Workforce accommodation study

New England Regional Major Infrastructure Studies

NSW GOVERNMENT

December 2025

Acknowledgement of Country

The Energy Corporation of New South Wales acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Introduction

Renewable energy zones (REZs) are a critical part of our plan to provide affordable, clean and reliable energy for NSW.

Uralla

A secure energy future for everyone in NSW

Five REZs have been identified so far which will help keep the lights on as coal-fired power stations retire.

Regional communities play a vital role in hosting the power lines and renewables we need. We are committed to working with communities to minimise impacts and maximise the benefits of this investment in our regions. REZs will contribute to the growth, prosperity of regional communities through jobs, training, investment and funding for local projects.

Investigating priority areas for the New England REZ

EnergyCo is leading the delivery of the REZs to ensure long-term energy security for NSW. We are working closely with a range of stakeholders to coordinate investment and provide long-term benefits to communities who are hosting new energy projects.

EnergyCo has been investigating how potential impacts will be managed in the New England REZ. This work includes a program of engagement with local councils, government agencies and other key stakeholders to understand local issues.

In 2024, we commissioned a series of studies to understand the potential constraints and challenges caused by concurrent development in the region, as well opportunities that could be used to support renewable energy development. The studies aim to provide a point-in-time analysis of the potential impacts of REZ development along with other major infrastructure projects in the region.

We will use this information, along with local feedback, to develop the REZ in a way that supports growth and sustainable demand for skills, services and infrastructure across the region in the years to come.

Community, council and key stakeholder input will help us to focus efforts where they are needed.

Purpose of this document

This document provides the workforce accommodation study developed by Urbis. The study aims to understand regional housing profiles and identify ways to meet workforce accommodation demands generated by the construction and operational workforces. It also identifies potential opportunities to support REZ delivery in a proportionate and appropriate way which also meets the needs of local councils and communities.

Study development and limitations

Information contained in the study is based on knowledge and understanding at the time of its development. For this reason, it may not accurately represent local conditions at the time of reading.

The study provides a point-in-time analysis based on available data, proposed developments and the delivery timeframes for the New England REZ as of November 2024. The study does not predict future developments or changes in policy and should not be interpreted as a predictive or exhaustive assessment of all cumulative impacts over time.

Information has been sourced from EnergyCo, councils, government agencies, industry stakeholders, related third parties and/or as available in the public domain at the time of writing, coupled with research and industry knowledge of the study consultants. The passage of time, manifestation of latent conditions or impacts of future events may require further examination and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed within the study.

The study should not be interpreted as specific advice or relied upon in lieu of appropriate professional advice.

Project lists

Inclusion of projects or infrastructure in the study does not imply endorsement, approval or funding commitment by any government agency or private entity. Decisions about development approvals and infrastructure investments will be subject to separate statutory and policy processes.

Scenarios outlined in the study include renewable energy projects and non-renewable energy projects at various stages of the project development lifecycle (pre-planning, planning, construction and operation). Major projects, state significant development, state significant infrastructure and critical state significant infrastructure have been considered.

The number and configuration of renewable energy projects within the New England REZ may change and will be influenced by factors such as generation availability and network connection capacity.

The modelling undertaken for this study is based on the proposed projects identified at the time of writing and may exceed what can feasibly be realised due to factors such as generation availability and transmission capacity within the REZ network infrastructure. The scenarios used are sufficient to support the study's key findings, addressing the challenges and opportunities associated with the REZ. Subsequent studies (if undertaken) may build on this as more information becomes available. This methodology was used so that the full extent of potential impacts was presented in the study, allowing NSW Government to plan for a higher impact to communities. Some sections of the study are redacted due to confidential information provided by renewable energy developers or other key stakeholders. While this data was used in modelling, its removal does not affect the overall findings.

Opportunities

The study has identified opportunities to address potential cumulative impacts. The study does not represent a list of commitments or set of guaranteed actions to be implemented. EnergyCo will share the studies with community, councils and key stakeholders for feedback to help us identify and prioritise a list of potential opportunities to investigate further. We will then work with councils, renewable energy developers, other government agencies and key stakeholders to developthe opportunities into initiatives which provide legacy benefits for the region.

New England REZ network infrastructure corridor changes

In October 2025, EnergyCo announced that the corridor of the New England network infrastructure project is to be changed between Bayswater Power Station near Muswellbrook and the energy hub near Walcha. More information on this change is available at: energyco.nsw.gov.au/nerez

What the corridor updates mean for the studies

The studies provide a baseline understanding of the region and consider a point-in-time analysis of the potential challenges and opportunities from major infrastructure development in the region. These insights, together with community feedback, will help develop the REZ as a whole to best support growth, meet the future demand for skills, services, and infrastructure across the region, and provide legacy outcomes. As no new council areas are impacted by the revised corridor and due to the regional nature of the studies, the baseline information provided by the studies is largely unaffected. There may be changes in the timing of peak construction periods which will be determined by changes to the New England REZ network infrastructure project, and any changes renewable energy projects make to their programs.

A key part of the next phase will be for EnergyCo to monitor the status of projects as they continue to develop and refine the understanding of the potential cumulative impacts from development in the region. Further investigations will be carried out as part of the development of the REZ to capture these changes and respond to the identified impacts.

We will continue to work closely with community and stakeholders, including councils, to understand the areas that matter most to local communities. We are also continuing to work closely with renewable energy developers to identify opportunities and strategies to manage potential impacts from development in the region over time.

What the corridor updates mean for the workforce accommodation study

The workforce accommodation study aims to understand regional housing profiles and identify ways to meet workforce accommodation demands generated by the construction and operational workforces of the REZ. The changes to the corridor will influence the preferred sites to accommodate the workforce needed to construct the New England REZ network infrastructure project, while the analysis for renewable energy and non-renewable projects based on the study approach remains largely unchanged. These changes will likely be more significant in the local government areas located between Walcha and Muswellbrook. EnergyCo acknowledges that over time, the workforce demands from REZ development will change as renewable energy projects are refined, based on feasibility, scale, timing, etc, and that any responses to cumulative impacts will need to consider these changes over time. Further investigations will be carried out as part of the development of the REZ to capture these changes and respond to the identified impacts.

Acknowledgements

The study has been developed with assistance from a range of key stakeholders providing their input, expertise and local insights. EnergyCo thanks all those individuals and organisations who have participated in the development of this workforce accommodation study.

For more information

If you have any questions about the contents of this document, please get in touch with our team on 1800 061 114 (toll free) or by emailing nerez@energyco.nsw.gov.au.

For more information about the New England REZ visit our website at energyco.nsw.gov.au/nerez.


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NEW ENGLAND REZ WORKFORCE ACCOMMODATION STUDY

Prepared for EnergyCo
July 2025

This report is dated **July 2025** and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (Urbis) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of **Energy Corporation of NSW** (Instructing Party) for the purpose of a **Workforce Accommodation Study** (Purpose) and not for any other purpose or use. Urbis expressly disclaims any liability to the Instructing Party who relies or purports to rely on this report for any purpose other than the Purpose and to any party other than the Instructing Party who relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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Urbis has made all reasonable inquiries that it believes is necessary in preparing this report but it cannot be certain that all information material to the preparation of this report has been provided to it as there may be information that is not publicly available at the time of its inquiry.

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Urbis staff responsible for this report were:

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Project code	P0048300
Report number	3a

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

ACKNOWLEDGEMENT OF COUNTRY

Urbis acknowledges the Traditional Custodians of the lands we operate on.

We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.

We pay our respects to First Nations Elders, past and present.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

Title: Sacred River Dreaming
Artist: Hayley Pigram
Darug Nation
Sydney, NSW

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EXECUTIVE SUMMARY

INTRODUCTION

Background

The NSW Government has appointed EnergyCo to lead the delivery of Renewable Energy Zones (REZs) in NSW. The State's second REZ is in the New England region which was formally declared by the Minster for Energy and Environment in December 2021.

The NRNIP includes development of:

- New overhead transmission lines including dual 500 kV lines between Bayswater Power Station substation and the New England REZ, and 500 kV and 330 kV lines within the REZ to connect to proposed energy hubs and existing transmission lines
- Four energy hubs within the REZ and a switching station at the northern connection point
- Ancillary infrastructure such as access tracks and roads, laydown and staging areas, earthwork material sties and workforce accommodation camps are some of the additional uses.

EnergyCo requires a workforce accommodation study to consider the cumulative impacts of major generation and network infrastructure projects being developed in the Study Area. The Study will identify opportunities for workforce accommodation and options to help address other housing/ accommodation supply needs in the longer term.

EnergyCo is engaging with generators to coordinate the approach for developing the first stage of the REZ. This will help ensure there is a coordinated approach to the community in regard to cumulative impacts.

Studies for training and skills, water and wastewater security, waste management and circular economy, and local supply chain have also been commissioned by EnergyCo to assess cumulative impacts in the NE REZ.

Purpose of this Report

The purpose of the workforce accommodation study is to support EnergyCo in the planning and strategy for housing the construction workforce for the New England Renewable Energy Zone (NE REZ).

The purpose of this study is to gain a better understanding of the underlying housing situation in the Study Area and identify potential solutions to house the construction workforce for major projects which includes:

- New England REZ Network Infrastructure Project (NRNIP)
- Proposed GDPs solar, wind, BESS and pumped hydro
- Other major projects that are non-energy related.

The Study will support EnergyCo to develop strategies around workforce accommodation throughout the construction phases on the projects and help identify strategic opportunities for coordination, long-term benefits and legacy infrastructure as opposed to solutions on a project-by-project basis. Understanding the opportunity for legacy outcomes is also a key part of the study.

EXECUTIVE SUMMARY

The Study

EnergyCo commissioned Urbis to prepare a workforce accommodation study that considers the cumulative impacts of major generation and network infrastructure projects being developed for and within the New England REZ. LGAs that were assessed as adding to cumulative impacts were included in the Study Area examined. The LGAs identified as being in the primary study area were Armidale, Walcha, Tamworth and Uralla. LGAs identified as being in the secondary study area were Upper Hunter, Muswellbrook, Liverpool Plains, Glen Innes Severn and Inverell. Tenterfield LGA, while being a REZ LGA was excluded as it contained no major projects or future transmission corridors, so it would not contribute to cumulative impacts.

In summary, the New England REZ Network Infrastructure Project (NRNIP) includes the development of new overhead transmission lines, four energy hubs and a switching station at the northern connection point, and ancillary infrastructure such as workforce accommodation camps.

The Executive Summary outlines the key findings.

Population Dynamics

The Study Area has experienced slow population growth over the last 15 years, averaging 0.3%-0.4% per annum over that time for most of the Local Government Areas (LGAs). Tamworth has been the main centre for growth and that trend will continue. Population numbers in Walcha LGA have been declining and were static in the Uralla LGA. The cumulative impact analysis for this study shows that both areas will have a significant number of construction workers, particularly Uralla. There are also ongoing operational jobs that will drive the need for permanent dwellings in these areas. While there is a looming opportunity to rejuvenate these towns with the incoming temporary workers there will be different views in the community on whether this is positive.

The Existing Housing Market

The median rental vacancy rate for the New England Region, according to REINSW is 1.4% as of October 2024 and has been sitting below 2.5% since January-2021, highlighting that there is no capacity to absorb incoming temporary workers. Low vacancy means places are susceptible to sharp rent increases if enough competition pushes rents up. House rents in the Uralla LGA have increased by an average of 9.0% annually over 5 years, compared to 5.8% annually in the Tamworth LGA which has a larger supply base.

Residential lot sales have been in decline since 2021, the peak year for lot sales and prices declining, particularly in the Secondary Study Area LGAs which includes the Upper Hunter and Liverpool Plains LGAs.

Future Demand and Development

Dwelling projections show an additional 5,704 dwellings will be required by 2039, of which more than 75% are located in the Primary Study Area LGAs. These projections do not include workers moving to the area for construction projects and ongoing jobs.

Future development is centred on the Tamworth and Muswellbrook LGAs for dwellings and lots. Declining population growth in parts of the Study Area means developer investment is directed to the larger centres of Tamworth and Muswellbrook.

The potential for smaller declining centres to benefit from the increase in population who will be employed in ongoing jobs will be determined by both the preferences of future residents on where they want to live, and the appetite of the development industry to develop land outside the main centres. Councils could have a role to incentivise developers or take on the role of developer.

Councils would like to see legacy benefits for their communities. Affordable and smaller 1 and 2-bedroom homes were consistently mentioned as gaps during consultation with Councils. Demand for ongoing housing will be generated by renewable energy projects and other projects. This type of housing could be used for temporary workers before transitioning to permanent housing. This study could be shared with community housing providers and local developers as evidence to show the quantity of accommodation required and when.

Temporary Workers Accommodation

It is clear from the analysis of short-term accommodation supply in the Study Area it will play only a minor role in meeting the needs for temporary accommodation. There is a total of 1,736 rooms across the Study Area and only 99 new rooms are planned. Therefore, temporary workers accommodation camps will be essential.

There are 2 broad types of camps, company camps, which provide accommodation for workers of the same company, and another type that provides accommodation for multiple businesses and projects, and so operates similar to a hotel or motel where organisations book rooms. The latter type is more appropriate for the NE REZ as an efficient and central accommodation solution to avoid building camps for each project.

EXECUTIVE SUMMARY CONTINUED

The Cumulative Impacts

The cumulative demand for construction and operational workers was determined using a model Urbis developed using EnergyCo provided data and supplemented with research by Urbis.

Across the NE REZ Study Area, jobs will peak at 7,071 jobs in July 2030. During this month additional operational jobs are expected to be 1,597 and construction jobs 5,474.

Operational jobs reach 2,833 in February 2048. This indicates that ongoing or legacy accommodation should aim to build up to accommodate approximately 2,800 workers and their families by the start of 2048 and infrastructure would need to support an expected increase in population of around 7,080 people.

The results vary significantly by LGA, project type and likelihood to proceed, assuming either medium or high likelihood.

The most impacted by construction activity is Uralla LGA estimated to have 3,000 workers at the peak in mid-2030, and in Muswellbrook LGA there is an estimated peak workforce of approximately 1,500.

The assessment of accommodation required shows Uralla will be the most impacted LGA for temporary accommodation needs, while the Tamworth LGA will generate the greatest need for ongoing permanent dwellings. Table 1.1 lists the top 5 LGAs for construction workers requiring accommodation and shows the additional households required for ongoing jobs.

Table 1.1	Construction Workers Requiring Accommodation (Peak Year)	New Households Required for Ongoing Jobs
Uralla	2,919	240
Muswellbrook	1,310	949
Tamworth	940	1,358
Upper Hunter	886	88
Armidale	768	109

Assumes a Base Case scenario where 90% of construction workers are external (i.e., from outside the Study Area). For new households, we have assumed that 100% are external as the Base Case

To understand workforce demand more clearly, we calculated and heat-mapped the geographic distribution of workers, highlighting areas with the highest intensity of workforce activity. Drawing on the outcomes of drive time analysis and density modelling along with consideration of existing infrastructure we identified Accommodation Catchments, listed below with the number of associated peak construction jobs.

- Armidale: 978 peak construction jobs
- Denman: 501 peak construction jobs
- Glen Innes: 430 peak construction jobs
- Muswellbrook: 1,456 peak construction jobs
- Tamworth: 833 peak construction jobs
- Uralla: 3,071 peak construction jobs
- Walcha: 875 peak construction jobs
- Wallabadah: 296 peak construction jobs

We also considered locations that offer synergies with existing uses, which could benefit from the long-term availability of new accommodation beyond the immediate needs of the NE REZ workforce.

The cumulative impacts assessment importantly shows the size of the additional population, though the distribution will change.

The assessment is based on the best available information for construction start and end dates which will inevitably move. The potential impacts on some areas is high based on the estimated number of workers particularly in Uralla. To mitigate the impacts projects should be staged to smooth the peak periods. Start dates could be a condition of approvals consents as well as having detailed plans for accommodation. Labour availability will most likely force staging to an outcome that could be managed.

The context of this study is to provide a baseline at a point in time. Once the certainty on project timings is further refined the analysis should be updated to provide a more accurate picture of accommodation needed, when and where. Lead time for temporary accommodation delivery could be about 2 years to allow for planning, procurement, manufacturing and deployment.

02

INTRODUCTION

RESEARCH APPROACH

Urbis developed a multi-disciplinary approach to address the requirements of the brief. The research underpinning this study draws on:

- Desktop research
- Stakeholder consultations
- Urban planning review
- Spatial analysis
- Workforce modelling
- Financial analysis.

Study Area

A Study Area has been defined to comprises two areas, a Primary and Secondary Area. The Primary Study Area is the focus of the REZ and will contain the majority of wind, solar and pumped hydro projects in addition to NRNIP. It encompasses the local government areas (LGAs) of:

- Armidale
- Walcha
- Tamworth
- Uralla.

The Secondary Study Area will have construction activity primarily related to the RNI and includes the following LGAs:

- Upper Hunter
- Muswellbrook
- Liverpool Plains
- Glen Innes Severn
- Inverell.

Map 3.1 shows the Study Area for this study. Tenterfield LGA, while being a REZ LGA was excluded as it contained no major projects or future transmission corridors, so it would not contribute to cumulative impacts. Nor was it identified in the requirements outlined in the brief.

Desktop Research

Population and demographic analysis was completed that includes the past 15 years of population growth and a15 year growth forecast for the Study Area as a whole, and by each of the LGAs. Key data sources include projected household size, household income, property tenure and ancestry demographics for the Primary and Secondary Areas drawn from Australian Bureau of Statistics Census (ABS) 2021, ABS ERP 2023; Department of Planning and Environment 2022 datasets.

Underlying Housing demand analysis was undertaken, considering residential vacancy rates and rental growth by LGA; vacant residential lots, house and unit sales volumes; and median values in the Primary and Secondary Areas over the past 5 years. The underlying future dwelling demand for the period 2024 to 2039 was calculated applying average household size to the population growth for the Study Area to calculate the annual and cumulative demand for apartments, townhouse and houses for the Primary and Secondary areas.

Construction and operational worker housing demand driven by the NRNIP and other major projects was modelled to quantify the number of workers by year and LGA that will be working in the NE REZ. The model was developed using data from the Data and Assumptions book (version 2.1) provided by EnergyCo. Where there were data gaps on the workforce numbers, the construction period and distribution of workers over the program, assumptions were made based on other data sources and these are documented in appendix A3.

Sensitivity analysis was completed assuming different project likelihood outcomes. As well as the base case of all relevant projects, two scenarios comprised projects with a ‘high’ likelihood and ‘medium’ and ‘high’ likelihood. This was completed for worker demand and accommodation demand assessments.

A benchmark was applied to quantify the number of workers that would not be currently living in the Study Area and therefore would be new to the area.

Supply analysis was undertaken that assessed the current dwelling supply in the Study Area using ABS data, real estate market data and local government strategic planning statements.

The future dwelling supply was estimated based on identified development projects that are being delivered or are in a planning pathway.

RESEARCH APPROACH CONT.

Desktop Research Cont.

Potentially available **short-term accommodation**, including hotels, motels, serviced apartments, and Airbnb listings, were examined focusing on capacity, pricing, and location.

Case studies of accommodation used for infrastructure, mining or construction projects was completed. These highlight the approaches to workforce accommodation, their successes, and lessons learned.

Stakeholder Consultation

Consultation was undertaken online with seven councils coordinated by EnergyCo Interface Leads and seven generators also coordinated by EnergyCo.

The purpose of engaging with councils was to understand their position on accommodation for future non-local workers, potential options by way of sites and vacant buildings, concerns and constraints and their desire for legacy benefits.

The purpose of engaging with generators was to understand plans and requirements for workforce accommodation.

EnergyCo representatives were present in all sessions.

Spatial Analysis

Drive time analysis was conducted to identify areas with high project activity which would inform identification of locations for workforce accommodation. Data files from EnergyCo were used to identify the locations used this assessment.

Driving Catchments were calculated from the potential entry points to the proposed worksites based on existing access tracks The drive times assessed were 45, 60 and 90 minutes.

For all the entry points within each time limit, service area polygons are calculated which show how far you can drive along the NSW road network from a given point. These are then intersected for each time limit, with the output feature showing where and how many times each Catchment intersects.

There are no explicit routes calculated.

Density modelling was completed showing peak construction jobs in future projects prepared with map outputs to show where the concentration of workforce activity is, which was then considered with the outputs of the drive time Catchment analysis.

Urban Planning

A review of the relevant planning framework for types of accommodation that could be temporarily used was done considering definitions of different types, identification of suitably zoned land most relevant to temporary uses, recommendations on suitable site selection criteria and overview of the relevant planning approval pathways for each type.

Financial Analysis

An evaluation of high-level feasibilities was completed to gauge the viability of different accommodation options that included temporary camp accommodation, student accommodation, manufactured housing estate, a refurbished motel, holiday park cabins and affordable housing.

A list of projects is shown on the following page in Table 2.1 and these are shown in map 9.2.

PROJECT LIST

Table 2.1

Project Name	Project Type	Project Group
Armidale Battery Energy Storage System	Other Energy	Renewable
Armidale East BESS	Other Energy	Renewable
Baiada Integrated Poultry Processing Facility	Other Infrastructure	Non-Renewable
Balala Wind Farm	New England Renewables	Renewable
Bayswater Power Station Upgrade	Other Energy	Non-Renewable
Bendemeer Solar Farm	Other Energy	Renewable
Bendemeer Wind Farm	New England Renewables	Renewable
Boorolong Wind Farm	New England Renewables	Renewable
Bowmans Creek Wind Farm	Other Energy	Renewable
Calala Battery Energy Storage System	Other Energy	Renewable
Deeargee Solar Farm	New England Renewables	Renewable
Dungowan Pumped Hydro Project	New England Renewables	Renewable
Eastern Hub Firming Battery	New England Renewables	Renewable
Edderton Solar Project and BESS	Other Energy	Renewable
Glen Innes Battery Energy Storage System	Other Energy	Renewable
Glenbawn Pumped Hydro	Other Energy	Renewable
Glenbawn Wind Farm	Other Energy	Renewable
Hills of Gold Wind Farm	Other Energy	Renewable
Hillview Solar Farm	New England Renewables	Renewable
Hillview Wind Farm	New England Renewables	Renewable
Hunter Transmission Project - Muswellbrook	EnergyCo	Renewable
Kayuga Solar Farm	Other Energy	Renewable
Kingswood Battery Energy Storage System	Other Energy	Renewable
Lambruk Solar Project	Other Energy	Renewable
Liddell Battery	Other Energy	Renewable
Liddell Future Land Use & Enabling Works	Other Energy	Non-Renewable
Middlebrook Solar Farm	Other Energy	Renewable
Mount Pleasant Optimisation Project	Other Energy	Non-Renewable
Muswellbrook BESS	Other Energy	Renewable
Muswellbrook Bypass Project (REF)	Other Infrastructure	Non-Renewable
Muswellbrook Solar Farm	Other Energy	Renewable
Muswellbrook Pumped Hydro Energy Storage	Other Energy	Renewable
NE REZ Transmission - Armidale	EnergyCo	Renewable
NE REZ Transmission - Liverpool Plains	EnergyCo	Renewable
NE REZ Transmission - Muswellbrook	EnergyCo	Renewable
NE REZ Transmission - Tamworth	EnergyCo	Renewable
NE REZ Transmission - Upper Hunter	EnergyCo	Renewable
NE REZ Transmission - Uralla	EnergyCo	Renewable
NE REZ Transmission - Walcha	EnergyCo	Renewable
New England Battery	New England Renewables	Renewable
New England Solar Farm Stage 2	Other Energy	Renewable
Northern Tablelands Wind Farm	New England Renewables	Renewable
Nottingham Park Solar Farm	Other Energy	Renewable
Oven Mountain Pumped Hydro	Other Energy	Renewable
Oxley Solar Farm	Other Energy	Renewable
Queensland-Hunter Gas Pipeline	Other Energy	Non-Renewable
Richard Gill School	Other Infrastructure	Non-Renewable
Salisbury Solar Farm	New England Renewables	Renewable
Skye Ridge Wind Farm	New England Renewables	Renewable
Sundown Solar Farm	Other Energy	Renewable
Tangaratta Feedmill	Other Infrastructure	Non-Renewable
Thunderbolt Wind Farm	Other Energy	Renewable
Tilbuster 2 Solar Farm	Other Energy	Renewable
Tilbuster Solar Farm	Other Energy	Renewable
Upper Hunter Battery Energy Storage System	Other Energy	Renewable
Uralla Solar Farm	New England Renewables	Renewable
Uralla Wind Farm	New England Renewables	Renewable
White Rock 2 Wind Farm	Other Energy	Renewable
Willow Tree Gravel Quarry Extension	Other Energy	Non-Renewable
Winterbourne Wind Farm	Other Energy	Renewable
Yarrowyck Wind Farm	New England Renewables	Renewable

NOTE: Eight projects are not listed for confidentiality purposes

SECTION OVERVIEW

Table 2.2

Section No.	Section Name	Contents
02	Introduction	Provides context on project and study approach
03	Study Area Definition	Map of the Study Area
04	Population & Demographic Drivers	Historical and forecast population growth for Study Area LGAs
05	Underlying Housing Demand	Housing demand projections for Study Area LGAs by type and current demand indicators
06	Housing & Accommodation Supply Analysis	Existing mix of dwelling types by Study Area LGAs, proposed future supply, existing short term and proposed supply
07	Temporary Workers Accommodation Case Studies	Profile of temporary worker accommodation camps to identify operators, area required, lead time and services provided
08	Stakeholder Consultation	Summary of discussions with and Councils.
09	Construction & Operational Worker Demand Assessment	Projections of future construction and operational workforce required for relevant projects 2023-2054
10	Construction & Operational Worker Accommodation Demand Assessment	Assesses the demand for temporary and permanent accommodation by LGA and for different project scenarios over time
11	Spatial & Accommodation Catchment Analysis	Drive time analysis and spatial density modelling, identification of suitable locations and accommodation required by Catchment over time
12	Financial Analysis	Financial evaluation of potential accommodation solutions
13	Implications & Accommodation Planning Direction	Evaluation of potential solutions considering demand, location, timing, proximity to existing services and potentially available sites
A1	Urban Planning Review	Relevant local government planning and zoning controls have been reviewed to identify constraints and opportunities for worker accommodation
A2	Residential Future Project List	Residential projects in supply pipeline in the Study Area
A3	Construction and Operational Workers Demand Assessment Assumptions	Assumptions used for the Construction and Operational Workers Demand Assessment
A4	Spatial Analysis Methodology	Methodology used for the Spatial Analysis
A5	Accommodation Suitability Drive Time and Job Density Maps	Additional maps generated for accommodation suitability, drive times and job densities
A6	Future New England Major Projects	List of future New England major projects examined in study

ABBREVIATIONS USED IN THIS REPORT

Table 2.3

Name	Abbreviation
Australian Bureau of Statistics	ABS
Average Daily Room Rates	ADR
Battery Energy Storage System	BESS
Development Application	DA
Drive-in-drive-out	DIDO
Department for Planning, Housing and Industry (NSW)	DPHI
Department of Planning & Environment (former)	DPE
Floor space ratio	FSR
Fly-in-fly-out	FIFO
Gigawatts	GW
generation design partners	GDPs
Gross Realisation Value	GRV
Hectare	ha
Internal Rates of Return	IRR
Local Environmental Plan	LEP
Local Government Area	LGA

Name	Abbreviation
Local Housing Strategy	LHS
Manufactured Housing Estate	MHE
Megawatts	MW
New England Renewable Energy Zone	NE REZ
New England Renewable Energy Zone Network Infrastructure Project	NRNIP
New South Wales	NSW
Purpose-Built Student Accommodation	PBSA
Real Estate Institute of New South Wales	REINSW
Renewable Energy Zone	REZ
Revenue per Available Room	RevPAR
Review of environmental effects	REF
Square metres	sq.m
State Environmental Planning Policy	SEPP
State Significant Development	SSD
State Significant Infrastructure	SSI
University of New England	UNE

03

STUDY AREA DEFINITION

STUDY AREA

To assess housing needs for workers involved in the construction and operation of the NE REZ, we employed two main Study Areas: Primary and Secondary. The Primary Study Area encompasses the LGAs of:

- Armidale
- Walcha
- Tamworth
- Uralla

These LGAs are in the vicinity of both the NE REZ transmission corridor and most generation projects.

The assessment includes the Secondary Study Area, which includes the following LGAs:

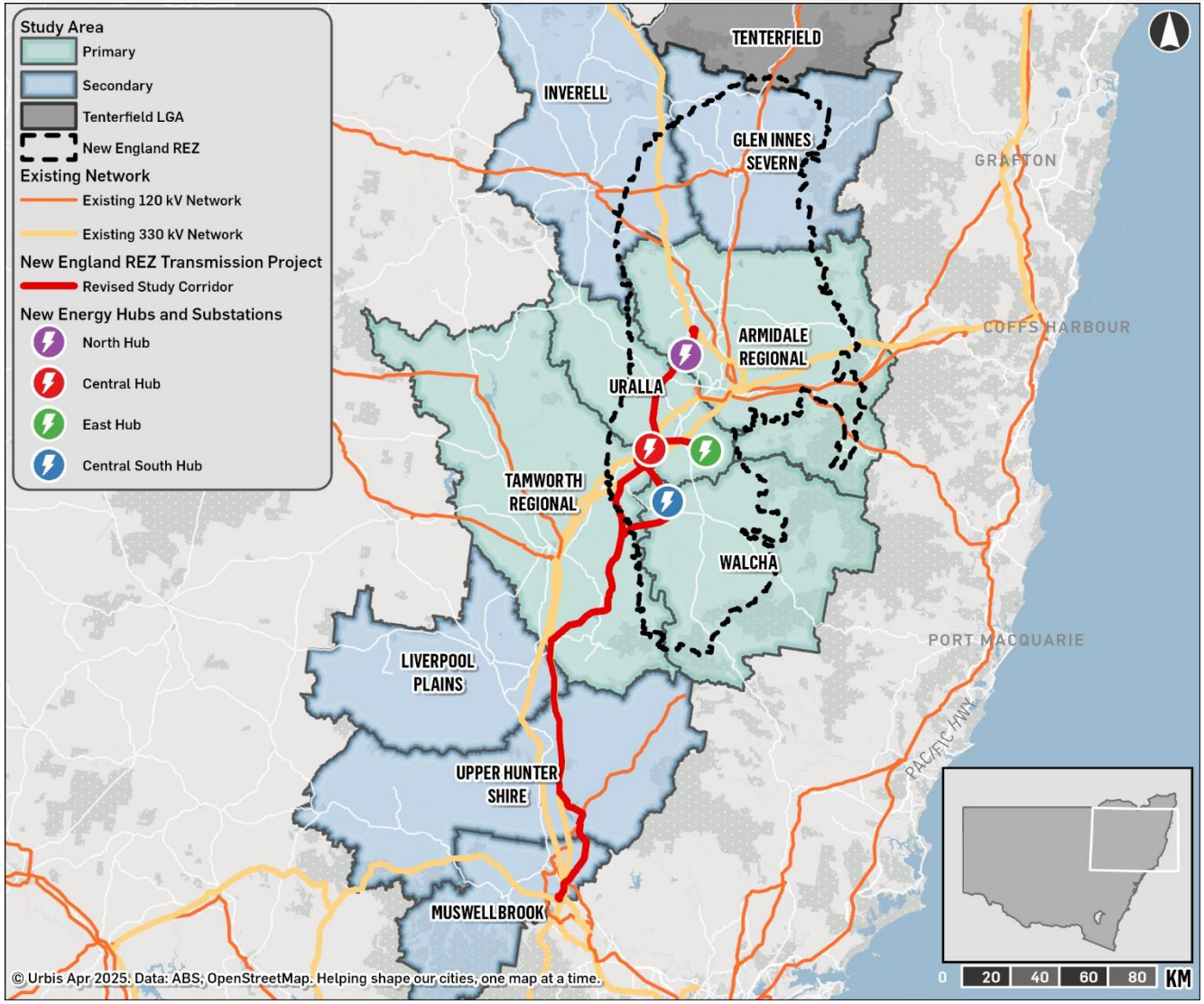
- Upper Hunter
- Muswellbrook
- Liverpool Plains
- Glen Innes Severn
- Inverell

The first three LGAs are in the vicinity of the NE REZ Transmission and the final two are within the REZ, but not in the vicinity of NE REZ Transmission aligning with the classifications in EnergyCo's brief.

While the Study Areas will be used to summarise data, the report will also provide specific information and assessments for individual LGAs.

While Tenterfield LGA is one of the ten REZ Council's and is officially located within the NE REZ (though only a small portion), as shown on map 3.1, it was not included in the study as not mentioned in the brief. The purpose of the work is to determine the cumulative impacts of major projects. As there were no projects or new transmission line corridors identified as being within the Tenterfield LGA, the LGA was not considered to be contributing to workforce or accommodation cumulative impacts.

Map of Study Area **Map 3.1**



Source: Urbis

04

POPULATION & DEMOGRAPHIC DRIVERS

Key Findings

Population growth is an indicator of housing demand in a specific area.

Charts 4.1 and 4.2 illustrate the historical resident population for the Study Area spanning 15 years, from 2008 to 2023. These figures are based on ABS population estimates by LGA.

Primary Study Area

Historically, the Primary Study Area has experienced moderate population growth, rising from 93,104 in 2008 to 103,855 in 2023, with an average annual growth rate of 0.7% or a cumulative increase of 11.5%. This translates to adding 10,751 new residents over the past 15 years.

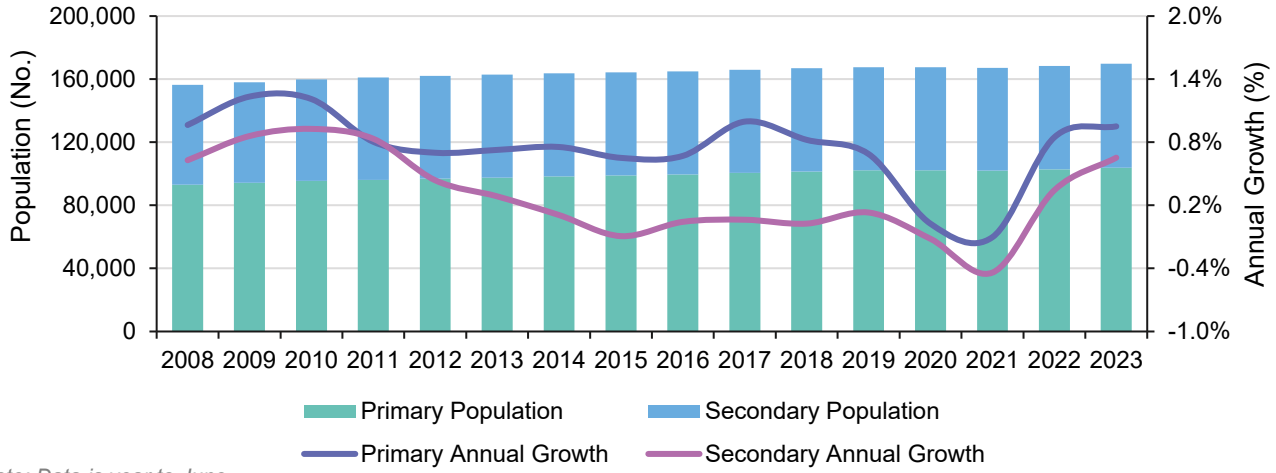
In 2023, the Tamworth LGAs population accounted for 63% of the Primary Study Area and contributed to 85% of growth in the area over the past 15 years.

Secondary Study Area

The Secondary Study Area, characterised by a smaller population base, has seen slower population growth. Over the 15 years to June 2023, the population has grown at a lower rate, increasing from 63,225 in 2008 to 65,831 in 2023. This represents an average annual growth rate of 0.3% or the addition of 2,606 new residents in absolute terms.

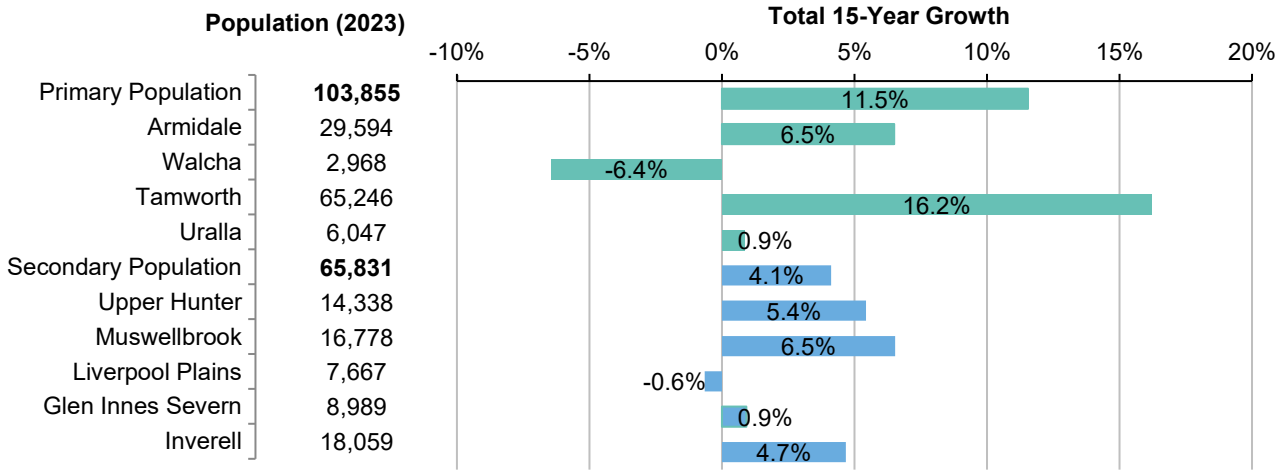
In 2023, Inverell accounted for 27% of the Secondary Study Area's population, while Muswellbrook contributed to 39% of the Secondary Area's growth over the past 15 years, adding 1,029 new residents.

Existing Population by Study Area, 2008 – 2023 — Chart 4.1



Note: Data is year to June
Source: ABS ERP 2023; Department of Planning and Environment 2022

Existing Population Growth by Study Area and LGA, 2008 – 2023 — Chart 4.2



Note: Data is year to June
Source: ABS ERP 2023; Department of Planning and Environment 2022

Key Findings

The rate and extent of future population growth will substantially affect future demand for residential dwellings.

Chart 4.3 presents the projected resident population from 2024 to 2039. These figures are based on Department of Planning and Environment (DPE) population forecasts, now Department of Planning, Housing and Infrastructure (DPHI). These projections were developed in 2022 and do no reflect population growth associated with construction of REZ projects and therefore is only used for a base point of comparison to which we add future workforce demand.

Primary Study Area

From 2024 to 2039, the Primary Study Area was expected to grow from 104,276 residents to 112,348 residents, equating to an increase of 538 residents p.a. (or an average of 0.5% per annum).

