and leases in flora reserves.

The project's potential effect on landscape changes, and for enterprises dependent on land use versatility or visual amenity (e.g. nearby vineyards, equestrian centres, eco-tourism businesses), is addressed in *section 7.3.1*.

Following construction, around 1264 hectares would be permanently affected by the project including 426 hectares of non-irrigated grazing land (34% operational impact area) and 29 hectares of irrigated agricultural land (2% of the operation impact area). While grazing properties are generally expected to maintain movement and access for livestock, workers and equipment (see *Technical Report 5 – Agricultural impact assessment*), irrigated and more intensively managed lands may experience greater restrictions during construction which may continue through to operation.

These restrictions would limit certain farming activities under the transmission line, and reduce flexibility for future land use decisions, however in a regional context of agricultural productivity impacts, *Technical Report 19 – Economic impact assessment* has determined this impact as relatively low representing be $404,738/annum / 0.1% of the gross value of agriculture for the hunter region. Notwithstanding the findings of the *Technical Report 5 – Agricultural impact assessment* and *Chapter 12 (Land use and property*) of the EIS, concerns regarding the social implications of land use change affecting property use, and effects on place attachment, were notable in the SIA consultation findings.

Overall, while directly affected landowners may experience several high-magnitude impacts – particularly in relation to land use disruption, property value concerns (see *section 6.5.5)*, visual and amenity changes (see *section 6.4* and *section 6.6*), and perceived lack of agency in decisions relating to property (see *section 6.1.1*)– the overall extent of these impacts is relatively limited in geographic terms, and due to the discrete number of directly affected landowners. By contrast, broader community-level impacts are more dispersed and of generally lower intensity, but remain vulnerable to cumulative impacts which are discussed further in *Chapter 9 (Cumulative social impacts)*.

Without mitigation, construction activities would result in a **high negative** social impact for 35 directly affected landowners in the corridor social locality due to both temporary and future permanent land use changes, resultant restrictions and the potential for heightened biosecurity risks (see Table 6.3). With the application of mitigation strategies – including provision of compensation (where applicable) under the *Land Acquisition (Just Terms Compensation) Act 1991,* Strategic Benefits Payments (where applicable), implementation of the S04 Landowner Engagement Strategy, including Property-Specific management plans (see LP2 in *Appendix E (Proposed mitigation measures)* of the EIS), Biodiversity management plan (see B1 *Appendix E (Proposed mitigation measures)* of the EIS), the residual social impact of changed land use is assessed as **medium** within the corridor social locality, and **low** in the local and regional social localities (see Table 6.3).

Table 6.3 Impact evaluation: Land use changes due to full or partial land acquisition

Affected people	Extent	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners Farmers	Corridor locality	High (negative)	Compensation under the *Land Acquisition (Just Terms Compensation) Act 1991* Strategic Benefit Payments S04 Landowner Engagement Strategy, including Property-Specific Management Plans (LP2 in *Appendix E (Proposed mitigation measures)*) B1 – Biodiversity management plan (see *Appendix E (Proposed mitigation measures)*	Medium (negative)
Landowners Farmers	Local social locality	Medium (negative)	As above	Low (negative)
-	Regional social locality	Low (negative)	-	Low (negative)

6.2.2 Loss of property and relocation of landowners

Acquisition of land for the project would directly impact private landowners, including farmers, rural businesses and residential property owners through total or partial property acquisition including easement acquisition. The total number of properties affected by full or partial acquisition are discussed in preceding *section 6.2.1*. This section focuses largely on the extent to which directly affected landowners would experience loss of property and require relocation.

A total of 7 private landowners would be affected by full property acquisition resulting in permanent relocation from their homes and properties. EnergyCo has advised that all landowners have requested a whole of property acquisition over an easement or partial acquisition and it is their strong preference to reach negotiated agreement with the 7 affected landowners. These details were not discussed in detail with affected landowners at the time of SIA interviews.

Six of these properties would be acquired in Millfield, as well as 1 in Gouldsville. Five of the property acquisitions are associated with direct impacts within the HTP corridor, while 2 are associated with the Wollombi construction support site.

While the number of full acquisitions is relatively small in the context of the 110 kilometres HTP corridor, the personal significance of property acquisition and relocation for affected landowners remains substantial. Loss of property and relocation would directly affect a total of 18 adults and 5 children, which may disrupt existing employment and schooling arrangements, as well as their prior involvement in established neighbour and community networks. This SIA recognises that the emotional and logistical impacts of full acquisition would persist throughout the construction period and may be compounded by relocation stress, particularly in a constrained property and housing market (see *section 5.8*) where comparable properties may be harder to secure.

Consultation undertaken for the SIA included 11 interviews with directly affected landowners, including those affected by acquisition. Issues related to acquisition, compensation, and relocation were raised across key themes including:

- engagement and planning processes (98 mentions), describing experiences and perceptions of a lack of transparency, empathy and timely communication regarding acquisition processes (see *section 4.2.2*)
- mental health and wellbeing (21 mentions), including issues of stress linked to the acquisition land valuation and the uncertainty of relocation processes (see *section 4.2.2*)
- acquisition effects (12 mentions), describing the challenges perceived and experienced by landowners looking to secure like-for-life replacement properties, and expressing dissatisfaction with valuation offers.

While the primary relocation impacts are expected to take effect from the project's approval and commencement of construction, the permanent consequences of full acquisition would continue into the project's construction and operation.

Without mitigation, the significance of the loss of property and required relocation is assessed as **very high** for seven (7) directly affected landowners.

For landowners affected by partial acquisition and/or easement acquisitions, the likelihood of property loss and relocation is assessed as high (pre mitigation), in recognition that property users would maintain access and rights to ongoing permissible land use under these acquisition arrangements (see also Section *6.2.1* regarding land use change due to full or partial acquisition).

EnergyCo has implemented a compensation framework under the *Land Acquisition (Just Terms Compensation) Act 1991* with provisions for financial compensation of land, disturbance and legal/valuation costs,. In addition, *Chapter 11 (Social impact management)* of this SIA sets out social impact management measures including a S04 Landowner Engagement Strategy, which includes dedicated relationship management and specific training requirements for engaging with vulnerable people. These additional measures could further reduce the significance of the social impacts associated with relocation impact and improve landowner sentiment.

Within the corridor and local social locality, the significance of this impact for landowners impacted by full property acquisition and before mitigation is assessed as **very high (negative)**. The SIA acknowledges at the time of preparing the assessment, all full property acquisition engagements were being undertaken by individual landowner agreement, and no land had been or was being acquired for the project via compulsory acquisition. However, the potential for compulsory acquisition cannot be precluded from the evaluation of impact significance and residual significance for landowners directly affected by full acquisition and relocation. As such, and with recognition of the project's compensation and additional engagement supports in place, the significance of this impact is assessed as **high (negative)** for landowners affected by full acquisition.

Table 6.4 Impact evaluation: loss of property and relocation of landowners

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly affected landowners (full acquisition)	Corridor, Local	Very High (negative)	S01 Social Impact Management Plan (including monitoring) Compensation under the *Land Acquisition (Just Terms Compensation) Act 1991* S04 Landowner Engagement Strategy	High (negative)
Directly affected landowners (partial or easement acquisition)	Corridor, Local	High (negative)	S04 Landowner Engagement Strategy, including Property-Specific Management Plans (LP2 in *Appendix E (Proposed mitigation measures)*))	Medium(negative)
-	Local	Low (negative)	-	Low (negative)
-	Regional	Low (negative)	-	Low (negative)

6.2.3 Loss of residential amenity

Construction activity is expected to temporarily diminish residential amenity, particularly near work sites along the construction corridor and around the identified construction support and accommodation sites, due to increased noise, dust, vibration, visual disturbance, and with potential for loss of privacy for directly affected and near neighbours. As detailed in *section 4.4*, project modifications in response to landholder feedback are expected to lessen the magnitude of amenity-related impacts during the construction period, however a number of effects remain expected, particularly for directly affected landowners and near neighbours.

While construction is assumed (see *section 3.3.3*) to progressively ramp up from late 2027 with main construction activities occurring from early 2028 for a period of around 2-2.5 years this construction program is not linear and would be delivered across multiple work fronts in parallel and with some activities occurring with a shorter duration than others (e.g. substation and switching station construction timelines would vary, while transmission tower construction may occur concurrently along the corridor with a shorter duration of activity concentrated at one location).

Consultation with directly affected landowners (11) identified a range of amenity-specific concerns associated with the project's construction including (in order of most frequently captured in reporting):

- concerns about construction noise and dust affecting daily living conditions (7 mentions)
- loss of localised visual qualities and outlook due to the presence of project construction equipment, laydown areas and broader site disturbance (6 mentions)
- concerns about traffic and access disruptions, including increased volumes on local roads and localised dust generation (6 mentions)
- concerns about residential privacy with project workers and machinery operating near homes (5 mentions)
- perceived disruptions to rural lifestyles and existing peacefulness during construction (4 mentions).

Some landowners, particularly within the central section of the project, expressed concern that mitigation measures may not be fully implemented by the project's delivery partners. Stakeholders representing the broader community conveyed that, with clear proactive communications and suitable mitigation measures, the communities of the local and regional social localities are likely to adapt well to temporary amenity impacts as such development activities are not uncommon in the Hunter region.

Findings from the community survey (104 respondents) also reinforced concerns about construction-related amenity impacts with 67% of respondents expressing 'extreme concern' about the project's environmental amenity impacts including noise, dust, visual disturbance and landscape changes. In addition, 72% reported 'extreme concern' linking land use changes during construction to perceived loss of rural and residential character, while 10% of respondents linked perceived construction-related traffic impacts to local area amenity loss.

The following technical assessments are of relevance to the evaluation of social impact significance for loss of residential amenity during construction.

- *Technical Report 3 - Landscape character and visual impact assessment:*
    - The visual contrast of construction activities with rural and forested settings is expected to be noticeable for residents within the project corridor due to the project's construction footprint, associated ground disturbance, the use of large-scale equipment and supporting infrastructure. However, the assessment concludes that the visual effect of construction works remain temporary and intermittent.
    - The 3 temporary workers accommodation facilities on Hebden Road, Gouldsville Road and Freemans Drive would be located away from dwellings and not anticipated to cause visual impacts to private viewpoints.
    - Moderate daytime impacts to landscape character from construction and operation are expected within 3 landscape character zones (LCZs) assessed. The moderate impacts would occur across LCZs within the Wollombi Brook rural valley, Forested hills and Narrow rural valleys LCZ's - due to the scenic qualities of these settings and a higher magnitude of change during construction works and operation.
    - Night-time visual impacts, including the introduction of artificial lighting during construction, would also be moderate in the Forested hills LCZ and at the temporary worker's accommodation at Freemans Drive.

- *Technical Report 8 - Noise and vibration impact assessment:*

    - This assessment has found that where construction activities are in proximity to sensitive receivers, potential noise impacts range from negligible to clearly audible. Some of the closest receivers are expected to experience highly intrusive impacts – otherwise classified as being highly noise affected – during the project's highest impact work such as earthworks during site establishment (assumed to occur from late 2027 to mid-2028, see *section 3.3.3* for construction schedule assumptions). Noise impacts would also be greatest when transmission line construction is closest to each receiver.

    - Construction noise management level exceedances are also predicted for residences in the vicinity of the Wollombi Road and Freemans Drive construction support sites.

    - The maximum potential night time noise level from the accommodation facility at Freemans Drive are predicted to exceed sleep disturbance levels (however considered unlikely to cause awakening reactions)

    - Construction activities during extended construction hours would only be conducted where construction noise levels would not exceed the noise management level at any noise sensitive receiver.

    - Notable increases in road traffic noise (i.e. greater than 2.0 dB) are predicted on some arterial roads and all local roads with low existing traffic volumes.

    - The predicted helicopter noise from arrivals and departures at potential helipads show that high noise levels are predicted at residential receivers close to the potential helipads in the Gouldsville Road and Freemans Drive construction support sites.

- *Technical Report 18 – Air quality and greenhouse gas impact assessment*

    - The air quality and greenhouse gas assessment concludes that the project's construction carries a low to medium risk of dust impacts (dust soiling and respiratory health impacts) from earthworks and track-out and a low risk for construction.

While temporary in nature, the project's effect on local environmental qualities and conditions is expected to result in the following social impacts within the corridor social locality, and key local social localities where co-located construction support sites and temporary accommodation facilities are proposed. Identified social impacts include:

- disruptions to quiet enjoyment of properties and place (with temporary noise, dust and visual impacts), particularly for residents within 100 metres of the main HTP corridor (up to 30 residences). This disruption is also expected for residents in proximity to construction support sites and temporary accommodation facilities

- temporary increases in frustration and/or stress levels due to disruptions to access during construction, and/or changed environmental qualities affecting perceptions of quality of life.

- in the SIA engagement process, a number of landowners and neighbours disclosed health or mobility vulnerabilities that could be exacerbated by noise, vibration, and air quality changes. The potential loss of residential amenity, and effects on environmental qualities may exacerbate the existing health or wellbeing conditions for these and other potentially vulnerable residents. Particularly where impacted residents require stable utility supply, are sensitive to noise or dust due to physical or mental health, and/or where residents depend on low-noise environments as part of their care or therapy.

EnergyCo has committed to managing construction impacts through dust suppression measures; and noise and visual mitigation measures where needed during construction (refer mitigation measures LV1–LV3, NV1, AQ1–AQ3, and TT1 (*Appendix E (Proposed mitigation measures)* of the EIS). Where possible, transmission towers have been designed as set back from main ridgelines to avoid and reduce potential visual impacts. EnergyCo's consultation with residents adjacent to construction support sites and accommodation sites will be ongoing as management plans for these facilities are developed and finalised.

Chapter 11 (Social impact management) sets out additional measures to help mitigate and manage temporary disruptions to residential amenity, including S01 Social Impact Management Plan, inclusive of monitoring and adaptive management procedures, S02 Community Communication Strategy involving early notice of high-impact works, translation into accessible formats, and dedicated liaison staff for point-of-contact availability, and S03 Complaints Management System providing responsive mechanisms to log and act on real-time community concerns.

The significance of this impact before mitigation in the corridor social locality and social localities affected by construction support sites is assessed as **high (negative)**. With mitigations in place, together with financial compensation for directly impacted landowners (where applicable), the significance of this impact is assessed as **medium (negative).**

Table 6.5 Impact Evaluation: Loss of residential amenity

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly affected landowners Near neighbours Business operators	Corridor	High (negative)	S02 Community Communication Strategy S03 Complaints Management System Compensation under the *Land Acquisition (Just Terms Compensation) Act 1991* Mitigation measures LV1–LV3, NV1, AQ1–AQ3, and TT1 (*Appendix E (Proposed mitigation measures)* of the EIS)	Medium (negative)
Community Community-run services Education facilities Business operators Local health facilities Recreation facilities	Local	High (negative)		Medium (negative)
Local Governments Operators Regional health and social services	Regional	Low (negative)	-	Low (negative)

6.3 Community

With a peak construction workforce of 830 personnel and workforce assumptions (see *section 3.3.3*) that 20% would be drawn from within the project's host LGAs, the project has the potential to provide employment for around 166 residents and 664 non-residents (drawn from outside the regional social locality). As a result, the project would potentially create new opportunities for local employment and investment, and also potential challenges for local community dynamics. The phased increase in workforce, beginning with pre-construction minor works in late 2027, early works in early–mid 2028, and peaking during main construction from mid-2027 to mid-2029, reflects the non-linear nature of labour demand over the project timeline. The project is proposing three dedicated accommodation camps with a combined capacity of 780 beds, established by mid-2028 and prior to peak construction works to avoid adding pressure on already strained local housing conditions.

Through the creation of new job and business opportunities, the project is expected to enhance local economic activity. However, the increased presence of a largely non-residential workforce (around 80% of the peak workforce), if not appropriately mitigated, may strain local resources, elevate social tensions, and exacerbate concerns about the fairness of benefit distribution.

This section examines the project's key impacts on community in accordance with the NSW SIA Guideline, with specific focus on cohesion, resilience, and capacity within the corridor and social localities.

6.3.1 Workforce presence affecting perceptions of safety and community cohesion

The project is anticipated to have a staged, temporary but noticeable effect on community dynamics within the corridor and local social localities, particularly for residents and businesses located near construction support sites and proposed workforce accommodation facilities. These accommodation sites—at Hebden Road, Gouldsville Road and Freemans Drive—along with the remaining construction support sites, are expected to experience a concentrated level of construction and workforce activity.

During SIA consultations, stakeholders expressed familiarity with mining and infrastructure-related workforces. While communities demonstrated a general tolerance for these activities, concerns were raised regarding workforce integration, social cohesion, and the perceived inequitable distribution of project benefits. These concerns are expected to persist into construction and would require targeted engagement and mitigation.

During pre-construction minor works and early works, prior to the establishment of dedicated workforce accommodation, non-residential workers would rely on existing short-term accommodation options in Muswellbrook, Singleton, Cessnock and, to a lesser extent, Lake Macquarie. A review of online listings and baseline data (see *section 5.6*) confirms sufficient regional short-term accommodation capacity, with the highest availability in Muswellbrook, Singleton and Cessnock, and no viable options in rural localities such as Wollombi or Gouldsville.

During this interim period, demand for short-term accommodation may increase the visibility of the non-local workforce within host communities and elevate community concerns regarding safety, fairness, and social cohesion.

It is expected that the non-residential workforce would be absorbed within larger accommodation and service centres including Muswellbrook, Singleton and Cessnock until the new dedicated accommodation facilities come online. While workforce demand is expected to remain low during pre-construction minor works in late 2027, a visible ramp-up is anticipated from Q1 2028. In this context, a sustained but manageable workforce presence in regional centres is unlikely to generate significant concerns around community cohesion or perceptions of safety.

Once accommodation facilities are established, and in the context of the substantive main construction works program, analysis of engagement feedback for the SIA, together with consideration of related EIS technical reports (*Technical Report 4 - Traffic and transport impact assessment, Technical Report 8 - Noise and vibration impact assessment, Technical Report 3 - Landscape character and visual impact assessment*) indicate that an increased presence of workers and construction activities could contribute to:

- visible increase in traffic volumes particularly on local road networks, and the introduction of additional work sites associated with road and intersection upgrades
- perceived and/or actual changes to individual residents' sense of privacy with project workers and machinery operating near homes
- perceived and/or actual changes to rural character and associated local values, particularly near to construction support sites and accommodation facility locations.

These impacts are expected to vary by location as noted below, based on the scale of workforce concentration, proximity to sensitive community uses, and the degree of separation between worker accommodation and local communities.

The operational workforce would be small (around 10 personnel after testing and commissioning, see also *section 3.3.3)*, leading to negligible population growth, and negligible effect on community cohesion and perceptions of safety. As such, the significance of this social impact has been assessed for the project's construction only.

i Hebden Road construction support site

The Hebden Road construction support site would accommodate up to 300 workers adjacent to Lake Liddell and the New England Highway. It would be located adjacent to the Lake Liddell recreation area and Speed Bowl raceway.

If the non-local workforce was fully embedded in the community, an addition of 300 workers would temporarily represent a 2.44% increase on the Muswellbrook suburbs and localities (SAL) 2021 population. This is below the 5% threshold identified in research for notable social cohesion effects at a population level (Burdge, 2015). In the context of EnergyCo's proposed dedicated accommodation facilities, separately located from existing communities, this further reduces the potential effects on cohesion and perceptions of safety in Muswellbrook.

However, given the popularity of the Lake Liddell recreation area for camping and nature-based activities, and the Lake Liddell Speed Bowl, the temporary workforce presence (at a distance of 800 metres from the recreation area) may affect visitor experience, community character, and perceptions of personal safety, particularly during the peak periods (Easter and Christmas holidays). A representative from the Lake Liddell recreation area expressed a desire to engage more with project staff to manage and minimise potential impacts on recreation users.

Visual impacts would be moderated by the existing industrial character of the area but require consideration in site design and aesthetics (see *Technical Report 3 - Landscape character and visual impact assessment*). Noise and lighting impacts from the construction support site are not expected to significantly affect the amenity of nearby recreational precincts, given the existing daytime and nighttime noise levels from the Main Rail Line (located to the north) and Speed Bowl events. However, up to 434 light vehicle and 406 heavy vehicle movements daily would occur at this site. This level of activity would require close coordination with the operators of Lake Liddell recreation area and Speed Bowl.

Mitigation measures will be implemented to manage the potential for social impacts arising from the Hebden Road construction support site including ongoing consultation with the Lake Liddell recreation area and speedway manager (see S02 Community Communication Strategy in *Chapter 11 (Social impact management)*) and an enforceable Workforce Code of Conduct (see S07 Temporary Worker Accommodation Management Plan in *Chapter 11 (Social impact management)*). Noise, visual and traffic management plans (see NV1, LVIA1 and TT1 in *Appendix E (Proposed mitigation measures)* of the EIS) will also mitigate the project's potential to detract from existing uses and values.

ii Pikes Gully Road construction support site

The Pikes Gully Road construction support site, located southeast of Bayswater Power Station, would not provide worker accommodation but would support substantial construction activity. Traffic modelling for this site predicts an increase of up to 378 light vehicle and 335 heavy vehicle movements per day (85 movements during morning peak), potentially affecting local connectivity on the New England Highway. Given the industrial nature of the surrounding land uses, community exposure and associated effects on social cohesion are expected to be minimal (no sensitive receivers identified within 1 kilometre of the site). Nonetheless, traffic management would be required to address perceived and/or actual safety risks to road users at the New England Highway access point.

iii Gouldsville Road construction support site

The Gouldsville Road construction support site, east of the Mount Thorley Warkworth mine, would accommodate up to 180 workers and include helicopter/helipad facilities. The Gouldsville SAL had a resident population of 24 at the 2021 Census. Relative to the population of Gouldsville, the temporary addition of 180 non-local workers embedded with the local population would represent significant increase (around 800%) on baseline population estimates. However, the separate location of the accommodation facility on Gouldsville Road, and the limited visibility of the facility from private viewpoints, would largely mitigate potential impacts on local population characteristics which can otherwise affect social cohesion.

There is limited to no social infrastructure and services available in Gouldsville to draw non-local workers to interact with the Gouldsville residents, and EnergyCo's commitment to service provision within each workforce facility would also address immediate workforce health and wellbeing needs. Increased workforce commute trips, and heavy haulage activity from the construction support site at Gouldsville Road would contribute to localised traffic pressures, with a forecast of up to 434 light vehicle movements and 406 heavy vehicle movements daily.

The aesthetic appearance of the workforce accommodation facility from Gouldsville Road would be important as it represents a new feature on approach to the small residential population of Gouldsville, with potential to temporarily detract from their sense of place and affect perceptions of safety and cohesion. EnergyCo would also be required to undertake further consultation with neighbouring landowners regarding site establishment and management plans to identify and appropriately mitigate social impacts relating to noise, dust, access, quiet enjoyment of property, and perceived safety risks.

iv Wollombi Road construction support site

The Wollombi Road construction support site, west of Millfield, would support construction activities but would not provide worker accommodation. Findings from *Technical Report 3 - Landscape character and visual impact assessment* indicate the construction support site is around 500 metres from the nearest rural residents. It is likely that direct views of the site from these rural dwellings would be screened by dense vegetation surrounding dwellings. Dwellings with a more direct view (although still filtered by existing vegetation) are around1 kilometre away. Construction activities and increased heavy vehicle traffic may temporarily impact residents' quiet enjoyment of property, attachment to place and local character, as well as perceptions of safety associated with increased traffic movement patterns at this location.

v Freemans Drive construction support site

The Freemans Drive construction support site, northwest of Eraring Power Station, would accommodate up to 300 workers within a semi-rural landscape surrounded by trees, with the nearest dwelling being on the adjoining land parcel, around 400 metres from the site. The Freemans Drive site is located within the broader SAL of Cooranbong, with a population of 7077 residents in 2021. The temporary population addition at the Freemans Drive site would represent a 4.23% increase to the overall population if embedded within the residential population, which also falls under the threshold for potential affects to community cohesion at the SAL level. As a standalone facility, any social impacts are more likely to be experienced by residences and community facilities located within a 1-kilometre radius of the site.

The construction support site would be located adjacent to numerous private dwellings within 1 kilometre of the construction support site access road, in addition to 3 private accommodation providers, 2 places of worship, 3 parks and recreation facilities, 2 primary schools, 3 childcare facilities with the closest located around 400 metres from the access road, plus medical and aged care services, 1 emergency service facility, and 1 tertiary institution.

This construction support site, inclusive of worker accommodation, and associated traffic and haulage movements, if not adequately managed, may have an effect on nearby residents' and occupants' sense of place and perceptions of safety, potentially affecting community dynamics and cohesion. As noted in *Technical Report 3 – Landscape character and visual impact assessment,* the facility's visual impacts would be mitigated to an extent by existing tree cover. Nonetheless, proactive site design, traffic movement controls, and workforce behaviour management would be important measures to reduce the social impact of the establishment and operation of this temporary facility.

As with all accommodation facilities, the construction support site on Freemans Drive would require adequate on-site provisions to reduce the potential for strain on surrounding amenities and services, combined with any necessary aesthetic treatments to enhance the visual appeal of the facility and mitigate impacts on local community character and values. EnergyCo's site and accommodation management plans would also be informed by consultation with near neighbours to reduce the potential for significant social impacts to be experienced at neighbouring locations.

Analysis of the likely effects and extent/magnitude of impacts within the corridor social locality and social localities affected by construction support sites concludes that the significance of impacts to cohesion and perceptions of safety prior to mitigation is assessed as **medium (negative)**.

With proposed mitigations in place including implementation of S02 Community Communication Strategy, S03 Complaints Management System, and S07 Temporary Worker Accommodation Management Plan (inclusive of a code of conduct for managing workforce behaviour) (see *Chapter 11 (Social impact management)*) the significance of this remains **medium (negative)** in the corridor and local social localities[7](see Figure 3.1).

Table 6.6 Impact evaluation: Workforce presence affecting perceptions of safety and community cohesion

Affected people	Extent	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners Near neighbours Construction workers	Corridor locality	Medium (negative)	S02 Community Communication Strategy S03 Complaints Management System S07 Temporary Worker Accommodation Management Plan	Medium (negative)
Construction workforce Local communities Education providers Health providers Social service providers	Local social locality	Medium(negative)	As above	Medium (negative)
Regional communities	Regional social locality	Low (negative)	As above	Low (negative)

[7] the likelihood of impacts remains unchanged but the magnitude of impacts are expected to reduce to meet the NSW SIA Guideline definition of minor

6.3.2 Enhanced community services through community benefit investments

EnergyCo is expecting to commence consultation with relevant communities in 2026 to inform the design and delivery of the Community and Employment Benefit Program in the Hunter Central Coast region. The project's construction represents a significant opportunity to deliver meaningful, long-term improvements to community infrastructure and services. Characteristics of the program, its delivery and key initiatives will be refined through stakeholder, community, and regulator engagement during project development and detailed design. The program will have a governance framework that underpins the allocation and management of funds and will ensure benefits are shared with the local communities hosting the renewable energy infrastructure, including the Hunter Transmission Project, that will enable the renewable energy transition.

If implemented effectively, the program would enhance local service provision and community connectivity, and offset some negative project impacts. Stakeholders engaged during the SIA and EIS process identified the potential for community benefit investments to address local needs. However, engagement also revealed a level of social risk associated with this benefit, with 22% of survey respondents indicating a view that no benefits would materialise from the project.

Of note from consultation:

- Local and State Government (9 mentions): emphasised opportunities for substantial investment in critical local infrastructure such as roads, community facilities, and recreation spaces
- Aboriginal stakeholders (9 mentions): proposed culturally meaningful initiatives including ranger programs, culturally safe spaces, and upgrades to park infrastructure.
- Regional Reference Group (10 mentions) members emphasised the importance of local benefit sharing, especially considering the Hunter Region's role in hosting critical State significant infrastructure.

From the community survey:

- 12% of respondents prioritised investment in local environmental and Landcare projects
- 6% of respondents called for new or upgraded community amenities
- 23% of respondents believed no benefits would occur without targeted, visible investments.

While acknowledging the benefit potential to be derived from EnergyCo's Community and Employment Benefit Program, social risks remain around perceptions of distributional inequity and unmet expectations.

The significance level of this potential benefit could not be assessed at the time of writing as details on the nature of the program are currently unknown.

Table 6.7 Impact evaluation: Enhanced community services through community benefit investments

Affected people	Extent	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners	Corridor locality	Program not currently defined	-	-
Local communities	Local social locality	Program not currently defined	-	-

Affected people	Extent	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Community groups Local government First Nations people Recreation users and providers Local businesses	Regional social locality	Program not currently defined	-	-

6.3.3 Perceived unequal distribution of project benefits creating community strain

Improved coordination and delivery of equitable benefit sharing for communities hosting transmission projects is a common challenge in the energy transition nationwide. Research indicates that many people living in resource and energy development zones don't believe that they will directly benefit from the transition, but rather, most benefits will be experienced by people who live far from their communities. As such, resource communities are keen to see the energy transition leave a positive legacy (Dyer, Community Engagement Review Report, 2024).

Stakeholders acknowledged and accepted the energy transition (raised 5 times in consultation with general community members, and 8 times during consultation with directly affected landowners). However, those stakeholders also held the view that directly impacted stakeholders – particularly landowners hosting transmission infrastructure or directly affected by construction activities – bore a disproportionate impact without clear, tangible benefits identified for their community. As reported in *Chapter 4 (Stakeholder engagement)*, key findings from consultation included:

- directly affected landowners (5 mentions) acknowledged the project would contribute to short-term employment and procurement benefits but expressed concern regarding limited definition of long-term community benefits, and challenges accessing information and processes to realise local benefit
- Regional Reference Group members (10 mentions) stressed the critical need for localised benefit sharing, noting the Hunter region is hosting critical infrastructure for the State's energy future
- general community survey results showed that 61% of respondents believed there would be no benefit for the local community, with some suggestions of tangible local investments including hall upgrades and environmental restoration projects
- Aboriginal stakeholders (9 mentions) proposed ideas such as ranger programs, cultural interpretation initiatives and park upgrades.

EnergyCo is committed to compensating affected landowners via the *Land Acquisition (Just Terms Compensation) Act 1991*, implementing the Strategic Benefit Payments and a Community Communications Strategy (see S02 in *Chapter 11 (Social impact management)*. Consultation on the Community and Employment Benefit Program in the Hunter Central Coast region is also expected to commence in 2026.

The significance of this impact prior to intervention is assessed as **medium (negative)** in the corridor and local social localities based on evidence of existing levels of community concern, perceived lack of clarity, and the risk of perceived division in benefit sharing. Assuming effective participatory processes, transparent communication and tailored investment streams are fully implemented, the significance of this impact is reevaluated as **low (negative)**.

Table 6.8 Significance of social impact: perceived unequal distribution of project benefits creating community strain

Affected people	Extent	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners Near neighbours	Corridor locality	Medium (negative)	S02 Community Communication Strategy Strategic benefit payment Compensation via the *Land Acquisition (Just Terms Compensation) Act 1991*	Medium (negative)
Businesses	Local social locality	Medium(negative)	S02 Community Communication Strategy	Low (negative)
Local government / Broad community Community groups	Regional social locality	Low (negative)	S02 Community Communication Strategy	Low (negative)

6.4 Accessibility

The NSW SIA Guideline recognises accessibility as a key category for assessment, focusing on how the project might affect the ease with which people access emergency and essential community services, housing, and recreation. This assessment identifies 4 accessibility-related impacts for further evaluation:

- changed and/or diminished access arrangements for emergency services
- project impacts on access to housing and short-term accommodation
- increased demand for social infrastructure and services affecting local access
- changed access to recreational infrastructure, particularly within State forests, due to changed road and traffic conditions.

6.4.1 Changed access arrangements for emergency services

The project's construction is expected to temporarily affect access to emergency services along and near the project impact area. Impacts would primarily arise from:

- localised road closures and traffic controls at 9 identified road crossings, including:
  - Pacific Motorway near Mount Faulk Road (during stringing at night)
  - Putty Road near Broke Road
  - Cessnock Road east of Broke
  - Wollombi Road west of Millfield
  - 5 additional local road crossings as outlined in *Technical Report 4 – Traffic and transport impact assessment*

- increased construction traffic, including heavy vehicles, particularly on:
    - Pokolbin Mountains Road (narrow, unsealed, steep grades, poor visibility)
    - Mount View Road (narrow rural road)
    - Wollombi Road (unsealed sections, existing safety issues)
    - roads in Corrabare and Olney State forests (currently degraded or insufficient for heavy traffic volumes, to be upgraded as part of the project)
- temporary partial or full road closures to facilitate access track upgrades and transmission stringing works
- physical constraints on emergency access due to construction activities, exacerbated by the narrowness, steepness, and varied condition of some local roads.

There is a risk that without mitigation, emergency services – inclusive of ambulance, police, and fire and rescue services – could experience delays responding to critical incidents. The potential for this impact is considered in the context of feedback received during SIA consultation from emergency service stakeholders who identified existing access and response time issues for regional and remote call-outs.

Other consultation findings relevant to this SIA:

- Cessnock Local Emergency Management Committee (LEMC) requested a dedicated emergency services workshop to develop a coordinated response plan and address emergency access risks during construction
- Cessnock LEMC, particularly rural fire services, also identified the potential benefits associated with the project, to increase access through new access roads and improved road networks, for emergency response provision
- Rural Fire Service (RFS) stakeholders and local police raised concerns that degraded road surfaces and increased heavy vehicle use could hinder emergency access and response times, particularly in remote forested and mountainous areas recognising they operate in an already constrained challenging environment
- residents along Pokolbin Mountains Road raised concerns about delayed emergency evacuation options during construction, particularly because some people who live on the mountain have health vulnerabilities.

Similar sentiment was also found in the community survey, with 16% of respondents being ‘extremely concerned’ and 24% being ‘moderately concerned’ about access to services. Ten (10) respondents submitted open response comments regarding road safety and congestion.

There are limited emergency services in the northern section of the local social locality, with only 2 ambulance stations and 3 police stations supporting a broad geography. The central section of the local social locality has moderate emergency service availability with additional coverage from Cessnock. The southern section of the local social locality is comparatively better equipped, with 12 ambulance stations, 6 police stations and 17 fire services and facilities across the combined LGAs of Central Coast and Lake Macquarie. On average, ambulance wait times of over 15 minutes is higher for the local social locality compared to the New South Wales (NSW) average.

EnergyCo and its delivery partner propose a suite of mitigation strategies to reduce the potential for restrictions to emergency services. These measures include emergency access planning with service providers (see *Chapter 11 (Social impact management)*), S02 Community Communications Strategy (including notification and communication protocols), TT01 Traffic & Transport Management Plan (see *Appendix E (Proposed mitigation measures)* of the EIS), and S01 SIMP (adaptive management measures based on ongoing consultation and review of management measures with emergency services during construction) (see *Chapter 11 (Social impact management)*).

The significance of this impact prior to mitigation is assessed as **medium (negative)** in the corridor and local social localities. With the implementation of proposed mitigations, the post mitigation impact is assessed as **low (negative)** and the extent of significant effects are limited to key access roads and key rural roads in Cooranbong, Martinsville, Millfield, Pokolbin and Broke.

Table 6.9 Impact evaluation: Changed access arrangements for emergency services

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Community & Vulnerable Residents	Corridor & Local	Medium (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy TT01 – Traffic and Transport Management Plan Appendix E (Proposed mitigation measures) of EIS	Low (negative)
Emergency Services workers General community Health providers (State Government)	Regional	Low (negative)	As above	Low (negative)

6.4.2 Reduced access to housing and short-term accommodation due to increased workforce demand

The project's construction workforce is forecast to peak at around 830 personnel from and onwards of Quarter 2 2028, with 80% of the overall workforce expected to be non-resident. The project includes provision for non-resident workers to be accommodated in three fully self-contained temporary accommodation facilities, co-located at key construction support sites (Hebden Road, Gouldsville Road, and Freemans Drive), with a combined capacity of 780 beds. These facilities are scheduled to become available from mid-2028, in alignment with peak construction activity peak.

This approach to dedicated workforce accommodation solutions substantially reduces the potential demand of non-local workers to be accommodated in the project's social localities, thereby minimising potential pressures on the local rental and short-term accommodation markets.

Short-term transitional pressures may arise prior to the full establishment of the temporary facilities, with some non-local workers needing to secure local accommodation. Workforce ramp-up is expected to be staged, with non-resident demand growing incrementally from around 20 to 40 workers in late 2027, up to 150 workers during early and enabling works prior to peak construction.

During this period, workers are likely to seek accommodation in towns including Muswellbrook, Singleton, Cessnock, and Lake Macquarie, where the SIA regional (combined LGA) capacity for short-term accommodation beds is highest, but where economies are largely subject to tourism and seasonal peaks, and where rental vacancy rates remain at or below 1.5%. Smaller communities such as Broke, Millfield, and Cooranbong have limited supply and heightened sensitivity to even minor increases in demand, raising the risk of rental price escalation, short-term visitor displacement, and competition for accommodation among existing vulnerable tenants.

While this transitional period is expected to be short, it represents a potentially high-risk timeframe for unmanaged demand for short-term accommodation particularly, and for six month rental contracts where rental markets and short-term accommodation are already under strain or subject to seasonal tourism activity).

Stakeholder feedback substantiates these risks noting that without appropriate mitigations in place, even a modest increase in accommodation demand may exacerbate current conditions and vulnerabilities locally. Feedback included:

- near neighbours, tourism operators, and local councils raised concerns that an influx of non-resident workers, without appropriate provisions in place for their accommodation, could:
    - displace low-income residents and compete with existing tenants in already tight rental markets (noted in 7 interviews with directly affected landowners, and 4 interviews with near neighbours)
    - create demand pressures on tourism accommodation, particularly during peak periods, affecting current business operations in Broke and Pokolbin
- business and industry stakeholders, including representatives from Hunter Valley vineyards and a tourism accommodation provider, welcomed advance notice by the project regarding workforce numbers and accommodation plans to avoid temporary booking conflicts and impacts to existing clientele patterns, with particular concern regarding the management of competing demands during harvest and holiday seasons (6 mentions)
- directly affected landowners including individuals that would experience relocation reported difficulties (actual and expected) in their search for comparable replacement properties, suggesting scarce supply and high competition to secure similar rural lifestyle and productive agricultural land types (12 mentions). While these challenges are unlikely to be exacerbated by any future project demand, the insights regarding constrained housing market conditions remains relevant to the SIA
- local councils, particularly Cessnock and Singleton, expressed concern about the project's effect on housing affordability if the construction period were to extend, or if workforce accommodation arrangements were not sufficient to meet project demand leading to 'spillover' experienced in local towns.

While 'access to housing or short-term accommodation' was ranked a lower concern than the project's potential environmental and amenity impacts, 18% of community survey respondents (sample total n=104), identified this as a potential project impact with qualitative responses noting existing concern regarding rental pressure, potential for displacement, and changed access to short-term lease availability during the project's construction.

The project's proposed housing and accommodation management measures substantively reduce the risk of diminished access to housing and short-term accommodation for other uses during the construction period. These management measures are detailed in *Chapter 11 (Management measures)*, and include S07 Temporary Worker Accommodation Management Plan(s), which will include including contemporary analysis of short-term and local accommodation capacity in key localities including Broke, Millfield, Cooranbong and surrounding postcode areas, ongoing monitoring of housing availability, updated workforce histograms, and informed by key stakeholder consultation. Where required, adaptive management measures (described in S01 SIMP) should be developed in consultation with affected stakeholders including councils, accommodation providers, and social support services as representatives for affected vulnerable groups.

Without these mitigation measures in place, the significance of reduced access to accommodation during the project's construction is assessed as **medium (negative)** at the corridor and local level, due to constraints in existing market conditions and expected temporary spike in demand prior to accommodation facilities becoming operational. With the implementation of the proposed management measures, the residual social impact is assessed as **low (negative)** at the corridor and local level and **low (negative)** at the regional level. In a cumulative context, the potential for social impact on housing availability and affordability may be greater.

Table 6.10 Impact evaluation: Reduced access to housing and short-term accommodation due to increased workforce demand

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Community & vulnerable people	Corridor	Medium (negative)	S01 Social Impact Management Plan S07 Temporary Worker Accommodation Management Plan(s)	Low (negative)
Accommodation providers Social support services	Local	Medium (negative)		Low (negative)
Non-resident workers	Regional	Low (negative)		Low (negative)

6.4.3 Reduced access to health and other community services due to increase in construction workforce

The presence of temporary construction workers has the potential to increase demand on already limited health and community services catering to a rapidly growing population, potentially leading to longer wait times and reduced service availability. Sixteen percent (16%) of survey respondents stated they were 'extremely concerned' about access to services, 24% were 'moderately concerned and 24% were 'somewhat concerned'. Key service centres of Muswellbrook, Singleton, Cessnock and Cooranbong are identified with the greatest potential to experience increased service demand.

Assuming 20% of the project workforce reside locally, these workers are most likely to continue to use their existing hospital and health service arrangements, thus mitigating strain on social and health services unless due to a work-related emergency. The remaining 80% of the workforce is assumed to be non-resident (around 664 workers), and accommodated across 3 self-contained workforce accommodation sites with a collective capacity of 780 beds:

- Hebden Road, offering 300 beds, is relatively isolated from the broader Muswellbrook community. However, workforce health needs that cannot be addressed by on-site first aid, would likely result in an overflow to Muswellbrook hospital which has limited staffing and specialist capacity, as well as local medical centres, which may affect the overall capacity of these services to meet existing resident population needs

- Gouldsville Road, with 180 beds, is also a relatively isolated facility from nearby communities, and is located without surrounding health or hospital infrastructure. Any off-site demand for services would most likely affect Cessnock Hospital where existing capacity constraints have been identified, together with local medical centres

- Freemans Drive, with 300 beds, is located in proximity to a range of social and health infrastructure, with Martinsville and Cooranbong the nearest population centres. However, these localities do not host hospital level care. As such, offsite needs for hospital and health services would likely extend to affect hospitals in the Lake Macquarie or Central Coast LGAs.

Each accommodation facility includes workforce amenities including catering, sanitation, laundry and first aid. The accommodation is intended to be fully self-contained, minimising reliance on surrounding health and social infrastructure. Helipad sites may also facilitate onsite emergency response if required. Consultation with Cessnock LEMC members representing NSW Health, raised questions regarding more detailed provision of health services, particularly paramedics, as part of the project's accommodation management plans. The LEMC also identified insights from working protocols with other projects (e.g. Inland Rail accommodation management plans) to be considered during the project's detailed planning of accommodation and emergency management protocols. Representatives from volunteer organisations, including the RFS and Hunter Wildlife Rescue, also anticipate increased pressure on their volunteer-based community services during the project's construction period (mentioned 4 times).

To reduce pressure on local hospital and health services, and supporting volunteer-based and community services, EnergyCo proposes a range of mitigation measures, under S01 Social Impact Management Plan and S07 Temporary Workforce Accommodation Management Plan, to be refined in consultation with representatives from NSW Health, LEMCs, Primary Health Networks and associated social support services. These measures include providing first aid and paramedic on-site health services together with wellbeing program provision (see *Chapter 11 (Social impact management)*.

Without mitigation, the significance of increased demand to local health and community services from non-local workers is assessed as **medium (negative)** across the local area, and **low (negative)** in a regional context. With the full implication of self-contained accommodation, on-site health provision, and strategic partnerships with primary health networks (PHNs) and community-based wellbeing organisations, the residual impact is assessed as **low (negative)**.

Table 6.11 Impact evaluation: Reduced access to health and other community services due to increase in construction workforce

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Community PHN	Corridor	Medium (negative)	S01 Social Impact Management Plan S07 Temporary Worker Accommodation Management Plan(s)	Low (negative)
Local allied health service providers	Local	Medium(negative)		Low (negative)
NSW Health LEMC Emergency Services Non-resident workers	Regional	Low (negative)		Low (negative)

6.4.4 Changed access to recreational infrastructure due to road network changes

Increased use of the road network during construction may impact public access to recreational areas including State forests, sport fields and recreational areas. Stakeholders identified access to State forests and national parks and other nature-based recreational settings as a key community value. The State forests of the Watagan Mountains (Awaba, Heaton, Olney, Ourimbah, Watagan and Wyong) were described as affordable and easily accessible destinations, attracting local residents as well as regional visitors from Sydney, Newcastle, and the Central Coast. These areas support day trips, camping, 4WD touring, horse riding, hiking, and mountain biking, and are important for family wellbeing, social connection, and community identity. The Pines Campground and Picnic Area in the Olney State Forest is a popular destination for camping, day trips and (increasingly) weddings.

Annual visitation figures to the Watagans (a common term used to describe Watagan Mountains hosting multiple State forests and national park) were reported to be at least 1 million people in 2025 (understood to be dominated by visitation to Olney State Forest). Further, the State forests of the Watagan Mountains won the Gold Award for Adventure Tourism in the Hunter Central Coast Tourism Awards in 2012, 2013 and 2014, and received a bronze award in the tourist attraction category in 2011, and won the silver award for adventure tourism at the NSW Tourism Awards in 2013. This recognition further emphasises the value and popularity of the forests within the social locality (Forestry Corporation, 2025).

Concerns were raised about the potential for construction traffic and road upgrades to reduce access or deter visitation, especially during weekends and peak holiday periods. Representatives from the Forestry Corporation of NSW raised risks regarding access to well-used access points, particularly along Martinsville Road, Sweetmans Creek Road, Watagans Forest Road. Key feedback relevant to potential changed access arrangements included:

- Forestry Corporation of NSW conveyed concerns about the impacts of traffic / construction noise on campers and forest visitors in the Olney State Forest campgrounds, potentially deterring visitors and/or resulting in complaints
- Forestry Corporation of NSW welcomes an opportunity to work with EnergyCo to coordinate public access notifications with land managers and forest operators, particularly during peak holiday seasons
- Cessnock City Council suggested early engagement on construction scheduling and operations to help maintain access to parklands and recreational facilities
- Traditional Owner representatives expressed interest in opportunities to use EnergyCo's community investment mechanisms to support initiatives that allow Aboriginal people to spend more time on Country
- a representative from the Lake Liddell Recreation Reserve raised concerns about the potential impacts of increased traffic (adjacent Hebden Road construction support site) on visitation, particularly during Easter and Christmas holidays where camping is usually booked out.

Construction traffic would generate increased traffic along key roads also used for accessing recreation areas, including Hebden Road (Lake Liddell Recreation Area), Broken Back Road (Pokolbin State Forest), Martinsville Road and Watagans Forest Road. *Technical Report 4 - Traffic and Transport Assessment* concluded that the forecast increase in construction traffic is unlikely to exceed the capacity of the local road network. However, from a social perspective, even minor delays, perceived safety risks, reduced amenity of the natural surroundings or uncertainty about access could deter residents and visitors from accessing their preferred recreational sites. Project-related traffic increases on Freemans Drive, which services Cooranbong Sports Facility and the broader Martinsville area, may also influence perceived diminished access to formal and informal use of sports fields, community parks and State forests.

Unmitigated, the social impact of diminished recreational access is rated as **high** (negative) for campers & visitors, NSW / ACT 4WD Association, Local 4WD clubs, Trail biking clubs, Forest permit holders and Nature based recreation operators in the local and corridor localities, and **low** (negative) for the regional social locality. Mitigation and management measures include TT01 Traffic & Transport Management Plan (see *Chapter 11 (Traffic and transport),* S01 Social Impact Management Plan, S02 Community Communications Strategy inclusive of engagement with tourism and recreation operators to manage associated impacts during construction, and community notification processes developed in consultation with Forestry Corporation of NSW and councils. With the implementation of these measures, the significance rating is reduced to **medium** (negative) for stakeholders in the corridor and local social localities, and **low** (negative) for other users.

Table 6.12 Impact evaluation: Changed access to recreational infrastructure due to road network changes

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Olney State Forest users: • Campers & visitors • NSW / ACT 4WD Association • Local 4WD clubs • Trail biking clubs • Forest permit holders • Nature based recreation operators	Corridor & Local localities	High (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy TT01 – Traffic and Transport Management Plan (see *Chapter 11 (Traffic and transport)*	Medium (negative)
Nature based recreation operators and users	Corridor & local locality	Medium (negative)	As above	Low (negative)
Nature based recreation operators and users	Regional social locality	Low (negative)	As above	Low (negative)

6.5 Livelihoods

6.5.1 Broad financial benefits through benefit sharing initiatives

EnergyCo is expecting to commence consultation with relevant communities in 2026 to inform the design and delivery of the Community and Employment Benefit Program in the Hunter Central Coast region. The project's construction represents a significant opportunity to deliver meaningful, long-term improvements to community infrastructure and services. Characteristics of the program, its delivery and key initiatives will be refined through stakeholder, community, and regulator engagement during project development and detailed design. The program will have a governance framework that underpins the allocation and management of funds and will ensure benefits are shared with the local communities hosting the renewable energy infrastructure, including the Hunter Transmission Project, that will enable the renewable energy transition.

These initiatives are expected to result in a high social benefit to the livelihoods and sustainability of communities affected by the project.

Additional commitments by EnergyCo that seek to enhance local livelihoods include ongoing payments to landowners hosting project infrastructure ($200,000 per kilometre of transmission infrastructure hosted to be paid in instalments over 20 years starting from the commencement of energisation), increasing income and employment opportunities for local Aboriginal groups under the First Nations Guidelines (DCCEEW 2024) to the value of at least 1.5% of the contract value of the project, and maximising the employment of locals and the purchase of local goods and services.

During the engagement, stakeholders referenced the following ideas for local and regional investments:

- upgrades to roads and public transport
- investing in youth training and employment programs
- legacy social infrastructure projects
- investment in recreational facilities in the State Forests of the Watagans Mountains
- investment in infrastructure that would enhance greater access to Country and culturally safe places for Aboriginal people.

Opportunities to maximise the broad financial investments that enhance livelihoods of local communities and nearby landowners include consideration of:

- a funding stream dedicated to sustaining the co-existence of local industries including agriculture, tourism, and local business sectors. This may include additional grants for impacted businesses and farmers and targeted financial support for tourism and agriculture sustainability
- recommended participatory community engagement and planning for needs identification and place-based approaches to decision making.

The significance rating of the project's financial benefits for stakeholders within the corridor is assessed as a **high** (positive). Across the local and regional social localities, the evaluation cannot be completed at this time due to a lack of detail around investment priorities and quantum for the Community and Employment Benefit Program.

Table 6.13 Impact evaluation: Broad financial benefits through benefit sharing initiatives

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Farmers Landowners Near Neighbours	Corridor locality	High (positive)	-	High (positive)
Local business and industry groups Local community/local government Community Groups	Local social locality	-	-	-
Health and social service providers	Regional social locality	-		-

6.5.2 Generation of employment and training opportunities for local and regional residents

The project is expected to create significant employment opportunities during its construction, involving a peak workforce of 830 personnel from mid-2028, and with approximately 20% drawn from the project's host local government areas, and up to 80% drawn across the State and elsewhere (if required). Employment opportunities would expand a broad spectrum ranging from technical and trade roles to environmental management, cultural heritage, land access and community engagement roles. The project also has potential to stimulate the establishment of new businesses and industry precincts, fostering economic diversification in a region where mining remains dominant.

The renewable energy transition catalyses broader economic benefits, including growth in technical services, construction, and infrastructure maintenance. Economic modelling presented in *Technical Report 19 – Economic impact assessment* estimates up to 875 direct and indirect annual jobs at peak construction and an associated $78 million per year to the regional economy. Section 5.9 highlights baseline conditions including relatively high rates of youth employment, strong alignment of local skills mix particularly in civil construction, including trade and machinery operators, opportunities to focus on Aboriginal training and employment where 6-12% of residents across the project's regional social locality identify as Aboriginal and/or Torres Strait Islander.

During SIA engagement, business representatives and other stakeholders spoke of the high potential for the project to contribute positively to local and regional livelihoods through employment and to create opportunities for locals to transition away from historically dominant mining industry employment particularly in Muswellbrook and Singleton. However, stakeholders also cautioned that ongoing training and support packages would be needed to maximise local access to opportunities and minimise the risk of benefits leaving the regional economy.

EnergyCo will develop targeted employment and training initiatives, including established partnership with NSW TAFE, to address the project's labour force requirements as part of a S05 Local Business and Employment Strategy and S06 Industry and Aboriginal Participation Plan (S06) (see *Chapter 11 (Social impact management)*). Additional local developments (see *section 0*), such as the establishment of a new education precinct in Cessnock (expected by 2028), represent emerging opportunities for collaboration between local providers and EnergyCo. The Cessnock precinct will have a focus on vocational training and early education, with opportunities to contribute to legacy skill sets required for social sustainability (e.g. early education), and pathways for participation in this project and the region's broader energy transition.

The unenhanced significance of the project's generation of employment and training is assessed as **medium (positive)**, with the majority of benefit derived during a temporary construction period. The enhanced significance of the project benefits on employment and training opportunities, underpinned by local and regional partnerships, is assessed as **high (positive).**

Table 6.14 Impact evaluation: Generation of employment and training opportunities for local and regional residents

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Community – young people, Aboriginal residents, women, previous mining industry and associated civil construction employees Education providers – TAFE, high schools Local and Aboriginal businesses	Corridor, Local, Regional	Medium (positive)	S01 Social Impact Management Plan S05 Local Business and Employment Strategy S06 Industry and Aboriginal Participation Strategy	High (positive)

6.5.3 Increased regional business opportunities contributing to economic prosperity

The project is expected to boost demand for local and regional goods and services, benefiting retail, hospitality and supply chain businesses. Key economic benefits associated with the project's construction includes larger, construction-related contractual opportunities (majority of direct benefits) and increased ancillary spending in local and regional businesses including food services and transport, retail, health care and other social services (flow-on spend).

Regionally, the construction activities are estimated to contribute $325 million in direct and indirect output, including $113 million in direct and indirect value-add and $72 million in direct and indirect household income. This represents a 0.6% increase in contribution against the regional economy's 2020 input/output quantum.

For the NSW economy as a whole, the project's construction activities are estimated to contribute $551 million in annual direct and indirect output, $232 million in direct and indirect value-add and $150 million in direct and indirect household income.

Business representatives identified the potential benefits of the project to regional businesses. Business Hunter welcomed continued briefings and engagement from EnergyCo. Businesses are eager to further understand how they can 'tap into' project opportunities to realise maximum value. Participants also emphasised the highly adaptable nature of businesses in the Hunter region and for the project to recognise this capability.

Although fundamentally positive for local and regional businesses and therefore the community, a key challenge for the economy will be to anticipate and plan for the temporary nature of the opportunity, and what this means for the downturn post-construction. This will form part of ongoing engagement and planning through the RRG and supported by topic-specific communications as part of S02 Community Communication Strategy. In addition, EnergyCo have committed to a range of initiatives, as part of S05 Local Business and Employment Strategy and S06 Industry and Aboriginal Participation Strategy, including set targets and ongoing partnerships with businesses and forums to enhance benefits to regional businesses (refer *Chapter 11 (Social impact management)).*

The unenhanced rating for the benefit is assessed as **medium (positive)** across the project's local and regional social locality, and with targeted strategies in place, the enhanced significance of the project benefits on local and regional business opportunities is rated as **high (positive)**.

Table 6.15 Impact evaluation: Increased regional business opportunities contributing to economic prosperity

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Local and regional businesses Business Hunter	Corridor, Local, Regional	Medium (positive)	S01 Social Impact Management Plan S05 Local Business and Employment Strategy S06 Industry and Aboriginal Participation Strategy	High (positive)

6.5.4 Increased competition for workers impacting local and regional businesses

The project's workforce and labour demands have the potential to strain labour availability, particularly for businesses that rely on similar trades. From mid-2028, the project's main construction program is likely to involve the following key components:

- civil construction (up to 280 personnel at peak, including around 56 drawn from the regional social locality)
- project and technical staff (indicatively 220 workers sustained across the construction period including around 44 drawn from the regional social locality)
- transmission line teams (320 workers required primarily through 2028, including around 64 drawn from the regional social locality)
- substation and switching station crews (around 80 workers from mid-2028).

The project's workforce requirements align with dominant industries in the regional social locality, including mining, energy, trades, machinery operation, and civil construction. Given the tight regional labour market and baseline findings of existing workforce shortages in civil construction roles the project may contribute to increased competition for skills and labour and contribute to labour draw from other existing businesses in the region. In acknowledgement of these risks, EnergyCo has assumed 80% of the workforce would be sourced from outside the regional social locality.

During SIA engagement, regional business and industry stakeholders have raised concerns about labour shortages in key occupations such as machinery operators, tradespeople, technicians, and drivers, who are also critical to mining, agriculture, and infrastructure. Businesses in Singleton, Muswellbrook, and Cessnock may face difficulties attracting and retaining workers, particularly in sectors where wages and conditions cannot compete with project-based employment. Local service industries, such as hospitality, retail, and healthcare, could experience staffing shortages. Youth unemployment (ranging from 9.8% to 11.8%) presents an opportunity to integrate young workers into the project. However, without structured training programs, businesses relying on entry-level labour may still experience workforce shortages.

Regional business groups, including Business Hunter, have noted a lack of clarity on how local businesses can participate in the project, creating uncertainty around their own workforce planning. Winery and tourism operators raised concerns regarding labour draw of service staff during peak tourism and harvest seasons, which may not represent a significant skills alignment or labour draw attributable to this project, but a concern that can be managed through the project's regular engagement program. Representatives from Cessnock, Singleton, and Lake Macquarie Councils have also expressed concern for the project's effect on labour draw and local economies.

Labour competition is not unique to the HTP. The transition to renewable energy in NSW and across Australia is driving unprecedented demand for skilled workers, intensifying competition across industries (Australian Renewable Energy Agency (2023), AEMO, 2024), (Briggs, et al., 2022). As described in sections 5.5, and 5.8 renewable energy projects are predicted to continue competing with mining, infrastructure and urban construction projects for the same pool of skilled labour – particularly electricians, mechanical trades and engineers. With a tight labour market, wages for roles within the project may be higher, making it more challenging for other sectors to attract and retain workers.

EnergyCo's commitments to workforce planning and diversity targets, local and regional employment targets, and regional education and training partnership are set out in S05 Local Business and Employment Strategy, and S06 Industry and Aboriginal Participation Strategy (see *Chapter 11 (Social impact management)*). S02 Community Communication Strategy and commitment to targeted stakeholder engagement, together with regionally-focused engagement the project's RRG, will support the project to refine these strategies and monitor their outcomes and effectiveness (see also the project's commitment to monitoring and adaptive management under S01 Social Impact Management Plan).

The unmitigated impact of labour competition associated with the project is assessed as high likelihood, and high temporary impact. The effect within the corridor social locality unmitigated is assessed as medium, with acknowledgement of varied capacity to participate in employment and business opportunities, thus a medium potential significance of labour draw from the corridor social locality.

To align the project's workforce requirements with regional economic stability, targeted workforce development and industry collaboration will be essential. The pre-mitigated impact rating for increased competition for workers and labour draw is assessed as **high (negative)** in the local social locality and the mitigated impact rating is assessed as **low (negative).** In a regional context, the potential for the project to exacerbate competition for labour is lower, but further assessment has been made of regional effects in the project's cumulative development context at *section 9.2.*

Table 6.16 Impact evaluation: Increased competition for workers impacting local and regional businesses

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Local and regional businesses	Corridor	Medium (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy S05 Local Business and Employment Strategy S06 Industry and Aboriginal Participation Strategy	Low (negative)
Local and regional businesses	Local	High (negative)		Low (negative)
Young people Aboriginal People TAFE NSW Farmers Federation Business Hunter	Regional	Low (negative)		Low (negative)

6.5.5 Impacts on rural livelihoods and biosecurity risks

Construction activities can increase biosecurity risks to farms and forested/riparian areas, as weeds can spread across the landscape at a higher rate when machinery, people and vehicles access previously unused sites on a regular basis. Construction activities may cause soil erosion, changes overland flow, and restrictions on farm vehicle and/or stock movements.

Impacts are primarily anticipated to be experienced in non-irrigated land used for beef cattle grazing, occurring on 817 hectares or 35% of the construction impact area, with impacts to irrigated lands used for more highly sensitive agricultural operations such as dairying occurring over 57 hectares or 2% of the construction impact area. The loss of agricultural land over around 874 hectares during construction represents around 0.4% of the total land used for agriculture in the project impact area, inferring a low or negligible impact regionally.

Landowners affected by easement acquisition and land access agreements within the corridor social locality carry the highest risks for this impact, while local and regional social localities the risk is lower but still present due to the movement of construction vehicles around these areas.

Landowners interviewed conveyed concerns for reduced property values, biosecurity risks and long-term impacts on farming practices and profitability. Some farmers raised concerns about the efficacy of standard biosecurity management approaches and called for greater participation in their development and monitoring. Farmers also conveyed concern for regional food security and the general decline and undervaluing of rural livelihoods and farmers by government policy and programs.

EnergyCo have committed to a range of mitigation measures to reduce risks to rural livelihoods, including S04 Landowner Engagement Strategy, LP2 Property management plans and B1 Biodiversity management plan (inclusive of biosecurity management measures, refer *Chapter 11 (Social impact management)*). Compensation (where appropriate) and standard construction operational procedures will also be applied.

The pre-mitigated impact rating for Impacts on rural livelihoods and biosecurity risks is assessed as **medium (negative)** in the corridor social locality and the mitigated impact rating is assessed as **medium (negative)**.

Table 6.17 Impact evaluation: Impacts on rural livelihoods and biosecurity risks

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly affected landowners	Corridor	Medium (negative)	S04 Landowner Engagement Strategy including property-specific management plans LP2 – Property management plans (see *Appendix E (Proposed mitigation measures)* B1 – Biodiversity management plan (see *Appendix E (Proposed mitigation measures)*	Medium (negative)
Community including agricultural property owners and near neighbours to construction support sites	Local	Low (negative)	B1 – Biodiversity management plan (see *Appendix E (Proposed mitigation measures)*	Low (negative)
	Regional	Low (negative)		Low (negative)

6.5.6 Impacts on tourism operation and visitor economy

Construction activities in high-tourism areas such as the Hunter wine region may affect the visitor experience due to increased traffic and visual impacts in certain areas. Increased construction noise, visual disturbances, road detours and congestion, may also deter visitors from engaging in wine tourism, eco-tourism, and cultural heritage experiences.

Interviews undertaken with tourism operators conveyed concerns about increased construction traffic causing reduced local amenity (noise, dust, vibrations) and road congestion (coinciding with grape harvesting season), potentially interrupting operations and detracting from visitor experiences. Business operators also conveyed that long term planning was a key part of business operation and relevant project information – such as operation hours/days, road closures and delays – is needed as early as possible to ensure the future viability of their businesses and livelihoods.

A representative from the Hunter Valley Wine and Tourism Association echoed this sentiment by raising concerns about road congestion, deterioration and safety, and the potential for the project (and others in the region, such as greenfield housing developments and the Cessnock bypass) to reduce the aesthetic appeal of the vineyard region. It was also noted that the local tourism economy has been 'flat' since 2023. The importance of preserving the vineyard regions is supported by Cessnock City Council, with the 'Vineyards Planning Proposal' due for release in the second half of 2025.

While tourism is not directly addressed within *Technical Report 19 - Economic impact assessment*, the assessment identifies relevant constraints potentially exacerbated by the project (due to accommodation demand) as well as opportunities (via recreational investments and local economic stimulus) for the visitor economy. Roads that traverse Pokolbin wine country that would be used for construction include Wine Country Drive, Broke Road, McDonalds Road and the lower portion of Pokolbin Mountains Road. Upgrades and minor works would also be required for some of these roads. Related social impacts including reduced access to short-term accommodation and changed access to recreational infrastructure, are considered in the context of the project's potential effects on tourism operations and the visitor economy.

EnergyCo will minimise impacts on the tourism sector through S01 Social Impact Management Plan, S02 Community Communication Strategy and implementation of visual, traffic and noise mitigation measures near key visitor attractions (mitigation measures LV1–LV3, NV1, AQ1–AQ3, and TT1 (*Appendix E (Proposed mitigation measures)*). The pre-mitigated impact rating for impacts on the tourism economy is assessed as **low (negative)** within the corridor social locality, and **medium (negative)** in terms of interactions with tourism operators in surrounding local social localities. The mitigated impact rating is assessed as **low (negative)**, with consideration of management measures set out in *Chapter 11 (Social impact management)*.

Table 6.18 Impact evaluation: Impacts on tourism operation and visitor economy

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Business owners Business Hunter HVWTA	Corridor	Low (negative)	S01 Social Impact Management Plan S02 Community Communications Strategy Mitigation measures LV1–LV3, NV1, AQ1–AQ3, and TT1 (*Appendix E (Proposed mitigation measures)*)	Low (negative)
	Local	Medium (negative)		Low (negative)
	Regional	Low (negative)		Low (negative)

6.6 Health and wellbeing

6.6.1 Diminished mental health and wellbeing due to project-related stressors

Findings from the SIA engagement program has revealed a number of project-related factors contributing to elevated stress, anxiety and diminished wellbeing among stakeholders, and particularly among directly affected landowners. These mental health and wellbeing impacts were commonly attributed by stakeholders to their experience of project planning, engagement and land acquisition processes, while other stakeholders highlighted more general concerns for how the project's effect on environmental values, attachment to place and property stewardship would affect people's mental health and wellbeing. This section considers a broad range of contributing factors to people's mental health and wellbeing during the project's construction. Further analysis regarding the project's impacts on environmental values is provided at subsequent *section 6.6.2*.

During the SIA process, 11 directly affected landowners participated in one-on-one interviews. Mental health and wellbeing concerns were raised in these interviews 21 times, underscoring this as a prominent and recurring theme in relation to the project's planning and engagement processes (common references were made to the project's route selection and consultation process, land acquisition engagement process, EIS communication and consultation processes). Concerns about the issue of mental health and wellbeing impacts on directly affected landowners was also mentioned by other (non-impacted) community members, including 4 elected representatives, 1 RRG representative and 2 near neighbours.

Interviewees identified a range of factors as contributing to elevated anxiety and emotional strain including:

- a perceived lack of control over project planning and decision-making processes
- protracted, uncertain and changeable project timeframes
- uncertainty and delay associated with the land acquisition, valuation and relocation process
- perceived loss of intergenerational land and disruption of family legacy
- concern for environmental values at individual properties.

Several landowners also reported existing chronic and/or terminal health conditions as being potentially exacerbated by project stressors. In some instances, landowners called for greater empathy, responsiveness, disclosure and respect for individual's personal circumstances moving forward.

Broader sentiment around the engagement process was also captured in a community survey conducted from December 2024 to March 2025. A total of 104 individuals participated in the survey, 77% of whom identified as living within the project's local social localities. Across the survey, 26 respondents (around 25%) raised concerns relating to mental health and wellbeing.

As detailed in *Appendix B (Social baseline)*, mental health conditions including depression and anxiety are already prevalent in the corridor social locality (at a rate higher in the local government areas than the NSW average), as are other chronic health conditions. These factors contribute to overall vulnerability within the communities associated with the project. Farming livelihoods also carry an elevated risk to mental health due to factors such as the solitary nature of work, lack of specialised support services, and high financial risk.

In addition, 6 survey respondents specifically highlighted their concern regarding the mental health toll being experienced by the project's directly affected landowners. This indicates broader community awareness and concern for those navigating land acquisition negotiations. A recurring theme in broader community responses was the perception that the engagement approach to date has at times contributed to community division rather than fostering collaborative problem solving. Some stakeholders, including local business and non-affected residents, described consultation efforts as reactive, inconsistent and needing to be underpinned with greater transparency.

It is important to differentiate the nature of social impact for directly affected landowners currently navigating property acquisition processes, and those expressed by broader community members living within the project's social localities. While both groups have reported stress and dissatisfaction with project engagement processes, the mental health impacts described by directly affected landowners are more acute, often tied to personal loss, disruption and uncertainty. In contrast, concerns (in some cases perceived impacts) raised by the broader community relate more to disengagement and frustration with the project's communication and engagement approach generally, and concern for the welfare of directly impacted landowners.

EnergyCo has already established a range of mental health and wellbeing measures for landowners affected by property access and acquisition processes, including 24/7 psychological services through a Property Acquisition Support Line and access to free and confidential counselling as detailed on the EnergyCo website (EnergyCo, 2025). However, consultation with landowners indicated that the service was not widely utilised due to difficulty accessing an advisor and also perceptions the support would not effectively help their mental health status (i.e. was not culturally suitable).

Additional measures are required to address the social impact of project planning and engagement on mental health outcomes for landowners and community members within the corridor and local social localities primarily as the project transitions into the detailed design and construction. These measures are set out in *Chapter 11 (Social impact management)* and include S01 Social Impact Management Plan, S02 Community Communication Strategy, S03 Complaints management system and S04 Landowner Engagement Strategy. These strategies include measures such as extension of existing mental health services for landowners to be accessible to nearby communities, and ensuring additional training for project engagement and land acquisition staff in line with community engagement certifications (e.g. IAP2), and trauma informed care.

For directly affected landowners within the corridor social locality, the pre-mitigated significance of this impact is rated as **High (negative).** With a sustained effort to implement the mitigation measures over time, the post mitigation significance rating is reduced to **Medium (negative).** This residual rating acknowledges existing vulnerabilities among landowners in the corridor social locality. For affected people within the local social locality, the pre-mitigated significance of this impact is rated as **Medium (negative).** With a sustained effort to implement the mitigation measures over time, the post mitigation significance rating is reduced to **Low (negative).** It is unlikely for this social impact to be experienced at a regional scale, representing negligible effect in this context.

Table 6.19 Impact evaluation: Diminished mental health and wellbeing due to project related stressors

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly affected landowners Near neighbours Community	Corridor	High (negative)	S01 Social Impact Management Plan S02 Community Communications Strategy S03 Complaints management system S04 Landowner Engagement Strategy	Medium (negative)
	Local	Medium (negative)		Low (negative)
	Regional	Low (negative)	-	Negligible

6.6.2 Impacts on environmental values

The central and southern sections of the corridor traverse through State forests and reserves, where 720 hectares of forested land is estimated to be cleared. This would cause biodiversity impacts and forest fragmentation. Solastalgia is a term used to describe the emotional distress caused by negative changes in one's home environment, through environmental degradation, disasters or large-scale developments, whilst still residing in that environment. A range of psychological effects such as loss of sense of place, grief and sadness can occur (Albrecht 2019).

The aesthetic appeal and wellbeing attributes of the Hunter region's natural environment is part of its regional identity, and its preservation and enjoyment are highly valued by the local community, and visitors. This value was a standout observation in the engagement, with at least 10 directly affected landowners interviewed expressing appreciation for the natural environment, and it being a primary reason why they reside in the area. Landowners described a range of voluntary land conservation and restoration programs (including ecological agricultural initiatives) that they have undertaken over the years using their own resources. Similarly, the most frequently rated community value in the survey results was 'the natural environment' (85% of respondents), and the impact cited most frequently of concern was 'impacts to the natural environment' (85% of respondents). Representatives from Hunter Valley Wildlife Rescue conveyed the concern they have for the anticipated land clearing and wildlife casualties, and the pressure that the volunteer rescue community would experience in elevated rescue callouts.

Most interviewees expressed broad support for the energy transition and decarbonisation, but at the same time do not support the ecological impacts (perceived or otherwise) associated with land clearing. Such sentiment is not uncommon in resource communities, with several proposed renewables developments experiencing similar ongoing social risks and issues in Australia (The University of Queensland, 2024). Interviewees, particularly directly affected landowners in the central and southern corridor section, repeatedly questioned the route selection planning process and called for co-location of the corridor with existing linear infrastructure and/or re-investigation of other options.

As documented in *Technical Report 1 - Biodiversity development assessment report,* EnergyCo has sought to avoid and minimise the project's impacts on areas of high-quality native vegetation. Importantly, more than 200 hectares of native vegetation clearing was avoided through design refinements. The project would result in residual direct impacts to a total of 774 hectares of native vegetation. Of this, 232 hectares is listed under *the NSW Biodiversity Conservation Act* (BC Act) and 169 hectares is listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The preferred route traverses through State forests to avoid as many private properties, communities and agricultural holdings as possible and was selected with the aim of avoiding/minimising impacts on biodiversity values. EnergyCo will also implement S01 Social Impact Management Plan and S02 Community Communication Strategy.

The pre-mitigated significance of this impact within the corridor and for surrounding local social localities is **high (negative)**. With focused additional measures in place the significance of this impact is reevaluated as **medium (negative)**.

Table 6.19 Impact evaluation: Impacts on environmental values

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Hunter Wildlife Rescue Landcare Groups Broad community Schools	Corridor	High (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy	Medium (negative)
	Local	High (negative)		Medium (negative)
	Regional	Medium (negative)	As above	Low (negative)

6.6.3 Changes to traffic movements, potentially creating new road safety risks

Project construction activities would generate both light and heavy vehicle movements across multiple work fronts, affecting both arterial and local road networks. Primary transport routes for the project include:

- New England Highway, with access points including Hebden Road, Lemington Road and Pikes Gully Road
- Golden Highway, with multiple access points including Lemington Road, Comleroi Road, Long Point Road (Warkworth), Gouldsville Road (Gouldsville) and Range Road (Singleton Military Area)
- Putty Road East of Broke Road providing access to the HTP corridor (with Broke Road also servicing Mount Thorley to the north and ecotourism destination Pokolbin to the east)
- Wollombi Road servicing Millfield, Wollombi Street (Broke) and Wollombi Road/Mount View Road (Millfield)
- Freemans Drive as the primary access point to the Freemans Drive construction support site and accommodation facility in Cooranbong.

Additional road use includes forest and local access roads in Martinsville, Olney, Corrabare and Pokolbin.

Heavy vehicle activity during construction would be concentrated on supporting the delivery of project materials to the HTP corridor, laydown areas and construction support sites, while light vehicle movements would be required for workers travelling to and from construction support sites and individual work sites. Non-standard or oversize and/or over mass (OSOM) loads would be required, particularly for switching stations and substations (e.g. for transformer and reactor transport).

Community and stakeholder feedback during the SIA and EIS engagement highlighted traffic and transport as a key concern. This feedback, drawing on a frequency analysis reported in *Chapter 4 (Stakeholder engagement),* includes:

- concern regarding the suitability of local rural and forest roads (including Pokolbin Mountains Road, Wollombi Road, and Mount Baker Road) for heavy vehicle usage. A resident group has formed to advocate for route alternatives and safety interventions – the Pokolbin Mountain Roads Resident Group
- road safety risks raised particularly in relation to school zones and residential areas, where increased vehicle movements could intersect with vulnerable road users (e.g. children, or families with children), with calls for pre-construction consultations with early learning centres and schools regarding project-specific road safety protocols
- concerns regarding project-induced deterioration of existing road networks during construction, with concerns these impacts may not be adequately remediated following the project's delivery

- the potential for cumulative traffic disruptions to affect visitor experience, contribute to increased road safety risks as well as potential local parking constraints, during peak tourism and seasonal periods. Concerns raised include the project's impact during the grape harvest season when seasonal worker traffic is also high

- feedback regarding existing safety concerns associated with speeding trucks on Martinsville Road, contributing to consideration of existing social risk in this SIA.

Across the engagement program, stakeholders emphasised the need for clear and early communication about construction related traffic changes. There were also expressed expectations regarding the project's traffic management strategies, including further consultation with nearby schools and learning facilities regarding driver behaviour protocols, and a program of appropriate road upgrades prior to, and post-construction.

As identified within EIS *Technical Report 4 - Traffic and transport impact assessment*:

- construction related traffic movements would generally commence from the construction support sites at Hebden Road, Pikes Gully Road, Gouldsville Road, Wollombi Road and Freemans Drive. At peak (in 2028), daily traffic movements are estimated as:

    - 562 daily movements for light vehicles and 480 heavy vehicles from the Freemans Drive construction support site

    - up to 434 daily movements for light vehicles and 406 heavy vehicle movements from the remaining construction support sites during peak construction activities

    - around 12 OSOM vehicle movements from the Port of Newcastle or interstate to the proposed switching stations or upgraded substations (see *Chapter 4.3.6 (Engagement) of the EIS*).

Trip generation modelling for morning and afternoon peak periods from construction support sites includes:

- at Hebden Road, Pikes Gully Road, Gouldsville Road and Wollombi Road - at least 85 vehicle movements per hour during morning peak (6:00 am to 7:00 am); at least 70 movements/hour during afternoon peak (5:00 pm to 6:00 pm)

- at Freeman's Drive - higher trip frequencies being the largest construction support site and supporting most activities; 130 vehicle movements/hour during morning peak (6:00 am to 7:00 am); 100 movements/hour during afternoon peak (5:00 pm to 6:00 pm).

These movements are expected to contribute to temporary increases in traffic volumes, exacerbating the potential for, or community concern, regarding road safety risks – particularly in Cooranbong, Martinsville, Millfield, Broke, Pokolbin and immediate surrounds.

Sensitive locations along the project's key transport routes include the following schools and childcare facilities Congewai Public School, Cooranbong Public School, Avondale School, Millfield Public School, Goodstart Early Learning Cooranbong, Avondale Early Learning Centre, Cooranbong Valley Community Preschool, Tillys, where construction traffic could intersect with vulnerable road users.

Technical report 4 - Traffic and transport impact assessment concluded that traffic volumes generated by the project are generally manageable within existing road capacities. However, multiple road sections and intersections would require modification to accommodate safe project access and use. These activities have the potential to cause temporary disruption to existing social uses of these road networks and intersections.

The predicted increase in traffic volumes generated during construction to the road network's capacity and efficiency are assessed as minor in *Technical Report 4 - Traffic and transport impact assessment.* The SIA also considers the potential disruption associated with road and intersection upgrades during construction together with feedback provided by stakeholders indicating existing social sensitivity to how impacts would be experienced by locals, and in the context of other established uses and peak periods.

As such, the significance of the social impact, prior to mitigation, for the corridor and local social localities is assessed as **High (negative),** and for the regional social locality it is assessed as **Medium (negative)**.

EnergyCo will implement a comprehensive range of strategies to mitigate the impact of construction-related traffic and to reduce potential safety risks. These measures are detailed in *Chapter 24 (Environmental Management)* of the EIS, TT01 Traffic & Transport Management Plan (*Appendix E (Proposed mitigation measures)*) S02 Community Communication Strategy and S03 Complaints Management System (refer *Chapter 11 (Social impact management)).*

With the implementation of proposed mitigations, the impact significance is reduced to **medium (negative)** for the corridor and social localities and **low (negative**) for the regional locality.

Table 6.20 Impact evaluation: Changes to traffic movements, potentially creating new road safety risks

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly affected landowners Near neighbours Community Road users Emergency services	Corridor	High (negative)	S02 Community Communication Strategy S03 Complaints Management System TT01 – Traffic and Transport Management Plan (*Appendix E (Proposed mitigation)*) *measures*	Medium (negative)
	Local	High (negative)		Medium (negative)
	Regional	Medium (negative)		Low (negative)

6.7 Culture

6.7.1 Potential impacts to Aboriginal Cultural Heritage, cultural landscapes and wellbeing

The project traverses a region of significant cultural value to Wonnarua, Awabakal, and Darkinjung peoples, intersecting known Aboriginal heritage places and affecting broader cultural landscapes. Across all relevant consultation for the project — involving direct engagement for the SIA, analysis of records from the project's Aboriginal Focus Groups (AFGs), and engagement outcomes reported for the Aboriginal cultural heritage assessment (ACHA) (see *Technical Report 2 - Aboriginal cultural heritage assessment*)—participants raised concerns about the potential for irreversible harm to tangible and intangible cultural heritage, and its implications for cultural identity, wellbeing, and intergenerational connection.

The project impact area contains 32 identified Aboriginal heritage sites, with archaeological investigations and over 600 person-days of survey work confirming the presence of stone arrangements, rock shelters, grinding grooves, and culturally modified trees. Five culturally and scientifically significant sites have been avoided through project design refinements. The corridor intersects areas valued for spiritual teaching, ceremony, and intergenerational knowledge transmission, including the Flat Rock and Corrabare Forest areas, and broader cultural landscapes tied to the Hunter Valley.

Participants of project consultation have also emphasised the importance of 'cultural sightlines' connecting features such as Mount Yengo, Mount Sugarloaf, and Mount Warrawolong, integral to Dreaming stories and cultural practice. Disruption of these sightlines, even without direct site disturbance, was perceived as a significant form of cultural harm, weakening relational connections across Country and contributing to spiritual and psychological distress.

Key concerns identified through consultation include:

- direct and indirect impacts to sites and cultural landscapes through construction activities (e.g. vibration, dust, changed access arrangements)
- longer-term risks to site integrity during the transition from construction to operation
- erosion of cultural identity through visual changes to sacred landscapes and diminished spiritual connections
- potential for a perceived loss of agency, impacting community wellbeing across generations
- continuation of cultural governance arrangements agreed in planning phase, for the life of the project.

EnergyCo's Aboriginal Focus Groups, with established representation and views specific to the northern, central and southern sections of the local social, expressed diverse views and shifting sentiment towards the project, with more supportive sentiment featuring at the time of writing than at the beginning of the project. These have been reflected in the engagement and governance arrangements progressed under the project's ACHA (see *Technical Report 2 - Aboriginal cultural heritage assessment*). Between July 2024 and February 2025 consultation sessions:

- in the northern section of the corridor, AFG representatives have shared their views regarding respectful engagement undertaken by the project team, and have supported proposed site verification processes
- in the central section of the corridor AFG representatives have voiced concerns regarding project-induced vibration risks at Flat Rock, while also recognising EnergyCo's responsiveness to concerns and feedback on mitigations
- in the southern region, participants stressed the need to avoid specific rock shelters and sought commitments to ongoing site protection beyond construction.

Some improvements in project planning were acknowledged, particularly where the corridor was refined to avoid key ridgelines and reduce sightline intrusion. However, participants reiterated that any infrastructure within view of sacred sites could still diminish cultural value and wellbeing. Concerns remain about:

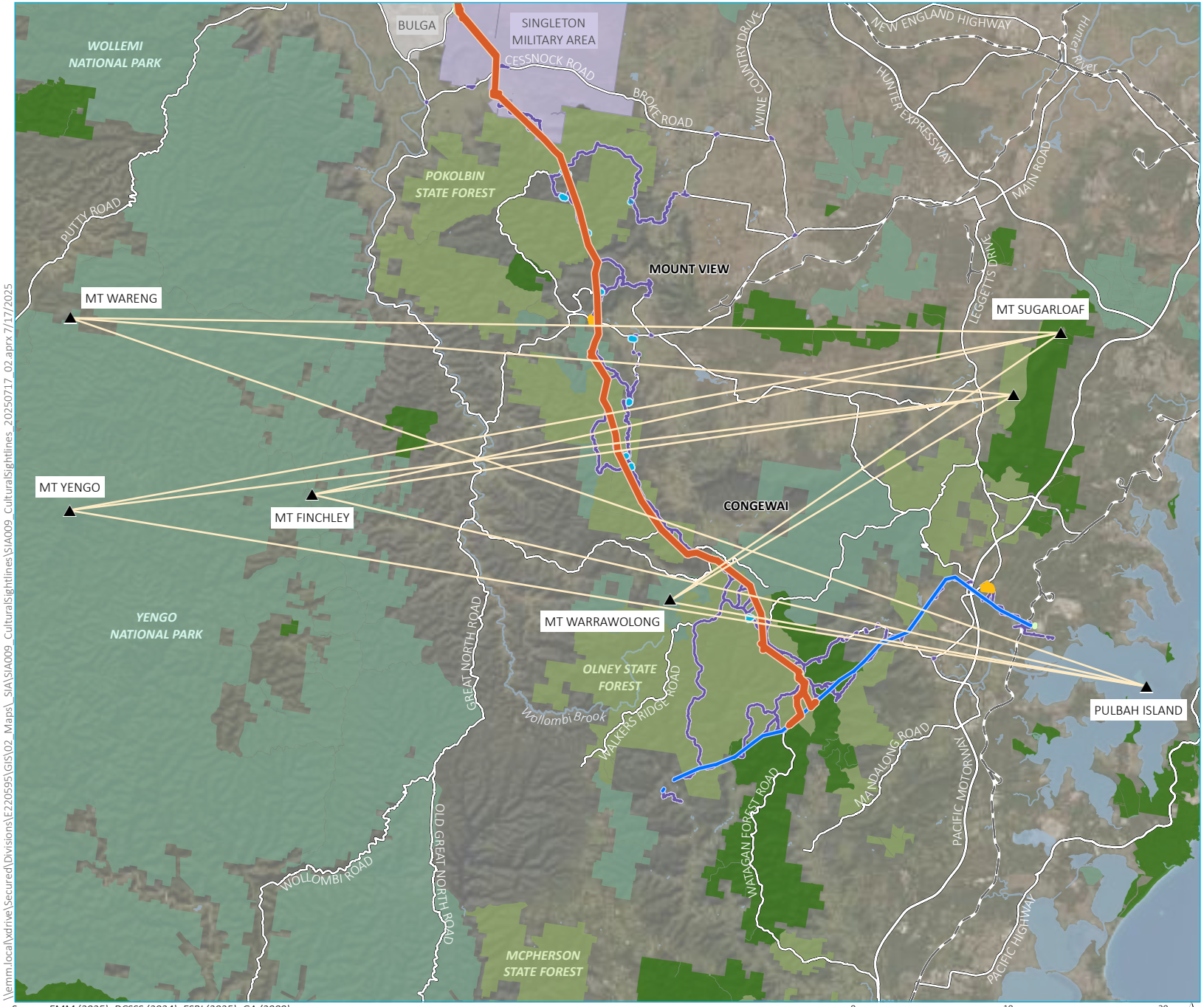
- indirect impacts to sites within 250 metres of the project impact area, particularly those not physically affected but vulnerable to vibration, dust, and increased access
- the long-term integrity of sites post-construction, especially during contractor handover and operation. Increasing accessibility from clearing the corridor for previously difficult areas to access for cultural purposes
- the adequacy of cultural governance, including protection mechanisms for future land use change.

Despite these risks, participants also acknowledged strengths in the mitigation approaches committed to by EnergyCo, including a cultural values offset strategy, cultural heritage governance frameworks and cultural awareness training.

While mitigation measures materially reduce some risks, the loss of cultural heritage values—both tangible and intangible—cannot be entirely avoided. The significance of this impact before mitigation is assessed as **high (negative)** for the corridor social locality, and Traditional Owners. With focused additional measures – S01 Social Impact Management Plan, S02 Community Communication Strategy (*Chapter 11 (Social impact management)*, combined with AH1 Aboriginal cultural heritage management plan the significance of this impact is assessed as **medium (negative).**

Table 6.21 Impact evaluation: Potential impacts to Aboriginal cultural heritage, cultural landscapes, and wellbeing

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Traditional Owners and Endorsed Aboriginal Parties	Corridor	High (negative)	S01 Social Impact Management Plan	Medium (negative)
	Local	High (negative)	S02 Community Communication Strategy	Medium (negative)
	Regional	High (negative)	AH1 Aboriginal cultural heritage management plan (*Appendix E (Proposed mitigation measures)*)	Medium (negative)



KEY

- Cultural site
- Cultural view line

Project impact area

- HTP corridor
- Switching station
- Construction support site
- Laydown area
- Adjustment to existing transmission line
- Upgrades to existing transmission line
- Access track

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State conservation area
- State forest
- Defence
- Mining

Source: EMM (2025); DCSSS (2024); ESRI (2025); GA (2009)

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Cultural sightlines

Hunter Transmission Project
Social Impact Assessment
Figure 6.1

EMM
creating opportunities

7 Operation impact assessment

This chapter of the social impact assessment (SIA) outlines the social impacts that are predicted to occur during operation of the Hunter Transmission Project (HTP, the project). Communities in the corridor, local and regional social localities are expected to be both impacted and benefited by operation.

Social impact categories per the NSW SIA guidelines relevant to the study findings include:

- way of life
- health and wellbeing
- surroundings.

7.1 Way of Life

7.1.1 Enhanced intergenerational equity through contributing to energy system decarbonisation and improved energy security

Once operational, the HTP will make a positive contribution to intergenerational equity by enabling NSW to transition to a more sustainable, reliable and affordable energy system. As a major transmission corridor connecting Renewable Energy Zones (REZs) to the broader grid, HTP supports long-term decarbonisation goals while bolstering stability of the energy grid. These benefits—improved energy security, reduced emissions, and enabling a clean energy economy—are foundational to quality of life for future generations.

This aligns with the NSW Electricity Infrastructure Roadmap (2020) (DPIE, 2020a) and the Intergenerational Report (2021), (NSW Government , 2021) both of which emphasise the importance of infrastructure that delivers on short-term outcomes such as increased infrastructure network capacity, while also contributing to future network resilience and sustainability. HTP directly contributes to these objectives by unlocking new renewable generation in the Central-West Orana and New England REZs and facilitating more equitable access to clean energy over the long term.

While the broader public benefit of the energy transition is widely documented and acknowledged, the project's directly impacted stakeholders—including affected landowners and Traditional Owners—have highlighted concerns around loss of intergenerational connections associated with property and knowledge transfer. Similarly, 85% of survey respondents rated the impact of most concern with the project to be 'impacts on the natural environment'. These views emphasise social expectations for the transition to strike a balance between decarbonisation and preserving enduring personal and cultural legacies, and loss of/impacts to biodiversity.

The NSW Government's 2024 discussion paper Delivering Equitable Outcomes in the Renewable Energy Transition reinforces the importance of procedural, distributive, and intergenerational equity, as does the Community Engagement Report authored by the Australian Infrastructure Energy Commissioner in 2024 (Dyer, Community Engagement Review: Report to the Minister for Climate Change and Energy, 2023). HTP responds to this policy direction by contributing to systemic reform while continuing to apply adaptive management measures to its community engagement practices through S02 Community Communication Strategy.

The benefit that can be derived from the project's contribution to intergenerational equity in the corridor social locality is assessed as **medium (positive)** significance. This evaluation considers the contrasting perspectives among directly affected landowners, the local community and Traditional Owners regarding the project's effect on intergenerational connection to land and culture. Within the local social locality, the significance of the benefit is assessed as **medium (positive),** acknowledging limited distinction between localised benefit and system-wide benefits. Whilst the implementation of the communications strategy is beneficial, it is not sufficient to alter the residual rating, primarily because more collaborative forms of engagement would be required to address the impacts associated with biodiversity values and intergenerational attachment to properties. Across the regional social locality, as with the State, the significance of the benefit is assessed as **high (positive)**, noting broad acceptance of intergenerational outcomes that would be derived from NSW energy transition.

Table 7.1 Impact evaluation: enhanced intergenerational equity through contributing to energy system decarbonisation and improved energy security

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners Traditional Owners	Corridor social locality	Medium (positive)	S02 Community Communication Strategy	Medium (positive)
Local Government Local settlements/townships	Local social locality	Medium (positive)	As above	Medium (positive)
Regional communities	Regional social locality; State of NSW	High (positive)	-	High (positive)

7.2 Health and wellbeing

7.2.1 Safety & wellbeing concerns related to electromagnetic fields, bushfire hazards and anti-social behaviours

During EIS and SIA consultation, safety concerns were raised as a common theme—particularly among directly affected landowners and neighbours. Feedback from consultation highlighted concerns around:

- the perceived health risks of electromagnetic field (EMF) exposure for residents living in proximity to the operational transmission network
- increased bushfire risk from overhead transmission infrastructure, including concerns about the physical safety and wellbeing of people and livestock living or working under or near the proposed transmission line
- the creation of easements and access roads may attract illegal activities such as illegal 4WD and trail bike riding, gathering/parties/camping
- Residents and emergency management committees expressed interest in understanding the project's security fencing arrangements to manage safety risks to residents and visitors.

Technical assessment findings, together with broader research outcomes, indicate that the health and safety risks of EMF and bushfire associated with 500kV transmission infrastructure are low. Findings within *Technical Report 17 – Electric and magnetic fields assessment confirm*:

- EMF levels generated by the proposed 500 kilovolt (kV) infrastructure are below the exposure limits set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), as adopted by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)
- EMF strength reduces significantly with increasing distance from the transmission line source. Modelling indicates that both directly beneath and at the edge of the proposed easement, EMF levels would be within safe exposure limits.

Broader ARPANSA (2024) findings align with global studies and confirm no conclusive link between EMF exposure and cancer, reproductive harm, cognitive issues, or sleep disturbances.

Findings from *Technical Report 14 – Bushfire risk assessment* conclude that the likelihood of 500 kV transmission lines initiating bushfires is very low. There are no recorded incidents in NSW (or Australia more broadly) of 500 kV transmission lines starting a bushfire in the last 42 years. This result is attributed to the design of the infrastructure, including high clearance heights, anti-clash conductors, and robust asset maintenance systems that meet critical electricity infrastructure standards. During operation of the transmission line, vegetation management and real-time condition monitoring systems would further reduce bushfire risk and support rapid response if threats emerge.

Despite technical evidence indicating low operational risk, perceptions of health and safety risks combined with existing bushfire danger within region, were reported from stakeholders in the corridor and local social localities. The relationship between perceived risk and psychological stress is well documented in both environmental health and social impact literature (Cutter, et al., 2008) especially for those residing and working in proximity.

To mitigate the risk of stress associated with community concerns (albeit perceived) around EMF and increased bushfire risk, EnergyCo has committed to S01 Social Impact Management Plan and S02 Community Communication Strategy, which will include a commitment to providing transparent research-based communication on EMF safety and clearly communicate proactive fire management and prevention measures.

The pre-mitigated significance of this impact is assessed as **medium (negative)** in the corridor and local social localities. With the implementation of mitigation measures, the significance of this impact is assessed as **low (negative)**.

Table 7.2 Impact evaluation: Safety & wellbeing concerns related to electromagnetic fields, bushfire hazards and anti-social behaviours

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners Near neighbours	Corridor	Medium (negative)	S01 Social Impact Management Plan S02 Community Communication Strategy BF1 Bushfire emergency management and evacuation plan (BEMEP)	Low (negative)
General communities RFS Forestry Corporation of NSW	Local	Medium (negative)		Low (negative)
Regional communities	Regional	Low (negative)	As above	Low (negative)

7.3 Surroundings

7.3.1 Changes to the natural character of landscape altering sense of place

The project's permanent infrastructure footprint would comprise steel lattice towers to a height of up to 85 metres, spaced between 75 metres to 1.5 kilometre (typically 300 metres to 600 metres) apart over 110 kilometres. These structures would contribute to a permanent change in the visual and physical landscape during operations, affecting residents' and visitors' experiences of rural, natural, and cultural surroundings.

Stakeholders expressed mixed sentiment about the visual and landscape impacts of the project. Tourism representatives acknowledged that, through the corridor planning process, EnergyCo had done well to minimise impacts on the picturesque Hunter Valley wine and tourism region. It was also acknowledged by local community representatives that the placement of the towers below ridgelines (where possible) would reduce visual amenity impacts. Others expressed concerns relating to:

- changed rural and natural vistas, particularly around Millfield, Broke Road, and Congewai Valley
- disruptions to landscapes that are culturally significant to Aboriginal communities, particularly the ridgelines of the Watagan State Forest
- high impacts to some residents' sense of place and rural identity (limited to a small number of long-term and/or intergenerational landowners).

Survey findings reflect similar concerns, with 85% of community respondents reporting 'extreme concern' about the project's impact on the natural environment, and 67% 'extremely concerned' about changes to environmental amenity.

Technical Report 3 - Landscape character and visual impact assessment a identified:

- moderate daytime impacts in 3 LCZs (Wollombi Brook rural valley, forested hills and narrow rural valleys) where the towers contrast with established rural and natural characteristics
- moderate night-time impacts in 1 LCZ (forested hills) due to lighting at the Olney switching station. No other night-time lighting impacts are expected due to the absence of tower lighting along the corridor
- low to negligible visual impacts across public viewpoints with the exception of Broke Road, Cessnock, which is predicted to experience high visibility impacts due to its scenic backdrop
- that the project would not result in high visual impacts for private viewpoints, however 4 rural dwellings would experience a moderate visual impact and an additional 2 would experience a low visual impact

Project design refinements have involved locating towers on secondary ridgelines near Millfield to reduce visibility from the town centre, however some tower tops would remain visible from key vantage points (e.g. Main Street) extending into the skyline. *Technical Report 3 - Landscape character and visual impact assessment* concludes that many impacts would be substantially mitigated through topography, existing vegetation, and design treatments.

Forested areas including Corrabare and Olney State forests, and Watagans National Park, support nature-based activities like bushwalking. Recreational users of these areas may experience reduced landscape amenity. At the southern end of the corridor, the Great North Walk would intersect with the easement. While the Great North Walk traverses these areas, visual encroachment is not expected to fundamentally alter this recreational use (see *Technical Report 3 – Landscape character and visual impact assessment*). For other recreational activities, including active recreation biking, the presence of permanent transmission infrastructure is unlikely to have an adverse effect on recreational use.

Aboriginal stakeholders conveyed that ridgelines within the State forests contribute to a broader cultural landscape and expressed concern about the permanent disturbance of these areas, even where tangible cultural heritage sites are not directly impacted. These concerns were also identified as part of social and cultural impacts addressed in *section 9.4.6*.

To minimise long-term impacts on surroundings, EnergyCo will implement ongoing design refinements during detailed design (e.g. retention of vegetation buffers, reduced lighting) and implement S02 Community Communication Strategy, focusing on continued engagement with affected stakeholders to increase awareness of design refinements.

Without mitigation, the potential long-term change of this project on natural landscape characteristics and sense of place is assessed as **high (negative),** for the corridor and local social localities, inclusive of Traditional Owners and Aboriginal community members. With mitigations implemented throughout the project's planning, to delivery and final form, the significance of this impact will reduce to **medium (negative)** for the corridor and **low (negative)** for the local social localities.

Table 7.3 Impact evaluation: Changes to the natural character of landscape altering sense of place

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Landowners Traditional Custodians	Corridor locality	High (negative)	S02 Community Communication Strategy	Medium (negative)
Tourism and business operators Traditional Custodians Local communities	Local social locality	High (negative)	As above	Low (negative)
Broder communities Traditional Custodians	Regional social locality	Medium (negative)	As above	Low (negative)

8 Decommissioning impact assessment

8.1 Social risks associated with decommissioning and resource recovery plans

The NSW Social Impact Assessment (SIA) Guideline (2023) (NSW SIA Guideline) recommends that proponents consider potential social impacts across all phases of a project lifecycle, including decommissioning, even where decommissioning remains long-term and indicative. As outlined in *Chapter 2 (Project description)* of the EIS*)*, following construction, the life of the project is anticipated to be around 50 years and potentially beyond this with regular maintenance and upgrades. If required, decommissioning and rehabilitation would occur over 2 years..

Decommissioning processes, whether in stages or in entirety, may carry social risks related to land rehabilitation outcomes, infrastructure removal, and economic transition for affected communities. A small number of stakeholders engaged during the SIA reported uncertainty around the Energy Corporation of NSW's (EnergyCo) position on decommissioning and rehabilitation and questioned the overall sustainability of the energy transition with the levels of resources it required for construction and waste – actual or perceived – that it could create.

Given the early lifecycle stage and the long operational horizon for the HTP, the potential social risks associated with decommissioning are expected to be relatively limited in scale.

Key considerations include:

- while maintenance roles associated with transmission line operations would likely be retained or transitioned (rather than lost), some indirect local business dependencies – such as suppliers providing project-specific maintenance, vegetation management, or land access services – could experience minor reductions in demand. The scale of this effect is expected to be small
- decommissioning activities could raise community concerns regarding the appropriate removal or reuse of infrastructure (e.g., towers, access tracks), management of materials, and rehabilitation of disturbed lands, both in the current host community and future host communities.

Detailed assessment and mitigation planning would be undertaken closer to the time of the project's decommissioning. This process would be documented during the preparation of a decommissioning and rehabilitation management plan (DRMP), and subject to regulatory approval. With appropriate management, including engagement and responsible resource recovery practices, residual risks are anticipated to be **low (negative)** and localised.

Table 8.1 Impact evaluation: Social risks associated with decommissioning and resource recovery plans

Affected people	Extent (social locality)	Unmitigated significance rating	Summary of mitigation measures	Mitigated significance rating (residual impact)
Directly affected landowners	Corridor	Low (negative)	Decommissioning and Rehabilitation Plan	Low (negative)
Extent of affected parties TBD at time of decommissioning	Local	Low (negative)	As above	Low (negative)
	Regional	Negligible	As above	Negligible

9 Cumulative social impacts

The NSW Department of Planning, Industry and Environment (DPIE) published the Cumulative Impact Assessment Guidelines for State Significant Projects in July 2021 (DPIE, 2021). It defines cumulative impacts as the combined, incremental and compounding impacts of a project in combination with the impacts of other past, current and reasonably foreseeable future development activities. These may result from additive or interactive effects on the same social values (DPIE, 2021, p. 5). These impacts may arise when one project overlaps with others in a space or time – potentially amplifying effects or generating altogether new ones.

This assessment follows the DPIE's Cumulative Impact Assessment Guidelines for State Significant Projects (2021), applying both spatial and temporal overlap methodologies. The assessment also follows the NSW Social Impact Assessment (SIA) Guideline (2023) (NSW SIA Guideline) by examining cumulative effects across social domains and categories.

Stakeholder engagement findings that informed the SIA significance ratings have been applied to assess unmitigated impacts, and residual (mitigated) impacts. Additionally, this assessment considers the NSW Construction Workforce Accommodation Guideline (DPHI, 2024) identifying where projects of relevant workforce scale require additional measures, and/or represent a risk to housing availability and affordability.

9.1 EnergyCo's approach to cumulative social impact management

As a coordinator of NSW's Renewable Energy Zone (REZ) development, EnergyCo has adopted a region-wide, collaborative approach to cumulative impact management based on:

- establishment of the Hunter-Central Coast Regional Reference Group (HCCRRG) (EnergyCo, 2025) designed to facilitate strategic discussions between EnergyCo and the broader Hunter Central Coast community about EnergyCo projects in the region. The reference group comprises diverse regional stakeholder representation including council representatives, a mix of community representatives and respected subject matter experts
- integrated planning and transmission coordination with delivery partners Ausgrid (Hunter Central Coast REZ) and Transgrid (HTP) to align regional developments within EnergyCo's remit
- commitments to transparency and annual public reporting relevant to social impact management and sustainability (EnergyCo Annual Report, 2024).

9.2 Summary of key project interactions

Projects with the potential to contribute to cumulative social impacts were identified based on geographic proximity, project delivery timeframes, and potential social impacts. Drawing on *Chapter 23 (Cumulative impacts)* of the EIS, Table 9.1 summarises concurrent and overlapping development with the project's anticipated delivery timeframe and project location. The anticipated period of cumulative interaction with the project is from late 2027 to mid 2029.

Table 9.1 Projects considered in cumulative assessment

Project	Proponent	Scope	Status	Estimated jobs Construction (C) / Operation(O)	Interface with the HTP
New England REZ Transmission	EnergyCo	Construction of new network infrastructure that to connect energy generation and storage projects within the New England REZ to the existing electricity network. The transmission project is proposed to connect to the existing Bayswater switching station in the south and 4 energy hubs within the New England REZ located in the Northern Tablelands region of NSW	• Scoping report submitted in July 2024. EIS currently being prepared • The New England REZ project has a six-year construction program. • Stage 1 of this construction would include transmission line construction from Bayswater switching station	C: 1250 O: NA	• Once construction for HTP is complete, construction for the New England REZ would commence prolonging construction related impacts in Muswellbrook LGA and utilising some of the same major transport routes
Liddell Future Land Use and Enabling Works	AGL	To support the proposed closure strategy of Liddell Power Station, the proponent is seeking to undertake works for the demolition of the Liddell Power Station and associated infrastructure and preparation of the site for ongoing industrial land use	• The project was determined in January 2025 • Works commenced in mid-2025. The development of the future land use program would extend over a 20-year period, meaning there would be an overlap between HTP construction and some aspect of the future land use program	C: 75 to 100 O: 20	• The future land use program and the HTP are both development associated with the energy transition occurring within the same time period within the Muswellbrook LGA drawing on similar resources and infrastructure

Project	Proponent	Scope	Status	Estimated jobs Construction (C) / Operation(O)	Interface with the HTP
Hunter Valley Operations continuation projects (HVO North Open Cut Coal Continuation Project and HVO South Open Cut Coal Continuation Project)	Yancoal/ Glencore	HVO continuation projects involve continuation of mining at the HVO North open cut coal mining complex until 2050, including extension of approved mining areas, mining of deeper coal seams and realignment of Lemington Road, and continuation of mining at the HVO South open cut mining complex until 2045, including a reduction in maximum extraction rate	• An EIS was submitted to DPHI in December 2022 and following requests for further information, HVO decided to amend their project • Assuming a new EIS will be prepared and submitted, this means construction has been delayed. However, there is a likely overlap with HTP construction	C: 600 O: 1500	• Based on information available, the timing of the HVO continuation projects would need to be co-ordinated with the HTP construction to avoid duplication of impacts or design revisions
Maison Dieu Solar Farm	MAC	The construction, operation and decommissioning of a large-scale solar photovoltaic generation facility, including an integrated battery energy storage system, a high-voltage electricity switching station, connection to the national electricity market through the existing Ausgrid switching station, and associated infrastructure. This project would generate and supply 60 MW of clean, renewable electricity to the grid with a storage capacity of 40 MW/80 MWh.	• This project is currently in the response to submissions phase	C: 150 O: 5	• Construction of the solar farm may overlap with HTP construction with construction of the solar farm beginning in 2026 and overlapping with the HTP in 2027 • Maison Diew Solar Farm would be operational when HTP is also operational • The Maison Dieu Solar Farm and the HTP are both development associated with the energy transition occurring within the same time period within the Singleton LGA drawing on similar resources and infrastructure

Project	Proponent	Scope	Status	Estimated jobs Construction (C) / Operation(O)	Interface with the HTP
Mandalong Road Upgrades	Transport for NSW (TfNSW)	The project involves the replacement of roundabouts with new traffic lights and other road and pedestrian safety improvements at 2 intersections on Mandalong Road, Morisset	• TfNSW has published a project Review of Environmental Factors (May 2025)	C:20-50 O: N/A	• The project will influence the construction routes for the HTP • An overlap of construction programs is likely with construction of the project anticipated to commence in Q1 2026 and extend in 2027; however this will be coordinated with TfNSW
Hunter-Central Coast REZ Transmission	EnergyCo	Provision of 2 new 132 kV switching stations as well as upgrades to existing 132 kV transmission lines	• Ausgrid published a project Review of Environmental Factors in April 2025 • Construction is anticipated to take place between early 2026 and mid-2028	C:280 O: NA	• Construction of the Hunter-Central Coast REZ Transmission Project would overlap with HTP construction and would be operational when HTP is also operational • The Hunter-Central Coast REZ Transmission Project and the HTP are both transmission projects associated with the energy transition occurring within the same time period within 3 overlapping LGAs drawing on similar resources and public infrastructure

Project	Proponent	Scope	Status	Estimated jobs Construction (C) / Operation(O)	Interface with the HTP
Muswellbrook Solar Farm	OX2	A large-scale solar photovoltaic generation facility and associated infrastructure. The proposed solar farm would have generation capacity of around 135 MW and would produce around 347 GWh of energy annually, which is enough to power around 79,000 homes	• This project was referred to the Independent Planning Commission in February 2025. The Independent Planning Commission approved the project subject to conditions as of 27 May 2025 • Construction planned to last for 31 months, some overlap with HTP construction is likely	C: 200 O: 6	• No direct interface between the solar farm and HTP however both projects are associated with the energy transition occurring within the same time period within the Muswellbrook LGA drawing on similar resources and public infrastructure
Bowmans Creek Wind Farm	Ark Energy	Stage 1 of the Bowmans Creek Wind Farm would involve 54 wind turbines. Stage 2 would involve a further 21 wind turbines	• Stage 1 of Bowmans Creek Wind Farm was determined in February 2024, while an EIS is currently being prepared for Stage 2 after having been issued SEARs • Stage 2 has been determined to be a controlled action by DCCEEW for assessment under the bilateral agreement • Construction of Stage 2 is anticipated to take around 18 months and would be commissioned by mid-2028 (Renew Economy, 2024). As such, overlap with HTP construction is likely	C: 200 O:30	• No direct interface between the wind farm and HTP however both projects are associated with the energy transition occurring within the same time period within the Muswellbrook LGA drawing on similar resources and public infrastructure

Project	Proponent	Scope	Status	Estimated jobs Construction (C) / Operation(O)	Interface with the HTP
Central-West Orana REZ Transmission Project	EnergyCo	This project would involve new transmission network infrastructure, including transmission lines and energy hubs, which would transfer power generated by solar and wind farms in the Central-West Orana REZ to electricity consumers	• Construction of this project is anticipated to take place between 2024 and 2028. As such, overlap with HTP construction is likely	C: 1800 O: N/A	• Given the distance of this development from the project impact area there is no direct interface with HTP • Operationally, cumulative benefits would result from this project alongside HTP due to increased transmission capacity and greater renewable energy transmission in the National Energy Market (NEM)
Bayswater Power Station Upgrade	AGL	Improvement of the management of ancillary processes over the remaining operating life of Bayswater Power Station including the augmentation of the existing ash disposal areas and creation of a salt cake disposal landfill	• The project began construction 2022	C: 90 O: 25	• Construction of the Bayswater Power Station Upgrade is anticipated to be mostly completed before construction commences for the HTP. Construction of the HTP would however contribute to impacts to biodiversity values in the Muswellbrook LGA associated with the Bayswater Power Station Upgrade

Project	Proponent	Scope	Status	Estimated jobs Construction (C) / Operation(O)	Interface with the HTP
Edderton Solar Project	EDF Renewables	This project includes the construction, operation and decommissioning of a solar photovoltaic energy generating facility with an estimated capacity of 350 MW and battery energy storage system (BESS)	• An EIS is currently being prepared for this project. A scoping report was submitted in April 2024 and SEARs were issued in May 2024 • If approved, construction of this project is anticipated to take around 20 months	C: 400-450 O:10-15	• No direct interface between the solar project and HTP however both projects would be constructed and operated within the Muswellbrook and Singleton LGA drawing on similar resources and public infrastructure • Construction of the project is anticipated to commence as soon as necessary approvals are obtained
Muswellbrook Pumped Hydro Energy Storage Project	AGL Energy Pty Limited Idemitsu Renewable Developments Australia Pty Ltd	This project would involve the development of a 500 MW pumped hydro power station, upper and lower reservoirs, grid connection and ancillary infrastructure	• A scoping report has been prepared, and SEARs were issued in November 2024 • If approved, construction of this project is anticipated to take around 4 years, overlap with the HTPs construction program is possible	C: 250 O: 20	• Given the distance from the project impact area there is no direct interface between the Muswellbrook Pumped Hydro Energy Storage Project. However, both projects would draw similar resources and public infrastructure in the Muswellbrook LGA

There is a high likelihood that the concurrent timeframes and proximity of other proposed projects set out in Table 9.1 would contribute to cumulative impacts. The potential cumulative social impacts and benefits may include:

- significant contributions to intergenerational equity through access to an affordable and reliable energy network
- increased employment and economic opportunities, and by extension, increased competition for labour and supplies
- cumulative change to land use and rural livelihoods for directly affected landowners, including changed environmental qualities during construction and operation affecting people's experience of their surroundings and local amenity
- changed access to services and infrastructure, including overlapping road use
- impacts to environmental and cultural values, consultation fatigue and enduring relationships with regional stakeholders.

9.3 Social benefits and opportunities

The subsequent section sets out the potential cumulative benefits that these combined projects may derive.

9.3.1 Intergenerational equity

The HTP and other energy and infrastructure development projects in the Hunter region collectively represent once-in-a-generation investments in transition, energy security and decarbonisation. If delivered collaboratively:

- regional communities could benefit from training and skills development and a longer-term employment pipeline in the renewable energy sector, representing a significant cumulative benefit for communities currently transitioning from a predominant mining industry landscape
- local business could be supported through structured procurement and workforce participation targets
- strategic partnerships can be achieved across public and private sectors to deliver local community benefits
- NSW energy affordability and reliability targets could be advanced in a socially sustainable way.

Positive and/or mitigated social outcomes requires strategic coordination efforts by proponents with other key stakeholders, including local government. While some intergenerational benefits are still highly likely without regional coordination, optimal equity outcomes across communities may be not be realised. The pre and post enhancement significance ratings for intergenerational equity for all stakeholders is rated as **high**.

9.3.2 Increased opportunities for employment and training

Based on current knowledge of existing and planned energy developments, the cumulative projects are expected to generate close to 5000 construction jobs over a 7-year period between 2025 and 2032, with a primary overlap with HTP construction period between 2027 and 2029. Cumulative workforce requirements would span similar scopes and fields including transmission line construction, civil works, construction support services, stakeholder engagement and environmental management.

There is strong support for regional training pipelines, local participation targets, and workforce transition planning, particularly in social localities traditionally dependent on the resources sector, such as Muswellbrook and Singleton. EnergyCo has established broad partnerships with NSW agencies including Technical and Further Education NSW (TAFE), NSW Department of Education, the Port of Newcastle and Transport for NSW to deliver the resources, skills, innovation and solutions needed for NSW's energy transition. This work is detailed in EnergyCo's annual reports, available online. The cumulative significance of the employment and training opportunities generated from multiple developments affecting the corridor and local social localities is assessed as **medium,** reflecting latent workforce capacity relative to the project's regional context. At a regional level the significance of cumulative opportunities is rated as **high.**

9.3.3 Increased supply chain and regional business participation

The cumulative potential benefits of these projects present significant opportunity for regional businesses across civil works services and material supply, logistics and plant hire, environmental, community and heritage consulting, accommodation facility operation and supply, and technical contracting.

Singleton and Muswellbrook alone host over 3400 registered businesses, with strengths in the supply chain focused on construction, resources and services transferrable to the energy sector. Early procurement visibility across the cumulative project set would enhance supply chain coordination and participation. *Chapter 5 (Existing environment)* of the SIA also notes a relatively small representation of registered Aboriginal businesses. With coordinated efforts across proponents, the availability and capacity of these business services could be significantly enhanced. These participation strategies would be reflected in *Chapter 11 (Social impact management)* specifically, S06 Industry and Aboriginal Participation Plan, contributing to targets and strategies relevant to development of the region. S05 Local Business and Employment Strategy will address local skills gaps and training requirements and identify employment opportunities. With these measures in place, the significance of benefits derived for all social localities is **high.**

9.4 Social impacts

This section discusses the cumulative impacts that could potentially occur as a result of the project and other projects listed in Table 9.1 being undertaken within overlapping timeframes.

9.4.1 Increased competition for labour and skills

The overlapping timeframes of major projects in the Hunter region, including HTP, has the potential to cause skilled labour shortages, wage competition and potential increase in disparities within local (and potentially regional) socioeconomics. Projects such as the New England, and Hunter-Central Coast REZ transmission projects, HVO continuation, and Eraring BESS development are expected to rely on similar labour pools required for transmission line construction, civil engineering and construction works, and environmental services.

Competition and delays in securing the required workforce may contribute to project delays, increased non-local recruitment and associated costs. The significance of cumulative impacts on labour draw and competition is assessed as **high** across the social localities.

9.4.2 Housing availability and affordability

Section 5.6 considers the project's potential effect on already constrained housing market conditions in the SIA social localities. Stakeholders noted risks of displacement, rental escalation, and reduced availability of longer-term rental and housing stock.

As shown in Table 9.1, the construction workforce from HTP and concurrent projects represent a cumulative workforce in the order of 5000 workers, with a peak occurring during 2028.

It is expected that the majority of State significant and major infrastructure project developments will have dedicated workforce accommodation solutions in line with the NSW construction workforce accommodation guideline (DPHI, 2024).

Without these measures, the cumulative workforce profile and associated demand for nearby housing and accommodation would exceed existing capacity of short-term, rental and available purchase housing stock in the SIA social locality (also discussed in *Technical Report 19 - Economic impact assessment*). In a cumulative context, concentrated demand would most likely be in Singleton, Cessnock and Muswellbrook.

Even with proposed measures in place, there remains a high likelihood of temporary cumulative social impacts due to potentially overlapping transition periods for approved projects prior to dedicated accommodation facilities being established. In the context of HTP, it is assumed this period would most likely be experienced in the first few months of 2027, increasing temporary demand for accommodation, together with ad-hoc, visiting workforce demands and potential economic opportunity seekers not currently employed by a project.

In a cumulative context, community members dependent on temporary housing—such as seasonal workers and transitional renters—may face displacement. Similarly, tourists may face limited accommodation options.