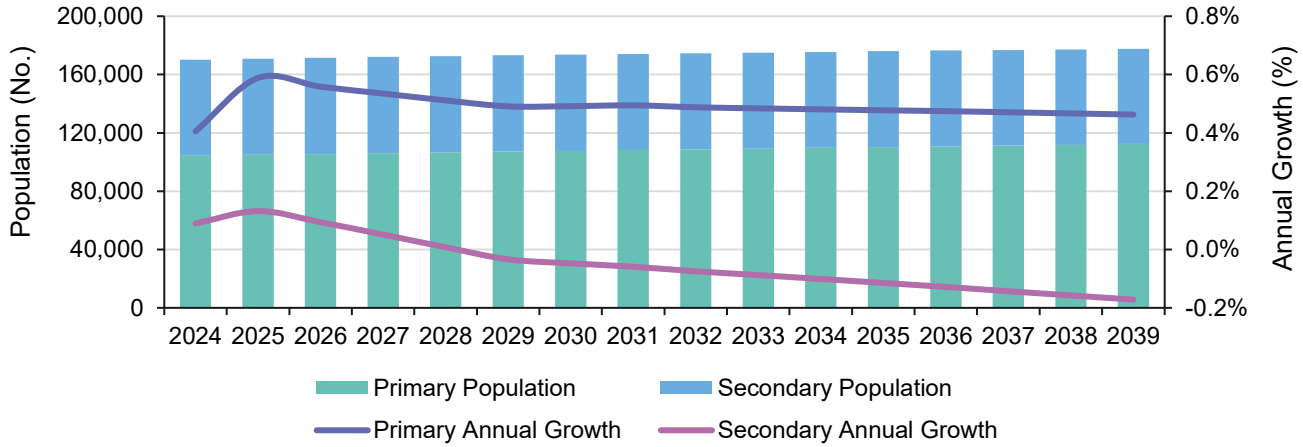
Future population growth will predominantly depend on the development of Tamworth, which is projected to increase by 7,348 residents over the next 15 years. In contrast, Walcha and Uralla were expected to experience population declines during this period.

Secondary Study Area

The expected population decline in the Secondary Study Area over the next 15 years is exacerbated by reductions in population forecast in the Upper Hunter and Liverpool Plains LGAs.

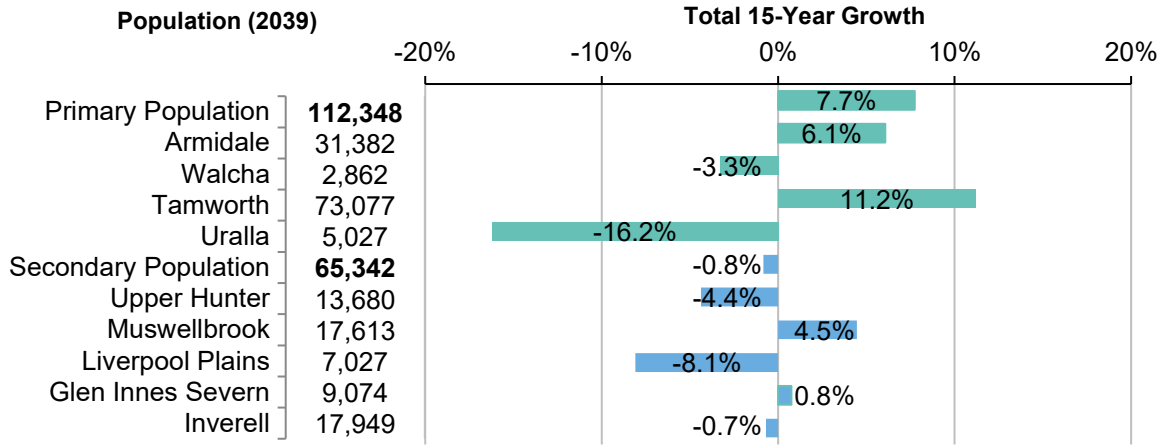
Between 2024 and 2039, the Secondary Study Area was forecast to decrease from 65,890 residents to 65,342 residents, resulting in a decline of 548 residents. This equates to a small population loss of 0.06% per annum.

Population Forecast by Study Area, 2024 – 2039 — Chart 4.3



Note: Data is year to June
Source: ABS ERP 2023; Department of Planning and Environment 2022

Population Growth Forecast by Study Area and LGA, 2024 – 2039 — Chart 4.4



Note: Data is year to June
Source: ABS ERP 2023; Department of Planning and Environment 2022

Key Findings

Chart 4.5 illustrates the current average household sizes within each LGA and Study Area as of 2023, while Chart 4.6 displays household size projections through to 2039. The provided data reveals notable disparities in average household sizes among distinct LGAs.

Primary Study Area

In 2023, the average household size in the Primary Study Area is 2.45, aligning with the Non-Metro NSW average. Chart 4.6 anticipates a minor decline, forecasting it to reach 2.40 by 2039.

Armidale has the highest average household size at 2.50, indicating a 2.7% surplus over the Non-Metro NSW average. Walcha reports the lowest household size of 2.22, marking a notable 9.1% reduction compared to the Non-Metro NSW average of 2.44.

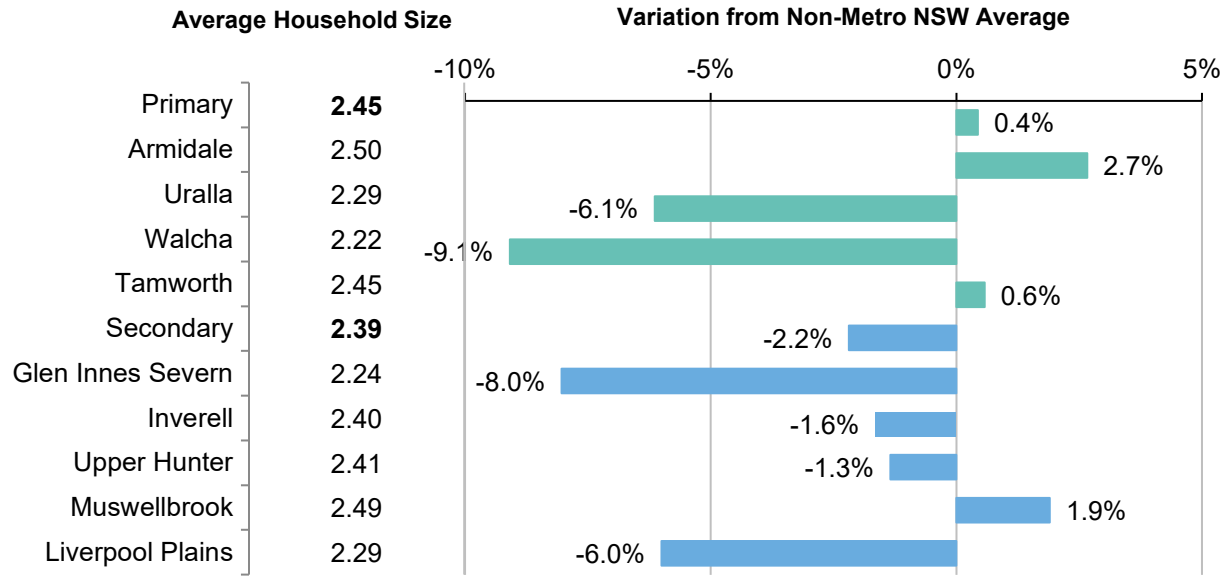
The projected decline in household size across the Primary Study Area implies that more dwellings will be needed per additional resident. This demographic shift is expected to result in an increased demand for additional dwellings to accommodate the anticipated population growth across the Primary Study Area.

Secondary Study Area

In 2023, the average household size in the Secondary Study Area is 2.39, 2.2% below the Non-Metro NSW average. Chart 4.6 anticipates a significant decline, forecasting it to reach 2.27 by 2039.

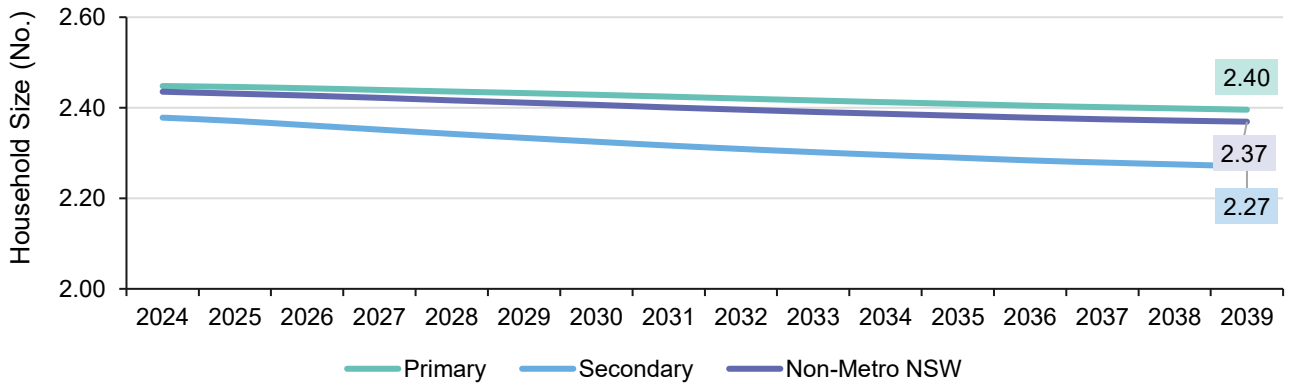
Despite the decreasing household size, the overall decline in population across the Secondary Study Area will result in a reduction in annual dwelling demand over the projected period.

Current Household Size, 2023 — Chart 4.5



Source: Department of Planning and Environment 2021

Household Size Projections, 2024 – 2039 — Chart 4.6



Source: Department of Planning and Environment 2021

CENSUS | HOUSEHOLD INCOME, TENURE AND ANCESTRY

Key Findings

Table 4.1 provides a snapshot of the demographic characteristics of residents within the Study Area and their variance to the Non-Metro NSW benchmark as at the 2021 Census.

Household income:

- The Primary and Secondary Study Area have lower household incomes compared to Non-Metro NSW, with median incomes being 4.8% and 10.4% below the average, respectively
- There is a smaller percentage of residents earning over $208,500 in these areas, being 1.4% and 2.1% lower, respectively
- Over the 10 years to 2021, household income in the Primary Study Area increased by 3.9% p.a. (equivalent to $3,310 per year), while in the Secondary Study Area, it grew by 3.2% p.a. (equivalent to $2,500 per year).

Tenure:

- Homeownership is the predominant tenure type in the Study Area. However, in the Primary Study Area, it falls 3.1% below the Non-Metro NSW average, indicating affordability challenges
- In the Primary Study Area, renters surpass the Non-Metro NSW average by 4.4%. The construction of worker accommodation is expected to artificially raise rental prices during peak construction periods, resulting in a negative impact on renters.

Ancestry:

- There is a higher proportion of Aboriginal people in the Study Areas and a lower proportion of people born overseas.

Key Demographics — Table 4.1

	Primary		Secondary	
Measure	**2021 Census**	**Non-Metro NSW Variation**	**2021 Census**	**Non-Metro NSW Variation**
Income				
Average Per Capita Income	$54,200	-4.6%	$53,400	-6.0%
Average Household Income	$97,100	-4.8%	$91,400	-10.4%
Negative/Nil income	1.7%	-0.1%	2.3%	0.5%
$0-$8,000	0.8%	0.0%	0.9%	0.1%
$8,000-$15,500	1.7%	0.2%	1.9%	0.4%
$15,500-$21,000	2.9%	0.1%	3.4%	0.6%
$21,000-$26,000	7.7%	-0.2%	9.3%	1.4%
$26,000-$34,000	5.5%	-0.1%	5.8%	0.2%
$34,000-$41,500	8.2%	0.3%	8.9%	1.0%
$41,500-$52,000	7.8%	0.2%	8.2%	0.6%
$52,000-$65,000	8.6%	0.4%	8.4%	0.2%
$65,000-$78,000	8.5%	0.3%	8.1%	-0.1%
$78,000-$91,000	6.1%	0.2%	5.6%	-0.2%
$91,500-$104,000	6.3%	0.5%	5.6%	-0.1%
$104,500-$130,500	11.7%	0.6%	10.9%	-0.3%
$130,500-$156,500	7.0%	-0.1%	5.8%	-1.3%
$156,500-$182,500	5.4%	-0.3%	5.2%	-0.5%
$182,500-$208,500	2.9%	-0.5%	2.9%	-0.6%
$208,500 +	7.3%	-1.4%	6.6%	-2.1%
Tenure and Landlord Type				
Renter	32.4%	4.4%	29.2%	1.2%
Owner	36.5%	-3.1%	39.8%	0.2%
Purchaser	31.2%	-1.3%	31.0%	-1.5%
Ancestry				
Australian Aboriginal	10.2%	+4.1%	9.3%	+3.2%
Overseas Born	11.0%	-2.0%	8.4%	-4.6%

Source: ABS Census 2021; Urbis

05

UNDERLYING HOUSING DEMAND

Key Findings

Table 5.1 provides a comparison between the lowest and highest residential vacancy rates observed in every suburb within each LGA as of September 2024. It uses the New England Region as a reference benchmark.

In the New England Region, vacancy rates were predominantly low, averaging 1.5% as reported by REINSW in September 2024. However, certain postcodes within each LGA recorded higher vacancy rates. It is worth noting that these areas are less populated suburbs where a small number of vacancies had a noticeable impact on the overall rate.

As per SQM data, which calculates vacancy rates from August 2019 to 2024 by postcode, numerous postcodes showed either zero or very few vacancies. In some cases, certain postcodes within both the Primary and Secondary Study Area maintained zero vacancies consistently for several months.

The equilibrium vacancy rate hovers around 3%, signifying a balance between supply and demand. With an overall vacancy rate of just 1.5% and postcode medians within each LGA also below 3%, this suggests an undersupply of dwellings in the New England Region.

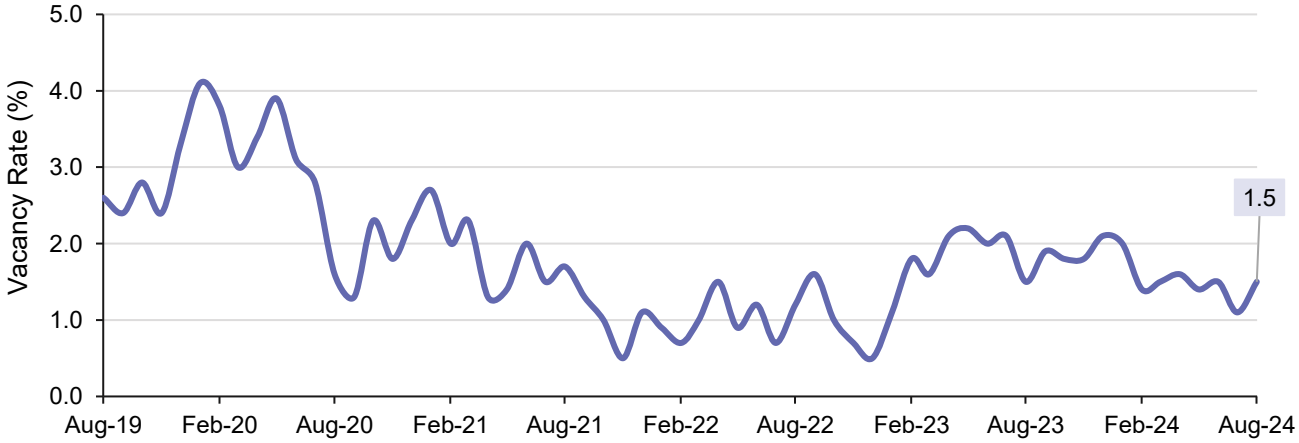
Rental and vacancy rates are highly responsive to shifts in supply and demand dynamics. To assess the extent and impact of the undersupply within the LGAs, the vacancy findings will be cross-referenced with rents and median sale prices.

Residential Vacancy by Study Area and LGA, Sep 2024 **Table 5.1**

Location	Lowest vacancy	Highest vacancy	Median vacancy
Primary	**0.0%**	**11.1%**	**1.1%**
Armidale	0.0%	5.0%	2.2%
Walcha	0.0%	4.8%	1.7%
Tamworth	0.0%	5.6%	0.9%
Uralla	0.0%	7.4%	1.2%
Secondary	**0.0%**	**4.5%**	**0.7%**
Upper Hunter	0.0%	7.4%	1.2%
Muswellbrook	0.0%	5.6%	0.9%
Liverpool Plains	0.0%	4.8%	0.9%
Glen Innes Severn	0.0%	5.0%	1.1%
Inverell	0.0%	5.4%	0.0%
New England Region			**1.5%**

Note: Vacancy range based on postcode data in LGA, as of Sep-24
Source: SQM Research.

New England Residential Vacancy Rate, Aug 2019 – Aug 2024 **Chart 5.1**



Source: Real Estate Institute of NSW

Key Findings

Table 5.2 displays historical rental performance data spanning from 2019 to 2024 for each LGA, providing a comparison with the Non-Metro NSW average.

Primary Study Area

In the June quarter of 2024, the weekly rental prices for detached houses ranged between $440 and $450, while unit rentals averaged at $320.

For detached houses, robust growth was observed in Uralla, which increased from $293 in 2019 to $450 in 2024, experiencing annual growth of 9.0%.

For units, the five-year growth in rents averaged 5.1% per annum.

In 2024, detached house and unit rents across the Primary Study Area are generally lower than those achieved in Non-Metro NSW.

Secondary Study Area

In the June quarter of 2024, the rental prices for detached houses in the Secondary Study Area ranged between $350 and $515.

Muswellbrook achieves the highest median rent of $515 for detached houses and $355 for units, which aligns with the Non-Metro NSW average.

Upper Hunter has shown sharp growth, with a five-year annual growth rate of 9.4% for detached houses and 10.8% for units.

Recent tight vacancy rates and strong rental growth are indicative of strong demand for dwellings across the Study Area in the short term.

Rental Market Summary by LGA, June 2019 – June 2024 **Table 5.2**

	House			Unit		
LGA	Median Rent (Jun-24)	Median Rent (Jun-19)	5yr Growth p.a.	Median Rent (Jun-24)	Median Rent (Jun-19)	5yr Growth p.a.
Primary						
Armidale	$440	$350	4.7%	$310	$250	4.4%
Walcha	-	-	-	-	-	-
Tamworth	$450	$340	5.8%	$330	$250	5.7%
Uralla	$450	$293	9.0%	-	-	-
Secondary						
Upper Hunter	$470	$300	9.4%	$380	$228	10.8%
Muswellbrook	$515	$378	6.4%	$355	$223	9.7%
Liverpool Plains	$380	$260	7.9%	$250	$165	8.7%
Glen Innes Severn	$350	$245	7.4%	$235	$160	8.0%
Inverell	$383	$300	5.0%	$290	$190	8.8%
Non-Metro NSW	$510	$370	6.6%	$380	$265	7.5%

Source: Pricefinder; Urbis

DEMAND | MEDIAN PURCHASE PRICE AND TURNOVER

Key Findings

Charts 5.2 and 5.3 show the sales performance of houses and units from 2019 to 2024.

Primary Study Area

Over the past five years, house prices have experienced substantial growth, increasing from $337,250 to $510,000, with an average annual growth rate of 8.6%.

Over the same period, unit prices grew at 7.0% annually, surging to 13.0% per annum between 2020 and 2022. It is worth noting that median unit prices have historically fluctuated, reaching particularly high levels in 2023.

The pandemic and low interest rates initiated a strong increase in house sales and house prices, with a 12.9% annual house price growth rate between 2020 and 2022. The pandemic catalysed movement away from dense urban areas towards regional areas, as remote working became more available. This trend has eased n 2023 and 2024.

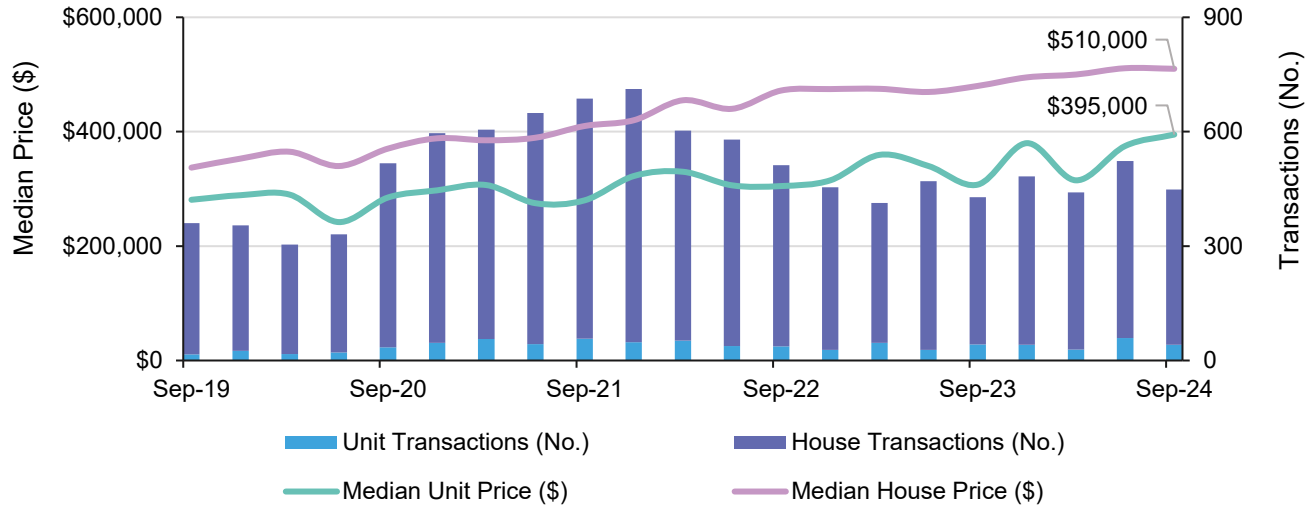
Secondary Study Area

Despite having lower median house and unit prices, the Secondary Study Area has demonstrated more stable and steady growth over the past five years.

House prices increased from $291,400 to $462,500, indicating an average annual growth rate of 9.7%. The positive impact of the pandemic on house prices, observed from 2020 to 2022, was also seen in the Secondary Study Area, with an annual increase of 17.8%.

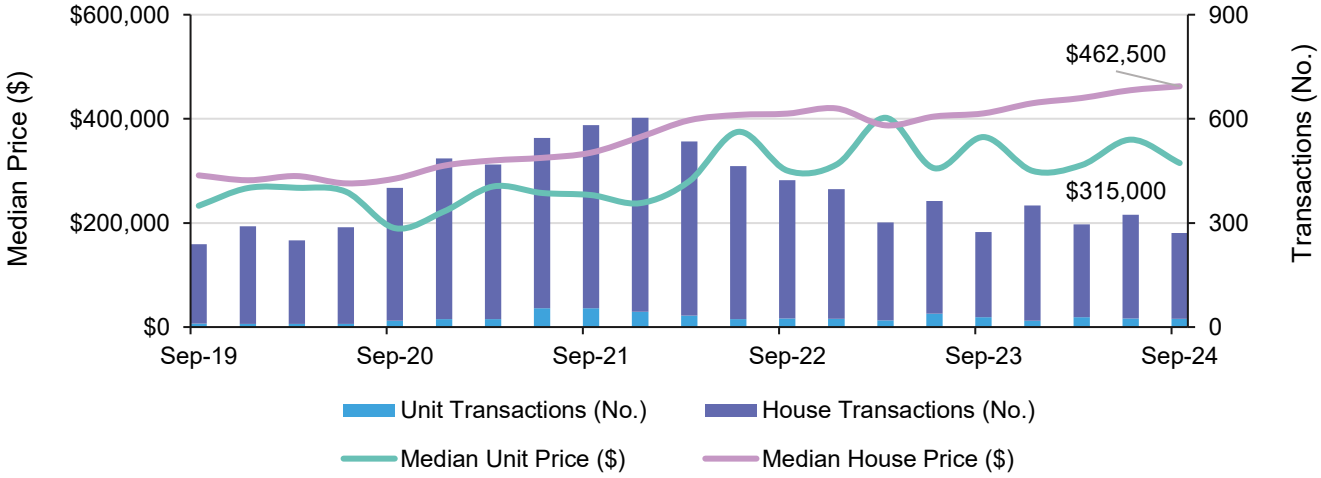
Unit sales have consistently risen at an annual rate of 6.2% over the past five years and 2.4% per annum over the last two years.

Dwellings Sales Cycle, Primary Study Area, Sep 2019 – Sep 2024 **Chart 5.2**



Source: Pricefinder; Urbis

Dwellings Sales Cycle, Secondary Study Area, Sep 2019 – Sep 2024 **Chart 5.3**



Source: Pricefinder; Urbis

DEMAND | MEDIAN PURCHASE PRICE AND TURNOVER (CONT.)

Key Findings

Charts 5.4 and 5.5 shows the sales performance of vacant residential lots from 2019 to 2024.

Primary Study Area

Between 2019 (i.e. pre-COVID) and 2024, median lot sales prices experienced significant year-on-year growth, averaging 6.6% per annum. This highlights the regional relocation trend seen across Australia, catalysed by the pandemic.

Between 2019 and 2024, the Primary Study Area averaged 337 sales per annum. Residential lot sales activity reached a historical peak in 2021 with 588 sales before declining to 226 by 2023.

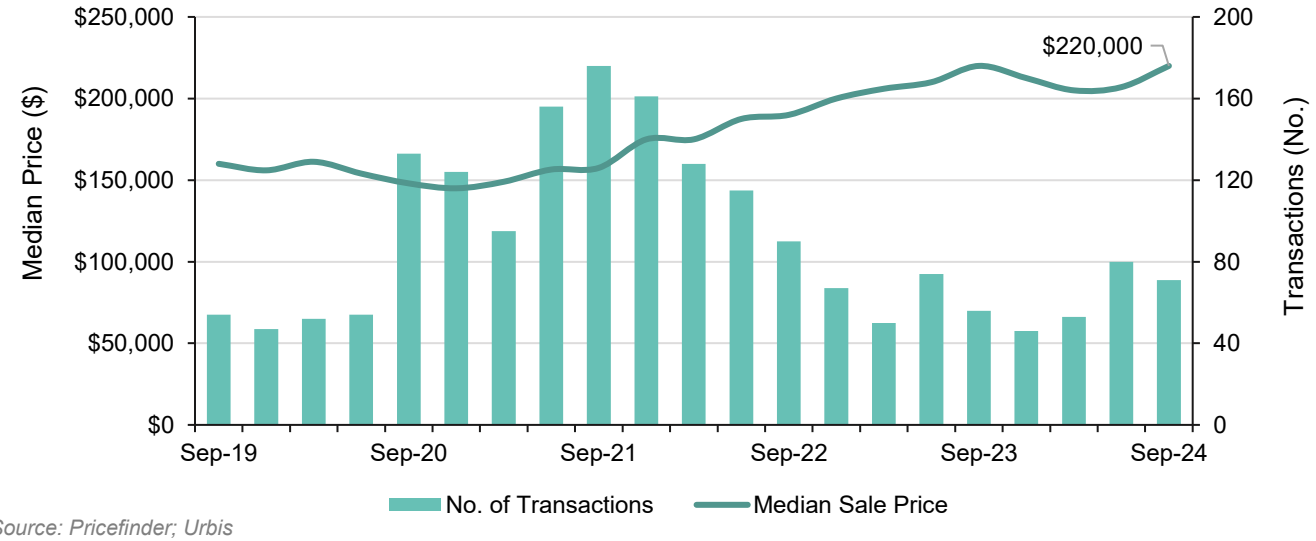
Secondary Study Area

With a lower annual transaction volume, median residential lot prices in the Secondary Study Area have seen a decrease over the past five years.

Median lot sales prices have decreased from $145,500 to $125,000 over the last five years, decreasing at an average annual growth rate of 3.0%. Despite this a 12.1% increase per annum was seen between 2019 and 2023, with 2024 being a year of steady decline.

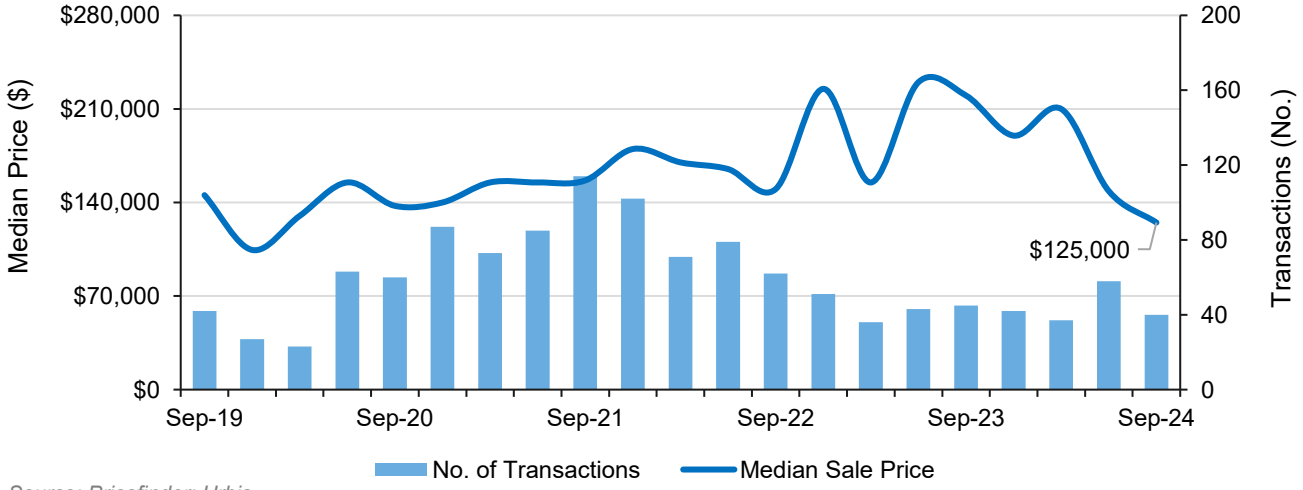
Between 2019 and 2024, the Secondary Study Area averaged 217 sales per annum. Residential lot sales activity reached a historical peak in 2021 with 374 sales before declining to 166 by 2023.

Vacant Lots Sales Cycle, Primary Study Area, Sep 2019 – Sep 2024 **Chart 5.4**



Source: Pricefinder; Urbis

Vacant Lots Sales Cycle, Secondary Study Area, Sep 2019 – Sep 2024 **Chart 5.5**



Source: Pricefinder; Urbis

DEMAND | UNDERLYING HOUSING DEMAND IN PRIMARY STUDY AREA

Table 5.3 assesses the future demand for residential dwellings (or houses/townhouses/units) in the Primary Study Area until 2039. This assessment assesses base underlying demand excluding additional demand that will be tied to REZ projects and other new major projects in the Study Area. This, therefore, is the base case upon which addition housing requirements will be assessed.

Our approach is as follows:

- To calculate the annual dwelling demand, we applied average household size projections for the Study Area to the Study Area population growth
- We then applied the proportion of dwellings expected to be houses, townhouses and apartments (based on ABS dwelling structure proportions and completion/approvals trends) to the annual dwelling demand. This approach allows us to determine the annual demand for houses, townhouses and units in the Study Area. As the population grows, medium density options become more popular as consumers look for more affordable options.

Key Findings:

- The annual demand translates to a cumulative demand of 3,969 houses, 455 townhouses and 90 units by 2039, totaling 4,514 dwellings.

Housing Demand in the Primary Study Area **Table 5.3**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Dwelling Demand																
Population	104,276	104,889	105,475	106,039	106,581	107,105	107,631	108,163	108,691	109,217	109,742	110,266	110,789	111,311	111,830	112,348
Average Household Size	2.45	2.45	2.44	2.44	2.44	2.43	2.43	2.42	2.42	2.42	2.41	2.41	2.40	2.40	2.40	2.40
Dwellings Required	42,597	42,882	43,173	43,469	43,755	44,032	44,318	44,611	44,907	45,202	45,492	45,781	46,076	46,352	46,622	46,896
Annual Dwelling Demand	215	285	291	296	286	277	286	293	296	295	291	288	295	276	270	273
Proportion of Dwelling Demand that are:																
Houses	89%	89%	89%	89%	88%	88%	88%	88%	88%	88%	88%	88%	87%	87%	87%	87%
Townhouses	9%	9%	9%	10%	10%	10%	10%	10%	10%	10%	10%	11%	11%	11%	11%	11%
Apartments	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Demand for:																
Houses	191	253	258	262	253	244	252	258	260	259	255	252	258	241	235	238
Townhouses	20	26	27	28	28	27	28	29	30	30	30	30	31	30	29	30
Apartments	4	6	6	6	6	6	6	6	6	6	6	6	6	6	5	5
Cumulative Demand for:																
Houses	191	444	702	964	1,217	1,461	1,713	1,971	2,231	2,490	2,745	2,997	3,255	3,496	3,731	3,969
Townhouses	20	46	73	101	129	156	184	213	243	274	304	334	365	395	425	455
Apartments	4	10	16	22	27	33	39	45	51	56	62	68	74	79	85	90
Total	**215**	**500**	**791**	**1,088**	**1,374**	**1,650**	**1,936**	**2,229**	**2,525**	**2,820**	**3,111**	**3,399**	**3,694**	**3,971**	**4,241**	**4,514**

Source: Urbis, ABS, NSW Department of Planning and Environment.

DEMAND | UNDERLYING HOUSING DEMAND IN SECONDARY STUDY AREA

Table 5.4 assesses the future demand for residential dwellings (or houses/townhouses/units) in the Secondary Study Area until 2037. We applied the same approach as previously outlined for the Primary Study Area, which excludes any accommodation demand associated with REZ projects and other new major projects in the Study Area

Key Findings:

- The annual demand translates to a cumulative demand of 1,086 houses, 92 townhouses and 12 units by 2039, totaling 1,190 dwellings
- The anticipated population decline is the driving factor behind the decreasing annual dwelling demand starting in 2029 and beyond.

Housing Demand in the Secondary Study Area **Table 5.4**

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Dwelling Demand																
Population	65,890	65,977	66,039	66,072	66,078	66,055	66,024	65,985	65,936	65,878	65,812	65,736	65,652	65,558	65,455	65,342
Average Household Size	2.38	2.37	2.36	2.35	2.34	2.33	2.32	2.32	2.31	2.30	2.30	2.29	2.28	2.28	2.27	2.27
Dwellings Required	27,706	27,828	27,966	28,095	28,210	28,308	28,399	28,484	28,556	28,617	28,668	28,709	28,748	28,766	28,772	28,776
Annual Dwelling Demand	120	122	138	129	115	98	91	86	72	62	51	41	39	18	6	4
Proportion of Dwelling Demand that are:																
Houses	92%	92%	92%	92%	91%	91%	91%	91%	91%	91%	91%	91%	90%	90%	90%	90%
Townhouses	7%	7%	7%	8%	8%	8%	8%	8%	8%	8%	8%	9%	9%	9%	9%	9%
Apartments	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Annual Demand for:																
Houses	110	112	126	118	105	89	83	78	65	56	46	37	36	16	5	4
Townhouses	9	9	10	10	9	8	7	7	6	5	4	3	3	2	1	0
Apartments	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Cumulative Demand for:																
Houses	110	222	349	467	572	661	744	822	887	943	989	1,025	1,061	1,077	1,082	1,086
Townhouses	9	17	28	37	46	54	61	68	73	79	83	86	90	91	92	92
Apartments	1	2	4	5	6	7	8	9	10	10	11	11	12	12	12	12
Total	**120**	**242**	**380**	**510**	**625**	**722**	**813**	**899**	**970**	**1,032**	**1,082**	**1,123**	**1,162**	**1,180**	**1,186**	**1,190**

Source: Urbis, ABS, NSW Department of Planning and Environment.

Demand for Housing

Competition for rental properties is evident by the consistently low rental vacancy rate across the Study Area over the last 5 years. In August 2024 the New England vacancy rate was at 1.5%. The growth in rents is a response to the low supply, which highlights no capacity to meet the needs on future workers coming into the area.

House rents in Uralla LGA increased on average 9.0% per annum over a 5-year period. The New England Solar project currently under construction is likely to be one of the drivers of rent increases. ACEN Renewables indicated that no temporary accommodation was developed to house the workforce. For context, the project's peak workforce numbers are 450.

Further vacant lot sales in 2023 were less than half the volume they were in 2021. The drop in demand is likely to be more a factor of limited supply available for purchase.

Noting that forecast underlying demand is modelled on the existing dwelling type mix. It does not allow for changing preferences or the need for a type of housing not catered for, such as apartments or townhouses. Apartments and townhouses may have a role in Tamworth or Armidale, and so the small numbers showing as required should not be limit what is built.

Ultimately, there is a requirement for approximately 5,700 additional residential dwellings across the Study Area between 2024 and 2039 before the requirement associated with the New England REZ and other major projects are accounted for.

Challenges in the Market

In the opinion of a Tamworth agent there is not enough land that has been released in a timely manner and this has resulted in a shortage of dwellings. Our future supply analysis, however, shows most of the future lot supply is in the Tamworth LGA.

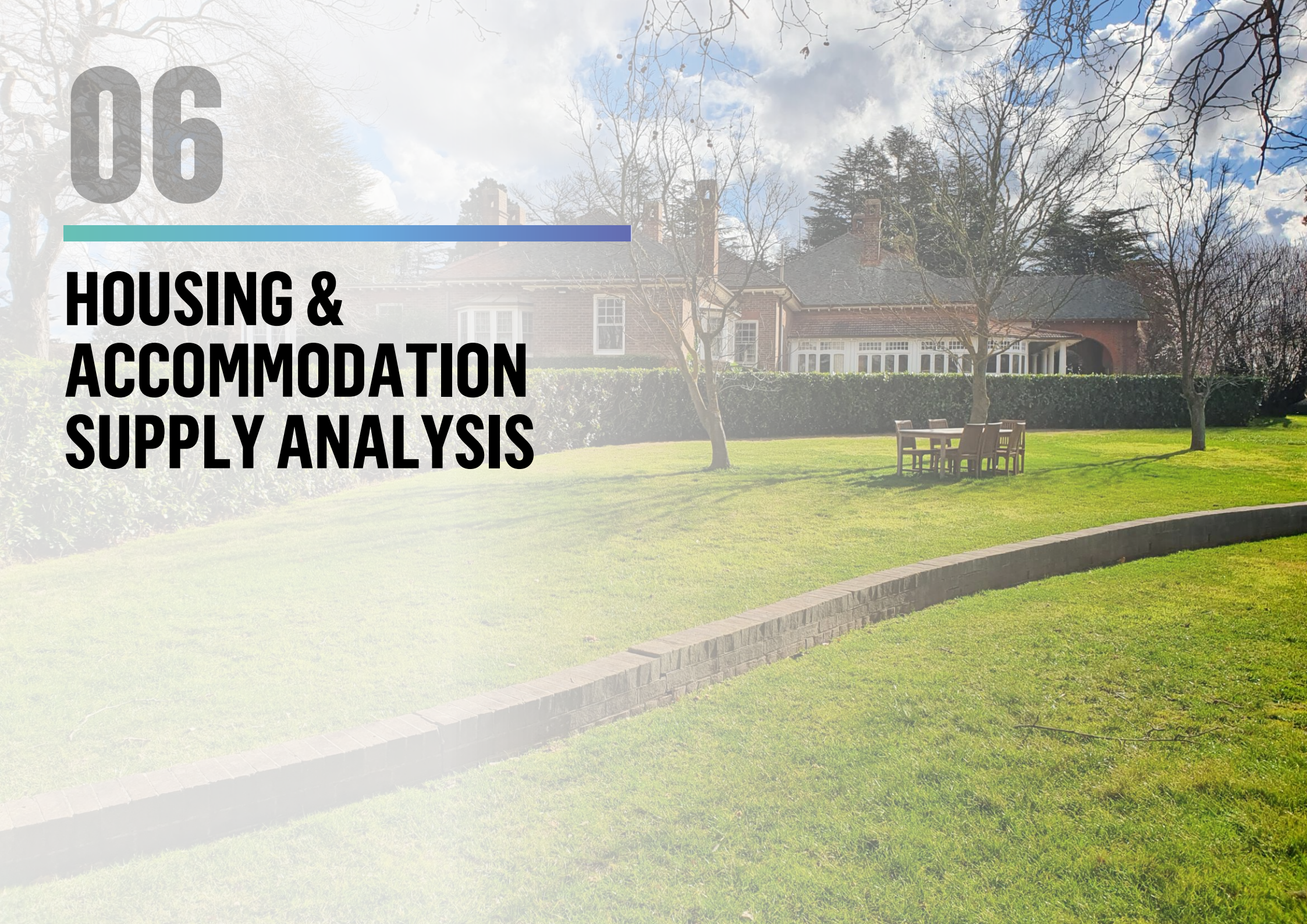
The agent indicated a rental vacancy rate below 1.0% for their management portfolio. There is unmet demand for 3 and 4-bedroom houses and a gap for 1 and 2-bedroom homes or units.