Although of low residual significance when project-specific demands are considered in isolation with project-specific management measures, the cumulative impact of multiple projects utilising local accommodation requires further consideration. Without a coordinated management strategy, the cumulative demand has the potential to be of a **high** significance for all localities. To avoid this occurring, developers will need to plan carefully in advance to ensure sufficient project accommodation is available for their workers and contractors. With stronger coordination across developers, with council, and accommodation providers, the potential risk of housing insecurity can be reduced to **medium**.

9.4.3 Access to services and infrastructure

There is potential for cumulative impacts to traffic and transport associated with the following relevant future projects:

- New England REZ Transmission Project
- Liddell Future Land Use and Enabling Works
- Hunter Valley Operations continuation projects
- Maison Dieu Solar Farm
- Muswellbrook Solar Farm
- Bowmans Creek Wind Farm
- Hunter-Central Coast REZ Transmission Project
- Mandalong Road Upgrades
- Muswellbrook Pumped Hydro Energy Storage Project.

These future projects have the potential to cause cumulative traffic impacts with the HTP as they are likely to use similar construction access routes or have overlapping construction programs with these projects (see *Chapter 23 (Cumulative impacts)* of the EIS.

Increased construction traffic on key routes such as the Golden Highway and Wollombi Road, has potential to affect community mobility, service access and increase perceptions of road safety risks. Local road users, particularly around Maison Dieu and Broke, may face additional disruption to their daily connectivity, and without mitigation, experience a greater negative impact to local road conditions.

The mitigation measures outlined in *Appendix E (Proposed mitigation measures)* of the EIS, including the consultation with construction contractors, proponents, councils, and affected landowners as required to coordinate construction staging/timing (i.e. Mitigation measure CI1) would mitigate potential cumulative impacts associated with the interaction of the HTP and other relevant future projects.

Stakeholders, including local emergency management committees (LEMCs), noted existing capacity limitations in local health and emergency services. Without coordinated management measures, the significance of changed access to services and infrastructure in a cumulative context is assessed as **high** for the local and corridor localities and **medium** for the region. With project-specific contribution measures including traffic management plans, and real time notification processes for affected communities, the significance of this impact can be reduced to **medium** for all localities.

9.4.4 Impacts to surroundings and amenity

During consultation the community raised concerns about the industrialisation of the landscape, altering sense of place, loss of rural character and changed outlook aesthetics from private and public viewpoints and concentrated construction activities contributing to prolonged exposure to noise and dust.

Each individual project is expected in isolation to contribute to temporary and permanent changes to the surrounding environment. The potential for cumulative visual amenity impact for private dwellings in proximity to both the HTP and the Maison Dieu Solar Farm was assessed in *Technical Report 3 - Landscape character and visual impact assessment* to be negligible as the private viewpoints affected by the HTP would not have a visual impact caused by the proposed Maison Dieu Solar Farm.

The potential for cumulative construction noise impacts were assessed in *Technical Report 8 – Noise and vibration impact assessment* which found cumulative noise impacts may potentially occur due to the concurrent construction of the HTP and the Maison Dieu Solar Farm, and the Hunter-Central Coast REZ Transmission Project and for a small number of receivers for the HTP and HVO project.

It is anticipated that the implementation of mitigation measures of the EIS would minimise potential cumulative impacts to air quality.

Overlapping heavy vehicle movements are also likely to impact road safety, local amenity, and resident wellbeing, particularly in rural and semirural settings.

Given the likely level and magnitude of the cumulative disruption this impact is rated **high** for the project's corridor and local social localities, and **low** for the region. However, with the project's implementation of noise & dust suppression techniques and coordination of project construction times and subsequently traffic movements across developments, the cumulative impact is assessed as **medium** for the corridor and local social localities and remains **low** for the region.

9.4.5 Impacts to land use and rural livelihoods

The project intersects with active agricultural land and overlaps with other current and proposed industrial land uses. Major developments in proximity to the project include HVO, and Bowmans Creek Wind Farm. The cumulative effect of these projects includes land fragmentation, biosecurity risks, long-term planning uncertainty for graziers and cropping operators and reduced productivity.

Concerns raised during SIA consultation such as the project's effect on the operational continuity of select properties, an increased risk of weeds spreading, and reduced productivity during construction, have the potential to be exacerbated in a cumulative context.

In the context of HTP and EnergyCo's role in developing the Hunter-Central Coast REZ, EnergyCo has published a spatial tool for public access to increase visibility of cumulative infrastructure locations within the REZ. EnergyCo has also committed to implementing S04 Landowner Engagement Strategy and LP2 Property Management Plans.

Without these foundations, the significance of cumulative impacts on labour draw and competition is assessed as **high** within the corridor locality, **medium** in the local locality and low regionally. With project-specific management measures in place, the residual impacts are reduced to **medium** in both the corridor and local localities, and remains **low** regionally.

9.4.6 Impacts to cultural values

While project-specific cultural mitigation is in place, Aboriginal Focus Groups expressed concern about cumulative fragmentation of cultural connection to land. HTP and many of the projects outlined in Table 9.1 intersect culturally significant landscapes, including areas of ceremony, teaching, and intergenerational importance. In addition, the multiple requests for Aboriginal representatives to be consulted and to participate in Aboriginal cultural heritage surveys may place unnecessary demands and pressures on specific groups if not well timed and coordinated.

Chapter 6 (Construction impact assessment) acknowledges legacy issues borne from the project's corridor selection process, and broader experiences of limited representation or participation of Traditional Owners, and Aboriginal community members in other State significant projects. While these impacts have been considered, these impacts illustrate that the collective performance of project engagement processes can negatively affect enduring relationships between Traditional Owners and any one project at any one time.

Cumulative impacts to tangible cultural heritage items and sites are not address in this SIA and are outlined in *Chapter 23 (Cumulative impacts)* of the EIS.

9.4.7 Effects on community wellbeing and resilience

As noted in *Chapter 4 (Stakeholder engagement),* stakeholders, particularly within the corridor social locality, have raised concerns about engagement fatigue, process duplication, and inconsistent messaging across proponents. In addition, landowners noted the psychological burden of sustained uncertainty and consultation overload.

The cumulative burden of fragmented and/or repetitive engagement from multiple proponents can contribute negatively to the wellbeing of affected stakeholders, leading to feelings of burnout and affecting wider community resilience. The significance rating is assessed as **high** for the corridor and local localities, and **low** regionally. With the project's contribution of management measures, there is potential these social impacts may be reduced, but will require collective action and coordination, with a pivotal opportunity for these matters to be a focus of engagement with the project's regional reference group.

9.4.8 Impacts to environmental values due to biodiversity decline

A notable theme from the engagement was the importance and value communities of the corridor and local social localities placed on the natural environment of the Hunter Valley, and its conservation. Stakeholders expressed concern and a level of stress regarding anticipated land clearing, habitat fragmentation and species loss. The wildlife carer community in the Hunter Valley is a notable, exemplified by the bespoke soft wallaby release facility located in the corridor social locality.

Relevant future projects identified as having potential cumulative biodiversity impacts with the HTP include:

- Hunter Valley Operations continuation projects
- Maison Dieu Solar Farm
- Bayswater Power Station Upgrade.

Potential cumulative biodiversity impacts to threatened ecological communities (TECs) or threatened species would primarily be a result of vegetation clearing and disturbance compounding existing or future impacts to habitat and biodiversity values (see *Chapter 23 (Cumulative impacts)* of the EIS).

The HTP has the potential to contribute to further habitat fragmentation. Impacts to habitat connectivity are expected to only occur in the short term where affected flora and fauna would disperse from the project impact area after having adjusted to the new transmission corridor. Habitat connectivity for bird and bat species, given they are migratory in nature, were assessed to largely be unaffected as a result of the project. Nonetheless, the community (as reported through the engagement findings) expressed their concerns for the impact of the project on the natural environment.

A full assessment of cumulative impacts to habitat connectivity resulting from the interaction of the project and relevant future projects is available in *Technical Report 1 – Biodiversity development assessment report.* The significance of biodiversity decline, impacting environmental values, is assessed as **high** in the corridor and local social localities and **low** across the regional social locality.

10 Significance evaluation

A summary of potential social impacts of the project (both positive and negative) is outlined in Table 10.1.

Table 10.1 Summary of social impact assessment evaluation

Impact/ benefit	Social Impact categories	Corridor Social Locality						Local Social Locality						Regional Social Locality					
		Likelihood	Magnitude	Unmitigated / unenhanced significance	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced
Construction assessment (22 impacts/benefits)																			
6.1.1 Perceived lack of ability to influence project and government decision-making processes, eroding community trust	Decision making systems	Likely (A)	Moderate (3)	High (negative)	Possible (C)	Minor (2)	Medium (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Negligible	Very unlikely (E)	Minimal (1)	Negligible
6.1.2 Legacy impacts of project engagement affecting enduring relationships, confidence and participation of Traditional Owners	Decision making systems	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minimal (1)	Low (negative)	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Negligible
6.2.1 Land use changes due to full or partial land acquisition	Way of life	Almost certain (A)	Moderate (3)	High (negative)	Almost certain (A)	Minor (2)	Medium (negative)	Likely (B)	Minor (2)	Medium (negative)	Likely (B)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)
6.2.2 Loss of property and relocation of landowners due to full acquisition	Way of life	Almost certain (A)	Major (4)	Very high (negative)	Almost certain (A)	Moderate (3)	High (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.2.3 Loss of residential amenity (noise, vibration and dust) during construction including potential interruption of utilities	Way of life	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Minor (2)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Minor (2)	Medium (negative)	Very unlikely (E)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.3.1 Workforce presence affecting perceptions of safety and community cohesion	Community	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minor (2)	Medium (negative)	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.3.2 Enhanced community services through community benefits investments	Community	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown
6.3.3 Perceived unequal distribution of project benefits creating community strain	Community	Possible (C)	Moderate (3)	Medium (negative)	Unlikely (D)	Moderate (3)	Medium (negative)	Possible (C)	Moderate (3)	Medium (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)

Impact/ benefit	Social Impact categories	Corridor Social Locality						Local Social Locality						Regional Social Locality					
		Likelihood	Magnitude	Unmitigated / unenhanced significance	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced
6.4.1 Changed access arrangements for emergency services	Accessibility	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minor (2)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.4.2 Reduced access to housing and short-term accommodation due to increased workforce demand	Accessibility	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)
6.4.3 Reduced access to health and other community services due to increase of the construction workforce	Accessibility	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minor (2)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.4.4 Changed access to recreational infrastructure due to road network changes	Accessibility	Likely (B)	Major (4)	High (negative)	Likely (B)	Moderate (3)	Medium (negative)	Possible (C)	Minor (2)	Medium (negative)	Possible (C)	Minimal (1)	Low (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)
6.5.1 Broad financial benefits through Benefit Sharing initiatives	Livelihoods	Almost certain (A)	Moderate (3)	High (benefit)	Almost certain (A)	Major (4)	High (benefit)	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown	Possible (C)	Unknown	Unknown
6.5.2 Generation of employment and training opportunities for local and regional residents.	Livelihoods	Likely (B)	Minor (2)	Medium (benefit)	Likely (B)	Moderate (3)	High (benefit)	Likely (B)	Minor (2)	Medium (benefit)	Likely (B)	Moderate (3)	High (benefit)	Almost certain (A)	Minor (2)	Medium (benefit)	Almost certain (A)	Moderate (3)	High (benefit)
6.5.3 Increased regional business opportunities contributing to regional economic prosperity	Livelihoods	Likely (B)	Minor (2)	Medium (benefit)	Likely (B)	Moderate (3)	High (benefit)	Likely (B)	Minor (2)	Medium (benefit)	Likely (B)	Moderate (3)	High (benefit)	Almost certain (A)	Minor (2)	Medium (benefit)	Almost certain (A)	Moderate (3)	High (benefit)
6.5.4 Increased competition for workers potentially affecting the operation of local and regional businesses	Livelihoods	Likely (B)	Minor (2)	Medium (negative)	Possible (C)	Minor (2)	Low (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Minimal (1)	Low (negative)	Unlikely (D)	Minor (2)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.5.5 Impacts on rural livelihoods and biosecurity risks	Livelihoods	Likely (B)	Minor (2)	Medium (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)
6.5.6 Impacts on tourism operation and visitor economy	Livelihoods	Unlikely	Minor (2)	Low (negative)	Very Unlikely	Minor (2)	Low (negative)	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minor (2)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Low (negative)
6.6.1 Diminished mental health and wellbeing due to project-related stressors	Health and wellbeing	Likely (B)	Major (4)	High (negative)	Likely (B)	Moderate (3)	Medium (negative)	Likely (B)	Major (4)	Medium (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Very unlikely (E)	Minimal (1)	Negligible

Impact/ benefit	Social Impact categories	Corridor Social Locality						Local Social Locality						Regional Social Locality					
		Likelihood	Magnitude	Unmitigated / unenhanced significance	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced
6.6.2 Impacts on environmental values	Health and wellbeing	Likely (B)	Major (4)	High (negative)	Likely (B)	Moderate (3)	Medium (negative)	Likely (B)	Major (4)	High (negative)	Likely (B)	Moderate (3)	Medium (negative)	Unlikely (D)	Moderate (3)	Medium (negative)	Unlikely (D)	Minimal (1)	Low (negative)
6.6.3 Changes to traffic movements, potentially causing new road safety risks	Health and wellbeing	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Minor (2)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Moderate (3)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)
6.7.1 Potential impacts to Aboriginal Cultural Heritage, cultural landscapes and wellbeing	Culture	Possible (C)	Major (4)	High (negative)	Unlikely (D)	Moderate (3)	Medium (negative)	Possible (C)	Major (4)	High (negative)	Unlikely (D)	Moderate (3)	Medium (negative)	Possible (C)	Major (4)	High (negative)	Unlikely (D)	Moderate (3)	Medium (negative)
Operations assessment (3 impacts/benefits)																			
7.1.1 Enhancing intergenerational equity through contributing to energy system decarbonisation and improved energy stability	Way of life	Likely(B)	Minor (2)	Medium (benefit)	Almost Certain (A)	Minor (2)	Medium (benefit)	Likely(B)	Minor (2)	Medium (benefit)	Almost Certain (A)	Minor (2)	Medium (benefit)	Likely (3)	Moderate (3)	High (benefit)	Almost Certain (A)	Major (4)	High (benefit)
7.2.1 Safety & wellbeing concerns related to electromagnetic fields (EMF), bushfire hazards and anti-social behaviours	Health and wellbeing	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (C)	Minor (2)	Medium (negative)	Unlikely (C)	Minimal (1)	Low (negative)	Very Unlikely (E)	Minor (2)	Low (negative)	Very Unlikely (E)	Minimal (1)	Low (negative)
7.3.1 Changes to the natural character of landscape and altering sense of place	Surroundings	Almost Certain (A)	Moderate (3)	High (negative)	Likely (B)	Minor (2)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Minimal (1)	Low (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minimal (1)	Low (negative)
Decommissioning assessment (1 impact)																			
8.1 Social risks associated with decommissioning and resource recovery plans	Way of Life	Possible (C)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)			Negligible			Negligible
Cumulative (11 impacts)																			
9.3.1 Enhancing intergenerational equity through contributing to energy system decarbonisation and improved energy stability	Way of life	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)
9.3.2 Increased opportunity for employment and training	Livelihoods	Likely (B)	Minor (2)	Medium (benefit)	Likely (B)	Minor (2)	Medium (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)

Impact/ benefit	Social Impact categories	Corridor Social Locality						Local Social Locality						Regional Social Locality					
		Likelihood	Magnitude	Unmitigated / unenhanced significance	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced	Likelihood	Magnitude	Unmitigated / unenhanced	Likelihood	Magnitude	Mitigated / enhanced
9.3.3 Increased supply chain and regional business participation	Livelihoods	Likely (B)	Moderate (3)	High (benefit)	Almost Certain (A)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (benefit)	Almost Certain (A)	Major (4)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)	Likely (B)	Moderate (3)	High (Benefit)
9.4.1 Increased competition for labour and skills	Livelihoods	Likely (B)	Major (4)	High (negative)	Likely (B)	Major (4)	High (negative)	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Major (4)	High (negative)	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Major (4)	High (negative)
9.4.2 Housing availability and affordability	Accessibility	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Moderate (3)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Moderate (3)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Minor (2)	Medium (negative)
9.4.3 Access to services and infrastructure	Accessibility	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Moderate (3)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Moderate (3)	Medium (negative)	Likely (B)	Minor (2)	Medium (negative)	Possible (C)	Minimal (1)	Medium (negative)
9.4.4 Impacts to surroundings and amenity	Surroundings	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Moderate (3)	Medium (negative)	Possible (C)	Moderate (3)	High (negative)	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minimal (1)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)
9.4.5 Impacts to land use and rural livelihoods	Way of life	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Minor (2)	Medium (negative)	Possible (C)	Moderate (3)	Medium (negative)	Possible (C)	Minor (2)	Medium (negative)	Possible (C)	Minimal (1)	Low (negative)	Possible (C)	Minimal (1)	Low (negative)
9.4.6 Impacts to cultural values	Culture	Refer to Chapter 23 of the EIS																	
9.4.7 Effects on community wellbeing and resilience	Health and wellbeing	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Moderate (3)	Medium (negative)	Likely (B)	Moderate (3)	High (negative)	Possible (C)	Minor (2)	Medium (negative)	Unlikely (D)	Minor (2)	Low (negative)	Unlikely (D)	Minimal (1)	Low (negative)
9.4.8 Impacts to environmental values due to biodiversity decline	Health and wellbeing	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Moderate (3)	High (negative)	Likely (B)	Moderate (3)	High (negative	Possible (C)	Minimal (1)	Low (negative)	Possible (C)	Minimal (1)	Low (negative)

11 Social impact management

11.1 Management approach

This chapter of the SIA outlines the impact mitigation and benefit enhancement measures and identifies the residual impacts post application of the mitigation measures. The assessment and relied upon best available information at the time of drafting, and the management approaches set out in this section represents the continued application of the precautionary principle to minimise social risks in the absence of fulsome data sets. This includes:

- consideration in the impact assessment and SIMP of the effects of project activities on directly affected landowners
- recognising and responding to potential cumulative impacts on housing, access to services and wellbeing, even where a quantitative evidence base for social impacts in a cumulative development context may be limited.

Where residual risk remains, the SIA recommends a monitoring and adaptive management program, to be further developed and formalised as part of the project's SIMP. This approach and application of the precautionary principle across will support proactive identification and management of emerging risks throughout the project's delivery.

Environmental management for the Hunter Transmission Project (HTP, the project) will be carried out in accordance with the approach as detailed in *Chapter 24 (Environmental management)* of the environmental impact statement (EIS). This includes the existing EnergyCo program areas, measures from other technical reports and social mitigation and enhancement measures, which will include:

- compensation for directly impacted landowners under the *Land Acquisition (Just Terms Compensation) Act 1991*
- Strategic Benefit Payments Scheme for landowners hosting project infrastructure
- contribution to and implementation of the *NSW Renewable Energy Transmission Landholder Guide*
- dedicated workforce accommodation facilities at 3 strategic locations to reduce potential for non-local demand on existing accommodation
- traffic management plan informed by *Technical Report 4 – Traffic and transport impact assessment* findings
- issue-specific environmental management plans, including controls for noise, vibration, air quality and visual impact
- cultural heritage management plan and landscape values plan informed by *Technical Report 2 – Aboriginal cultural heritage assessment*.

11.2 Social mitigation measures

The additional mitigation measures that will be implemented to avoid or minimise potential social impacts and enhance potential social benefits are listed in Table 11.1 . These should be read in conjunction with relevant and interlinked management measures set out in *Appendix E (Proposed mitigation measures*) of the EIS, which have been excluded from this chapter to avoid duplication.

Table 11.1 Social management measures

Reference	Management measure	Timing	Location
S01	A **Social Impact Management Plan (SIMP**) will be developed to outline the proponent's integrated approach to managing social impacts, enhancing benefits, and delivering responsive engagement and communications. The SIMP will: • Detail commitments and management measures, specifying the social impacts addressed, affected stakeholders, implementation timeframes, roles and responsibilities • Describe how project-specific and regional social changes will be monitored to support adaptive management • Provide mechanisms for community and stakeholder input to mitigation planning and evaluation of effectiveness The SIMP will be implemented and monitored through quarterly data collection where possible to inform adaptive management and continuous improvement. Monitoring outcomes will be shared with the Regional Reference Group and other stakeholder forums as relevant during construction. The proponent will also host annual community surveys to seek feedback on SIMP monitoring. The SIMP will be reviewed annually and updated based on monitoring data and community and stakeholder feedback. This will include assessing the relevance of mitigation measures and identifying any new issues or initiatives requiring inclusion to ensure they meet the residual risk ratings. Review outcomes will be published on the proponent's website.	Detailed design Construction	Corridor Local Regional
S02	A **Community Communication Strategy** will establish the approaches to facilitating communication between the proponent and the community during construction. The strategy will: • Appoint a dedicated community liaison officer(s) and ensure they receive adequate training aligned to trauma-informed care principles • Ensure key stakeholders - including affected landowners, Hunter Businesses, community groups and Local Government - are proactively informed through regular updates using a range of communications channels • Undertake proactive, targeted engagement with impacted stakeholders located near construction support sites and accommodation facilities—including schools, childcare centres, and social services in Millfield, Cooranbong and Martinsville—to develop and implement agreed mitigation measures • Undertake consultation with affected schools and childcare facilities and local governments on traffic impacts and management approaches • Implement real time traffic monitoring and SMS alerts for local residents • Establish a feedback mechanism by which the community can discuss or provide feedback to the proponent, including how the proponent will respond to enquiries or feedback from the community • Implement targeted communications regarding visual, noise, and air quality impacts, road changes/closures, and emergency access coordination—ensuring timely notification ahead of disruptions (see also mitigation measures LV1–LV3, NV1, AQ1–AQ3, and TT1 in Appendix E of the EIS) • Provide clear, accessible information on EMF, fire safety, and associated risk reduction measures to address community concerns • Offer 24/7 access to psychological services and tailored mental health support programs, with targeted confidential counselling for directly affected landowners • Continue adaptive engagement with Traditional Owners, maintaining agreed governance arrangements and supporting ongoing cultural monitoring through planning and construction (see also measure AH1 in Appendix E of the EIS)	Detailed design Construction	Corridor Local Regional

Reference	Management measure	Timing	Location
	• Engage with affected tourism and recreation operators to minimise disruptions and support continuity of operations • Set out a framework to develop community notification processes in consultation with Forestry Corporation of NSW and councils during construction		
S03	A **complaints management system** will be maintained throughout the construction period and for a minimum of 12 months after the completion of construction. The complaints management system will include the following (at a minimum): • Contact details for a 24-hour response line and email address for ongoing stakeholder contact throughout the project • Details of all complaints received will be recorded • Verbal and written responses describing what action will be taken will be provided to the complainant (or as otherwise agreed by the complainant)	Detailed design Construction Operations (first 12 months)	Corridor Local Regional
S04	A **Landowner Engagement Strategy** will be developed and implemented for the project and will include: • Appointing a dedicated Land Acquisition Manager to oversee implementation of the strategy • Ensuring all land and property access and community liaison personnel are trained in community & stakeholder engagement aligned with trauma-informed care principles to support interactions with vulnerable individuals, including those with chronic illness, disability, or mental health conditions • **Property Management Plans** will also be implemented to complement the Landowner Engagement Strategy These will be customised to address landowner concerns and property-specific needs, with a focus on respect for landowner values and expectations, co-existence principles, biosecurity, and permissible land uses (see LP2 in Appendix E of the EIS).	Detailed design Construction	Corridor Local
S05	A **Local Business and Employment Strategy** will be prepared and implemented, reflecting Energy Co's Hunter-First commitments to the local community. It will include the following initiatives: • Identify local skills gaps and workforce skills and training requirements • set targets for local employment in line with the *NSW Renewable Energy Sector Board's Plan* (NSW Office of Energy and Climate Change 2022) • Set diversity and inclusion targets that align with the NSW Procurement Board Direction PBD 2023-01 Skills, Training, and diversity in construction (NSW Treasury 2023) • Education and training partnerships, such as TAFE NSW and local high schools and the upcoming Cessnock Education Precinct to support energy transition career pathways • Support tailored training and upskilling programs for residents, with a targeted focus on young people, Aboriginal people, candidates seeking career transition from existing local industries, and older people • Providing full, fair, and reasonable access to Australian, regional and local suppliers, and including commitments to an ongoing program of engagement with regional suppliers and contractors (see *Appendix E (Proposed mitigation measures*) of the EIS) • Investment in retraining and upskilling pathways for workers transitioning into renewable energy industries (e.g. technicians, infrastructure specialists) • maintaining a local and regional supplier database to increase promotion and access to project opportunities • prioritising local procurement and contractor engagement, with clear targets for small and medium enterprises (SMEs) linked to NSW Procurement Board Direction PBD-2023-03 Procurement opportunities for small and medium businesses (NSW Treasury 2023) and the Small and Medium Enterprise and Regional Procurement Policy (Buy NSW 2021)	Detailed design Construction	Local Regional

Reference	Management measure	Timing	Location
	• partnering with Business Hunter and Local Chambers of Commerce to promote procurement opportunities • outlining mechanisms to monitor cumulative competition and changes to community access to key goods and services that may affected by the project's local procurement activities • delivery of workforce initiatives focused on Aboriginal employment pathways and contractor engagement		
S06	An **Industry and Aboriginal Participation Plan**, outlining tailored strategies to strengthen Local and Aboriginal business participation, will be prepared and implemented and will include: • 'meet-the-contractor' events for local and Aboriginal businesses to learn about potential opportunities associated with project delivery • Supply chain mapping, with a focus on identifying goods and services suitable for local sourcing (e.g. select civil works, catering, cleaning, transport) and identifying the capacity of local and Aboriginal business to be ready for additional demand • Aboriginal Procurement commitments of 2.5% with a stretch goal of up to 10% in line with the *NSW Renewable Energy Sector Board's Plan* (NSW Office of Energy and Climate Change 2022) • set targets for local procurement in line with the *NSW Renewable Energy Sector Board's Plan* (NSW Office of Energy and Climate Change 2022) • Monitor the availability and price of goods and services in the community that are locally procured • This plan will be developed in consultation with local business representatives including Traditional Owners and Local Aboriginal Business representatives	Detailed design Construction	Local Regional
S07	A **Temporary Worker Accommodation Management Plan(s)** will be developed prior to construction to address requirements set out in the NSW Guideline for Construction Workers Accommodation (May 2025), and informed by consultation with neighbours, councils, health and emergency service stakeholders. It will include: • Contemporary analysis of short-term and local accommodation capacity in key localities, including consideration of updated workforce estimates • A code of conduct for workers, which will include a zero-tolerance policy relating to anti-social behavior, health & safety, environmental management, and community engagement and cultural awareness raising • Measures to support workforce well-being and integration with the local community. E.g. internet access, promotion of participation in local events, healthy food options, wellbeing & safety programs • Dedicated health, paramedic, catering, and recreational services • Specific measures to support community cohesion & safety at nearby communities including Cooranbong, Martinsville, and the Lake Liddell Recreation Reserve • Security protocols for each accommodation facility The plan (s) will be reviewed on a 6-monthly basis to monitor effectiveness of management commitments and to address emerging or unanticipated impacts.	Detailed design Construction	Corridor Local

11.3 Residual social impacts

This SIA identifies a number of residual social impacts, both negative and positive, that will remain of medium to high significance following mitigation (see *Chapter 11 (Social impact management)*, *11.2social mitigation measures*). Residual impacts are concentrated in the corridor and local social localities, with broader regional effects in some cases.

Social impacts with a residual impact rating of high to medium significance include:

- The social impact associated with loss of property and relocation of landowners is largely irreversible and emotionally disruptive, although financial compensation and procedural support measures set out in *section 11.1* will contribute positively to the overall management of this social impact. This social impact primarily affects landowners and farmers within the corridor, but also the local social locality affected by construction support sites. Monitoring and adaptive management measures are set out in section 11.4.

- Positive legacy benefits from the project include enhanced intergenerational equity through decarbonisation together with the generation of employment opportunities, and increased business opportunities. All benefits retain a high positive residual rating. Their long-term benefit can be maximised through the project's implementation of equitable and inclusive participation strategies detailed in the SIMP.

- The perceived unequal distribution of project benefits, affecting cohesion, may be addressed as the project develops its Community and Employment Benefit Program. Monitoring and adaptive management measures are set out in *section 11.4*.

- Land use changes to full/partial acquisition will result in a medium residual social impact, with compensation and other social mitigation measures in place.

- Diminished mental health and wellbeing due to project-related stressors may continue to affect directly affected landowners, near neighbours, and community members within the corridor and social locality. Monitoring and adaptive management measures are set out in *section 11.4*.

- Impacts to Aboriginal cultural heritage, landscape, and associated wellbeing may continue with a medium social significance, however management will remain under the agreed mechanisms of the Aboriginal cultural heritage assessment (ACHA) (see *Technical Report 2 - Aboriginal cultural heritage assessment*)—with monitoring and adaptive management measures in line with *section 11*.

- Changes to traffic movements creating potential road safety risks will remain a social impact of medium significance to be addressed through management measures set out in section 11, together with monitoring and adaptive management strategies presented in *section 11.4*.

- Impacts on rural livelihoods and biosecurity risks remain a medium social impact significance to be managed through engagement and tailored management plans. Monitoring and adaptive management measures are set out in *section 11.4*.

- Impacts on environmental values held by stakeholders in the corridor and social localities particularly, will be monitored with identified stakeholders including identified wildlife carers, local schools, and general community members to focus on ongoing management of project impacts on habitat disturbance, perceived degradation, and implications for community wellbeing.

Table 11.2 Residual impacts – construction and operations

NSW Guideline category	Potential impact / benefit	Impacted stakeholders	Extent (SIA social locality)	Residual impact
Construction				
Decision-making systems	Perceived lack of ability to influence project and government decision-making processes	Directly affected landowners	Corridor, Local	Medium
Way of Life	Loss of property and relocation of landowners	Directly affected landowners Farmers	Corridor, Local	High
Way of Life	Land use changes due to full/partial acquisition	Directly affected landowners Farmers	Corridor	Medium
Way of Life	Loss of residential amenity	Directly affected landowners Near neighbours Business operators	Corridor, Local	Medium
Livelihoods	Generation of employment opportunities for local and regional residents	Local and regional communities, First Nations businesses, young people	Corridor, Local, Regional	High (benefit)
Livelihoods	Broad financial benefits through benefit sharing initiatives	Directly affected landowners Near neighbours	Corridor, Local	High (benefit)
Livelihoods	Increased regional business opportunities	Local and regional businesses	Corridor, Local, Regional	High (benefit)
Livelihoods	Impacts on rural livelihoods and biosecurity risks	Directly affected landowners Community including agricultural property owners and near neighbours to construction support sites	Corridor, Local	Medium
Health & Wellbeing	Diminished mental health and wellbeing due to project-related stressors	Landowners, near neighbours, local communities	Corridor	Medium
Health & Wellbeing	Impacts on environmental values	Hunter Wildlife Rescue, Landcare, schools, general public	Corridor, Local	Medium
Health & Wellbeing	Changes to traffic movements creating road safety risks	Landowners, local communities, road users, emergency services	Corridor, Local	Medium

NSW Guideline category	Potential impact / benefit	Impacted stakeholders	Extent (SIA social locality)	Residual impact
Community	Workforce presence affecting perceptions of safety and community cohesion	Landowners, near neighbours, Councils	Corridor, Local	Medium
Community	Perceived unequal distribution of project benefits creating community strain	Landowners, near neighbours, Councils	Corridor	Medium
Accessibility	Changed access to recreational infrastructure and use due to construction and road network changes	Recreation/park users (including family / friend groups using campgrounds) Forestry Corporation of NSW NSW and ACT 4WD association, Local 4WD clubs, Trail biking clubs, Forest Permit holders Nature based recreation operators	Corridor / Olney State Forest	Medium
Culture	Impacts to Aboriginal cultural heritage, landscape, wellbeing	Traditional Owners, Custodians and Endorsed Aboriginal Parties	Corridor, Local, Regional	Medium
Operation				
Way of Life	Enhanced intergenerational equity through decarbonisation	Community, local government	Corridor, Local, Regional	Medium - High (benefit)
Surroundings	Changes to the natural character of landscape altering sense of place	Directly affected landowners Near neighbours Traditional Owners and Custodians Tourism and business operators	Corridor, Local	Medium

11.4 Monitoring and reporting framework

Monitoring and evaluation of social impacts will be critical to ensuring that the project's mitigation and enhancement measures are responsive, adaptive, and effective across the life of the project. Monitoring will be underpinned by transparent reporting of significant outcomes and response measures and informed by inclusive stakeholder engagement processes. EnergyCo reports its performance outcomes, inclusive of social and sustainability outcomes as part of its Annual Reporting cycle. Reporting on project-specific monitoring activities will occur through established stakeholder engagement forums including the Hunter Central Coast RRG and LEMCs.

The social impact monitoring process will be detailed within a project-specific SIMP to be developed post approval. The objectives of the social monitoring program are to:

- track the effectiveness of mitigation and benefit enhancement strategies addressing social impacts identified in *Chapter 1 (Introduction)* to *Chapter 10 (Significance evaluation)*
- identify emerging or unforeseen impacts requiring responsive management
- ensure that directly affected landowners, nearby residents, and local communities are meaningfully involved in the management of project-specific, and where relevant cumulative social impacts
- evaluate outcomes against residual impact significance ratings, particularly those assessed as medium or high.

Monitoring and evaluation activities will focus on the social impacts assessed as having high or persistent medium residual significance, particularly where impacts are compounded by cumulative development activity in the project's region social locality. Priority monitoring areas are presented in Table11.3 and will be further refined as part of the final SIMP for the project.

Table11.3 Social monitoring framework – priority indicators

Priority monitoring area	Project-specific / Cumulative	Example indicators
Land acquisition and relocation	Project-specific	• Number of agreements and compulsory acquisitions required for the project • Monitoring of post-relocation wellbeing of displaced landowners via dedicated relationship managers • Implementation, monitoring and reporting of engagement review recommendations
Surroundings and amenity	Project-specific	• Number of complaints and close-out times • Feedback from RRG members
Cultural values and representation	Project-specific	• Monitoring of outcomes of cultural heritage surveys and compliance with cultural heritage management plan • Track satisfaction, levels of engagement/attendance and representation at the Aboriginal Focus Groups
Community wellbeing and engagement fatigue	Project-specific and cumulative	• Annual community perceptions survey to evaluate stakeholder satisfaction with the engagement program and relevant mitigation measures • Monitoring of consultation fatigue indicators such as low/declining participation, negative sentiment, or repetition in community feedback • Regular (quarterly) feedback from regional engagement forums, including the Hunter Central Coast RRG, about the effectiveness of streamlining input and reducing consultation burden

Priority monitoring area	Project-specific / Cumulative	Example indicators
Skills and labour competition and workforce pressures	Project-specific and cumulative	• Monitoring of skilled local labour availability via publicly available research and datasets, together with proponent engagement outcomes on trends, issues and response strategies • Monitoring of outcome of EnergyCo's regional workforce strategies and project-specific plans, including training uptake and performance against local employment targets • Collaboration with TAFE NSW, local business chambers, and councils to forecast and respond to labour draw risks
Housing availability and affordability	Project-specific and cumulative	• Monitoring of rental vacancies and median rents to improve responsiveness to affordability pressures • Track project phase and delivery timelines and occupancy of project-specific workforce accommodation facilities to demonstrate effectiveness of measure • Engagement with local real estate agents, housing providers, and social service organisations to identify emerging risks
Access to local services and infrastructure	Project-specific and cumulative	• Monitoring of community feedback and complaints on construction traffic, road safety, and service accessibility • Engagement with LEMCs, schools, and health providers to identify disruptions, capacity strains, investment opportunities and adaptive management strategies

12 Conclusion

The Hunter Transmission Project (HTP, the project) is critical infrastructure required to support New South Wales's (NSW's) transition to renewable energy. It represents a significant opportunity to secure long-term energy reliability while contributing meaningful social and economic benefits for regional and local communities across the Hunter region.

This SIA has been prepared in accordance with the NSW Social Impact Assessment Guideline (DPE 2023a, NSW SIA Guideline). It presents findings from a comprehensive baseline study, integrating primary and secondary data sources, and a robust SIA engagement program. The assessment identifies potential positive and negative impacts, and evaluates their significance pre- and post-mitigation, drawing on technical inputs, local knowledge and stakeholder feedback. A suite of mitigation and enhancement measures have been designed to address the impacts identified, forming part of the project's SIMP.

SIA engagement conducted by EnergyCo and its consultants have highlighted the need to ensure that project benefits are equitably distributed. These inputs are expected to inform the project's Community and Employment Benefits Program. Key social impacts associated with the project's refined land acquisition program, cultural heritage, amenity, and cumulative pressures require proactive and adaptive management. Themes emerging from engagement include the need to restore and build trust through consistent communications, protection and ongoing governance of project impacts to cultural and environmental values, and amenity and access disruptions during construction.

The SIA has been developed through an iterative and participatory process that integrates the findings of environmental, cultural heritage, and social studies. The social management approach has been designed to remain responsive to community needs and stakeholder expectations, with mechanisms for adaptive management, transparency, and regional coordination—supported through platforms such as the Hunter Central Coast Regional Reference Group (RRG)—to enable shared benefits and mitigate risks in a cumulative development context (see *Chapter 11 (Social impact management)*).

While the overall scale of directly affected landowners has been notably reduced during the project's route selection phase, the social impacts on this directly affected group of stakeholders, particularly for landowners needing to relocate as a result of the project, are significant. The SIA identifies seven properties anticipated to require full acquisition, resulting in high-magnitude emotional, financial and social disruption (see *Chapter 6 (Construction impact assessment)*).

At the broader community and regional level, most negative social impacts are assessed as medium or low post-mitigation, including changes to amenity, access, and perceptions of safety.

The project's social and economic benefits, notably during construction phase will be derived from employment, local procurement and supply chain development. Operation of the project would deliver long-term benefits through improved energy security, enhanced transmission network performance, and strengthened intergenerational equity.

The project's SIMP is proposed for development post-approval to operationalise the mitigation measures identified within this SIA.

In the cumulative context, a number of social impacts require coordinated management including competition for labour and skills, access to health and emergency services, pressure on short-term accommodation and cumulative effects on community, cultural and environmental values. However, the project is also anticipated to contribute to lasting regional and state-wide benefits, including energy system resilience, regional economic diversification, and strengthened community confidence in NSW's energy transition objectives.

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Appendix A
SIA methodology statement

EMM
creating opportunities

A.1 SIA methodology

This attachment presents the methodology which guided completion of the social impact assessment (SIA). The methodology was specifically tailored to meet the requirements of the Secretary's environmental assessment requirements (SEARs) and the SIA Guideline (DPE, 2023a). This SIA has also been informed by best practice guidance and standards articulated by the International Association for Impact Assessment (IAIA) and International Finance Corporation (IFC).

The following sections describe the phases of the SIA methodology which reflects the SIA process outlined in the SIA Guideline (DPE, 2021a). This SIA report, which is an output of Phase 2, will be placed on public exhibition with the environmental impact statement (EIS).

A.1.1 Scoping and initiation

As per the SIA Guideline (DPE, 2021a), the purpose of an SIA Scoping Report is to present the findings of initial project scoping which includes outlining the social context, the nature and scale of project activities which might impact the receiving social environment and subsequent definition of the social locality.

The Social Impact Assessment Scoping Report for the Hunter Transmission Project (EMM 2024a) was submitted to the NSW DPE as part of the *Hunter Transmission Project Scoping Report* (EnergyCo 2024), using an approach consistent with the SIA Guideline (2023a). Scoping is the first phase of the SIA process and provides an understanding of what the project entails and how it might interact with the social environment.

The SIA Scoping Report identified initial key elements of this SIA including:

- potentially affected stakeholders
- an understanding of the social locality
- potential negative and positive social impacts for further investigation
- the level of assessment required to address potential social impacts
- the methodology to be adopted in completion of this SIA.

The scoping report informed definition of the SEARs. These matters are addressed in *Chapter 5 (Existing environment)* of this SIA.

A.1.2 Social baseline study

Building upon the initial understanding of the existing social environment attained in the scoping phase, a social baseline study was compiled. Key sources of information included existing demographic, health, housing, and socio-economic data collected by the Australian Bureau of Statistics (ABS), other government agencies and local government; published literature and social research; government policies and plans; and research completed on similar projects. A wide range of social indicators were reviewed and assessed for relevance.

The selection of social baseline indicators was informed by early project stakeholder and community engagement (2023 submissions data), outcomes of initial scoping, and review of relevant literature. The social baseline study provides a comprehensive socio-economic profile and analysis of social infrastructure and its capacity within social localities.

The social baseline study provides the benchmark against which potential social impacts are identified and assessed. The social baseline study is presented in *Appendix B (Social baseline)*.

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A.1.3 Engagement informing this SIA

A primary source of information drawn upon by this SIA was the feedback generated through engagement with potentially affected stakeholders and communities. SIA engagement was carried out in accordance with Appendix A of the SIA Guideline which prescribes key engagement objectives and methods. The specific activities and outcomes of EIS community engagement and SIA engagement are presented in *Appendix B (Social baseline)*.

The engagement component of this SIA employed contemporary social research methods including in-depth stakeholder interviews to:

- validate baseline data and assumptions
- identify/test impacts that may be experienced by nearby neighbours and the broader community
- confirm identified impacts and determine potential management strategies.

An online survey was also distributed to the community and stakeholders unable or unwilling to participate in the semi-structured interviews. Observations and photographs within settlements and farmland were also taken during the field trips.

A.1.4 Social impact identification

Social impacts and benefits were identified by suitably qualified social scientists through analysis of the nature of project activities, the baseline characteristics of potentially affected communities and feedback generated through engagement processes.

The identification and assessment of impacts was undertaken with consideration of the impact categories outlined in the SIA Guideline (DPE, 2023a) which refers to potential changes to people's:

- **way of life:** how people live, work, play, and interact
- **community:** its composition, cohesion, character, how it operates, and sense of place
- **accessibility:** how infrastructure provided by public, private or not for profit organisations, including services and facilities, is accessed and used
- **culture:** shared beliefs, customs, values and stories, and connection to Country, land, places, watercourses, and buildings, both Aboriginal and non-Aboriginal
- **health and wellbeing:** physical and mental health
- **surroundings:** access to and use of ecosystem, public safety and security, access to and use of natural and built environment, aesthetic value and/or amenity
- **livelihoods:** how people sustain themselves through employment or business, their capacity to do so and whether disadvantage is experienced
- **decision-making systems:** extent community can have a say in decisions that affect their lives, access to complaint, remedy, and grievance mechanisms.
- For ease of assessment, each social impact and benefit was organised under the category it is most related to. It is acknowledged that impacts and benefits can often relate to more than one category.

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Identification of the project's potential social impacts and benefits was completed through several complementary approaches to triangulate the findings and confirm accuracy. These approaches included consideration of:

- environmental impacts – review of similar projects in the area, as well as available academic and grey literature to identify potential impacts
- local plans and policies – findings from the review aided to contextualise and understand the local priorities as well as to identify local values
- the existing social environment – demographic and social analysis in the form of a social baseline study
- feedback generated through stakeholder engagement including findings from SIA engagement activities along with broader engagement undertaken as part of the EIS process
- findings from other relevant technical disciplines that contributed to the EIS were reviewed and potential social impacts defined. These included:
    - biodiversity development assessment report (BDAR)
    - Aboriginal cultural heritage assessment (ACHA)
    - land and rehabilitation assessment (LRA)
    - landscape and visual impact assessment (LVIA)
    - noise and vibration impact assessment (NVIA)
    - traffic impact assessment (TIA)
    - bushfire risk assessment (BRA)
    - economic assessment.
- A full description of each social impact is provided in *Chapter 1 (Introduction) to Chapter 8 (Cumulative social impacts)* of this SIA.

A.1.5 Social risk assessment

This stage involved the systematic assessment of each identified social impact to predict the nature and scale of social risk associated with construction and operation of the project. The risk approach assesses the magnitude and likelihood of potential positive and negative social impacts with and without mitigation.

The social risk assessment stage evaluates each identified potential social impact and benefit across each phase of the project. Evaluating potential positive and negative impacts considers both subjective (experiential) and objective (technical) components of 'likelihood' and 'magnitude'. The criteria for rating levels of 'magnitude' and 'likelihood' for social impacts are provided in Figure A.1. Once established, these levels of 'likelihood' and 'magnitude' are then interpreted through the social impact 'significance matrix'.

The social risk assessment matrix is provided in the *SIA Guideline* Technical Supplement (DPE 2023a) and presented in Figure A.1. This process is applied to potential social impacts to understand the significance level of impacts before mitigation/enhancement measures. The process is applied again assuming the adoption of mitigation/enhancement measures, which determines the residual significance level.

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

Source: SIA Guideline Technical Supplement, Social impact significance matrix (DPE 2023a)

Figure A.1 Social impact significance matrix

A.1.6 Social impact mitigation and benefit enhancement

Findings from Stages 1-5 were used to distil and analyse recommendations for mitigation and enhancement measures for the identified social impacts and benefits. A mitigation and management framework was prepared with consideration of all potential social impacts and benefits to allow for the identification of:

- required impact mitigation measures
- enhancement measures to maximise potential benefits
- partnership opportunities.

As stated above, other relevant technical studies undertaken as part of the EIS were considered for impact evaluation. This stage assesses how proposed mitigation measures from these studies may manage social impacts as identified by this SIA, and where necessary, proposes additional, complimentary social mitigation measures.

A.1.7 SIA reporting

Development of this SIA technical report and internal peer review were conducted by EMM's social scientists and environmental scientists.

A.2 SIA assumptions and limitations

This SIA has been based on the best available information relevant to the SEARs specific to the project. This SIA assessment is based on the description provided in *Chapter 3 (Alternatives and options)* of the EIS. It has been noted that while project components are generally fixed, some refinements to the physical layout or design of certain components of the project may be required following further investigation and design. The objective is to ensure that the final design can meet construction requirements while continuing to minimise social and environmental impacts and deliver benefits.

This SIA relies on several assumptions regarding workforce requirements and the associated accommodation strategy that will be refined during later stages of project planning and development. Proposed mitigation and management measures have been developed based on the most accurate information available at the time of writing this SIA. As per the SIA Guideline an adaptive management approach is required to ensure mitigation and management strategies remain valid.

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Other assumptions and limitations of the research include:

- a key source of data describing social conditions is the ABS Census of Population and Housing, the latest of which was in 2021. There may have been changes to social characteristics since this census event. A consideration is that the 2021 census occurred during the height of COVID-19 pandemic restrictions which may have impacted upon socio-economic trends and characteristics as recorded
- social infrastructure reviewed in the social baseline predominantly considers government-provided facilities or services. In some instances, it is possible that local communities access services through private providers for which data is not available
- the social baseline at this stage of the SIA process is limited to secondary data as the SIA engagement program has not yet occurred
- that as the corridor social locality is geographically focussed with relatively low populations; there is a limited range of secondary data to draw upon. Publicly available data sets need to ensure privacy of those who contribute data and, therefore, a limited range of indicators are published. Data describing characteristics in the corridor social locality has been provided where available and will be supplemented with primary data when this becomes available
- data generated through SIA engagement is based on the interviewee's knowledge and experience and on their willingness to participate and share information. The data collected may not be fully representative of the perspectives of all community members
- during stakeholder interviews data is recorded in note form by the SIA specialist conducting the interview. Comments and quotes in this report are summarised as accurately as possible but may not be verbatim.

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Appendix B
Social baseline

EMM
creating opportunities

B.1 HTP social baseline

This appendix provides the socio-economic data tables supporting analysis of baseline conditions as described in *Chapter 5 (Existing environment)* of this social impact assessment (SIA).

Where relevant, particular social characteristics are described according to the three sections in the corridor. This is due to the divergent nature of the communities broadly in line with these geographies. These included the northern section (Bayswater to Broke), central section (Pokolbin to Corrabare) and southern section (Olney to Eraring).

Table B.1 presents the outcomes of research intro Native Title interests across local government areas (LGAs) that make up the northern, central and southern sections of the HTP corridor.

Table B.1 Traditional Owner and Native Title interest

Local area	Traditional Owner and Native Title interests
Northern section	• Warrabinga-Wiradjuri #7 Native Title claim (NC2018/002) spans over the Muswellbrook and Singleton LGAs (National Native Title Tribunal, 2024) • Gomeroi People Native Title claim (NC2011/006) is inclusive of Muswellbrook Shire Council (National Native Title Tribunal, 2024) • The Wonnarua people submitted a native title claim in 2017, however the claim was not accepted (NC2017/007)
Central section	• Awabakal LALC native title claim (NN2023/008) is inclusive of Cessnock City Council (National Native Title Tribunal, 2024)
Southern section	• The Darkinjung Local Aboriginal Land Council have submitted various native title claims (NN2020/009); however none have received a successful determination. (National Native Title Tribunal, 2024)

Table B.2 presents a consolidated data table for population trends across the corridor, local and regional social locality, and within the project area.

Table B.2 Population trends

Location	2011	2016	2021	Total % change 2016 – 2021	Total % change 2011 – 2021	Median age
corridor social locality (mesh blocks within visual corridor)						
Corridor total	-	454	543	18.3%	-	-
Northern section	-	272	339	24.60%	-	-
Central section	-	182	204	12.00%	-	-
Southern section	-	-	-	-	-	-
Local area (SALs within 10 km)						
Local area total	66,442	69,808	75,513	16.20%	17.00%	46
Northern section	30,931	31,864	31,930	0.20%	3.10%	41
Central section	21,878	23,411	25,919	10.70%	18.40%	47
Southern section	13,633	14,533	17,664	21.50%	29.50%	49
Nearby regional communities						
Singleton UCL	13,961	13,214	14,229	7.70%	1.90%	35
Muswellbrook UCL	11,042	10,404	10,901	4.80%	-1.30%	36

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Location	2011	2016	2021	Total % change 2016 – 2021	Total % change 2011 – 2021	Median age
Broke UCL	260	239	231	-3.30%	-11.20%	42
Cessnock UCL	20,013	21,725	23,211	6.80%	15.90%	39
Millfield SAL	806	1,006	1,282	27.40%	59.10%	38
Regional area (LGA social locality)						
Regional area total	278,331	619,740	665,007	7.44%	10.04%	39
Singleton LGA	22,694	22,987	24,577	6.90%	8.30%	37
Muswellbrook LGA	15,791	16,086	16,357	1.70%	3.60%	37
Cessnock LGA	50,840	55,560	63,632	14.50%	25.20%	37
Lake Macquarie LGA	189,006	197,371	213,845	8.30%	13.10%	42
Central Coast	-	327,736	346,596	5.80%	-	43
Benchmark regions						
Newcastle LGA + Hunter Valley SA4	391,781	418,827	460,819	0.1	0.176	39
NSW	**6,917,658**	**7,480,228**	**8,072,163**	**8.1**	**16.7**	**39**

Note: 2011-2021 population data for Central Coast LGA (HTP South) was calculated based on a sum of 2011 LGA data for Wyong LGA and Gosford LGA, which merged in 2016 to create Central Coast LGA

Table B.3 presents the population projections by Local Government Area, and HTP section between 2021 and 2041.

Table B.3 Population projections 2021-2041

Area	2021	2026	2031	2036	2041	Annual growth rate (%)
Muswellbrook LGA	16,469	16,763	17,083	17,392	17,696	0.4%
Singleton LGA	24,725	25,590	26,527	27,433	28,321	0.7%
Cessnock LGA	64,120	70,305	77,064	83,607	90,019	1.7%
Lake Macquarie LGA	214,054	224,853	236,642	248,055	259,237	1.0%
Central Coast LGA	348,493	362,744	378,395	393,545	408,390	0.8%
NSW	**8,097,062**	**8,680,294**	**9,161,041**	**9,622,204**	**10,070,467**	**1.1%**

Source: NSW Department of Planning (DPE, 2024)

Table B.4 presents a consolidated project overview of select population characteristics, as discussed in *Chapter 5 (Existing environment)* of this SIA.