There is strong competition for rental properties from large construction projects and employers, notably Baida's poultry plant and Thomas Foods International.

The agent mentioned that a hotel was purchased by Thomas Foods International for workers and another local hotel was converted to refuge accommodation. Tamworth has a diverse and growing economy and is well positioned to attract development investment relative to other towns and cities in the Study Area.

06

HOUSING & ACCOMMODATION SUPPLY ANALYSIS



SUPPLY OUTLOOK | SUMMARY

Current and Projected Local Housing Supply

Urbis assessed the current dwelling supply in the Study Area using data, real estate market data and local government strategic planning statements (see Table 6.1 overleaf for residential supply identified in the strategic planning statements).

The future dwelling supply was estimated based on identified development projects that are being delivered or are in a planning pathway. The availability of undeveloped zoned land suitable for housing was also estimated through consultation with local governments in the Study Area.

Other potential sources of housing that could contribute to meeting the needs of the construction workforce were also assessed (e.g. student accommodation at University of New England).

Short-term accommodation supply

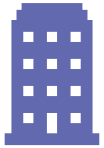
Potentially available short-term accommodation, including hotels, motels, serviced apartments, and Airbnb listings, were examined focusing on capacity, pricing, and location. Short-term accommodation can assist in determining additional sites that could meet the shorter-term requirements of workers.

Case studies

Case studies of accommodation used for infrastructure, mining or construction projects was completed. These highlight the approaches to workforce accommodation, their successes, and lessons learned. These learnings provide ideas on how challenge may be met and any legacy benefits that could be available.

Current Accommodation Supply Assessed

70,140 Existing Dwellings



2,201 Student Accommodation Beds

Short Term Accommodation

1,736 Motels / Hotels / Serviced Apartment Rooms

428 Airbnb Listings

Residential Land Identified in Council Local Strategic Planning Statements **Table 6.1**

LGA	Potential Residential Supply	Locations	Source
Armidale	The development potential in the area includes: • R1 General Residential Infill: 850 lots • R1 General Residential Greenfield: 1,522 lots • Low Density Residential: 308 lots • R5 Large Lot Residential: 341 lots	RU5 Zoned Land: Hillgrove: 272 vacant lots, 238 potential additional lots. Wollomombi: 12 vacant lots, 5 potential additional lots. Ebor: 34 vacant lots, 86 potential additional lots. Black Mountain: 34 vacant lots, 86 potential additional lots. Ben Lomond: 247 vacant lots, 58 potential additional lots. Llangothlin: 23 vacant lots, 14 potential additional lots. R5 Zoned Land: Black Mountain: 9 vacant lots, 20 potential additional lots.	The Armidale Regional Local Housing Strategy (LHS) August 2024
Walcha	Promote the prosperity of our urban areas by directing future residential and large lot housing to existing zoned areas of R1, R5 and E4 land within Walcha; RU5 and R5 zoned land in Nowendoc; and RU5 zoned land in Walcha Road and Woolbrook.		Walcha Local Strategic Planning Statement 2036
Tamworth	The existing R1 – General Residential and R2 – Low Density Residential zones have the capacity to accommodate 8,806 additional dwellings, primarily in Hills Plain, Calala, South Tamworth, Hillvue, Oxley Vale, Westdale, Mount Falcon, Kootingal, and Manilla. Under the TRLEP 2010, lots under **Rural Residential Lands** have a minimum size of 2 hectares. The theoretical supply of these lots, calculated by considering the total area designated for 2-hectare lots, fragmentation, established estates, and a 25% allowance for services, amounts to 1,836 lots. However, the practical availability drops significantly to just 223 lots when factoring in vegetation, existing planning controls, and limitations on water supply. While the Council appears to have a surplus of zoned rural residential land, practical constraints, especially the need for reticulated water and environmental considerations, heavily influence the actual supply. Most of the potential 2-hectare lots are located in Hallsville, Moore Creek, Daruka, Moonbi Hinterland, Tintinhull, Nemingha, Piallamore, and along Nundle Road.		Tamworth Regional Housing Strategy 2024
Uralla	The main population centres are Uralla and Bundarra, which are smaller settlements that rely on larger surrounding towns such as Tamworth, Armidale and Inverell for higher order health and education services and major shopping needs. The decline in household size and the ageing of the population will mean more housing variety is needed to support changing lifestyles. A challenge for Uralla Shire is the mismatch between the available housing stock or land and the needs of residents, such as smaller housing for the aged. Attracting and retaining younger age groups for education and employment will be critical to maintain a diverse community and assist in housing investment. Future growth should also be promoted in locations that build on existing and potential strengths, as well as infrastructure and services that have capacity. Limiting development in places that are difficult to service adequately may assist in improving existing areas. Housing for temporary workers associated with large renewable energy projects needs to be considered in the planning and development stage as projects develop.		Uralla Shire Local Strategic Planning Statement 2021

Residential Land Identified in Council Local Strategic Planning Statements **Table 6.1…cont.**

LGA	Potential Residential Supply Locations	Source
Upper Hunter	The main population centres of Scone and Aberdeen offer the opportunity to meet population growth and reduce the need for housing developments in rural and natural areas. At this same time this will allow for greater diversity of housing types, along with improving affordability and sustainability by aligning housing type, design and location with community needs.	Upper Hunter Shire Council Local Strategic Planning Statement 2020
Muswellbrook	The Shire will provide opportunities for growth in housing, including a greater mix of housing types to cater for the needs of different households. The Planning Principles that we will apply when making decisions: Medium density housing is encouraged in locations that are in walking distance to the Muswellbrook town centre, the Muswellbrook Railway Station, and neighbourhood shops in Rutherford Road, Muswellbrook, or the Denman village centre; Additional residential urban release areas are only provided where it is demonstrated that existing supply will not meet a ten-year demand; The development pattern, scale and sequencing of urban release areas will be planned to integrate with infrastructure availability. Noting a land audit was provided to EnergyCo by the council with more detail of sites.	Local Strategic Planning Statement 2020 - 2040
Liverpool Plains	The prime candidates in which growth is best accommodated have been determined to be Currabubula (40 dwellings), Quirindi (60 dwellings), Wallabadah (30 dwellings), Werris Creek (20 dwellings), and Willow Tree (30 dwellings). It is also anticipated that rural areas (20 dwellings) will experience some growth.	Liverpool Plains Shire Council Growth Management and Housing Strategy 2043 Draft
Glen Innes Severn	Currently a lack of lot creation on developable land in the residential zones in Glen Innes LGA is constraining new housing supply. Additional quality medium density housing is also identified as a key need in Glen Innes LGA. As well as facilitating a development targeting the needs of key groups, council is investigating whether an area near the Glen Innes LGA town centre should be zoned for future medium density development to encourage long term supply of this type of housing.	Glen Innes Severn Local Government Area Housing Strategy 2022-2041
Inverell	The Living Lands Strategy identified a further 59 hectares as suitable for urban residential development in the short term and further 175 hectares in the longer term. It also recommended a range of low-density residential environments around Inverell. Lot sizes proposed range from 2,000 square metres to 4 hectares depending on land constraints and availability of infrastructure such as reticulated water, sewer and sealed road access.	Inverell Shire Strategic Land Use Plan, 2011- 2031

Key Findings

Table 6.2 shows the existing housing supply based on dwelling types (e.g., houses, semi-detached, and apartments) and shows the growth in dwelling structures from 2011 to 2021. These figures are sourced from ABS census data.

Primary Study Area

In the Primary Study Area, separate houses are the most common dwelling type, making up 78.9% (33,195 dwellings), followed by semi-detached houses at 7.9% (3,334 dwellings). Apartments are not common, representing only 2.3% (948 dwellings) of total dwellings.

In the Primary Study Area, Tamworth LGA constitutes most of the total dwelling supply, with a significant 61.6% share. From 2011 to 2021, Tamworth LGA experienced notable growth, with an addition of 2,380 detached houses and 1,248 semi-detached houses. This growth translates to an annual growth of 1.2% for detached houses and 9.0% for semi-detached houses.

Secondary Study Area

In the Secondary Study Area, separate houses are the most common type of dwelling, making up 79.9% (22,432 dwellings), followed by semi-detached houses at 6.0% (1,686 dwellings). Apartments only represent 1.0% (276 dwellings) of total dwellings.

Inverell accounts for 26.4% of the total dwelling supply in the Secondary Study Area, with Muswellbrook following closely at 24.2%. Muswellbrook experienced notable growth, with an addition of 301 detached houses and 391 semi-detached houses.

Dwelling Structure

Table 6.2

	2021 Census					2011-2021 Growth p.a.				
Location	House	Semi-detached	Apartment *	Other	Unoccupied ^	House	Semi-detached	Apartment	Other	Unoccupied ^
Primary	33,195	3,334	948	223	4,356	1.0%	8.7%	-9.5%	-3.4%	0.5%
Armidale	8,993	1,111	469	55	1,426	0.7%	8.3%	-6.9%	-1.9%	1.3%
Walcha	1,127	3	39	10	322	-0.2%	-16.4%	2.0%	-5.7%	0.8%
Tamworth	20,893	2,166	421	128	2,307	1.2%	9.0%	-12.0%	-4.1%	0.3%
Uralla	2,183	54	19	30	300	0.4%	21.1%	-11.4%	-1.8%	-1.5%
Secondary	22,432	1,686	276	196	3,494	0.4%	11.4%	-13.1%	-3.3%	-0.9%
Upper Hunter	5,006	386	44	65	853	0.4%	13.9%	-13.9%	-4.9%	-1.0%
Muswellbrook	5,307	597	58	33	807	0.7%	10.7%	-15.6%	-5.2%	1.5%
Liverpool Plains	2,729	66	34	13	464	-0.4%	4.2%	-4.3%	-5.1%	-3.0%
Glen Innes Severn	3,357	158	76	34	581	0.3%	2.7%	1.1%	7.8%	-1.2%
Inverell	6,033	478	63	50	789	0.5%	18.5%	-18.5%	-3.5%	-1.1%
Total Study Area	**55,627**	**5,020**	**1,224**	**418**	**7,850**	0.7%	9.5%	-10.5%	-3.4%	-0.1%
Non-Metro NSW	**884,838**	**106,912**	**68,252**	**11,193**	**135,309**	1.1%	4.4%	-0.7%	-2.3%	-0.8%

**Apartments include flats attached to houses such as granny flats, and houses converted into two or more flats.*
^Vacant houses, holiday homes, huts and cabins (other than seasonal workers' quarters) are counted as unoccupied private dwellings.
Source: ABS; Urbis

Key Findings

Charts 6.1 and 6.2 display the status of proposed residential dwelling and lot projects in the Study Area, categorised by stage, year and LGA.

Development application and approval clarify the status of residential dwellings, whereas subdivision application and approval relate to the development stage of residential lots.

Primary Study Area

According to Cordell and Urbis research, there are 20 residential projects in the Primary Study Area, with 11 being lot development projects and 9 involving residential dwellings. All of these projects are clustered within the LGAs of Armidale and Tamworth.

Out of the proposed projects, 13% involve the construction of residential lots, 2% are in the development approval stage, and 22% are in the subdivision approval stage. The remaining 2% and 61% are in the development and subdivision application stages, respectively, and have lower certainty regarding their progression.

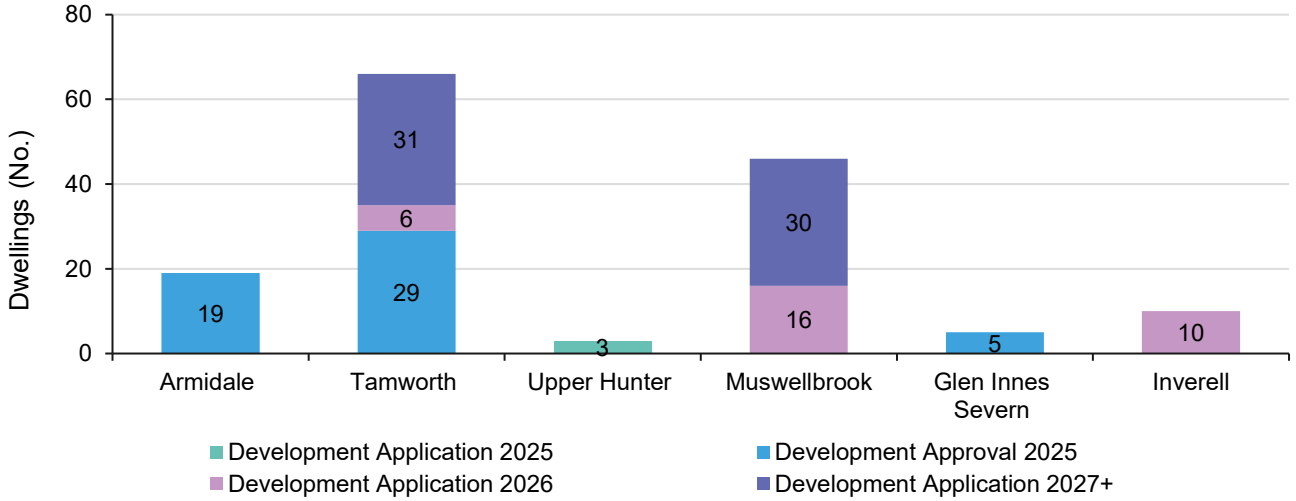
Secondary Study Area

According to Cordell and Urbis research, there are 10 residential projects in the Secondary Study Area, with 5 being lot development projects and 5 involving residential dwellings. Most of these projects are clustered within the LGAs of Muswellbrook and Upper Hunter.

Among the proposed projects, 84% are in the early planning phase, which includes a residential subdivision of 1,350 lots in Muswellbrook.

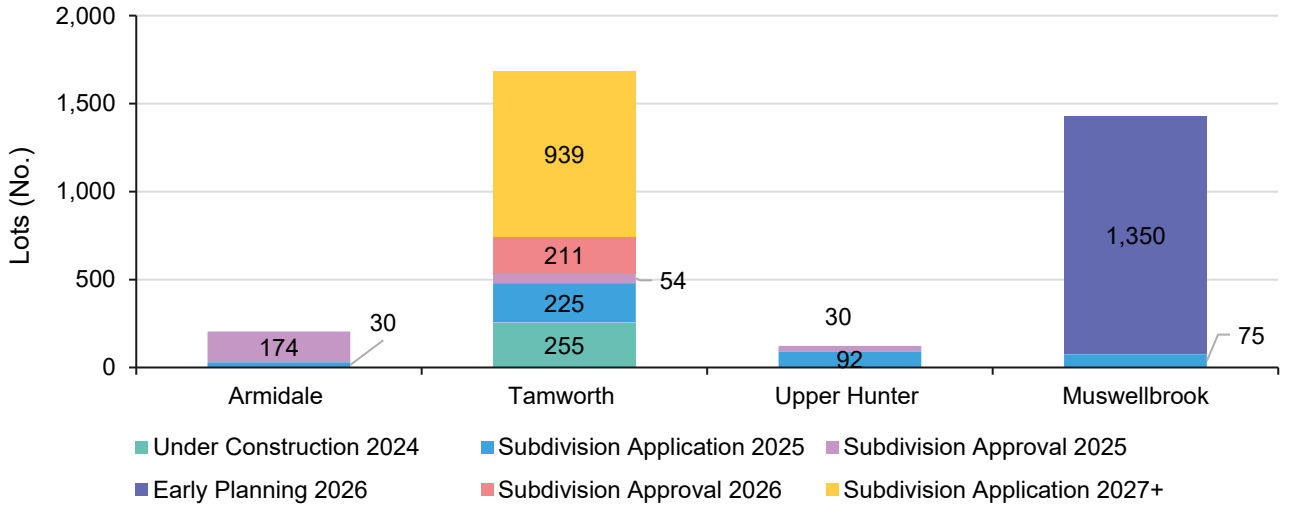
See table of projects in Appendix.

Proposed Dwellings by Year, Status and LGA — Chart 6.1



Source: Cordell Connect; Urbis

Proposed Residential Lots by Year, Status and LGA — Chart 6.2



Source: Cordell Connect; Urbis

SHORT TERM ACCOMMODATION SUPPLY OUTLOOK | EXISTING AND PROPOSED SUPPLY

Key Findings

Table 6.3 outlines the existing short term accommodation establishments, based on an audit undertaken in October 2023. This audit included hotels, aparthotels (hybrid hotel / serviced apartments) and motels.

Table 6.4 opposite shows the proposed short term accommodation facilities by Study Area.

This data will assist in determining to what extent current short term housing supply will be able to meet the requirements of short-term workers.

Primary Study Area

The Primary Study Area comprises 55 establishments, offering a total of 1,338 rooms. Most of these establishments are concentrated in Tamworth and Armidale, which account for 98% of rooms within the Primary Study Area.

Most of the existing supply are motels (31 establishments), hotels (13 establishments) and aparthotels (10 establishments).

In the Primary Study Area, there are two proposed short-term accommodation establishments with development approval. These consist of serviced apartments and are expected to add a total of 27 units by the year 2026.

Secondary Study Area

The Secondary Study Area is a smaller market, with 23 establishments, offering 407 rooms. Most of these establishments are concentrated in Upper Hunter and Muswellbrook, which account for 73% of rooms within the Secondary Study Area.

There are four proposed new short-term accommodation establishments. These consist of mainly motels.

Existing Short Term Accommodation Supply (Establishments, Rooms) **Table 6.3**

	Hotel		Aparthotel		Motel/Inn		Total	
LGA	Est.	Rooms	Est.	Rooms	Est.	Rooms	Est.	Rooms
Primary	**13**	**501**	**10**	**72**	**32**	**765**	**55**	**1,338**
Armidale	3	99	5	13	13	303	21	415
Walcha	0	0	0	0	1	9	1	9
Tamworth	10	402	4	51	17	444	31	897
Uralla	0	0	1	8	1	9	2	17
Secondary	**4**	**49**	**0**	**0**	**19**	**358**	**23**	**407**
Upper Hunter	1	9	0	0	7	111	8	120
Muswellbrook	1	18	0	0	6	160	7	178
Liverpool Plains	1	9	0	0	1	18	2	27
Glen Innes Severn	1	13	0	0	2	26	3	39
Inverell	0	0	0	0	3	43	3	43

Source: STR; Booking.com

Proposed New Short Term Accommodation Establishments **Table 6.4**

Name	Study Area	Suburb	Status	Year	No. Of Units	Type
Longyard Serviced Apartments	Primary	Hillvue	Construction	2024	12	Serviced Apartments
The Gable Inn	Secondary	Scone	Development Approval	2024	21	Motel
The Upper Hunter Backpackers	Secondary	Muswellbrook	Development Approval	2024	-	Backpacker Accommodation
Otho Street Motel	Secondary	Inverell	Development Approval	2025	31	Motel
Mayne Street Motel	Secondary	Murrurundi	Development Application	2025	20	Motel
Dean Street Serviced Apartments	Primary	North Tamworth	Development Approval	2026	15	Serviced Apartments
Total					**99**	

Source: Cordell

Key Findings

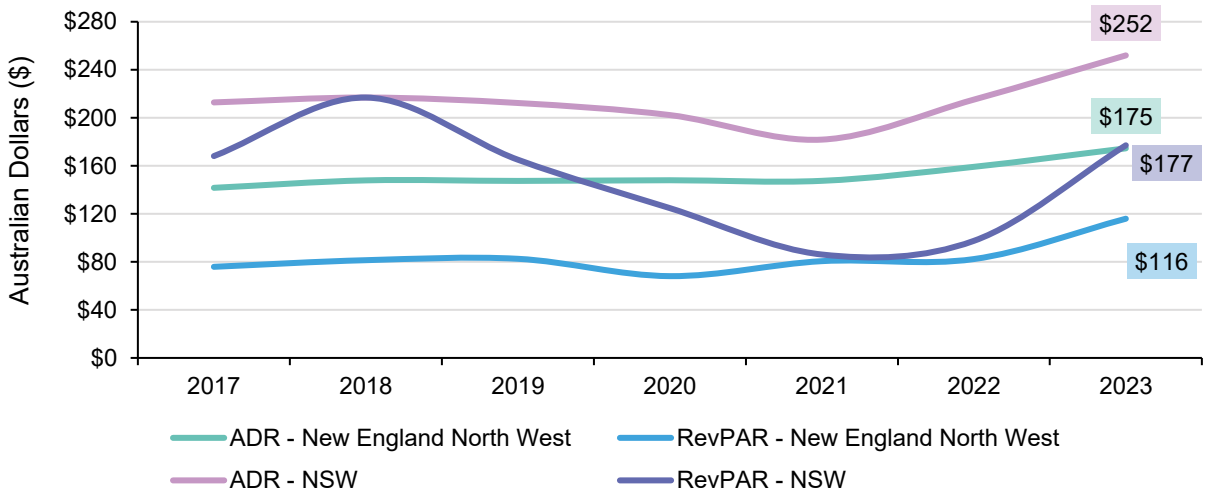
We have utilised data from the Australian Accommodation Monitor by STR to provide insights into the New England North West hotel market. The data represents a sample of 22 facilities, which accounts for 16% of the total establishments and 25% of the total beds in this market. Notably, the average size of the facilities in our sample is 40 beds, compared to the regional average of 26 beds, indicating that our sample consists of larger establishments.

Chart 6.3 illustrates the Average Daily Room Rate (ADR) for hotels in the New England North West region. Although ADR experienced a slight decline during the pandemic early lockdowns, although were quite resilient given the growth of regional tourism and now exceeds pre-pandemic levels. The current ADR in this region is $175, while the ADR in NSW stands at $252.

Chart 6.3 also provides details on the Revenue per Available Room (RevPAR) for New England North West hotels. RevPAR, a key hotel performance metric, is calculated by multiplying the occupancy rate by the ADR. The chart shows that RevPAR declined during the pandemic in NSW, primarily due to reduced occupancy rates, with New England North West improving its performance off the back of regional tourism growth. The current RevPAR in New England North West is $116, compared to $177 in NSW.

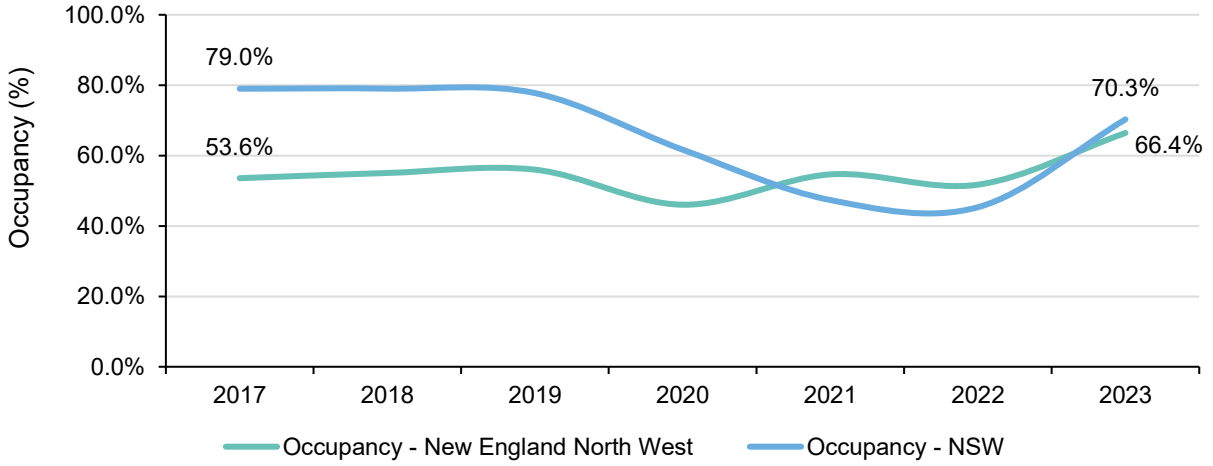
Chart 6.4 depicts recent trends in occupancy rates. Before the pandemic, hotels in the Study Area had an average occupancy rate of around 55%. During the pandemic, occupancy rates fell to 46% in 2020. However, the data indicates a robust recovery, with current occupancy levels reaching 66.4%. This increase is likely also influenced by increased activity in the region, driven by major projects in renewable energy, waste collection, infrastructure, coal mining, and education, particularly in Armidale.

ADR, 2017 – 2023 **Chart 6.3**



Source: STR Australian Accommodation Monitor, July 2022 – June 2023

Occupancy, 2017 – 2023 **Chart 6.4**



Source: STR Australian Accommodation Monitor, July 2022 – June 2023

Key Findings

Table 6.5 showcases the short-term accommodation establishments within the Tamworth, Muswellbrook, Armidale, Upper Hunter and Glen Innes Severn LGAs.

Used as a benchmark for all rooms, the rate per night figure is the cost for a room which sleeps 2 adults, as this is the standard hotel room type. Tamworth has the highest average rate at $177 per night. This is consistent throughout the other LGA averages with Armidale at $174 and Muswellbrook at $172. With a smaller study pool, Upper Hunter has a lower average of $159 per night.

Each LGA has a high occupancy rate within their accommodation establishments. Muswellbrook, which directly serves a district of coal mining, has the highest rate of occupancy at 84%. This comes from the large amounts of Workers, predominantly miners, that stay in the area. This high rate is upheld throughout the year. Tamworth and Armidale follow closely at 80% and 79% occupancy. In Armidale, the occupants are primarily made up of blue-collar workmen, as well as families visiting those who attend the surrounding universities and schools. Reflective of the Tamworth Country Music Festival, short-term accommodation occupancy in Tamworth reaches its highest point throughout December and January.

These high occupancy rates indicate a strong demand for short-term occupancy establishments in the Tamworth, Muswellbrook and Armidale areas.

Room Rate of Major Short-Term Accommodation Establishments — Table 6.5

Short-Term Accommodation Establishment	Type	LGA	Rooms	Rate per Night	Occupancy
ibis Styles Tamworth	Hotel	Tamworth	109	$199	70%
Powerhouse Hotel Tamworth by Rydges	Hotel	Tamworth	81	$309	80%
John Hunter Motel Muswellbrook	Motel	Muswellbrook	70	$172	75%
CH Boutique Hotel	Hotel	Tamworth	63	$217	90%
Redhill Tamworth Motor Inn & Conference Centre	Motel	Tamworth	60	$166	-
Best Western Sanctuary Inn	Motel	Tamworth	60	$244	80%
Econo Lodge Gateway Tamworth	Motel	Tamworth	60	$124	-
Rydges Armidale	Hotel	Armidale	57	$225	85%
Motel 359	Motel	Tamworth	55	$109	75%
The Remington Muswellbrook	Motel	Muswellbrook	54	$260	-
Mercure Tamworth	Hotel	Tamworth	52	$194	-
Country Comfort Armidale	Motel	Armidale	42	$167	80%
City Sider Motor Inn	Motel	Tamworth	41	$159	-
Armidale Tourist Park	Motel	Armidale	40	$186	-
Quest Tamworth	Hotel	Tamworth	40	$238	-
City Centre Motel Armidale	Motel	Armidale	40	$172	-
All Seasons Motel Armidale	Motel	Armidale	40	$146	-
Noah's Mid City Motor Inn Muswellbrook	Motel	Muswellbrook	36	$190	90%
Hermitage Motel	Motel	Muswellbrook	35	$140	95%
Best Western Plus All Settlers Motor Inn	Motel	Tamworth	33	$163	90%
Abbotsleigh Motor Inn	Motel	Armidale	32	$145	70%
Aberdeen Motel	Motel	Upper Hunter	32	$156	-
Acacia Motor Inn	Motel	Armidale	32	$180	80%
Tamworth City Motel	Motel	Tamworth	31	$139	-
Country Capital Motel	Motel	Tamworth	31	-	-
Golden Guitar Motor Inn	Motel	Tamworth	30	$170	-
Tamworth Motor Inn & Cabins	Motel	Tamworth	29	$143	-
Sandy Hollow Tourist Retreat	Motel	Muswellbrook	28	$140	75%
Almond Inn Motel	Motel	Tamworth	27	$138	-
Airlie House Motor Inn	Motel	Upper Hunter	26	$162	-
The Wayfarer Motel	Motel	Muswellbrook	25	$130	85%
Rest Point Motor Inn	Motel	Glen Innes Severn	25	$140	-
Econo Lodge Savannah Park Tamworth	Motel	Tamworth	25	$125	-

Source: STR; Booking.com

Key Findings

Chart 6.5 details the number of Airbnb listings by LGA, categorised into Primary and Secondary Study Areas. This information was primarily sourced from the Airbnb website due to a scarcity of data from alternative sources. For accuracy and consistency, the search for available listings was conducted over the same period, November 6-8, 2024.

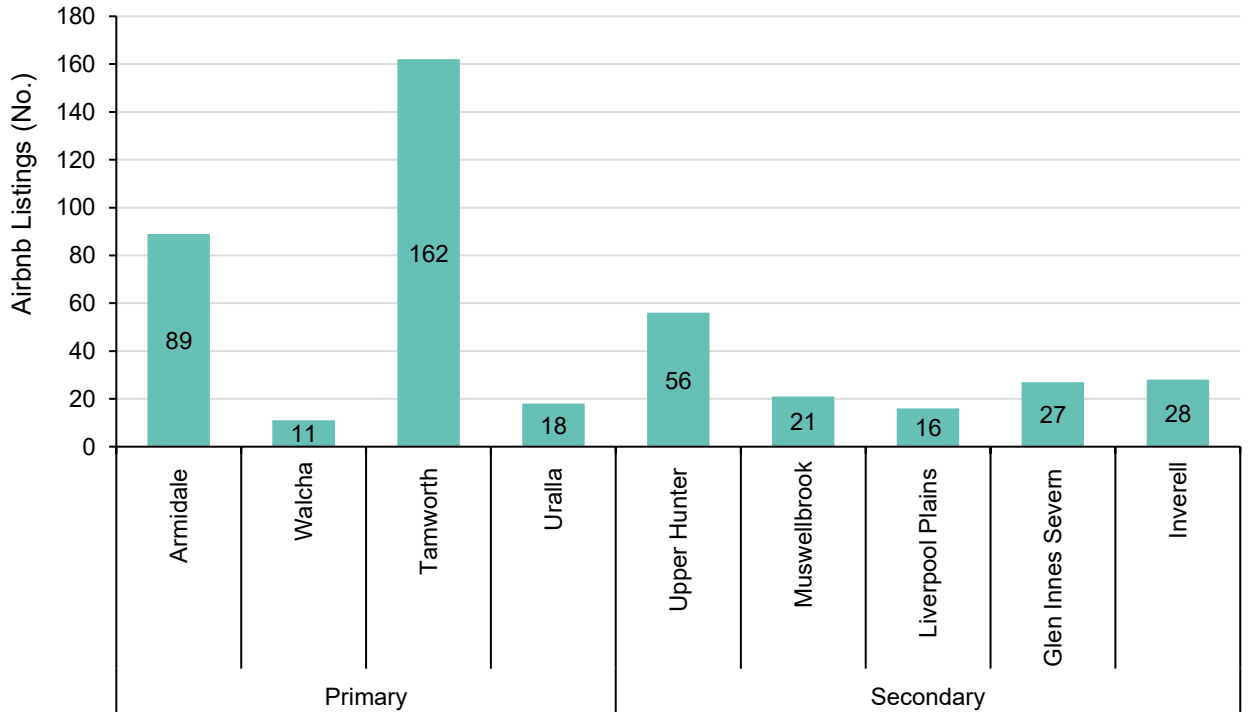
It is worth noting that the number of listings is likely to fluctuate at other times, especially during peak tourism periods such as school holidays, which could see a temporary increase in the number of available properties.

The data reveals that the Primary Study Area has 280 listings, nearly double the number found in the Secondary Study Area, which has significantly fewer listings. Combined, these areas have a total of 428 Airbnb listings. Despite this seemingly substantial number, the overall supply remains critically low relative to the accommodation needs.

Tamworth, with 162 listings, represents the highest number of Airbnb properties among the locations surveyed. In contrast, Walcha has only 11 listings, reflecting its smaller population and potentially limited market for short-term rentals.

Given the projected influx of workers into the region, the current Airbnb supply can not be relied upon to meet the anticipated demand. The imbalance between the number of available listings and the incoming workforce underscores a significant accommodation shortfall. This underscores a pressing need to investigate temporary rental options to accommodate the growing influx effectively.

Airbnb listings by LGA — Chart 6.5



Note: The search for available listings was conducted for the period, November 6-8, 2024.
Source: https://www.airbnb.com.au

Key Findings

Table 6.6 shows the existing supply of Purpose-Built Student Accommodation (PBSA) beds and facilities within each of the Study Areas we have defined.

Armidale stands as the sole market with current PBSA facilities, comprising a total of 1,805 operational beds. All beds are located at the University of New England (UNE) Armidale Campus.

St Albert's College operated by the Catholic Diocese of Armidale is also considered on-campus accommodation, with the note that it is affiliated with the UNE. This is the largest PBSA facility within the Study Area, having 304 beds.

Table 6.7 opposite shows the proposed PBSA supply by Study Area. There is a supply pipeline of 534 beds across two facilities, both of which are replacements for existing PBSA facilities. These projects are yet to proceed, with uncertainty of when construction may proceed.

The proposed New Wright Block project involves the demolition of the existing Wright College. The new facility will be under the ownership and operation of UNE and will be exclusively available to UNE Armidale's students. The new facility will consist of three separate buildings, totaling 114 accommodation rooms with a combined capacity of 342 beds.

Robb College will relocate to a new three two-story buildings, totaling 192 beds. The project's status is pending, with the building currently being assessed for its heritage value.

We are aware that not all accommodation has been fully occupied in recent years, with some permanently closed accommodation being made available to seasonal workers.

Existing PBSA Facilities by Study Area — Table 6.6

Facility Name	Study Area	Suburb	Owner	Year opened	No. Of beds
St Albert's College	Primary	Armidale	Catholic Diocese of Armidale	1969	**304**
Austin College	Primary	Armidale	University of New England	1972	**286**
Earle Page College	Primary	Armidale	University of New England	1963	
Wright Village	Primary	Armidale	University of New England	1956	**283**
Mary White College	Primary	Armidale	University of New England	1960	**209**
Wright College	Primary	Armidale	University of New England	2015	**211**
Duval College	Primary	Armidale	University of New England	1949	**216**
Robb College	Primary	Armidale	University of New England	1960	**296**
					1,805

Source: Urbis

All Proposed PBSA Supply by Study Area — Table 6.7

Facility Name	Study Area	Suburb	Owner	Status	Completion Year	No. Of beds
New Wright Block	Primary	Armidale	University Of New England	Development Approval	2025*	**342**
Robb College	Primary	Armidale	University Of New England	Development Approval	2026*	**192**
						534

Source: Cordell Connect; Urbis
** Original proposal timing which is unlikely to be achieved based on project not having commenced.*

The supply outlook for residential housing and short-term accommodation has been closely examined. The latter appears to be well utilised across the Study Area however may provide some options. Analysis shows that Tamworth LGA attracts a high level of developer interest and investment could be directed to workforce accommodation needs.

Residential Future Supply

Most of the major subdivision lots planned are located in the Tamworth and Muswellbrook LGAs. There are multiple projects in Tamworth which could potentially be activated early by temporary accommodation subject to the support of the developer and planning authorities. For example, there 939 lots are under development application and indicating commencement from 2027 onwards. Conversations with developers could be had to gauge their plans in terms of timing and interest in hosting temporary camps.

Short-Term Accommodation

Accommodation is largely concentrated in the Armidale and Tamworth LGAs. Occupancy rates in both are some of the highest in the Study Area at 79% and 80% respectively. This indicates that short-term accommodation has limited capacity to meet future demand generated by new energy projects in the NE REZ. Walcha and Uralla LGAs have less than 20 rooms each and unlikely to be suitable for temporary workers visiting projects.

Occupancy data is not available for all properties and there could be some not operating to optimal occupancy. Some contractors and large employers have negotiated deals directly with accommodation owners to secure rooms for their workforce, construction and operational. This is happening in locations in NSW where long-term accommodation is not available for rent. We have included financial analysis of refurbishing a motel and propose that it should be part of the accommodation mix investigated.

Outside Tamworth and Armidale there are few Airbnb listings. Properties in areas where there is no motel or hotel accommodation could be appropriate for workers temporarily visiting projects. Uralla and Walcha have more Airbnb listings than motels and so the Airbnb serves a role in those areas for short term needs.

07

TEMPORARY WORKERS ACCOMMODATION CASE STUDIES

CASE STUDIES | SUMMARY

Six case studies were completed on different worker accommodation establishments across Australia.
These are:

- Searipple Village Karratha, WA
- Moora Workers Camp, WA
- EnergyConnect Transmission Line Lockhart Accommodation Camp, NSW
- Moree Accommodation Village, NSW
- Leichhardt Accommodation, Mount Isa, QLD
- HumeLink East, NSW.

Projects were selected to include camps that serviced infrastructure construction projects, examples that serviced workers from different projects and examples developed specifically for transmission projects. We avoided mining camps which are common though not as relevant as they service a longer-term operational workforce.
The models identified are built, owned and operated by an accommodation services provider, and built by an infrastructure contractor with operations outsourced to a specialist accommodation provider. The latter are occupied by employees and contractors working on the project, whereas other camps are utilised by workers on multiple projects.

The camps ranged in size from 42 rooms to 1,300 rooms and time to build ranged from 19 days to a more typical timeframe of 6 to 12 months.

Searipple Village

Rooms	1,300
Site Area	15.0 ha
Building Area	~19,825 sq. m
FSR	0.13:1
Model	Build, own, operate model

Moora Workers Camp

Rooms	60
Site Area	2.0 ha
Building Area	2,228 sq. m
FSR	0.11:1
Model	Build, own, operate model

EnergyConnect Accommodation Camp

Rooms	1,387 in 6 camps
Site Area	Up to 20ha
Building Area	N/A
FSR	N/A
Model	Company camp

Moree Accommodation Village

Rooms	300 beds
Site Area	2.1 ha
Building Area	~9,200 sq. m
FSR	~1:0.46
Model	Company camp

Leichhardt Accommodation

Rooms	138
Site Area	1.2 ha
Building Area	4,446 sq. m
FSR	1:0.37
Model	Outsourced to a build, own, operator

HumeLink East, NSW

Rooms	900
Site Area	26 ha
Building Area	N/A
FSR	N/A
Model	Company camp

Note: N/A Not available

CASE STUDIES | SEARIPPLE VILLAGE KARRATHA, WA

SUMMARY AND APPROACH TO WORKFORCE ACCOMMODATION

- Originally a caravan park, Fleetwood acquired Lot 250 in the late eighties, the other half of the site is located on two lots which are Crown Land leased to Fleetwood by the State for the purpose of Transient Workforce Accommodation
- This land was developed into a construction camp and subsequently evolving it into a large modular accommodation facility
- This facility has played a role in delivering accommodation solutions for numerous workforces in resources and construction projects in the Pilbara region, including Woodside's North West Shelf project, Rio Tinto's coastal exports projects, Citic Pacific mine development and the Yara Pilbara fertiliser plant
- Fleetwood delivered the solution as part of a build, own and operate business model
- The purpose-built village is one of the largest accommodation villages in Western Australia, featuring queen and king single rooms with ensuites
- It includes a gymnasium, two swimming pools, a football field and a basketball court. The village also offers three dining facilities and a fully licensed tavern.

CASE STUDY SUMMARY

Location	Karratha WA
Operator	Operated by Fleetwood Australia
Rooms	1,300
Site Area	15.43 ha
Buildings Area	~19,825 sq. m
FSR	0.13:1
Model	Build, own, operate
Build Time	9 months
Value	$130 m

SUCCESS AND LESSONS LEARNED

- The facility has evolved over time. It developed initially as a construction camp and in recent times has become a modular accommodation village.
- This accommodation solution has assisted the resources and construction sector in the Pilbara by offering affordable accommodation that meets the needs of workers.
- The City of Karratha council voted in favour of a seven-year extension of the landhold lease, valid until 31 January 2027.
- The housing solution can cater for a diverse workforce across multiple projects and therefore can have a longer operational life that helps to amortise costs. Shorter term projects will cost more per bed to construct and operate due to the shorter time to recoup development costs.
- Utilisation of a dedicated booking website provides a convenient platform for businesses, contractors and workers to apply for accommodation.
- Having a third party manage accommodation can have advantages and disadvantages. Outsourcing means businesses can specialize and not have to employ someone to manage the camp. On the other hand, anyone can lease the accommodation so there is no guarantee space will be available when needed.

CASE STUDIES | MOORA WORKERS CAMP, WA

CASE STUDY SUMMARY

Location	Corner Long and Drummond Streets, Moora, West Midlands, WA
Operator	BB Site Services
Rooms	60
Site	2 ha
Buildings Area	2,228 sq. m
FSR	0.11:1
Model	Build, own, operate
Build Time	13 months
Rental	$185 + GST per room per night

SUMMARY AND APPROACH TO WORKFORCE ACCOMMODATION

The camp trading as BBB Site Services is located in Moora, a small town approximately 180 kms north of Perth. The town services various infrastructure projects; however, it has limited accommodation offerings. Moora has banks, a post office, a pharmacy, a dentist, a doctor, a regional hospital, fuel, construction supplies, and commercial and retail providers.

The camp has been in situ for about ten years.

The rates are approximately $185 plus GST per room per night.

Rates includes:

- Breakfast, take away crib lunch and dinner
- Room cleaning
- Laundry facilities onsite for self-washing.

All 64 rooms have ensuites, are air-conditioned, and have a bar fridge and TV.

The camp is securely fenced and has adequate parking for light vehicles.

Meal service times to suit trade personnel (typically breakfast is between 5.00 am to 6.30 am and dinner is 6.00 pm to 7.30 pm.

The average booking is for 10 to 20 rooms for a month or two from a range of contractors.

SUCCESS AND LESSONS LEARNED

- Located within 25 minutes of a full-service regional town
- The camp supports the development and servicing of a range of projects in an area that has very limited accommodation offerings
- Has been utilised by contractors working on rail, wind farm, telecoms and road projects
- An environment suited to the lifestyle of workers, unlike motel accommodation where workers are subject to the general public and not always conducive to worker routines
- Operates like a motel with an overnight room rate providing a simple solution
- A solution that services multiple projects and contractors
- Flexibility for contractors to book in time periods when they need rooms and for the required number of workers. As long as space is available
- Fully integrated owner and operator model that requires no investment from 3rd parties.

CASE STUDIES | ENERGYCONNECT TRANSMISSION LINE ACCOMMODATION CAMPS

SUMMARY AND APPROACH TO WORKFORCE ACCOMMODATION

There are six worker camps required by EnergyConnect for their transmission project, which is due to complete in 2025. The plan was to provide the worker camps along the EnergyConnect alignment with a total of 1,387 beds. This includes camps at Renmark Rd near Wentworth (~100 beds), Buronga (340 beds), Church St Balranald (168 beds), Cobbs Highway near Hay (150-160 beds) Dinawan, near Coleambally (460 beds) and Lockhart (240 beds).

Buronga is located near Buronga Substation development it contains 340 beds and was the first to open along the transmission area in 2022.

Wentworth was the second to open around Apr-23.

Dinawan is the location of a substation and laydown. It is expected to have 460 units on a 1.5 ha camp site with facilities including a laundry, kitchen, dining room, games room, spiritual room and gym as well as a water treatment plant. Ba**lranald** was occupied in May-23 it was the only pre-existing accommodation facility along the line and was supplied by QVC, food by ESS.

Hay construction commenced Jun-24 and is due for completion in late 2024.

Wi-fi and all internet facilities were supplied across the camps. Breakfast, dinner and crib lunches supplied by kitchens.

The Lockhart camp is located on a 20 ha site, opening in Dec-2023, eight months after commencing construction.

CASE STUDY SUMMARY

Location	Southern NSW
Client	EnergyConnect
Rooms	1,387
Site Area	Varied up to 20ha
Model	Company camp
Build Time	Varied 0-8 months identified

SUCCESS AND LESSONS LEARNED

- Locations for the worker camps were determined early in the project planning
- Safety of employees, including drive time to work was a key consideration in deciding camp locations
- Transportation for workers during a rostered shift would be by bus and or SecureEnergy 4WD vehicle
- The workforce is on a set roster with a 10-hour working day so the opportunity for workers to go into town is limited but not restricted and so some spending is captured locally
- SecureEnergy encourages their workforce to visit local tourist locations in the region to add further economic benefits local businesses
- At the camps, 90% of the daily water usage at each camp will be recycled for use as construction water for compaction of soil and dust suppression.
- Various suppliers were used including Australian Portable Camps and QVC covering maintenance, water management, generators, power distribution, office facilities, kitchen/dry mess and remote accommodation.
- Many local suppliers were used, therefore, an opportunity was provided for businesses in the area to benefit.

CASE STUDIES | MOREE ACCOMMODATION VILLAGE, NSW

CASE STUDY SUMMARY

Location	6 Perry James Cres, Moree NSW
Client	Administered by Blackdown Accommodation Services Landowner Moree Plains Shire Council
Rooms	300
Site Area	2.15 ha
Buildings Area	N/A
FSR	N/A
Model	Company camp
Build Time	Conditional Approval Feb-21 Construction expected Apr-21 Completed Jul-21
Value	$130 m

SUMMARY AND APPROACH TO WORKFORCE ACCOMMODATION

A temporary workers' accommodation facility was constructed in early 2021 at the Moree Gateway for out-of-town workers delivering the Narrabri to the North Star Phase 1 section of the Inland Rail.

The facility originally included new internal roads, footpaths and parking and the establishment of accommodation (88 buildings) and support buildings (3 laundries, a reception and a gym).At its peak it housed up to 300 workers and was helping minimise the impact on local accommodation providers as the Inland Rail construction brought workers into town.

Drive-in-drive-out (DIDO) and fly-in-fly-out (FIFO) workers make up a large portion of the rail construction workforce and work on a 14 days on, 7 days off roster.

Generally, residents arrived in Moree on the seventh day of Rest and Recreation and head home on their fourteenth day of work, and while they were working, they were allocated a room at the village.

Rooms have a king single bed, ensuite bathroom, air conditioner, television and fridge.

All food is provided in the village kitchen. Breakfast is available from 4 am to 7 am and workers can also grab lunch at this time. Dinner is available from 5.30 pm to 8 pm.

The Village also featured a gym and a recreation room, which has a large-screen TV, books, games, pool tables and dart boards.

There were 24 staff employed at the village. The camp was being dismantled in mid-2024.

SUCCESS AND LESSONS LEARNED

- Built for Inland Rail workers making it possible to tailor the worker solution to the requirements of the Inland Rail project and the workers involved
- The edge of town site allows access to services and entertainment, while not significantly impacting traffic
- Camp provides enough features to mean workers can stay at the camp without the need to travel into town if preferred
- Camp minimized the impact of the inland rail on the local accommodation
- The camp employed local staff benefiting the local Moree economy
- Many goods are sourced from local businesses, such as Mayco Foods who are supplying 200 products to the Village.

CASE STUDIES | LEICHHARDT ACCOMMODATION, MOUNT ISA, QLD

CASE STUDY SUMMARY

Location	3 Camooweal St, Mount Isa City
Client	Operated by Mount Isa Group
Rooms	138
Site Area	1.2109 ha
Buildings Area	4,446 sq. m
FSR	1:0.37
Model	Build, own, operate
Build Time	N/A
Rental (single)	$100/night $454/week 13/12/19

SUMMARY AND APPROACH TO WORKFORCE ACCOMMODATION

Accommodation solutions are offered by the Mount Isa Group in Mt Isa City. The property is listed as a hotel motel. It is within 1 km of supermarkets (Woolworths), cafes, pubs, clubs, the post office and 400m to the hospital.

The camp focuses on corporate group rentals for long-term stays. It offers resort-style living combined with secure parking for work vehicles.

The accommodation includes unisex single and couples cabin-style accommodation that was purpose-built in 2008 and then extended in 2012. It provides accommodation for contractors, shift workers and tourists. The site offers two undercover barbecue areas, a camp kitchen, a fully equipped commercial-grade kitchen and a restaurant, supplying three meals a day, including packed crib lunches for shift workers if required.

The kitchen responds to guests' needs, operating from 4.30 am-7.00 am for breakfast and dinner from 5.00 pm-8.00 pm. Crib meal takeaways are by request.

Other features include a conference and business centre, laundromat, gym and fitness centre, library, and pool, security including automatic gates, video surveillance, and an onsite manager who is on-call 24/7.

The property is currently under offer with the motel at 14 Fourth Avenue, Mt Isa. Savills is the selling agent.

SUCCESS AND LESSONS LEARNED

- The in-town location and nearby supermarkets, make it more viable for longer-term accommodation
- Operation is carried out by an experienced operator meaning the businesses using the worker accommodation can focus on their business and leave the responsibility for the accommodation provision and upkeep of facilities to a specialist in this area
- Bookings can be made by tourists as well as individual workers and businesses. This flexibility appears to have kept the occupancy rates in Leichhardt Accommodation high
- The camp is close to businesses using the accommodation making it convenient for workers
- The operations are located outside the residential area, which means there is less concerns by local residents about traffic and other issues
- All services are available to the accommodation due to its in-town location
- Plenty of parking is available for work vehicles making it convenient for occupants
- Offering meals for workers provides a source of income for the operators and provides a convenient service for the occupants
- NBN connected and 4G mobile service is essential for workers away from families.

SUMMARY AND APPROACH TO WORKFORCE ACCOMMODATION

SUMMARY AND APPROACH

The HumeLink project involves building a new 500 kV transmission line connecting Wagga Wagga, Bannaby, and Maragle to the existing network, supporting large-scale renewable energy generation.

To accommodate up to 1,600 workers during peak construction, three temporary worker camps, each housing 300 people, will be established. An Expression of Interest (EOI) was issued by Acciona Genus Joint Venture (AG JV) for operation and maintenance of the camps.

These camps will include dry mess (kitchen and dining), reception/office building, wet mess, resident laundries, commercial laundry/linen storage, chop/café and gymnasium.

OPPORTUNITIES AND THREATS

While only one accommodation facility was initially assessed in the Environmental Impact Statement (EIS), concerns about potential accommodation shortages and impacts on local housing and tourism were raised during community engagement. In response, additional temporary camps are planned along the project footprint, co-located with construction compounds for easy access. The number of workers will vary depending on the construction stage.

After no longer needed, the construction compounds and worker accommodation facilities will be demobilised. There is an opportunity to reuse these units elsewhere in the South West REZ.

CASE STUDY SUMMARY

Location	Yass	Woodhouselee	Adjungbilly
Client	Acciona and GenusPlus Group Ltd (JV)		
Area	10 hectares		6 hectares
Nearby	Closest residence approximately 120m to the south-west	Closest residence approximately 205m to the west	Closest residence approximately 2.1 km to the west
Access	Via existing property access on Faulder Avenue	Via existing property access from Adjungbilly Road	Via Graywood Siding Road
Parking	Space for 125 light vehicles and 25 heavy vehicles		
Rehabilitation	Site to be rehabilitated after works in consultation with the landowner		
Potential Activities	Concrete batching, helipad/helicopter facilities, sediment basins for erosion control, and utility connections		
Initial Occupancy – Duration - Demobilisation Commencing	January 2025 – 18 months – June 2026	January 2025 – 14 months – March 2026	April 2025 – 14 Months – June 2026

08

STAKEHOLDER CONSULTATION

STAKEHOLDER CONSULTATION APPROACH

Overview

Urbis participated in EnergyCo-led council interface meetings with seven councils hosting REZ infrastructure. These meetings are held monthly and are to work through issues and opportunities from the development of the REZ including key priority areas such as roads and transport, housing and accommodation, community services and infrastructure.

We spoke with:

- Armidale Regional Council
- Liverpool Plains Shire Council
- Muswellbrook Shire Council
- Upper Hunter Shire Council
- Tamworth Regional Council
- Uralla Shire Council
- Walcha Shire Council.

EnergyCo arranged online meetings with generators for Urbis to understand plans and needs for worker accommodation. We met with:

- ACEN Renewables
- Dawn Renewables
- ACE Power
- Metis Energy
- Walcha Energy (project bought by Origin Energy since consultation)
- Lightsource bp
- Neoen.

Specifics of Engagement with Councils

The purpose of the online sessions was to:

- Understand the key strategic plans that relate to future growth in the LGA
- Identify growth areas for future permanent housing
- Understand key challenges in supporting more housing in the LGA
- Understand the Council's considerations when it comes to workforce accommodation
- Identify suitable areas or sites with potential to host workers
- Discuss indicative accommodation camp locations identified by EnergyCo
- Discuss desirable legacy benefits.

The outcomes of these discussions were important when we were identifying suitable locations for temporary and permanent accommodation. Some areas and actual sites were identified as potential options for temporary and legacy accommodation.

Dates

Meetings were held between 30 May 2024 and 2 July 2024.

Attended by EnergyCo, Council and Urbis representatives.

Specifics of Engagement

The target outcomes of the meetings were to:

- Understand the profile of the likely workforce considering breakdown by job type, local versus non-local workers, single workers versus family households (for non-local workers)
- Understand planning for workforce accommodation and solutions thinking.

Dates

Meetings were held between 6 November 2023 and 15 November 2023.

Attended by EnergyCo, generator and Urbis representatives.

COUNCIL FEEDBACK | OPPORTUNITIES AND CONCERNS RELATED TO REZ WORKFORCE

Key Themes

- **Existing pressures in the rental housing market will be intensified by additional REZ workers**
- **Some towns do not have the services needed to support workforce accommodation camps**
- **A desire to benefit economically if impacts can be managed**
- **Ensuring that the character and design integrity of towns and cities is preserved**
- **Ensuring that short term accommodation is available to support the visitor economy**

Concerns

In the **Armidale LGA,** the housing shortage impacts tourism as tourism accommodation is being occupied by temporary workers and social housing providers renting entire motels.

Council advised that Armidale has not previously hosted temporary accommodation and residents may have concerns with it. The acceptable size of any accommodation camp will depend on the community's view on perceived benefits.

In the **Liverpool Plains Shire,** population growth is stagnating, so it has not been an area of interest for investors and developers. There is an ageing population which will likely drive the need for aged care facilities.

In the **Upper Hunter Shire,** Council expressed an understanding of the pressures on accommodation that new projects will create. There is the Santos' Hunter Gas Pipeline and Racing NSW is planning to build a major stable project in Scone.

In the **Upper Hunter Shire,** there are natural constraints, including flood and bushfire prone land.

In the **Tamworth LGA,** there are pain points with rental accommodation being very difficult to access. An influx of workers would put more pressure on the supply. Pressure is not seasonal and an issue year-round.

Tamworth is very festival oriented and protecting short-term accommodation for visitors is important.

Council is open to considering proposed development on a merit basis in order to get the right built outcome ensuring that the standard aligns with Council's principles.

Uralla Shire Council's advised a preference to have accommodation placed where it generates economic benefits to the community.

Walcha Shire Council considers Armidale could be an appropriate location for temporary accommodation given the city has more amenity.

COUNCIL FEEDBACK | HOUSING LEGACY ASPIRATIONS AND OPTIONS

Key Themes

- **Housing diversity lacking in towns, there is a need for small houses**
- **Lack of affordable and social housing is an issue throughout**
- **Councils have areas that would benefit from connection to key infrastructure services**
- **It is difficult to attract investment to smaller towns so the investment in renewables could generate opportunities**

Ideas for Legacy Benefits

In the **Armidale LGA,** there is a significant shortage of social and affordable housing. Addressing these gaps would be beneficial.

In the **Liverpool Plains Shire,** there are villages that would benefit from connection to sewerage, including Wallabadah. Small lot housing could be suitable as retirement housing after being used as accommodation for workers.

In the **Upper Hunter Shire,** there is a shortage of social housing. Any initiative that helps address the affordability issue will create a legacy benefit.

In the **Tamworth LGA,** Council can see the additional of smaller housing as an opportunity.

Uralla Shire Council advised it would benefit from improved underground infrastructure capacity, which could be facilitated by the development of temporary accommodation and subsequently utilised for permanent dwellings.

Walcha Shire Council has an ageing population, the Council identified the need for age-appropriate accommodation for residents.

GENERATORS | SENTIMENT

Key Themes

- **Inconsistent positions of communities and councils to worker accommodation camps**
- **Armidale Regional Council is very optimistic about the benefits of the NE REZ and proactive with generation design partners on solutions**
- **Optimal accommodation locations are a balance of site proximity and town amenities and services**
- **Towns have an opportunity to benefit economically, and workers could help revitalise declining towns**

The community's opinion on the ideal location for worker accommodation camps lacks a clear consensus. Whilst some councils and communities want facilities close to towns to reap benefits for local communities, others prefer camps to be isolated. This makes navigating with councils challenging for developers with multiple projects dealing with different councils.

Local communities have expressed concerns about the impact of temporary workforce accommodation facilities. In the original proposal for the New England Solar Farm, camps were part of the plan. Following community feedback and submissions, the accommodation facility was removed. This example was referred to by multiple developers.

Communities fear negative social impacts from camps including workers not taking responsibility for the community and not contributing to the local economy.

Armidale Regional Council has been visibly open to supporting accommodation needs.

One developer said most conversations about accommodation have been about centralising it in Armidale which would not suit all projects

All developers want to employ locally based workers. However, the reality is with concurrent construction of multiple projects within the NE REZ, the workforce will be scarce. Hence, accommodation solutions will be a critical component of a project.

A shared preference is to locate workers close to towns with existing services.

Hotels and motels are primarily suitable for FIFO workers, whereas on-site workers need long-term solutions. Senior management typically does not stay for more than a week at a time.

A common position is that the solution needs to be done in collaboration with the council. Ideally, it would be beneficial to bring councils, generation design partners and EnergyCo together and find a solution that will work collectively.

All generation design partners want to be associated with good outcomes for the community from their contributions the Voluntary Planning Agreements and Community Benefit Funds.

Generators will be guided by councils and the community. In their experience, these funds have not focused on accommodation solutions.

One pathway to improving housing could be contributing to funding for housing grants to assist in building housing that serves as short-term accommodation initially and later transitions into affordable housing upon completion.

None had done any detailed planning for REZ projects. Other examples were building a mobile tower and setting up a scholarship program to fund a number of students' university education.

GENERATORS | WORKFORCE REQUIREMENTS AND PROFILE

Construction Overview

Peak construction workforce numbers, construction start and end dates and histograms have been provided by EnergyCo in the Data and Assumptions book (2.1). Operation worker numbers are also provided.

Most construction programs follow a two to three year duration designed around commissioning occurring following completion of the relevant REZ stage.

The construction program for solar projects broadly aligns with these stages:

- Early works taking 6-12 months
- The intense period about 12 months after start where all contractors come in and work in parallel
- Ramp down in last six months of the project for the commissioning phase of the project.

For wind projects the workforce numbers are more evenly distributed.

Operational workforce varies from five up to 20 workers. Wind projects require more workers.

Workforce Profile

The skills profiles of the workforce are wide ranging from general labour accounting for the majority to specialists which could account for approximately 30% of total workforce.

Broad role categories are skilled, non-skilled and administrative. The main works package typically includes:

- Management and commissioning (minor workforce component)
- Civil works
- Concreting (largest component of workers)
- Crane workers
- Specialised engineers.
- Construction
- Contractors.

Assumptions provided across the sample are that:

- General labour makes up about 70% of the workforce and specialised is 30%
- Accommodation requirements are broadly regarded to be similar for all job types regardless of whether they are skilled or non-skilled
- Senior project staff including senior managers and advisers are likely to be FIFO or DIVO and utilise convenient short-term accommodation
- Construction will operate on a 5-6 days per week.

Workforce Profile – Different Profiles and Accommodation Implications

Worker Demographics

Developers do not have access to workforce demographics due to the privacy arrangements with personal data. The data would be held by the relevant contractor employing workers.

On past observations there appears to be a bias to single young males, aged 20-30 years old. There is no understanding of whether families relocate. We expect there would be some families making up a minor proportion, which is impossible to quantify.

If there are multiple project opportunities for workers to move from one project to another, there is more likelihood of families moving.

Local and Non-Local Workforce

Due to the scale of development in the New England REZ and projects competing for labour, the renewable energy proponents interviewed assumed that most of the workforce will come from outside the region. However, most proponents would prefer to employ locally based workers.

One renewable energy proponent estimated that about 10% of the workforce will be from either Armidale or Uralla, and the remainder would be staying in worker accommodation camps.

For specialised maintenance operation roles, it is anticipated that these would be fulfilled by FIFO workers, whilst vegetation-related roles would be fulfilled by local workers.

Another renewable energy proponent expected that around 70% of the solar farm construction workforce would be local, which is projected to finish before Stage 1 of the NE REZ. They also noted that windfarms require more skilled workers for construction and so will rely on bringing in more non-local skilled workers, estimating that only about 40% would be local.

The projects aim to maximise local tradespeople to maintain the wind and solar projects as part of ongoing operation. There are a few roles that will be specialised and not necessarily locally based and service multiple projects.

Another renewable energy proponent is aiming for about 30% of its workforce to be local. Additionally, FIFO workers who are primarily white-collar employees, account for less than 10% of the workforce. Typically, these FIFO workers would stay in a house rented by the project.

Accommodation Implications

Most of the workforce would be comfortably accommodated in standard worker camps and there would be no different requirements by job role.

There is no separation of accommodation types based on skill sets.

Given the segmented contract structure of the contractors, it can allow each contractor to independently seek their own accommodation solutions.

GENERATORS | ACCOMMODATION SOLUTIONS

Accommodation Solutions

There is no uniform approach by proponents when planning for workforce accommodation. Some have identified potential sites and investigated site options with landowners.

Construction contractors also have a role to source accommodation and independently seek their own accommodation solutions.

Other options being explored are private landowners developing subdivisions for long-term housing, which may be open to camp accommodation as a short-term use. Further there are vacant or under-utilised buildings that should also be identified and considered. Accommodation can include houses where workers share and short-term rental accommodation via Airbnb.

Two development and operator models were identified by generators.

Accommodation Development Models

Private Developer Led

A private developer establishes a facility with around 500 beds. The development costs are funded by the developer with a commercial agreement structured as a lease payment based on the number of heads or beds required. A generation design partner agrees to requiring a certain number of beds over a timeframe. The facility developer would need to secure a minimum capacity to make feasible and service multiple projects.

Generator Led

The generators would lease a parcel of land from a landowner to build a camp. They would enlist the primary contractor to be the accommodation developer and subsequently engage a sub-contractor to carry out the construction, and another to provide management of the operations,

Centralised Solution

Camps can include a high level of amenity such as a canteen, library, gym, and on-site health services (including standard first aid, a doctor, nurse). These services could potentially be shared across multiple projects if centrally located.

A good idea is to have a centralised website that serves as a one-stop shop, consolidating information about all available rooms for reservation in the NE REZ. This platform would be beneficial for contractors, offering a comprehensive overview of the rooms available.

09

CONSTRUCTION & OPERATIONAL WORKER DEMAND ASSESSMENT

Overview

This phase of work was undertaken to understand the potential additional population demand that may be generated through the workforce required to deliver the NE REZ infrastructure. This phase included:

- Development of a schedule of construction projects – a consolidated list of all proposed and ongoing projects within the NE REZ using data from EnergyCo, public databases, and construction industry sources, outlining the timeline, scale, and type of project.
- Assessment of the workforce staging and peak periods of workforce intensity. Through consultations with EnergyCo and project developers, Urbis estimated the likely staffing requirements and timelines for each project, identifying periods of peak workforce demand.
- A heat map of the geographic distribution of the workforce demand, showing where the demand is likely to be most intense.
- Key assumptions about the types of workers that will be required for these projects were made to determine the benchmark proportions of those that will be permanently relocated versus those that are likely to be temporary (e.g. FIFO and DIVO)). From this, Urbis estimated the potential for additional population growth through the relocation of families for ongoing jobs.

This assessment generates the additional demand for workers that could be generated by the NE REZ.

Type Definitions

Table 9.1

	Term	Definition
Project Type	New England Renewables Projects	Renewable energy projects including battery storage, hydroelectric, solar, and wind farm projects, located within the boundaries of the NE REZ. These projects encompass a variety of energy proponents.
	NRNIP (EnergyCo)	Transmission line projects, specifically those led by EnergyCo, as the proponent. These projects involve the development of electrical transmission infrastructure within the NE REZ or surrounding areas.
	Other Energy Projects	Energy-related projects not included in the New England Renewables or EnergyCo Transmission categories. These may involve either renewable or non-renewable energy sources and are located outside the boundaries of the NE REZ but within the Primary and Secondary Local Government Areas (LGAs) of the Study Area.
	Other Infrastructure Projects	Infrastructure-related projects not directly linked to energy generation, including but not limited to education, food, beverage, and tobacco manufacturing, road construction, and other general infrastructure developments within the Study Area.
Project Group	Renewable Energy Projects	Renewable energy projects including battery storage, hydroelectric, solar, and wind farm projects, located within the Study Area.
	Non-Renewable Projects	Non-renewable energy projects, including coal, natural gas, and electricity generation, as well as infrastructure-related initiatives such as road construction.

Overview

Urbis has created a heat map of the geographic distribution of the workforce demand, identifying where the demand is likely to be most intense. All major projects listed in table 9.2 are identified on the map and provide the epicentres of the future worker demand.

Methodology:

We used the Inverse Distance Weighted (IDW) tool in ArcGIS pro to create our density maps. We plotted each of the projects on the map and adopted their peak workforce to calculate the density of jobs. A higher weighting is applied to areas closest to the centre of the project location.

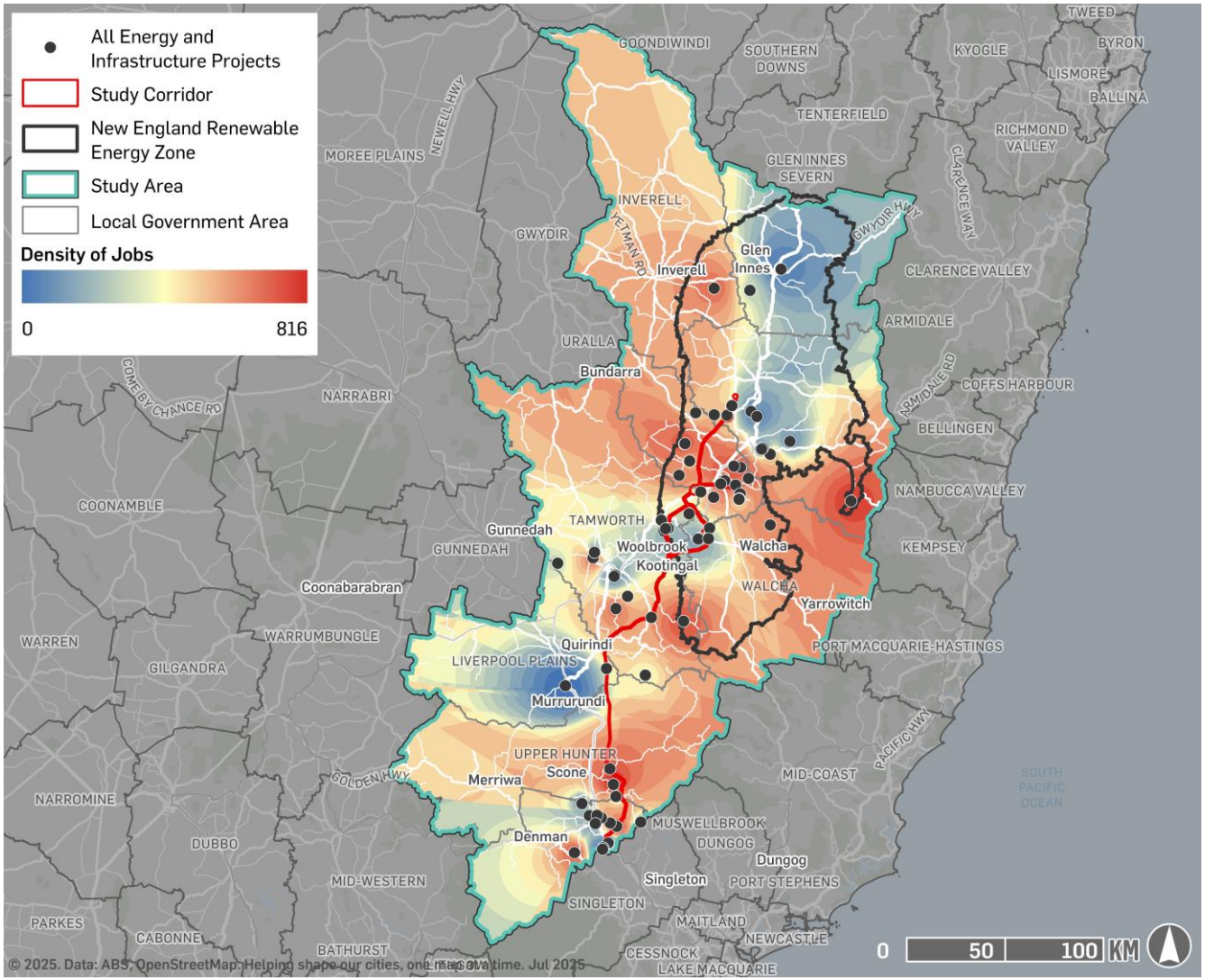
Potential limitations:

If workers are not evenly distributed across the project sites, the representation of job density may not align with local workforce patterns.

Key Findings:

The heat map shows the geographic distribution of workers, highlighting areas with the highest intensity of workforce needs. This analysis was used to understand workforce distribution more clearly, providing insights into potential work locations. We used this to help determine the Accommodation Catchments outlined on page 87.

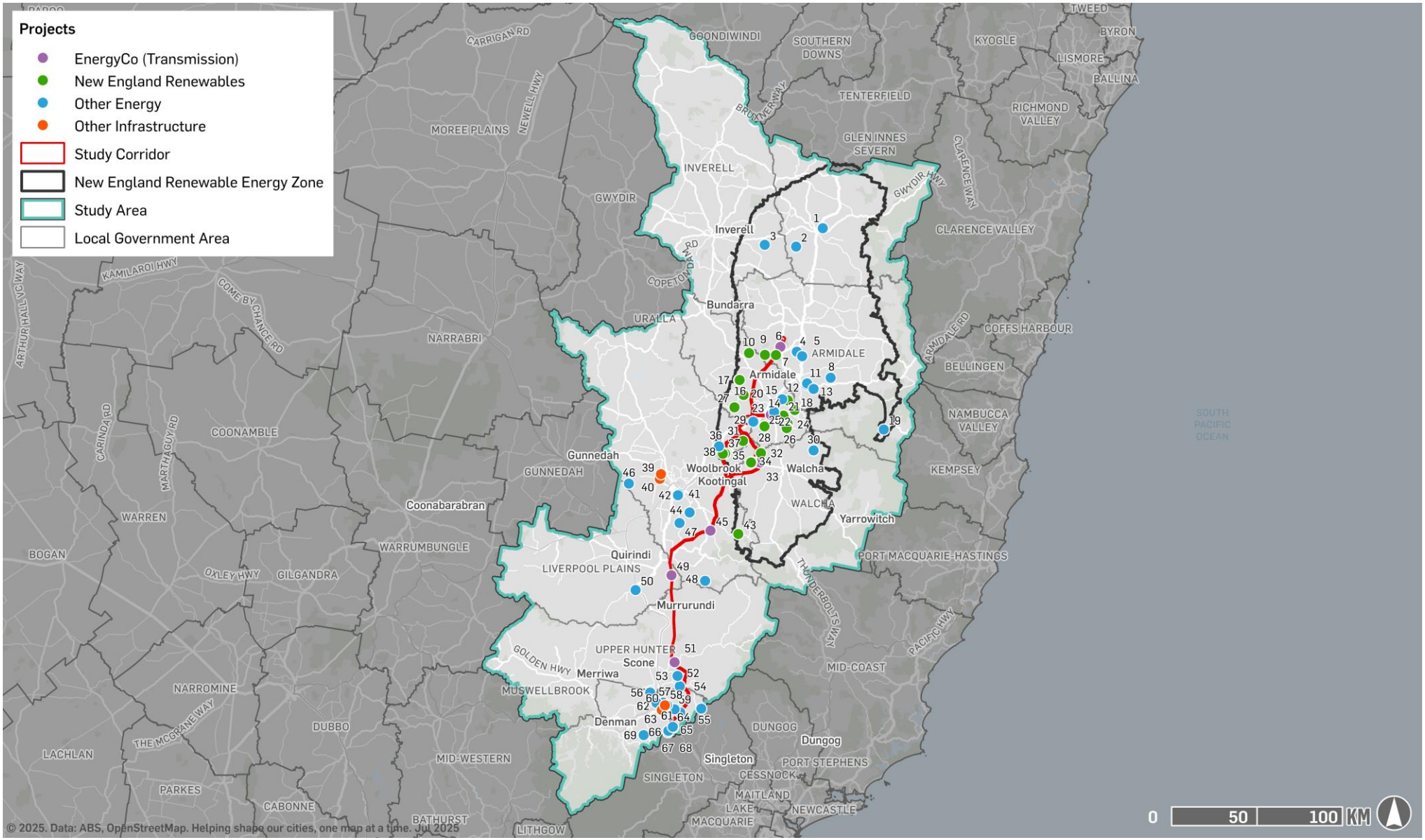
Density of Construction Jobs Across the Study Area — Map 9.1



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

STUDY AREA PROJECTS

Map 9.2



Note: Projects as of November 2024. One project is not represented on the map for confidentiality purposes

PROJECTS IN MAP

Table 9.2

Project Name	Project Type	Project Group
Armidale Battery Energy Storage System	Other Energy	Renewable
Armidale East BESS	Other Energy	Renewable
Baiada Integrated Poultry Processing Facility	Other Infrastructure	Non-Renewable
Balala Wind Farm	New England Renewables	Renewable
Bayswater Power Station Upgrade	Other Energy	Non-Renewable
Bendemeer Solar Farm	Other Energy	Renewable
Bendemeer Wind Farm	New England Renewables	Renewable
Boorolong Wind Farm	New England Renewables	Renewable
Bowmans Creek Wind Farm	Other Energy	Renewable
Calala Battery Energy Storage System	Other Energy	Renewable
Deeargee Solar Farm	New England Renewables	Renewable
Dungowan Pumped Hydro Project	New England Renewables	Renewable
Eastern Hub Firming Battery	New England Renewables	Renewable
Edderton Solar Project and BESS	Other Energy	Renewable
Glen Innes Battery Energy Storage System	Other Energy	Renewable
Glenbawn Pumped Hydro	Other Energy	Renewable
Glenbawn Wind Farm	Other Energy	Renewable
Hills of Gold Wind Farm	Other Energy	Renewable
Hillview Solar Farm	New England Renewables	Renewable
Hillview Wind Farm	New England Renewables	Renewable
Hunter Transmission Project - Muswellbrook	EnergyCo	Renewable
Kayuga Solar Farm	Other Energy	Renewable
Kingswood Battery Energy Storage System	Other Energy	Renewable
Lambruk Solar Project	Other Energy	Renewable
Liddell Battery	Other Energy	Renewable
Liddell Future Land Use & Enabling Works	Other Energy	Non-Renewable
Middlebrook Solar Farm	Other Energy	Renewable
Mount Pleasant Optimisation Project	Other Energy	Non-Renewable
Muswellbrook BESS	Other Energy	Renewable
Muswellbrook Bypass Project (REF)	Other Infrastructure	Non-Renewable

NOTE: Eight projects are not listed for confidentiality purposes

Project Name	Project Type	Project Group
Muswellbrook Solar Farm	Other Energy	Renewable
Muswellbrook Pumped Hydro Energy Storage	Other Energy	Renewable
NE REZ Transmission - Armidale	EnergyCo	Renewable
NE REZ Transmission - Liverpool Plains	EnergyCo	Renewable
NE REZ Transmission - Muswellbrook	EnergyCo	Renewable
NE REZ Transmission - Tamworth	EnergyCo	Renewable
NE REZ Transmission - Upper Hunter	EnergyCo	Renewable
NE REZ Transmission - Uralla	EnergyCo	Renewable
NE REZ Transmission - Walcha	EnergyCo	Renewable
New England Battery	New England Renewables	Renewable
New England Solar Farm Stage 2	Other Energy	Renewable
Northern Tablelands Wind Farm	New England Renewables	Renewable
Nottingham Park Solar Farm	Other Energy	Renewable
Oven Mountain Pumped Hydro	Other Energy	Renewable
Oxley Solar Farm	Other Energy	Renewable
Queensland-Hunter Gas Pipeline	Other Energy	Non-Renewable
Richard Gill School	Other Infrastructure	Non-Renewable
Salisbury Solar Farm	New England Renewables	Renewable
Skye Ridge Wind Farm	New England Renewables	Renewable
Sundown Solar Farm	Other Energy	Renewable
Tangaratta Feedmill	Other Infrastructure	Non-Renewable
Thunderbolt Wind Farm	Other Energy	Renewable
Tilbuster 2 Solar Farm	Other Energy	Renewable
Tilbuster Solar Farm	Other Energy	Renewable
Upper Hunter Battery Energy Storage System	Other Energy	Renewable
Uralla Solar Farm	New England Renewables	Renewable
Uralla Wind Farm	New England Renewables	Renewable
White Rock 2 Wind Farm	Other Energy	Renewable
Willow Tree Gravel Quarry Extension	Other Energy	Non-Renewable
Winterbourne Wind Farm	Other Energy	Renewable
Yarrowyck Wind Farm	New England Renewables	Renewable

Summary

To determine construction activity in the Study Area the following steps were undertaken:

- The project data supplied by EnergyCo was interrogated. Projects that were already in the operation phase were removed as the workers for these projects are assumed to already have accommodation or arrangements in place to get to work sites.
- Cordell and internet searches were undertaken to supplement the project data, adding start and finish dates, expected job numbers, and other information where available.
- For the battery, solar and wind projects, the histogram data supplied was rebased to the duration of the individual projects.
- For other projects the following assumptions were made:
  - the construction midpoint was used as the job peak.
  - To distribute job numbers over the construction period 20% of the peak workforce for projects that included 10 plus workers and 33% for projects that included less than 10 workers was used as the starting portion of jobs. This recognises the need for a critical mass of jobs to start projects.
  - Job numbers were tapered down from the peak to 20% of peak jobs in the last month of construction.
- For all projects, the workforce percentages were applied to the peak construction jobs, and a workforce profile was obtained for each project.
- The operational jobs were added to each project in line with the operational start dates identified. Where these were not available, the assumption was made that the project would be operational the month following completion for non-renewable projects and 6 months after completion for renewable projects.
- Jobs were totalled for each month from February 2023 to December 2054.