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Table B.4 Select population characteristics

Area	Population	People aged 14 and under	People aged 65+	Youth (15- 24)	Aboriginal and/or Torres Strait Islander	% Aboriginal and/or Torres Strait Islander	Renter households where rent payments are greater than or equal to 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Corridor social locality (mesh blocks within visual corridor)													
Corridor total	543	16.1%	21.5%	12.0%	-	-	-	2.9%	4.6%	-	-	-	0%
Northern section	339	18.9%	14.2%	15.2%	27	8.0%	-	4.3%	6.8%	-	-	-	0%
Central section	204	13.2%	28.8%	8.8%	-	3.4%	-	1.5%	2.4%	-	-	-	0%
Southern section	-	-	-	-	-	-	-	-	-	-	-	-	-
Local area (SALs within 10 km)													
Local area total	74,973	19.4%	20.2%	11.6%	6991	8.7%	-	19.2%	8.1%	12.8%	5.2%	3.6%	0.5%
Northern section	31,390	21.8%	14.0%	11.7%	3,317	10.4%	-	18.0%	5.8%	17.7%	4.7%	3.9%	0.5%
Central section	25,919	18.3%	20.1%	11.4%	2,772	10.7%	-	24.5%	9.1%	14.6%	6.2%	2.5%	0.3%
Southern section	17,664	16.9%	26.4%	11.5%	902	5.1%	-	15.0%	9.4%	6.0%	4.6%	4.4%	0.6%
Nearby regional communities													
Singleton UCL	14,229	17.3%	19.5%	12.7%	1,428	9.1%	9.7%	18.2%	6.5%	21.3%	4.7%	4.7%	0.6%
Muswellbrook UCL	10,901	21.8%	14.9%	12.1%	1,294	13.1%	8.3%	21.3%	6.3%	20.3%	6.1%	4.7%	0.4%
Broke UCL	231	22.9%	15.2%	7.8%	28	12.1%	10.9%	14.1%	10.0%	0.0%	3.8%	1.3%	0.0%
Cessnock UCL	23,211	18.3%	19.4%	12%	2,732	11.8%	43.0%	27.3%	9.7%	14.8%	6.6%	2.4%	0.4%
Millfield SAL	1,282	20.6%	14.8%	12.9%	107	8.3%	50.0%	14.8%	6.4%	0.0%	5.5%	1.6%	0.0%

Area	Population	People aged 14 and under	People aged 65+	Youth (15- 24)	Aboriginal and/or Torres Strait Islander	% Aboriginal and/or Torres Strait Islander	Renter households where rent payments are greater than or equal to 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Cooranbong SAL	7,077	20.0%	22.8%	11.3%	335	4.7%	39.2%	13.9%	7.6%	3.6%	4.4%	5.9%	0.6%
Martinsville SAL	389	13.9%	26.7%	11.1%	6	1.5%	33.3%	7.0%	7.2%	0.0%	3.1%	3.3%	0.0%
Total regional area (Combined LGAs)	665,007	18.4%	21.2%	11.4%	39,227	5.9%	-	18.7%	7.1%	14.4%	4.7%	5.4%	0.7%
Newcastle LGA + Hunter Valley SA4	460,819	18.3%	18.4%	12.6%	30,719	6.7%	35.3%	17.6%	6.7%	14.0%	4.8%	5.8%	0.9%
NSW	**8,072,163**	**18.2%**	**17.6%**	**11.8%**	**278,043**	**3.4%**	**35.5%**	**15.8%**	**5.8%**	**12.8%**	**4.9%**	**22.4%**	**4.5%**

Table B.5 Long-term health conditions, 2021

Area	Has one or more long-term health condition	Asthma	Diabetes (excluding gestational diabetes)	Cancer (including remission)	Lung condition (including COPD or emphysema)	Mental Health condition (inc depression or anxiety)
Corridor social locality (mesh blocks within visual corridor)						
Corridor total (average)						
Northern section	-	11.50%	4.90%	1.70%	1.60%	9.30%
Central section	-	3.10%	1.30%	2.20%	0.70%	5.50%
Southern section	-	-	-	-	-	-
Local area (SALs within 10 km)						
Local area total (average)	34.9%	10.3%	5.9%	3.4%	2.6%	12.2%
Northern section	30.9%	10.3%	5.2%	2.6%	2.0%	10.6%
Central section	36.4%	10.9%	6.2%	3.3%	2.9%	13.2%
Southern section	37.5%	9.6%	6.3%	4.2%	2.9%	12.7%
Nearby regional communities						
Singleton UCL	31.4%	9.7%	5.2%	2.6%	1.9%	11.0%
Muswellbrook UCL	33.2%	11.6%	5.9%	2.8%	2.4%	11.6%
Broke UCL	32.9%	10.0%	5.2%	1.3%	4.3%	10.8%
Cessnock UCL	37.4%	11.2%	6.7%	3.3%	3.2%	14.2%
Millfield SAL	35.1%	13.0%	4.8%	3.3%	2.3%	12.9%
Cooranbong SAL	33.8%	9.6%	5.6%	3.4%	1.9%	10.8%
Martinsville SAL	34.4%	9.0%	3.1%	4.9%	2.8%	12.1%
Regional area (LGA social locality)						
Singleton LGA	29.4%	9.1%	4.6%	2.6%	1.9%	9.6%
Muswellbrook LGA	31.6%	10.8%	5.6%	2.6%	2.2%	10.6%
Cessnock LGA	35.3%	11.0%	6.0%	3.1%	2.7%	13.0%
Lake Macquarie LGA	35.6%	10.2%	5.6%	3.8%	2.5%	12.0%
Central Coast LGA	33.9%	9.6%	5.5%	3.7%	2.7%	11.0%
Hunter region						
Newcastle LGA + Hunter valley SA4	33.6%	10.10%	5.30%	3.20%	2.20%	12.10%
NSW	**27.0%**	**7.80%**	**4.80%**	**2.80%**	**1.70%**	**8.00%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Table B.6 Number of recorded incidents by offence, April 2023-March 2024

Study area	Assault	Domestic violence related assault	Sexual offences	Malicious damage to property	Theft*	Drug offences
Singleton LGA	113	115	142	229	605	47
Muswellbrook LGA	133	202	83	207	649	114
Cessnock LGA	306	485	229	632	2,273	219
Lake Macquarie LGA	759	862	507	1,341	5,208	742
Central Coast LGA	1,504	1,778	854	2,394	7,691	1,875

Note: *Sum of all theft related offences, including robbery

Source: NSW Bureau of Crime Statistics and Research, Crime Statistics by LGA, March 2024

Table B.7 Voluntary work in the social locality

Area	Have participated in voluntary work in the last 12 months (total)	Have participated in voluntary work in the last 12 months (proportion)
Corridor social locality		
Total		15.3%
Northern section	-	13.6%
Central section	-	16.9%
Southern section	-	-
Local area		
Total	7,518	12.7%
Northern section	3,187	12.8%
Central section	1,953	9.2%
Southern section	2,378	16.2%
Nearby regional communities		
Singleton UCL	1,534	13.8%
Muswellbrook UCL	890	10.4%
Broke UCL	25	13.7%
Cessnock UCL	1,540	8.1%
Millfield SAL	82	8.1%
Cooranbong SAL	1,062	18.7%
Martinsville SAL	92	27.2%
Regional area		
Singleton LGA	2,869	14.7%
Muswellbrook LGA	1,560	12.1%
Cessnock LGA	4,902	9.6%
Lake Macquarie LGA	23,087	13.2%
Central Coast LGA	34,473	12.1%

Area	Have participated in voluntary work in the last 12 months (total)	Have participated in voluntary work in the last 12 months (proportion)
Benchmark region		
Newcastle LGA + Hunter Valley SA4	49,273	13.1%
NSW	**857,891**	**13.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

Table B.8 Unemployment and labour force participation rates, 2021

Study area	Labour force (no.)	Labour force participation	Unemployed persons (no.)	Unemployed	Youth un-employment	Aboriginal and/or Torres Strait Islander un-employment
Local social locality						
Northern section	15,593	62.40%	735	4.70%	10.20%	-
Central section	10,403	49.10%	644	6.20%	11.80%	-
Southern section	7,736	52.60%	353	4.60%	9.80%	-
Nearby regional communities						
Singleton UCL	11,139	63.80%	336	4.70%	10.70%	-
Muswellbrook UCL	8,527	59.50%	307	6.10%	10.70%	-
Broke UCL	182	57.10%	4	3.80%	0.00%	-
Cessnock UCL	9,144	48.20%	603	6.60%	12.20%	-
Millfield SAL	579	57.20%	32	5.50%	9%	8.50%
Cooranbong SAL	3,241	57.20%	142	4.40%	10.80%	3.90%
Martinsville SAL	194	57.40%	6	3.10%	0.00%	0.00%
Regional area						
Total regional area	309,405	57.00%	14,584	4.70%	9.90%	9.60%
Singleton LGA	12,574	64.50%	467	3.70%	7.80%	8.00%
Muswellbrook LGA	7,751	60.10%	397	5.10%	10.10%	10.70%
Cessnock LGA	28,714	56.50%	1,595	5.60%	11.20%	9.60%
Lake Macquarie LGA	189,006	197,371	213,845	8.30%	13.10%	42
Central Coast	-	327,736	346,596	5.80%	-	43
Hunter SA4 / Newcastle LGA	227,763	60.50%	10,879	4.80%	9.60%	9.50%
NSW	**3,874,012**	**58.70%**	**189,852**	**4.90%**	**9.80%**	**9.80%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Notes: 1. Youth refers to those aged 15 to 24 years

Table B.9 Occupations, 2021

Location	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
Local area								
Northern section	8.9%	11.6%	18.9%	10.6%	10.3%	8.4%	17.4%	11.7%
Central section	10.8%	12.0%	16.8%	14.9%	9.7%	8.8%	11.1%	13.5%
Southern section	12.3%	19.3%	16.7%	12.2%	11.6%	7.7%	7.9%	10.5%
Nearby regional communities								
Singleton UCL	8.3%	12.3%	18.2%	11.7%	11.2%	8.7%	17.5%	10.3%
Muswellbrook UCL	6.3%	10.4%	20.6%	10.9%	9.6%	8.6%	18.1%	13.6%
Broke UCL	9.4%	6.3%	12.5%	10.4%	3.1%	6.3%	31.3%	19.8%
Cessnock UCL	8.3%	10.3%	17.5%	16.3%	9.4%	9.9%	12.0%	4.6%
Millfield SAL	12.3%	12.1%	15.8%	15.2%	10.1%	7.5%	10.6%	10.8%
Cooranbong SAL	9.9%	23.2%	17.1%	12.1%	12.1%	6.9%	7.1%	10.1%
Martinsville SAL	16.1%	27.6%	16.1%	6.3%	15.1%	6.3%	5.7%	6.3%
Total regional area	**11.4%**	**19.4%**	**15.6%**	**13.1%**	**12.7%**	**8.9%**	**7.4%**	**9.9%**
Singleton LGA	10.80%	12.10%	18.00%	13.00%	10.80%	7.80%	16.00%	9.80%
Muswellbrook LGA	9.10%	10.10%	19.40%	10.30%	9.40%	7.80%	18%	13.80%
Cessnock LGA	9.40%	11.80%	18.10%	13.90%	10.80%	8.90%	12.50%	12.80%
Lake Macquarie LGA	10.90%	21.50%	15.80%	13.20%	13.10%	8.60%	6.40%	9.10%
Central Coast LGA	12.30%	20.40%	14.60%	13%	13.10%	9.20%	6%	9.70%
Hunter region	11.1%	20.2%	15.2%	13.2%	11.6%	8.5%	8.5%	10.0%
NSW	**14.6%**	**25.8%**	**11.9%**	**10.6%**	**13.0%**	**8.0%**	**6.0%**	**8.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Table B.10 Median household income and income range, 2021

Study area	Median household incomes	Proportion of households earning less than $650 per week	Proportion of households earning more than $3,000 per week
Local area			
Northern section	$1,948	15.1%	22.7%
Central section	$1,647	19.7%	14.1%
Southern section	$1,864	19.2%	17.9%
Nearby regional communities			
Singleton UCL	$1,864	16.2%	23.5%
Muswellbrook UCL	$1,547	18.3%	18.5%
Broke UCL	$1,458	17.9%	20.2%
Cessnock UCL	$1,254	21.1%	11.8%
Millfield SAL	$1,668	15.3%	16.5%
Cooranbong SAL	$1,639	21.1%	19.1%
Martinsville SAL	$1,821	11.4%	27.3%
Regional area total	$1,623	17.6%	19.3%
Singleton LGA	$2,016	13.80%	26.90%
Muswellbrook LGA	$1,628	17.50%	19.70%
Cessnock LGA	$1,493	17.20%	16.00%
Lake Macquarie LGA	$1,623	17.00%	20.40%
Central Coast LGA	$1,507	18.40%	18.70%
Hunter region	$1,659	16.4%	19.9%
NSW	**$1,829**	**15.3%**	**25.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Table B.11 Industry of employment

Industry	Local areas			Nearby regional communities							Regional area (LGAs)						
	Northern section	Central section	Southern section	Singleton UCL	Muswellbrook UCL	Cessnock UCL	Millfield SAL	Broke UCL	Cooranbong SAL	Martinsville SAL	Singleton	Muswellbrook	Cessnock LGA	Lake Macquarie	Central Coast	Hunter region	NSW
Agriculture, forestry and fishing	3.1%	1.5%	2.5%	1.1%	1.4%	1.0%	1.7%	7.3%	1.1%	5.2%	3.8%	7.1%	1.5%	0.4%	0.8%	2.0%	2.0%
Mining	22.8%	7.5%	1.5%	23.2%	22.1%	8.0%	6.4%	29.2%	1.5%	1.6%	21.6%	21.5%	8.5%	2.6%	0.5%	5.7%	1.0%
Manufacturing	4.1%	7.4%	6.4%	4.3%	3.6%	7.3%	7.5%	8.3%	6.8%	4.7%	4.2%	3.8%	7.5%	5.8%	5.9%	5.7%	5.5%
Electricity, gas, water and waste services	3.2%	1.3%	1.3%	2.6%	4.4%	1.2%	2.0%	0.0%	1.3%	0.0%	2.4%	3.8%	1.3%	1.4%	1.0%	1.4%	1.0%
Construction	6.5%	8.2%	13.2%	6.7%	5.8%	7.5%	9.4%	12.5%	12.4%	15.6%	7.2%	5.7%	9.2%	11.2%	11.5%	8.6%	8.6%
Wholesale trade	2.9%	2.1%	2.4%	3.1%	2.7%	2.2%	1.8%	6.3%	1.9%	3.1%	2.8%	2.6%	2.4%	2.2%	2.2%	2.2%	2.8%
Retail trade	8.4%	9.6%	8.8%	8.5%	8.6%	10.6%	8.4%	5.2%	8.0%	8.9%	7.9%	7.9%	9.7%	9.4%	10.2%	9.1%	9.0%
Accommodation and food services	7.3%	10.6%	5.3%	8.0%	8.0%	11.0%	9.7%	5.2%	5.2%	0.0%	6.8%	6.8%	8.8%	6.3%	7.0%	7.9%	6.2%
Transport, postal and warehousing	2.8%	3.5%	5.1%	2.7%	2.8%	4.1%	2.9%	3.1%	4.5%	2.1%	2.9%	2.9%	4.1%	3.8%	3.7%	3.8%	4.6%
Information media and telecommunications	0.3%	0.6%	0.8%	0.3%	0.5%	0.4%	0.9%	0.0%	0.7%	0.0%	0.3%	0.5%	0.5%	0.7%	1.7%	0.7%	1.8%
Financial and insurance services	0.8%	1.9%	2.0%	0.9%	1.0%	1.6%	1.8%	0.0%	2.6%	3.1%	1.0%	0.9%	1.7%	3.2%	3.3%	2.4%	5.3%

Industry	Local areas			Nearby regional communities							Regional area (LGAs)						
	Northern section	Central section	Southern section	Singleton UCL	Muswellbrook UCL	Cessnock UCL	Millfield SAL	Broke UCL	Cooranbong SAL	Martinsville SAL	Singleton	Muswellbrook	Cessnock LGA	Lake Macquarie	Central Coast	Hunter region	NSW
Rental, hiring and real estate services	1.0%	1.5%	1.0%	1.0%	1.0%	1.4%	1.7%	0.0%	0.9%	1.6%	1.0%	1.1%	1.3%	1.3%	1.6%	1.3%	1.7%
Professional, scientific and technical services	2.8%	3.6%	4.8%	2.9%	2.3%	2.7%	4.4%	0.0%	4.6%	5.7%	3.0%	2.5%	3.6%	5.7%	6.0%	5.6%	8.9%
Administrative and support services	5.0%	4.6%	2.8%	5.2%	5.4%	5.0%	4.4%	8.3%	3.0%	2.1%	4.5%	5.0%	4.7%	3.1%	3.3%	3.6%	3.2%
Public administration and safety	4.0%	5.4%	4.5%	4.4%	4.2%	5.5%	7.9%	0.0%	4.0%	1.6%	7.0%	3.9%	5.0%	5.6%	6.1%	6.3%	6.1%
Education and training	6.0%	6.0%	9.7%	5.8%	6.4%	6.0%	7.2%	0.0%	11.6%	16.1%	5.8%	6.3%	6.0%	9.2%	8.2%	8.3%	8.7%
Health care and social assistance	9.3%	14.1%	17.3%	9.9%	10.1%	14.8%	11.9%	8.3%	20.3%	12.0%	8.8%	9.0%	14.3%	19.1%	17.8%	16.5%	14.4%
Arts and recreation services	0.8%	1.3%	1.6%	0.7%	0.9%	1.2%	1.1%	0.0%	1.0%	1.6%	0.8%	0.9%	1.0%	1.1%	1.3%	1.2%	1.4%
Other services	4.5%	4.3%	5.0%	4.6%	4.6%	4.5%	4.2%	3.1%	5.2%	0.0%	4.4%	4.1%	4.6%	4.1%	3.8%	3.9%	3.4%

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Table B.12 Most prevalent local businesses by industry, 2023

Area	First	#	Second	#	Third	#
Singleton LGA	Agriculture, forestry and fishing	589	Construction	326	Rental, hiring and real estate services	199
Muswellbrook LGA	Agriculture, forestry and fishing	321	Construction	111	Other services	104
Cessnock LGA	Construction	671	Professional, scientific and technical services	324	Agriculture, forestry and fishing	305
Lake Macquarie LGA	Construction	3611	Professional, scientific and technical services	1731	Rental, hiring and real estate services	1524
Central Coast LGA	Construction	6502	Professional, scientific and technical services	3424	Rental, hiring and real estate services	2422
Hunter region	Construction	6283	Professional, scientific and technical services	4360	Rental, hiring and real estate services	3784

Source: ABS 2023, Data by region – Number of businesses by industry at 30 June 2023.

Table B.13 Housing stock and occupancy

Area	Private dwellings (number)	Occupied dwellings	Unoccupied dwellings
Local area (SALs within 10 km)			
Northern section	12,782	90.4%	9.6%
Central section	10,150	88.7%	11.2%
Southern section	6907	91.6%	8.5%
Nearby regional communities			
Singleton UCL	5698	93.1%	6.8%
Muswellbrook UCL	4675	88.7%	11.3%
Broke UCL	104	80.8%	15.4%
Cessnock UCL	8936	91.5%	8.6%
Millfield SAL	466	88.4%	11.4%
Cooranbong SAL	2680	93.5%	6.6%
Martinsville SAL	149	88.6%	7.4%
Regional area (LGAs)			
Singleton LGA	9255	91.2%	8.7%
Muswellbrook LGA	6802	88.2%	11.8%
Cessnock LGA	24,664	91.5%	8.5%
Lake Macquarie LGA	86,059	93.7%	6.3%
Central Coast LGA	146,248	90.1%	9.9%

Area	Private dwellings (number)	Occupied dwellings	Unoccupied dwellings
Benchmark regions			
Hunter Region	191,878	90.3%	9.7%
NSW	3,199,988	90.6%	9.4%

Table B.14 Housing type

Area	Separate house	Semi-detached, row or terrace house, townhouse etc.	Flat or apartment	Other dwelling
Local area (SALs within 10 km)				
Northern section	87.0%	9.8%	2.2%	0.7%
Central section	88.9%	8.9%	1.4%	0.4%
Southern section	83.8%	11.6%	2.5%	1.8%
Nearby regional communities				
Singleton UCL	83.0%	11.0%	4.4%	1.4%
Muswellbrook UCL	87.0%	11.9%	0.7%	0.2%
Broke UCL	98.8%	0%	0%	3.6%
Cessnock UCL	85.3%	12.2%	1.7%	0.5%
Millfield SAL	99.3%	0%	0%	0%
Cooranbong SAL	85.4%	10.2%	3.7%	0.1%
Martinsville SAL	100%	0%	0%	0%
Regional area (LGAs)				
Singleton LGA	88.6%	7.3%	2.7%	1.1%
Muswellbrook LGA	88.2%	9.9%	1.0%	0.5%
Cessnock LGA	90.5%	7.7%	1.3%	0.3%
Lake Macquarie LGA	85.2%	9.7%	4.4%	0.5%
Central Coast LGA	78.4%	12.0%	8.7%	0.7%
Benchmark regions				
Hunter Region	80%	12.2%	6.9%	0.7%
NSW	65.6%	11.7%	21.7%	0.7%

Table B.15 Tenure type

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type
Local area (SALs within 10 km)				
Northern section	28.1%	37.2%	32.1%	1.4%
Central section	33.7%	33.4%	29.4%	1.9%
Southern section	36.2%	33.6%	21.0%	7.3%
Nearby regional communities				
Singleton UCL	28.1%	38.5%	31.1%	1.2%
Muswellbrook UCL	27.4%	34.1%	35.8%	1.3%
Broke UCL	35.7%	54.8%	8.3%	0.0%
Cessnock UCL	31.6%	31.1%	34.1%	1.7%
Millfield SAL	36.2%	51.9%	9.7%	1.9%
Cooranbong SAL	29.0%	40.8%	21.3%	7.3%
Martinsville SAL	53.8%	33.3%	13.6%	3.0%
Regional area (LGAs)				
Singleton LGA	31.6%	40.8%	24.8%	1.6%
Muswellbrook LGA	28.6%	33.1%	34.2%	2.7%
Cessnock LGA	90.5%	7.7%	1.3%	0.3%
Lake Macquarie LGA	85.2%	9.7%	4.4%	0.5%
Central Coast LGA	78.4%	12.0%	8.7%	0.7%
Benchmark regions				
Hunter region	32.0%	34.2%	30.5%	2.0%
NSW	31.5%	32.5%	32.6%	1.9%

Table B.16 Residential stock on market

	Muswellbrook (2333)	Singleton (2330)	Cessnock and Millfield (2325)	Broke (2330)	Cooranbong and Martinsville (2265)
December 2022					
Houses	160	150	290	150	126
Units	17	28	30	28	5
December 2023					
Houses	130	205	330	205	97
Units	24	22	31	22	5

	Muswellbrook (2333)	Singleton (2330)	Cessnock and Millfield (2325)	Broke (2330)	Cooranbong and Martinsville (2265)
December 2024					
Houses	121	251	298	251	95
Units	13	41	34	41	9

Table B.17 provides the number of short-term accommodation options in the regional social locality.

Table B.17 Short-term accommodation counts

Location (approx. commute)	Hotel / Motel	Caravan park / Camping ground	Bed and breakfast / Cottage / Retreat	Holiday homes / Airbnb
Nearby regional communities				
Muswellbrook UCL	13	1	4	7
Singleton UCL	13	2	4	17
Broke UCL	1	2	1	12
Cessnock UCL	10	1	-	18
Millfield SAL	0	0	2	13
Cooranbong SAL	-	-	1	9
Martinsville SAL	-	-	-	3

Source: https://www.google.com/travel;2024

Table B.18 Mortgage and rental stress

Area	Median rent (weekly)	Renter households where rent payments are greater than or equal to 30% of household income	Median mortgage repayments (monthly)	Owner with mortgage households with mortgage repayments greater than 30% of household income
Local area				
Northern section	$337	-	$2,096	-
Central section	$353	-	$1,702	-
Southern section	$364	-	$2,158	-
Nearby regional communities				
Singleton UCL	$320	33.5%	$1,733	9.7%
Muswellbrook UCL	$300	34%	$1,517	8.3%
Broke UCL	$373	85.7%	$1,500	10.9%
Cessnock UCL	$320	43%	$1,517	12.2%
Millfield SAL	$320	50%	$1,794	14.4%
Cooranbong SAL	$380	39.2%	$2,058	12.6%

Area	Median rent (weekly)	Renter households where rent payments are greater than or equal to 30% of household income	Median mortgage repayments (monthly)	Owner with mortgage households with mortgage repayments greater than 30% of household income
Martinsville SAL	$347	33.3%	$2,149	11.4%
Regional area (LGAs)				
Singleton LGA	$338	31.1%	$1,917	10.7%
Muswellbrook LGA	$300	30.7%	$1,517	9.2%
Cessnock LGA	$340	39.9%	$1,647	12.7%
Lake Macquarie LGA	$375	37%	$1,950	12.1%
Central Coast LGA	$400	42%	$2,000	14.7%
Benchmark regions				
Hunter region	$375	35.5%	$1,860	11.7%
NSW	$420	35.5%	$2,167	17.3%

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Table B.19 Education institution attendance, 2021

Area	Preschool	Primary	Secondary	Technical or further educational institution	University or other tertiary institution	Other type of education institution
Northern section	8%	31.8%	21.5%	9.1%	5.9%	2.4%
Singleton UCL	8.5%	33%	22.1%	10%	7.5%	2.8%
Muswellbrook UCL	8.4%	31.7%	21.9%	9.1%	5.3%	2.1%
Central section	6.9%	24.6%	18%	7.4%	6.1%	1.5%
Broke UCL	10.9%	32.8%	18.8%	14.1%	0%	0%
Cessnock UCL	6.8%	24%	18.1%	8%	5.9%	1.4%
Millfield SAL	10.3%	26.7%	20.8%	7.4%	7.4%	1.0%
Southern section	7.6%	28.6%	21.4%	10%	13.9%	1.7%
Cooranbong SAL	9.2%	32.1%	19.5%	7.9%	17.2%	1.9%
Martinsville SAL	6.0%	24.1%	21.7%	10.8%	18.1%	0%
Regional area total	8.3%	29.2%	22.3%	9.0%	10.7%	2.0%
Hunter region	7.5%	27.7%	20.8%	8.9%	15.1%	2.1%
NSW	6.8%	26.5%	20.9%	8.5%	15.3%	3.0%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

Table B.20 Schools in the regional social locality

HTP A	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Muswellbrook	Muswellbrook Public School	Government	Primary	K-6	443	25
Muswellbrook	Muswellbrook High School	Government	Secondary	7-12	718	64
Muswellbrook	Muswellbrook South Public School	Government	Primary	K-6	516	39
Muswellbrook	Richard Gill School	Non-government	Primary	K-3	41	5
Muswellbrook	Pacific Brook Christian School	Non-government	Combined	K-10	111	7
Muswellbrook	St James Primary School	Non-government	Primary	K-6	305	20
Singleton	Mount Pleasant Public School	Government	Primary	K-6	53	3
Singleton	Singleton Heights Public School	Government	Primary	K-6	498	30
Singleton	Singleton Public School	Government	Primary	K-6	375	26
Singleton	King Street Primary	Government	Primary	K-6	431	25
Singleton	Singleton Highschool	Government	Secondary	7-12	954	75
Singleton	Australian Christian School	Non-government	Combined	K-12	303	24
Singleton	St Catherine High School	Non-government	Combined	K-12	955	71
Singleton	Jerrys Plains Public School	Government	Primary	K-6	19	3
Cessnock	Branxton Public School	Government	Primary	K-6	429	21
Cessnock	Rosary Park Catholic School	Non-government	Primary	K-6	362	25
Cessnock	Paxton Public School	Government	Primary	K-6	88	5
Cessnock	Bellbird Primary School	Government	Primary	K-6	277	16
Cessnock	Kitchener Public School	Government	Primary	K-6	114	7
Cessnock	Nulkaba Public School	Government	Primary	K-6	378	26
Cessnock	Mount View High School	Government	Secondary	7-12	877	72
Cessnock	Cessnock East Primary School	Government	Primary	K-6	232	15
Cessnock	Cessnock Public School	Government	Primary	K-6	271	25
Cessnock	St Phillip's Christian School	Non-government	Combined	K-12	1214	98
Cessnock	Cessnock Public School	Government	Primary	K-6	271	23
Cessnock	Cessnock High School	Government	Secondary	7-12	592	62
Cessnock	St Patricks Primary School	Non-government	Primary	K-6	351	20
Cessnock	Cessnock West Public School	Government	Primary	K-6	387	26
Cessnock	Millfield Public School	Government	Primary	K-6	96	5
Cessnock	Ellalong Public School	Government	Primary	K-6	109	8
Cessnock	Kearsley Public School	Government	Primary	K-6	108	8

HTP A	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Cessnock	Congewai Public School	Government	Primary	K-6	11	2
Cessnock	Laguna Public School	Government	Primary	K-6	50	3
Lake Macquarie	Cooranbong Public School	Government	Primary	K-6	274	17
Lake Macquarie	Avondale School	Non-government	Combined	K-12	870	61
Lake Macquarie	Dora Creek Public School	Government	Primary	K-6	128	6
Lake Macquarie	Brightwaters Christian Collage	Non-government	Combined	K-8	76	6
Central Coast	Mannering Park Public School	Government	Primary	K-6	225	17
Central Coast	Wyee Primary	Government	Primary	K-6	178	13

Source: (ACARA, 2023), My School

Table B.21 Tertiary and vocational institutions in the regional social locality

Area	School	Sector	Type	Courses on offer (on campus)
Muswellbrook	TAFE NSW Hunter Institute Muswellbrook Campus	Government	Vocational	• Carpentry (Cert III) • Career preparation (Cert II) • Light Vehicle Mechanical Technology (Cert III) • Workplace skills (Cert II) • Engineering – fabrication trade (Boilermaking) (Cert III) • Skills for Work and Vocational Pathways (Cert II)
Singleton	TAFE NSW Hunter Institute Singleton Campus	Government	Vocational	• Career preparation (Cert II) • Foundation Skills Support (Certificate of Attainment) • Aboriginal and/or Torres Strait Islander Cultural Arts (Cert II) • Skills for Work and Vocational Pathways (Cert II)
Cessnock	TAFE NSW Cessnock	Government	Vocational	• Career preparation (Cert II) • Auslan (Cert II) • Tertiary preparation (Cert IV) • Retail services (Cert I) • Pathways to further study (Cert III) • ills for Work and Vocational Pathways (Cert II)
Lake Macquarie	Avondale University	Private	Tertiary	• Nursing courses • Teaching courses • Business courses • Arts courses • Counselling courses • Ministry and theology courses • Lifestyle medicine courses

Area	School	Sector	Type	Courses on offer (on campus)
Newcastle	University of Newcastle	Public	Tertiary	• Architecture and construction courses • Business and management courses • Computing, maths and technology courses • Creative industries and communication courses • Education courses • Engineering courses • Health and medicine courses • Humanities and social sciences courses • Law courses • Science and the environment courses

Source: Google Maps

Table B.22 Availability of health professionals, 2022

Area	GPs per 100,000 people (count)	Total health professionals per 100,000 people
Northern section		
Singleton LGA	24 (95.6)	43 (171.4)
Muswellbrook LGA	13 (78.6)	25 (151.1)
Central section		
Cessnock City LGA	47 (71.3)	82 (124.5)
Southern section		
Lake Macquarie LGA	116.3 (252)	253.5 (549)
Central Coast LGA	116.0 (405)	376.3 (1,314)
NSW	**122.6 (10,014)**	**419.8 (34,281)**

Source: (PHIDU, 2024)

Table B.23 Health and emergency services

Health and emergency services	Northern section	Central section	Southern section
Hospitals	2 - Muswellbrook, Singleton	Cessnock Hospital	5 - Lake Macquarie, Central Coast
GP Clinics	7 – Singleton, Muswellbrook	8 - Cessnock	50+ - Lake Macquarie and Central Coast
Aged care facilities	~8 facilities	13 - Cessnock	Approx. 34 – Lake Macquarie, Central Coast
Ambulance	2	Cessnock Ambulance Station	12 – Lake Macquarie, Central Coast
Police stations	3 – Muswellbrook, Singleton, Jerrys Plains	Cessnock Police Station	6 - Lake Macquarie, Central Coast
Fire services	2 – Muswellbrook, Singleton	3 -Cessnock, Bellbird, Maitland	17 - Lake Macquarie, Central Coast

Source: Google.com; Google Maps, 2025

B.2 HTP section baseline profiles

Where relevant, particular social characteristics are described according to the three sections in the corridor. This is due to the divergent nature of the communities broadly in line with these geographies.

These included:

- Northern section: Bayswater to Broke
- Central section: Pokolbin to Corrabare
- Southern section: Olney to Eraring

For each of the HTP Project sections, the social locality hierarchy defined in *section 3.4* has been adopted:

- Corridor social locality (see Figure 3.3) includes people within 1.5 kilometres either side of the corridor, measured from the edge of the 200-metre-wide easement[8] (approximate total width of 3.2 kilometres).
- Local social locality (see Figure 3.3), includes people generally within a 10-kilometre area surrounding the 200-metre-wide easement. It also includes key nearby townships and settlements.
- Regional social locality (see Figure 3.3) includes the LGAs of Central Coast, Lake Macquarie, Muswellbrook, Singleton and Cessnock.

Social characteristics for each social locality are benchmarked to the Hunter region (including Newcastle) and NSW. Baseline information will be supplemented with primary data when this becomes available. The key data sources drawn upon the prepare the social baseline included:

- Australian Bureau of Statistics (ABS) Census of Population and Housing 2011-2021
- Australian Department of Jobs and Small Business
- NSW Bureau of Crime Statistics and Research
- NSW Department of Education and Communities
- NSW Ministry of Health
- NSW Department of Planning and Environment
- NSW Department of Trade and Investment, Regional Infrastructure and Services
- NSW Department of Family and Community Services
- NSW Housing
- Cessnock City Council
- Muswellbrook Shire Council
- Singleton Shire Council

[8] 3.2 kilometres from the centre line

- Lake Macquarie City Council
- Central Coast Council
- SQM Research
- Public Health Information Development Unit; and
- websites and other documentation representing key stakeholders and industries.

B.3 Northern section of the HTP corridor: Bayswater to Broke

The northern section of the HTP corridor spans from the Bayswater Power Station to the east of the small settlement of Broke, lying predominantly within the Singleton LGA but also including small parts of the Muswellbrook LGA. The northern section falls on the traditional country of the Wonnarua peoples.

B.3.1 Corridor social locality

The northern section of the corridor social locality (see Figure 3.3) is around 78 kilometres in length. The main land uses in this social locality include major coal mining complexes in the Upper Hunter Valley, the Mount Thorley Industrial Estate, Singleton Military Area and rural properties generally on the alluvial floodplains of the Hunter River.

In 2021, there were 339 people residing the corridor social locality and 129 private dwellings. There are around a total of 80 sensitive receivers within the corridor social locality, including industry facilities, private dwellings and utility facilities and a number of unknown sensitive receivers. Note that sensitive receivers within the corridor social locality are being further refined and will be updated accordingly.

Key socio-economic characteristics across the northern section of the corridor social locality include:

- high population growth, with the number of residents growing from 272 residents in 2016 to 339 residents in 2021, growing by almost a quarter (24.6%). The number of private dwellings also grew from 94 dwellings in 2016 to 129 dwellings in 2021
- low rate of labour force participation, with 41.1% of the working-age population engaged in the labour force, compared to 58.7% for NSW. This is likely reflective of the older population, consisting of people who have retired from the labour force. Retail trade is the key industry of employment
- high degree of low-income households, with more than one fifth (20.2%) of households considered low-income earning less than $650 per week, compared to 15.3% for NSW. Low-income households are typically more vulnerable to changes in the social environment
- key environmental features traversed by the corridor social locality include Wollombi Brook Creek and Loders Creek, with key roads including the Golden Highway, Putty Road and Cessnock Road. Golden Highway is a state-significant highway, connecting Dubbo to the New England Highway at Whittingham, and is an important freight route. The Hunter Valley Coal Rail Network is also traversed by the corridor social locality.

Social values are described in *section 5.2*, and *Chapter 4 (Stakeholder engagement)*.

The northern section of the local social locality includes people generally within 5 kilometres either side of the 200-metre-wide easement (total width of 10.2 kilometres). It also encompasses surrounding townships and settlements. In 2021, there were 31,930 people residing in the local social locality and 12,782 private dwellings. The key urban centres in the local social locality are Muswellbrook, located around 10 kilometres north of the transmission line, and Singleton, located around 6.5 kilometres to the east of the transmission line. Muswellbrook and Singleton are typified as regionally significant strategic centres in the Hunter Regional Plan 2041, which mean they are primary activity destinations providing a high level of community, cultural, civic and commercial uses and services (Department of Planning and Environment, 2022).

Muswellbrook is the main regional centre for the Upper Hunter Region and had a population of 10,901 people in 2021. The town provides a modest range of community and social services, including a hospital, several schools and sporting facilities. Main access to Muswellbrook is via the New England Highway and Denman Road. Singleton is located on the banks of the Hunter River and at the junction of the New England Highway and Putty Road. In 2021, Singleton had a population of 14,299 people. Singleton offers a moderate range of educational, medical, sporting facilities and community services, in addition to several workforce accommodation facilities servicing the nearby mines.

Key socio-economic characteristics across the northern section of the local social locality including the urban centres of Muswellbrook and Singleton include:

- almost negligible population growth, with the population growing by 0.2% in the 5 years to June 2021, while NSW's population grew by 8.1%. Reasons for slow population growth in the local social locality may be attributed to the closure of Liddel Power Station and to the economic uncertainty of the coal mining industry driving the out-migration of workers and their families. The population is also ageing, recording a median age of 41 years, compared to 39 years for NSW

- higher rate of labour force participation (62.4%) and a lower rate of unemployment (4.7%) when compared to NSW. However, the local social locality demonstrates a higher rate of youth unemployment, indicating there is limited employment and training opportunities for local youth

- mining is the dominant industry of employment, with more than one fifth of the local social locality's resident labour force employed in mining. Other key industries of employment include health care and social assistance, and retail trade

- higher median household incomes compared to NSW, with a lower proportion of low-income households and a lower proportion of high-income households. High median household incomes are likely to be influenced by residents employed in the mining industry

- compared to NSW, key vulnerable groups in the local social locality include 1-parent families, children aged 14 years or younger, and people residing in social housing. Around 30.9% of local social locality residents reported as having one or more long-term health condition (compared to 27.0% for NSW), with mental health conditions the most prevalent.

Social values are described in *section 5.2*, and *Chapter 4 (Stakeholder engagement)*.

B.3.2 Regional social locality

The northern section of the regional social locality consist of Muswellbrook Shire LGA and Singleton LGA. In 2021, the total population of the regional social locality was 40,934 people, of which 60.0% resided in Singleton LGA.

Data on Socio-Economic Indexes for Areas (SEIFA) indicated that Muswellbrook LGA experiences relative socio-economic disadvantage, being in the bottom 20% of all LGAs in NSW, while Singleton LGA experiences relatively higher levels of socio-economic advantage, being in the top 30% of all LGAs in NSW.

i Muswellbrook Shire LGA

The Muswellbrook Shire LGA encompasses an area of around 3,400 square kilometres, with a large proportion (43.0%) of the Shire designated as national park (Wollemi National Park). Key towns within the LGA are Muswellbrook itself and smaller towns such as Denman, to the southwest. Muswellbrook LGA has an estimated population of 16,357 people with a median age of 37 years. The population grew by 1.7% between 2016 and 2021.

Coal mining remains a key contributor to Muswellbrook's economy with almost one fifth of the workforce employed in the industry. Two operational coal mines are located within the area, Bengalla Mine and Mangoola Coal Mine. Economic drivers and opportunities in Muswellbrook LGA include mining and mining support industries, agriculture and horse breeding, tourism and renewable energy.

The Muswellbrook LGA falls within the traditional country of the Wonnarua peoples, who traded with and had ceremonial links to their neighbouring tribes such as Awabakal, Darkinjung, Geawegal, Kamilaroi, Wiradjuri and Worimi peoples. Muswellbrook township was established by European settlers in the 1820s as an agricultural and mining centre (Muswellbrook Shire Council, 2023).

Access to medical facilities and services are limited in the LGA, similar to many rural and regional localities. An important community service located in the LGA is St Heliers Correctional Centre, a low-security institution that houses 160 male inmates. Muswellbrook is experiencing a period of change with the imminent closure of NSW's largest coal-fired power stations and the closure of several coal mines in the region (Mt Arthur Mine and Ravensworth Mine).

- The viticulture industry in the area is internationally renowned for the quality and quantity of wine production and processing, and as a wine tourism destination (Muswellbrook Council, 2020). Muswellbrook Council expects that tourism visitation may be increased through a focus on nature-based experiences in local National parks, wineries, the equine industry and water bodies such as Lake Liddell (Muswellbrook Council, 2020)

ii Singleton LGA

The Singleton LGA spans 4900 square kilometres and is situated on the Hunter River and hosts many of the renowned Hunter Valley vineyards. A large proportion (40%) of the area is world heritage-listed National parks including the Wollemi, Yengo and Mount Royal National parks.

In 2021 the population was 24,577 people and the median age was 37 years. Between 2016 and 2021, the population growth rate was 6.9%. Singleton is the largest township in Singleton LGA comprising 69.2% of the LGA's population. Other notable towns include Broke, Bulga, Howes Valley, Warkworth and Jerry Plains. Industries in Singleton include coal mining, agriculture, equine breeding, construction and defence. Tourism is an emerging industry.

Singleton is located on the lands of the Wonnarua peoples and has a relatively large First Nations population. Singleton was established by European settlers in the 1820s. The Singleton community values the surrounding natural beauty of Glennies Creek Dam, Lake St Clair and the surrounding National parks. The community is looking towards a planned transition from the mining industry with a focus on entrepreneurial and economic support, health and wellbeing, infrastructure, education and training, environmental management and equality.

The Singleton Economic Development Strategy aims to build on its reputation and attraction as one of Australia's premier visitor destinations, offering a high value experience based around quality food and wine experiences, nature-based activities such as adventure, golf and sports, and culture and heritage. Singleton Council also has strategic focus on develop developing camping and caravan tourism as well as developing Lake St Clair as an adventure tourism precinct (Singleton Council, 2024)

B.3.3 Northern section of the HTP corridor: population

i Population trends

The population of the northern section of the corridor social locality at the time of the 2021 census was 339 persons.

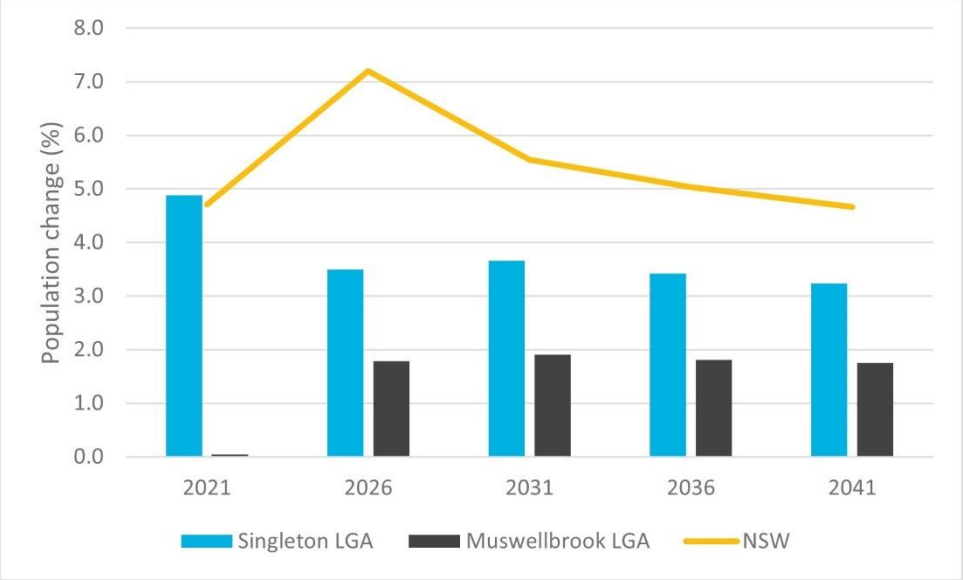
The local area had a total population of 31,930 residents, with low population growth in the 10 years leading to 2021 (3.1%), compared to the Hunter region (17.6%) and NSW (16.7%). With regard to nearby townships, Singleton experienced a slight increase in population in the 10 years leading to 2021 (1.9%) while Muswellbrook's population declined slightly (-1.3%), both well below the Hunter Valley and NSW trends. Both populations of the LGAs grew in the 10 years leading up to 2021, but again at lower rates than the Hunter Valley and NSW rates. Table B.24 details population trends in the 10 years to 2021, and median age for each social locality.

Table B.24 Population trends, 2011 to 2021, and median age

Location	2011	2016	2021	Total % change 2016 – 2021	Total % change 2011 – 2021	Median age
Corridor social locality (mesh blocks within visual corridor)						
North	-	272	339	24.6%	-	-
Local area (SALs within 10 km)						
North	30,931	31,864	31,930	0.2%	3.1%	41
Nearby regional communities						
Singleton UCL	13,961	13,214	14,229	7.7%	1.9%	35
Muswellbrook UCL	11,042	10,404	10,901	4.8%	-1.3%	36
Regional area						
Singleton LGA	22,694	22,987	24,577	6.9%	8.3%	37
Muswellbrook LGA	15,791	16,086	16,357	1.7%	3.6%	37
Hunter region						
Newcastle LGA + Hunter Valley SA4	391,781	418,827	460,819	10.0%	17.6%	39
NSW	**6,917,658**	**7,480,228**	**8,072,163**	**8.1**	**16.7**	**39**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

ii Population projections



Source: NSW Department of Planning (DPE, 2024)

Figure B.1 Northern section Population projections 2021 to 2041

iii Aboriginal and/or Torres Strait Islander population

Across all northern section social localities, the Aboriginal and Torres Strait Islander populations were proportionately higher than the Hunter region (6.7%) and NSW (3.4%). Of note, relatively high populations featured in Muswellbrook township (13.1%) and the Muswellbrook LGA (11.7%). Table B.25 provides Aboriginal and/or Torres Strait Islander population totals and proportions across respective social localities.

Table B.25 Aboriginal and/or Torres Strait Islander population

Area	Aboriginal and/or Torres Strait Islander population total	Aboriginal and/or Torres Strait Islander population
Corridor social locality		
Northern section (total)	27	8%
Local area		
Northern section (total)	3,317	10.4%
Nearby regional communities		
Singleton UCL	1,428	9.1%
Muswellbrook UCL	1,294	13.1%
Regional area		
Singleton LGA	2,033	8.3%
Muswellbrook LGA	1,908	11.7%
Hunter region		
Newcastle LGA + Hunter Valley SA4	30,719	6.7%
NSW	**278,043**	**3.4%**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

B.3.4 Northern section of the HTP corridor: housing and accommodation

Indicators describing housing trends and characteristics were sourced from the 2021 ABS census, unless otherwise stated.

i Housing stock

Data for the corridor social locality is not available however within the local area, there were 12,782 private dwellings. A majority of the private dwellings in the social locality were in the nearby regional communities of Singleton and Muswellbrook, which had a total of 10,373 private dwellings. In the local area the rate of occupied dwellings was 90.4%, with unoccupied dwellings at 9.6%, broadly in line with the Hunter region (90.3%) and NSW (90.6%). Within the nearby townships, Singleton had the highest occupancy rate of 93.1%, and similarly the LGA had an elevated rate of 91.2% compared to both the Hunter region and NSW. Occupancy rates were lowest across the Muswellbrook LGA at 88.2%, with 11.8% of dwellings unoccupied. Table B.26 provides the proportion of occupied dwellings and unoccupied dwellings in each social locality.

Table B.26 Housing type

Area	Private dwellings (number)	Occupied dwellings	Unoccupied dwellings
Local area			
Northern section total	12,782	90.4%	9.6%
Nearby regional communities			
Singleton UCL	5,698	93.1%	6.8%

Area	Private dwellings (number)	Occupied dwellings	Unoccupied dwellings
Muswellbrook UCL	4,675	88.7%	11.3%
Regional area			
Singleton LGA	9,255	91.2%	8.7%
Muswellbrook LGA	6,802	88.2%	11.8%
Hunter region			
Newcastle LGA + Hunter SA4	191,878	90.3%	9.7%
NSW	**3,199,988**	**90.6%**	**9.4%**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

ii Housing type and composition

Housing types within the local and regional social localities are predominantly separate houses, with fewer semi-detached/terraces/townhouses and flats/apartments in the regional areas compared to urban areas. The Singleton LGA has the highest proportion of separate houses (88.6%) across all the social localities and is also higher than the Hunter Valley region rate (80%) and notably higher than NSW (65.6%). Both the Hunter region and NSW geographies have a higher rate of detached/terraces/townhouses (12.2% and 11.7%, respectively) and flats/apartments (6.9% and 21.7%, respectively) compared to the north section social localities.

Table B.27 provides proportions of housing types across the social localities.

Table B.27 Housing type

Area	Separate house	Semi-detached, row or terrace house, townhouse etc.	Flat or apartment	Other dwelling
Local area				
Northern section total	87.0%	9.8%	2.2%	0.7%
Nearby regional communities				
Singleton UCL	83.0%	11.0%	4.4%	1.4%
Muswellbrook UCL	87.0%	11.9%	0.7%	0.2%
Regional area				
Singleton LGA	88.6%	7.3%	2.7%	1.1%
Muswellbrook LGA	88.2%	9.9%	1.0%	0.5%
Hunter Valley region				
Newcastle LGA + Hunter Valley SA4	80%	12.2%	6.9%	0.7%
NSW	**65.6%**	**11.7%**	**21.7%**	**0.7%**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

iii Tenure

Muswellbrook township had the highest rental rate of all geographies at 35.8%, followed closely by the Muswellbrook LGA at 34.2%. These rates are both higher than the Hunter region and NSW rates (30.5% and 32.6%, respectively). The Singleton LGA has the highest home ownership rate at 72.4% (owned outright and with a mortgage), which is notably higher than the Hunter region at 66.2% and NSW at 64%. Singleton and Muswellbrook townships had lower proportions of homes owned outright. Singleton had more homes owned with a mortgage and Muswellbrook and more homes rented. This is likely reflective of lower median incomes in these areas.

Table B.28 provides the breakdown of tenure type across each social locality.

Table B.28 Tenure type

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type
Local area				
Northern section total	28.1%	37.2%	32.1%	1.4%
Nearby regional communities				
Singleton UCL	28.1%	38.5%	31.1%	1.2%
Muswellbrook UCL	27.4%	34.1%	35.8%	1.3%
Regional area				
Singleton LGA	31.6%	40.8%	24.8%	1.6%
Muswellbrook LGA	28.6%	33.1%	34.2%	2.7%
Hunter Valley region				
Newcastle LGA + Hunter Valley SA4	32.0%	34.2%	30.5%	2.0%
NSW	**31.5%**	**32.5%**	**32.6%**	**1.9%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

iv Mortgage and rental stress

The ABS classifies 'housing stress' as households where 30% or more of pre-tax income is spent on housing costs, whether this be rent or mortgage payments, due to the fact that households spending more 30% on housing costs may experience difficulties affording other living expenses, such as food and utilities (ABS, 2022).

The local social locality and key townships and the regional area all had lower median rental values compared to the Hunter region ($375/week) and NSW ($420/week). The highest median rental price was in the Singleton LGA at $338 per week, followed by the total local area at $337/wk. Mortgage repayments were highest in the local area at $2096/month, which is higher than the Hunter regional area rate of $1860/month, but lower than NSW at $2167/month. The lowest median mortgage repayment was recorded for Muswellbrook township at $1517/month.

While rents are lower than the Hunter region average, the rate of rental stress are similar in Singleton and Muswellbrook townships, and lower in Singleton and Muswellbrook LGAs. Regarding mortgage repayments, payments were higher in the local area compared to Singleton and Muswellbrook townships, and in Muswellbrook LGA. In Singleton LGA, mortgage payments are slightly higher than the region average.

Table B.29 presents data on rental stress, housing repayments and mortgage stress across each social locality.

Table B.29 Mortgage and rental stress

Area	Median Rent (weekly)	Renter households where rent payments are greater than or equal to 30% of household income	Median Mortgage repayments (monthly)	Owner with mortgage households with mortgage repayments greater than 30% of household income
Local area				
Northern section	$337	-	$2096	-
Nearby regional communities				
Singleton UCL	$320	33.5%	$1733	9.7%
Muswellbrook UCL	$300	34%	$1517	8.3%
Regional area				
Singleton LGA	$338	31.1%	$1917	10.7%
Muswellbrook LGA	$300	30.7%	$1517	9.2%
Hunter region				
Newcastle LGA + Hunter Valley SA4	$375	35.5%	$1860	11.7%
NSW	**$420**	**35.5%**	**$2167**	**17.3%**

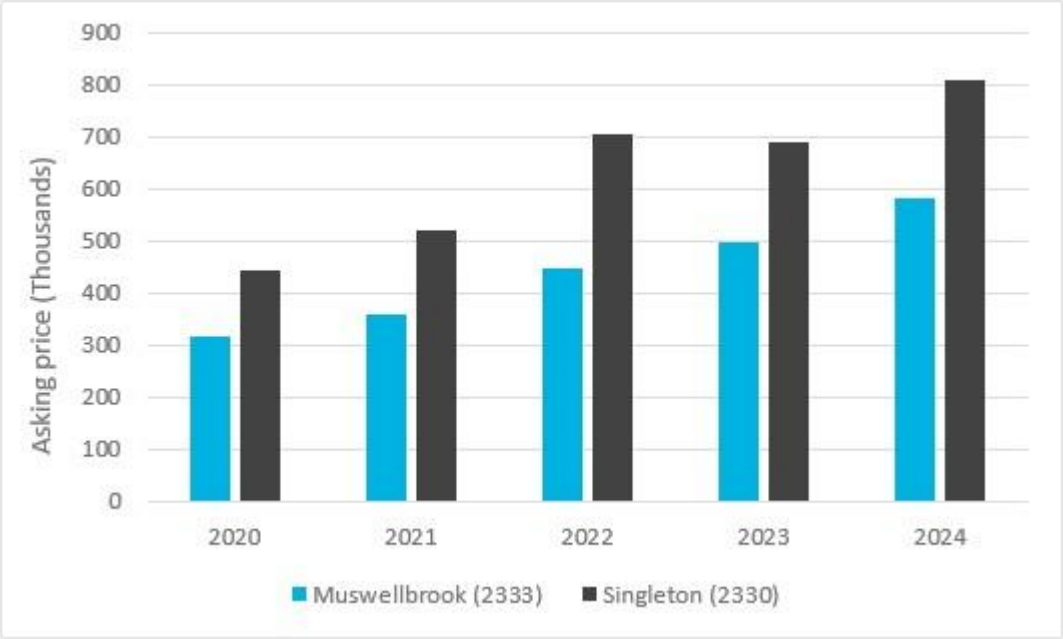
Source: ABS 2021, Census of Population and Housing: General Community Profiles

v Property prices and trends

Data produced for postcodes were used to determine residential vacancy rates and property prices within the northern section of the HTP corridor. The data was for postcodes 2333 (Muswellbrook) and 2330 (Singleton). Between 2020 and 2024, property prices have been steadily increasing across the north section social localities with both postcodes experiencing an annual increase in property asking prices between August 2020 and August 2024.

The postcode of 2333 (Muswellbrook) had lower asking prices, with a high of $580,277 in 2024. Singleton (2330) experienced a slight decrease in asking price from 2022 to 2023, rising again in 2024.

Figure B.2 displays property asking prices over the four years to August 2024.



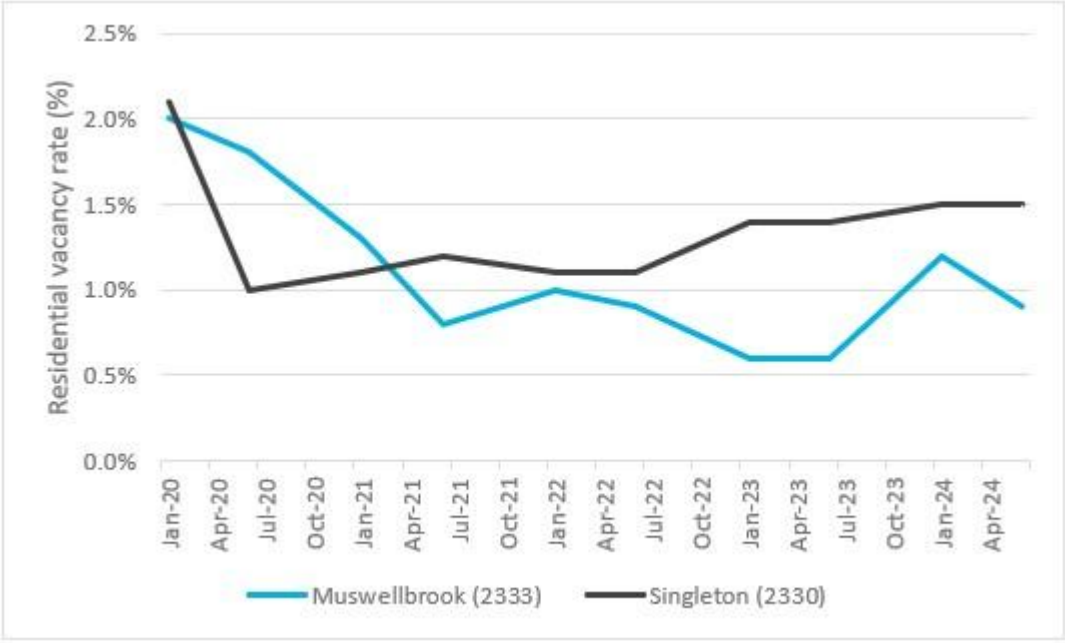
Source: SQM Research, 2024

Note: based on combined asking prices for all property types (including houses and units).

Figure B.2 Property asking prices, August 2020 to August 2024

vi Residential vacancy rates

In June 2024, Muswellbrook township had a residential vacancy rate of 0.9% and Singleton township had a rate of 1.5%. The trend suggests that vacancy rates overall have fallen for the past four years, indicative of low availability of housing across the social locality. A vacancy rate below 2.5% indicates a tight rental market (Real Estate Institute of Queensland, 2023). Residential vacancy trends for the study are depicted in Figure B.3.



Source: SQM Research, (2024)

Figure B.3 Residential vacancy rates

vii Short-term accommodation

There were around 26 hotels in the townships of Singleton and Muswellbrook, as well as other accommodation options such as cottages (8), holiday homes/Airbnb's (24) and caravan parks (3).

Table B.30 provides the number of short-term accommodation options in the regional area.

Table B.30 Short-term accommodation counts

Location (approx. commute)	Hotel / Motel	Caravan park / Camping ground	Bed and breakfast / Cottage / Retreat	Holiday homes / Airbnb
Nearby regional communities				
Muswellbrook UCL	13	1	4	7
Singleton UCL	13	2	4	17

Source: https://www.google.com/travel

B.3.5 Northern section of the HTP corridor: employment, business and industry

i Labour force characteristics

The corridor social locality is characterised by low labour force participation at 41.1% compared to the Hunter Region average of 60.5% and NSW rate of 58.7%. The local social locality recorded a higher proportion of employed residents compared to the Hunter region, although youth unemployment is slightly higher than the Hunter region.

Singleton township had a relatively high rate of labour force participation while Muswellbrook was similar to the NSW average. Unemployment and youth unemployment in Muswellbrook is higher than benchmark regions, which suggests elevated rates of socioeconomic disadvantage in the township.

Within the regional area, Singleton LGA has a significantly higher proportion of employed residents at 64.5% compared to the Hunter region average of 70.5% while Muswellbrook LGA is close to the regional average. Singleton LGA is also characterised by lower unemployment and youth unemployment than other geographies. Aboriginal and/or Torres Strait Islander unemployment is lower in Singleton and higher in Muswellbrook.

Table B.31 provides unemployment and labour force participation rates for the social locality.

Table B.31 Unemployment and labour force participation rates, 2021

Area	Labour force (no.)	Labour force participation	Unemployed persons (no.)	Unemployed	Youth unemployment	Aboriginal and/or Torres Strait Islander unemployment
corridor social locality						
Northern section (total)		41.1%	-	0%	-	-
Local area						
Northern section (total)	15,593	62.4%	735	4.7%	10.2%	-

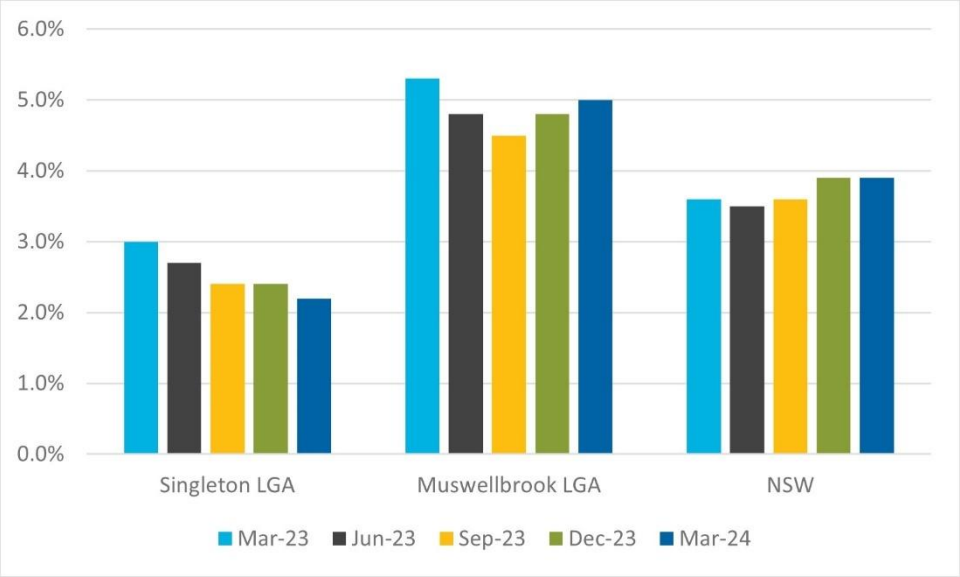
Area	Labour force (no.)	Labour force participation	Unemployed persons (no.)	Unemployed	Youth unemployment	Aboriginal and/or Torres Strait Islander unemployment
Nearby regional communities						
Singleton UCL	11,139	63.8%	336	4.7%	10.7%	-
Muswellbrook UCL	8,527	59.5%	307	6.1%	10.7%	-
Regional area						
Singleton LGA	12,574	64.5%	467	3.7%	7.8%	8.0%
Muswellbrook LGA	7,751	60.1%	397	5.1%	10.1%	10.7%
Hunter region						
Newcastle LGA + Hunter Valley SA4	227,763	60.5%	10,879	4.8%	9.6%	9.5%
NSW	**3,874,012**	**58.7%**	**189,852**	**4.9%**	**9.8%**	**9.8%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Notes: 1. Youth refers to those aged 15 to 24 years

Over the year to March 2024, unemployment has fallen in the Singleton LGA while it fell and then edged higher in Muswellbrook leading up to March 2024.

Figure B.4 displays quarterly unemployment rates for the LGAs in the regional area.



Source: Small Area Labour Market (National Skills Commission, 2024)

Figure B.4 Unemployment over time – LGAs

ii Occupation

Predominant occupations in the northern section of the corridor area include sales workers (23.2%) with a significant proportion of machinery operators and drivers (15.5%), and managers (14.8%). In the local social locality key occupation were technicians and trades workers (18.9%) and machinery operators and drivers (17.4%) reflecting the significant mining industry presence in the area.

Occupations align in Singleton and Muswellbrook townships with the highest proportion of workers employed as technicians and trades workers (18.2% and 20.6%, respectively), and machinery operators and drivers (17.5% and 18.1%, respectively); again reflecting mining industry related occupations.

Across the regional areas, occupations are reflective of urban counterparts with the highest proportion of workers employed as technicians and trades workers, followed by machinery operators and drivers.

Table B.32 provides the proportion of key occupations across the social localities.