The results of the cumulative worker demand assessment are shown for the entire Study Area in the chart on the following page and for each LGA in the pages following.

Findings

- Across the REZ Study Area, jobs peaked at 7,071 jobs in July 2030. During this month operational jobs are expected to be 1,597 and construction jobs 5,474. The jobs peak corresponds with the peak in construction jobs.
- In the REZ Study Area, operational jobs reach 2,833 in February 2048. This indicates that ongoing or legacy accommodation should aim to build up to accommodate approximately 2,800 workers and their families by the start of 2048 Infrastructure would also need to support an expected increase in population of around 7,080 people, created by the major projects by 2048.
- The results vary significantly by LGA. The key results by LGA are shown in the following tables.

Sensitivity Analysis

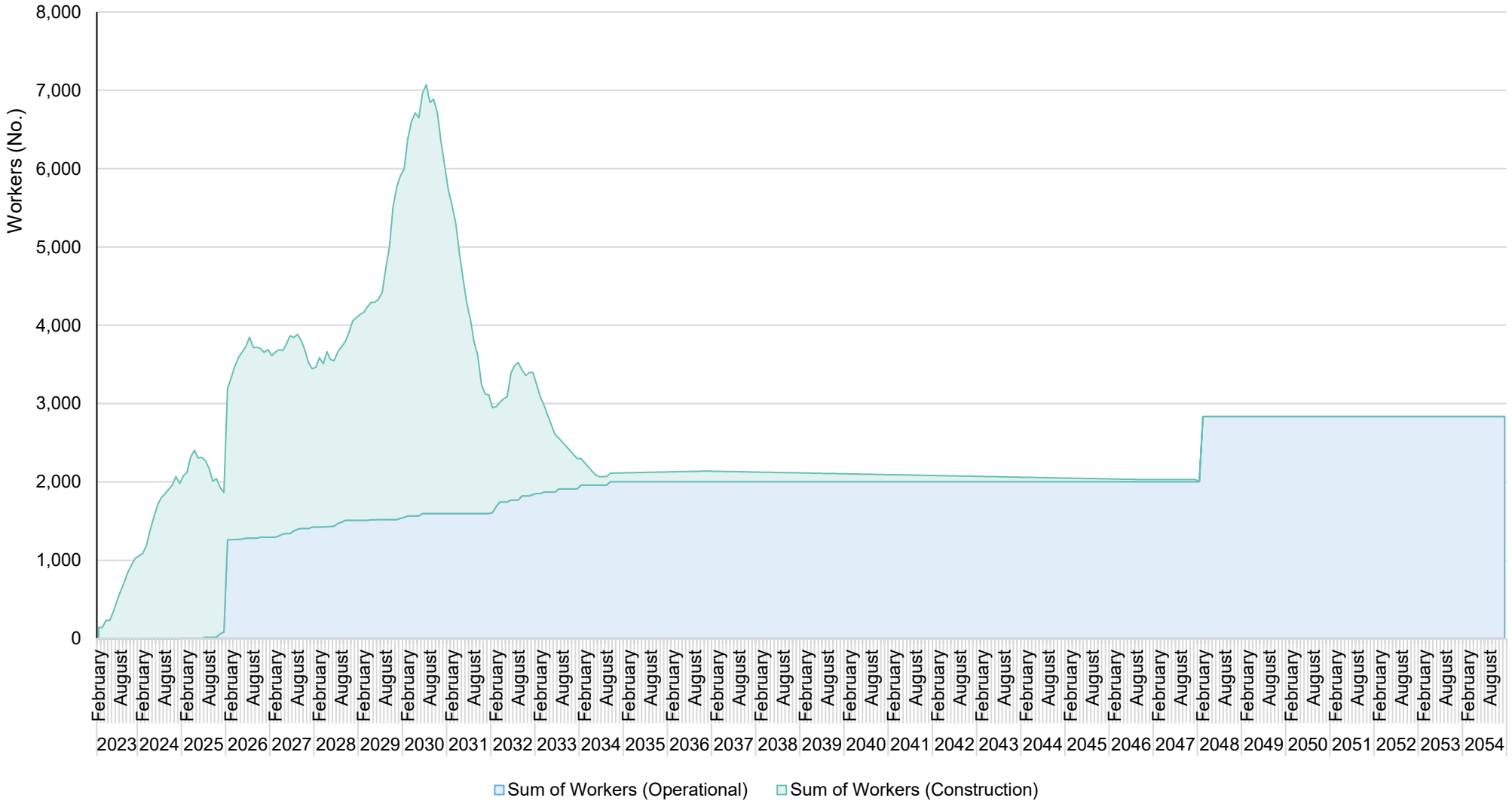
A sensitivity analysis was completed based on the likelihood of projects completing. All projects were classified by EnergyCo in terms of their likelihood. The projects classified as high likelihood tended to be the projects that generated the greatest demand for ongoing workers and, therefore implications for more legacy housing than temporary housing. The medium likelihood projects are primarily associated with construction jobs, and, therefore, require more temporary accommodation.

Charts on the following pages show:

- Total construction and operational workforce required for the Study Area Periodic demand by project categories and likelihood rating for the Study Area
- Periodic demand for each LGA
- Note - the chart elements are additive, meaning the highest point on each date is the sum of operational jobs and construction jobs at that time.

CUMULATIVE WORKER DEMAND | TOTAL WORKFORCE REQUIRED OVER TIME

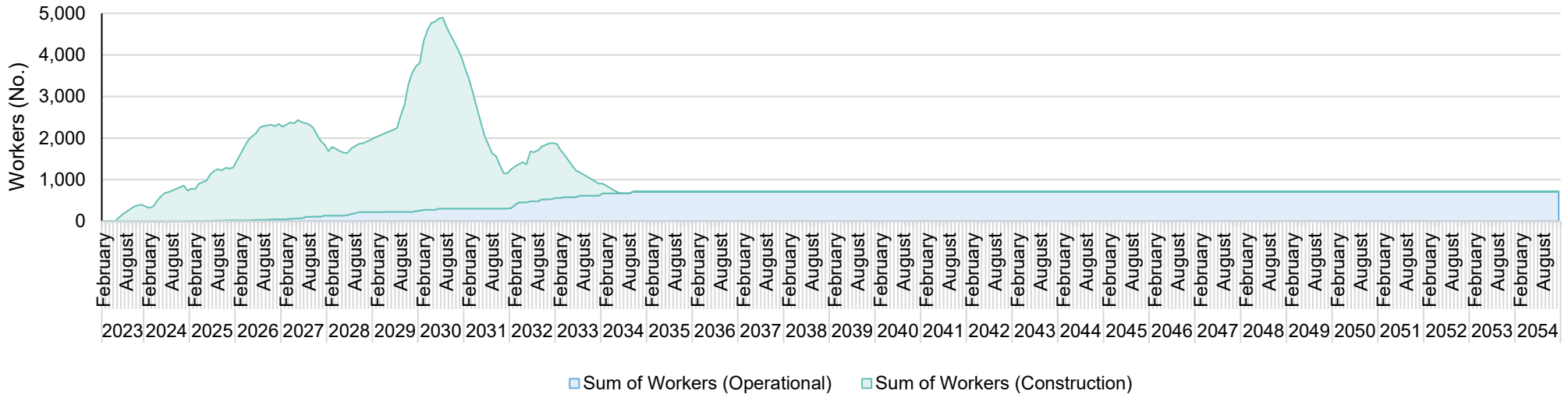
New England REZ Study Area Major Projects Workforce Demand **Chart 9.1**



CUMULATIVE WORKER DEMAND | RENEWABLE AND NON-RENEWABLE

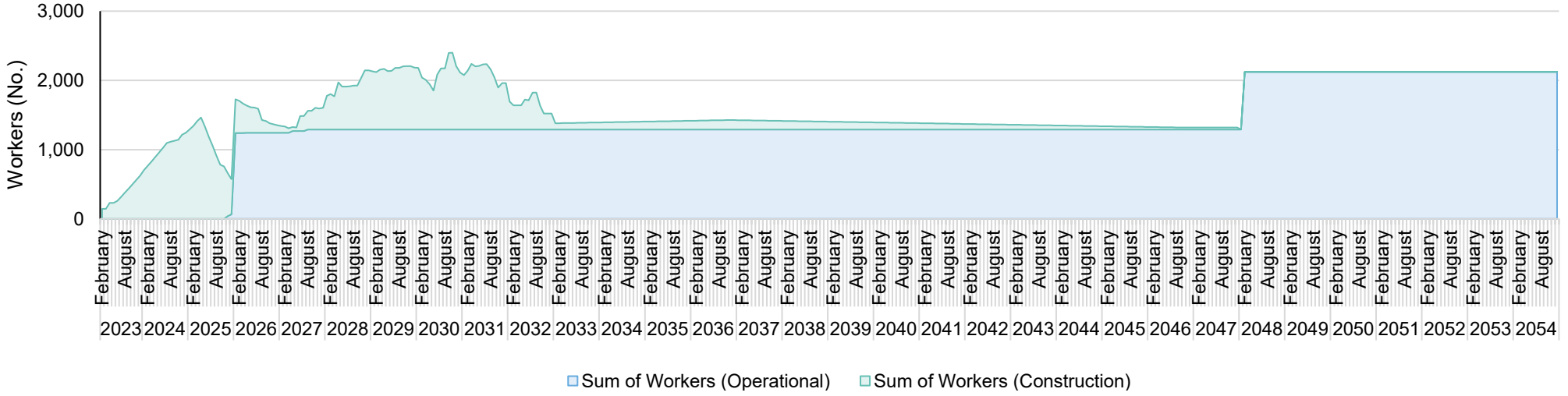
Renewable

Chart 9.2



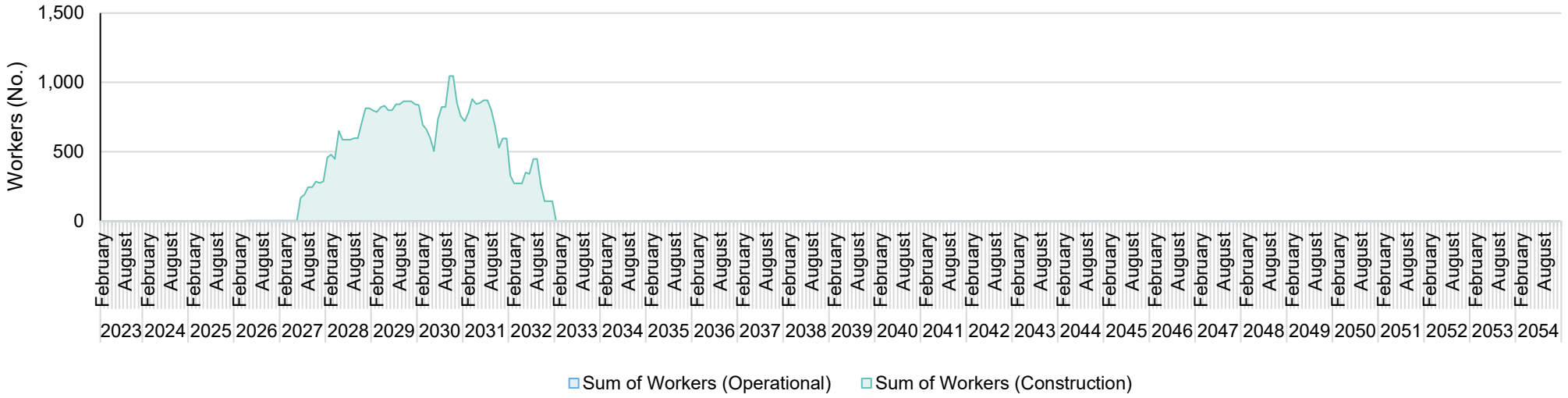
Non-renewable

Chart 9.3



CUMULATIVE WORKER DEMAND | ENERGYCO PROJECTS

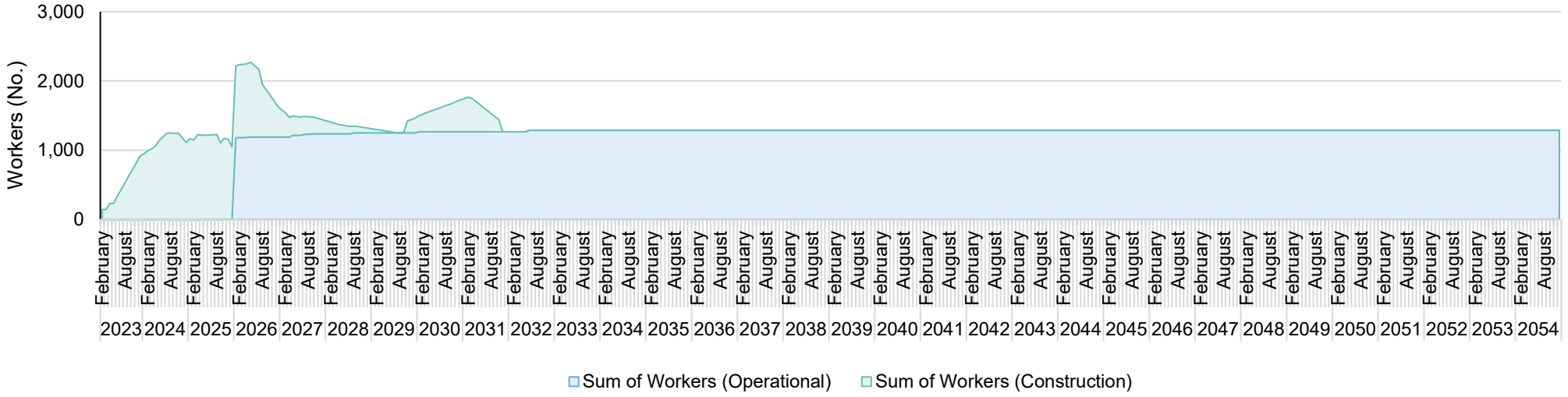
EnergyCo projects **Chart 9.4**



CUMULATIVE WORKER DEMAND | BASED ON PROJECT LIKELIHOOD

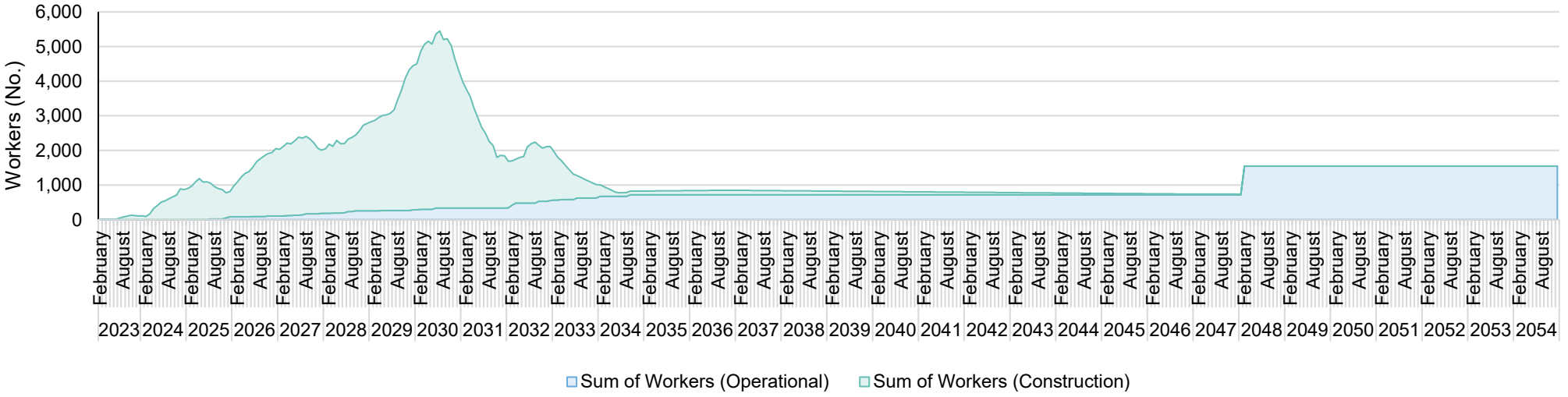
High Likelihood

Chart 9.5



Medium Likelihood

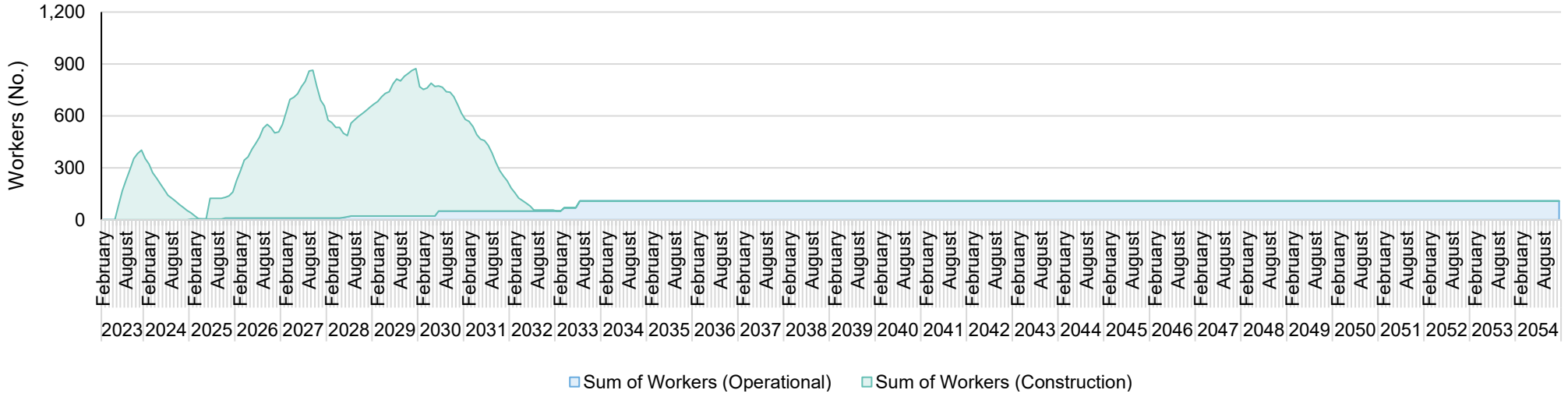
Chart 9.6



CUMULATIVE WORKER DEMAND BY LGA | ARMIDALE & WALCHA

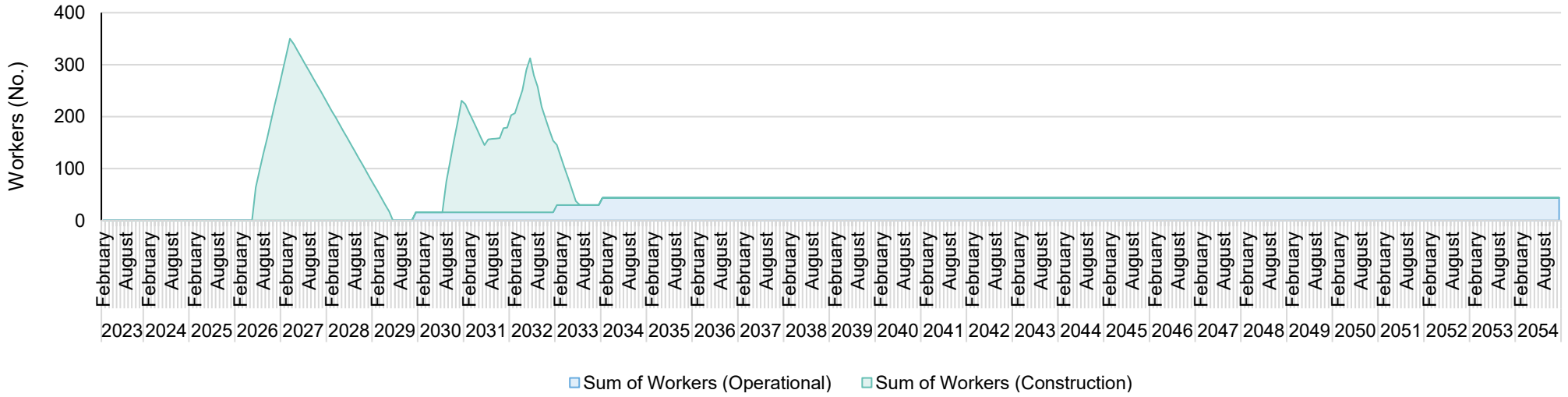
Armidale

Chart 9.7



Walcha

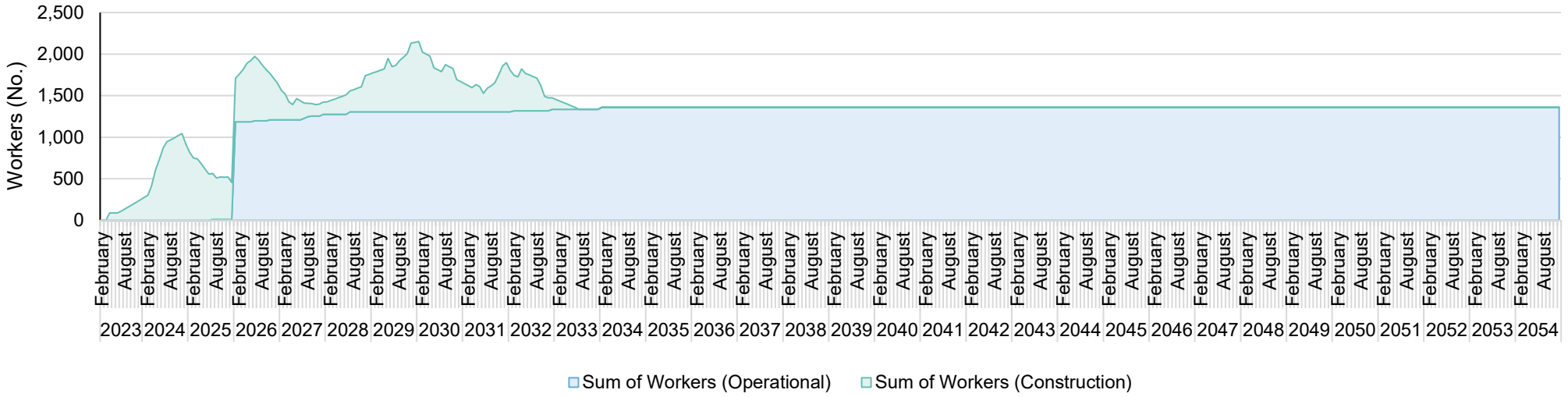
Chart 9.8



CUMULATIVE WORKER DEMAND BY LGA | TAMWORTH & URALLA

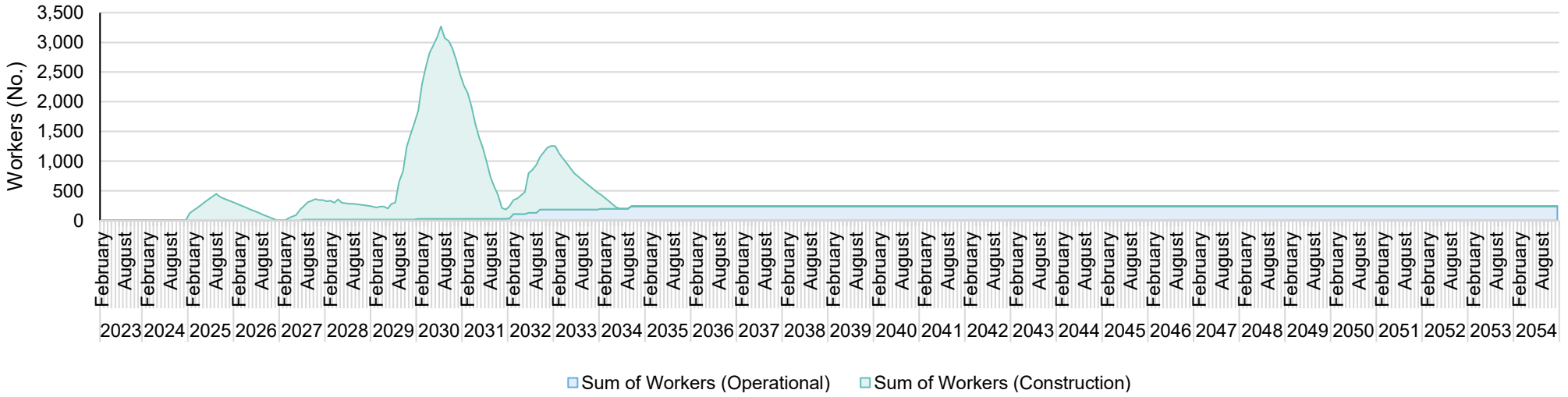
Tamworth

Chart 9.9



Uralla

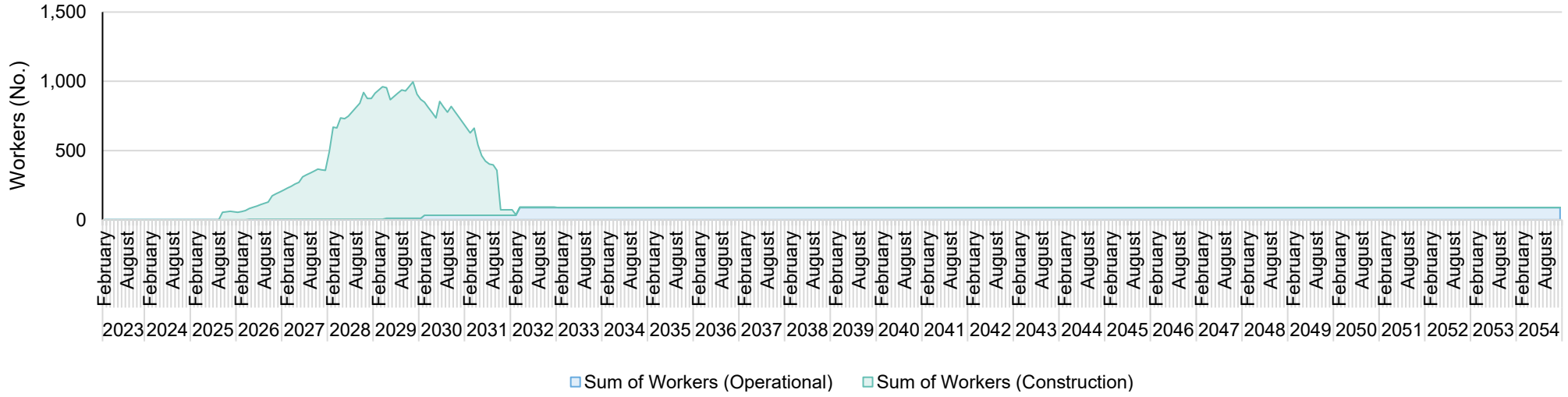
Chart 9.10



CUMULATIVE WORKER DEMAND BY LGA | UPPER HUNTER & MUSWELLBROOK

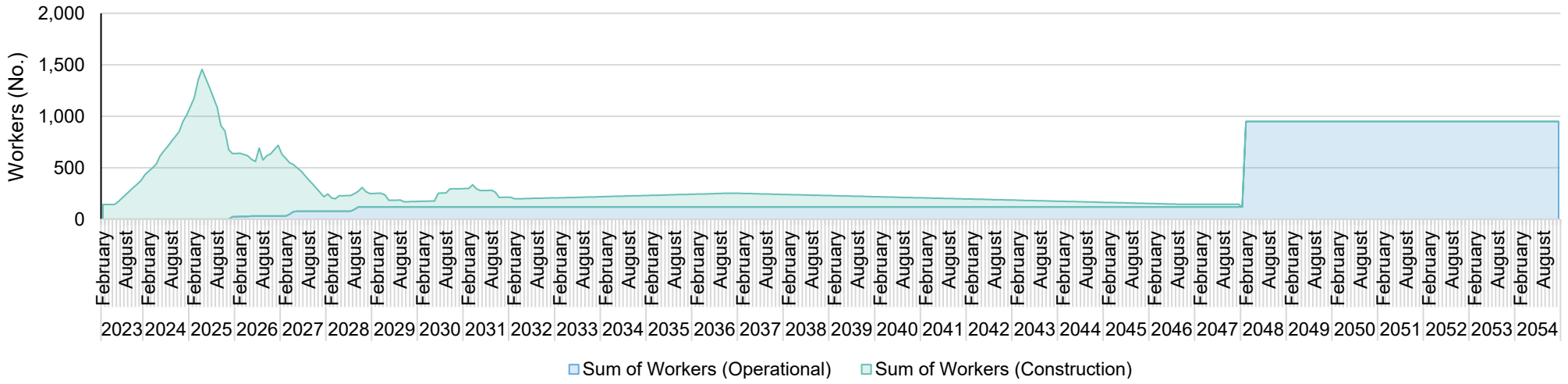
Upper Hunter

Chart 9.11



Muswellbrook

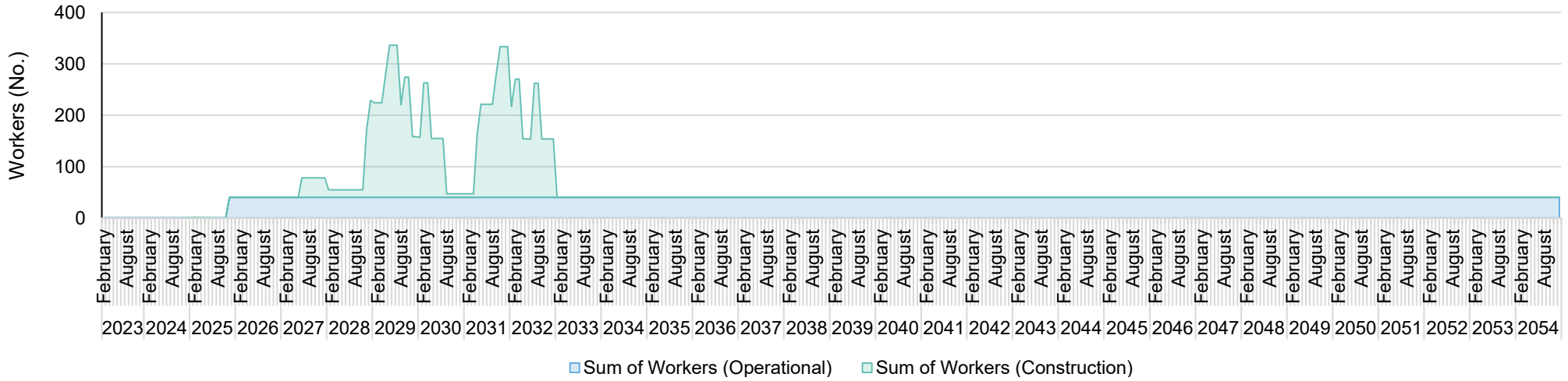
Chart 9.12



CUMULATIVE WORKER DEMAND BY LGA | LIVERPOOL PLAINS & GLEN INNES SEVERN

Liverpool Plains

Chart 9.13



Glen Innes Severn

Chart 9.14

CUMULATIVE WORKER DEMAND BY LGA | INVERELL

Inverell **Chart 9.15**

10

CONSTRUCTION & OPERATIONAL WORKER ACCOMMODATION DEMAND ASSESSMENT

Methodology

Based on the available information and the key assumptions made, the month of peak construction employment was determined for each LGA and for the NE REZ Study Area. These peaks ranged across the LGAs. This shows the importance of looking at cumulative impacts on a more local scale. It also implies there may be an advantage in having at least some camps that are able to be relocated as workers move to new projects in different areas.

To determine the number of potential workers from within the Study Area who will not require accommodation compared to those coming from beyond who will require temporary accommodation we examined several factors including:

- The unemployment rate in New England Northwest at 4.5% according to Jobs and Skills Australia (September 2024).
- Jobs and Skills Australia also provide a participation rate to determine if there was a possibility of more people entering the workforce when well-paid jobs become available in the local area 65.7% as of September 2024. This resulted in an employment-to-population ratio for the 15–64-year age group of 77.6%, meaning 22.4% of the population are not in active employment and therefore theoretically available, which provides an extreme cap to the number of workers that could come from the local area. It is unlikely that a large volume of this employment capacity would have the appropriate skill alignment and therefore is unlikely.

This means workers required from outside the local catchment will be within a range of 77.6% and 95.5%. We have selected 90% as the Base Case and two scenarios of 85% and 95% as the likely Low and High Case. As many who are not participating in the workforce will be doing so for family and other responsibilities, we estimated that around 10% of these people are unlikely to join the workforce regardless of incentives.

We completed a scenario analysis to evaluate the potential additional demand for temporary housing generated by the NE REZ.

Low Case: We project that up to 85% of the workforce could come from outside the region under this scenario, indicating that approximately 15% of workers will already reside in the Study Area and will not need accommodation.

High Case: We project that 95% of the workforce will come from outside the region, meaning that approximately 5% of workers will already reside in the Study Area and will not require accommodation.

Scenario Results

Low Case Scenario

In the Low Case scenario, we anticipate that of the temporary job peaks in the Study Area (5,474) by July 2030, **85% will require external employment, this translates to a need for temporary housing for around 4,653 workers.** This scenario would necessitate the construction of smaller accommodation camps to accommodate workers coming from beyond the Study Area, making this the best-case scenario in terms of having the lowest need for worker accommodation.

The demand for temporary accommodation will be most pronounced in Uralla, where we estimate that 2,757 workers will require housing. Muswellbrook is expected to need accommodation for approximately 1,238 workers, while Tamworth will require housing for about 887 workers.

All LGAs will have demand for worker accommodation due to the completion of the assessed projects.

High Case Scenario

In the High Case scenario, we anticipate that temporary job peaks in the Study Area (5,474) by July 2030**, will require 95% external employment, this translates to a need for temporary housing for around 5,200 workers.** This scenario would necessitate the construction of larger accommodation camps to accommodate the influx of workers coming from beyond the Study Area, making this the worst-case scenario in terms of housing demand.

As in the Base Case and High Case scenarios, the demand for temporary accommodation will be most pronounced in Uralla, Muswellbrook, and Tamworth and all LGAs will require some form of worker accommodation.

Comparing Renewables and Transmission Line Projects to Total Projects

Comparing Renewable Energy Projects and NE REZ Transmission and Total Projects it was found that there are only an additional 58 peak workers requiring temporary accommodation outside of renewables and EnergyCo Transmission line projects. Tamworth, Upper Hunter, Muswellbrook and Liverpool Plains are the LGAs that have non-renewable and infrastructure projects. The impact of these non-renewable and infrastructure projects on temporary accommodation requirements is low.

TEMPORARY ACCOMMODATION | TOTAL PROJECTS

Temporary Accommodation, External Employment Sensitivity **Table 10.1**

LGA	Peak Construction Employment Year and Month	Employment Reaches Zero Year and Month	Peak Construction Jobs	Construction Workers Requiring Accommodation		
				85% External (Low Case)	90% External (Base Case)	95% External (High Case)
Armidale	Sep-27	From Jan-33	853	725	768	810
Walcha	Mar-27	From Dec-28	350	298	315	333
Tamworth	Nov-24	From Oct-27	1,044	887	940	992
Uralla	Jul-30	From Jan-33	3,243	2,757	2,919	3,081
Upper Hunter	Nov-29	From Jan-48	984	836	886	935
Muswellbrook	Apr-25	From Jul-33	1,456	1,238	1,310	1,383
Liverpool Plains	May-29	From Jan-33	296	252	266	281
Glen Innes Severn	May-27	From Jun-34	245	208	221	233
Inverell	May-26	From Jun-29	400	340	360	380
New England REZ	**Jul-30**	From Jan-48	**5,474**	**4,653**	**4,927**	**5,200**

Temporary Accommodation, External Employment Sensitivity **Table 10.2**

LGA	Peak Construction Employment Year and Month	Employment Reaches Zero Year and Month	Peak Construction Jobs	Construction Workers Requiring Accommodation		
				85% External (Low Case)	90% External (Base Case)	95% External (High Case)
Armidale	Sep-27	From Jan-33	853	725	768	810
Walcha	Mar-27	From Dec-28	350	298	315	333
Tamworth	Dec-29	From Jul-33	834	709	751	792
Uralla	Jul-30	From Jan-33	3,243	2,757	2,919	3,081
Upper Hunter	Nov-29	From Jan-33	984	836	886	935
Muswellbrook	Dec-26	From Jan-33	639	543	575	607
Liverpool Plains	May-29	From Jan-33	296	252	266	281
Glen Innes Severn	May-27	From Jun-34	245	208	221	233
Inverell	May-26	From Jun-29	400	340	360	380
New England REZ	**Jul-30**	**From Jun-34**	**5,416**	**4,604**	**4,874**	**5,145**

Note: Armidale, Walcha, Uralla, Glen Innes and Inverell have the same result as 'Total Projects' on the previous page (No non-renewable projects in these LGAs).

ONGOING ACCOMMODATION | RESULTS

Methodology

In this section, we analyse workers permanently moving to the Study Area to engage in ongoing jobs (i.e. post development operational jobs). This analysis helps us to evaluate the potential for population growth and the need for permanent dwellings as families relocate to the Study Area.

We have established 100% as our Base Case scenario for workers coming from outside the region who will permanently relocate to meet ongoing job demands. Additionally, we considered two alternative scenarios: 90% as the Low Case scenario and 95% as the Moderate Case scenario. These percentages reflect our assessments of worker availability, and the likelihood of relocation based on current labor market conditions.

Given the uncertainty surrounding the origins of these workers, we estimate an average household size of 2.5 people, reflecting the typical Australian household (ABS Census 2021). This estimation allows us to anticipate potential population growth resulting from the influx of families accompanying these workers.

Results

Due to the number and type of jobs required, Tamworth and Muswellbrook stand out as areas that present legacy housing opportunities to support ongoing employment. Therefore, there is greater potential to construct permanent accommodation, that are initially used for temporary purposes, with final completion by January 2034 for Tamworth and February 2048 for Muswellbrook. In contrast, regions like Inverell and Glen Innes Severn are unlikely to require permanent housing, as their needs will primarily be met through temporary accommodation to support the transient workforce.

For the Base Case scenario regarding the relocation of workers, there is a need for 100% external employment and these workers will permanently move to the area for ongoing jobs.

Our analysis reveals that while Tamworth will require housing for approximately 940 peak temporary workers (Base Case scenario) by November 2024, the LGA is projected to experience a peak demand of +1,358 ongoing workers (Base Case scenario) starting in January 2034. This disparity highlights a significant challenge - although the immediate need for temporary accommodation is lower, there is a pressing requirement for long-term housing solutions to support an influx of permanent residents in the future.

Results (Continued)

This situation presents an opportunity to develop permanent housing in Tamworth, which could serve not only the local workforce but also support projects from surrounding LGAs that have lower demand for construction and ongoing worker accommodation, such as in Walcha and Liverpool Plains.

By strategically establishing permanent housing in Tamworth, we can effectively accommodate temporary workers within the LGA and surrounding areas, ensuring that as construction projects come to completion, the necessary infrastructure and housing are already in place for ongoing workers.

Investing in permanent housing solutions in Tamworth not only addresses the projected demand for ongoing workers but also positions the area to support the broader regional workforce needs more effectively, facilitating sustainable growth and stability in the local economy.

Looking at the Moderate Case scenario regarding the relocation of workers, there is a need for 95% external employment and these people with their families would likely permanently move to the area for ongoing jobs. This scenario assumes fewer workers are already locally based, thereby increasing the need to accommodate more incoming workers and their families long term.

The projected demand for ongoing workers under different scenarios is as follows:

- 90% external employment (Low Case): 2,550 new households required
- 95% external employment (Moderate Case): 2,691 new households required.
- 100% external employment (Base Case): 2,833 new households required

The difference between the Base Case and the Low Case scenario is an additional 283 households. This variation highlights the significant impact that external employment rates can have on housing demand in the area. While the 90% scenario is the most likely given the regional context, it is crucial to consider the challenges in attracting skilled labour for ongoing work. Given the area's regional nature and size of the potential workforce requirements, it is likely to be quite difficult to fill many positions locally, which could further complicate housing needs.

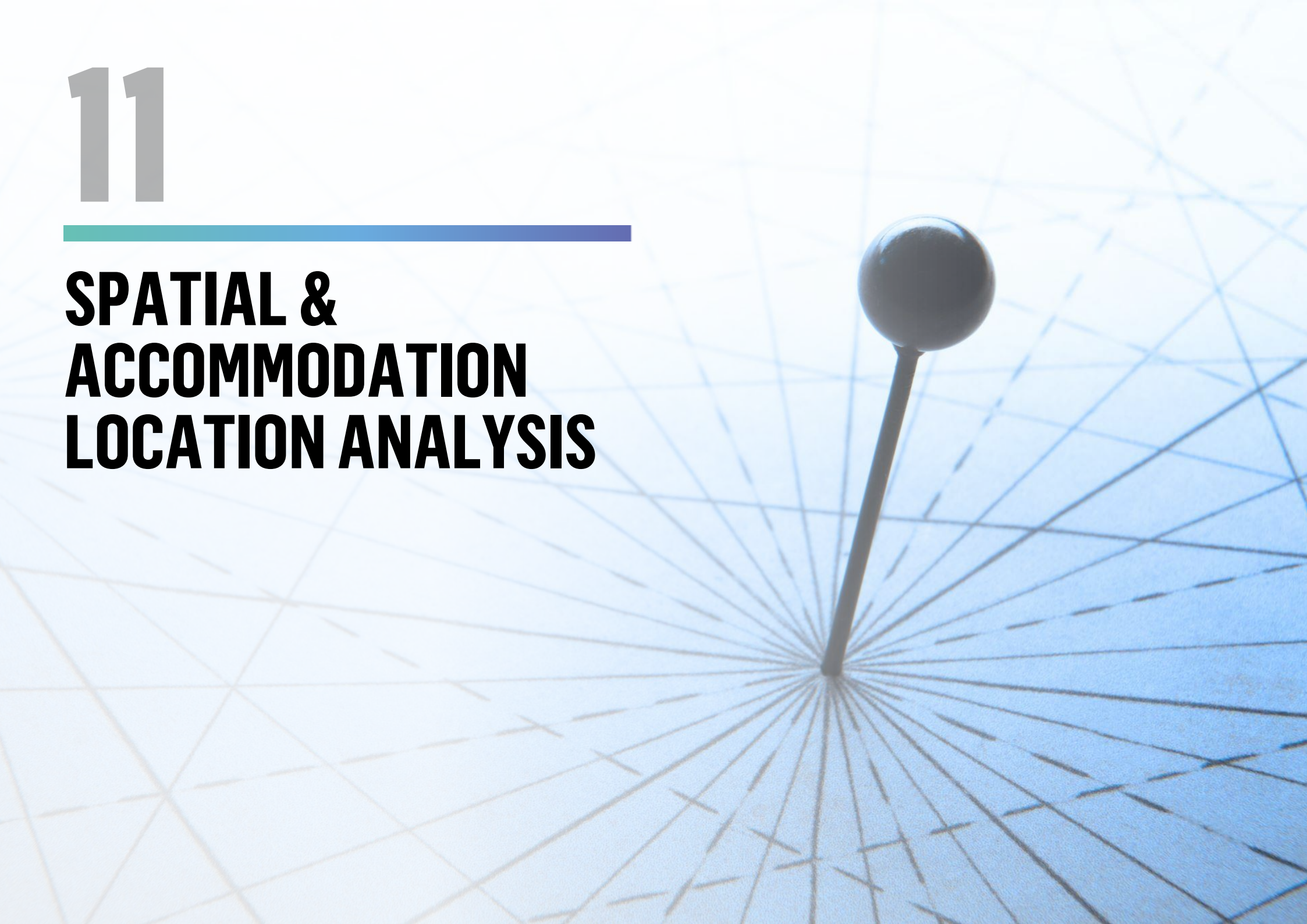
In summary, understanding these scenarios is essential for effective planning and ensuring that the infrastructure is in place to support the incoming workforce while addressing the unique challenges of each LGA.

Ongoing Workforce and Future Population Required **Table 10.3**

LGA	Ongoing Start Month and Year	Peak Ongoing Jobs Required – New Households			Peak Additional Population @ 2.5 people per household		
		90% External (Low Case)	95% External (Moderate Case)	100% External (Base Case)	90% External (Low Case)	95% External (Moderate Case)	100% External (Base Case)
Armidale	From Jul-33	+98	+104	+109	+245	+259	+273
Walcha	From Jan-34	+40	+42	+44	+99	+105	+110
Tamworth	From Jan-34	+1,222	+1,290	+1,358	+3,056	+3,225	+3,395
Uralla	From Sep-34	+216	+228	+240	+540	+570	+600
Upper Hunter	From Mar-32	+79	+84	+88	+198	+209	+220
Muswellbrook	From Feb-48	+854	+902	+949	+2,135	+2,254	+2,373
Liverpool Plains	From Nov-25	+36	+38	+40	+90	+95	+100
Glen Innes Severn	From Jun-29	+5	+5	+5	+11	+12	+13
Inverell	-	0	0	0	0	0	0
New England REZ	**From Feb-48**	**+2,550**	**+2,691**	**+2,833**	**+6,374**	**+6,728**	**+7,083**

11

SPATIAL & ACCOMMODATION LOCATION ANALYSIS



INTRODUCTION

Spatial Analysis

The accommodation location analysis expands on the density mapping. This section comprises the outcomes of the analysis completed to identify where additional accommodation will be required, it estimates the volume of accommodation required and the time of when this accommodation is likely to be needed. We assessed the requirements for construction and ongoing operational workers who are not existing residents in the Study Area.

Specifically, the section sets out:

- Density of accommodation need based on peak jobs
- Suitability of areas for worker accommodation
- Identification of Accommodation Catchments
- Identification of areas best placed to accommodate workers

This approach was undertaken to meet these scope objectives:

- Assessing the cumulative impacts of major generation and network infrastructure projects
- Outlining opportunities for workforce accommodation
- Approach to addressing the accommodation needs short and long-term

To assess the optimal locations for worker Accommodation Catchments and camps the following assumptions were made:

- A drive time of 45 minutes was considered to be the optimal maximum drive time. Additional analysis of a 60 and 90 minute drive time is included in Appendix A5
- Accommodation suitability was assessed on the basis of job density based on the projects and drive time
- Weighting was completed using a weighting of drive time Catchment overlaps and distance to job density. A value of zero for both datasets indicated low suitability for accommodation (i.e, few overlaps and low job numbers).

Worker Accommodation Requirements Considered

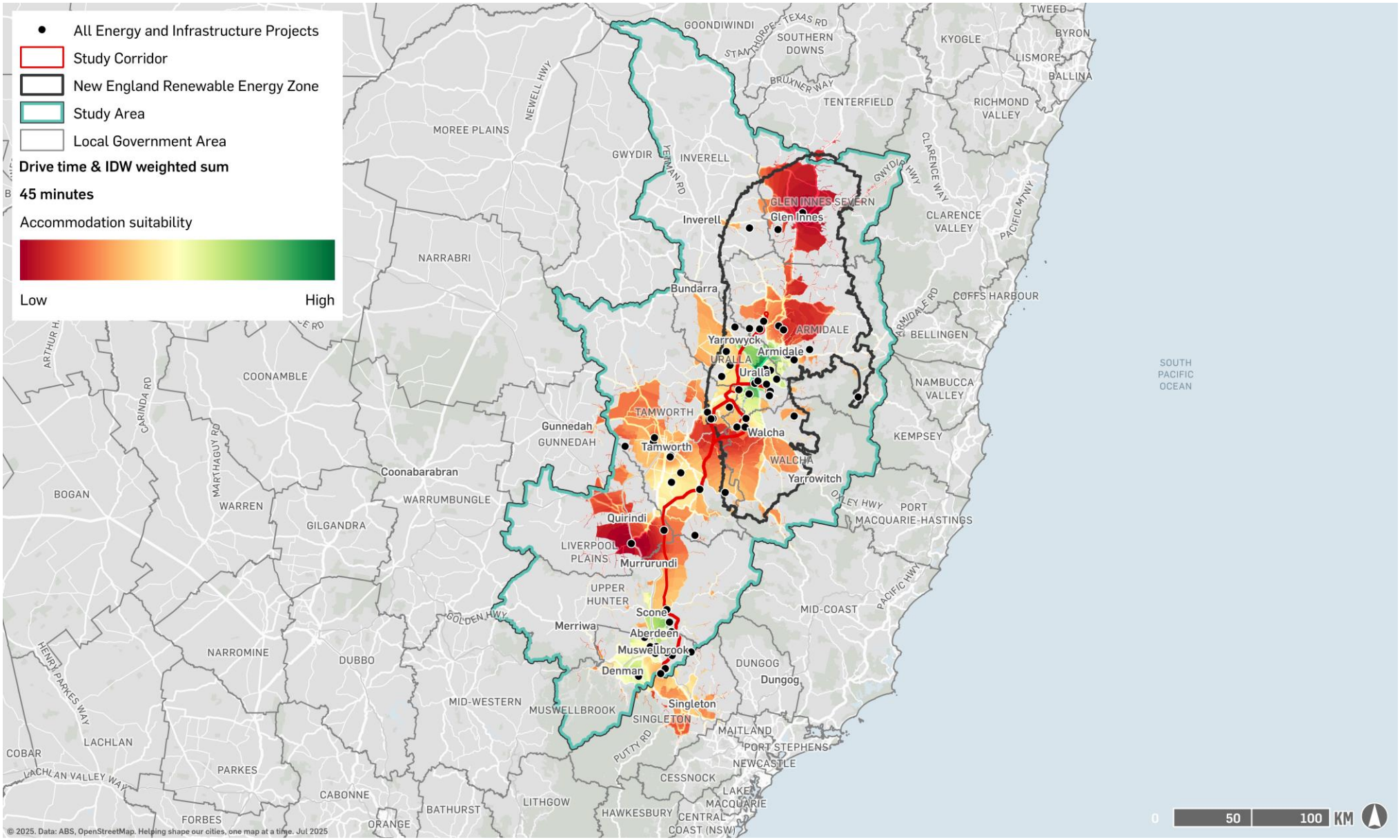
WHEN ARE PROJECTS EXPECTED TO OCCUR?

WHERE THE PROJECTS ARE?

HOW MANY WORKERS ARE REQUIRED?

ACCOMMODATION SUITABILITY ANALYSIS ALL PROJECTS– 45 MINUTES

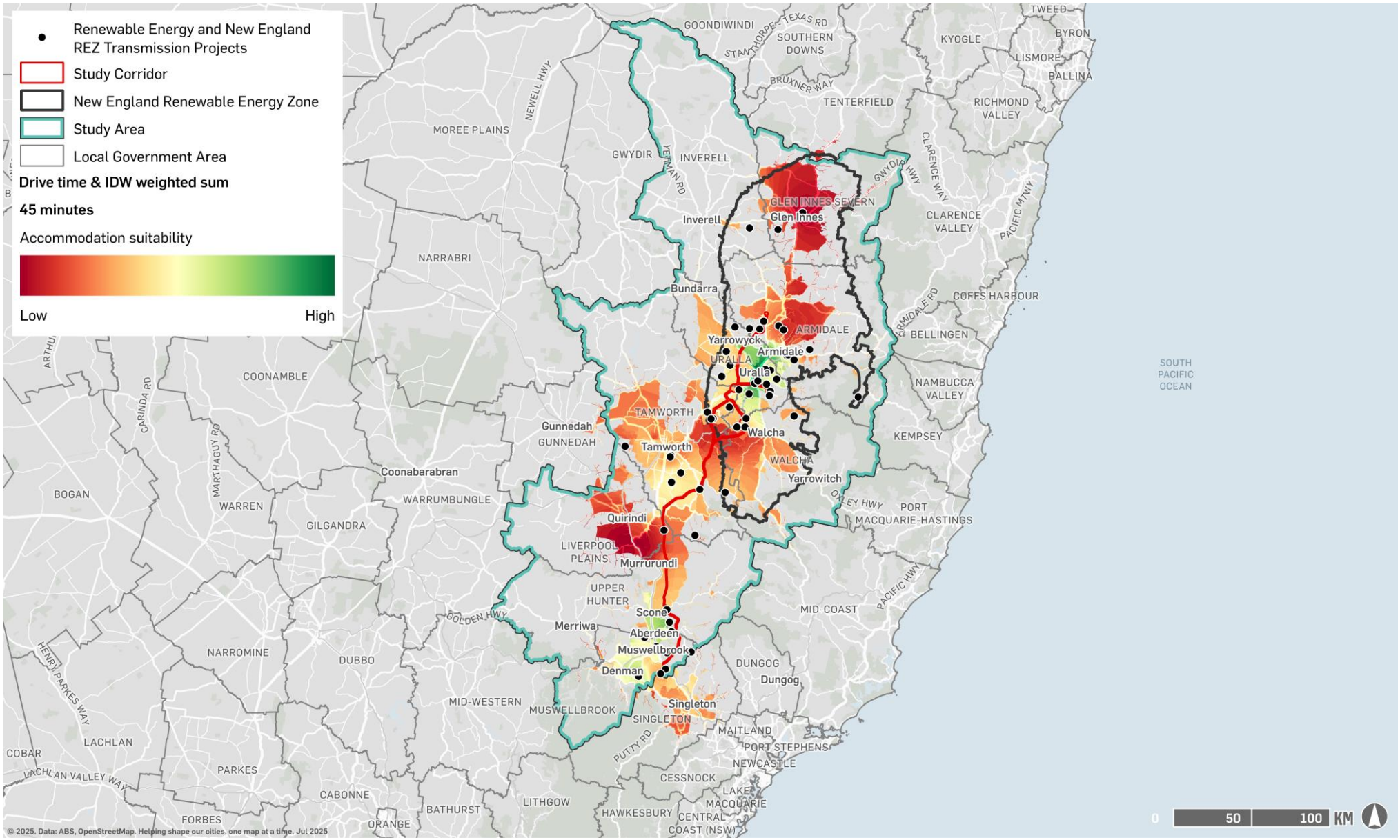
Map 11.1



Note: Projects as of November 2024. One project is not represented on the map for confidentiality purposes

ACCOMMODATION SUITABILITY ANALYSIS ENERGY PROJECTS– 45 MINUTES

Map 11.2



Note: Projects as of November 2024. One project is not represented on the map for confidentiality purposes

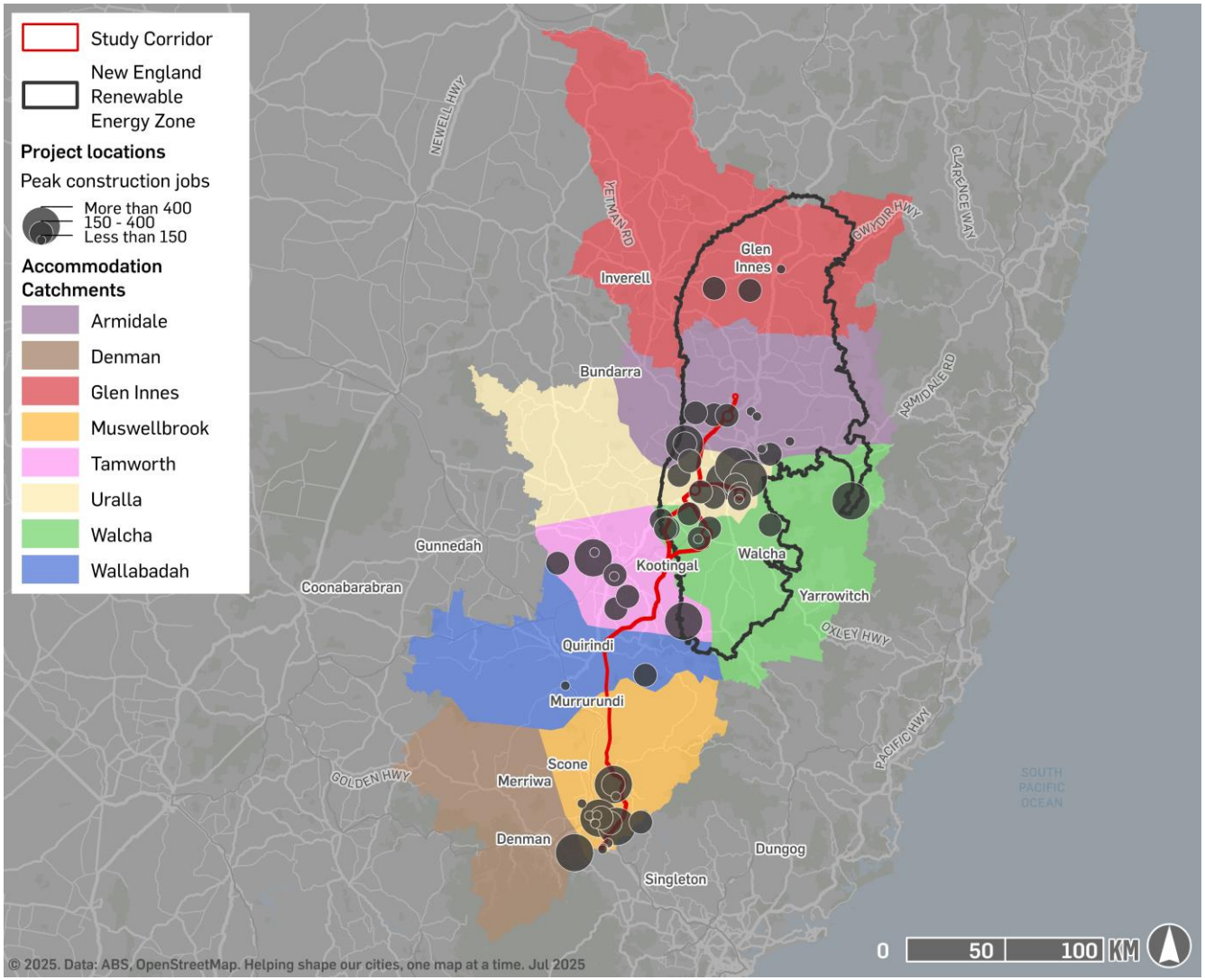
ACCOMMODATION CATCHMENTS | | IDENTIFICATION OF LOCATIONS FOR WORKER HOUSING

Summary

- Based on the analysis above, we have identified locations for workforce accommodation, considering factors such as proximity to work sites, existing infrastructure, and potential community impacts. We also considered locations that offer synergies with existing uses, which could benefit from the long-term availability of new accommodation beyond the immediate needs of the NE REZ workforce. To understand workforce demand more clearly, we calculated and heat-mapped the geographic distribution of workers, highlighting areas with the highest intensity of workforce needs. This analysis provides insights into potential work locations. Based on drive-time analysis and workforce density modelling, we identified the following Accommodation Catchments as potential hosts to worker camps.
- **Armidale: 978 peak construction jobs**
- **Denman: 501 peak construction jobs**
- **Glen Innes: 430 peak construction jobs**
- **Muswellbrook: 1,456 peak construction jobs**
- **Tamworth: 833 peak construction jobs**
- **Uralla: 3,071 peak construction jobs**
- **Walcha: 875 peak construction jobs**
- **Wallabadah: 296 peak construction jobs**

The number of workers requiring temporary accommodation was informed by benchmark assumptions regarding the proportion of workers likely to live locally versus those expected to temporarily relocate to the Study Area. These assumptions are based on industry standards (e.g., 95%, 90%, or 85% external employment rates), which helped estimate the demand for temporary accommodation.

Accommodation Catchment Locations — Map 11.3



Note: Projects as of November 2024. One project is not represented on the map for confidentiality purposes

Key Findings

Table 11.1 outlines the temporary accommodation requirements for construction workers across the defined Accommodation Catchment locations. The peak construction employment periods range from 2024 to 2030 across these Catchments. For each Catchment, a significant proportion of workers (up to 90-95%) will be coming from outside the local area, necessitating temporary housing. The accommodation needs vary depending on the size of the workforce, with locations such as Uralla and Muswellbrook requiring multiple camps to house over 2,500 workers, while smaller Catchments like Wallabadah and Denman will need facilities for approximately 250-500 workers. Given these varying requirements, it is recommended that temporary camps be designed to accommodate different workforce sizes, ranging from smaller camps (150-300 workers) to larger facilities (600+ workers) for Catchments with a greater number of projects or larger projects. Flexibility in camp size will be essential to adjust for fluctuations in worker numbers during peak construction months. Additionally, all camps should provide basic amenities and be strategically located near construction sites to minimize travel time and ensure efficient operation.

Consideration should be made to the transition of camp accommodation on completion of projects to other areas where temporary workforces are increasing in size. For example, Glen Innes sees its workforce peak in 2026 and reaches zero worker requirements in 2028 The accommodation supplied in Glen Innes could be moved to Uralla as the worker numbers fall to accommodate the increasing worker demand in Uralla in 2029.

Temporary Accommodation, External Employment Sensitivity **Table 11.1**

Accom. Catchments	Peak Construction Employment Year and Month	Employment Reaches Zero Year and Month	Peak Construction Jobs	Construction Workers Requiring Accommodation		
				85% External (Low Case)	90% External (Base Case)	95% External (High Case)
Armidale	Apr-30	From Jun-34	978	831	880	929
Denman	Dec-26	From Jan-33	501	426	451	476
Glen Innes	May-26	From Dec-28	430	366	387	409
Muswellbrook	Apr-25	From Jan-48	1,456	1,238	1,310	1,383
Tamworth	Jul-24	From Oct-32	833	708	750	791
Uralla	Jul-30	From Jul-33	3,071	2,610	2,764	2,917
Walcha	Sep-27	From Jul-33	875	744	788	831
Wallabadah	May-29	From Jan-33	296	252	266	281

Key Findings

Comparing renewable energy projects and NE REZ transmission with total projects, it was found that there are 476 additional workers in Muswellbrook, and 124 additional workers in Tamworth who will need temporary accommodation outside of non-renewable energy and EnergyCo transmission line projects. The impact of these non-renewable and infrastructure projects on temporary accommodation requirements is quite high.

The timing of peak accommodation needs for Renewable Energy Projects and NE REZ Transmission also varies significantly. In Muswellbrook, the peak demand for accommodation related to total projects is anticipated in April 2025. In contrast, the peak demand for renewable energy and network infrastructure projects is not expected until November 2029, creating a four-year delay in accommodation requirements. In Tamworth, the peak accommodation demand for all projects is projected for July 2024. However, for renewable energy and transmission, this peak is pushed forward to December 2029, indicating a substantial postponement in the timing of accommodation needs.

On the other hand, Accommodation Catchments such as Armidale, Denman, Glen Innes, Uralla, and Walcha—areas not affected by non-renewable energy or infrastructure projects—are not experiencing the same level of accommodation pressure. This suggests that their accommodation requirements are influenced only by the energy sector.

Temporary Accommodation, External Employment Sensitivity **Table 11.2**

Accom. Catchments	Peak Construction Employment Year and Month	Employment Reaches Zero Year and Month	Peak Construction Jobs	Construction Workers Requiring Accommodation		
				85% External (Low Case)	90% External (Base Case)	95% External (High Case)
Armidale	Apr-30	From Jun-34	978	831	880	929
Denman	Dec-26	From Jan-33	501	426	451	476
Glen Innes	May-26	From Dec-28	430	366	387	409
Muswellbrook	Nov-29	From Jan-33	980	833	882	931
Tamworth	Dec-29	From Oct-32	709	603	638	674
Uralla	Jul-30	From Jul-33	3,071	2,610	2,764	2,917
Walcha	Sep-27	From Jul-33	875	744	788	831
Wallabadah	May-29	From Jan-33	296	252	266	281

Note: Armidale, Denman, Glen Innes, Uralla and Walcha have the same result as 'Total Projects' on the previous page (No non-renewable projects in these LGAs).

ACCOMMODATION CATCHMENTS | TOTAL ONGOING WORKFORCE AND FUTURE POPULATION

Key Findings

For the defined Accommodation Catchments, the need for legacy accommodation was estimated. The results are shown in the table right. This shows the timing and size of the ongoing need for accommodation based on the ongoing workforce. Using the Base Case jobs requirements as a proxy for the number of dwellings that will be required, there is going to be strong demand for housing across the region. While some workers may enter shared accommodation, we estimate this to be a low portion so have completed the analysis based on each person requiring a separate household.

According to the results the Tamworth Accommodation Catchment is likely to have the greatest need for ongoing accommodation with over 1,000 dwellings likely to be required by 2032. Muswellbrook Catchment is also expected to require a high number of new dwellings with over 800 dwelling likely to be needed by 2048.

At the other end of the scale Glen Innes may not need ongoing accommodation as four dwellings may be able to be sourced from the existing housing vacancy within the area.

The peak additional population is also supplied in the table. The population was calculated using the average household size for Australia as the incoming workers are likely to be represented by this group. These populations with require appropriate infrastructure to be built to enable the towns to cope with the influx of new residents.

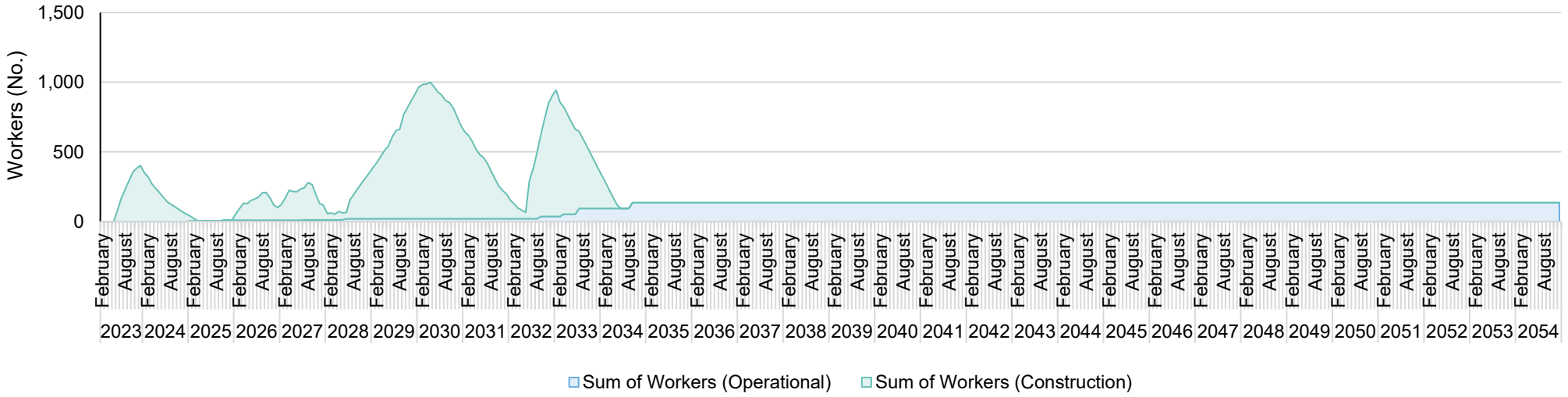
Ongoing Workforce and Future Population Required External Employment Table 11.3

Accom. Catchments	Peak Construction Employment Year and Month	Peak Ongoing Jobs Required – New Households			Peak Additional Population @ 2.5 people per household		
		90% External (Low Case)	95% External (Moderate Case)	100% External (Base Case)	90% External (Low Case)	95% External (Moderate Case)	100% External (Base Case)
Armidale	From Sep-34	+122	+129	+136	+306	+323	+340
Denman	From Sep-28	+23	+24	+25	+56	+59	+63
Glen Innes	From Jun-29	+5	+5	+5	+11	+12	+13
Muswellbrook	From Feb-48	+912	+962	+1,013	+2,279	+2,406	+2,533
Tamworth	From Dec-32	+1,156	+1,220	+1,284	+2,889	+3,050	+3,210
Uralla	From Jan-34	+165	+174	+183	+412	+435	+458
Walcha	From Jan-34	+105	+111	+117	+263	+278	+293
Wallabadah	From Jul-28	+64	+67	+71	+160	+169	+178

TOTAL PROJECT LIKELIHOOD SENSITIVITY | ARMIDALE ACCOMMODATION CATCHMENT

Total (Medium and High Likelihood)

Chart 11.1



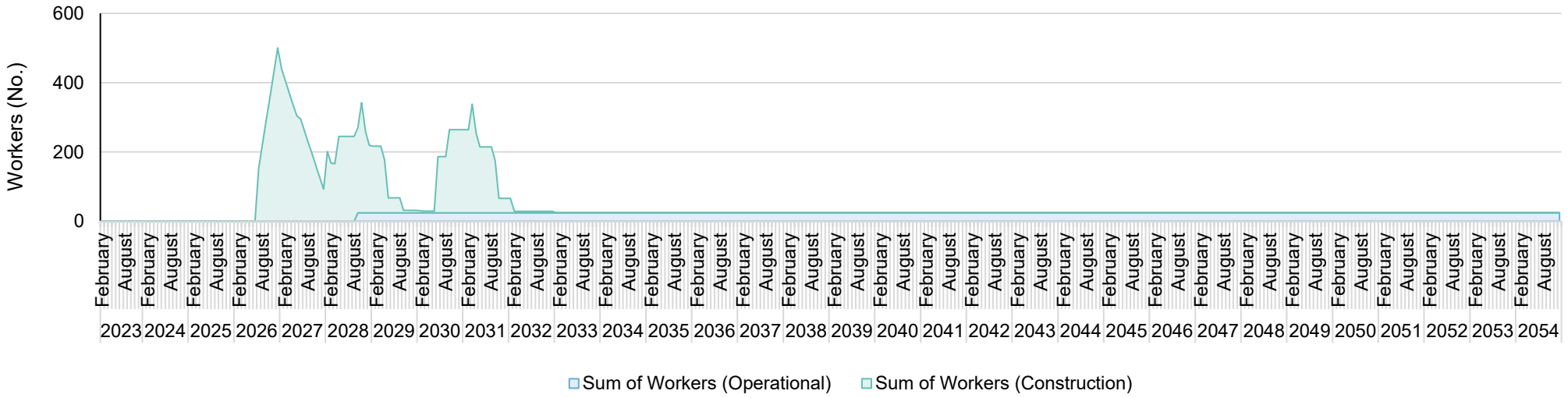
High Likelihood

Chart 11.2

TOTAL PROJECT LIKELIHOOD SENSITIVITY | DENMAN ACCOMMODATION CATCHMENT

Total (Medium and High Likelihood)

Chart 11.3



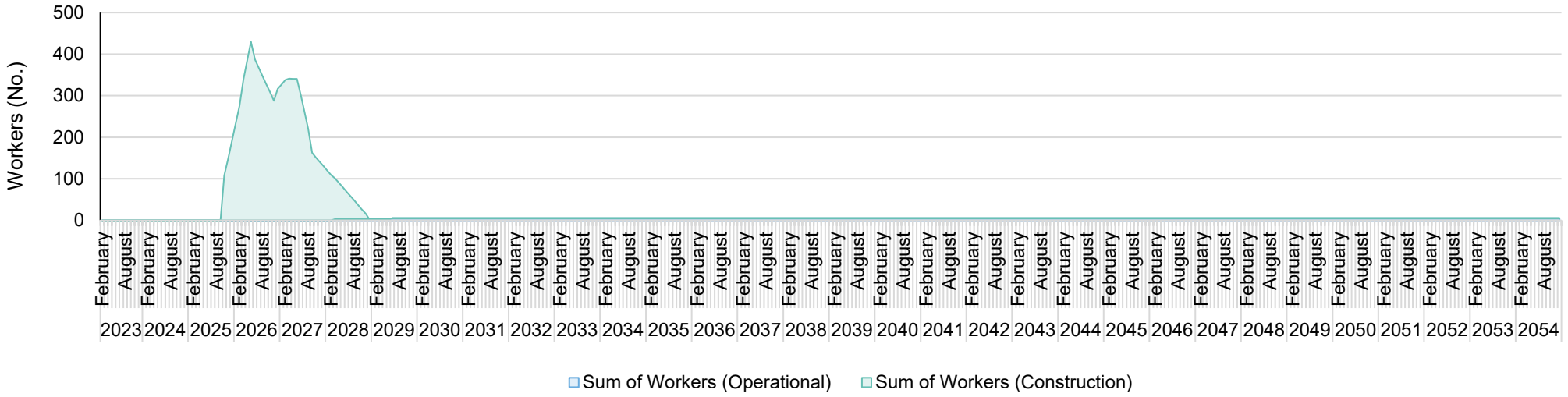
High Likelihood

No High Likelihood Projects in Catchment

TOTAL PROJECT LIKELIHOOD SENSITIVITY | GLEN INNES ACCOMMODATION CATCHMENT

Total (Medium and High Likelihood)

Chart 11.4

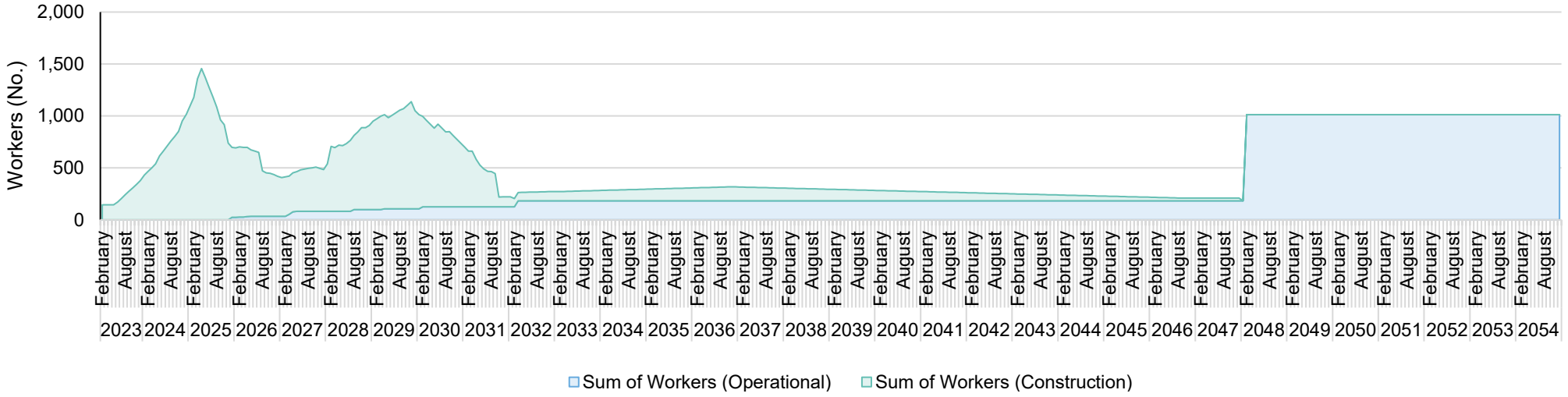


High Likelihood

Chart 11.5

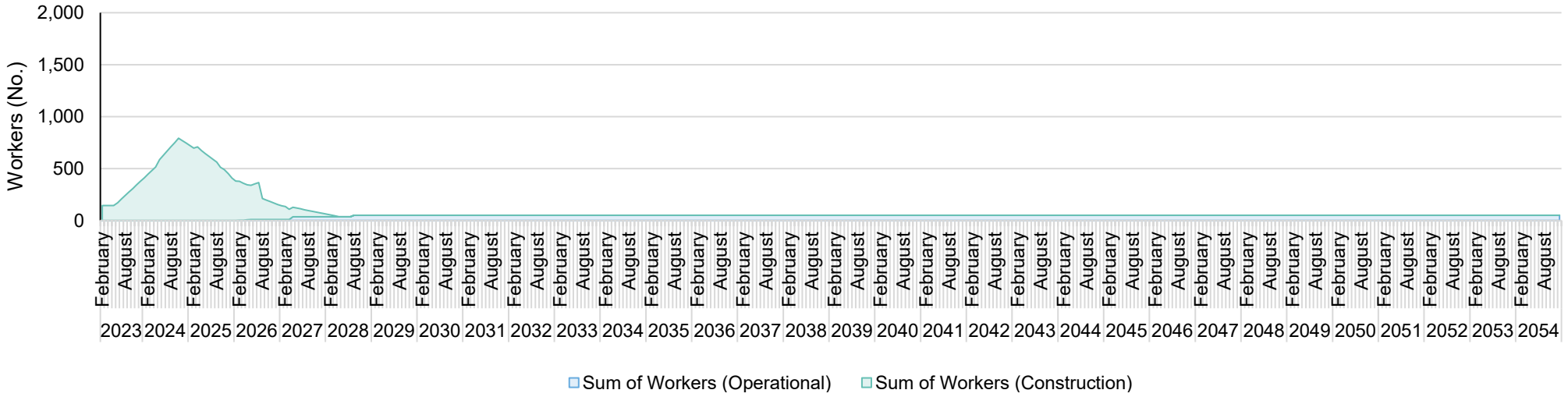
Total (Medium and High Likelihood)