Table B.32 Occupations, 2021

Location	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
corridor social locality								
Northern section (total)	14.@8%	9.7%	13.5%	6.5%	7.7%	23.2%	15.5%	9.7%
Local area								
Northern section (total)	8.9%	11.6%	18.9%	10.6%	10.3%	8.4%	17.4%	11.7%
Nearby regional communities								
Singleton UCL	8.3%	12.3%	18.2%	11.7%	11.2%	8.7%	17.5%	10.3%
Muswellbrook UCL	6.3%	10.4%	20.6%	10.9%	9.6%	8.6%	18.1%	13.6%
Regional area								
Singleton LGA	10.8%	12.1%	18.0%	13.0%	10.8%	7.8%	16.0%	9.8%
Muswellbrook LGA	9.1%	10.1%	19.4%	10.3%	9.4%	7.8%	18%	13.8%
Hunter region								
Newcastle LGA + Hunter Valley SA4	11.1%	20.2%	15.2%	13.2%	11.6%	8.5%	8.5%	10.0%
NSW	**14.6%**	**25.8%**	**11.9%**	**10.6%**	**13.0%**	**8.0%**	**6.0%**	**8.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

iii Income

In the northern section of the corridor area households recorded lower incomes, with a higher proportion of households (20.2%) earning less than $650 per week compared to all other social localities. The local social locality recorded relatively high-income inequality with a notable proportion of households on low high incomes.

In nearby townships, households in Muswellbrook recorded lower incomes with an average household weekly income of $1547 compared with the Hunter region average of $1659 and NSW at $1829.

Regionally, households in the Singleton LGA benefit from higher incomes while Muswellbrook LGA households experience lower incomes, in line with characteristics of households in Muswellbrook township.

Table B.33 provides study area median household incomes and income range.

Table B.33 Median household income and income range

Area	Median household incomes	Proportion of households earning less than $650 per week	Proportion of households earning more than $3,000 per week
corridor social locality			
Northern section total	-	20.2%	0.9%
Local area			
Northern section total	$1948	15.1%	22.7%
Nearby regional communities			
Singleton UCL	$1864	16.2%	23.5%
Muswellbrook UCL	$1547	18.3%	18.5%
Martinsville SAL	$1821	11.4%	27.3%
Regional area			
Singleton LGA	$2016	13.8%	26.9%
Muswellbrook LGA	$1628	17.5%	19.7%
Hunter region			
Newcastle LGA + Hunter Valley SA4	$1659	16.4%	19.9%
NSW	**$1829**	**15.3%**	**25.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

B.3.6 Local business and industry

i Industry of employment

The top 3 industries of employment in the corridor area include transport, postal and warehousing (5.1%), agriculture, forestry and fishing (4.1%) and mining (3.6%). Within the local area, mining is the dominant industry of employment, accounting for 22.8% of workers. Retail trade and accommodation and food services are the next highest employing industries at 8.4% and 7.3% respectively.

In nearby townships, the dominant industry of employment in both Singleton and Muswellbrook township is mining which employs 23.2% and 22.1% of local residents respectively. Health care and social assistance, and retail trade are other significant industries in Singleton and Muswellbrook townships.

In the regional area, mining was the primary employer in Singleton and Muswellbrook LGAs, employing 21.6% and 21.5% respectively of local residents. Health care and social assistance was the second largest industry of employment with 8.8% and 9.0% respectively.

Table B.34 provides industries of employment proportions for each study area.

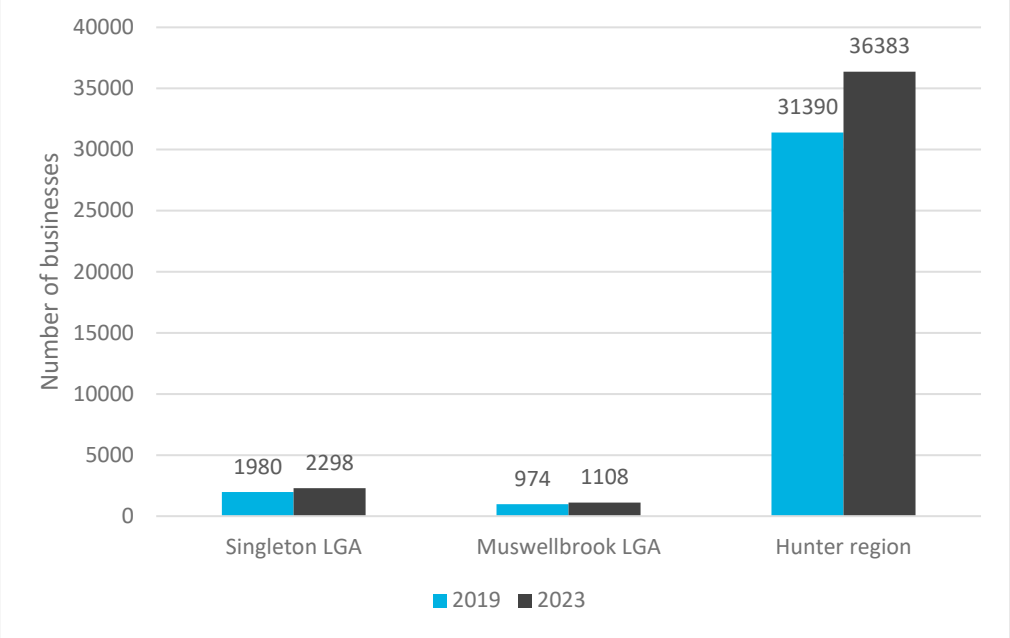
Table B.34 Industry of employment

Industry	Corridor social locality	Local area	Nearby regional communities (UCLs)		Regional Area (LGAs)			
	Northern section total	Northern section total	Singleton	Muswellbrook	Singleton	Muswellbrook	Hunter region	NSW
Agriculture, forestry and fishing	4.1%	3.1%	1.1%	1.4%	3.8%	7.1%	2.0%	2.0%
Mining	3.6%	22.8%	23.2%	22.1%	21.6%	21.5%	5.7%	1.0%
Manufacturing	0.7%	4.1%	4.3%	3.6%	4.2%	3.8%	5.7%	5.5%
Electricity, gas, water and waste services	0.0%	3.2%	2.6%	4.4%	2.4%	3.8%	1.4%	1.0%
Construction	0.5%	6.5%	6.7%	5.8%	7.2%	5.7%	8.6%	8.6%
Wholesale trade	0.0%	2.9%	3.1%	2.7%	2.8%	2.6%	2.2%	2.8%
Retail trade	6.6%	8.4%	8.5%	8.6%	7.9%	7.9%	9.1%	9.0%
Accommodation and food services	2.9%	7.3%	8.0%	8.0%	6.8%	6.8%	7.9%	6.2%
Transport, postal and warehousing	5.1%	2.8%	2.7%	2.8%	2.9%	2.9%	3.8%	4.6%
Information media and telecommunications	0.0%	0.3%	0.3%	0.5%	0.3%	0.5%	0.7%	1.8%
Financial and insurance services	0.0%	0.8%	0.9%	1.0%	1.0%	0.9%	2.4%	5.3%
Rental, hiring and real estate services	0.0%	1.0%	1.0%	1.0%	1.0%	1.1%	1.3%	1.7%
Professional, scientific and technical services	1.0%	2.8%	2.9%	2.3%	3.0%	2.5%	5.6%	8.9%
Administrative and support services	0.9%	5.0%	5.2%	5.4%	4.5%	5.0%	3.6%	3.2%
Public administration and safety	0.7%	4.0%	4.4%	4.2%	7.0%	3.9%	6.3%	6.1%
Education and training	2.2%	6.0%	5.8%	6.4%	5.8%	6.3%	8.3%	8.7%
Health care and social assistance	0.5%	9.3%	9.9%	10.1%	8.8%	9.0%	16.5%	14.4%
Arts and recreation services	0.0%	0.8%	0.7%	0.9%	0.8%	0.9%	1.2%	1.4%
Other services	1.5%	4.5%	4.6%	4.6%	4.4%	4.1%	3.9%	3.4%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

ii Local businesses

In 2023 there was a total of 36,383 businesses in the regional area, with 2298 businesses registered in Singleton LGA and 1108 businesses in the Muswellbrook LGA. Most businesses in both LGAs serviced the agriculture, forestry and fishing sector and the construction sector. Figure B.5 displays number of businesses in the regional area and Table B.35 displays the most prevalent local businesses by industry in the regional area.



Source: ABS 2023, Data by region

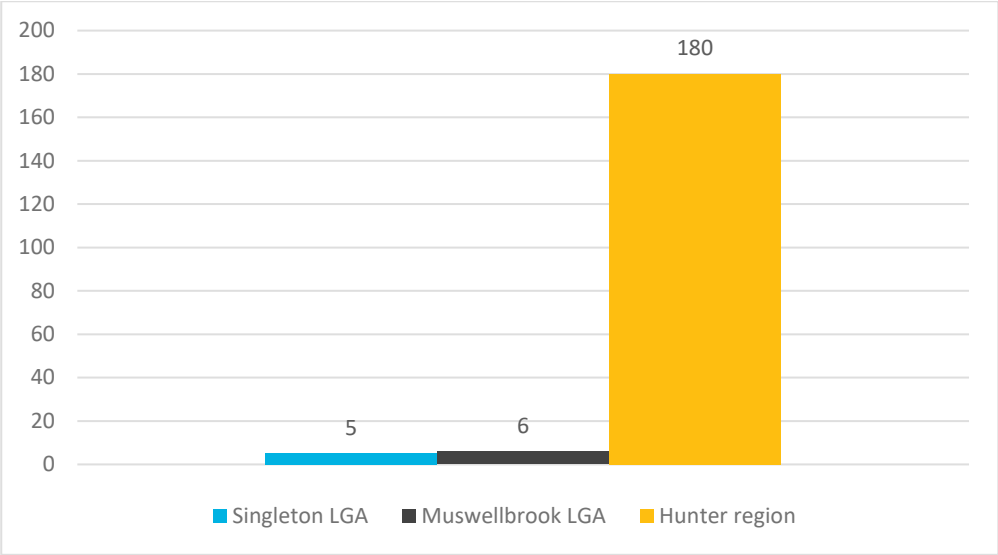
Figure B.5 Number of businesses in the northern regional area

Table B.35 Most prevalent local businesses by industry, 2023

Area	First	#	Second	#	Third	#
Singleton LGA	Agriculture, forestry and fishing	589	Construction	326	Rental, hiring and real estate services	199
Muswellbrook LGA	Agriculture, forestry and fishing	321	Construction	111	Other services	104

Source: ABS 2023, Data by region – Number of businesses by industry at 30 June 2023.

In 2024 there were 6 First Nations owned businesses in Muswellbrook and 5 in the Singleton LGA registered on 'Supply Nation'. These account for a small proportion of businesses in the Hunter region which has 180 First Nations registered businesses. FigureB.6 provides data on indigenous businesses in the regional area.



Source: Supply Nation, Search Indigenous business direct

Note: Based on an assumption of search results, conducted August 2024

FigureB.6 Count of Indigenous businesses in the regional area

iii Tourism

Tourism across the Singleton and Muswellbrook LGAs is focussed on nature-based tourism including walking trails, wineries and horse-based activities. In Singleton LGA, an estimated 739 jobs or 4% of total employment, are supported by tourism (REMPLAN, 2023). Singleton Council considers tourism an important growth industry and its vision for tourism is to 'double the value of the Singleton Visitor Economy by 2036'. The Singleton Economic Development Strategy aims to build on its reputation and attraction as one of Australia's premier visitor destinations, offering a high value experience based around quality food and wine experiences, nature-based activities such as adventure, golf and sports, and culture and heritage. Council also has plans to develop camping and caravan tourism as well as developing Lake St Clair as an adventure tourism precinct (Singleton Council, 2024).

In Muswellbrook LGA, an estimated 411 jobs, or 3.6% of total employment, are supported by tourism (REMPLAN, 2024). A large proportion (43.0%) of Muswellbrook Shire's around 3400 square kilometre area is designated as national park. The viticulture industry in the area is internationally renowned for the quality and quantity of wine production and processing, and as a wine tourism destination (Muswellbrook Council, 2020). The Council expects that tourism visitation may be increased through a focus on nature-based experiences in local National Parks, wineries, the equine industry and water bodies such as Lake Liddell.

B.3.7 Northern section of the HTP corridor: Social infrastructure

Central to supporting the quality of life and well-being of communities, social infrastructure can be defined as the 'community and individual support services and resources such as health, education, early childhood, community support, community development, culture, sport and recreation, parks and emergency services' (Australian Urban Observatory, 2020).

i Health and emergency services

Similar to many rural and regional Australian communities, the Singleton and Muswellbrook LGAs features fewer GPs (24 per 100,000 people and 13 per 100,000 people, respectively) and total health professionals (43 per 100,000 people and 25 per 100,00 people, respectively) compared to NSW which features 122.6 GPs per 100,000 people and 419.8 total health professionals per 100,000 people (Table B.36). Table B.36 details the rate of provision of GPs and total health professionals across the regional area.

Table B.36 Availability of health professionals, 2022

Area	GPs per 100,000 people (count)	Total health professionals per 100,000 people
Singleton LGA	24 (95.6)	43 (171.4)
Muswellbrook LGA	13 (78.6)	25 (151.1)
NSW	122.6 (10,014)	419.8 (34,281)

Source: PHIDU, 2024

In Singleton LGA there were a number of medical and aged care facilities, including:

- Singleton Hospital
- Au Tuan General Practitioner
- Burdekin Park Medical Centre
- Singleton Physiotherapy and Allied Health
- Ambulance service
- Singleton Medical Centre Skin Clinic
- Douglas Hanly Moir Pathology Singleton
- NSW Health Pathology
- Raworth Cottage Medical Practice
- Singleton Doctors
- Singleton Heights Medic
- around 8 aged care facilities.

In Muswellbrook LGA there were multiple medical and aged care facilities, including:

- Muswellbrook Doctors
- Muswellbrook hospital
- Audika Hearing Clinic Muswellbrook
- Aaron Henry Optometry
- around 5 aged care facilities.

ii Education

The northern section of the corridor social locality is characterised by lower attendance at high school and university, and higher attendance at TAFE and other types of education institutions. The local area is characterised by high school and TAFE attendance similar to the Hunter region average, and lower university attendance.

In nearby townships, there were similar rates of attendance across all education institutions in Singleton and Muswellbrook townships, except for university which was significantly lower at 7.5% and 5.3% respectively compared to the Hunter region average of 15.1%.

In the regional area, residents in Singleton and Muswellbrook LGA exhibited average attendance rates at secondary school and TAFE, while lower rates of university attendance were recorded.

Table B.37 displays education institution attendance in 2021 across the social localities.

Table B.37 Education institution attendance, 2021

Area	Preschool	Primary	Secondary	Technical or further educational institution	University or other tertiary institution	Other type of education institution
Corridor social locality						
Northern section total	6.2%	21.5%	13.8%	15.4%	12.3%	9.2%
Local area						
Northern section total	8%	31.8%	21.5%	9.1%	5.9%	2.4%
Nearby regional communities						
Singleton UCL	8.5%	33%	22.1%	10%	7.5%	2.8%
Muswellbrook UCL	8.4%	31.7%	21.9%	9.1%	5.3%	2.1%
Regional area						
Singleton LGA	7.5%	31.4%	22.1%	9%	7.2%	2.5%
Muswellbrook LGA	7.7%	30.1%	21.3%	8.9%	4.9%	1.7%
Hunter region						
Newcastle LGA + Hunter Valley SA4	7.5%	27.7%	20.8%	8.9%	15.1%	2.1%
NSW	**6.8%**	**26.5%**	**20.9%**	**8.5%**	**15.3%**	**3.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

a Primary and secondary schools

The Muswellbrook LGA has four primary schools, one secondary school and one combined school K-10, with total enrolment of 2134 students. Muswellbrook High School is the largest school with 718 students. The Singleton LGA has 5 primary schools, 1 secondary school and 2 combined K-12 schools. There are two larger schools including Singleton High School and St Catherines High School. Jerry Plains Public School is a small school with only 19 students enrolled. There are 3588 students enrolled at schools across Singleton LGA.

Table B.38 lists schools in the regional area.

Table B.38 Schools in the regional social locality

Area (LGA)	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Muswellbrook	Muswellbrook Public School	Government	Primary	K-6	443	25
Muswellbrook	Muswellbrook High School	Government	Secondary	7-12	718	64
Muswellbrook	Muswellbrook South Public School	Government	Primary	K-6	516	39
Muswellbrook	Richard Gill School	Non-government	Primary	K-3	41	5
Muswellbrook	Pacific Brook Christian School	Non-government	Combined	K-10	111	7
Muswellbrook	St James Primary School	Non-government	Primary	K-6	305	20
Singleton	Mount Pleasant Public School	Government	Primary	K-6	53	3
Singleton	Singleton Heights Public School	Government	Primary	K-6	498	30
Singleton	Singleton Public School	Government	Primary	K-6	375	26
Singleton	King Street Primary	Government	Primary	K-6	431	25
Singleton	Singleton Highschool	Government	Secondary	7-12	954	75
Singleton	Australian Christian School	Non-government	Combined	K-12	303	24
Singleton	St Catherine High School	Non-government	Combined	K-12	955	71
Singleton	Jerrys Plains Public School	Government	Primary	K-6	19	3

Source: ACARA 2021, My School

iii Tertiary and vocational

There are TAFE campuses in both Muswellbrook and Singleton townships (Table B.39).

Table B.39 Tertiary and vocational institutions in the regional social locality

Area	School	Sector	Type	Courses on offer (on campus)
Muswellbrook	TAFE NSW Hunter Institute Muswellbrook Campus	Government	Vocational	• Carpentry (Cert III) • Career preparation (Cert II) • Light Vehicle Mechanical Technology (Cert III) • Workplace skills (Cert II) • Engineering – fabrication trade (Boiler making) (Cert III) • Skills for Work and Vocational Pathways (Cert II)
Singleton	TAFE NSW Hunter Institute Singleton Campus	Government	Vocational	• Career preparation (Cert II) • Foundation Skills Support (Certificate of Attainment) • Aboriginal and/or Torres Strait Islander Cultural Arts (Cert II) • Skills for Work and Vocational Pathways (Cert II)

Source: Google Maps

B.3.8 Northern section of the HTP corridor: health and wellbeing

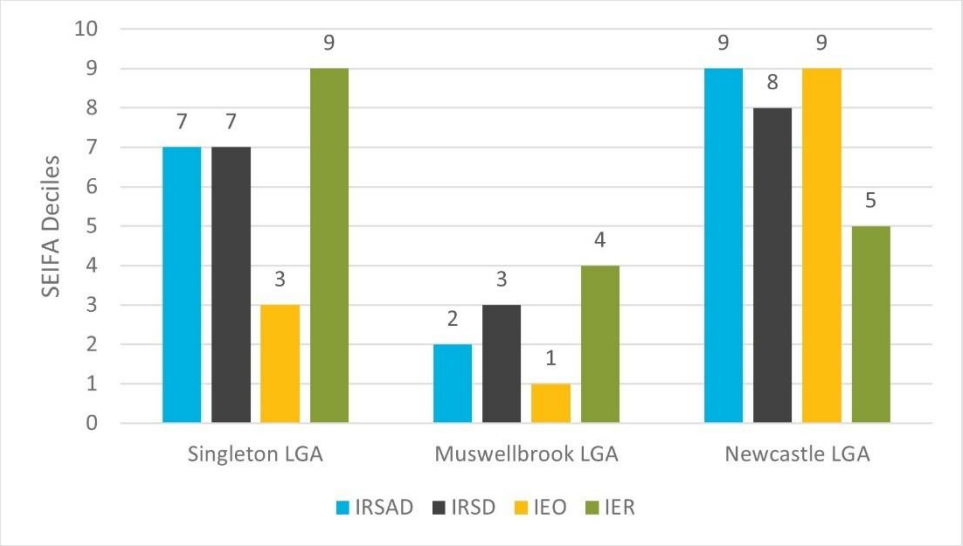
i Socio-economic disadvantage

The Socio-Economic Indexes for Areas (SEIFA) provides indicators of relative disadvantage and advantage in the population. Using ABS census data, these indexes measure a variety of socio-economic characteristics such as income, education and employment to derive a relative score or ranking. SEIFA provides 4 summary measures:

- the Index of Relative Socio-Economic Disadvantage (IRSD)
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)
- the Index of Education and Occupation (IEO)
- the Index of Economic Resources (IER).

The SEIFA decile ranking system allocates the lowest 10% of areas to the decile number of 1 and the highest 10% of areas to a decile number of 10. While there are variations to interpreting the decile scores across the four indexes, generally a low decile rank is associated with disadvantage, and a high decile rank is associated with less disadvantage. The decile score is relative to comparable geographies (i.e. other SALs or LGAs), and hence the score represents a ranking (or position) within NSW. As such, in lieu of comparing ranking to NSW, these scores can be interpreted as their relative position in NSW.

SEIFA scores indicates that the Muswellbrook LGA experiences relative socioeconomic disadvantage with an IRSAD of 2, placing it in the bottom 20% of all LGAs in NSW. The Singleton LGA features an IRSAD of 7, indicating relatively higher levels of advantage and lower levels of disadvantage compared to Muswellbrook. The rankings recorded across the regional area for each of the four summary measures is provided in Figure B.7.



Source: ABS 2021, Socio-Economic Indexes for Areas (SEIFA), Australia

Figure B.7 SEIFA deciles for regional area, 2021

ii Population health status – chronic illness

Mental Health is defined by the ABS as 'whether a person has been told by a doctor or nurse that they have a mental health condition (including depression or anxiety).' It does not measure the severity of the condition or if a person has multiple conditions and excludes self-reported psychological distress (ABS, 2021).

Across all of the social localities, mental health (depression and anxiety) and asthma are the dominant chronic health conditions, as is the case at the Hunter region and NSW. Notably, Muswellbrook and Singleton have the highest proportion of mental health conditions at 11.6% and 11.0%, respectively, lower than the Hunter Valley region rate but higher than the NSW rate. Asthma is most prevalent in the local social locality (11.5%) and Muswellbrook UCL (11.6%). The Muswellbrook LGA and Muswellbrook itself experiences the highest chronic morbidity featuring the highest rates of people having one or more long-term health conditions. The sub-regional area features the lowest rate of people having one or more long-term health conditions at 30.9%.

Table B.40 provides the proportions of long-term health conditions in each study area.

Table B.40 Long-term health conditions, 2021

Area	Has one or more long-term health condition	Asthma	Diabetes (excluding gestational diabetes)	Cancer (including remission)	Lung condition (including COPD or emphysema)	Mental Health condition (including depression or anxiety)
corridor social locality						
Northern section local area total	-	11.5%	4.9%	1.7%	1.6%	9.3%
Local area						
Northern section total	30.9% (9879)	10.3%	5.2%	2.6%	2.0%	10.6%
Nearby regional communities						
Singleton UCL	31.4% (4474)	9.7%	5.2%	2.6%	1.9%	11.0%
Muswellbrook UCL	33.2% (3614)	11.6%	5.9%	2.8%	2.4%	11.6%
Regional area						
Singleton LGA	29.4% (7230)	9.1%	4.6%	2.6%	1.9%	9.6%
Muswellbrook LGA	31.6% (5169)	10.8%	5.6%	2.6%	2.2%	10.6%
Hunter Valley region						
Newcastle LGA + Hunter valley SA4	33.6% (37,931)	10.1%	5.3%	3.2%	2.2%	12.1%
NSW	**27.0% (2,177,225)**	**7.8%**	**4.8%**	**2.8%**	**1.7%**	**8.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

iii Crime and community safety

Data from the NSW Bureau of Crime Statistics and Reporting (2024) shows that theft was the most prevalent offence in both the Singleton and Muswellbrook LGAs, with 609 and 649 incidents (respectively) being recorded in the year leading up to March 2024. Domestic violence incidents had the highest upward trend over the 24 months to March 2024, rising by 25% in Singleton LGA and 27.8% in Muswellbrook LGA (NSW Bureau of Crime Statistics and Research, 2024).

Table B.41 details the number of recorded offences in the regional area, in the year to March 2024.

Table B.41 Number of recorded incidents by offence, April 2023-March 2024

LGA	Assault	Domestic violence related assault	Sexual offences	Malicious damage to property	Theft*	Drug offences
Singleton	113	115	142	229	605	47
Muswellbrook	133	202	83	207	649	114

*Sum of all theft related offences, including robbery

Source: NSW Bureau of Crime Statistics and Research, Crime Statistics by LGA, March 2024

iv Vulnerability

Vulnerability relates to a group's capacity to adapt to, or cope with, changes to their social environment (Cutter, et al., 2008). In defining potential project impacts on surrounding communities, it is important to understand the presence of more vulnerable sectors of society as they are likely to experience an impact differently, or may be less adaptable to changes, such as increased traffic associated with construction activity. There are certain demographic and social characteristics that may indicate heightened vulnerability. Social indicators associated with vulnerability include:

- age, such as the very young and the elderly who are more likely to require care and may by financially dependent on the working population (people aged 15 to 64)
- socio-economic status, such as people who are recipient of welfare, reside in social housing, or who are unemployed
- people with a need for assistance, such as those people requiring assistance in the core activities of self-care, mobility or communication because of disability, long-term health condition, or old age
- culturally and linguistically diverse (CALD) populations, such as those who live in households where a non-English language is spoken.

v Vulnerable groups

As outlined in Table B.42, within the corridor area there are a relatively high proportion of persons aged 14 and under (18.9%) along with a high proportion of youth (15 to 24 years) (15.2%). The local area is also characterised by a high proportion of persons aged under 14 years (21.8%), one parent families with children (18%) and those residing in social housing (17.7%). Key vulnerable cohorts in Singleton include people residing in social housing (21.3%) and people aged over 65 years (19.5%). Muswellbrook recorded a relatively high proportion of persons aged under 14 years (21.8%) and 1 parent families with children (21.4%). Both the LGAs feature a young cohort (people under 14 years) and the Muswellbrook LGA features the highest proportion of one parent families with children at 19%. Using the Hunter region and NSW as a comparison illustrates some key areas of vulnerability in the regional social locality.

Table B.42 Vulnerable groups

Area	Population	People aged 14 and under	People aged 65+	Youth (15- 24)	Renter households where rent payments are greater than 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Corridor social locality											
Northern section total	339	18.9%	14.2%	15.2%	-	4.3%	6.8%	-		-	0%
Local area											
Northern section total	31,390	21.8% (6953)	14% (4460)	11.7% (3750)	-	18% (1516)	5.8% (1,849)	17.7% (655)	4.7% (735)	3.9% (1241)	0.5% (155)
Nearby regional communities (UCLs)											
Singleton	14,229	17.3% (60,126)	19.5% (67,925)	12.7% (44,159)	9.7% (197)	18.2% (695)	6.5% (928)	21.3% (352)	4.7% (336)	4.7% (583)	0.6% (91)
Muswellbrook	10,901	21.8% (2371)	14.9% (1628)	12.1% (1318)	8.3% (118)	21.3% (604)	6.3% (689)	20.3% (302)	6.1% (307)	4.7% (514)	0.4% (48)
Regional area (LGAs)											
Singleton	24,577	20.7% (5078)	14.4% (3539)	13.4% (3291)	10.7% (370)	14.6% (962)	5.4% (1,324)	16.8% (352)	3.7% (467)	3.2% (788)	0.5% (114)
Muswellbrook	16,357	21.1% (3457)	14.9% (2444)	11.8% (1923)	9.2% (182)	19% (803)	5.6% (914)	15.4% (315)	5.1% (397)	3.9% (645)	0.3% (56)

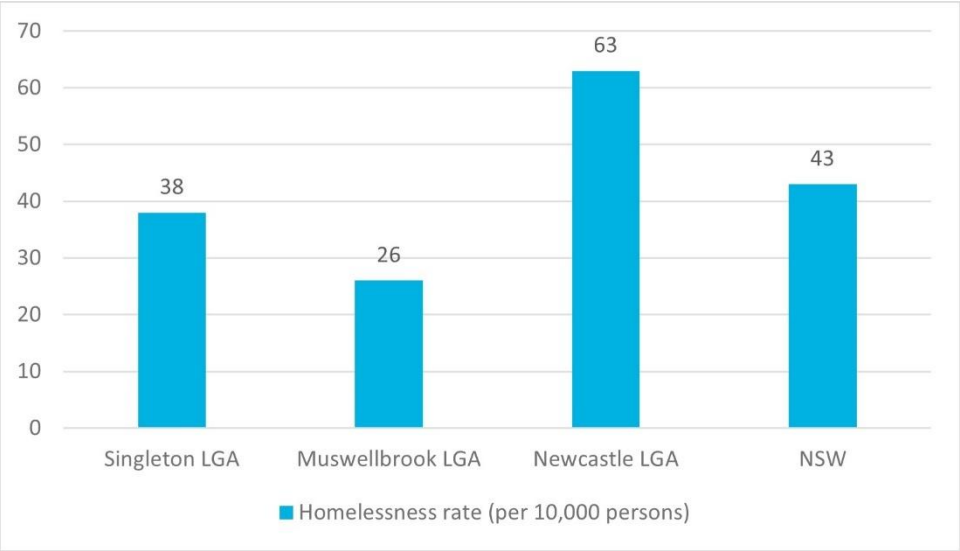
Area	Population	People aged 14 and under	People aged 65+	Youth (15- 24)	Renter households where rent payments are greater than 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Hunter Valley region											
Regional area total	460,819	18.3% (84,263)	18.4% (84,957)	12.6% (57,912)	35.3% (18,709)	17.6% (17.6%)	6.7% (30,689)	14% (7393)	4.8% (10,879)	5.8% (26,634)	0.9% (3992)
NSW	**8,072,163**	**18.2% (1,470,012)**	**17.6% (1,424,135)**	**11.8% (954,079)**	**35.5% (335,404)**	**15.8% (337,729)**	**5.8% (464,712)**	**12.8% (84,732)**	**4.9% (84,732)**	**22.4%**	**4.5%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

Note: proportion of social housing is based on number of rented private dwellings.

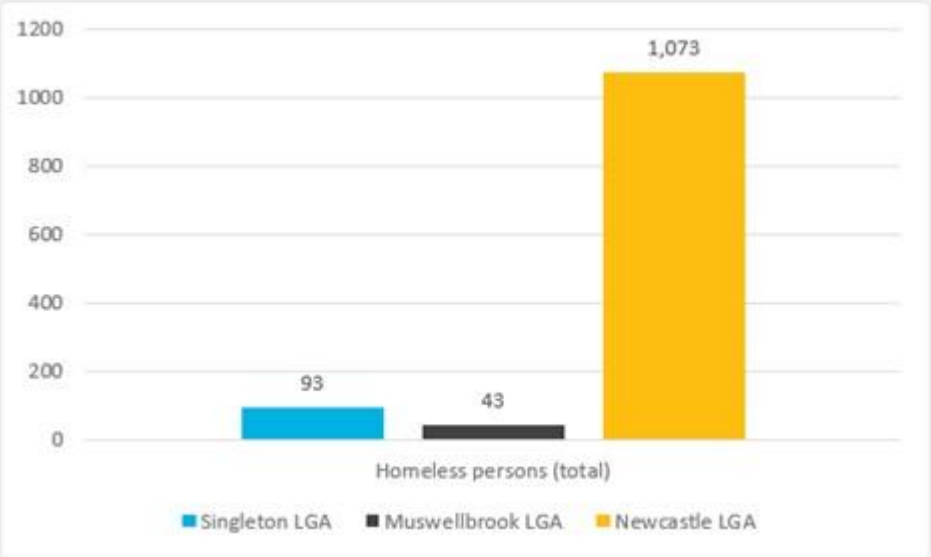
vi Homelessness

Homelessness is defined by the ABS using six different operational groups to estimate persons who are homeless or marginally housed (Flatau & Lester, 2023). The Singleton LGA recorded a rate of 38 (people per 100,000), and Muswellbrook LGA a rate of 26 persons (per 100,000), both lower than the NSW rate of 43 people (per 100,000) (Figure B.8). In 2021 43 people were recorded as homeless in Muswellbrook and 93 homeless in Singleton (Figure B.9).



Source: Source: ABS 2021, Estimating Homelessness: Census

Figure B.8 Homelessness rate per 10,000 persons – northern section



Source: ABS 2021, Estimating Homelessness: Census

Figure B.9 Number of homeless people in regional area – northern section

vii Voluntary work

Volunteering rates can provide an indication of social cohesion and resilience in a community, and the willingness of people to help each other. Higher rates of volunteerism are also associated with older age groups, households with higher incomes, and couples with children (AIHW, 2021b). The Singleton LGA featured the highest rates of volunteerism in the last 12 months at 14.7%, followed closely by Singleton township (13.8%) and the corridor area (13.6%). Both of these are above the Hunter region and NSW rates of 13.1% and 13.0%. The lowest rate of volunteerism is observed across the Muswellbrook LGA at 12.1%. Table B.43 provides the number and proportion of residents who participated in voluntary work in each study area.

Table B.43 Voluntary work in the study area

Area	Have participated in voluntary work in the last 12 months (total)	Have participated in voluntary work in the last 12 months (proportion)
corridor social locality		
Northern section	-	13.6%
Local area		
Northern section	3187	12.8%
Nearby regional communities		
Singleton UCL	1534	13.8%
Muswellbrook UCL	890	10.4%
Regional area		
Singleton LGA	2869	14.7%
Muswellbrook LGA	1560	12.1%
Hunter Valley region		
Newcastle LGA + Hunter Valley SA4	49,273	13.1%
NSW	**857,891**	**13.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

B.4 Central section of the HTP corridor: Pokolbin to Corrabare

Central section spans from Pokolbin to Corrabare and lies predominantly within the Cessnock LGA. Key townships within the central section include Cessnock, Millfield and Broke. The central section falls on the traditional country of the Wonnarua peoples, the Mindaribba peoples and the Awabakal peoples.

B.4.1 Corridor social locality

The central section of the corridor social locality is around 55 kilometres in length. The main land uses in this study area include a mix of State forests (Pokolbin and Corrabare), National parks (Watagans), eco-tourism ventures, wineries, a wildlife rescue facility, cattle grazing and nature-based recreation.

In 2021, there were 201 residents in the area and 122 private dwellings. There are a total of 80 sensitive receivers within the corridor social locality, including community facilities, education facilities, industry facilities, private dwellings, recreation facilities , utility facilities and a large number of unknown sensitive receivers. Two community facilities are located outside but in relatively close proximity to the corridor social locality- the Anglican Church in Millfield, and Millfield Public School, which had 93 students enrolled across kindergarten to Year 6 in 2023. Note that identified sensitive receivers are being further refined and will be updated accordingly.

Key socio-economic characteristics across the central section of the corridor social locality include:

- an older population, with nearly a quarter of the population (22.4%) aged 60 years or older. The population is also growing, with the number of residents growing from 182 residents in 2016 to 201 residents in 2021. The number of private dwellings grew from 97 dwellings in 2016 to 122 dwellings in 2021
- very low rate of labour force participation, with only a quarter (25.1%) of the working-age population engaged in the labour force. This is reflective of the ageing population, with many residents likely to have retired from the labour force
- higher proportion of low-income households compared to NSW, with more than one fifth (20.4%) of households earning $650 or less per week, compared to 15.3% for NSW. There is also a significantly lower proportion of high-income households compared to NSW, with 5.4% of households earning more than $3,000 per week, compared to 25.2% for NSW
- strong degree of community cohesion, with 16.9% of the population having participated in voluntary work, compared to 13.0% for NSW. This is likely reflective of the high proportion of retirees residing in the area, indicating that residents have strong ties to the community and the local environment
- key environmental features include Pokolbin State Forest and Corrabare State Forest, which is publicly accessible for hiking, mountain biking and four-wheel driving. The key road traversed by the corridor social locality is Wollombi Road, which connects Cessnock City to the township of Wollombi. Congewai Creek is also traversed by the corridor social locality.

Social values are described in *section 5.2*, and *Chapter 4 (Stakeholder engagement)*.

B.4.2 Local social locality

Dominant land uses in the local social locality includes state forest and national parks. In 2021, there were 21,878 people residing in the local social locality, of which 91.5% lived in the city of Cessnock, the main urban centre of Cessnock City LGA. Cessnock City is located around 10 kilometres to the east of the transmission line. Cessnock city is categorised as a regionally significant strategic centre in the Hunter Regional Plan 2041.

Other key townships in the local social locality include Broke, located around 5 kilometres to the west of the transmission line which has a population of 260 people, and Millfield, located around 3.5 kilometres to the east of the transmission line and has a population of 806 people. Broke is a small township experiencing population decline. It provides a limited range of short-term accommodation and food services, a Rural Fire Service, a church and a petrol station. Mining is a key industry for Broke residents while tourism is an emerging industry. Millfield is a small township of 1282 residents experiencing population growth. Facilities in Millfield include a general store, a primary school, a church, community hall and a range of short-term accommodation options.

Key socio-economic characteristics across the central section of the local social locality including the townships of Cessnock, Broke and Millfield include:

- high population growth, with the population growing by 10.7% in the five years to June 2021, while NSW's population grew by 8.1%. Much of the local social locality's population growth is attributed to the township of Millfield, which grew by 27.4% over the five years, due to new residential developments located south of the township
- higher rate of unoccupied dwellings (11.2%) compared to NSW (9.4%), indicating a presence of holiday homes or short-term accommodation. Housing costs are more affordable in the local social locality compared to NSW, with lower median rents and mortgage repayments
- lower rate of labour force participation (49.1%) and a higher rate of unemployment (6.2%) when compared to NSW. Youth unemployment in the local social locality is also higher than that recorded for NSW, indicating there are limited training and employment opportunities for youth
- accommodation and food services is the top industry of employment for residents of the local social locality, indicating the importance of the area's nature-based tourism industry. Other key industries of employment include retail trade and construction
- higher proportion of residents reporting as having one or more long-term health condition (36.4%), with mental health conditions the most prevalent
- compared to NSW, key vulnerable groups in the local social locality include people needing assistance, people residing in social housing, and elderly people aged 65 years or older. There is also a higher proportion of residents reporting as having one or more long-term health condition compared to NSW, with mental health conditions the most prevalent.

B.4.3 Regional social locality

Cessnock City LGA is situated to the west of Newcastle LGA, in the Central Coast Region. The area covers around 1950 square kilometres. Around one third of the LGA is part of the Greater Blue Mountains UNESCO World Heritage Listed Area and one quarter is National Park (Cessnock City Council, 2024). There are also several State Forests and other bushland areas (Cessnock City Council, 2022). Cessnock City LGA experiences significant socioeconomic disadvantage, with a SEIFA score placing the region in the bottom 30% of LGAs in NSW.

Cessnock City LGA is a mix of rural and residential areas. The area has a population of 50,840 people and a median age of 37 years. The area experienced significant population growth (14.5%) between 2016 and 2021.

The manufacturing sector is the greatest economic contributor to the area accounting for 21.4% of total output. Health care and social assistance provides 2647 jobs or 14.5% of total employment. Construction, agriculture, viticulture and related tourism are primary employment sectors with potential for future growth (REMPLAN, 2024)

The area is situated on the traditional lands of the Wonnarua people, the Awabakal people, and the Darkinjung people and is home to many significant Aboriginal sites. European settlement dates from the 1820s. Significant development occurred in the town of Cessnock when coal deposits were discovered in 1892 and several coal mines were established. Cessnock City Council's vision for the area is to be liveable and renowned for its relaxed country lifestyle, as well as being a leader of wine tourism, eco-tourism and agri-based tourism in NSW.

B.4.4 Central section of the HTP corridor: Population

i Population trends

The population of the central section of the corridor social locality at the time of the 2021 census was 204 persons.

The local social locality had a total population of almost 26,000 people, with higher population growth in the 10 years leading to 2021 (18.4%), compared to the Hunter Region (17.6%) and NSW (16.7%). The area has a notably higher median age of 47 years compared to the Hunter Region (39) and NSW (39).

Regarding nearby townships, Millfield experienced significant population growth of 59.1% in the 10 years to 2021, albeit from a low base of 806 people in 2011. Cessnock experienced a lower growth rate of 15.9% across the same timeframe, whilst the population of Broke declined by 11.2%. The median ages for Broke, Cessnock and Millfield are 42, 39 and 38 respectively, which is similar to the Hunter region (39) and NSW (39).

The population of the Cessnock LGA was 63,632 in 2021, recording a population growth rate of 25.2% between 2016 and 2021, higher than the benchmarks of Hunter Valley (17.6%) and NSW (16.7%).

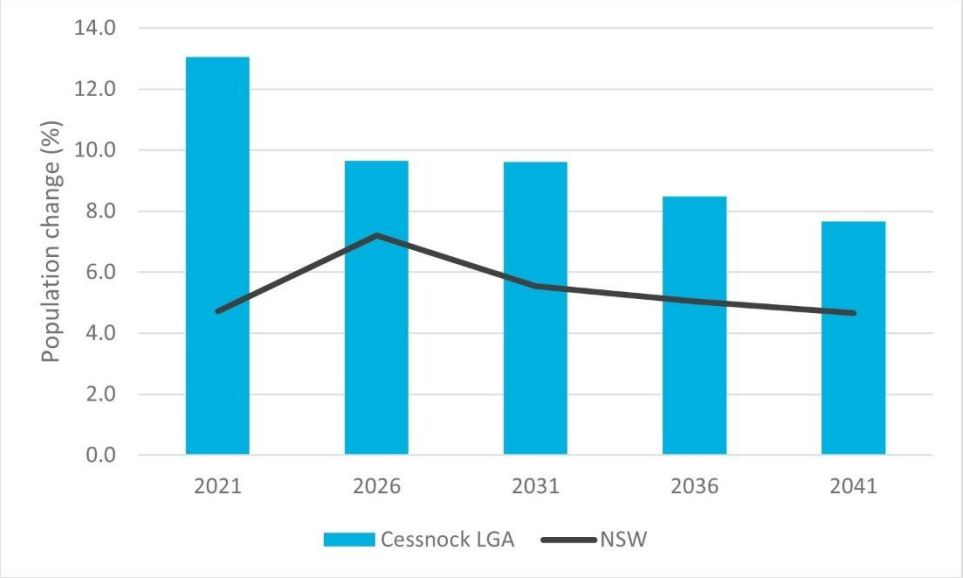
Table B.44 details population trends in the 10 years to 2021, and median age for each study area.

Table B.44 Population trends, 2011 to 2021, and median age

Location	2011	2016	2021	Total % change 2016–2021	Total % change 2011–2021	Median age
corridor social locality						
Central section (total)	-	182	204	12.0%	-	-
Local area						
Central section (total)	21,878	23,411	25,919	10.7%	18.4%	47
Nearby regional communities						
Broke UCL	260	239	231	-3.3%	-11.2%	42
Cessnock UCL	20,013	21,725	23,211	6.8%	15.9%	39
Millfield SAL	806	1006	1282	27.4%	59.1%	38
Regional area						
Cessnock LGA	50,840	55,560	63,632	14.5%	25.2%	37
Hunter Region						
Newcastle LGA + Hunter Valley SA4	391,781	418,827	460,819	10.0%	17.6%	39
NSW	**6,917,658**	**7,480,228**	**8,072,163**	**8.1**	**16.7**	**39**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

ii Population projections



Source: NSW Department of Planning (DPE, 2024)

Figure B.10 Central section population projections 2021-2041

iii Aboriginal and/or Torres Strait Islander population

The Aboriginal and Torres Strait Islander population of the local area is 3.4%, which is notably lower than all the other geographies but in line with the NSW proportion, which is also 3.4%. Broke has the largest Aboriginal and Torres Strait Islander population of three nearby townships at 12.1%, which is higher than the Cessnock LGA (10.2%), Hunter region (6.7%) and NSW (3.4%) rates.

Table B.45 Aboriginal and/or Torres Strait Islander population

Area	Aboriginal and/or Torres Strait Islander population total	Aboriginal and/or Torres Strait Islander population
Corridor social locality		
Central section (total)	-	3.4%
Local area		
Central section (total)	2,772	10.7%
Nearby regional communities		
Broke UCL	28	12.1%
Cessnock UCL	2,732	11.8%
Millfield SAL	107	8.3%
Regional area		
Cessnock LGA	6,480	10.2%

Area	Aboriginal and/or Torres Strait Islander population total	Aboriginal and/or Torres Strait Islander population
Hunter region		
Newcastle LGA + Hunter Valley SA4	30,719	6.7%
NSW	**278,043**	**3.4%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

B.4.5 Central section of the HTP corridor: Housing and accommodation

Indicators describing housing trends and characteristics were sourced from the 2021 census, unless otherwise stated.

i Housing stock

Data for the corridor social locality is not available however within the local area, there were 10,150 private dwellings. A majority of the private dwellings in the study area were in the nearby township of Cessnock, which had 8936 private dwellings. There were a smaller number of private dwellings in the Millfield (466) and Broke (104) townships. Within the local area, the rate of occupied dwellings was 88.7%, with unoccupied dwellings at 11.2%. Within the nearby regional centres, Cessnock had the highest occupancy rate of 91.5%, in line with the Cessnock LGA also at 91.5%. Broke has the lowest occupancy rate at 80.8%. All occupancy rates across the localities were lower than the Hunter region (90.3%) and NSW (90.6%) rates except for the Cessnock LGA and Cessnock UCL.

Table B.46 Housing stock

Area	Private dwellings (number)	Occupied dwellings	Unoccupied dwellings
Local area			
Central section total	10,150	88.7%	11.2%
Nearby regional communities			
Broke UCL	104	80.8%	15.4%
Cessnock UCL	8,936	91.5%	8.6%
Millfield SAL	466	88.4%	11.4%
Regional area			
Cessnock LGA	24,664	91.5%	8.5%
Hunter region			
Newcastle LGA + Hunter SA4	191,878	90.3%	9.7%
NSW	**3,199,988**	**90.6%**	**9.4%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

ii Housing type and composition

Housing types within the local and regional locality are predominantly separate houses, with a relatively low proportion of semi-detached/terraces/townhouses and flats/apartments. Millfield has the highest proportion of separate houses across the regional communities at 99.3%, which is slightly higher than Broke at 98.8%. Both the Hunter region and NSW geographies have a notably higher rate of detached/terraces/townhouses (12.2% and 11.7%, respectively) and flats/apartments (6.9% and 21.7%, respectively).

Table B.47 Housing type

Area	Separate house	Semi-detached, row or terrace house, townhouse etc.	Flat or apartment	Other dwelling
Local area				
Central section total	88.9%	8.9%	1.4%	0.4%
Nearby regional communities				
Broke UCL	98.8%	0%	0%	3.6%
Cessnock UCL	85.3%	12.2%	1.7%	0.5%
Millfield SAL	99.3%	0%	0%	0%
Regional area				
Cessnock LGA	90.5%	7.7%	1.3%	0.3%
Hunter region				
Newcastle LGA + Hunter Valley SA4	80%	12.2%	6.9%	0.7%
NSW	**65.6%**	**11.7%**	**21.7%**	**0.7%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

iii Tenure

The city of Cessnock had the highest rental rate of all geographies at 34.1%, only slightly higher than the Hunter region and NSW benchmarks of 30.5% and 32.6%, respectively. Indicative of small regional towns, the highest home ownership rate (owned outright and with a mortgage) was in Broke, at 90.5%, which is notably higher than the Hunter region at 66.2% and NSW at 64%.

Table B.48 Tenure type

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type
Local area				
Central section total	33.7%	33.4%	29.4%	1.9%
Nearby regional communities				
Broke UCL	35.7%	54.8%	8.3%	0.0%
Cessnock UCL	31.6%	31.1%	34.1%	1.7%

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type
Millfield SAL	36.2%	51.9%	9.7%	1.9%
Regional area				
Cessnock LGA	31.5%	38.5%	27.3%	1.4%
Hunter region				
Newcastle LGA + Hunter Valley SA4	32.0%	34.2%	30.5%	2.0%
NSW	**31.5%**	**32.5%**	**32.6%**	**1.9%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

iv Housing cost and stress

The ABS classifies 'housing stress' as households where 30% or more of their pre-tax income is spent on housing costs, whether this be rent or mortgage payments, due to the fact that households spending more 30% on housing costs may experience difficulties affording other living expenses, such as food and utilities (ABS, 2022).

The corridor, local and regional areas all had lower median rental values compared to NSW ($420/week). The highest median rental price in the study area is Broke at $373 per week. Within the study area, mortgage repayments were highest in Millfield at $1794/month, which is lower than the Hunter regional area rate of $1917/month, and NSW at $2167/month. The lowest median mortgage repayments in the study area was Broke at $1500/month.

Broke also has the highest proportion of renters experiencing housing stress (85.7%), followed by the Millfield SAL (50%). These rates are both higher than the Hunter region and NSW. For those with a mortgage, housing stress was highest in the Millfield SAL (14.5%). Followed by Cessnock LGA (12.7% of mortgage holders), which is higher than the Hunter region rate of 11.9% but lower than the NSW rate of 17.3%.

Table B.49 Mortgage and rental stress

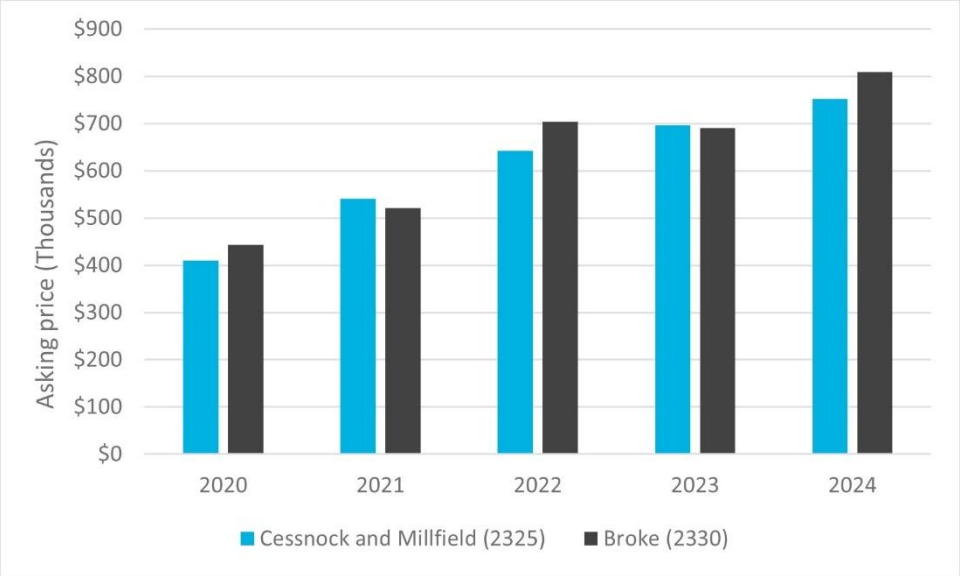
Area	Median rent (weekly)	Renter households where rent payments are greater than or equal to 30% of household income	Median mortgage repayments (monthly)	Owner with mortgage households with mortgage repayments greater than 30% of household income
Corridor social locality				
Central section of the local area total	$360	-	$1777	-
Local area				
Central section total	$353	-	$1702	-
Nearby regional communities				
Broke UCL	$373	85.7%	$1500	10.9%
Cessnock UCL	$320	43%	$1517	12.2%
Millfield SAL	$320	50%	$1794	14.4%
Regional area				
Cessnock LGA	$340	39.9%	$1647	12.7%

Area	Median rent (weekly)	Renter households where rent payments are greater than or equal to 30% of household income	Median mortgage repayments (monthly)	Owner with mortgage households with mortgage repayments greater than 30% of household income
Regional area total	**$340**	**36.1%**	**$1917**	**11.9%**
NSW	**$420**	**35.5%**	**$2167**	**17.3%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

v Property prices and trends

Data produced for postcodes were used to determine residential vacancy rates and property prices within the central section of the HTP corridor. The data was for 2330 (Broke UCL) and 2325 (Cessnock UCL and Millfield SAL). Between 2020 and 2024, property prices have been steadily increasing across the central section with all postcodes experiencing an annual increase in property asking prices between August 2020 and August 2024.

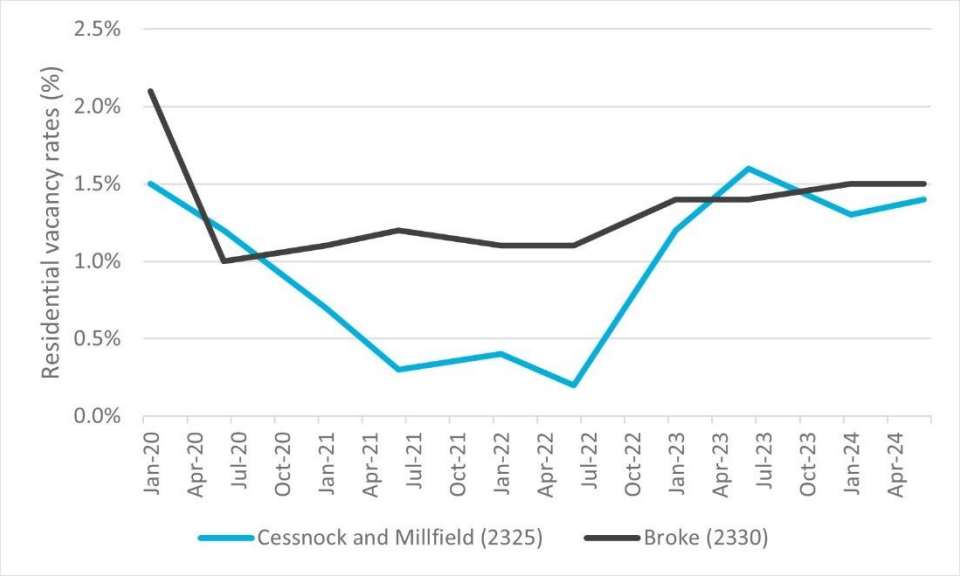


Source: SQM Research, 2024

Figure B.11 Property asking prices, August 2020-August 2024

vi Residential vacancy rates

In the Broke UCL (2330) vacancy rates have been rising steadily from 1% in June 2020 to 1.5% in May 2024. In the Cessnock UCL and Millfield (2325), vacancy rates dipped to 0.2% in May 2022and have risen since then with the May 2024 rate at 1.4%. This suggests that there is a low availability of housing in the study area, with a vacancy rate below 2.5% indicating a tight rental market (Real Estate Institute of Queensland, 2023). Residential vacancy rates for the study area can be seen in Figure B.12.



Source: SQM Research, 2024

Figure B.12 Residential vacancy rates

vii Short-term accommodation

There were a limited number of short-term accommodation options available in the central section of the social localities nearby townships of Cessnock UCL, Broke UCL and Millfield SAL. There were around 43 holiday homes/Airbnb's across the study area, which was the most common short-term accommodation offering. Additionally, there were 11 hotels, with 10 of these in Cessnock UCL, 3 caravan parks, and 3 other accommodation options including cottages, retreats and bed and breakfasts.

Table B.50 provides the approximate number of short-term accommodation options in the nearby regional communities

Table B.50 Short-term accommodation counts

Location (approx. commute)	Hotel / motel	Caravan park / Camping ground	Bed and breakfast / cottage / retreat	Holiday homes / Airbnb
Nearby regional communities				
Broke UCL	1	2	1	12
Cessnock UCL	10	1	-	18
Millfield SAL	0	0	2	13

Sources: https://www.google.com/travel; airbnb.com

Note: Approximate numbers of accommodation options available when accessed September 2024

B.4.6 Central section of the HTP corridor: Employment, business and industry

i Labour force characteristics

The corridor social locality is characterised by low labour force participation at 25.1% compared to all other localities. The sub-regional area and Cessnock UCL also feature lower labour force participation rates (49.1% and 48.2%, respectively) compared to the NSW and Hunter region rates. Participation rates for Broke and Millfield are broadly comparable to the NSW rate of 58.7%. Youth unemployment is highest in the Cessnock UCL (12.2%), followed by Cessnock LGA (11.2%) and the sub-regional area (11.8%). These rates are higher than the Hunter region and NSW labour force participation rates.

Table B.51 presents unemployment and labour force participation data for the social localities.

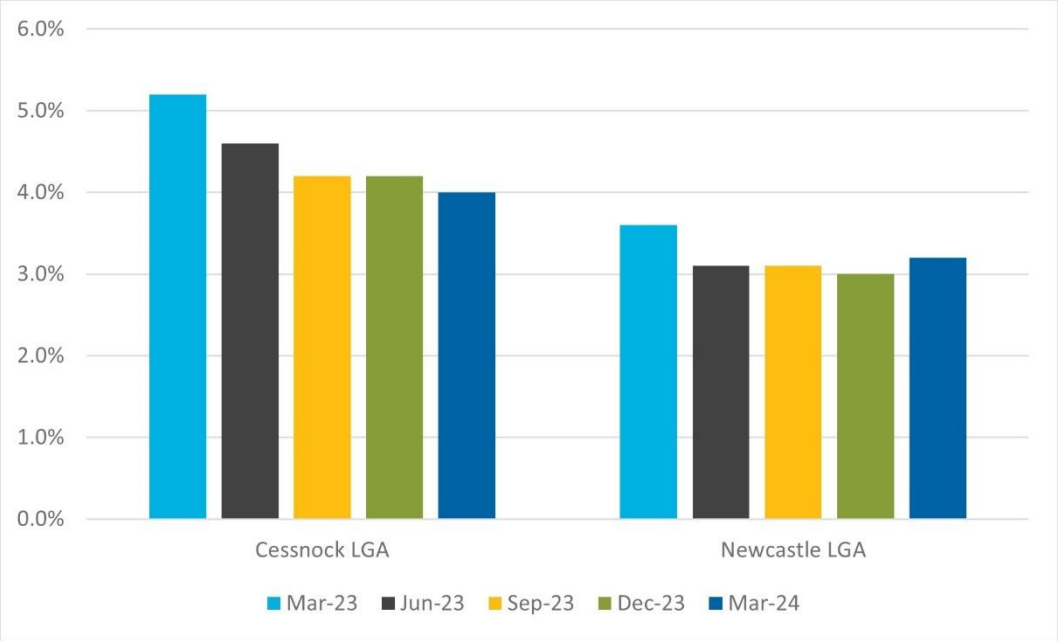
Table B.51 Unemployment and labour force participation rates, 2021

Area	Labour force (no.)	Labour force participation	Unemployed persons (no.)	Unemployed	Youth unemployment	Aboriginal and/or Torres Strait Islander unemployment
Corridor social locality						
Central section of the local area (total)		25.1%	-	0.7%	-	-
Local area						
Central section (total)	10,403	49.1%	644	6.2%	11.8%	-
Nearby regional communities						
Broke UCL	182	57.1%	4	3.8%	0.0%	-
Cessnock UCL	9,144	48.2%	603	6.6%	12.2%	-
Millfield SAL	579	57.2%	32	5.5%	9%	8.5%
Regional area						
Cessnock LGA	28,714	56.5%	1,595	5.6%	11.2%	9.6%
Hunter region						
Newcastle LGA + Hunter Valley SA4	227,763	60.5%	10,879	4.8%	9.6%	9.5%
NSW	**3,874,012**	**58.7%**	**189,852**	**4.9%**	**9.8%**	**9.8%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Notes: 1. Youth refers to those aged 15 to 24 years

Over the year to March 2024, unemployment has consistently fallen in the Cessnock LGA, from 5.2% in March 2023 to 4% in March 2024 (Figure B.13). This remains slightly higher than the unemployment rate for NSW of 3.9%.