Chart 11.6



High Likelihood

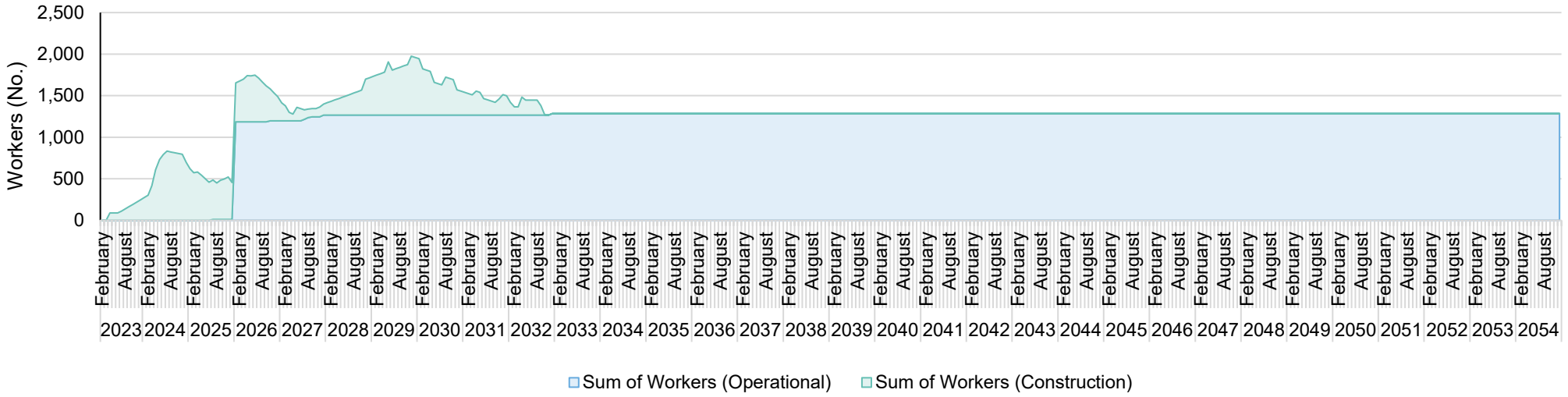
Chart 11.7



TOTAL PROJECT LIKELIHOOD SENSITIVITY | TAMWORTH ACCOMMODATION CATCHMENT

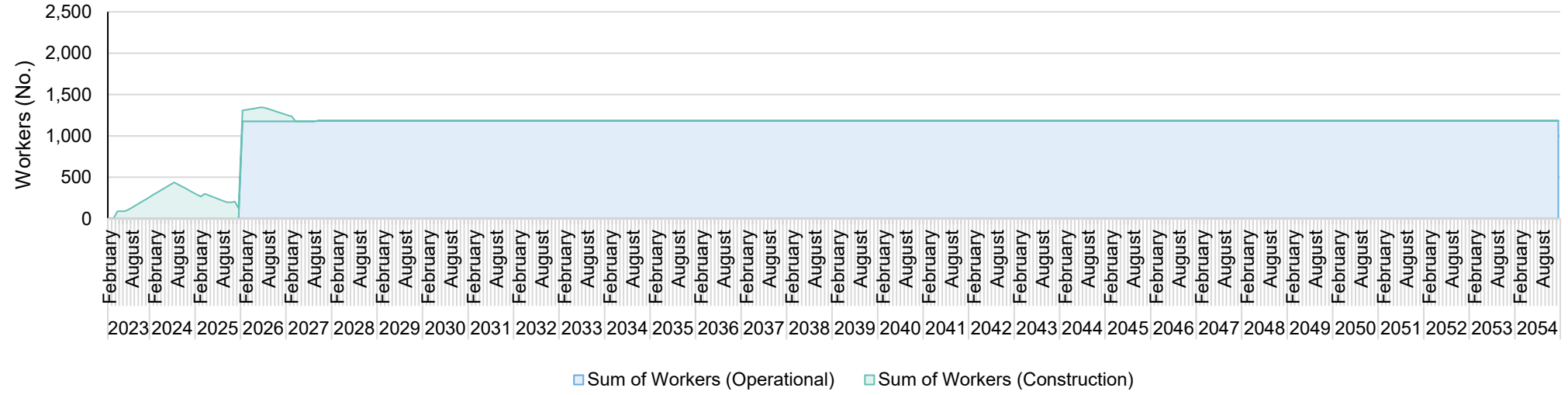
Total (Medium and High Likelihood)

Chart 11.8



High Likelihood

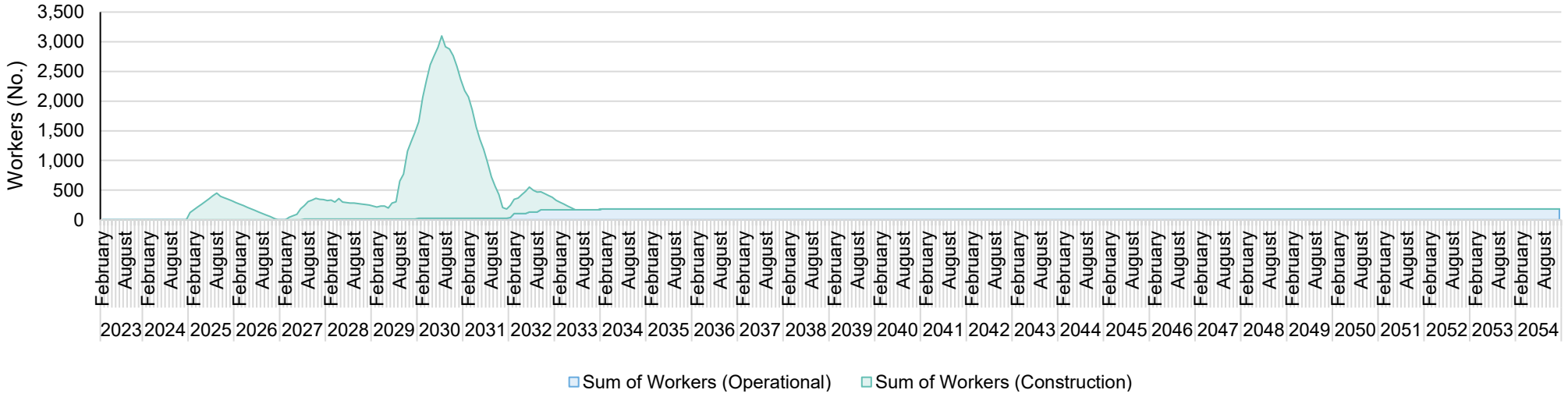
Chart 11.9



TOTAL PROJECT LIKELIHOOD SENSITIVITY | URALLA ACCOMMODATION CATCHMENT

Total (Medium and High Likelihood)

Chart 11.10



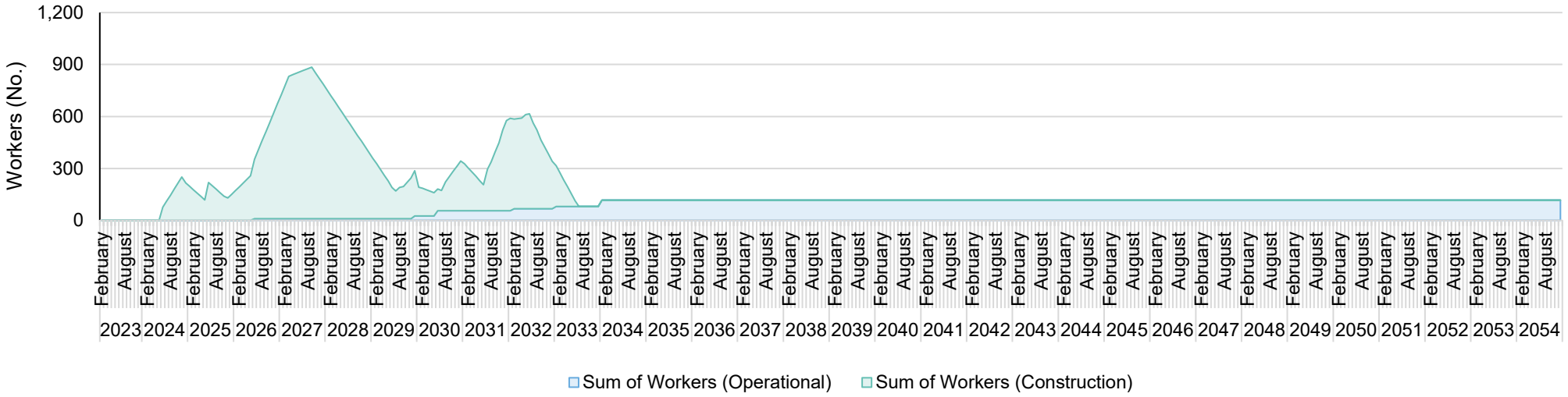
High Likelihood

Chart 11.11

TOTAL PROJECT LIKELIHOOD SENSITIVITY | WALCHA ACCOMMODATION CATCHMENT

Total (Medium and High Likelihood)

Chart 11.12



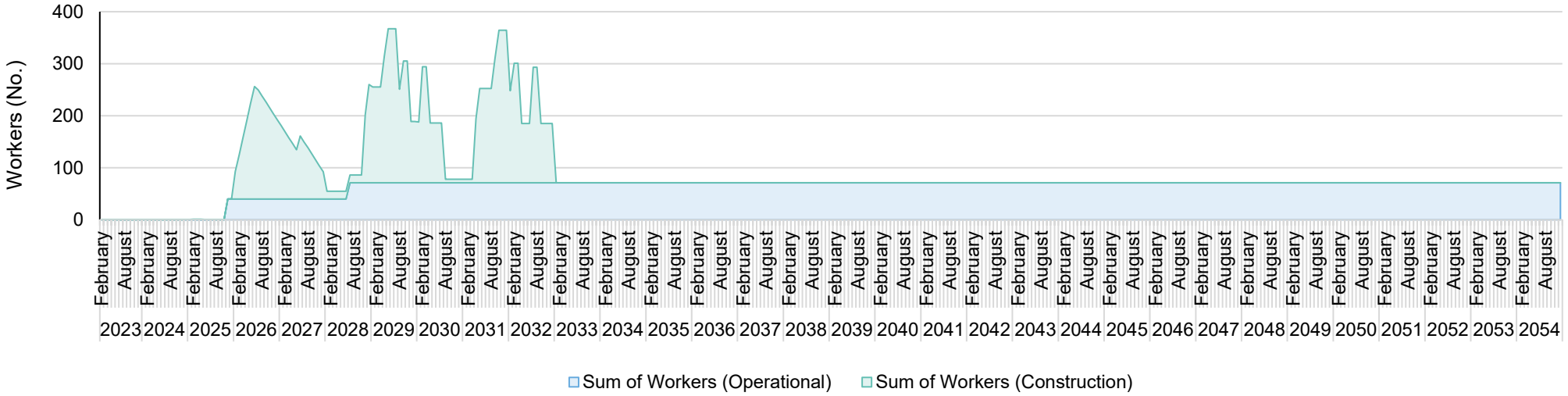
High Likelihood

No High Likelihood Projects in Catchment

TOTAL PROJECT LIKELIHOOD SENSITIVITY | WALLABADAH ACCOMMODATION CATCHMENT

Total (Medium and High Likelihood)

Chart 11.13



High Likelihood

No High Likelihood Projects in Catchment

12

FINANCIAL ANALYSIS

INTRODUCTION

Overview

A high-level feasibility assessment was completed to gauge the viability of various accommodation options.

The general assumption is that an Accommodation Provider develop a living asset or rent an existing facility which to be leased to the workers during the NE REZ Transmission Project construction period (May-27 to Jul-33). At the end of the above period, the asset will be divested or vacated (in the case of renting).

Acknowledging that AEMO made a public announcement in December 2024 advising revised completion dates for Stage 1 (July-2032) and Stage 2 (Jan-2034). The change in stage dates could affect the total rental income, and construction costs (due to inflation).

Urbis notes the dollar value in this assessment is as of October 2024. No revenue escalation is assumed as we are unable to predict the market movements, but construction cost escalations are applied as advised by Rider Levett Bucknall (RLB).

This exercise considers the strategic assessment outcomes and indicative costings to project the anticipated financial returns. Estate Master was utilised for high-level feasibility assessments, based on various financial assumptions and construction cost and timeframe estimation prepared by RLB to analyse each option's project profitability and cost recovery.

The construction cost estimation has factored in a 5% regional factor, 5% contingency and cost escalation of 4.5% (up to Jan 2025) and 10% (up to Jan 26). RLB also estimated construction period range of 12 to 37 months.

By determining the profitability and level of cost recovery of each option, it will become evident which option holds the potential for feasible development.

Urbis note that this analysis could be impacted by changes in various factors such as construction costs, associated development costs, interest rate, assessed terminal value, assessed net rental income and etc.

Accommodation Options and Assumptions

This assessment has tested the below development options which could be utilised for worker accommodation during New England project period:

- Temporary Workforce Accommodation Camp
- Student Accommodation
- Manufactured Housing Estate
- Holiday Park Cabins
- Existing Motel
- Residential villas (Affordable Rental Housing).

Given there is no specified site / development process identified, we have established the following assumptions for each accommodation option for the purposes of this high-level feasibility assessment.

Temporary Workforce Accommodation Camp

This development option assumed an Accommodation Provider acquire a rural land and develop a Temporary Worker Camp. The completed facility will be leased to the workers over the NE REZ Transmission Project construction period (May-27 to Jul-33).

At the end of the project, the accommodation will be decommissioned and sold at a depreciated value. Given the utility services has been build on site, we assumed the land would be sell as a manufactured house estate rather than a rural land.

Student Accommodation

This development option assumed an Accommodation Provider negotiated a deal with local university to develop a student accommodation on the university's land, free of land cost.

Upon the construction completion, the Provider will manage and operate the facility and lease it to the workers. At the end of the project, the facility will be transferred to the university as a student accommodation. In return, the university contributed 50% of the construction costs.

Manufactured Housing Estate (MHE)

The Provider acquired a potential MHE site and develop the site with relocatable dwellings. Upon the completion, the estate will be leased to the workers during the project period.

At the end of the project period, the relocatable dwellings will be decommissioned and sold at a depreciated value and the land sold as a MHE site.

Holiday Park Cabin

Similar to the MHE option, the Provider will acquire the land, development the facility, lease it to the workers. At the end of the project period, decommissioned the cabins and sold at a depreciated value. The land will also be sold on market.

Existing Motel

This option assumed the Provider rent an older condition motel with higher vacancy at a discounted rate. The Provider will then refurbish the motel and lease it to the workers. A legacy benefit will flow from the improved motel condition.

Residential Villas (ARH)

This option assumed a Provider acquired a potential development site and develop a residential villa complex to lease to the workers. The villas will be dedicated as Affordable Rental Housing in perpetuity and sold upon the end of the project period.

Summary

For the temporary worker camps, we have assessed 3 development options being 150, 300 and 600 units.

Each unit will feature an internal area of 20 square metres and provide queen bed, desk and ensuite cupboard.

We have further adopted a development efficiency of 25% to estimate required land size for each development option.

Table 11.1 outlines our key valuation assumptions and a summary of the revenues and costs.

Key Assumptions:

- Assumes acquisition of rural land at current market rate.
- Lease the rooms to the worker at $180 per room per night, which includes meal costs.
- A higher vacancy rate is expected during Year 1 and Year 7 due to the commencement and conclusion of local construction projects, resulting in reduced human movement inflow.
- At the end of the operational period, the camps will be sold on the market at a depreciated rate.
- The land will also be considered for sale as a potential Manufactured Housing Estate site, given the roads and services in place at the end of the project period. We note that we have utilized the current market rate in assessing the terminal land value as predicting future market value involves high uncertainty.

Temporary Worker Camps Feasibility Considerations **Table 11.1**

Gross Revenue			
Scenario	**150 units**	**300 units**	**600 units**
Land Area	12,000 sq. m	24,000 sq. m	48,000 sq. m
Land Value	**$3,780,000**	**$6,300,000**	**$10,080,000**
Building Cost (Rounded)	$17,000,000	$31,500,000	$49,800,000
Depreciated Building Value (at 50%)	**$8,500,000**	**$15,750,000**	**$24,900,000**
Gross Sales Revenue (Rounded)	**$12,300,000**	**$22,100,000**	**$35,000,000**
Rental Assessment			
Net Rental Income	$2,853,800	$14,451,000	$74,577,000
Estimated Vacancy Rate per annum	Y1 & Y7: 37% Y2, Y3, Y4, Y5, Y6: 19%		

Development Costs (excl GST)			
Scenario	**150 units**	**300 units**	**600 units**
Land Purchase Costs	**$300,000**	**$480,000**	**$720,000**
Construction Costs incl Contingency	$40,650,000	$70,800,000	$112,800,000
Removal Costs	$2,100,000	$4,200,000	$8,400,000
Total Construction Costs	**$42,750,000**	**$75,000,000**	**$121,200,000**
Total Construction Period	12 months	15 months	20 months
Estimated Construction Commencement Date	May-26	Feb-26	Sep-25
Estimated Construction Completion Date	Apr-27	Apr-27	Apr-27
Other Costs			
Professional Fees	5% of Costs		
Development Management	2.5% of Costs		
Marketing & Legal on Sale	0.5% & 0.5% of GRV		
Interest	6.5% p.a. (100% debt funded)		

Escalations		Hurdle Rate	
Costs	4.5% to Jan-25 & 10% to Jan-26 included	IRR	6.50%
Revenue	Nil	Development Margin	10.00%

FEASIBILITY CALCULATION | TEMPORARY WORKER CAMPS

Summary

Table 11.2 outlines the estimated Developer's Profit/Loss, Development Margin, and Cost Recovery for each scenario.

The feasibility analysis indicates a development loss range of -$58.6M to -$91.6M and a development margin range of -43.94% to -23.25%. The Cost Recovery achieved ranges from 20.19% to 56.02%.

We also note that the estimated total development timeline for temporary worker camps are as follows:

150 units – 12 months

300 units – 15 months

600 units – 20 months

The scenario involving 600 units offers a reasonable development timeline to provide a large-scale accommodation compared to other options, and with achievable cost recovery exceeding 50%.

Development Outcomes — **Table 11.2**

Revenues	150 Units	300 Units	600 Units
Gross Sales Revenue	12,300,000	22,100,000	35,000,000
Less Selling Costs	(338,250)	(607,750)	(962,500)
NET SALES REVENUE	11,961,750	21,492,250	34,037,500
NET RENTAL INCOME	2,853,800	14,451,000	74,577,000
TOTAL REVENUE (before GST paid)	14,815,550	35,943,250	108,614,500
TOTAL REVENUE (after GST paid)	14,815,550	35,943,250	108,614,500
Costs			
Land Purchase Cost	300,000	480,000	720,000
Land Acquisition Costs	10,548	19,448	31,568
Construction (inc. Construct. Contingency)	47,025,000	82,500,000	133,320,000
Professional Fees	3,599,630	6,314,963	10,204,425
Statutory Fees	518,288	885,000	1,410,000
Interest Expense	26,316,950	45,210,972	61,068,807
TOTAL COSTS (before GST reclaimed)	78,020,415	135,660,382	207,004,800
Less GST reclaimed	(4,643,302)	(8,129,578)	(13,135,535)
TOTAL COSTS (after GST reclaimed)	73,377,113	127,530,804	193,869,265
Performance Indicators	1	2	3
[1] Gross Development Profit	(58,561,563)	(91,587,554)	(85,254,765)
[3] Development Margin (Profit/Risk Margin)	(43.94%)	(38.66%)	(23.25%)
Cost Recovery	20.19%	28.18%	56.02%

* Note : Development Margin inc Selling & operating costs

FEASIBILITY CALCULATION | STUDENT ACCOMMODATION

Summary

In regard to student accommodation scenario, we have assessed 3 development options being 150, 300 and 600 units on a hypothetical university's land.

We have assumed that each unit will feature an internal area of 20 square metres and provide queen bed, desk and ensuite cupboard.

For the purpose of this high-level feasibility evaluation, we have assumed the landowner contributes 50% of the construction costs, and in return, gain the ownership of the facility upon the end of the operational period.

Table 11.3 outlines our key valuation assumptions and a summary of the revenues and costs.

Key Assumptions:

- The facility will be leased as worker accommodation at $180 per room per night, which includes meal costs upon construction completion.
- A higher vacancy rate is expected during Year 1 and Year 6 due to the commencement and conclusion of local construction projects, resulting in reduced human movement inflow.
- 50% of the construction costs contributed by the landowner. The developer/accommodation provider receiving rental income over the operational period and transferring the facility to the landowner, free of cost.

Student Accommodation Feasibility Considerations **Table 11.3**

Gross Revenue			
Scenario	**150 units**	**300 units**	**600 units**
Rental Assessment			
Net Rental Income	$7,394,250	$19,715,900	$63,052,600
Estimated Vacancy Rate per annum	Y1 & Y6: 37% Y2, Y3, Y4 & Y5: 19%		

Development Costs (excl GST)			
Scenario	**150 units**	**300 units**	**600 units**
Construction Costs incl Contingency	$20,625,000	$39,000,000	$72,300,000
Total Construction Period	24 months	31 months	37 months
Estimated Construction Commencement Date	May-25	Feb-25	Feb-25
Estimated Construction Completion Date	May-27	Aug-27	Feb-28
Other Costs			
Professional Fees	5% of Costs		
Development Management	2.5% of Costs		
Marketing & Legal on Sale	0.5% & 0.5% of GRV		
Interest	6.5% p.a. (100% debt funded)		

Escalations		Hurdle Rate	
Costs	4.5% to Jan-25 & 10% to Jan-26 included	IRR	6.50%
Revenue	Nil	Development Margin	10.00%

FEASIBILITY CALCULATION | STUDENT ACCOMMODATION

Summary

Table 11.4 outlines the estimated Developer's Profit/Loss, Development Margin, and Cost Recovery for each scenario.

The feasibility analysis indicates a development loss range of -$27.6M to -$49.5M and a development margin range of -18.81% to -30.98%. The Cost Recovery achieved ranges from 21.1% to 56.03%.

We also note that the estimated total development timeline for student accommodation are as follows:

150 units – 24 months

300 units – 31 months

600 units – 37 months

As mentioned, 50% of the construction costs contributed by the landowner. The developer/accommodation provider receiving rental income over the operational period and transferring the facility to the landowner, free of cost. Any changes of monetary contributions made by the landowner would impact the cost recovery and the development margin

Development Outcomes — Table 11.4

Revenues			
NET RENTAL INCOME	7,394,250	19,715,900	63,052,600
TOTAL REVENUE (before GST paid)	7,394,250	19,715,900	63,052,600
TOTAL REVENUE (after GST paid)	7,394,250	19,715,900	63,052,600
Costs			
Land Purchase Cost	-	-	-
Land Acquisition Costs	-	-	-
Construction (inc. Construct. Contingency)	22,687,500	42,900,000	79,530,000
Professional Fees	1,744,102	3,297,938	6,113,869
Statutory Fees	515,625	975,000	1,807,500
Land Holding Costs	-	-	-
Interest Expense	12,064,833	20,973,593	32,614,874
TOTAL COSTS (before GST reclaimed)	37,262,060	68,396,531	120,316,243
Less GST reclaimed	(2,221,055)	(4,199,813)	(7,785,806)
TOTAL COSTS (after GST reclaimed)	35,041,005	64,196,718	112,530,437
Performance Indicators	1	2	3
[1]Gross Development Profit	(27,646,755)	(44,480,818)	(49,477,837)
[3]Development Margin (Profit/Risk Margin)	(30.98%)	(27.61%)	(18.81%)
Cost Recovery	21.10%	30.71%	56.03%

* Note : Development Margin inc Selling & operating costs

HIGH LEVEL FEASIBILITIES | MANUFACTURED HOUSING ESTATE

Summary

We have assessed a hypothetical MHE development which comprises 120 sites each accommodating a 3-bedroom relocatable dwelling.

Each dwelling will feature 115 sq. m internal area along with garage and external area.

We have further adopted a development efficiency of 70% resulting an estimate required land size of 30,343 sq. m.

Table 11.5 outlines our key valuation assumptions and a summary of the revenues and costs.

Key Assumptions:

- Assumes acquisition of a potential MHE site at current market rate.
- Upon the construction completion, the facility will be leased as worker accommodation at $360 per night per dwelling, excluding meal given centralise kitchen is unlikely to be provided.
- A higher vacancy rate is expected during Year 1 and Year 7 due to the commencement and conclusion of local construction projects, resulting in reduced human movement inflow.
- At the end of the operational period, the site will be sold as an improved MHE site, considering the existing infrastructure in place along with the relocatable dwellings sold at a depreciated rate.
- We note that we have utilized the current market rate in assessing the terminal land value as predicting future market value involves high uncertainty.

Manufactured Housing Estate Feasibility Considerations **Table 11.5**

Gross Revenue	
Scenario	**120 x 3 bedroom dwellings**
Estimated Land Area	30,343 sq. m
Improved Land Value	**$12,000,000**
Sellable Facility Cost (Rounded)	$59,300,000
Depreciated Value (at 20%)	**$47,440,000**
Gross Sales Revenue (Rounded)	**$59,400,000**
Rental Assessment	
Net Rental Income	$35,408,700
Estimated Vacancy Rate per annum	Y1 & Y7: 37% Y2, Y3, Y4, Y5, Y6: 19%

Development Costs	
Land Purchase Costs	**$3,000,000**
Construction Costs incl Contingency	**$82,800,000**
Total Construction Period	16 months
Estimated Construction Commencement Date	Jan-26
Estimated Construction Completion Date	Apr-27
Other Costs	
Professional Fees	5% of Costs
Development Management	2.5% of Costs
Marketing & Legal on Sale	0.5% & 0.5% of GRV
Interest	6.5% p.a. (100% debt funded)

Escalations	
Costs	4.5% to Jan-25 & 10% to Jan-26 included
Revenue	Nil
Hurdle Rate	
IRR	6.50%
Development Margin	10.00%

FEASIBILITY CALCULATION | MANUFACTURED HOUSING ESTATE

Summary

This option involves a developer acquiring a potential development site and develop a MHE facility which will be leased as worker accommodation and sold at the end of operational period.

Table 11.6 outlines the estimated Developer's Profit/Loss, Development Margin, and Cost Recovery for each scenario.

The feasibility analysis indicates a development loss of -$47M and a development margin of -23.03%. The Cost Recovery achieved 66.35%.

We also note that the estimated total development timeline for this MHE development option is 16 months.

Development Outcomes	Table 11.6
Revenues	
Gross Sales Revenue	59,400,000
Less Selling Costs	(1,633,500)
NET SALES REVENUE	57,766,500
NET RENTAL INCOME	35,408,700
TOTAL REVENUE (before GST paid)	93,175,200
TOTAL REVENUE (after GST paid)	93,175,200
Costs	
Land Purchase Cost	3,000,000
Land Acquisition Costs	149,568
Construction (inc. Construct. Contingency)	91,080,000
Professional Fees	6,973,313
Statutory Fees	1,035,000
Interest Expense	46,997,648
TOTAL COSTS (before GST reclaimed)	149,485,528
Less GST reclaimed	(9,062,438)
TOTAL COSTS (after GST reclaimed)	140,423,090
Performance Indicators	1
[1] Gross Development Profit	(47,247,890)
[3] Development Margin (Profit/Risk Margin)	(23.03%)
Cost Recovery	66.35%

* Note : Development Margin inc Selling & operating costs

Summary

For the holiday park cabin, we have assessed 3 scenarios being 20, 50 and 150 cabins.

Each unit will feature an internal area of 20 sq.m and provide queen bed, desk and ensuite cupboard.

We have further adopted an average development land size per site of 300 sq.m to estimate required land size for each development scenario.

Table 11.7 outlines our key valuation assumptions and a summary of the revenues and costs.

Key Assumptions:

- Assumes acquisition of rural land at current market rate.
- Upon the construction completion, the facility will be leased as worker accommodation at $220 per night per cabin, excluding meal given centralise kitchen is unlikely to be provided.
- A higher vacancy rate is expected during Year 1 and Year 7 due to the commencement and conclusion of local construction projects, resulting in reduced human movement inflow.
- At the end of the operational period, the cabins will be sold at a depreciated value. We have adopted a depreciation rate of 20%.
- We also adopted the land value at current rate and no revenue escalation.

Holiday Park Cabin Feasibility Considerations — Table 11.7

Gross Revenue			
Scenario	**20 x 2 Bedroom Cabins**	**50 x 2 Bedroom Cabins**	**150 x 2 Bedroom Cabins**
Land Area	6,000 sq. m	15,000 sq. m	45,000 sq. m
Land Value	**$250,000**	**$400,000**	**$700,000**
Building Cost (Rounded)	$7,800,000	$19,600,000	$49,700,000
Depreciated Value (at 20%)	**$6,240,000**	**$15,680,000**	**$39,760,000**
Gross Sales Revenue (Rounded)	**$6,500,000**	**$16,100,000**	**$40,500,000**
Rental Assessment			
Net Rental Income	$1,994,983	$4,987,458	$14,962,375
Estimated Vacancy Rate per annum	Y1 & Y7: 37% Y2, Y3, Y4, Y5, Y6: 19%		

Development Costs			
Scenario	**20 x 2 Bedroom Cabins**	**50 x 2 Bedroom Cabins**	**150 x 2 Bedroom Cabins**
Land Purchase Costs	**$250,000**	**$400,000**	**$700,000**
Total Construction Costs	**$8,900,000**	**$22,250,000**	**$56,250,000**
Total Construction Period	16 months	16 months	16 months
Estimated Construction Commencement Date	Jan-26	Jan-26	Jan-26
Estimated Construction Completion Date	Apr-27	Apr-27	Apr-27
Other Costs			
Professional Fees	5% of Costs		
Development Management	2.5% of Costs		
Marketing & Legal on Sale	0.5% & 0.5% of GRV		
Interest	6.5% p.a. (100% debt funded)		

Escalations	
Costs	4.5% to Jan-25 & 10% to Jan-26 included
Revenue	Nil
Hurdle Rate	
IRR	6.50%
Development Margin	10.00%

FEASIBILITY CALCULATION | HOLIDAY PARK CABIN

Summary

This option involves a developer acquiring a potential development site and developing a holiday park which will be leased as worker accommodation. At the end of the operational period, the facility will be sold on market at a depreciated rate.

Table 11.8 outlines the estimated Developer's Profit/Loss, Development Margin, and Cost Recovery for each scenario.

The feasibility analysis indicate development loss range of -$7.1M to -$40.9M and development margin range from -26.09% to -30.13%. The achievable Cost Recovery for all scenarios is range from 53.83% to 57.08%.

We also note that the estimated total development timeline are as follows:

20 cabins – 16 months

50 cabins – 16 months

150 cabins – 17 months

Development Outcomes — **Table 11.8**

Revenues			
Gross Sales Revenue	6,500,000	16,100,000	40,500,000
Less Selling Costs	(178,750)	(442,750)	(1,113,750)
NET SALES REVENUE	6,321,250	15,657,250	39,386,250
NET RENTAL INCOME	1,994,983	4,987,458	14,962,375
TOTAL REVENUE (before GST paid)	8,316,233	20,644,708	54,348,625
TOTAL REVENUE (after GST paid)	8,316,233	20,644,708	54,348,625
Costs			
Land Purchase Cost	250,000	400,000	700,000
Land Acquisition Costs	7,148	13,208	26,708
Construction (inc. Construct. Contingency)	9,790,000	24,475,000	61,875,000
Professional Fees	749,547	1,873,867	4,737,305
Statutory Fees	111,250	278,125	703,125
Interest Expense	5,465,567	13,421,208	33,278,730
TOTAL COSTS (before GST reclaimed)	16,423,511	40,511,407	101,370,867
Less GST reclaimed	(974,391)	(2,435,602)	(6,156,914)
TOTAL COSTS (after GST reclaimed)	15,449,121	38,075,806	95,213,953
Performance Indicators	1	2	3
[1] Gross Development Profit	(7,132,887)	(17,431,098)	(40,865,328)
[3] Development Margin (Profit/Risk Margin)	(30.13%)	(29.73%)	(26.09%)
Cost Recovery	53.83%	54.22%	57.08%

* Note : Development Margin inc Selling & operating costs

Summary

For the motel scenario, we have assumed that an accommodation provider takes a head lease over an older motel with higher vacancy at a discounted rate, conducts necessary refurbishments, and sub-leases it to workers over the operational period. At the end of the lease, a make-good allowance is applied before exiting the lease.

Table 11.9 outlines our key valuation assumptions and a summary of the revenues and costs.

Key Assumptions:

- Assume renting a 20 rooms motel at $400,000 per annum.
- Lease the rooms to the worker at $180 per room per night, which includes meal costs.
- A higher vacancy rate is expected during Year 1 and Year 7 due to the commencement and conclusion of local construction projects, resulting in reduced human movement inflow.
- At the end of the operational period, a make-good allowance of $1,000 per room is applied before existing the lease.
- Assuming no debt in the development costs.

Motel Feasibility Considerations — Table 11.9

Gross Revenue	
Scenario	**20 motel rooms**
Rental Assessment	
Net Rental Income	$985,900
Estimated Vacancy Rate per annum	Y1 & Y7: 37% Y2, Y3, Y4, Y5, Y6: 19%

Development Costs	
Refurbishment costs	$3,600,000
Make-good allowances ($1,000 per room)	$20,000
Total Costs	**$3,620,000**
Rental Costs per annum	$400,000
Refurbishment Period	13 months
Estimated Refurbishment Commencement Date	Apr-26
Estimated Refurbishment Completion Date	Apr-27
Other Costs	
Professional Fees	5% of Costs
Development Management	2.5% of Costs
GST	10% added to costs and reclaimed from GRV
Marketing & Legal on Sale	0.5% & 0.5% of GRV
Interest	Nil

Escalations	
Costs	10% to Jan 2026 included
Revenue	Nil
Hurdle Rate	
IRR	6.50%
Development Margin	10.00%

FEASIBILITY CALCULATION | UPGRADE AN EXISTING MOTEL

Summary

This financial analysis examined the scenario of rents a motel at a discounted rate, conducts necessary refurbishments, and sub-leases it to workers over the operational period.

Table 11.10 outlines the estimated Developer's Profit/Loss, Development Margin, and Cost Recovery.

The feasibility analysis indicates a project loss of $5.5M and a project margin of -40.07%. The Cost Recovery achieved 15.22%.

We also note that the estimated total development timeline for this accommodation option is 13 months.

Development Outcomes	Table 11.10
Revenues	
NET RENTAL INCOME	985,900
TOTAL REVENUE (after GST paid)	985,900
Costs	
Construction (inc. Construct. Contingency)	3,982,000
Professional Fees	173,800
Land Holding Costs	2,970,000
TOTAL COSTS (before GST reclaimed)	7,125,800
Less GST reclaimed	(647,800)
TOTAL COSTS (after GST reclaimed)	6,478,000
Performance Indicators	1
[1] Gross Development Profit	(5,492,100)
[3] Development Margin (Profit/Risk Margin)	(40.07%)
Cost Recovery	15.22%

* Note : Development Margin inc Selling & operating costs

HIGH LEVEL FEASIBILITIES | AFFORDABLE HOUSING DWELLING

Summary

We have assessed a hypothetical residential development which comprises 120 x 2 bedroom villas. Upon the construction completion, the villas will be leased to the workers. At the end of the operational period, the dwellings will be dedicated as Affordable Housing dwellings in perpetuity.

Each dwelling will feature 75 sq. m internal area along with garage and external area.

Table 11.11 outlines our key valuation assumptions and a summary of the revenues and costs.

Key Assumptions:

- Assumes acquisition of a potential residential development site at $50,000 per site.
- Upon the construction completion, the facility will be leased as worker accommodation at $220 per night per cabin, excluding meal given centralise kitchen is unlikely to be provided.
- A higher vacancy rate is expected during Year 1 and Year 7 due to the commencement and conclusion of local construction projects, resulting in reduced human movement inflow.
- At the end of the operational period, the dwellings will be dedicated as Affordable Housing dwellings in perpetuity.
- For the purposes of this high level assessment, we have adopted a market value discount of 25% to derive a notional value for a residential villa with Affordable Housing restrictions in perpetuity.

Affordable Housing Dwelling Feasibility Considerations **Table 11.11**

Gross Revenue	
Scenario	**120 x 2 bedroom villas**
Market Rate per villa	$500,000
Affordable Housing value discount	25%
Value per villa	$375,000
Gross Realisation Value	**$45,000,000**
Rental Assessment	
Net Rental Income	$22,094,900
Estimated Vacancy Rate per annum	Y1 & Y7: 37% Y2, Y3, Y4, Y5, Y6: 19%

Development Costs	
Land Purchase Costs	**$6,000,000**
Construction Costs incl Contingency	**$67,800,000**
Total Construction Period	18 months
Estimated Construction Commencement Date	Nov-25
Estimated Construction Completion Date	Apr-27
Other Costs*	
Professional Fees	5% of Costs
Development Management	2.5% of Costs
Marketing & Legal on Sale	0.5% & 0.5% of GRV
Interest	6.5% p.a. (100% debt funded)

Escalations	
Costs	4.5% to Jan-25 & 10% to Jan-26 included
Revenue	Nil
Hurdle Rate	
IRR	6.50%
Development Margin	10.00%

FEASIBILITY CALCULATION | AFFORDABLE HOUSING DWELLING

Summary

This option involves a developer acquiring a potential development site and develop 120 residential villas which will be leased as worker accommodation and dedicated as Affordable Housing in perpetuity.

Table 11.12 outlines the estimated Developer's Profit/Loss, Development Margin, and Cost Recovery for each scenario.

The feasibility analysis indicates a development loss of -$58.3M and a development margin of -35.67%. The Cost Recovery achieved 53.03%.

We also note that the estimated total development timeline for this accommodation option is 18 months.

Development Outcomes	Table 11.12
Revenues	
Gross Sales Revenue	45,000,000
Less Selling Costs	(1,237,500)
NET SALES REVENUE	43,762,500
NET RENTAL INCOME	22,094,900
TOTAL REVENUE (before GST paid)	65,857,400
TOTAL REVENUE (after GST paid)	65,857,400
Costs	
Land Purchase Cost	6,000,000
Land Acquisition Costs	356,658
Construction (inc. Construct. Contingency)	74,580,000
Professional Fees	5,710,031
Statutory Fees	847,500
Interest Expense	43,816,339
TOTAL COSTS (before GST reclaimed)	131,610,528
Less GST reclaimed	(7,411,594)
TOTAL COSTS (after GST reclaimed)	124,198,934
Performance Indicators	1
[1] Gross Development Profit	(58,341,534)
[3] Development Margin (Profit/Risk Margin)	(35.67%)
Cost Recovery	53.03%

* Note : Development Margin inc Selling & operating costs

FINANCIAL ANALYSIS OUTCOMES

Key Findings

The development outcomes for each scenario are summarised in Table 11.13.