Source: Small Area Labour Market (National Skills Commission, 2024)

Figure B.13 Unemployment over time – LGAs

ii Occupation

Predominant occupations in the central section of the central corridor include managers (32.6%) and professionals (19.8%). In the local area, technicians and trades workers were primary occupations (16.8%), followed by community and professional service workers (14.9%).

In nearby townships, almost one third of Broke's employed residents work as machinery operators and drivers (31.3%), and one fifth are employed as labourers (19.8%), reflective of mining being a significant industry of employment in the town. Technician and trades workers are the primary occupations in both Cessnock (17.5%) and Millfield (15.8%). This is also the case in the Cessnock LGA at 18.1%, followed by community and personal service workers (13.9%) and labourers (12.8%).

Table B.52 Occupations, 2021

Location	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
Corridor social locality								
Central section of the local area (total)	32.6%	19.8%	10.5%	14.0%	10.5%	7.0%	9.3%	7.0%
Local area								
Central section (total)	10.8%	12%	16.8%	14.9%	9.7%	8.8%	11.1%	13.5%
Nearby regional communities								
Broke UCL	9.4%	6.3%	12.5%	10.4%	3.1%	6.3%	31.3%	19.8%
Cessnock UCL	8.3%	10.3%	17.5%	16.3%	9.4%	9.9%	12%	4.6%

Location	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
Millfield SAL	12.3%	12.1%	15.8%	15.2%	10.1%	7.5%	10.6%	10.8%
Regional area								
Cessnock LGA	9.4%	11.8%	18.1%	13.9%	10.8%	8.9%	12.5%	12.8%
Hunter region								
Newcastle LGA + Hunter Valley SA4	11.1%	20.2%	15.2%	13.2%	11.6%	8.5%	8.5%	10.0%
NSW	**14.6%**	**25.8%**	**11.9%**	**10.6%**	**13.0%**	**8.0%**	**6.0%**	**8.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

iii Income

In the corridor social locality, households recorded lower incomes compared to other geographies, with a high proportion of households (20.4%) earning less than $650 per week. In the local area, the median household income is higher than the other social localities at $1647/week but slightly lower than the Hunter region ($1659/week). In nearby townships, Cessnock and Broke households experience low incomes with an average household income of $1254 and $1458 respectively, compared to the Hunter Valley region average of $1659. The Cessnock LGA experiences lower median incomes with an average of $1493/week, compared to the Hunter region and NSW ($1659 and $1829, respectively).

Table B.53 provides median household incomes and income range.

Table B.53 Median Incomes and income range

Area	Median household incomes	Proportion of households earning less than $650 per week	Proportion of households earning more than $3,000 per week
Corridor social locality			
Central section of the local area total		20.4%	5.4%
Local area			
Central section total	$1647	19.7%	14.1%
Nearby regional communities			
Broke UCL	$1458	17.9%	20.2%
Cessnock UCL	$1254	21.1%	11.8%
Millfield SAL	$1668	15.3%	16.5%
Regional area			
Cessnock LGA	$1493	17.2%	16.0%

Area	Median household incomes	Proportion of households earning less than $650 per week	Proportion of households earning more than $3,000 per week
Hunter region			
Newcastle LGA + Hunter Valley SA4	$1659	16.4%	19.9%
NSW	**$1829**	**15.3%**	**25.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

iv Local business and industry

There is no dominant industry of employment in the central section of the corridor area. Significant industries of employment are professional, scientific and technical services, education and training, and financial and insurance services.

Within the sub-regional area, health care and social assistance is the highest employing industry, hiring 14.1% of working residents. Accommodation and food services, and retail trade are also significant employing 10.6% and 9.6% of local residents, respectively. This is reflective of the region's tourism industry.

In nearby townships, top industries of employment in Broke are mining, construction and administrative and support services, while Cessnock's employment is focused on health care and social assistance as well as tourism-related sectors such as accommodation and food services, and retail trade. The top three employing industries in Millfield township are health care and social assistance, accommodation and food services, and construction.

In the Cessnock LGA, health care and social assistance is the primary employing industry, hiring 14.3% of working residents while retail trade and construction were also significant at 9.7% and 9.2%, respectively.

Table B.54 displays industry of employment for each study area.

Table B.54 Industry of employment

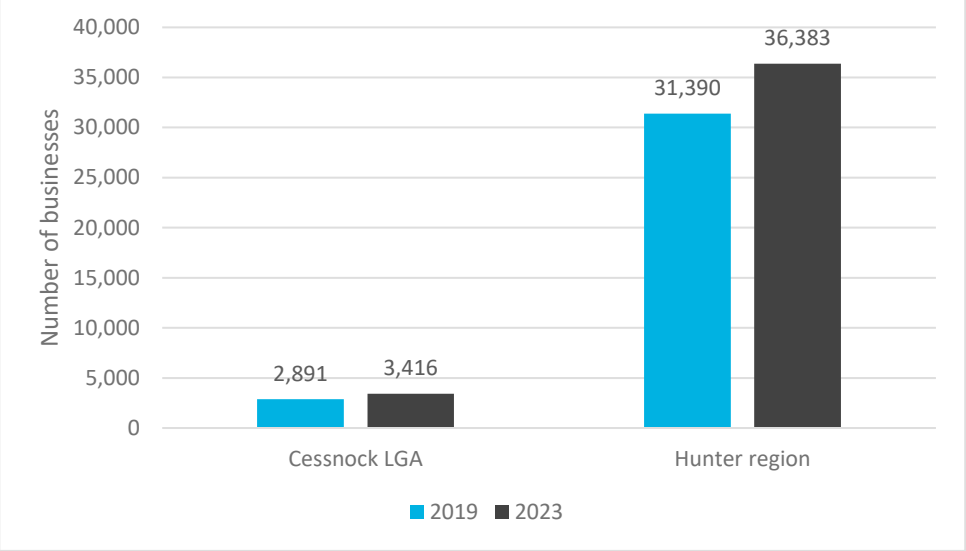
Industry	Corridor social locality	Central section – Local area	Cessnock UCL	Millfield SAL	Broke UCL	Cessnock LGA	Hunter region	NSW
Agriculture, forestry and fishing	0.9%	1.5%	1.0%	1.7%	7.3%	1.5%	2.0%	2.0%
Mining	0.0%	7.5%	8.0%	6.4%	29.2%	8.5%	5.7%	1.0%
Manufacturing	1.4%	7.4%	7.3%	7.5%	8.3%	7.5%	5.7%	5.5%
Electricity, gas, water and waste services	0.0%	1.3%	1.2%	2.0%	0.0%	1.3%	1.4%	1.0%
Construction	0.0%	8.2%	7.5%	9.4%	12.5%	9.2%	8.6%	8.6%
Wholesale trade	0.0%	2.1%	2.2%	1.8%	6.3%	2.4%	2.2%	2.8%
Retail trade	1.1%	9.6%	10.6%	8.4%	5.2%	9.7%	9.1%	9.0%
Accommodation and food services	1.5%	10.6%	11.0%	9.7%	5.2%	8.8%	7.9%	6.2%
Transport, postal and warehousing	1.1%	3.5%	4.1%	2.9%	3.1%	4.1%	3.8%	4.6%
Information media and telecommunications	0.0%	0.6%	0.4%	0.9%	0.0%	0.5%	0.7%	1.8%
Financial and insurance services	2.6%	1.9%	1.6%	1.8%	0.0%	1.7%	2.4%	5.3%
Rental, hiring and real estate services	0.0%	1.5%	1.4%	1.7%	0.0%	1.3%	1.3%	1.7%
Professional, scientific and technical services	3.1%	3.6%	2.7%	4.4%	0.0%	3.6%	5.6%	8.9%
Administrative and support services	0.0%	4.6%	5.0%	4.4%	8.3%	4.7%	3.6%	3.2%

Industry	Corridor social locality	Central section – Local area	Cessnock UCL	Millfield SAL	Broke UCL	Cessnock LGA	Hunter region	NSW
Public administration and safety	2.2%	5.4%	5.5%	7.9%	0.0%	5.0%	6.3%	6.1%
Education and training	2.8%	6.0%	6.0%	7.2%	0.0%	6.0%	8.3%	8.7%
Health care and social assistance	1.1%	14.1%	14.8%	11.9%	8.3%	14.3%	16.5%	14.4%
Arts and recreation services	0.0%	1.3%	1.2%	1.1%	0.0%	1.0%	1.2%	1.4%
Other services	0.0%	4.3%	4.5%	4.2%	3.1%	4.6%	3.9%	3.4%

Source: ABS 2021, Census of Population and Housing: General Community Profiles

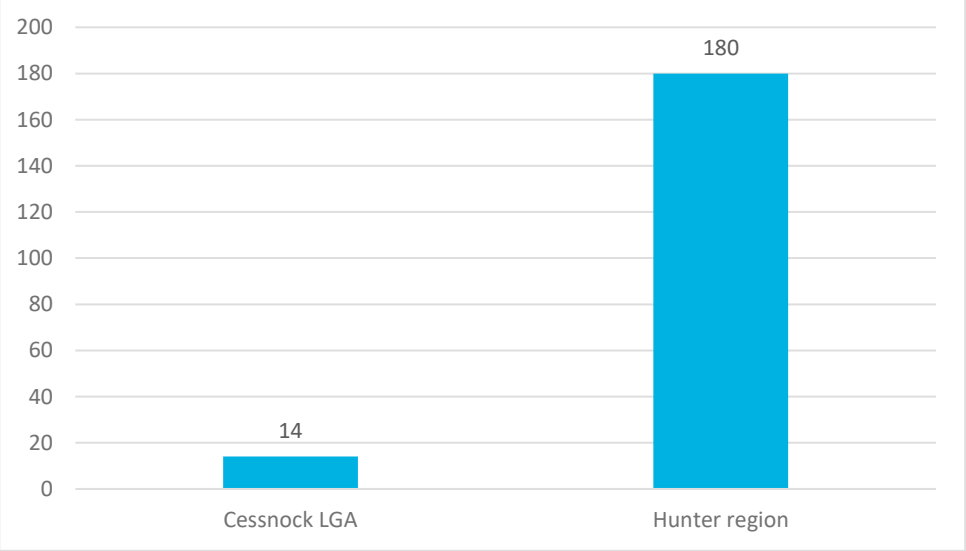
v Local businesses

In 2023 there were 3416 registered businesses in the Cessnock LGA. The most prevalent businesses were construction (671), Professional, scientific and technical services (324) and Agriculture, forestry and fishing (305). In 2024, there was a total of 180 Indigenous owned businesses registered in the Hunter region. Fourteen (14) of those were registered in the Cessnock LGA (Supply Nation, 2024).



Source: ABS 2023, Data by region

Figure B.14 Count of businesses in the regional area



Source: Supply Nation, Search Indigenous business direct

Note: Based on an assumption of search results, conducted August 2024

Figure B.15 Count of Indigenous businesses in the regional area

Table B.55 Most prevalent local businesses in the regional area and Hunter region by industry 2023

Area	First	#	Second	#	Third	#
Singleton LGA	Agriculture, forestry and fishing	589	Construction	326	Rental, hiring and real estate services	199
Muswellbrook LGA	Agriculture, forestry and fishing	321	Construction	111	Other services	104
Cessnock LGA	Construction	671	Professional, scientific and technical services	324	Agriculture, forestry and fishing	305
Lake Macquarie LGA	Construction	3611	Professional, scientific and technical services	1731	Rental, hiring and real estate services	1524
Central Coast LGA	Construction	6502	Professional, scientific and technical services	3424	Rental, hiring and real estate services	2422
Hunter Valley region (Newcastle LGA + Hunter Valley SA4)	Construction	6283	Professional, scientific and technical services	4360	Rental, hiring and real estate services	3784

Source: ABS 2023, Data by region – Number of businesses by industry at 30 June

vi Tourism

Tourism in central section is focussed on nature-based tourism including walking trails, wineries and horse riding. The corridor runs through the Pokolbin and Corrabare State forests.

The Cessnock LGA has a large t tourism industry of all the LGAs in the regional area, supporting 2542 jobs or 13.9% of total employment. Around one third of the LGA is part of the Greater Blue Mountains UNESCO World Heritage Listed Area (Cessnock City Council, 2020) Cessnock City Council's vision for the area is to be liveable and renowned for its relaxed country lifestyle, as well as being a leader of wine tourism, eco-tourism and agri-based tourism in NSW. A planning priority under its local Strategic Planning Statement focusses on support and enhancement of the wine industry, as well as facilitation and promotion of heritage-based and nature-based tourism.

B.4.7 Central section of the HTP corridor: social infrastructure

Central to supporting the quality of life and well-being of communities, social infrastructure can be defined as the 'community and individual support services and resources such as health, education, early childhood, community support, community development, culture, sport and recreation, parks and emergency services' (Australian Urban Observatory, 2020).

i Health and emergency services

Similar to many rural and regional Australian communities, the Cessnock LGA features fewer GPs (47 per 100,000 people) and total health professionals (82 per 100,000 people) compared to NSW which features 122.6 GPs per 100,000 people and 419.8 total health professionals per 100,000 people (Table B.56).

Table B.56 Availability of health professionals, 2021

Area	GPs per 100,000 people (count)	Total health professionals per 100,000 people
Cessnock City LGA	47 (71.3)	82 (124.5)
NSW	122.6 (10,014)	419.8 (34,281)

Source: PHIDU 2023

In the Cessnock LGA there are multiple medical and aged care facilities, including:

- Optimum Health Solutions
- Hunter Doctors
- All Ways Healthcare
- Cessnock Foot Clinic
- Cessnock Medicare urgent Care Clinic
- In Focus Radiology
- Khan Medical Centre
- Australian Clinical Labs
- Cumberland Street Dental
- Douglass Hanly Moir Pathology Cessnock
- Dr Andrew Martin
- Cessnock Medical Centre
- Westcott Street Medical Centre
- Cessnock Hospital
- ambulance services
- around 13 aged care facilities
- education.

The corridor social locality is characterised by a relatively higher proportion of infants and children attending an education institution (40%) compared to all other localities and the regional and state benchmarks. It also has the highest proportion of people who have attended a university or other tertiary institution (20%) compared to all other localities and benchmarks. A high proportion of people in the corridor area (22.5%) also attended a technical or further education institution.

Attendance at education institutions in the local area is dominated by infants and primary school children (24.6%), which is broadly in line with attendance rates in the nearby regional communities and the Cessnock LGA. The local area, nearby townships and Cessnock LGA all have lower attendance rates for universities and other tertiary institutions compared the Hunter region and NSW benchmarks (15.1% and 15.3%, respectively).

Table B.57 displays education institution attendance in 2021 across the social localities.

Table B.57 Education institution attendance, 2021

Area	Preschool	Infants/ primary	Secondary	Technical or further educational institution	University or other tertiary institution	Other type of education institution
Corridor social locality						
Central section of the local area total	7.5%	40%	12.5%	22.5%	20%	0%
Local area						
Central section total	6.9%	24.6%	18%	7.4%	6.1%	1.5%
Nearby regional communities						
Broke UCL	10.9%	32.8%	18.8%	14.1%	0%	0%
Cessnock UCL	6.8%	24%	18.1%	8%	5.9%	1.4%
Millfield SAL	10.3%	26.7%	20.8%	7.4%	7.4%	1.0%
Regional area						
Cessnock LGA	8.3%	28.9%	20.4%	9%	7.1%	1.9%
Hunter region						
Newcastle LGA + Hunter Valley SA4	7.5%	27.7%	20.8%	8.9%	15.1%	2.1%
NSW	**6.8%**	**26.5%**	**20.9%**	**8.5%**	**15.3%**	**3.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

ii Primary and secondary schools

Cessnock City LGA has 19 schools including 14 primary, 1 combined K-12 and 2 high schools, Mount View High School and Cessnock High School. There are 2 small schools, Laguna Public School and Congewai Public School with 50 and 11 students enrolled respectively. Enrolments in Cessnock City LGA total 6217 students. Cessnock also features a TAFE offering Aboriginal languages, administration, business, real estate, early childhood education and aged care.

Table B.58 Schools in the regional social locality

Area (LGA)	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Cessnock	Branxton Public School	Government	Primary	K-6	429	21
Cessnock	Rosary Park Catholic School	Non-government	Primary	K-6	362	25
Cessnock	Paxton Public School	Government	Primary	K-6	88	5
Cessnock	Bellbird Primary School	Government	Primary	K-6	277	16
Cessnock	Kitchener Public School	Government	Primary	K-6	114	7

Area (LGA)	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Cessnock	Nulkaba Public School	Government	Primary	K-6	378	26
Cessnock	Mount View High School	Government	Secondary	7-12	877	72
Cessnock	Cessnock East Primary School	Government	Primary	K-6	232	15
Cessnock	Cessnock Public School	Government	Primary	K-6	271	25
Cessnock	St Phillip's Christian School	Non-government	Combined	K-12	1214	98
Cessnock	Cessnock Public School	Government	Primary	K-6	271	23
Cessnock	Cessnock High School	Government	Secondary	7-12	592	62
Cessnock	St Patricks Primary School	Non-government	Primary	K-6	351	20
Cessnock	Cessnock West Public School	Government	Primary	K-6	387	26
Cessnock	Millfield Public School	Government	Primary	K-6	96	5
Cessnock	Ellalong Public School	Government	Primary	K-6	109	8
Cessnock	Kearsley Public School	Government	Primary	K-6	108	8
Cessnock	Congewai Public School	Government	Primary	K-6	11	2
Cessnock	Laguna Public School	Government	Primary	K-6	50	3

Source: ACARA 2021, My School

iii Tertiary and vocational

There is a TAFE campus in the Cessnock township (Table B.39).

Table B.59 Tertiary and vocational institutions in the regional social locality

Area	School	Sector	Type	Courses on offer (on campus)
Cessnock	TAFE NSW Cessnock	Government	Vocational	• Career preparation (Cert II) • Auslan (Cert II) • Tertiary preparation (Cert IV) • Retail services (Cert I) • Pathways to further study (Cert III) • ills for Work and Vocational Pathways (Cert II)

Source: Google Maps

B.4.8 Health and wellbeing

i Socio-economic disadvantage

The Socio-Economic Indexes for Areas (SEIFA) provides indicators of relative disadvantage and advantage in the population. Using ABS census data, these indexes measure a variety of socio-economic characteristics such as income, education and employment to derive a relative score or ranking. SEIFA provides four summary measures:

- the Index of Relative Socio-Economic Disadvantage (IRSD)
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)

- the Index of Education and Occupation (IEO)
- the Index of Economic Resources (IER).

The SEIFA decile ranking system allocates the lowest 10% of areas to the decile number of 1 and the highest 10% of areas to a decile number of 10. While there are variations to interpreting the decile scores across the 4 indexes, generally a low decile rank is associated with disadvantage, and a high decile rank is associated with less disadvantage. The decile score is relative to comparable geographies (i.e. other SALs or LGAs), and hence the score represents a ranking (or position) within NSW. As such, in lieu of comparing ranking to NSW, these scores can be interpreted as their relative position in NSW.

SEIFA scores indicate that within the Cessnock City LGA there is a relatively high prevalence of socioeconomic disadvantage, with an IRASAD of 3, placing it in the bottom 30% of LGAs in NSW. The rankings recorded across the regional area for each of the four summary measures are provided in Figure B.16.

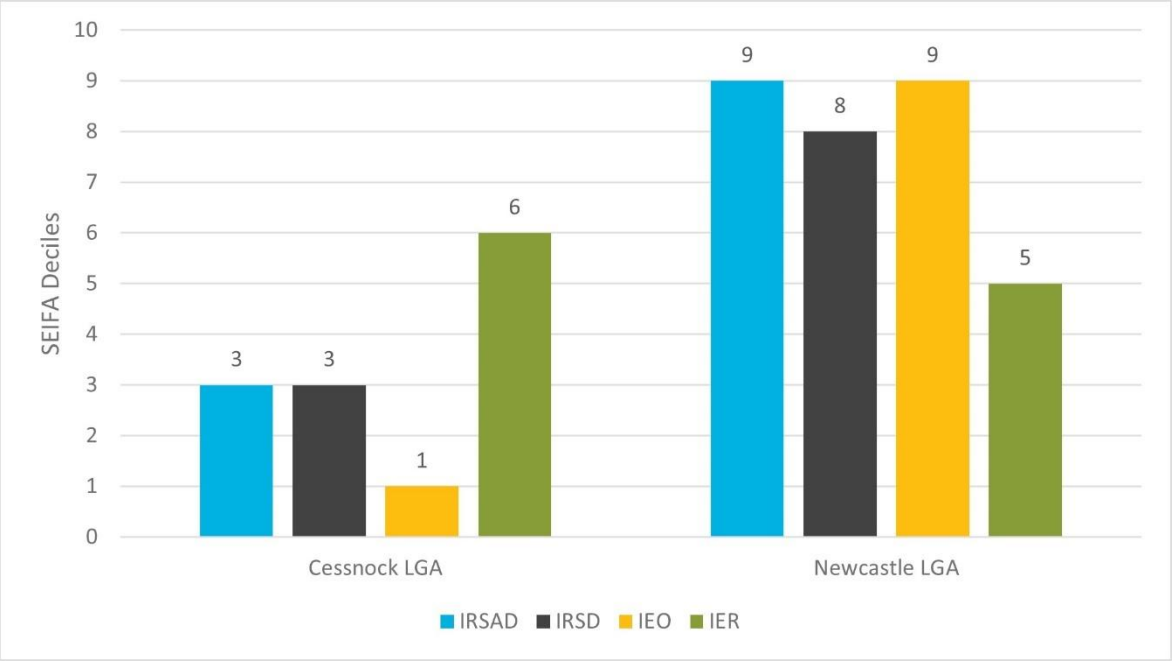


Figure B.16 SEIFA deciles for regional area, 2021

Mental health is defined by the ABS as 'whether a person has been told by a doctor or nurse that they have a mental health condition (including depression or anxiety).' It does not measure the severity of the condition or if a person has multiple conditions and excludes self-reported psychological distress (ABS, 2021).

Across all of the social localities, mental health (depression and anxiety) and asthma are the dominant chronic health conditions, as is the case at the Hunter region and NSW benchmarks. Notably, local area for central section and the Cessnock township have the highest proportion of mental health conditions at 13.2% and 14.2%, respectively. Asthma is most prevalent in Millfield (13.0%). The Cessnock UCL featured the most people with one or more chronic health conditions at 37.4%. Table B.60 displays selected long term health conditions across the social localities.

Table B.60 Long-term health conditions, 2021

Area	Has one or more long-term health condition	Asthma	Diabetes (excluding gestational diabetes)	Cancer (including remission)	Lung condition (including COPD or emphysema)	Mental Health condition (including depression or anxiety)
Corridor social locality						
Central section of the local area total	-	3.1%	1.3%	2.2%	0.7%	5.5%
Local area						
Central section total	36.4% (9432)	10.9%	6.2%	3.3%	2.9%	13.2%
Nearby regional communities						
Broke UCL	32.9% (76)	10.0%	5.2%	1.3%	4.3%	10.8%
Cessnock UCL	37.4% (8689)	11.2%	6.7%	3.3%	3.2%	14.2%
Millfield SAL	35.1% (450)	13.0%	4.8%	3.1%	2.3%	12.9%
Regional area						
Cessnock LGA	35.3% (22,472)	11.0%	6.0%	3.1%	2.7%	13.0%
Hunter region						
Newcastle LGA + Hunter valley SA4	33.6% (37,931)	10.1%	5.3%	3.2%	2.2%	12.1%
NSW	**27.0% (2,177,225)**	**7.8%**	**4.8%**	**2.8%**	**1.7%**	**8.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

ii Crime and community safety

Data from the NSW Bureau of Crime Statistics and Reporting (2024) shows that theft was the most prevalent offence in the Cessnock City LGA with 2,273 reported offences. In Cessnock City, domestic violence related assault was the offence with the highest upward trend, with an increase of 42.6% in the 24 months to March 2024. This was the highest increase in domestic violence offences across all social localities. Table B.61 outlines the number of incidents for different offences from April 2023 to March 2024.

Table B.61 Number of recorded incidents by offence, April 2023-March 2024

	Assault	Domestic violence related assault	Sexual offences	Malicious damage to property	Theft*	Drug offences
Cessnock LGA	306	485	229	632	2273	219

Source: NSW Bureau of Crime Statistics and Reporting, Crime Statistics by LGA, March 2024

Note: "Sexual offences" is inclusive of sexual assault, sexual touching, sexual act and other sexual offences.

*Sum of all theft related offences, including robbery

iii Vulnerability

Vulnerability relates to a group's capacity to adapt to, or cope with, changes to their social environment (Cutter, et al., 2008). In defining potential project impacts on surrounding communities, it is important to understand the presence of more vulnerable sectors of society as they are likely to experience an impact differently or may be less adaptable to changes. There are certain demographic and social characteristics that may indicate heightened vulnerability. Social indicators associated with vulnerability include:

- age, such as the very young and the elderly who are more likely to require care and may by financially dependent on the working population (people aged 15 to 64)
- socio-economic status, such as people who are recipient of welfare, reside in social housing, or who are unemployed
- people with a need for assistance, such as those people requiring assistance in the core activities of self-care, mobility or communication because of disability, long-term health condition, or old age
- culturally and linguistically diverse (CALD) populations, such as those who live in households where a non-English language is spoken.

iv Vulnerable groups

As outlined in Table B.62, within the corridor area there are a relatively high proportion of elderly persons (28.8%), along with persons aged under 14 years (13.2%). The other social localities feature lower proportions of people aged 65 and over compared to the Hunter region and NSW rates. The local social locality and Cessnock township feature a high proportion of one parent families with children (24.5% and 27.3%, respectively) compared to the Hunter Valley region (18.7%) and NSW (15.8%). Other notable trends include unemployed people, which is elevated in both the local social locality (6.2%) and Cessnock (6.6%).

Table B.62 Vulnerable groups

Area	Population	People aged 14 and under	People aged 65+	Youth (15-24)	Renter households where rent payments are greater than or equal to 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Corridor social locality											
Central section	204	13.2%	28.8%	8.8%	-	1.5%	2.4%	-		-	0%
Local area											
Central section	25,919	18.3% (4736)	20.1% (5201)	11.4% (2966)	-	24.5% (1618)	9.1% (2367)	14.6% (387)	6.2% (644)	2.5% (650)	0.3% (86)
Nearby regional communities											
Broke	231	22.9% (53)	15.2% (35)	7.8% (18)	10.9% (5)	14.1% (10)	10% (23)	0	3.8% (4)	1.3% (3)	0
Cessnock	23,211	18.3% (4251)	19.4% (4506)	12% (2780)	43% (1197)	27.3% (1577)	9.7% (2245)	14.8% (411)	6.6% (603)	2.4% (562)	0.4% (94)
Millfield	1,282	20.6% (264)	14.8% (190)	12.9% (166)	50% (20)	14.8% (50)	6.4% (82)	0%	5.5% (32)	1.6% (20)	0%
Regional area (LGAs)											
Cessnock	63,632	20.2% (5078)	17% (10,822)	11.9% (7582)	12.7% (1099)	22.1% (3775)	7.8% (4952)	10.7% (655)	5.6% (1595)	2.6% (1642)	0.4% (242)

Area	Population	People aged 14 and under	People aged 65+	Youth (15-24)	Renter households where rent payments are greater than or equal to 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Hunter region											
total	460,819	18.3% (84,263)	18.4% (84,957)	12.6% (57,912)	35.3% (18,709)	17.6% (17.6%)	6.7% (30,689)	14% (7393)	4.8% (10,879)	5.8% (26,634)	0.9% (3992)
NSW	**8,072,163**	**18.2% (1,470,012)**	**17.6% (1,424,135)**	**11.8% (954,079)**	**35.5% (335,404)**	**15.8% (337,729)**	**5.8% (464,712)**	**12.8% (84,732)**	**4.9% (84,732)**	**22.4%**	**4.5%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

Note: proportion of social housing is based on number of rented private dwellings

v Homelessness

Homelessness is defined by the ABS using six different operational groups to estimates persons who are homeless or marginally housed (Flatau & Lester, 2023). Cessnock recorded a rate of 30 (people per 100,000), which is lower than the NSW rate of 43 people (per 100,000) and Newcastle LGA rate of 63 persons (per 100,000). The Cessnock LGA has the second highest rate of homelessness in the broader region, surpassed only by Singleton LGA at 38 (people per 100,000) and Newcastle LGA (Figure B.17). In 2021, the Cessnock LGA had an estimated 193 homeless people (Figure B.18).

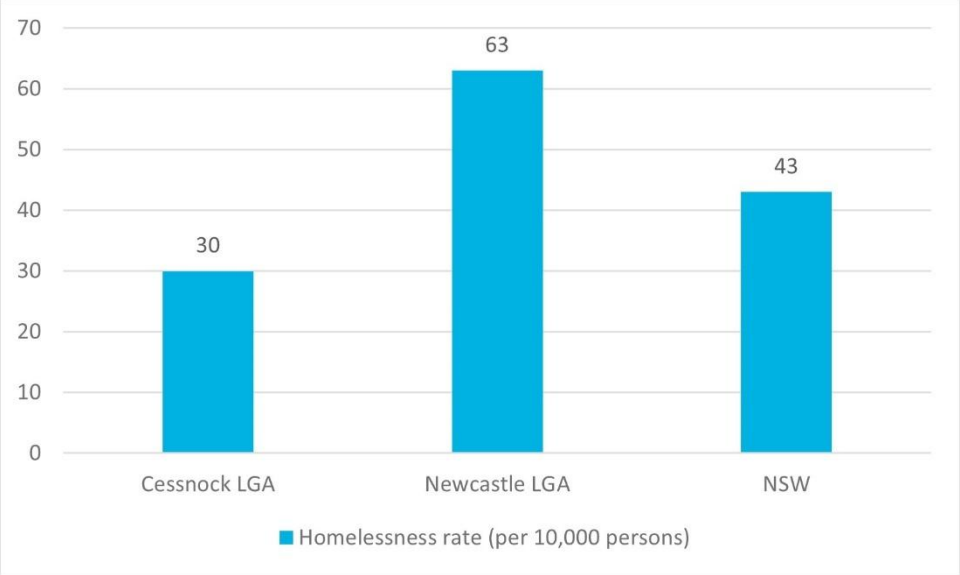


Figure B.17 Homelessness rate per 10,000 persons

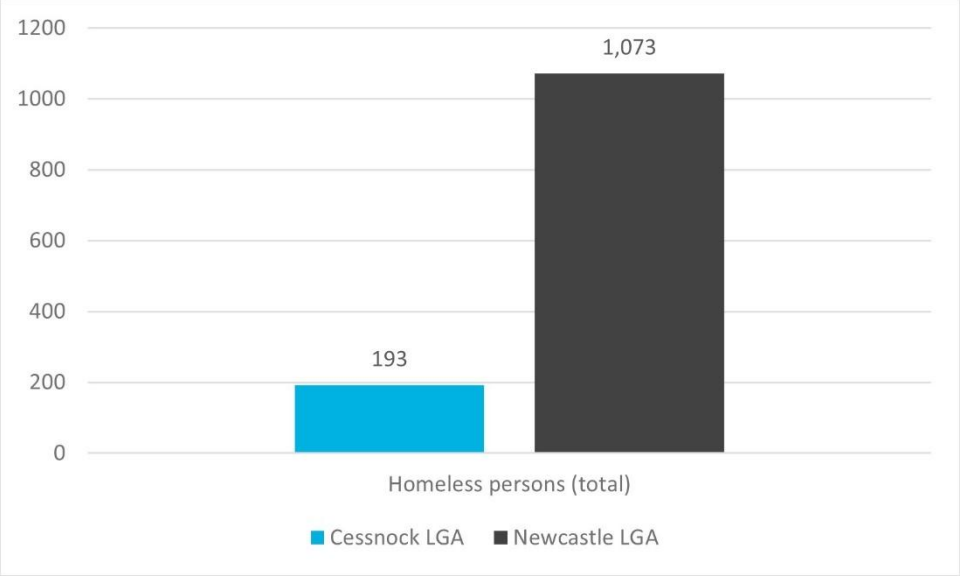


Figure B.18 Number of homeless people in regional area

vi Voluntary work

Volunteering rates can provide an indication of social cohesion and resilience in a community, and the willingness of people to help each other. Higher rates of volunteerism are also associated with older age groups, households with higher incomes, and couples with children (AIHW, 2021b). Within the corridor area, there were 16.9% of residents who participated in voluntary work compared with the Hunter region average of 13.1%. Conversely within the local area and Cessnock LGA, fewer residents (9.2% and 9.6%, respectively) undertake voluntary work compared to the Hunter region (13.1%) and NSW averages (13.0%). Table B.63 provides the rates of voluntary work across the study area.

Table B.63 Rates of voluntary work

Area	Have participated in voluntary work in the last 12 months (total)	Have participated in voluntary work in the last 12 months (proportion)
Corridor social locality		
Central section	-	16.9%
Local area		
Central section	1,953	9.2%
Nearby regional communities		
Broke UCL	25	13.7%
Cessnock UCL	1540	8.1%
Millfield SAL	82	8.1%
Regional area		
Cessnock LGA	4902	9.6%
Hunter region		
Newcastle LGA + Hunter Valley SA4	49,273	13.1%
NSW	**857,891**	**13.0%**

B.5 Southern section of the HTP corridor: Olney to Eraring

B.5.1 Surroundings and characteristics

The southern section of the HTP corridor spans from Congewai to the Jilliby State Conservation Area, across the LGAs of Cessnock City, Central Coast and Lake Macquarie. The southern section falls on the traditional country of the Biraban peoples and Darkinjung peoples.

B.5.2 Corridor social locality

The southern section of the corridor social locality (see Figure 3.3) is around 37 kilometres in length. There are no residents or private dwellings in the southern section of the corridor social locality. The main land uses in this study area include a mix of State forests, including Watagan State Forest, Olney State Forest and Jilliby State Conservation Area, and Watagans National Park. The forests are regularly used for nature-based recreation and feature a variety of facilities and walking trails.

B.5.3 Local social locality

Predominant land uses in the local social locality include Watagan and Olney State forests, Watagans National Park, Jilliby State Conservation Area and rural residential and residential areas. In 2021 there were 17,664 people residing in the local social locality and 6907 private dwellings. Key townships include Cooranbong, located around 9 kilometres to the northeast of the transmission line, and Martinsville, located around 6.5 kilometres to the northeast of the transmission line.

Cooranbong has a population of over 7000 people and has experienced significant population growth. Key services include child care, a primary school with an enrolment of 274 students, Avondale University, Lake Macquarie Campus and a range of businesses including the Avondale Dairy. Recreational facilities include the Awaba Mountain Bike Park. Martinsville locality is situated along Martinsville Road, around 5 kilometres northwest of Cooranbong. The locality includes part of Watagans National Park and Jillby State Conservation Area. Martinsville has a population of 389 people and a median age of 53 years, with 28.2% of the population aged 65 years and over. There are very few services in the locality given its small size. There are several local businesses including a wedding venue, and recreational facilities.

Key socio-economic characteristics across the southern section of the local social locality including the townships of Cooranbong and Martinsville include:

- high population growth, with the population growing by 21.5% in the five years to June 2021, while NSW's population grew by 8.1%. Much of the local social locality's population growth is attributed to the township of Cooranbong, which grew by 29.9% to 7,077 people over the five years to June 2021
- higher rate of homeownership (owned outright or with a mortgage) compared to NSW. Around 87.1% of private dwellings in Martinsville were owned in 2021, indicating a population with strong ties to the area. Housing costs are more affordable in the local social locality compared to NSW, with lower median rents and mortgage repayments
- lower rate of labour force participation (52.6%) and a lower rate of unemployment (4.6%), when compared to NSW. Health care and social assistance is the primary employing industry, hiring 17.3% of residents. Construction and education and training are also significant industries, employing 13.2% and 9.7% of working residents, respectively
- compared to NSW, key vulnerable groups in the local social locality include people needing assistance and elderly people aged 65 years or older. Higher proportion of residents reporting as having one or more long-term health condition (37.5%), with mental health conditions the most prevalent.

Sensitive

B.5.4 Regional social locality

The southern section of the regional social locality consists of Lake Macquarie LGA and Central Coast LGA. In 2021, the total population of the regional social locality was 560,441, of which 61.8% resided in Central Coast LGA. Data on Socio-Economic Indexes for Areas (SEIFA) indicated the Lake Macquarie and Central Coast LGAs experience relatively low socioeconomic disadvantage, both being in the top 30% of LGAs in NSW.

i Central Coast LGA

The Central Coast LGA is situated along the coast, south of Cessnock City LGA. The LGA is the sixth largest urban area in Australia, with a total land area of around 1680 square kilometres including more than 80 kilometres of coastline (id.consulting, 2024). More than half of the area is National parks, State forest, bushland, open space, nature reserves and aquatic environments such as beaches and watercourses. In 2021, the area's population was 346,596 with a median age of 43 years. The largest towns in the LGA are Gosford, Tuggerah-Wyong, Erina, Woy Woy and The Entrance (ibid, 2024).

Health care and social assistance are the largest industries of employment, employing 17.8% of the workforce. Construction provides the second highest number jobs in the area (11.5%). Emerging industries include manufacturing, logistics, warehousing and green economy enterprises.

The original inhabitants of the Central Coast Council area were the Darkinjung, Guringai and Awabakal Aboriginal people. European settlement dates from the 1820s, with development mainly along the coast centred on agriculture and ship building. The opening of the railway in the 1880s and 1890s led to the expansion of tourism. In the post-war period, Gosford and Wyong developed as commuter, holiday and retirement centres. Community and lifestyle values in Central Coast include natural surroundings, proximity to the beach/lake, scenery and major centres and quietness (Central Coast Council, 2024).

ii Lake Macquarie LGA

The Lake Macquarie LGA is situated along the coast, directly south of Newcastle. The LGA covers 648 square kilometres in area and includes Lake Macquarie, the main natural feature of the area. Lake Macquarie is one of Australia's largest saltwater lakes, with a circumference of 174 kilometres. In 2021 the area had a population of 213,845 people and is the third largest regional city in NSW by population (Lake Macquarie City Council, 2024). The median age is 42 years.

Key industries include construction, rental, hiring and real estate services, mining, health care and social assistance. Infrastructure will be a catalyst for investment and economic development in the future (Lake Macquarie City Council, 2019).

Aboriginal people of the Awabakal nation have lived in the Lake Macquarie area for more than 8000 years. The name Awabakal is derived from the lake, meaning people of the calm surface. Lake Macquarie was proclaimed a shire in 1906. The Shire of Lake Macquarie was proclaimed as a municipality from 1977 and became a city in 1984 (Lake Macquarie City Council, 2024). Residents value their outdoor lifestyle with an abundance of natural assets including beaches, forests and lakeside life.

Sensitive

B.5.5 Southern section of the HTP corridor: population

i Population trends

There are no people resident within the southern section of the corridor social locality.

At the time of the 2021 census, the local social locality had a total population of almost 17,664 people, recording a relatively high rate of population growth in the 10 years to 2021 (29.5%), compared to the Hunter region (17.6%) and NSW (16.7%). The local area has a notably higher median age of 49 years compared to the Hunter region and NSW, both at 39 years.

With regard to nearby townships, Cooranbong experienced a particularly high rate of population growth (40.7%) in the 10 years to 2021, from a base of 5030 people. In contrast, the population of Martinsville only grew by 6.6% between 2011 and 2021 from a low base of 365 people.

Lake Macquarie LGA recorded a population growth rate of 13.1% in the 10 years leading to 2021, which was lower than the Hunter region (17.6%) and NSW (16.7%). The median age of Lake Macquarie LGA and Central Coast LGA were 42 and 43 years (respectively), which is higher compared to the Hunter region and NSW (both 39 years).

Table B.64 details population trends over the 10 years to 2021, along with and the median age across each of the social localities.

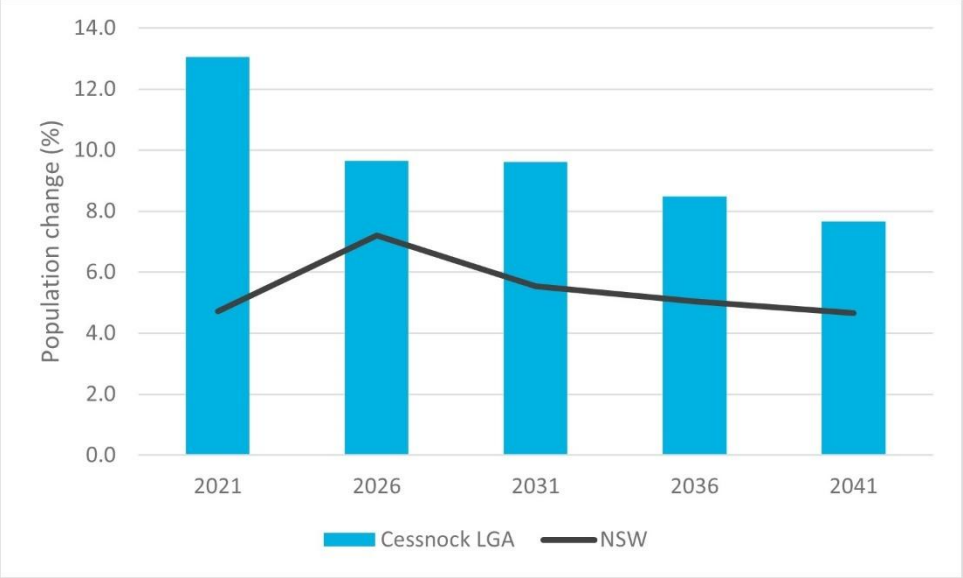
Table B.64 Population trends, 2011 to 2021, and median age

Location	2011	2016	2021	Total % change 2016 – 2021	Total % change 2011 – 2021	Median age
Corridor social locality (mesh blocks)						
Southern section of the local area (total)	-	-	-	-	-	-
Local area (SALs within 10 km)						
Southern section (total)	13,633	14,533	17,664	21.5%	29.5%	49
Nearby regional communities						
Cooranbong SAL	5,030	5,449	7,077	29.9%	40.7%	39
Martinsville SAL	365	361	389	7.8%	6.6%	53
Regional area						
Lake Macquarie LGA	189,006	197,371	213,845	8.3%	13.1%	42
Central Coast	-	327,736	346,596	5.8%	-	43
Hunter region						
Newcastle LGA + Hunter Valley SA4	391,781	418,827	460,819	10.0%	17.6%	39
NSW	**6,917,658**	**7,480,228**	**8,072,163**	**8.1**	**16.7**	**39**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

Sensitive

ii Population projections



Source: NSW Department of Planning (DPE, 2024)

Figure B.19 Central section population projections 2021-2041

iii Aboriginal and/or Torres Strait Islander population

The proportion of the population which identifies as Aboriginal or Torres Strait Islander was generally consistent (4.7% to 5.5%) across each of the social localities, with the exception of Martinsville which has a notable lower proportion of 1.5%. All areas were lower compared to the Hunter regional area (6.7%) but higher than the NSW average of 3.4%.Table B.65 details Aboriginal and/or Torres Strait Islander population and proportions in the study area.

Table B.65 Aboriginal and/or Torres Strait Islander population

Area	Aboriginal and/or Torres Strait Islander population total	Aboriginal and/or Torres Strait Islander population
Local area		
Southern section (total)	902	5.1%
Nearby regional communities		
Cooranbong SAL	335	4.7%
Martinsville SAL	6	1.5%
Regional area		
Lake Macquarie LGA	11,759	5.5%
Central Coast LGA	17,047	4.9%
Hunter region		
Newcastle LGA + Hunter Valley SA4	30,719	6.7%
NSW	**278,043**	**3.4%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

Sensitive

B.5.6 Southern section of the HTP corridor: housing and accommodation

Indicators describing housing trends and characteristics were sourced from the 2021 ABS census, unless otherwise stated.

i Housing stock

In the local area, there were 6907 private dwellings, with 2680 of these located in the nearby regional community of Cooranbong. The number of private dwellings in the local area was a small portion of total number of private dwellings in the regional area, with Lake Macquarie and Central Coast LGAs having a combined 232,307 private dwellings. In the local area, proportions of occupied dwellings in the southern section were slightly higher (91.6%) than the Hunter Valley region (90.3%), and unoccupied dwellings were slightly lower (8.5%) than the Hunter Valley region average (9.7%). Cooranbong has a higher occupancy rate (93.5%) than the Hunter region and NSW benchmarks however Martinsville was notably lower (88.6%). In the Regional area, the Lake Macquarie LGA had the highest overall occupancy rate of 93.7% and the lowest unoccupied rate (6.3%).

Table B.66 provides the proportion of occupied dwellings and unoccupied dwellings in each study area.

Table B.66 Housing stock

Area	Private dwellings	Occupied dwellings	Unoccupied dwellings
Local area			
Southern section total	6907	91.6%	8.5%
Nearby regional communities			
Cooranbong SAL	2680	93.5%	6.6%
Martinsville SAL	149	88.6%	7.4%
Regional area			
Lake Macquarie LGA	86,059	93.7%	6.3%
Central Coast LGA	146,248	90.1%	9.9%
Hunter region			
Newcastle LGA + Hunter SA4	191,878	90.3%	9.7%9
NSW	**3,199,988**	**90.6%**	**9.4%**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

ii Housing type and composition

Housing type within the local and regional social locality are predominantly separate houses (83.3%), with the next most common housing type being semi-detached/terraces/townhouses and flats/apartments (11.6%). In Martinsville 100% of housing are separate houses. In the regional social locality, both LGAs are dominated by separate houses, followed by semi-detached and then flats/apartments.

Table B.67. provides an overview of housing type across the study area.

Sensitive

Table B.67 Housing type

Area	Separate house	Semi-detached, row or terrace house, townhouse, etc.	Flat or apartment	Other dwelling
Local area				
Southern section total	83.8%	11.6%	2.5%	1.8%
Nearby regional communities				
Cooranbong SAL	85.4%	10.2%	3.7%	0.1%
Martinsville SAL	100%	0%	0%	0%
Regional area				
Lake Macquarie LGA	85.2%	9.7%	4.4%	0.5%
Central Coast LGA	78.4%	12.0%	8.7%	0.7%
Hunter region				
Newcastle LGA + Hunter Valley SA4	80%	12.2%	6.9%	0.7%
NSW	**65.6%**	**11.7%**	**21.7%**	**0.7%**

Source: ABS 2011; ABS 2016; ABS 2021, Census of Population and Housing: General Community Profiles.

iii Tenure

Central Cost LGA had the highest rate of rental tenure across the southern section of the study area geographies at 27.5%; however, this was lower than the Hunter region (30.5%) and NSW (32.6%). Indicative of smaller regional towns, the highest home ownership rate (owned outright and with a mortgage) was recorded in Martinsville, at 87.1%, which is notably higher than the Hunter region at 66.2% and NSW at 64%. In addition, over 50% of homes in Martinsville are owned outright.

Table B.68. provides details on of tenure type for each study area

Table B.68 Tenure type

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type
Local area				
Southern section total	36.2%	33.6%	21.0%	7.3%
Nearby regional communities				
Cooranbong SAL	29.0%	40.8%	21.3%	7.3%
Martinsville SAL	53.8%	33.3%	13.6%	3.0%
Regional area				
Lake Macquarie LGA	37.1%	36.3%	23.2%	2.1%
Central Coast LGA	34.5%	34.0%	27.5%	2.5%

Sensitive

Area	Owned outright	Owned with a mortgage	Rented	Other tenure type
Hunter region				
Newcastle LGA + Hunter Valley SA4	32.0%	34.2%	30.5%	2.0%
NSW	**31.5%**	**32.5%**	**32.6%**	**1.9%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

iv Mortgage and rental stress

As outlined in Table B.69, across the local and regional areas, median rental prices were lower compared to NSW ($420/week). The highest median rental price was recorded for the Central Coast LGA at $400 per week, followed by Cooranbong at $380/week. Monthly mortgage repayments were highest in the local social locality ($2158), which is higher than the Hunter regional area rate of $1860/month, but in line with NSW at $2167/month. The lowest median mortgage repayment in the study area was the Lake Macquarie LGA at $1950/month.

Central Coast LGA had the highest proportion of renters experiencing housing cost stress (42%), followed by Cooranbong (39.2%). These rates are both higher than the Hunter region and NSW. For those with a mortgage, housing cost stress was highest in the Central Coast LGA (14.7% of mortgage holders), which is higher than the Hunter region rate of 11.9% but lower than the NSW rate of 17.3%.

Table B.69 Mortgage and rental stress

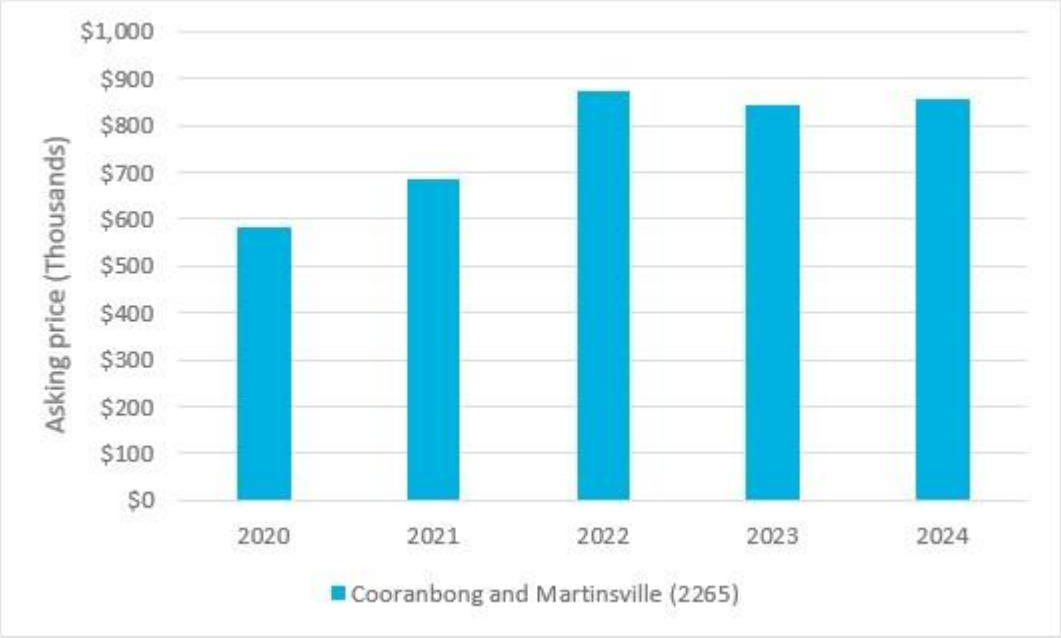
Area	Median Rent (weekly)	Renter households where rent payments are greater than or equal to 30% of household income	Median Mortgage repayments (monthly)	Owner with mortgage households with mortgage repayments greater than 30% of household income
Local area				
Southern section total	$364	-	$2158	-
Nearby regional communities				
Cooranbong SAL	$380	39.2%	$2058	12.6%
Martinsville SAL	$347	33.3%	$2149	11.4%
Regional area				
Lake Macquarie LGA	$375	37%	$1950	12.1%
Central Coast LGA	$400	42%	$2000	14.7%
Hunter region				
Newcastle LGA + Hunter Valley SA4	$375	35.5%	$1860	11.7%
NSW	**$420**	**35.5%**	**$2167**	**17.3%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Sensitive

v Property prices and trends

Data produced for postcodes were used to determine residential vacancy rates and property prices within the southern section of the HTP corridor. The data was for postcode 2265 (Cooranbong and Martinsville). Between 2020 and 2024, property prices have increased overall; however, they peaked in 2022. Property prices reduced in 2023 and then rose again in 2024 but not yet back to 2022 asking prices.



Source: SQM Research, 2024

Note: based on combined asking prices for all property types (including houses and units).

Figure B.20 Property asking prices, August 2020-August 2024

vi Residential vacancy rates

Residential vacancy rates in Cooranbong and Martinsville have fluctuated over the past four years. From January 2020 to January 2021, there was a drop in vacancy from 2.5% to 0.7% and then rising again to 3% in July 2023. The rate dropped to 1.7% in January 2024 and has remained stable since. This trend is indicative of a low availability of housing in the study area, with a vacancy rate below 2.5% indicating a tight rental market (Real Estate Institute of Queensland, 2023). Residential vacancy rates are depicted in Figure B.21.

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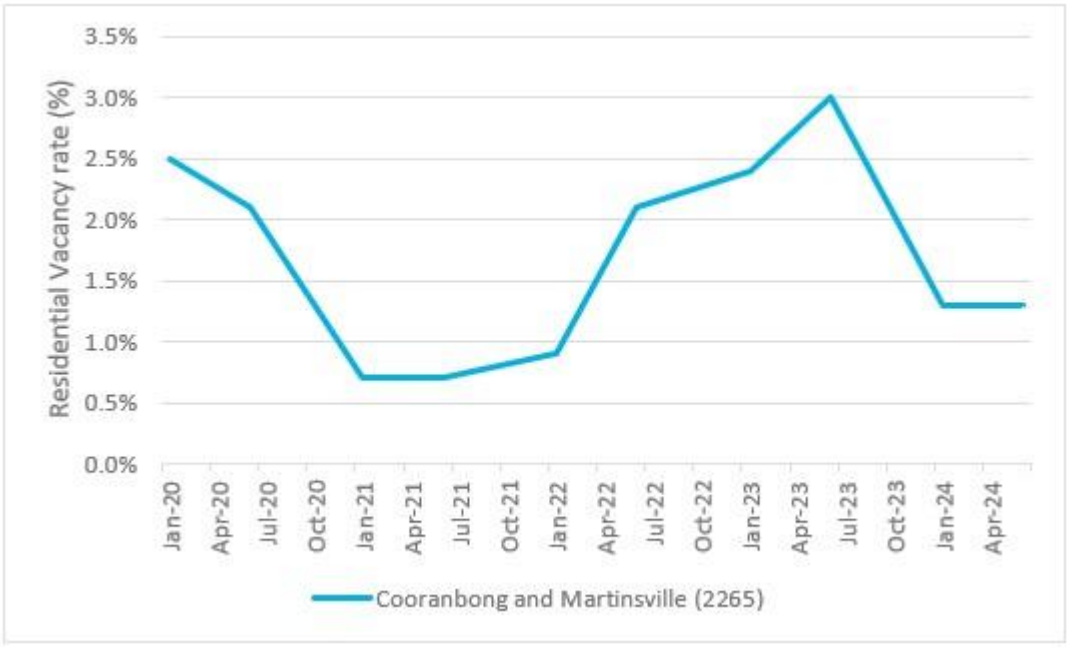


Source: SQM Research, 2024

Figure B.21 Residential vacancy rates

There were a limited number of short-term accommodation options available in the southern section of the local social locality and nearby townships of Cooranbong and Martinsville. There are no hotel and only 12 Airbnb listings. The surrounding regional area of the Central Coast and Lake Macquarie have a substantially higher number of accommodation options due to the region being a popular tourist destination.

Table B.70 provides the number of short-term accommodation options in nearby townships.

Table B.70 Short-term accommodation counts

Location (approx. commute)	Hotel / motel	Caravan park / Camping ground	Bed and breakfast / cottage / retreat	Holiday homes / Airbnb
Nearby regional communities				
Cooranbong SAL	-	-	1	9
Martinsville SAL	-	-	-	3

Sources: https://www.google.com/travel

B.5.7 Southern section of the HTP corridor: employment, business and industry

i Labour force characteristics

The local social locality is characterised by lower rates of labour force participation (52.6%) compared to the Hunter region (60.5%) and NSW averages (58.7%). Similarly, Cooranbong and Martinsville townships recorded lower rates of labour force participation (57.2% and 57.4% of residents respectively) than the Hunter region and NSW. All of the southern section of the study area localities feature lower unemployment rates than the Hunter regional area (4.8%) and NSW (4.9%). Cooranbong recorded a higher youth unemployment rate (10.8%) compared to other localities and the benchmarks geographies. Aboriginal and Torres Strait Islander unemployment is slightly higher in Central Coast (10.1%) compared to Hunter Valley (9.5%) and NSW (9.8%).

Sensitive

Table B.71 presents unemployment and labour force participation data for the southern section of the social localities.

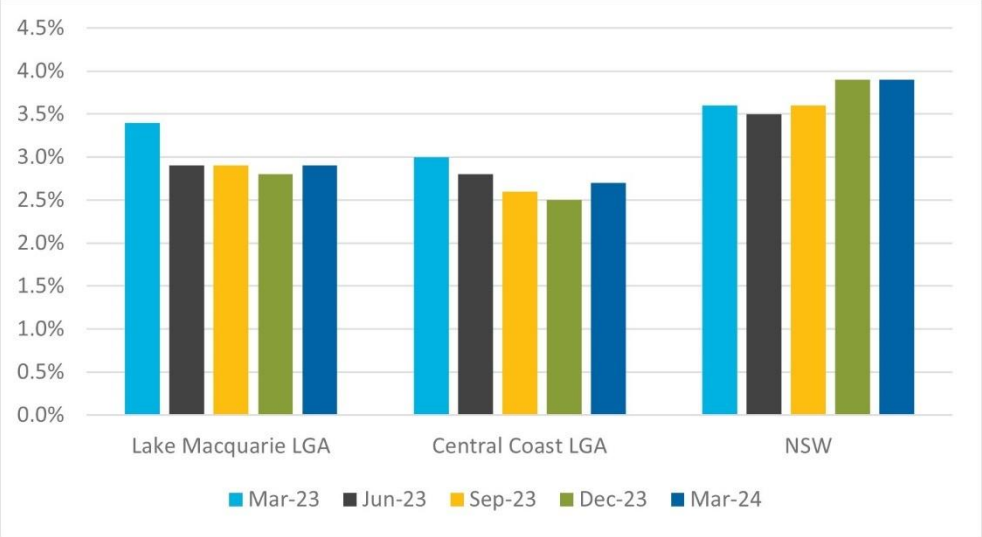
Table B.71 Unemployment and labour force participation rates, 2021

Area	Labour force (no.)	Labour force participation	Unemployed persons (no.)	Unemployed	Youth unemployment	Aboriginal and/or Torres Strait Islander unemployment
Local area						
Southern (total)	7,736	52.6%	353	4.6%	9.8%	-
Nearby regional communities						
Cooranbong SAL	3,241	57.2%	142	4.4%	10.8%	3.9%
Martinsville SAL	194	57.4%	6	3.1%	0.0%	0.0%
Regional area						
Central Coast LGA	158,296	55.7%	7463	4.7%	9.8%	10.1%
Lake Macquarie LGA	102,070	58.3%	4662	4.6%	10%	9.5%
Hunter region						
Newcastle LGA + Hunter Valley SA4	227,763	60.5%	10,879	4.8%	9.6%	9.5%
NSW	**3,874,012**	**58.7%**	**189,852**	**4.9%**	**9.8%**	**9.8%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

Notes: 1. Youth refers to those aged 15 to 24 years

Over the year to March 2024, unemployment fell but then edged higher in both Lake Macquarie LGA and Central Coast LGA. Figure B.22 displays quarterly unemployment rates for the LGAs in the Regional area.



Source: Small Area Labour Market (National Skills Commission, 2024)

Figure B.22 Unemployment over time – LGAs

Sensitive

ii Occupation

Predominant occupations in the local area include professionals (19.3%), technicians and trades workers (16.7%) and managers (12.3%). Similarly, Cooranbong and Martinsville are characterised by a high proportion of professionals (23.2% and 27.6% respectively) and technicians and trades workers (17.1% and 16.1% respectively). Martinsville also recorded a high level of managers (16.1%) compared to the Hunter Valley region (11.1%) and NSW (14.6%).

In the regional area, professionals are the most common occupation comprising 21.5% of the Lake Macquarie workforce and 20.4% of the Central Coast workforce. These rates are broadly in line with the Hunter Region (20.2%) but lower than the NSW rate (25.8%). Technicians and trades workers are the second most prevalent occupations accounting for 15.8% in Lake Macquarie and 14.6% in Central Coast, which is higher than the NSW rate of 11.9%.

Table B.72 provides the proportion of key occupations in each study area.

Table B.72 Occupations, 2021

Location	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
Local area								
Southern (total)	12.3%	19.3%	16.7%	12.2%	11.6%	7.7%	7.9%	10.5%
Nearby regional communities								
Cooranbong SAL	9.9%	23.2%	17.1%	12.1%	12.1%	6.9%	7.1%	10.1%
Martinsville SAL	16.1%	27.6%	16.1%	6.3%	15.1%	6.3%	5.7%	6.3%
Regional area								
Lake Macquarie LGA	10.9%	21.5%	15.8%	13.2%	13.1%	8.6%	6.4%	9.1%
Central Coast LGA	12.3%	20.4%	14.6%	13%	13.1%	9.2%	6%	9.7%
Hunter region								
Newcastle LGA + Hunter Valley SA4	11.1%	20.2%	15.2%	13.2%	11.6%	8.5%	8.5%	10.0%
NSW	**14.6%**	**25.8%**	**11.9%**	**10.6%**	**13.0%**	**8.0%**	**6.0%**	**8.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

iii Income

In the local area the township of Cooranbong (21.1%) recorded the highest rate of households earning less than $650/week. This was notably higher than the Hunter region (16.4%) and NSW (15.3%). Except for Martinsville (27.3%), the proportion of households earning more than $3000 per week in the study area were all less than the NSW average of 25.2%.

The median household income is highest in local social locality ($1864) and Martinsville ($1821), both higher than the Hunter region median ($1659) and broadly in line with NSW ($1829). The lowest median incomes occur in Cooranbong ($1639/week) and the Central Coast LGA ($1507/week). These median incomes are below those for the Hunter region and NSW.

Sensitive

Table B.73 Median income and income range

Area	Median household incomes /week	Proportion of households earning less than $650 per week	Proportion of households earning more than $3,000 per week
Local area			
Southern total	$1864	19.2%	17.9%
Nearby regional communities			
Cooranbong SAL	$1639	21.1%	19.1%
Martinsville SAL	$1821	11.4%	27.3%
Regional area			
Lake Macquarie LGA	$1623	17.0%	20.4%
Central Coast LGA	$1507	18.4%	18.7%
Hunter region			
Newcastle LGA + Hunter Valley SA4	$1659	16.4%	19.9%
NSW	**$1829**	**15.3%**	**25.2%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

B.5.8 Local business and industry

i Industry of employment

Within the local social locality, health care and social assistance is the primary employing industry, hiring 17.3% of working residents. Construction and education and training are also significant industries in the local area, employing 13.2% and 9.7% of working residents, respectively.

Similarly, the top three employing industries in Cooranbong are health care and social assistance (20.3%), construction (12.4%), and education and training (11.6%). In Martinsville, education and training, and construction are both large employing industries, respectively sitting at 16.1% and 15.6%.

Regionally, the focus of the economy in Lake Macquarie LGA and Central Coast is health care and social assistance (19.1% and 17.8% respectively) and construction (11.2% and 11.5% respectively). Retail trade is also a significant employing industry in these areas (10.2% and 9.1%). Table B.74 displays industries of employment proportions for each study area.

Sensitive

Table B.74 Industry of employment

	Local area (10 km SALs, totals)	Nearby regional communities (UCLs)		Regional Area (LGAs)			
Industry	Southern section	Cooranbong	Martinsville	Lake Macquarie	Central Coast	Hunter region	NSW
Agriculture, forestry and fishing	2.5%	1.1%	5.2%	0.4%	0.8%	2.0%	2.0%
Mining	1.5%	1.5%	1.6%	2.6%	0.5%	5.7%	1.0%
Manufacturing	6.4%	6.8%	4.7%	5.8%	5.9%	5.7%	5.5%
Electricity, gas, water and waste services	1.3%	1.3%	0.0%	1.4%	1.0%	1.4%	1.0%
Construction	13.2%	12.4%	15.6%	11.2%	11.5%	8.6%	8.6%
Wholesale trade	2.4%	1.9%	3.1%	2.2%	2.2%	2.2%	2.8%
Retail trade	8.8%	8.0%	8.9%	9.4%	10.2%	9.1%	9.0%
Accommodation and food services	5.3%	5.2%	0.0%	6.3%	7.0%	7.9%	6.2%
Transport, postal and warehousing	5.1%	4.5%	2.1%	3.8%	3.7%	3.8%	4.6%
Information media and telecommunications	0.8%	0.7%	0.0%	0.7%	1.7%	0.7%	1.8%
Financial and insurance services	2.0%	2.6%	3.1%	3.2%	3.3%	2.4%	5.3%
Rental, hiring and real estate services	1.0%	0.9%	1.6%	1.3%	1.6%	1.3%	1.7%
Professional, scientific and technical services	4.8%	4.6%	5.7%	5.7%	6.0%	5.6%	8.9%
Administrative and support services	2.8%	3.0%	2.1%	3.1%	3.3%	3.6%	3.2%
Public administration and safety	4.5%	4.0%	1.6%	5.6%	6.1%	6.3%	6.1%
Education and training	9.7%	11.6%	16.1%	9.2%	8.2%	8.3%	8.7%
Health care and social assistance	17.3%	20.3%	12.0%	19.1%	17.8%	16.5%	14.4%
Arts and recreation services	1.6%	1.0%	1.6%	1.1%	1.3%	1.2%	1.4%
Other services	5.0%	5.2%	0.0%	4.1%	3.8%	3.9%	3.4%

Source: ABS 2021, Census of Population and Housing: General Community Profiles.

ii Local businesses

In 2023 there were 26,266 registered businesses in the Central Coast LGA and 14,276 in the Lake Macquarie LGA. Within both LGAs, the most prevalent businesses were construction, professional scientific and technical services, and rental, hiring and real estate services. Figure B.23 displays number of businesses in the regional area.

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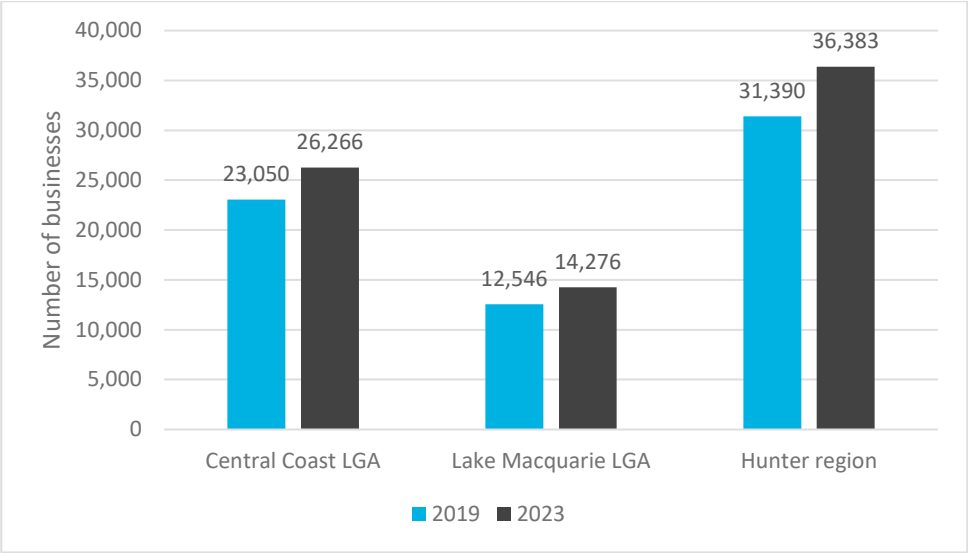


Source: ABS 2023, Data by region

Figure B.23 Number of businesses in the southern section of the regional area

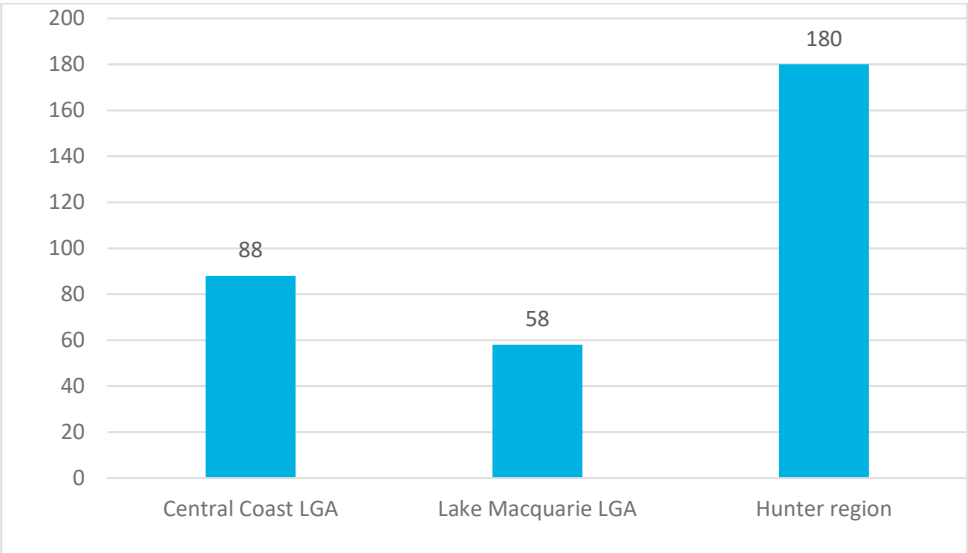
Table B.75 displays the more prevalent local businesses by industry in the regional area.

Table B.75 Most prevalent local businesses in the regional area by industry 2023

Area	First	#	Second	#	Third	#
Lake Macquarie LGA	Construction	3611	Professional, scientific and technical services	1731	Rental, hiring and real estate services	1524
Central Coast LGA	Construction	6502	Professional, scientific and technical services	3424	Rental, hiring and real estate services	2422

Source: ABS 2023, Data by region – Number of businesses by industry at 30 June 2023.

In 2024, there were 88 First Nations owned businesses registered in the Central Coast LGA, and 58 in the Lake Macquarie LGA. Figure B.24 provides data on indigenous businesses in the regional area.



Source: Supply Nation, Search Indigenous business direct

Note: Based on an assumption of search results, conducted August 2024

Figure B.24 Count of Indigenous businesses in the regional area

Sensitive

iii Tourism

Project infrastructure corridor runs along Jillby State Conservation Area, Oxley State Forest, Watagan State Forest, Corrabare State Forest and Pokolbin State Forest. Activities available at Jillby State Conservation Area include 4WD touring, mountain biking, horse riding, bush walking and bird watching. The Area has various walking trails, and picnic areas at Muirs lookout and Stoney Ridge. There are over 130 recorded bird species in Watagan Range. The area used for gatherings and celebrations such as weddings and birthdays. Tourism along the coastal LGAs such as Central Coast and Lake Macquarie is focussed on beach and lake-based activities.

In Lake Macquarie LGA and Central Coast LGA, tourism supports around 5% of total employment. Tourism in both LGAs is focussed on a range of nature-based recreation opportunities along the coastline, beaches and national and state parks. Tourism in the combined region remains a specialised and growing industry, with accommodation, food services and retail trade combining to add $2.5 billion to the local economy in 2020. Visitors were estimated to have spent $1.03 billion in 2021 (Department of Regional NSW, 2023). The Central Coast and Lake Macquarie region is a popular destination for day trips from Sydney and surrounds.

B.5.9 Social infrastructure

i Health and emergency services

As is the case in many regional areas the Lake Macquarie and Central Coast LGA have a lower proportion of GPs (116.3 per 100,000 and 116.0 per 100,000, respectively) compared to NSW (122.6 per 100,000). The same trend exists for total health professionals.

Table B.76 demonstrates the availability of GPs and total health professionals across the regional area.

Table B.76 Availability of health professionals, 2022

Area	GPs per 100,000 people (count)	Total health professionals per 100,000 people
Lake Macquarie LGA	116.3 (252)	253.5 (549)
Central Coast LGA	116.0 (405)	376.3 (1,314)
NSW	122.6 (10,014)	419.8 (34,281)

Source: PHIDU 2023

In Lake Macquarie LGA there were a range of medical and aged care facilities, including:

- hospitals
- osteopathic clinic
- Heal Specialist Urgent care
- multiple medical centres
- around 20 aged care facilities.

In Central Coast LGA there were a range medical and aged care facilities, including:

- hospitals
- multiple medical centres
- around 14 aged care facilities.

Sensitive

ii Education

Of the population in the local social locality attending an educational institution, most attend primary school (28.6%) and secondary school (21.4%). This trend extends to the regional communities of Cooranbong and Martinsville, with the most frequented education institutions being primary and secondary schools.

Primary and secondary schools are also the most frequented education institutions in the Lake Macquarie and Central Coast LGAs, with both LGAs having higher rates of attendance in primary and secondary schools compared to the Hunter Valley region and NSW. Of note, Martinsville has the highest attendance rate at a university at 18.1% of the population, followed closely by Cooranbong at 17.2%.

Table B.77 displays education institution attendance in 2021 across the social localities.

Table B.77 Education institution attendance, 2021

Area	Preschool	Primary	Secondary	Technical or further educational institution	University or other tertiary institution	Other type of education institution
Local area						
Southern section total	7.6%	28.6%	21.4%	10%	13.9%	1.7%
Nearby regional communities						
Cooranbong SAL	9.2%	32.1%	19.5%	7.9%	17.2%	1.9%
Martinsville SAL	6.0%	24.1%	21.7%	10.8%	18.1%	0%
Regional area						
Lake Macquarie LGA	8.6%	30.4%	22.8%	9%	12.3%	2.1%
Central Coast LGA	8.2%	28.3%	22.3%	9%	11%	1.9%
Hunter Valley region						
Newcastle LGA + Hunter Valley SA4	7.5%	27.7%	20.8%	8.9%	15.1%	2.1%
NSW	**6.8%**	**26.5%**	**20.9%**	**8.5%**	**15.3%**	**3.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles

a Primary and secondary schools

Lake Macquarie LGA features 4 schools, including 2 primary schools and two combined (K-8 and K-12) schools, with a total of 1348 students. There are two primary schools and no secondary schools in Central Coast LGA, with a total of 403 enrolled students. Table B.78 lists schools in the southern section.

Table B.78 Schools in the regional social locality

Area (LGA)	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Lake Macquarie	Cooranbong Public School	Government	Primary	K-6	274	17
Lake Macquarie	Avondale School	Non-government	Combined	K-12	870	61

Sensitive

Area (LGA)	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Lake Macquarie	Dora Creek Public School	Government	Primary	K-6	128	6
Lake Macquarie	Brightwaters Christian Collage	Non-government	Combined	K-8	76	6
Central Coast	Mannering Park Public School	Government	Primary	K-6	225	17
Central Coast	Wyee Primary	Government	Primary	K-6	178	13

Source: ACARA 2021, My School

b Tertiary and vocational

There are 2 major tertiary educational facilities in the regional social locality, the University of Newcastle (36,936 enrolments) and Avondale University (1495 enrolments).

Table B.79 Schools in the regional social locality

Area	School	Sector	Type	Year range	Student enrolments	Teaching staff (FTE)
Lake Macquarie	Avondale University	Private	Tertiary	-	1495 (2023)	56 (2023)
Newcastle	University of Newcastle	Public	Tertiary	-	36,936 (2022)	1077 (2022)

Source: Google Maps

B.5.10 Health and wellbeing

i Socio-economic disadvantage

The SEIFA provides the following indicators of relative disadvantage and advantage in the population:

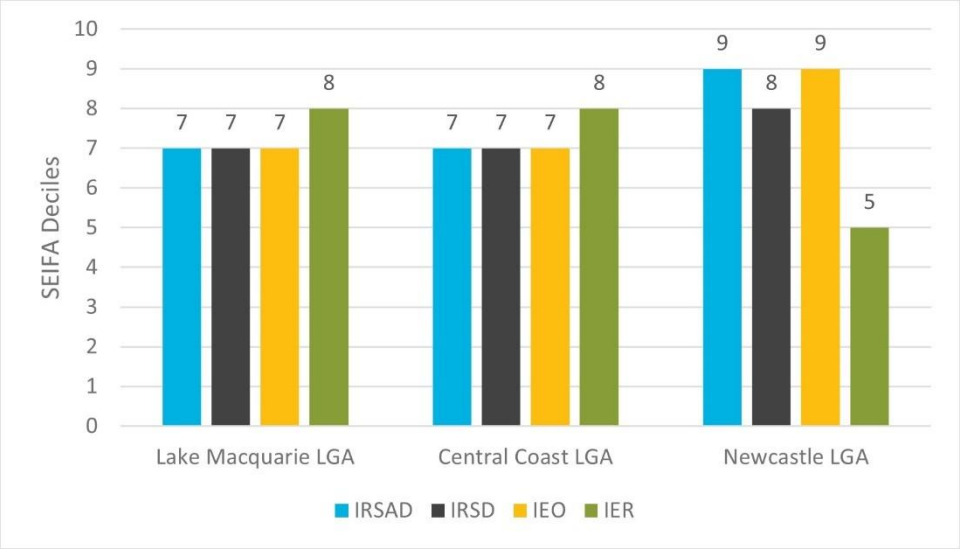
- the Index of Relative Socio-Economic Disadvantage (IRSD)
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)
- the Index of Education and Occupation (IEO)
- the Index of Economic Resources (IER).

The SEIFA decile ranking system allocates the lowest 10% of areas to the decile number of 1 and the highest 10% of areas to a decile number of 10. While there are variations to interpreting the decile scores across the four indexes, generally a low decile rank is associated with disadvantage, and a high decile rank is associated with less disadvantage. The decile score is relative to comparable geographies (i.e. other SALs or LGAs), and hence the score represents a ranking (or position) within NSW. As such, in lieu of comparing ranking to NSW, these scores can be interpreted as their relative position in NSW.

The rankings recorded across the regional area for each of the 4 summary measures is provided in Figure B.25.

Residents of Lake Macquarie and Central Coast LGAs experience relatively low socioeconomic disadvantage, both with IRSAD scores of 7, placing it in the top 30% of LGAs in NSW.

Sensitive



Source: ABS 2021, Socio-Economic Indexes for Areas (SEIFA), Australia

Figure B.25 SEIFA deciles for regional area, 2021

Across all of the social localities, mental health (depression and anxiety) and asthma are the dominant chronic health conditions, as is the case at the Hunter region and NSW. Notably the local social locality and particularly the township of Martinsville has the highest proportion of mental health conditions at 12.7% and 14.0%, respectively which is above the NSW benchmark of 8.0%. Asthma is most prevalent in the Lake Macquarie LGA at 10.2%, which is higher than the NSW benchmark (7.8%) but comparable to the Hunter region (10.1%). The sub-regional area featured the most people with one or more chronic health conditions at 37.5%.

Table B.80 displays selected long term health conditions across the southern section of the social localities.

Table B.80 Long-term health conditions, 2021

Area	Has one or more long-term health condition	Asthma	Diabetes (excluding gestational diabetes)	Cancer (including remission)	Lung condition (including COPD or emphysema)	Mental health condition (including depression or anxiety)
Local area						
Southern section total	37.5% (6622)	9.6%	6.3%	4.2%	2.9%	12.7%
Nearby regional communities						
Cooranbong SAL	33.8% (2394)	9.6%	5.6%	3.4%	1.9%	10.8%
Martinsville SAL	34.4% (134)	9.0%	3.1%	4.9%	2.8%	12.1%
Regional area						
Lake Macquarie LGA	35.6% (76,052)	10.2%	5.6%	3.8%	2.5%	12.0%
Central Coast LGA	33.9% (117,462)	9.6%	5.5%	3.7%	2.7%	11.0%

Sensitive

Area	Has one or more long-term health condition	Asthma	Diabetes (excluding gestational diabetes)	Cancer (including remission)	Lung condition (including COPD or emphysema)	Mental health condition (including depression or anxiety)
Hunter region						
Newcastle LGA + Hunter valley SA4	33.6% (37,931)	10.1%	5.3%	3.2%	2.2%	12.1%
NSW	**27.0% (2,177,225)**	**7.8%**	**4.8%**	**2.8%**	**1.7%**	**8.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

ii Crime and community safety

Data from the NSW Bureau of Crime Statistics and Reporting (2024) shows that theft was the most prevalent offence in both the Lake Macquarie and Central Coast LGAs, with a respective 5208 and 7691 offences recorded. In Lake Macquarie LGA, the crime with the highest growth in the 24 months leading to March 2024 was stealing from a retail store which rose by 56.3%. In Central Coast the highest growth was motor vehicle theft, which had an upward trend of 39.2%.

Domestic violence offences did not increase in the Central Coast LGA during the 24 months to March 2024, and relative to other areas the incremental rate of increase (9.4%) was not high in the Lake Macquarie LGA (NSW Bureau of Crime Statistics and Research, 2024).

Table B.81 details the number of recorded offences in the regional area, in the year to March 2024.

Table B.81 Number of recorded incidents by offence, April 2023-March 2024

LGA	Assault	Domestic violence related assault	Sexual offences	Malicious damage to property	Theft*	Drug offences
Lake Macquarie	759	862	507	1341	5208	742
Central Coast	1504	1778	854	2394	7691	1875

*Sum of all theft related offences, including robbery

Source: NSW Bureau of Crime Statistics and Reporting, Crime Statistics by LGA, March 2024

Note: "Sexual offences" is inclusive of sexual assault, sexual touching, sexual act and other sexual offences.

iii Vulnerability

Vulnerability relates to a group's capacity to adapt to, or cope with, changes to their social environment (Cutter, et al., 2008). There are certain demographic and social characteristics that may indicate some groups are more vulnerable than others. Broadly, social indicators associated with vulnerability include:

- age, such as the very young and the elderly who are more likely to require care and may by financially dependent on the working population (people aged 15 to 64)
- socio-economic status, such as people who are recipient of welfare, reside in social housing, or who are unemployed

Sensitive

- people with a need for assistance, such as those people requiring assistance in the core activities of self-care, mobility or communication because of disability, long-term health condition, or old age
- culturally and linguistically diverse (CALD) populations, such as those who live in households where a non-English language is spoken.

iv Vulnerable groups

As outlined in Table B.82, within the local area there are a relatively high proportion of persons who are elderly (26.4%), under 14 years (16.9%) and of one parent families with children (15%). Rental stress is also elevated in Cooranbong (39.2%) and Lake Macquarie LGA (37%), which is higher than the NSW rate of 35.5% and Hunter regional area (35.3%). The Lake Macquarie LGA also features an elevated rate of people residing in social housing (19.5%) compared to all other localities, and the Hunter region and NSW rates (14.4% and 12.8%, respectively).

Sensitive

Table B.82 Vulnerable groups

Area	Population	People aged 14 and under	People aged 65+	Youth (15- 24)	Renter households where rent payments are greater than or equal to 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
Local area (SALs within 10 km)											
Southern section total	17,664	16.9% (2987)	26.4% (4657)	11.5% (2023)	-	15% (712)	9.4% (1656)	6% (80)	4.6% (353)	4.4% (770)	0.6% (109)
Nearby regional communities (UCLs)											
Cooranbong	7,077	20% (1413)	22.8% (1612)	11.3% (797)	39.2% (209)	13.9% (268)	7.6% (540)	3.6% (19%)	4.4% (142)	5.9% (416)	0.6% (42)
Martinsville	389	13.9% (54)	26.7% (104)	11.1% (43)	33.3% (6)	7% (8)	7.2% (28)	0	3.1% (6)	3.3% (13)	0
Regional area (LGAs)											
Central Coast	346,596	18% (62,352)	22.2% (76,944)	11.2% (38,762)	14.7% (6582)	19.2% (18,194)	7% (87.5%)	12.3% (4437)	4.7% (7463)	6.5% (22,559)	0.9% (2956)
Lake Macquarie	213,845	18.1% (38,761)	22% (47,081)	11.2% (23,994)	37% (6938)	17.5% (10,523)	7.2% (15,456)	19.5% (3661)	4.6% (4662)	4.9% (10,475)	0.6% (1295)
Hunter region											
total	460,819	18.3% (84,263)	18.4% (84,957)	12.6% (57,912)	35.3% (18,709)	17.6% (17.6%)	6.7% (30,689)	14% (7393)	4.8% (10,879)	5.8% (26,634)	0.9% (3992)

Sensitive

Area	Population	People aged 14 and under	People aged 65+	Youth (15- 24)	Renter households where rent payments are greater than or equal to 30% of household income	One-parent families with children	People who need assistance	People who reside in social housing	Unemployed	Households where a non-English language is used	Does not speak English well or at all
NSW	**8,072,163**	**18.2% (1,470,012)**	**17.6% (1,424,135)**	**11.8% (954,079)**	**35.5% (335,404)**	**15.8% (337,729)**	**5.8% (464,712)**	**12.8% (84,732)**	**4.9% (84,732)**	**22.4%**	**4.5%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

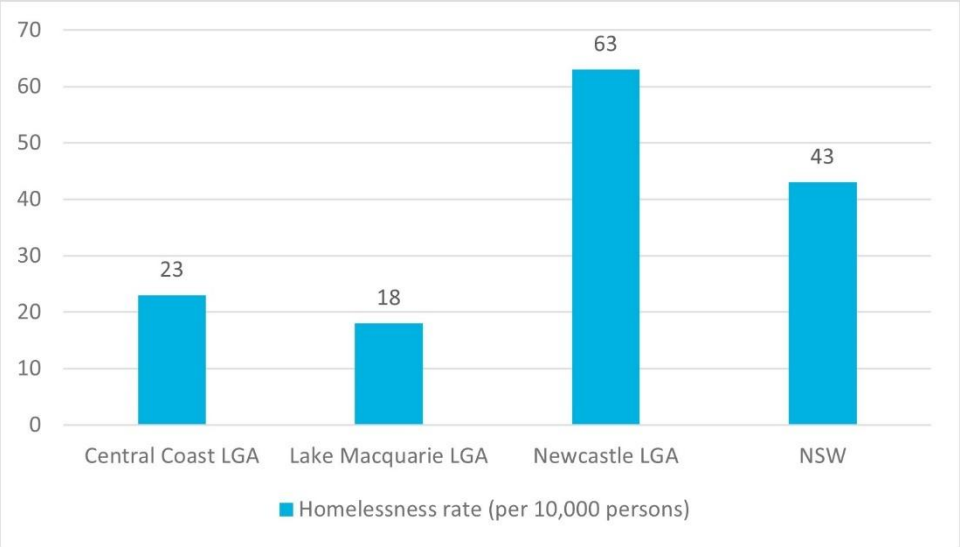
Note: proportion of social housing is based on number of rented private dwellings

Sensitive

v Homelessness

The Central Coast LGA has a homelessness rate of 23 (people per 100,000), which is lower than the NSW rate of 43 people (per 100,000) and Newcastle rate of 63 per 100,00 persons. Lake Macquarie's homelessness rate (18 per 100,000 people) is also notably lower than the NSW rate and Newcastle rates. Both LGAs had a combined total of 1182 homeless people in the 2021 census, only marginally higher than that of Newcastle at 1073 people.

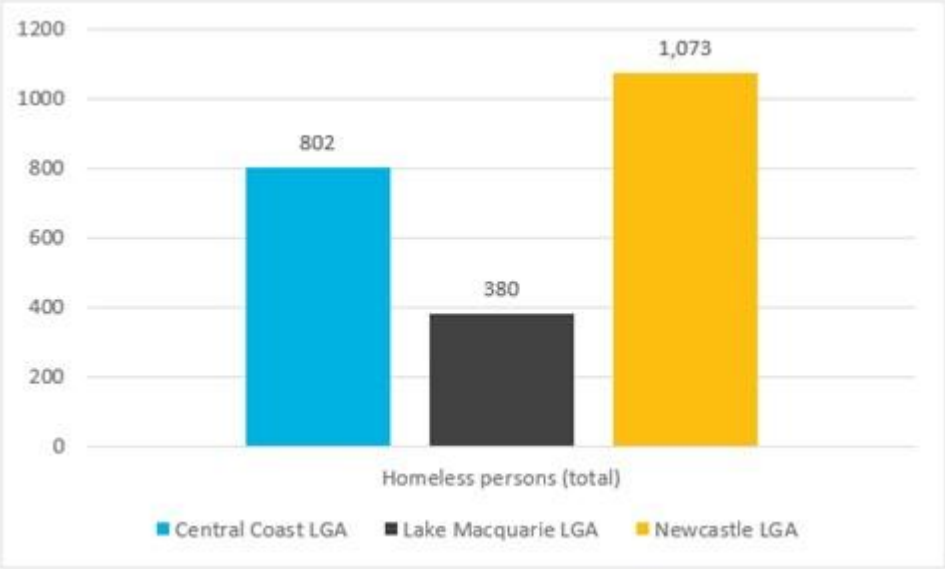
Figure B.26 provides the homelessness rate per 10,000 persons in the regional area and NSW.



Source: Source: ABS 2021, Estimating Homelessness: Census

Figure B.26 Homelessness rate per 10,000 persons – southern section

Figure B.27 provides the number of homeless persons in the regional area and NSW.



Source: ABS 2021, Estimating Homelessness: Census

Figure B.27 Number of homeless people in regional area – southern section

vi Voluntary work

The highest rates of volunteerism occurred in Martinsville (27.2%) and Cooranbong (18.7%), notably higher than the Hunter region and NSW rates (13.1% and 13.0% respectively). The lowest volunteering rates occurred in the Central Coast LGA (12.1%).

Table B.83 shows the rates of voluntary work across the study area.

Table B.83 Voluntary work in the study area

Area	Have participated in voluntary work in the last 12 months (total)	Have participated in voluntary work in the last 12 months (proportion)
Local area		
Southern section	2378	16.2%
Nearby regional communities		
Cooranbong SAL	1062	18.7%
Martinsville SAL	92	27.2%
Regional area		
Lake Macquarie LGA	23,087	13.2%
Central Coast LGA	34,473	12.1%
Hunter region		
Newcastle LGA + Hunter Valley SA4	49,273	13.1%
NSW	**857,891**	**13.0%**

Source: ABS 2021, Census of Population and Housing: General Community Profiles and QuickStats

B.6 Forests of the Watagans Mountains

The Forests of the Watagans Mountains are a popular nature-based tourist destinations locally, regionally and for the large population centres of Sydney, Newcastle and the Central Coast. Key features of the forest include:

- Jilliby State Conservation Area: Although the HTP corridor avoids the Jilliby State Conservation Area a number of access roads and upgrades are located in the south of the area. Activities available at Jilliby State Conservation Area include 4WD touring, mountain biking, horse riding, bush walking and bird watching. The area has various walking trails, and picnic areas at Muirs Lookout and Stoney Ridge.
- In Olney State Forest: located in the Watagan Mountains is a well-known destination for nature lovers and adventure seekers. It offers a range of activities including walking trails such as the Great North Walk, camping areas, picnic spots (e.g. the Pines Forest Park) and adventure tourism.
- Corrabare State Forest: offers opportunities for hiking, birdwatching, and exploring rugged landscapes. This includes the Corrabare State Forest Loop via Rocky Ridge and Lynch's Trail and the Corrabare North Flora Reserve. The forest is part of a regional habitat corridor that supports many threatened native animal species, including koalas and forest owls.
- Pokolbin State Forest; combines natural beauty with outdoor adventure including the Yellow Rock Lookout, Broken Back Road Trail. The forest is rich in diverse flora and fauna, making it ideal for nature enthusiasts.

- Watagan State Forest: is known for its walking trails such as the Gap Creek Falls Walking Track, camping areas and lookouts (e.g. Monkey Face). It is rich in Aboriginal cultural heritage, with over protected sites showcasing art, engravings, and historical significance. In addition, there are over 130 recorded bird species in the Watagan Range. The area used for gatherings and celebrations such as weddings and birthdays (Department of Regional NSW, 2023).

B.7 Regional social and environmental initiatives

The are numerous development projects in the regional social locality that are expected to enhance social infrastructure and regional community capacity, a selection include:

- Cessnock Education Precinct is in the planning stage, with delivery expected by 2028. (NSW Department of Education, 2025)
- Hunter Valley Flood Mitigation Scheme Upgrades, which aims to enhance resilience in flood-prone areas including Singleton and Muswellbrook, with works anticipated to continue through 2025
- the Hunter Valley Operations (HVO) provide funding for community and environmental projects. These grants support local initiatives such as leadership workshops for students, mental health awareness programs, and environmental conservation
- the Hunter Regional Plan 2041 focuses on sustainable growth, housing, and lifestyle opportunities to strengthen the region's economy and community character
- programs by Hunter Local Land Services aim to protect threatened species, restore habitats, and manage biodiversity across the region
- Climate Ready Aquaculture: This project supports oyster farmers in adapting to climate change while improving sustainability and productivity.

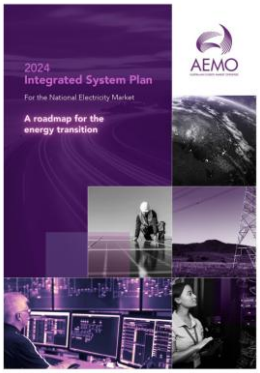
Appendix C

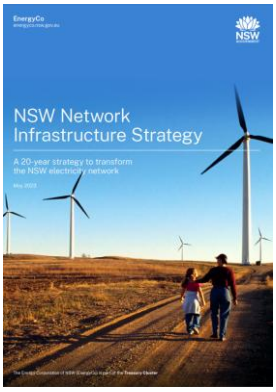
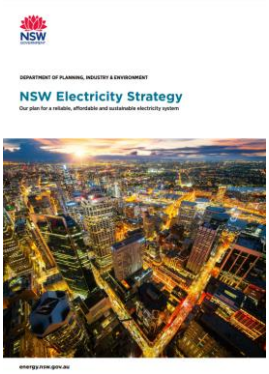
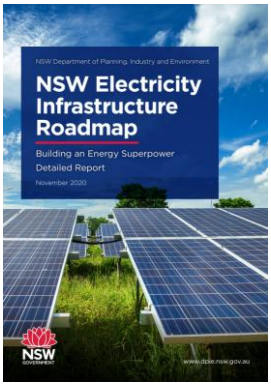
Supporting information – planning and policy guidance

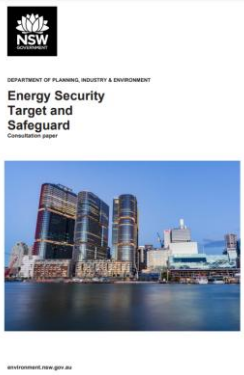
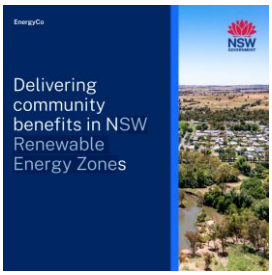
EMM
creating opportunities

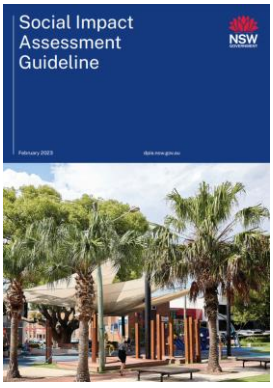
C.1 State strategies, plans, and guidelines

This attachment provides a summary of various studies that provide additional context to project planning. Areas include land use planning, managing and coordinating cumulative impacts and benefits from Roadmap projects.

Name	Description and relevance to the project
Community and Employment Benefit Program, (EnergyCo, 2024) 	The NSW Electricity Infrastructure Roadmap (the Roadmap) is the NSW Government's plan to transition the NSW electricity market to renewable energy sources, including achieving 12 gigawatts (GW) of renewable energy generation and 2 GW of long duration storage by 2030. The Roadmap is enabled by the Electricity Infrastructure Investment Act 2020 (EII Act) and the Electricity Infrastructure Investment Regulation 2021 (EII Regulation). To support this transition, the Community and Employment Benefit Program (the Program) will invest millions of dollars into regional communities in Renewable Energy Zones (REZ) so that the benefit of this transition is shared by more people. The Program aims to leave communities that host the required infrastructure in a better position than they were before the energy transition began. It is about making a serious contribution to the prosperity of regional communities and leaving a long-term legacy. There will be a range of projects, programs or services delivered, including those that provide immediate outcomes as well as those that contribute to the long term economic, social or environmental benefit of the community over time. This may be coordinated with other programs or investment such as from local, State or Federal levels of government and/or the renewable energy industry. Upfront consultation with local communities, First Nations organisations, councils and other stakeholders will be undertaken in each REZ, to ensure that local priorities are reflected in the design of the program.
Integrated Systems Plan (ISP), Australian Energy Market Operator (AEMO, 2024) 	AEMO's *Integrated System Plan* (ISP) is a roadmap for the transition of the National Electricity Market (NEM) power system, with a clear plan for essential infrastructure that will meet future energy needs. The ISP's optimal development path (ODP) sets out the needed generation, storage and network investments to transition to net zero by 2050 through current policy settings and deliver significant net market benefits for consumers. Published every 2 years, the ISP modelling approach applies the inputs to four separate yet integrated analytical models to find the optimal mix of generation, storage and transmission. The objective is to determine an 'optimal development path' (ODP) that will meet the NEM power system's reliability and security needs, aligned with government emissions reduction and other policies, at the lowest long-run cost to consumers. In addition to connecting consumers, distribution networks will host consumer energy resources (CER) and some utility-scale renewable and storage projects – facilitating coordinated two-way flow of electricity between grids. The ISP assumes that upgrades and other investments necessary for enabling distribution networks and their operation will be addressed through other mechanisms, ultimately supporting the forecasted levels of CER and their integration. The Project is an urgent NSW Actionable Project under the ISP. The project involves building a new 100-kilometre 500 kilovolt (kV) transmission line between Bayswater in the Upper Hunter and Olney in the Lower Hunter to connect the State's existing 500 kV transmission lines. This will help create a 500 kV ring of transmission infrastructure that will provide the backbone of the State's new electricity grid.

Name	Description and relevance to the project
NSW Network Infrastructure Strategy (EnergyCo, 2023) 	EnergyCo will work with AEMO, Transgrid and distribution network service providers to practically coordinate network infrastructure with NSW's generation, storage and firming infrastructure, and oversee the delivery of REZs. It will work to foster support in local communities by minimising impacts and maximising benefits, and support investors to build vital infrastructure for NSW at lowest cost to energy consumers. The NSW Network Infrastructure Strategy (the 'strategy') sets out a clear plan for NSW's network infrastructure, including the modernisation projects needed and their proposed timing. The Strategy is for the practical coordination of NSW network infrastructure to connect new generation, firming and storage in NSW's five Renewable Energy Zones (REZs), and otherwise to assist NSW meet the EII Act objectives. The strategy proposes Network Infrastructure Options with a total capacity of 14 GW to be delivered as soon as practicable over the next decade (by 2033), and further options to be considered for delivery beyond 2033. The project is a 'Deliver Now' project under the Network Infrastructure Strategy for NSW to support the delivery of the NSW Electricity Infrastructure Roadmap.
NSW Electricity Strategy (DPIE, 2019) 	The *NSW Electricity Strategy* (DPIE 2019) is the NSW Government's plan for a reliable, affordable and sustainable electricity future supporting a growing economy. The Strategy aims to improve the efficiency and competitiveness of the NSW electricity market and encourage investment in new price-reducing generation and energy-saving technology. The Strategy is underpinned by 4 important principles: • new market-driven electricity generation to reduce prices and help protect the environment. This is because firmed renewables are the cheapest form of new reliable generation and cheaper than the current wholesale price • as electricity is an essential service, State and Commonwealth governments are ultimately responsible for reliable electricity • government action should limit costs to households, businesses and taxpayers • government action should be consistent with the nature of the national electricity system and NSW policy objectives. The Strategy sets out an approach to respond to emerging challenges by: • delivering coordinated Renewable Energy Zones in NSW • saving energy, especially at times of peak demand via the Energy Security Safeguard • supporting the development of new electricity generators • setting a target to bolster the State's energy resilience • reducing risk for investors in NSW. The Project involves building a 100 km 500 kV transmission line between Bayswater in the Upper Hunter and Olney in the Lower Hunter to connect the State's existing 500 kV transmission lines. This will help create a 500 kV ring of transmission infrastructure that will allow distribution around the National Electricity Market (NEM).
NSW Electricity Infrastructure Roadmap (DPIE, 2020a) 	The *NSW Electricity Infrastructure Roadmap* (DPIE 2020b), enabled by the Electricity Infrastructure Investment Act 2020 (NSW), the Roadmap builds on the framework set out by the *NSW Electricity Strategy* (DPIE 2019). It sets out a rationale for the policies and programs that are specifically designed to attract and secure large-scale investment in new electricity infrastructure. The *Roadmap* (DPIE 2020b) recognises the findings of AEMO's 2020 *Integrated System Plan* (ISP) which finds that by mid-2030, NSW could need up to 2.3 GW of storage with 4 to 12 hours of duration to maintain system reliability and security under most scenarios. The Project is a priority transmission infrastructure project (PTIP) under the NSW *Electricity Infrastructure Investment Act 2020* (EII Act) because it is essential for energy security and avoiding breaches of the NSW Energy Security Target.

Name	Description and relevance to the project
NSW Energy Security Target and Safeguard (DPIE, 2020b) 	The objective of the *NSW Energy Security Target and Safeguard* is to give the market certainty about how much new electricity is needed to deliver a reliable energy system over the medium to long term, in response to the retirement of several large coal-fired generators. The *NSW Energy Security Target and Safeguard* was established under the *Electricity Investment Act 2020* and is equivalent to the maximum demand experienced in NSW every 10 years, plus a reserve margin. AEMO has been appointed as the Energy Security Target Monitor and its latest report released in October 2023 predicts a target breach in 2025-26 to 2032-33, when Eraring Power Station in the SNW sub-region retires. This signals the urgent need for new generation and transmission infrastructure to ensure energy security for NSW consumers. The Project involves building a 100 km 500 kV transmission line between Bayswater in the Upper Hunter and Olney in the Lower Hunter, supports this by enhancing the transmission network's capacity and reliability. This will help create a 500 kV ring of transmission infrastructure allowing distribution around the National Electricity Market (NEM).
Net Zero Plan Stage 1: 2020 – 2030 (DPIE, 2020c) 	The *Net Zero Plan Stage 1 2020–2030* (DPIE 2020) is the foundation for NSW action on climate change. It outlines the NSW Government's plan to grow the economy and create jobs while helping the State to deliver a 50% cut in emissions compared to 2005 levels. Implementing the Net Zero Plan and the Electricity Roadmap, will result in more than 9000 jobs and up to $37 billion in private investment, with the majority expected to occur across regional NSW. The Project will contribute to this plan by reducing carbon emissions by producing clean energy. The Project contributes to Priority 1 of four priorities identified in the Plan: 'Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living.' The Project will do this by providing 5 gigawatts (GW) of additional transfer capacity in the region to connect multiple sources of renewable generation and storage infrastructure, ensuring electricity security for regional NSW. Electricity will be imported to the core grid via the 500 kV Ring and then delivered via the existing transmission network to NSW consumers, particularly in the Hunter, Sydney and Illawarra where 80% of the State's electricity is used.
Delivering community benefits in NSW Renewable Energy Zones (EnergyCo, 2023) 	Developed by EnergyCo, the plan recognises that regional communities will host much of the new energy infrastructure. It will be important to minimise impacts and maximise benefits to local communities. The document sets out the plan to make sure regional communities see lasting tangible benefits from the energy transition. Initiatives under the plan include benefits for landowners including host payments, and benefits for local communities including community benefit initiatives to be designed in consultation with local communities. The plan recognises that new transmission infrastructure is designed to minimise potential land use and property impacts. Other impacts include road upgrades, housing and accommodation, community infrastructure and services. Potential benefits include improvements to mobile and internet connectivity. The Project is relevant to this plan as it is the key transmission infrastructure required to develop the Central West Orana and New England REZs.

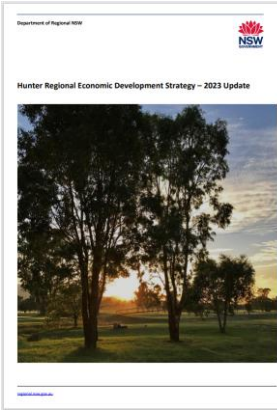
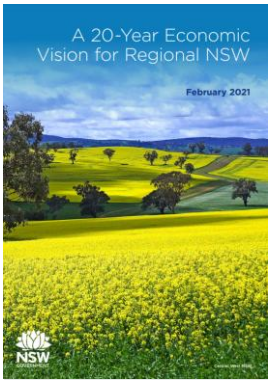
Name	Description and relevance to the project
Employment, Skills, and Supply Chains: Renewable Energy in NSW (Briggs, et al., Employment, Skills and Supply Chains: Renewable Energy in NSW, 2022) 	Commissioned by the NSW Renewable Energy Sector Board and DPHI, this assessment of employment and industry development opportunities associated with the Electricity Infrastructure Roadmap. The report details renewable energy supply chains, employment and skills and provides a skill and employment assessment for each REZ. The report is relevant to identifying and assessing potential social impacts and benefits associated with the project. The report provides insights into regional and broader drivers and an assessment of workforce and skill requirements across the life of projects, which is drawn upon in the baseline section (see *Chapter 5 (Existing environment)*) of this report to build a more nuanced basis for assessing potential impacts. Some overall findings from this report include: • the pace of change in the energy sector poses a challenge to predicting and planning for local workforce capacity and up-skilling • skills shortages emerged as the number one identified constraint during stakeholder interviews • short construction timeframes and uncertainty on contracts discourage investment in training workers and can even deter new entrants.
NSW Climate Change Policy Framework (OEH, 2016) 	The *NSW Climate Change Policy Framework* defines the NSW Government's role in reducing carbon emissions and adapting to the impacts of climate change. It commits NSW to achieving net zero emissions by 2050 and sets policy directions to help guide implementation of the Framework. The Project contributes to this Policy by providing 5 gigawatts (GW) of additional transfer capacity in the region to enable multiple sources of renewable generation and storage infrastructure to be connected, to ensure electricity security for regional NSW. Electricity will be imported to the core grid via the 500 kV Ring and then delivered via the existing transmission network to NSW consumers, particularly in the Hunter, Sydney and Illawarra where 80% of the State's electricity is used.
Social Impact Assessment Guideline for State Significant Projects (DPE, 2023a) 	The Social Impact Assessment Guideline for State Significant Projects (SIA Guideline) provides direction on assessing social impacts arising from State significant projects in the context of the environmental impact assessment process under the EP&A Act. The SIA Guideline states that SIA is the process of identifying, predicting, evaluating. and developing responses to the social impacts of a proposed State significant project which requires proportionate and tailored assessment to suit each project's context and the nature and scale of its potential impacts and benefits. The SIA Guideline requires that all State significant projects have a clear and consistent approach to assessing social impacts. The SIA Technical Supplement 202*3* accompanies the SIA Guideline to provide specific methods and techniques for the identification and assessment of social impacts and benefits (DPE 2023a). This SIA has been developed in reference to the requirements set out in the SIA Guideline, which is described in *Chapter 3 (Assessment methodology)* which responds to SIA review questions to demonstrate SIA Guideline fulfilment.

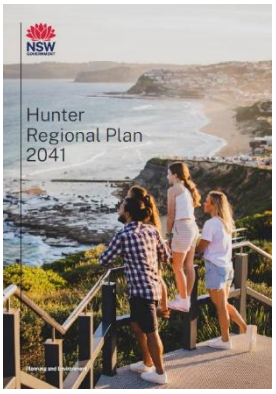
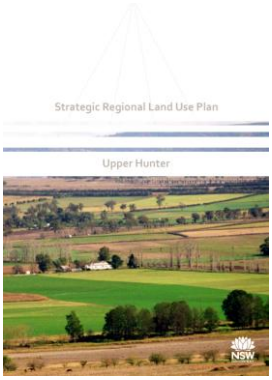
Name	Description and relevance to the project
Undertaking Engagement Guidelines for State Significant Projects (DPE, 2022b) 	The *Undertaking Engagement Guidelines for State Significant Projects* describes the requirements for effective engagement on State significant projects in NSW. The engagement guidelines outline requirements for proponents to engage with the community, councils and government agencies at each environmental assessment phase. The engagement guideline also outlines the actions that DPE will take and identifies opportunities for community participation during each phase. It emphasises early planning and engagement, effective engagement, proportionate engagement, innovation, and transparency. The primary audience of this guideline is proponents and their teams, who are responsible for engaging with the community and other stakeholders during each phase of the environmental assessment process. The engagement guidelines also give the community and other stakeholders a better understanding of how, when and on what they can provide feedback and how proponents and decision-makers will address it. The *Undertaking Engagement Guidelines for State Significant Projects has* informed the SIA engagement activities carried out for this SIA, which are described further in *Chapter 4 (Stakeholder engagement)*.

C.2 Local government strategies and plans

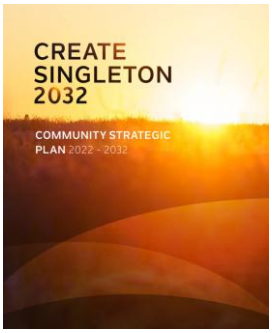
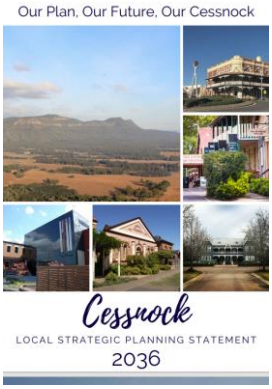
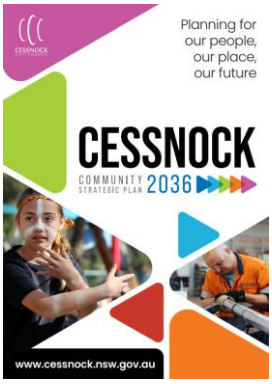
This section summarises the relevant plans and strategies for the Muswellbrook, Singleton, Cessnock, Central Coast, and Lake Macquarie Councils. Community strategic plans describe the community's vision and long-term aspirations for an LGA and defines Council's goals, strategies, and actions. A summary of these plans and strategies' relevance to the project, is provided in Table C.1.

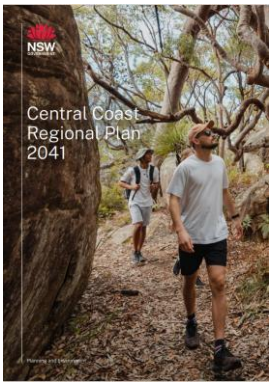
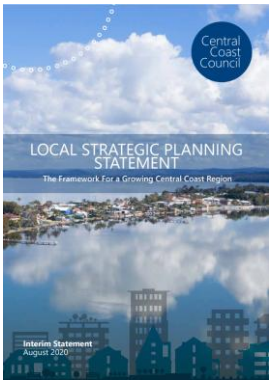
Table C.1 Local government strategies and plans

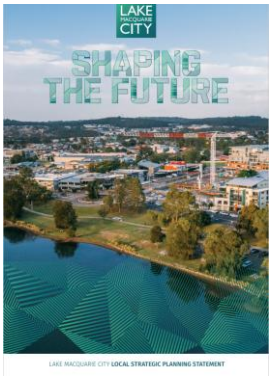
Name	Description and relevance to the project
Economic Development Strategy for Regional NSW (NSW Government 2023) 	The *Economic Development Strategy for Regional NSW* (NSW Government 2023) guides the long-term economic vision and associated strategy for the Hunter region. The Hunter Region covers LGAs, including Muswellbrook and Singleton LGAs. The vision for the Hunter Region is 'to enhance resilience and drive sustainable, long-term growth'. The key priorities include 'economic diversification, leveraging existing assets for future growth and maintaining amenity in the face of a growing population'. The *Economic Development Strategy* highlights several strategies to address the priorities. Strategies relevant to the Project include: • diversify the region's economy to build resilience while leveraging opportunities presented by transformative change in the mining and energy sectors • invest in development of the region's local workforce capability and capacity. The Project will support this strategy through its contribution to provision of reliable, affordable and sustainable electricity that supports a growing regional economy. The project also supports economic diversification and the hiring of a regional workforce. This could result in the upskilling and reskilling of workers to ensure the region's energy generation workforce is well-equipped for the transition to renewable energy.
A 20-Year Economic Vision for Regional NSW 2018–2038 (NSW Government 2021) 	*A 20-Year Economic Vision for Regional NSW 2018–2038* (the 20 Year Economic Vision) presents a strategy with NSW government priorities for Regional NSW. The strategy provides an overview of the current economic and demographic environment, including the external economic forces impacting regional growth. The 20 Year Economic Vision identifies that the Hunter region is Australia's largest regional economy, valued at over $40 billion. While the cumulative impacts of recent shocks have affected the tourism sector, the NSW Government has identified opportunities to accelerate recovery through investments in the Williamtown Special Activation Precinct, renewable energy and a range of infrastructure. The Project will facilitate investment opportunities in renewable energy, particularly energy generation and storage, supporting the regional economy. The project will support the Vision through its contribution to the provision of reliable, affordable and sustainable electricity that supports a growing regional economy.

Name	Description and relevance to the project
Hunter Regional Plan 2041 **Invalid source specified.** 	The *Hunter Regional Plan 2041* applies to the Hunter Region which includes the LGAs of Cessnock, Dungog, Lake Macquarie, Maitland, Mid-Coast, Muswellbrook, Newcastle, Port Stephens, Singleton and Upper Hunter. The Plan recognises that a critical issue for the region is the need for economic diversification. Traditional industries of mining, energy and manufacturing present opportunities to transform to cleaner, renewable energy sources. The project will facilitate investment opportunities in renewable energy, particularly energy generation and storage, supporting the regional economy.
Upper Hunter Strategic Regional Land Use Plan (DPI, 2012) 	The *Upper Hunter Strategic Regional Land Use Plan* (the Plan) provides a strategic framework for land use within the Upper Hunter Region to help inform government investment priorities, servicing strategies and local environmental plan making to improve environmental outcomes and reduce land use conflict. The Plan emphasises the need to minimise land use conflicts that arise from coal mining activities and balance economic growth in the region, whilst protecting agricultural lands and managing natural resources sustainably. Key challenges and actions defined in the Plan focus on balancing agriculture and resource development, infrastructure, economic development, employment, housing, cultural heritage, community health and amenity, natural hazards, climate change and the environment. Objectives of the Plan are: • protect agricultural land and water resources and ensure security and clarity for mining and agriculture • provide enhanced future opportunities for sustainable mining and agricultural industries • ensure a sufficient and balanced response to infrastructure provision across all key industries • ensure an adequate supply of labour for the needs of Upper Hunter industries and improve access to employment and training • develop economic resilience and diversify the region's economy. The project will facilitate investment opportunities in renewable energy, particularly energy generation and storage, and support all sectors of the regional economy through the provision of reliable, affordable and sustainable electricity.
Muswellbrook Shire 2022–2032 Community Strategic Plan (Muswellbrook Shire Council, 2022)	The 2022–2032 Community Strategic Plan (Muswellbrook Shire Council 2022) aims to develop a comprehensive and well-coordinated strategy to assist in the energy transition in the Hunter. The Plan establishes the shared visions and aspirations for Muswellbrook Shire and the future direction of the local community. The goals within the Plan consider State priorities and Government plans 'to grow the economy, deliver infrastructure, protect the vulnerable, reduce human impacts on the environment and improve health, education and public services'. Overarching aspirations outlined in the Community Plan are as follows: • emphasise community wellbeing within decision making • establish inclusivity and full participation within the community • encourage culturally diverse communities within the Shire with strong identities and a shared sense of place • develop a local economy with full employment and diverse, high value industries • pioneer environmental sustainability. The Community Plan recognises the need to improve economic viability and ensure job security. This derives from the impacts of mine closures on the local economy and the uncertainty surrounding the future of coal mining. The project aligns with the Plan as it will contribute to providing reliable, affordable and sustainable electricity that supports a growing local economy.

Name	Description and relevance to the project
Muswellbrook Local Strategic Planning Statement 2020 – 2040 (Muswellbrook Shire Council 2020) 	The Muswellbrook Local Strategic Planning Statement identifies key outcomes Council aims to achieve when developing policies and making land use decisions. The strategic vision for Muswellbrook Shire encourages a transition towards a more sustainable community, environment and economy through diversification, to be achieved by: • developing the Muswellbrook Shire as the major innovative energy centre and food bowl in NSW • becoming a major regional location for tertiary education services • establishing a diverse visitor economy • celebrating natural, cultural and Aboriginal heritage, landscapes and biodiversity • establishing higher order services and facilities, specifically aged care, housing opportunities and entertainment facilities • becoming a leading location for the equine industries. Planning Priorities that the Project contributes to include: 'Planning Priority 1: Our Shire embraces technology and innovation' identifies that a production and distribution of energy will continue in the Shire with a shift to renewable technologies... 'Planning Priority 3: The mineral resource and power generation industry is productive, accountable and considerate of surrounding land uses. 'Planning Priority 8: Our Town Centres and Villages are places of economic growth, business diversification and employment opportunities. 'Planning Priority 18: We adapt to climate change and build climate and hazard resilience' encourages investment in renewable energy generation projects and infrastructure. Planning Priority 1, 3, 8 and 18 will be supported by the project.
Singleton Local Strategic Planning Statement 2041 (Singleton Council, 2020) 	The *Singleton Local Strategic Planning Statement* 2041 (the Statement) provides the agreed 20-year vision for land use and development in Singleton LGA. The Statement outlines the key focus areas for local planning direction and provides a context for current and future planning and land use within Singleton. The Statement establishes key policy priorities supported by actions to encourage diversity and innovation within the local economy. Five themes relate to the local community, environment, economy and government, with several objectives detailed throughout each theme. The objectives aim to: • develop an inclusive and resilient community • ensure the region is well-planned, sustainable and safe • protect and enhance the local environment and encourage sustainability • develop a diverse economy. The Singleton Planning Statement emphasises the need to plan for sustainable a post-mining transition that enhances agricultural productivity in the region and ensures that rehabilitated mining land is prioritised for agricultural activity. **The project aligns with the Statement as it will contribute to providing reliable, affordable and sustainable electricity supporting a growing local economy.**

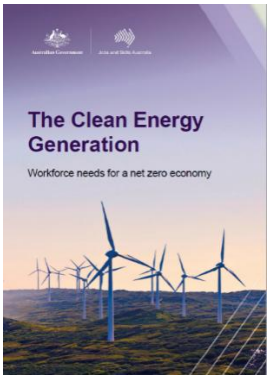
Name	Description and relevance to the project
Create Singleton 2032 Community Strategic Plan (Singleton Council, 2022) 	The Create Singleton 2032 Community Strategic Plan (CSP) sets the strategic vision for the future of the Singleton region over the 10-year period to 2032, as well as strategies to support the local community. The vision outlined in the plan is to develop a vibrant, progressive, connected, sustainable and resilient community. This is supported by five pillars: *our people, our places, our environment, our economy, and our leadership* (Singleton Council 2022). Each 'pillar' identifies various opportunities and challenges, informed by the community, with strategies and objectives in place to address community expectations. Such objectives and strategies are as follows: • provide safe and well-maintained facilities and infrastructure • facilitate land use planning and development outcomes which respect and contribute in a positive way to the environment and community • educate and advocate to improve air quality in Singleton • collaborate to enhance, protect, and improve our environment • enhance relationships between local business, industry and government to set strategic economic goals. In accordance with the Singleton Socio-Economic Development Strategy, the plan details the need to implement a planned transition from the mining industry and is supported by a delivery program, resourcing strategy and operational plan. The project aligns with the CSP by providing reliable, affordable and sustainable electricity that supports a growing local economy.
Our Plan, Our Future, Our Cessnock, Cessnock Local Strategic Planning Statement 2036 (Cessnock City Council, 2018) 	The Statement sets the planning direction for Cessnock LGA for 20 years. There are 4 themes: Liveable, Productive, Sustainable and Unique, and 30 priorities sitting underneath the themes. Relevant planning priorities include: • infrastructure and services meet the needs of our community and are appropriately funded • our industrial land fosters economic growth, business diversity and employment opportunities • key infrastructure is leveraged to support economic growth • our community adapts to climate change and builds climate resilience The project aligns with the Statement by contributing to the provision of reliable, affordable and sustainable electricity that supports a growing local economy.
Planning for our people, our place, our future Cessnock Community Strategic Plan 2036 (Cessnock City Council, 2018) 	The CSP sets the planning direction for 10 years for Cessnock City LGA. Principles underpinning the Plan include: • social justice • partnership and collaboration • opportunity • resilience • sustainability Economic outcomes include 'a sustainable and prosperous economy'. The focus of this objective is: • diversifying and growing our economy • achieving more sustainable employment opportunities • increasing tourism opportunities and visitation in the area The project will contribute to providing reliable, affordable and sustainable electricity that supports a growing local economy.

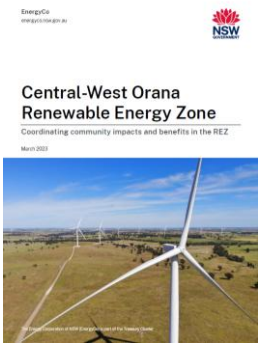
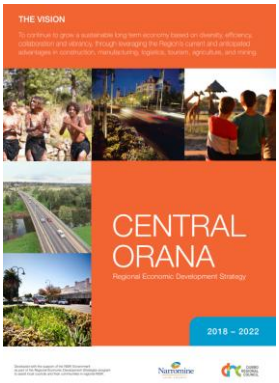
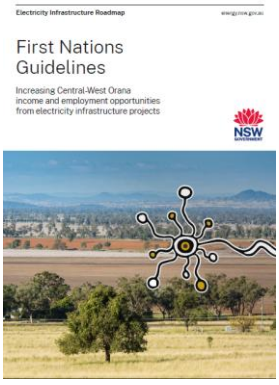
Name	Description and relevance to the project
Central Coast Regional Plan 2041 (DPE, 2022) 	This Regional Plan is a 20-year land use plan prepared under the Environmental Planning and Assessment Act 1979 (EP&A Act). It applies to the Central Coast LGA. Focus areas of the plan include: • greater diversification of employment and energy generation lands to support economic renewal and innovation and create opportunities for renewal and change to new land uses • a new approach to how we sequence planning for new land uses and infrastructure to accelerate proposals that support our vision for the region and bring even greater public value • net zero emissions as a guiding principle for all planning decisions The project aligns with the Plan as it will contribute to providing reliable, affordable and sustainable electricity that supports a growing regional economy including economic diversification.
Central Coast Community Strategic Plan (Central Coast Council, 2020) REVISED COMMUNITY STRATEGIC PLAN 2018-2028 ONE CENTRAL COAST	The CSP sets the strategic vision for the future of the Central Coast LGA over the 10-year period to 2028, as well as strategies to support the local community. The CSP is built on 5 themes: Belonging, Smart, Green, Responsible and Liveable. Relevant objectives include: • a growing and competitive region • a place of opportunity for people • environmental resources for the future • cherished and protected natural beauty • delivering essential infrastructure • balanced and sustainable development The project will contribute to providing reliable, affordable and sustainable electricity that supports a growing local economy.
Local Strategic Planning Statement: The framework for a growing Central Coast Region (Central Coast Council, 2020) 	The Central Coast Local Strategic Planning Statement provides a land use vision to guide sustainable growth and development across the region to 2036 and beyond. The 4 pillars of planning include Place, Environment, Lifestyle and Infrastructure. Economic priorities relate to facilitating emerging industries such as manufacturing, logistics, warehousing and green economy enterprises. Environment priorities include balanced and sustainable development, and environmental resources for the future. The project will contribute to providing reliable, affordable and sustainable electricity that supports a growing local economy.

Name	Description and relevance to the project
Lake Macquarie City Community Strategic Plan 2022-2032 (Lake Macquarie City Council, 2022) 	The Lake Macquarie City Community Strategic Plan describes how the city's vision will be achieved, in line with community's values, priorities and aspirations. The Plan identifies key challenges and risks for the city over the 10 years to 2032. It aims to identify objectives and strategies to address these issues and ultimately achieve the city's long-term goals. The Plan uses quadruple bottom line, or four key pillars of sustainability: economic, environmental, governance/civic leadership and social to monitor delivery of the plan. Economic objectives include building the prosperity by encouraging growth and sustainable development, ensuring cost effective delivery of services, and growing new and emerging industries including renewable technologies. The project will contribute to providing reliable, affordable and sustainable electricity that supports a growing local economy.
Lake Macquarie City Local Strategic Planning Statement (Lake Macquarie City Council, 2022) 	The Statement guides the growth of Lake Macquarie City as it evolves over future years in line with State and regional planning goals. The Statement aims to influence public and private investment to enhance the wellbeing of the local community and the environment – making Lake Macquarie City one of the most productive, adaptable, sustainable and liveable places in Australia. The Statement acknowledges that a growing liveable city requires infrastructure such as water, electricity, communication and sewerage, and that infrastructure will be a catalyst for investment and economic development. Planning priorities include positioning existing industries such as manufacturing, retail, healthcare and education for future economic and employment growth. The project will contribute to providing reliable, affordable and sustainable electricity that supports a growing local economy.

C.3 Additional relevant studies and assessments

Table C.2 Relevant studies and assessments

Name	Description and relevance to the project
The Clean Energy Generation: Workforce needs for a net zero economy (Jobs and Skills Australia, 2023) 	Commissioned by the Australian Government, Jobs and Skills Australia completed a capacity study on the workforce needs for Australia's transition to a clean energy economy. The report analyses current and future workforce needs, transition challenges, training and education pathways, and opportunities to transform existing sectors through decarbonisation. It also provides 50 recommendations to support levels of government with workforce planning and policy reform efforts. Findings of the study include: • many skills needed to decarbonise already exist in the economy however an additional 4000 workers will likely be required in clean energy supply over the next seven years with the workforce projected to reach around 84,000 in 2050 based on preliminary modelling • electricians and other electrical roles will likely experience the biggest shortages, with gaps also likely in other building and engineering trades • there must be a worker-centred approach to support people in transitioning regions (i.e. resources industry dependent) • need for inclusive pathways that align with the scale and pace required for the net zero transition and minimises traditionally underrepresented population groups face in participating in the economy. High risks identified that demonstrate the needs for real reform include: • a mismatch between employment demand and available skills, particularly in regional areas • current tertiary skills, training and qualifications system is not fit-for-purpose to keep pace with emerging occupations and rapidly changing technologies • domestic and international competition for skilled workers (i.e. electrical, mechanical, and civil trades, technicians and professionals) within the clean energy sector and with other sectors • ongoing challenges of growing the workforce at pace and scale required including accessibility of opportunities by traditionally underrepresented population groups (i.e. women, Aboriginal people, and recent migrants) • higher degree of variability and project-based work in clean energy (compared to traditional energy employment) and the workforce needs are also typically front-ended during construction with fewer long-term employment opportunities • shortfall of workers with the necessary VET qualification and workplace experience to fill the large number of expected roles (particularly electricians and other trades and technicians). The report provides insight into assessing workforce and skill requirements across the life of projects and potential cumulative demand by the industry/sector as a whole.
Central-West Orana Renewable Energy Zone Transmission project: Environmental Impact Statement (EnergyCo, 2023a) 	The *Central-West Orana Renewable Energy Zone Transmission project: Environmental Impact Statement* serves as a critical document that supports EnergyCo's application for approval of the Central-West Orana Renewable Energy Zone Transmission project. It includes a detailed analysis of potential impacts on various aspects, such as land use, biodiversity, cultural heritage, social and economic conditions, and air and water quality. It aims to provide a thorough evaluation of the project's potential effects, ensuring responsible development and balancing the project's benefits with environmental and social considerations. These insights can be crucial for the successful development of the project given the project synergies.

Name	Description and relevance to the project
Renewable Energy Zone: Coordinating community impacts and benefits in the REZ (EnergyCo, 2023b) 	The *Central-West Orana Renewable Energy Zone Research Summary* is a report by EnergyCo investigating the cumulative impacts and benefits of establishing the Central-West Orana REZ. The report aims to coordinate benefits for local communities and stakeholders in the REZ, which will host renewable energy generation and transmission projects. EnergyCo conducted research into key areas of concern, such as road upgrades, housing and accommodation, industry, training and skills, waste management, telecommunication, and social infrastructure. The report summarises EnergyCo's key findings, presenting potential challenges and opportunities related to each area. While it doesn't directly mention the Hunter Transmission Line, it does outline how EnergyCo is coordinating benefits for local communities hosting renewable energy projects, including transmission infrastructure. It emphasizes EnergyCo's commitment to understanding and addressing the cumulative impacts of projects in the REZ and provides valuable insight into the processes and considerations EnergyCo is using to manage the development of renewable energy projects, which in turn, could inform future approaches to the project.
Central Orana Regional Economic Development Strategy 2018-2022 (NSW Government, 2018) 	Developed by the NSW Government, the *Regional Economic Development Strategies* provides a long-term economic vision and associated strategy for all regions across NSW. The *Central Orana Regional Economic Development Strategy 2018-2022* covers two LGAs relevant to this SIAs study area - Dubbo and Narromine LGAs. The vision for the Central Orana Region is 'to capitalise on the Region's location as a significant natural endowment by promoting strong community cohesion and a pro-business environment' through various strategies. In particular, the fourth strategy outlines promoting industries such as energy, manufacturing, and transportation through the well-established industries of agriculture, mining and tourism founded from the Region's natural features. The report recognises that the multiple renewable projects in planning, construction or operation in the Central Orana Region can provide a broad economic base for the construction and manufacturing industry to grow. The report identified the utility of encouraging 'investment in renewable energy projects with small-scale co-generation in design to feed into the local economy'. The insights from this strategy are valuable for the Hunter Transmission Project as they highlight the economic benefits of investing in renewable energy infrastructure, which can inform the project's potential impacts on regional economic growth and infrastructure development in the Hunter region.
First Nations Guidelines: Hunter- Central Coast (DCCEEW, 2024) 	The *First Nations Guidelines: Hunter- Central Coast: Increasing income and employment opportunities in the Hunter-Central Coast from electricity projects* is a region-specific guidance for developing an Aboriginal Participation plan for Electricity Infrastructure Roadmap Projects. The region-specific guidelines were developed in consultation with a Central-West Orana working group, consisting of local community representatives, including those that provide support and services to the various Aboriginal communities in the region. The guidelines provide a profile on the Aboriginal community, including demographic profile, the landscape of organisations, businesses, and groups, and significant annual dates and events for the community. The community profile contained within the guidelines provides a basis for understanding potential social impacts and benefits in this region. Additionally, the guidelines outline how local Aboriginal communities may wish to be engaged with, or participate in, various aspects of the Electricity Infrastructure Roadmap. This is an important consideration for planning EIS and SIA engagement activities to build respectful and ongoing relationships. The Guidelines provide crucial insights for the project to ensure respectful and effective inclusion in project planning and implementation.

Appendix D
ABS statistical geographies

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D.1 ABS statistical geographies

The project social baseline is presented for 3 distinct sections:

1. **Northern section** - Bayswater to Broke, including the Bayswater Power Station, major coal mining complexes in the Upper Hunter Valley, Mount Thorley Industrial Estate, Singleton Military Area and several rural properties generally on the alluvial floodplains of the Hunter River.

2. **Central section** – Pokolbin to Corrabare, including the Pokolbin and Corrabare State forests and the rural residential areas between these forests at Cedar Creek, Millfield and Laguna.

3. **Southern section** – Olney to Eraring, including the Watagan and Olney State forests, Watagans National Park, Jilliby State Conservation Area, and Eraring Power Station.

D.2 corridor social locality codes (ABS geography – mesh blocks)

Social locality	ASGS statistical area codes
Northern section	MB 10710300000
	MB 11208370000
	MB 10712060000
	MB 10710021000
	MB 10710040000
	MB 10995790000
	MB 10709650000
	MB 10710240000
	MB 10710291000
	MB 10710022000
Central section	MB 10204780000
	MB 11234690000
	MB 10208920000
	MB 10204560000
	MB 10207320000
	MB 10204480000
Southern section	MB 10204652000
	MB 10911450000
	MB 11205416600

D.3 Local social locality codes (ABS Geography - Suburbs and Localities)

Social locality	Geographic area	ASGS statistical area codes
Northern section	Wylies Flat	SAL 14459
	Apple Tree Flat	SAL 10065
	Belford	SAL 10258
	Big Ridge	SAL 10343
	Bridgman	SAL 10564
	Bulga (NSW)	SAL 10648
	Camberwell (NSW)	SAL 10761
	Clydesdale (NSW)	SAL 10941
	Darlington (Singleton - NSW)	SAL 11214
	Doyles Creek	SAL 11290
	Dunolly (NSW)	SAL 11327
	Dural (Singleton - NSW)	SAL 11332
	Edderton	SAL 11377
	Fern Gully	SAL 11505
	Fordwich	SAL 11544
	Glennies Creek	SAL 11675
	Glenridding	SAL 11680
	Gouldsville	SAL 11732
	Gowrie (Singleton - NSW)	SAL 11735
	Hambledon Hill	SAL 11844
	Hebden	SAL 11892
	Howick (NSW)	SAL 11956
	Hunterview	SAL 11962
	Jerrys Plains	SAL 12030
	Lemington	SAL 12307
	Liddell	SAL 12326
	Long Point (Singleton - NSW)	SAL 12391
	Maison Dieu	SAL 12457
	McDougalls Hill	SAL 12551
	Middle Falbrook	SAL 12615
	Milbrodale	SAL 12623
	Mount Thorley	SAL 12805

Social locality	Geographic area	ASGS statistical area codes
	Muscle Creek	SAL 12878
	Muswellbrook	SAL 12879
	Obanvale	SAL 13077
	Ravensworth (NSW)	SAL 13335
	Redbournberry	SAL 13350
	Rixs Creek	SAL 13387
	Rothbury	SAL 13435
	Roughit	SAL 13439
	Scotts Flat	SAL 13522
	Singleton (NSW)	SAL 13564
	Singleton Heights	SAL13565
	Singleton Military Area	SAL 13566
	Warkworth	SAL 14170
	Wattle Ponds	SAL 14211
	Whittingham	SAL14296
	Broke	SAL 10587
Central section	Bellbird	SAL 10268
	Bellbird Heights	SAL 10269
	Cedar Creek (Cessnock - NSW)	SAL 10867
	Cessnock	SAL 10877
	Corrabare	SAL 11081
	Ellalong	SAL 11401
	Greta Main	SAL 11785
	Laguna	SAL 12245
	Millfield	SAL 12631
	Mount View	SAL 12809
	Paxton	SAL 13173
	Paynes Crossing	SAL 13174
	Pelton	SAL 13190
	Pokolbin	SAL 13248
	Quorrobolong	SAL 13315
	Sweetmans Creek	SAL 13728
	Wollombi	SAL 14373

Social locality	Geographic area	ASGS statistical area codes
	Cessnock	UCL 112005
HTP South	Cedar Brush Creek	SAL 10866
	Congewai	SAL 11007
	Cooranbong	SAL 11052
	Dairy Arm	SAL 11187
	Dooralong	SAL 11278
	Durren Durren	SAL 11339
	Jilliby	SAL 12036
	Lemon Tree	SAL 12308
	Mandalong	SAL 12475
	Martinsville	SAL 12522
	Morisset	SAL 12734
	Murrays Run	SAL 12866
	Olney	SAL 13094
	Ravensdale	SAL 13333
	Watagan	SAL 14198
	Wyee	SAL 14456

Appendix E
Community survey report

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Social impact assessment - Community survey report

Hunter Transmission Project

Prepared for Energy Corporation of NSW

March 2025

Social impact assessment - Community survey report

Hunter Transmission Project

Energy Corporation of NSW

E220595 RP_SIA

March 2025

Version	Date	Prepared by	Reviewed by	Comments
1	11 March 2025	Melanie Rippon	Chris Mahoney	Final

Approved by

Chris Mahoney
Associate Director
11 March 2025

Level 10 201 Pacific Highway
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1 Overview

A social impact survey was developed to enable the broader community to participate in the assessment, and as an alternative for interested and impacted stakeholders who couldn't or preferred not to participate in the semi-structured interviews. The survey was shared with stakeholders identified in the social impact assessment (SIA) engagement plan and distributed to the Energy Corporation of NSW's (EnegyCo's) Hunter Transmission Project (HTP, the project) database of over 800 members on 11 February 2025.

The response rate of the survey was 13%[1]. A total of 104 respondents participated in the survey, which ran from December 2024 to early March 2025. The survey questions are located in Appendix A (Survey questions). All questions were optional except for locality of residence, and consequently response tallies for some questions do not add up to the total response pool of 104.

2 Respondent demographics

Ninety one percent (99) of the survey respondents reported their gender, with 39% of the survey respondents being male, 57% being female, 2% non-binary, and the remaining 2% preferred not to say. Most respondents were aged between 50-64 (36%) years old and 65-79 years old (31%) (see Figure 2.1).

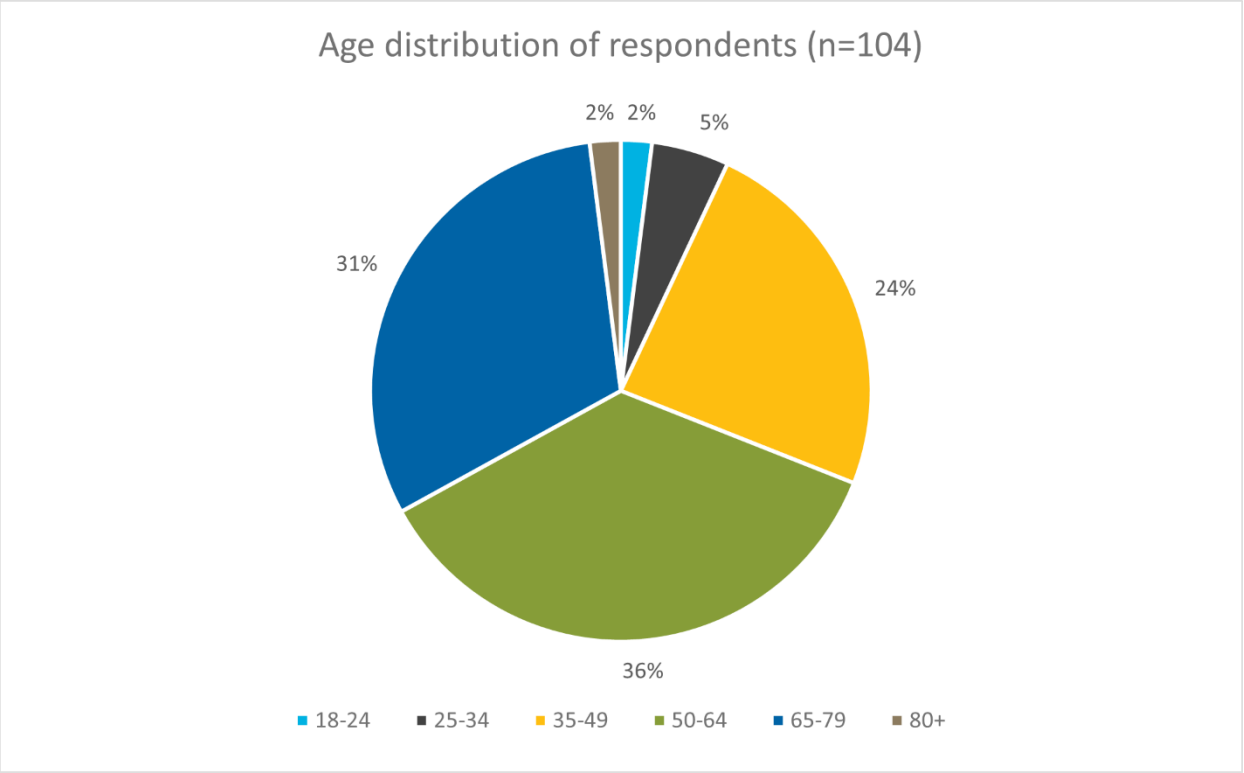

Figure 2.1 Age distribution of respondents

Nine percent of respondents identified as Aboriginal and/or Torres Strait Islander, 85% did not identify as Aboriginal and Torres Strait Islander and the remaining 6% preferred not to say. Geographically, 77% of respondents resided in suburbs within the regional project study area and 23% resided outside the study area ('other'). Within the study area, the highest number of respondents were located in Millfield (14%) and Mount View (5%) with the remaining spread across the other fifty localities (see Figure 2.2).

[1] Based on a total pool of 800 people

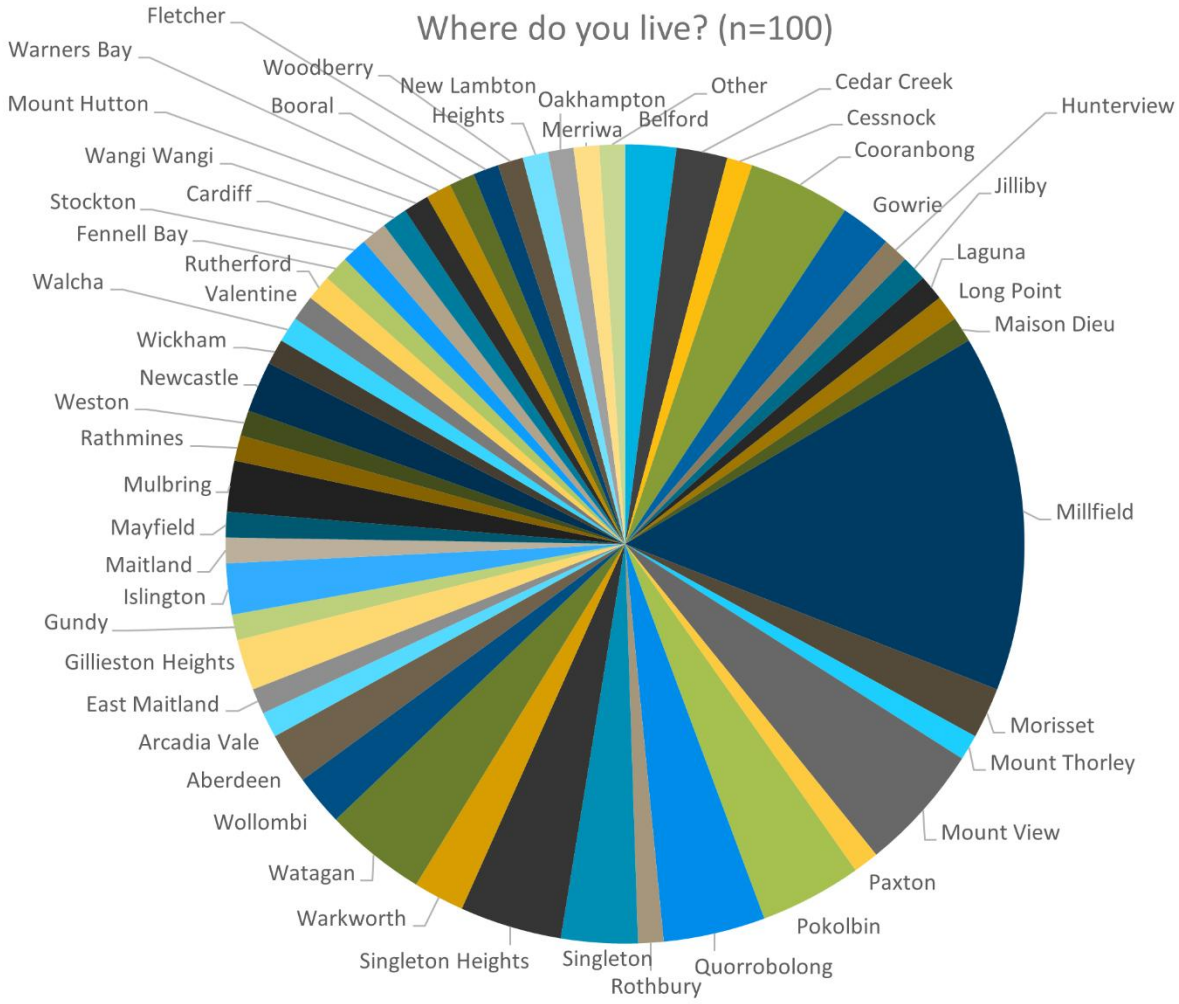

Figure 2.2 Geographical distribution of respondents

Ninety four percent of respondents reported their relationship to the project, with the most common being local resident (41%), community organisation/group representative (30%) and near neighbour (19%) (see Figure 2.3).

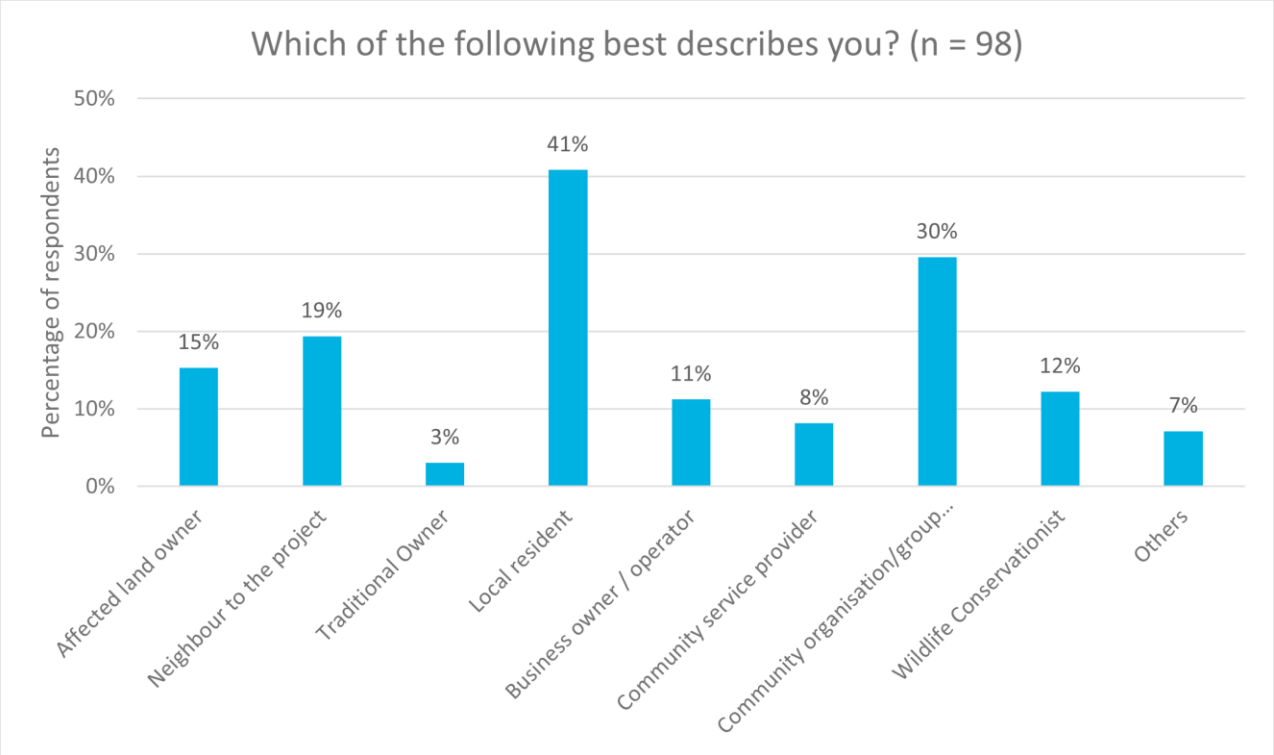

Figure 2.3 **Respondent stakeholder categories**

3 Community values

The most prevelent community values identified by respondents were the natural environment (86%), strong sense of community (54%), lifestyle (49%), and local identity and character (42%). Other identified community values are captured in (see Figure 3.1).

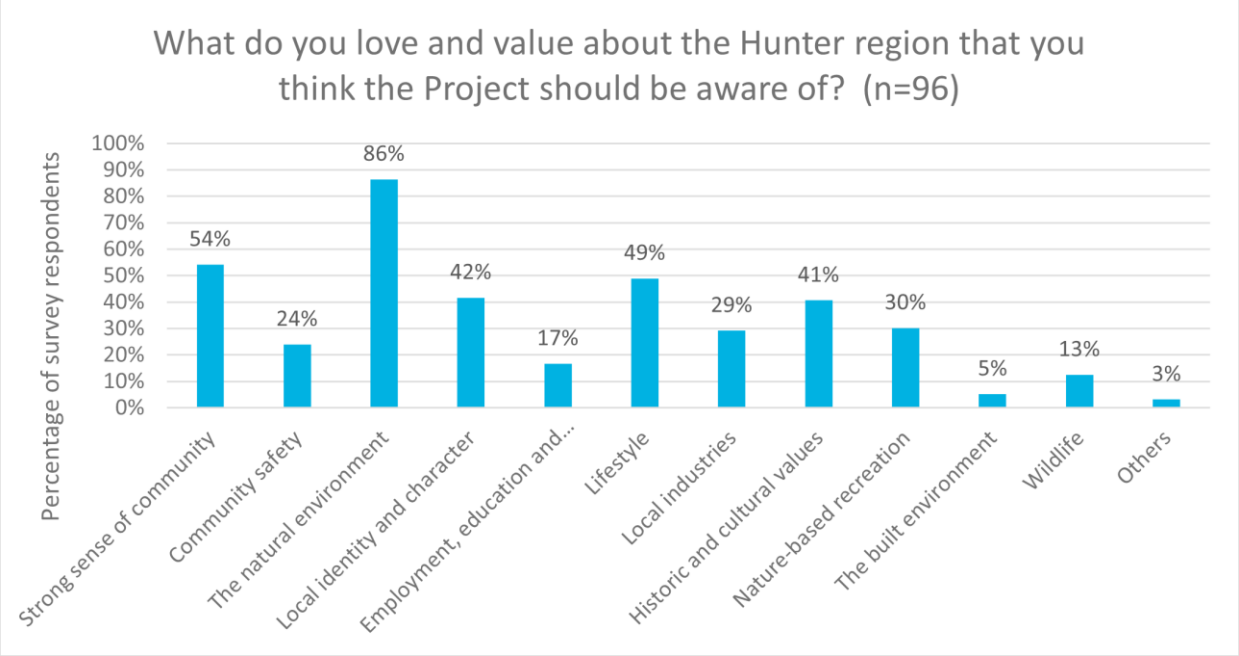

Figure 3.1 **Community values in the Hunter Valley region**

The majority of respondents had a decent, good and very good understanding of the project – 39%, 29% and 22% respectively. This result is to be expected as most respondents were existing members of EnergyCo's project notification database (see Figure 3.2).

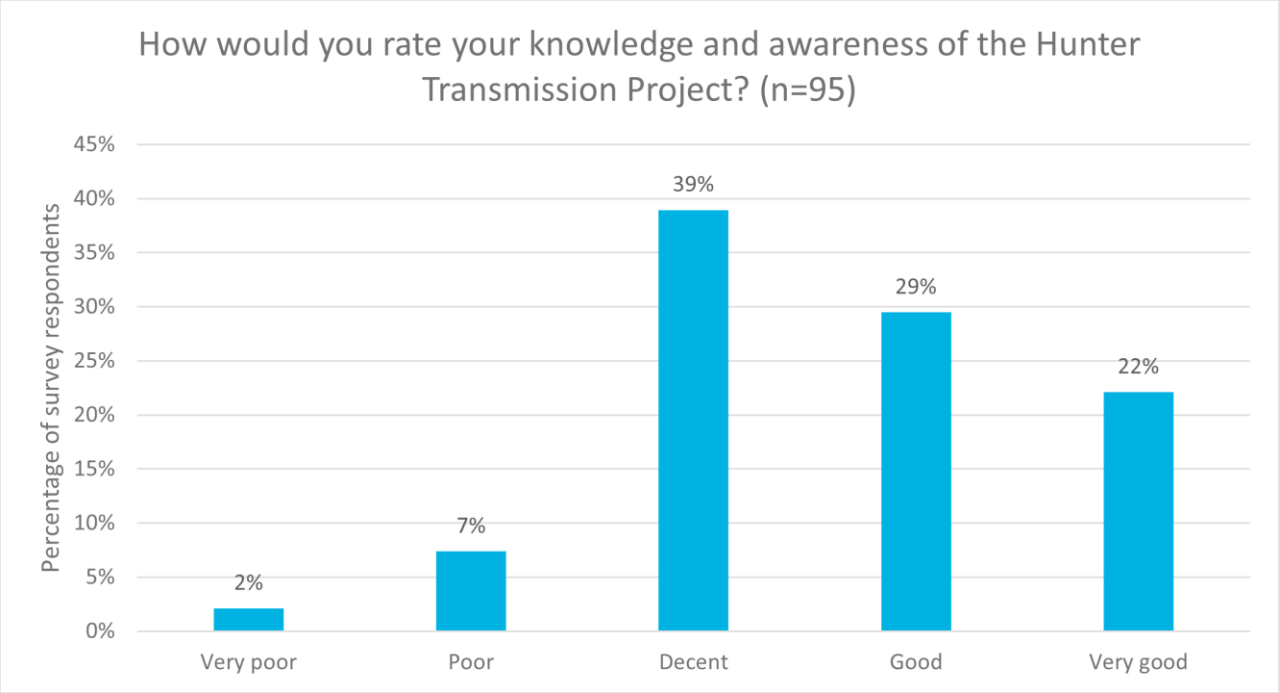

Figure 3.2 **Level of knowledge and awareness of the project**

4 Potential impacts of HTP

The potential impacts of most concern to respondents (n=85) included 'Impacts to natural environment' (85%), 'Changes in land use' (72%) and 'Environmental amenity' (67%).The potential impacts of lesser concern to respondents included 'Access to services', 'Access to housing and/or short-term accommodation', 'Reduced property prices' and 'Changes to industries', with 18%, 18%, 9% and 16% of respondents rating 'not at all concerned' about these impact categories, respectively (see Figure 4.1).

Additional commentary on other potetial impacts not idenitfied on the likert scale was provided by 52% of respondents. The top 3 themes of concern were 'impacts on environmental values', 'road safety and congestion' concerns and 'mental health and wellbeing decline'. Themes that were raised 3 or more time are outlined in Table 4.1.

Table 4.1 **Are there any other community impacts you are concerned about which are not listed above?**

Theme	Sub-themes	Frequency
Environmental values	• Concern for adverse impacts to biodiversity, including loss of wildlife, habitat and distress to wildlife • Concerns for vegetation loss/tree clearing • Importance of offsetting impacts raised • Concern for the displacement of a local wildlife rescue release site impacting local conservation efforts	37
Road safety and congestion	• Existing road quality is inadequate to support large-scale development and an increase in traffic	10

Theme	Sub-themes	Frequency
	• Concerns for increase in road traffic and resulting traffic congestion • Concerns of safety issues on Pokolbin Mountains Road • Concerns that necessary road improvements won't be delivered as part of the project	
Mental health and wellbeing	• Reported lack of project information and disclosure • Mental health decline and stress, particularly amongst directly affected landowners • Perceived lack of empathy in engagements with directly affected landowners • Project-induced stress	26
Community tension	• Affecting community due to displacement and impacts to natural environment • Respondents reported uncertainty about changes in the community due to lack of information about the project	3
Impacts to rural livelihoods	• Perception that 'bush blocks' have been undervalued • Loss of productive land • Biosecurity impacts	3

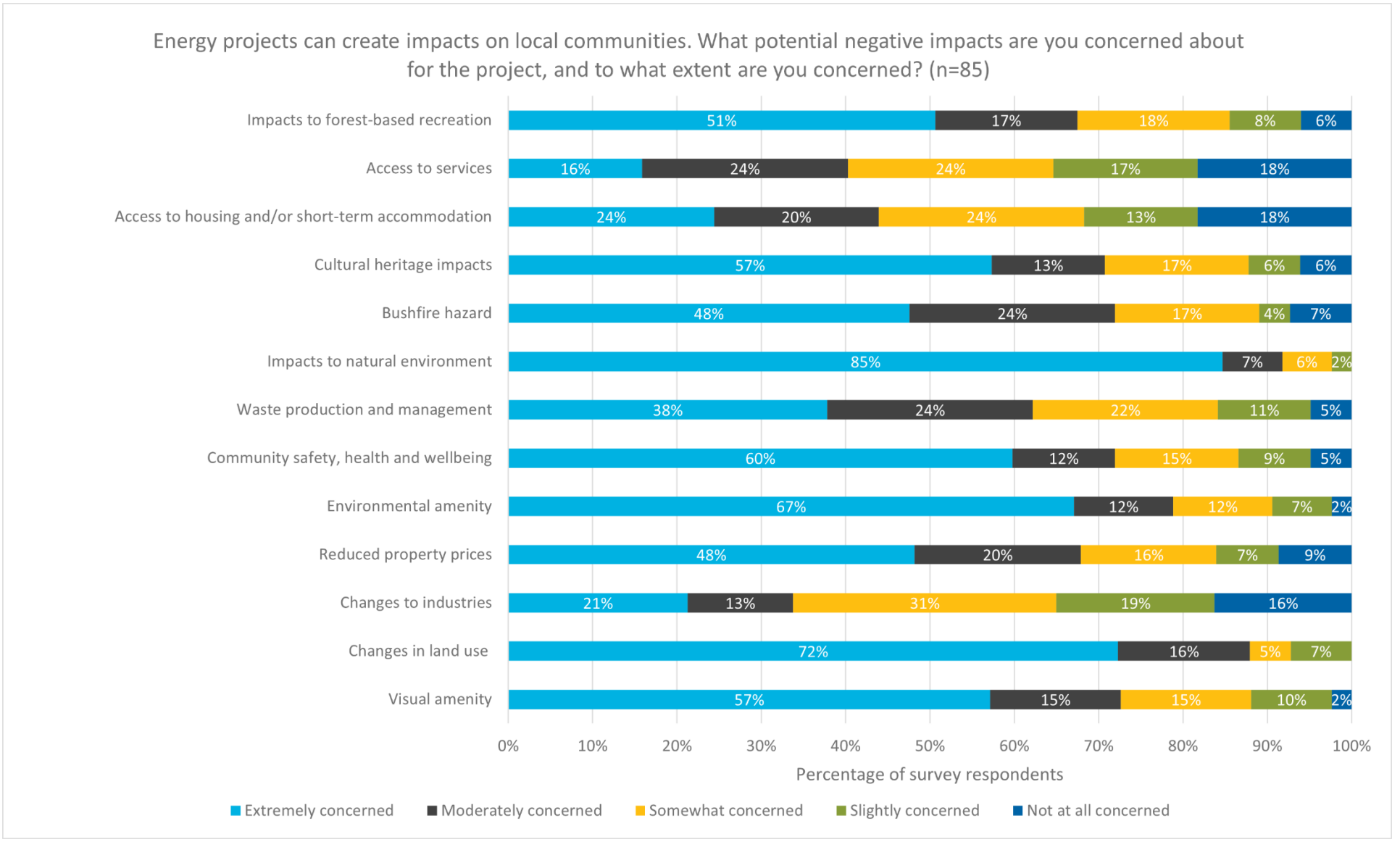

Figure 4.1 Level of concern regarding potential negative impacts

Forty nine percent (51) of respondents provided suggestions on how to reduce or manage potential community impacts. The most frequently raised suggestions were:

- use existing power corridors and/or abandon the project (21)
- improve communications and engagement with the local community (9)
- change the direction of the corridor (8)
- enhanced compensation for affected land owners (7).

5 Benefits of HTP

Respondents (n=84) were asked to rate to what extent they agree HTP will create a range of community benefits (see Figure 5.1). Thirty seven (37%) of respondents strongly agreed that the project would contribute towards income diversification for affected landowners, 30% strongly agreed it would contribute towards the reliability and stability of the network and 27% strongly agreed it will create local business opportunities. Thirty seven percent (37%) either disagreed or strongly disagreed that the project will contribute towards the stability of the energy network and 33% either disagreed or strongly disagreed that it would abate climate change (see Figure 5.1).

Respondents were also asked to identify any additional community benefits not specified in the Likert scale. Of those that provided a response to this question, 61% indicated the project would not bring benefits to the local community and suggested using existing or alternative infrastructure (21%) (see Table 5.1). Other suggestions offered by a small portion of respondents included improved social cohesion due to need to oppose project, income diversification, discounted energy and local procurement opportunities.

Table 5.1 Are there any other community benefits you can identify which aren't listed above?

Theme	Sub-theme	Frequency
No benefits	• The project won't bring any benefits to the local community	23
Existing infrastructure and alternative routes & co-location	• Use existing New England Highway corridor • Use the existing 330 kV corridor • Co-locate with other existing infrastructure • Undergrounding and avoidance of agricultural land	8
Alternative energy	• Investigate other energy generation types	2

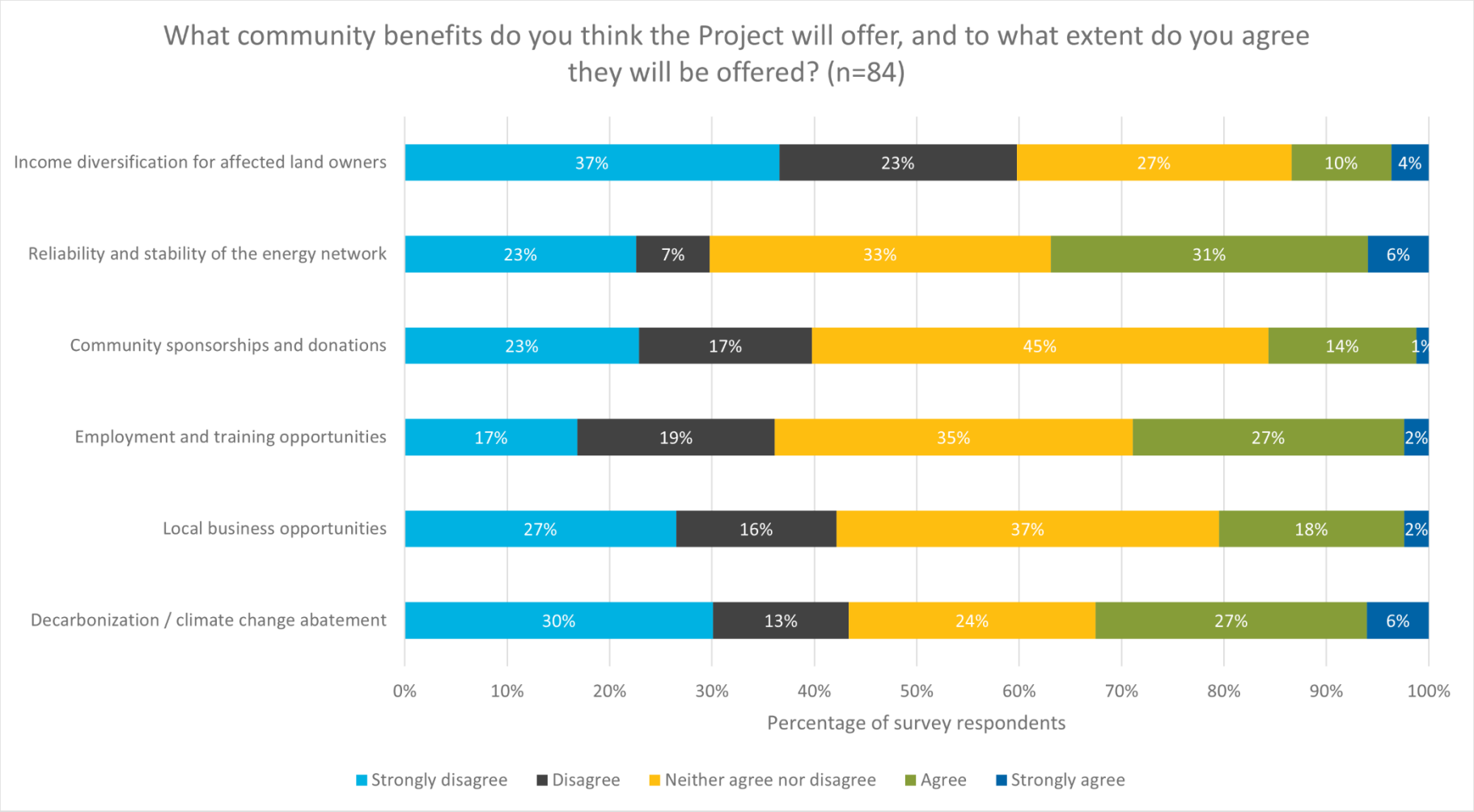

Figure 5.1 **Level of agreement with potential community benefits**

6 Investment initiatives

Participants were asked to provide additional suggestions for community investment, sponsorship and partnership initiatives. The most common suggestion provided was local environmental initiatives (12), no initiatives (11) and community amenities (6) (see Table 6.1). Other suggestions included cultural heritage investments, improved engagement and communications delivery and enhanced compensation.

Table 6.1 Do you have any suggestions on new community investment, sponsorship or partnership initiatives that the Project could create?

Theme	Sub-theme	Frequency
Local environmental initiatives	• Investment in native wildlife conservation and Landcare groups • Investment in nearby National parks • Proper restoration of existing coal and mining stations • Monitoring and assessment of wildlife during construction and operations • Partnerships with local wildlife groups	12
No initiatives	• The project will not create any investment initiatives	11
Community amenities	• Investment in local hall upgrades, education and children's play facilities • Sponsorship in community projects (e.g. sport groups and performing art groups)	6

7 Other feedback

Lastly, respondents were asked if they had any other feedback they would like considered as part of the SIA.

The top themes included consideration of negative impacts to the natural environment/environmental values (13), improving the quality of the engagement process (7) and mental health and wellbeing (6) (see Table 7.1).

Table 7.1 Do you have any other feedback that you would like us to consider as part of the SIA?

Theme	Sub-theme	Frequency
Environmental values	• Respondents re-emphasised the importance of local fauna and flora to the community of Hunter region • Suggestions in investments in native land conservation initiatives to build community support and trust • Suggestions in investment in the replacement of an affected wildlife rescue release site	13
Engagement process	• Respondents reported a lack of support and information about the project to enable effective engagement • Engagement process have been confusing and stressful, resulting in breakdown in relationships driven by perceptions in dishonest and unfriendly negotiations • Suggestions in involving technical staff to increase credibility and transparency	7
Mental health and wellbeing	• Stress and health impacts being experienced by affected landowners • Poor quality of engagement and communications	6

8 Overall sentiment towards the project

A sentiment analysis was conducted against all open response comments whereby the comment was categorised as positive, negative, neutral or mixed. Sixty three percent (63%) of responses were negative, 26% neutral, 8% were positive and 3% were mixed (see Figure 8.1).

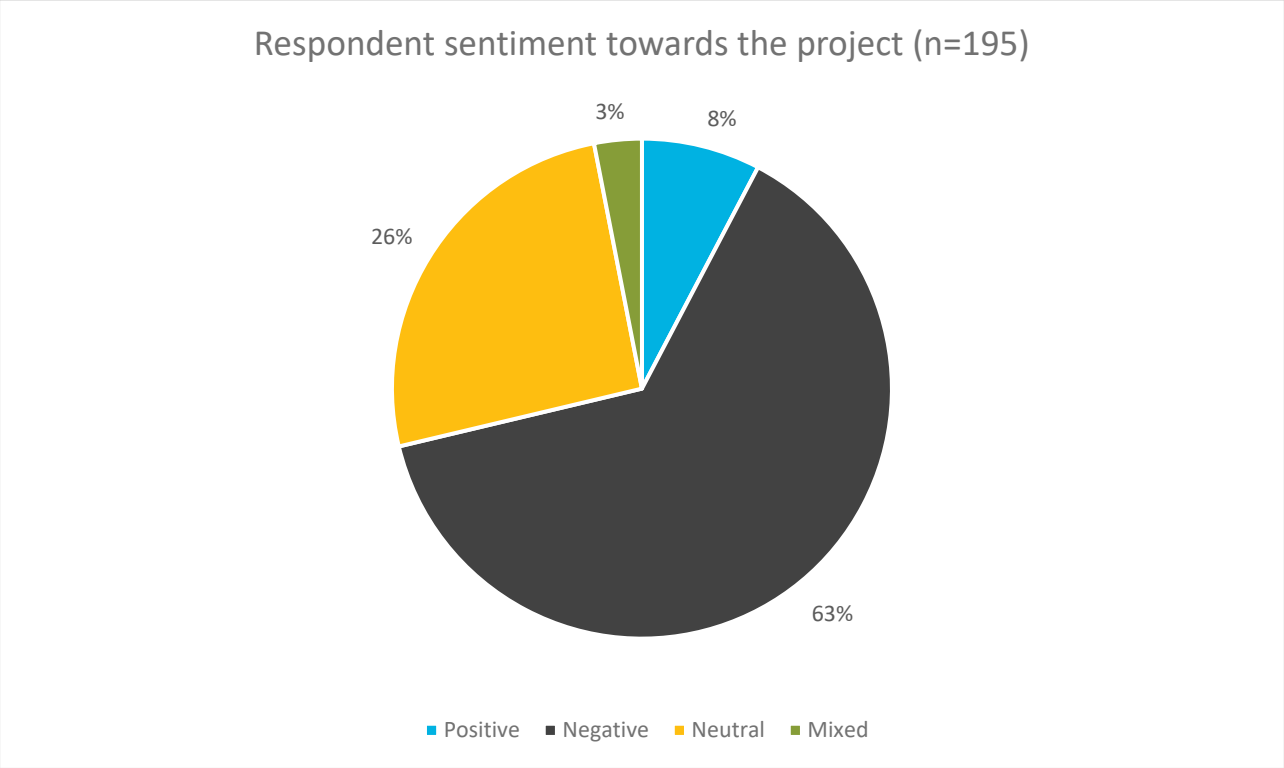

Figure 8.1 Overall sentiment towards the project

Appendix A
Survey questions

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Hunter Transmission Project - Social Impact Assessment Survey

Hunter Transmission Project Social Impact Assessment Survey

About the project
This survey will inform the Social Impact Assessment (SIA) for the Hunter Transmission Project (HTP), which has been declared a major project in NSW and is proposed to be developed by EnergyCo.

In accordance with planning guidelines, we've engaged a social impact specialist to undertake the social impact assessment (SIA) for the Hunter Transmission Project. This forms part of the broader environmental impact statement. The purpose of the SIA is to assess the project's impacts and benefits on the community, and how these can be minimised and/or improved.

Any feedback provided during this survey will be de-identified in the final report, which will be submitted by EnergyCo to the Department of Planning as part of the EIS submission.

Would you like to discuss further?

As part of the SIA, an independent social impact specialist is conducting interviews with a selection of stakeholders. If you would like to arrange a telephone or online interview, please email htp@energyco.nsw.gov.au and the Social Assessment team will contact you.

Privacy Statement
EMM Consulting is collecting your information as part of seeking feedback on the Hunter Transmission Project (HTP). Please note your responses to this survey are voluntary and the confidentiality of the information you provide will be safeguarded in accordance with The Privacy Act 1988 (Cth). This information will not be disclosed to a third party without your consent, or unless authorised or required by law.

Contact EnergyCo regarding the Hunter Transmission Project:
E: htp@energyco.nsw.gov.au
P: 1800 645 972 (9am - 5pm, Monday to Friday)
W: HTP website

Hunter Transmission Project - Social Impact Assessment Survey

About you

1. What is your first and last name?
This question is optional. Your feedback will not be personally identifiable in public reporting

2. What is your age?

- ◯ 18-24
- ◯ 25-34
- ◯ 35-49
- ◯ 50-64
- ◯ 65-79
- ◯ 80+

3. What is your gender?
Please the option that applies to you

- ◯ Male
- ◯ Female
- ◯ Non-binary
- ◯ Prefer not to say
- ◯ Other (please specify)

* 4. Which suburb do you live in?

5. Which of the following best describes you?
Please select all that apply to you

- [ ] Affected land owner
- [ ] Neighbour to the project
- [ ] Representative of a First Nations organisation
- [ ] Traditional Owner
- [ ] Local resident
- [ ] Business owner / operator
- [ ] Community service provider e.g. health, education, emergency services
- [ ] Community organisation/group representative
- [ ] Other (please specify)

6. Do you identify as Aboriginal and/or Torres Strait Islander?

- ◯ Yes
- ◯ No
- ◯ Prefer not to say

Hunter Transmission Project - Social Impact Assessment Survey

Your community

7. What do you love and value about the Hunter region that you think the Project should be aware of?
Select all that you agree with

- [ ] Strong sense of community
- [ ] Community safety
- [ ] The natural environment
- [ ] Nature-based recreation e.g. camping, bushwalking, mountain bikes riding, horse riding
- [ ] The built environment e.g. libraries, sports facilities, cultural spaces
- [ ] Local identity and character
- [ ] Employment, education and training opportunities
- [ ] Lifestyle
- [ ] Local industries e.g. mining, energy, tourism, social services
- [ ] Historic and cultural values
- [ ] Other (please specify)

Hunter Transmission Project - Social Impact Assessment Survey

Your knowledge of the project

8. How would you rate your knowledge and awareness of the Hunter Transmission Project

Very poor	Poor	Decent	Good	Very good
○	○	○	○	○

Hunter Transmission Project - Social Impact Assessment Survey

Project impacts and benefits

9. Energy projects can create impacts on local communities. What potential negative impacts are you concerned about for the project, and to what extent are you concerned?
Select a ranking for each

	Extremely concerned	Moderately concerned	Somewhat concerned	Slightly concerned	Not at all concerned
Visual amenity	○	○	○	○	○
Changes in land use	○	○	○	○	○
Changes to industries	○	○	○	○	○
Reduced property prices	○	○	○	○	○
Environmental amenity e.g. dust, noise, traffic	○	○	○	○	○
Community safety, health and wellbeing	○	○	○	○	○
Waste production and management	○	○	○	○	○
Impacts to the natural environment	○	○	○	○	○
Bushfire hazard	○	○	○	○	○
Cultural heritage impacts	○	○	○	○	○
Access to housing and/or short-term accommodation	○	○	○	○	○
Access to services such as health, emergency and retail services	○	○	○	○	○
Impacts to forest-based recreation	○	○	○	○	○

Are there any other community impacts you are concerned about which are not listed above?

10. Do you have any suggestions on how community impacts could be reduced or managed?

11. Energy projects also create a range of community benefits. What community benefits do you think the Project will offer, and to what extent do you agree they will be offered?
Select a ranking for each

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Decarbonization / climate change abatement	○	○	○	○	○
Local business opportunities	○	○	○	○	○
Employment and training opportunities	○	○	○	○	○
Community sponsorships and donations	○	○	○	○	○
Reliability and stability of the energy network	○	○	○	○	○
Income diversification for affected land owners	○	○	○	○	○

Are there any other community benefits that you can identify that aren't listed above?

12. Do you have any suggestions on new community investment, sponsorship or partnership initiatives that the Project could create?

Hunter Transmission Project - Social Impact Assessment Survey

Final thoughts

13. Do you have any other feedback that you would like us to consider as part of the SIA?

14. Would you like to receive updates about the Hunter Transmission Project?

- [ ] Yes
- [ ] No

15. Enter your email address

Australia

SYDNEY
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