Overall, the tested development options achieved the following:

- Loss range of $5.5M to $91.6M,
- Development margin range of -18.81% to -43.94%, and
- Cost recovery range of 15.22% to 66.35%.

The financial analysis has taken into the consideration of potential revenue and costs applicable to each specific development assumptions. We do note the following:

Construction Costs: we have adopted the cost estimates prepared by RLB. However, costs for a development can vary significantly in addition to the current climate of construction costs and has the potential to increase the overall costs of the project, and therefore negatively impact the overall development outcomes

Gross Sales Value and Rental Income: adopted gross sales value (depreciated value) and rental income are based on our knowledge of building lifespans and estimations. Whilst we are unable to predict market movement, the values have the propensity to fluctuate based on changing economic conditions and may also impact the overall development outcomes.

Development Outcomes Summary — Table 11.13

	Total Revenue	Total Cost	Development Profit/Loss	Development Margin (inc selling & leasing costs)	Cost Recovery
Temp Camp					
- 150 units	$14,815,550	-$73,377,113	-$58,561,563	**-43.94%**	**20.19%**
- 300 units	$35,943,250	-$127,530,804	-$91,587,554	**-38.66%**	**28.18%**
- 600 units	$108,614,500	-$193,869,265	-$85,254,765	**-23.25%**	**56.02%**
Student Accommodation					
- 150 units	$7,394,250	-$35,041,005	-$27,646,755	**-30.98%**	**21.10%**
- 300 units	$19,715,900	-$64,196,718	-$44,480,818	**-27.61%**	**30.71%**
- 600 units	$63,052,600	-$112,530,437	-$49,477,837	**-18.81%**	**56.03%**
Manufactured Housing Estate					
- 120 x 3 bedroom dwellings	$93,175,200	-$140,423,090	-$47,247,890	**-23.03%**	**66.35%**
Holiday Park Cabins					
- 20 cabins	$8,316,233	-$15,449,121	-$7,132,887	**-30.13%**	**53.83%**
- 50 cabins	$20,644,708	-$38,075,806	-$17,431,098	**-29.73%**	**54.22%**
- 150 cabins	$54,348,625	-$95,213,953	-$40,865,328	**-26.09%**	**57.08%**
Motel - 20 rooms	$985,900	-$6,478,000	-$5,492,100	**-40.07%**	**15.22%**
Affordable Housing - 120 villas	$65,857,400	-$124,198,934	-$58,341,534	**-35.67%**	**53.03%**

* Note : Development Margin inc Selling & operating costs

FINANCIAL ANALYSIS RANKING CONSIDERATIONS

Summary

To conclude the above financial assessments, we have adopted a ranking matrix to assist in the consideration of the proposed accommodation types.

We have considered the following ranking measures and selected the most relevant ones to develop a ranking matrix:

- Revenue
- Development costs
- Development margin
- Cost recovery
- Occupancy capacity
- Project timeframe

Considering the implications of the above measures, we have utilised Cost Recovery and Occupancy Capacity as the key metrics in the ranking matrix:

- **Cost Recovery** provides an indication of the financial results, after considering revenue and development costs.
- All scenarios show a loss. Thus, the development margin is less relevant in assessing the financial results.
- **Occupancy Capacity** provides an indication of the number of workers a facility capable to accommodate, which is directly relevant to the purpose of this report.
- Most of the project scenarios are able to deliver on the New England project commencement. However, we have considered to summarise the operation commencement periods to highlight the scenario that couldn't operate on time.

Ranking Measures

Table 11.14

Ranking Measures	Comments
Revenue:	▪ Represents the sale value / net rental income of the facility. ▪ The revenue achieved across all scenarios range from $986K to $108.6M.
Development Costs:	▪ Represents the total costs involved in developing the facility. ▪ The development costs incurred across all scenarios range from $6.5M to $194M.
Development Margin:	▪ Represents the profit / loss generated from the project after subtracting all development costs from the total revenue. ▪ The development margins in the all scenarios include selling and leasing costs. ▪ The development margin across all scenarios range from -18.81% to -43.94%.
Cost Recovery:	▪ Represents regaining the investment made to the project through its generated income. ▪ The cost recovery achieved across all scenarios range from 15.22% to 66.35%.
Occupancy capacity:	▪ Represents the number of worker that the facility is capable to accommodate. ▪ The occupancy capacity of all scenarios range from 40 to 600 workers.
Project timeframe:	▪ Represents time required to develop a facility. ▪ The construction timeframe across all scenarios range from 12 to 37 months.

FINANCIAL ANALYSIS RANKING MATRIX

Summary

We have assessed the financial analysis for the above 12 development scenarios based on No. of Occupants and Cost Recovery. We have also taken into the consideration of construction timeline and examine if the accommodation can be delivered on time (in line of New England project commencement).

Overall, **MHE achieved the highest overall ranking given it is capable to accommodate approximately 360 occupants and a cost recovery of 66.35%**. It ranked the top cost recovery attributed to its strong resale value at the end of operational period driven by the strong demand for affordable housing.

Following the MHE scenario is 150 x Holiday Park Cabins. This scenario has 4th highest occupancy capacity coupled with cost recovery of 57.08%.

Additionally, the 600-unit Temporary Worker Camp provide largest accommodation capacity and achieved a cost recovery of 56.02%.

Despite its lower rank in occupation capacity and cost recovery, the motel refurbishment option is the soonest scenario in providing the accommodation (only required 4 months for refurbishment).

Lastly, we note that Student Accommodation options generally required longer construction period (24 to 37 months). The 300-unit and 600-unit Student accommodation can only start operating on Aug-27 and Feb-28, behind the New England project commencement.

Scenario Ranking Matrix **Table 11.15**

Scenario	Cost Recovery	Operation Commencement	Max. Occupants	Rank (Cost Recovery)	Rank (No. of Occupants)
Temp Worker Camp					
- 150 units	**20.19%**	May-27	150	11	8
- 300 units	**28.18%**	May-27	300	9	4
- 600 units	**56.02%**	May-27	600	4	1
Student Accommodation					
- 150 units	**21.10%**	May-27	150	10	8
- 300 units	**30.71%**	Sep-27	300	8	4
- 600 units	**56.03%**	Mar-28	360	3	2
Manufactured Housing Estate					
- 120 x 3 bedroom dwellings	**66.35%**	May-27	360	1	2
Holiday Park Cabins					
- 20 cabins	**53.83%**	May-27	40	6	11
- 50 cabins	**54.22%**	May-27	100	5	10
- 150 cabins	**57.08%**	May-27	300	2	4
Motel					
- 20 refurbished rooms	**15.22%**	May-27	20	12	12
Affordable Housing Dwellings					
- 120 x 2 bedroom villas	**53.03**	May-27	240	7	7

13

IMPLICATIONS & ACCOMMODATION PLANNING DIRECTION

ACCOMMODATION PLANNING | KEY STAGES

Summary

This page provides a broad overview of the main stages associated with accommodation planning.

Temporary accommodation for construction workers is a critical part of enabling the construction of transmission and energy projects. There is complexity given the scale required, the area to be covered and the timeline.

Camps are often dedicated to a single employer or contractor where workers are employed on the same project. Camps servicing multiple projects would be more efficient than camps that are project specific. A small number of camp operators servicing the NE REZ would be more efficient than multiple or many operators. They would be able to manage the fluctuations in demand by scaling up or down operations and moving camps to other locations.

As shown in the analysis, there is a significant opportunity to develop permanent housing for workers moving to the Study Area. Therefore, options should be explored by Councils with developers, builders, holiday parks, short term accommodation providers, community housing providers etc.

Key Accommodation Planning Stages — Table 13.1

Land Identification	Expression of Interest	Request for Tender	Council Investment Attraction
Sites will be required for temporary worker accommodation and the priority step is to identify options. We note EnergyCo has identified a mix of Government and private owned sites for ancillary purposes. Councils identified some vacant sites during consultation which should also be captured in a land audit. Sites already identified that are located in the Accommodation Catchments should be assessed for suitability, and progress land access agreements. Site detail certainty is needed for procurement steps.	An Expression of Interest (EOI) is an effective process for scanning the temporary accommodation and other relevant sectors to understand industry capability and capacity. There are many camp operators though likely only a few with the capability to deliver a solution for such a complex project. We suggest an EOI would invite builders and operators of camps (including other related service providers such as catering, onsite energy and services providers, etc.) to submit their interest for the stated opportunity. The EOI registration would require examples of previous project experience, capability statement, health and safety statistics and insurance.	A Request for Tender (RFT) would seek responses from the market to provide the required goods and services outlined in detailed specifications. The RFT would identify the sites for camps with specifications, the amount needed and the timeframes. The RFT could also include existing short stay accommodation, new short stay accommodation and accommodation services. The RFT could select invite those providers that demonstrated capability during the EOI process subject to probity rules.	Councils will need to be proactive in securing their own opportunities, particularly for ongoing housing demand. In Accommodation Catchments where there is no or little investor/developer appetite, and showing projected demand for ongoing housing, Councils could take the lead on development, partner with developers or incentivise developers. Walcha and Uralla fall into this category. Tamworth Regional Council may see a lot of demand for ongoing housing and be ready to facilitate through timely land use planning and infrastructure delivery. Councils should explore opportunities with community housing providers for affordable housing projects.

Summary

This table provides an indication of what the accommodation mix could look like for each Accommodation Catchment for all projects.

Different sized temporary worker camps and permanent dwellings are considered. Depending on the number of peaks the camps may need to remain in place, though operations could be scaled back between peaks.

Not considered are other accommodation types such as holiday park cabins, hotel/motels and student accommodation. These opportunities could be identified via an EOI or an initial market sounding exercise. These may all provide some legacy benefits to communities and visitors.

The greatest demand for ongoing permanent housing is in Tamworth and Muswellbrook. The peak demand for housing in Tamworth is from Dec 2032, which allows time for development of housing that could be used temporarily for construction workers. The peak year for permanent housing in Muswellbrook is from Feb 2048 and being so far out, it will not be in place for temporary needs. Muswellbrook could also fulfil demand for accommodation in Denman.

The number of additional permanent dwellings needed in Armidale, Uralla and Walcha Catchments could have a positive impact. In the case of Uralla and Walcha providing an opportunity to revitalize the towns.

Permanent housing could be developed as:

- Social and affordable housing 2-bedroom dwellings
- Manufactured Housing Estate 2-bedroom dwellings
- Single lot subdivision dwellings

Accommodation Catchments Indicative Mix — Table 13.2

Accommodation Catchments	Indicative Accommodation Mix	Start and End Dates	Peak Year Required	Considerations
Armidale	2 x 445 unit camp 136 dwellings	Jan 2026 to May 2034	Aug 2027 Apr 2030 Jan 2033	Two larger workforce peaks Camps to remain in place. Legacy can involve collaboration with University of New England or provide residential land lease communities
Denman	1 x 455 unit camp 25 dwellings	Jul 2026 to Dec 2032	Dec 2026 Oct 2028 Mar 2031	Three workforce peaks Camps to remain in place
Glen Innes	1 x 390 unit camp 5 dwellings	Oct 2025 to Nov 2028	May 2026 Mar 2027	From 2028 units could be moved to Uralla
Muswellbrook	2 x 500 unit camp 1 x 320 unit camp 1013 dwellings	Now to Dec 2047	Apr 2025 Nov 2029	Two workforce peaks. First likely to be catered for, the second peak will require both camps by 2029
Tamworth	1 x 500 unit camp 1 x 250 unit camp 1,284 dwellings	Now to Sep 2032	Jun 2026 Nov 2029	Permanent housing can provide for construction workers if delivered in time
Uralla	5 x 500 unit camp 1 x 270 unit camp 183 dwellings	Jan 2025 to Jun 2033	Aug 2025 Jul 2030 Jun 2032	One intense workforce peak Potential to utilise Glen Innes camps subject to completion dates Permanent housing can provide for construction workers if delivered prior to peak year
Walcha	2 x 300 unit camp 1 x 190 unit camp 117 dwellings	Now to Jun 2033	Sep 2027 Jun 2032	Two larger workforce peaks Permanent housing can provide for construction workers if delivered prior to peak year
Wallabadah	1 x 270 unit camp 71 dwellings	Jan 2026 to Dec 2032	Jun 2026 May 2029 Oct 2031	Three workforce peaks Camps to remain in place

Summary

This table provides an indication of what the accommodation mix could look like for each Accommodation Catchment, considering the NE REZ renewable energy project needs. Existing or privately developed camps can be subtracted from the requirements.

Different-sized temporary worker camps and permanent dwellings are considered. Depending on the number of peaks, the camps may need to remain in place, though operations could be scaled back between peaks.

Similar to all projects, other accommodation types such as holiday park cabins, hotels/motels and student accommodation are not included in the analysis.

The greatest demand for ongoing permanent housing is in Uralla and Armidale. The peak demand for ongoing housing in Uralla is from Jan 2034 onwards, which allows time for the development of housing that could be used temporarily for construction workers. Demand in Uralla could be met by Armidale, a larger centre.

The peak year for ongoing housing in Armidale is from Sep 2034 onwards, which also allows time for the development of housing that could be used temporarily for construction workers.

The number of additional permanent dwellings needed could have a positive impact. In the case of Uralla and Walcha, providing an opportunity to revitalise the towns.

Note: Type New England Renewables used for analysis (i.e. renewable projects in the REZ declared area).

Accommodation Catchments Indicative Mix — Table 13.3

Accommodation Catchments	Indicative Accommodation Mix	Start and End Dates	Peak Year Required	Considerations
Armidale	2 x 410 unit camp 114 dwellings	Jul 2028 to May 2034	Apr 2030 Jan 2033	Two workforce peaks Camps to remain in place. Legacy can involve collaboration with University of New England or provide residential land lease communities Consider to assist with Uralla or Walcha peaks during 2030-2032
Denman	No camps required			
Glen Innes	No camps required			
Muswellbrook	No camps required			
Tamworth	1 x 320 unit camp to Dec-28 1 x 130 for peak 18 dwellings	May 2027 to Apr 2032	Oct 2029	First camp fully required by Jan 2029, build up to second camp for peak, then back down to 320 unit camp by Aug 2030. Potential to reuse Tamworth units at Uralla, Armidale, or Walcha
Uralla	3 x 500 unit camps 1 x 360 unit camp required for peak, one 500 camp to stay for second peak 131 dwellings	Aug 2029 to Jun 2033	Jul 2030 Jun 2032	One intense workforce peak Jul-30 Consider Walcha to take additional workers in Jul 2030 to reduce units. Permanent housing can provide for some construction workers if delivered prior to the peak year
Walcha	1 x 480 unit camps 61 dwellings	Aug 2029 to Jun 2033	Jan 2032	One major workforce peak Permanent housing can provide for some construction workers if delivered prior to peak year
Wallabadah	No camps required			

Summary

This table provides an indication of what the accommodation mix could look like for each Accommodation Catchment, considering only the EnergyCo Transmission and New England renewable Energy project needs. Privately developed camps can be subtracted from the requirements.

Different-sized temporary worker camps and permanent dwellings are considered. Depending on the number of peaks, the camps may need to remain in place, though operations could be scaled back between peaks and moved to locations of greater need.

Similar to all projects, other accommodation types such as holiday park cabins, hotel/motels and student accommodation are not included in the analysis.

The greatest demand for ongoing permanent housing is in Uralla and Armidale. The peak demand for housing in Uralla is from Jan 2034, which allows time for the development of housing that could be used temporarily for construction workers.

The peak year for ongoing housing in Armidale is from Sep 2034, allowing time for the development of housing or legacy accommodation that could be used temporarily for construction workers.

The number of additional permanent dwellings needed could have a positive impact. In the case of Uralla and Walcha providing an opportunity to revitalise the towns.

Note: Type EnergyCo (Transmission) and New England Renewables (i.e. renewable projects in the REZ declared area) are used for the analysis.

Accommodation Catchments Indicative Mix — Table 13.4

Accommodation Catchments	Indicative Accommodation Mix	Start and End Dates	Peak Year Required	Considerations
Armidale	1 x 500 unit camp and 1 x 380 camp at both peaks 114 dwellings	Jun 2027 to May 2034	Apr 2030 Jan 2033	Two major workforce peaks Camps to remain in place. Unless legacy accommodation can cater for some of the need, also consider assisting with Uralla or Walcha peaks during 2030-2032. Reduce units from Feb 2033
Denman	1 x 290 unit camp	Jun 2027 to Dec 2032	Oct 2028 Mar 2031	Two workforce peaks. Camps to build up to 2028 peak. Units can be shared with other locations, then build up again to 2031 peak, before reducing permanently
Glen Innes	No camps required			
Muswellbrook	1 x 140 unit camp	Jan 2026 to Dec 2032	Oct 2028 Mar 2031	Two workforce peaks. Similar to Denman, build up to the 2028 peak can reduce, then rebuild to the 2031 peak, before reducing units to the end
Tamworth	1 x 500 unit camp 1 x 140 unit camp 18 dwellings	May 2027 to Sep 2032	Nov 2029	Multiple small peaks, greatest requirement May 2029 to Feb 2030. The second 140 unit camp is required over this period, and then downsize to end
Uralla	4 x 500 unit camp 1 x 190 unit camp 131 dwellings	Jun 2027 to Jun 2033	Jul 2030 Jun 2032	Two main peaks, greatest requirement Oct 2029 – Jun 2031 (1,100-2,400 units, consider using additional space in Walcha and Armidale over this period. Build up units to 3 x 500 unit camps in Dec 2029, next needed in Mar 2030, then final units for the peak, depending on the availability from other nearby camps
Walcha	1 x 250 unit camp 1 x 250 unit camp 61 dwellings	Aug 2029 to Jun 2033	Dec 2030 Jun 2032	Two workforce peaks Build up to first camp by Dec 2030, Build up to second camp by Dec 2031
Wallabadah	1 x 270 unit camp	Jun 2027 to Dec 2032	May 2029 Feb 2030 Oct 2031 Jul 2032	Multiple workforce peaks Peak camp size to remain in place from May 2029 to Dec 2031, then reduce in size

ACCOMMODATION MIX

Summary

This table provides an indication of what the accommodation mix could look like for each Accommodation Catchment, considering only the EnergyCo Transmission and Connecting renewable Energy project needs. Existing or privately developed camps can be subtracted from the requirements.

Different sized temporary worker camps and permanent dwellings are considered. Depending on the number of peaks the camps may need to remain in place, though operations could be scaled back between peaks and moved to locations of greater need.

Similar to all projects other accommodation types such as holiday park cabins, hotel/motels and student accommodation are not included in the analysis.

The greatest demand for ongoing permanent housing is in Uralla and Armidale. The peak demand for housing in Uralla is from Jan 2034, which allows time for the development of housing that could be used temporarily for construction workers.

The peak years for housing in Armidale is from Sep 2034, allowing time for the development of housing or legacy accommodation that could be used temporarily for construction workers.

The number of additional permanent dwellings needed could have a positive impact. In the case of Uralla and Walcha providing an opportunity to revitalise the towns.

Note: Type EnergyCo (Transmission) and Project Source NE REZ Generator Design Partners used for the analysis.

Accommodation Catchments Indicative Mix **Table 13.5**

Accommodation Catchments	Indicative Accommodation Mix	Start and End Dates	Peak Year Required	Considerations
Armidale	1 x 500 unit camp and 1 x 400 camp at both peaks 114 dwellings	Jun 2027 to May 2034	Apr 2030 Jan 2033	Two major workforce peaks Camps to remain in place. Unless legacy accommodation can cater for some of the need, also consider assisting with Uralla or Walcha peaks during 2030-2032. Reduce units from Feb 2033
Denman	1 x 300 unit camp	Jun 2027 to Dec 2032	Oct 2028 Mar 2031	Two workforce peaks. Camps to build up to 2028 peak. Units can be shared with other locations, then build up again to 2031 peak, before reducing permanently
Glen Innes	No camps required			
Muswellbrook	1 x 140 unit camp	Jan 2026 to Dec 2032	Oct 2028 Mar 2031	Two workforce peaks. Similar to Denman, build up to the 2028 peak can reduce, then rebuild to the 2031 peak, before reducing units to the end
Tamworth	1 x 500 unit camp 1 x 150 unit camp 18 dwellings	May 2027 to Sep 2032	Nov 2029	Multiple small peaks, greatest requirement May 2029 to Feb 2030. The second 150 unit camp is required over this period, and then downsize to end
Uralla	4 x 500 unit camp 1 x 200 unit camp 131 dwellings	Jun 2027 to Jun 2033	Jul 2030 Jun 2032	Two main peaks, greatest requirement Oct 2029 – Jun 2031 (1,100-2,400 units, consider using additional space in Walcha and Armidale over this period. Build up units to 3 x 500 unit camps in Dec 2029, next needed in Mar 2030, then final units for the peak, depending on the availability from other nearby camps
Walcha	1 x 270 unit camp 1 x 230 unit camp 61 dwellings	Aug 2029 to Jun 2033	Dec 2030 Jun 2032	Two workforce peaks Build up to first camp by Dec 2030, Build up to second camp by Dec 2031
Wallabadah	1 x 270 unit camp	Jun 2027 to Dec 2032	May 2029 Feb 2030 Oct 2031 Jul 2032	Multiple workforce peaks Peak camp size to remain in place from May 2029 to Dec 2031, then reduce in size

Summary

This table provides an indication of what the accommodation mix could look like for each Accommodation Catchment considering only the EnergyCo project needs. Existing or privately developed camps can be subtracted from the requirements.

Different sized temporary worker camps and permanent dwellings are considered. Depending on the number of peaks the camps may need to remain in place, though operations could be scaled back between peaks.

Similar to all projects other accommodation types such as holiday park cabins, hotel/motels and student accommodation are not included in the analysis.

The peak requirement for temporary worker accommodation from EnergyCo is in September and October 2030 when there will be approximately 1,046 temporary workers in the Study Area. With these projects there are often spikes in activity as one group moves through the corridor, followed by another to complete the next stage of work. This means there may be an opportunity to shift units within the camps to follow the work along the Corridor.

The EnergyCo worker requirement in Walcha is a maximum of 18 workers over two short periods of time. Removing the Walcha catchment would, therefore, be recommended for this analysis and the workers would instead be housed in Uralla (32 minute drive via Thunderbolts Way) or Armidale (48-minute drive, via Thunderbolts Way and New England Highway). This will be dependent on work locations along the Transmission Corridor.

No ongoing housing is required.

Note: Type EnergyCo (Transmission) used for the analysis.

Accommodation Catchments Indicative Mix **Table 13.6**

Accommodation Catchments	Indicative Accommodation Mix	Start and End Dates	Peak Year Required	Considerations
Armidale	1 x 120 unit camp	Jun 2027 to Dec 2032	Sep 2029 Sep 2030 Feb 2031 Jun 2031	Four small workforce peaks. Camps to build up to 2030 peak. Legacy can involve collaboration with University of New England or provide residential land lease communities
Denman	1 x 300 unit camp	Jun 2027 to Dec 2032	Oct 2028 Mar 2031	Two workforce peaks. Camps to build up to 2028 peak. Units can be shared with other locations, then build up again to 2031 peak, before reducing permanently
Glen Innes	No camps required			
Muswellbrook	1 x 140 unit camp	Jan 2026 to Dec 2032	Oct 2028 Mar 2031	Two workforce peaks. Similar to Denman, build up to 2028 peak can reduce then rebuild to 2031 peak, before reducing units permanently
Tamworth	1 x 210 person camp	Nov 2028 to Sep 2032	May 2029 Nov 2029 Aug 2030 May 2032	Multiple small peaks. First two are the largest providing opportunity to downsize and reuse units elsewhere
Uralla	1 x 400 unit camp	Jun 2027 to Dec 2032	Apr 2028 Sep 2029 Sep 2030 Feb 2031 Jun 2031	Multiple workforce spikes. Build up units to 2029, keep over 2030, then reduce units over 2031 (consider taking Walcha requirements)
Walcha	1 x 17 unit camp or Uralla will have capacity to take 17 workers over required period	Nov 2031 to Aug 2032	Nov 2031 May 2032	Two small workforce peaks As only 6 months of accommodation required consider Armidale or Uralla to take Walcha workers or move small number of units from these locations to Walcha
Wallabadah	1 x 270 unit camp	Jun 2027 to Dec 2032	May 2029 Feb 2030 Oct 2031 Jul 2032	Multiple workforce peaks Peak camp size to remain in place from May 2029 to Dec 2031, then reduce in size

Summary

Table 13.3 identifies potential partners for the delivery and management of temporary worker accommodation, developers with current land projects in the pipeline, developers of land lease communities and community housing providers.

The organisations in the temporary accommodation sector operate nationally as do most of the land lease developers listed. The community housing providers are local to the broader Hunter region.

Examples of Potential Delivery and Management Partners **Table 13.7**

Accommodation manufacturers	Camp operators	Land lease developers	Local land and property owners	Community housing providers	Other service providers
• Fleetwood Australia • Black Diamond • AUSCO Group • ATCO • Australian Portable Camps	• Mining Camps Australia • Fleetwood Australia • Black Diamond • AUSCO Group • Quick Camps • ATCO • Blackdown Accom-modation Services • BB Site Services • Ventia • Village National Group • M Group	• Gemlife • Gateway Lifestyle • Hometown Australia • Stockland • Ingenia • Serenitas • Majestic	• Quambaloo Develop-ments • Universal Property Group • MAAS Group • TAFE • Councils • University of New England	• Home in Place • Homes North • Pathfinders	• Serco • Compass Group • Sodexo • Spotless • QVC

APPENDICES

A1

URBAN PLANNING REVIEW

Planning Legislation

Relevant local government planning and zoning controls have been reviewed to identify constraints and opportunities for worker accommodation.The key documents reviewed include the following:

- *Explanation of Intended Effect – Temporary workers' accommodation*
- *Armidale Regional Local Environmental Plan 2012*
- *Uralla Local Environmental Plan 2012*
- *Walcha Local Environmental Plan 2012*
- *Tamworth Regional Local Environmental Plan 2010*
- *Inverell Local Environmental Plan 2012*
- *Glen Innes Severn Local Environmental Plan 2012*
- *Liverpool Plains Local Environmental Plan 2011*
- *Upper Hunter Local Environmental Plan 2013*
- *Muswellbrook Local Environmental Plan 2009*
- *State Environmental Planning Policy (Housing) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *The Standard Instrument – Local Environmental Plan.*

Accommodation Land Use Classification and Definitions

The planning framework needs to support the delivery of housing for temporary workers in response to unexpected changes in demand at a local level.

Temporary workers' accommodation provides housing on a temporary basis for workers who need it for the life of a project or on a seasonal basis. It may therefore provide for workers who are employed on a permanent or temporary basis.

An important step in the Study is to understand what types of accommodation and land uses are permissible in the zoning of key locations in each of the New England LGAs, including, Armidale, Uralla, Walcha, Tamworth, Inverell, Glen Innes, Liverpool Plains, Upper Hunter and Muswellbrook.

The NSW Standard Instrument – Principal Local Environmental Plan (LEP) currently does not include a definition of 'temporary workers' accommodation. This is problematic as it forces a reliance on more permanent housing typologies to secure planning approvals. This often results in a disconnect between supply / location (via zoning) and worker need / demand

In response to this, the NSW Government exhibited a reform package in August / September 2023 . The exhibition package set out changes to introduce a standard instrument definition for temporary workers' accommodation; provide guidance on local LEP provisions for rural workers' dwellings and temporary workers' accommodation; and provide guidance on locational and zoning considerations for rural workers' dwellings and temporary workers' accommodation.

The proposed changes intend to give councils more certainty and clarity around how to plan and deliver workers' accommodation. DPHI is currently reviewing the submissions from this exhibition however it should be anticipated that these reforms are not likely to translate into amendments to Council LEPs before the end of 2024.

As such in the immediate term there is a need to continue to rely upon existing definitions in the Standard Principal LEP that can be most appropriately aligned to providing temporary worker housing accommodation. These are discussed overleaf.

Table A1.1

Type	Definition
Backpackers' Accommodation	Backpackers' accommodation means a building or place that—(a) provides temporary or short-term accommodation on a commercial basis, and (b) has shared facilities, such as a communal bathroom, kitchen or laundry, and (c) provides accommodation on a bed or dormitory-style basis (rather than by room). Backpackers' accommodation is a type of tourist and visitor accommodation
Camping Ground	Camping ground means an area of land, with access to communal amenities, used for the short-term placement of campervans, tents, annexes or other similar portable and lightweight temporary shelters for accommodation and includes a primitive camping ground but does not include— (a) a caravan park, or (b) farm stay accommodation.
Caravan Park	Caravan Park means an area of land, with access to communal amenities, used for the installation or placement of caravans, or caravans and other moveable dwellings, but does not include farm stay accommodation.
Farm Stay Accommodation	Farm stay accommodation means a building or place— (a) on a commercial farm, and (b) ancillary to the farm, and (c) used to provide temporary accommodation to paying guests of the farm, including in buildings or moveable dwellings. Farm stay accommodation is a type of tourist and visitor accommodation
Hotel or Motel Accommodation	Hotel or motel accommodation means a building or place (whether or not licensed premises under the Liquor Act 2007) that provides temporary or short-term accommodation on a commercial basis and that (a) comprises rooms or self-contained suites, and (b) may provide meals to guests or the general public and facilities for the parking of guests' vehicles, but does not include backpackers' accommodation, a boarding house, bed and breakfast accommodation or farm stay accommodation. Hotel or motel accommodation is a type of tourist and visitor accommodation

Table A1.1…cont.

Type	Definition
Serviced Apartments	Serviced apartment means a building (or part of a building) providing self-contained accommodation to tourists or visitors on a commercial basis and that is regularly serviced or cleaned by the owner or manager of the building or part of the building or the owner's or manager's agents. Serviced apartments are a type of tourist and visitor accommodation
Tourist and Visitor Accommodation **(Note this is an umbrella term)**	Tourist and visitor accommodation means a building or place that provides temporary or short-term accommodation on a commercial basis, and includes any of the following backpackers' accommodation, (b) bed and breakfast accommodation, (c) farm stay accommodation, (d) hotel or motel accommodation, (e) serviced apartments, but does not include— (f) camping grounds, or (g) caravan parks, or (h) eco-tourist facilities.
Manufactured Home Estate	Manufactured home means a self-contained dwelling (that is, a dwelling that includes at least 1 kitchen, bathroom, bedroom and living area and that also includes toilet and laundry facilities), being a dwelling (a) that comprises 1 or more major sections that are each constructed, and assembled, away from the manufactured home estate and transported to the estate for installation on the estate, and (b) that is not capable of being registered under the Traffic Act 1909 and includes any associated structures that form part of the dwelling. Manufactured home estate means land on which manufactured homes are, or are to be, erected. **Development for the purposes of a manufactured home estate may be carried out on any land on which development for the purposes of a caravan park may be carried out**, except (a) land within one or more of the categories described in **Schedule 6 of the Housing SEPP such as flooding prone land or is land affected by hazardous industry or any form of pollution.**
Moveable dwelling	Moveable dwelling means—(a) any tent, or any caravan or other van or other portable device (whether on wheels or not), used for human habitation, or (b) a manufactured home, or (c) any conveyance, structure or thing of a class or description prescribed by the regulations (under the Local Government Act 1993) for the purposes of this definition

Key Parcels of Land

The previous tables identified land use definitions which can be considered as the most appropriate land use category for temporary workers accommodation, prior to the new definitions being inserted into local and state environmental plans later in 2024.

Caravan Parks are considered the most practical land use definition, given these parks are typically permissible in recreational and rural zones in proximity to towns and amenity (subject to flooding and bushfire constraints) which would also possibly enable ongoing use of the housing accommodation once the workers have completed their projects.

The tables on the following pages, provide a high-level overview of the types of zoning where caravan parks and camping grounds are permissible.

These zones can then be overlayed against the outcomes of multi criteria analysis site selection as per the suggested criteria in the table, where practical, noting that planning approval will still need into account merit considerations e.g. design and relationship to adjoining uses.

Table A1.2

Site Criteria	Comments
Locational Requirements:	The proposed sites should: • Aim to avoid flood and bush fire prone land. • Meet minimum lot sizes • Ensure the site has safe access that is always available. • Be in a suitable location that give workers safe and reasonable access to their place of employment, and goods and services.
Environmental Values:	• The development should not adversely impact the environmental values of the land.
Utilities:	• Any infrastructure provided for the development should if practical, continue to be used once the temporary workers' accommodation is no longer needed.
Appropriate Design:	• The location and design of the facility should provide amenity for the users of the facility and the surrounding area.
Land-Use Conflicts and Impact on Locality:	• Temporary workers' accommodation should not conflict with existing land uses, including facilities that are provided in a rural or semi-rural location • The potential increase of residential uses affecting existing agricultural, or resource land operations is an important consideration for all proposals.

Table A1.3

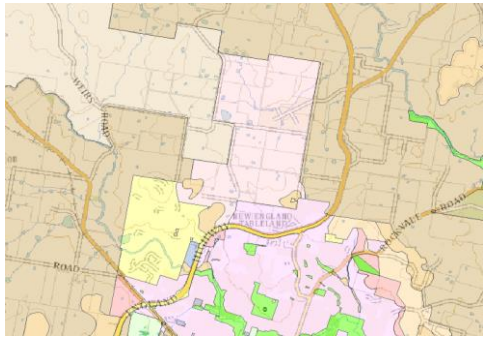
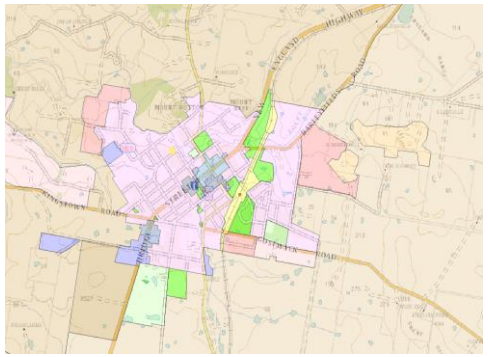
Environmental Plan	Location	Current Zones	Permitted uses	Max height	Max fsr	Heritage
Armidale Regional LEP 2012	North of University of New England (Armidale)		Camping Grounds (RU1, RU5, RE1, RE2 zones) Caravan Parks (RU1, RU5, RE1, RE2, zones)	N/A.	N/A.	Heritage Items within the university campus grounds including a number of historical houses, cottages and an archaeological site.
Uralla LEP 2012	Uralla Town Centre		Camping Grounds (RU5, R1, RE1, RE2 zones) Caravan Parks (RU5, R1, RE1, RE2 zones)	N/A.	N/A.	Heritage Items / Conservation area within the Town Centre (Commercial Precinct Significance and Rocky River Goldmining Precinct Significance)

Table A1.3…cont

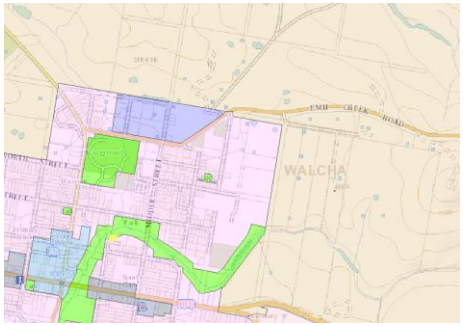
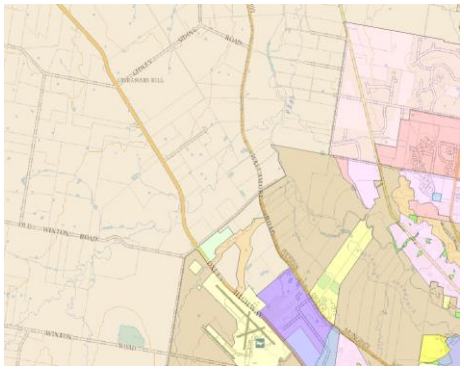
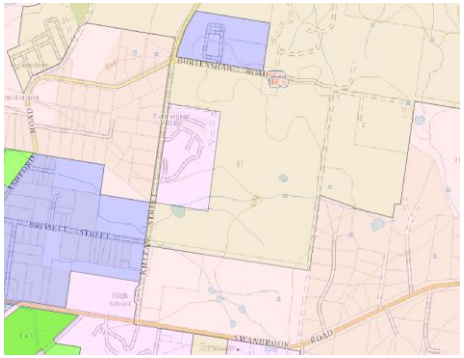
Environmental Plan	Location	Current Zones	Permitted uses	Max height	Max fsr	Heritage
Walcha LEP 2012	North and East of Walcha Town Centre		Camping Grounds (RU1, RU5, RE1 zones) Caravan Parks (RU5, RE1 zones)	8m but N/A in RE1, RU1 zone	N/A.	State Heritage Item known as 'Ohio Homestead' in RU1 land north of Town Centre. No Conservation Areas.
Tamworth LEP 2010	Wallamore		Camping Grounds (RU1, RU5, SP3, R1, RE1, RE2, zones) Caravan Parks (RU1, RU5,SP3, R1, RE1, RE2, zones)	N/A.	N/A.	No heritage items or conservation areas.
Inverell LEP 2012	North-west of Inverell Town Centre		Camping Grounds (RU1, RU5, R1, R5, RE2 zones) Caravan Parks (RU1, RU5, R1, R5, RE2, zones)	N/A.	N/A	Heritage Items within the Town Centre e.g. Inverell Hospital, War Memorial and historical houses.

Table A1.3…cont

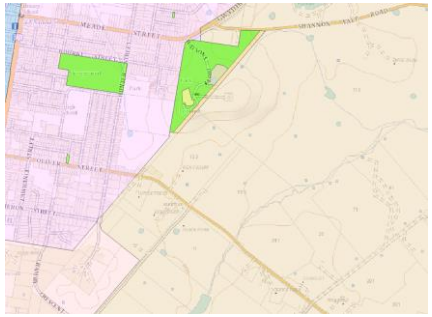
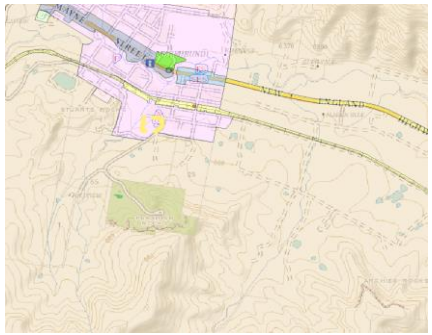
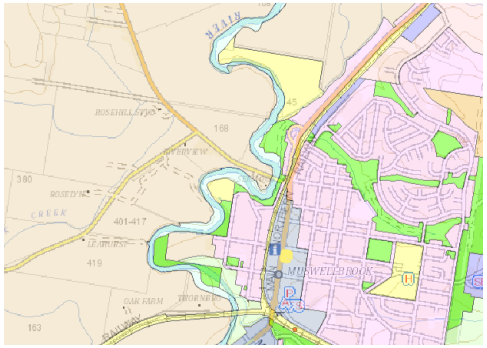
Environmental Plan	Location	Current Zones	Permitted uses	Max height	Max fsr	Heritage
Glen Innes Severn LEP 2012	South-east of Glen Innes Town Centre		Camping Grounds (RU1, RU3, RU4, R1, RE2 zones) Caravan Parks (RU1, RU3, RU4, R1, RE2 zones)	N/A.	N/A.	Heritage Items in the Town Centre e.g. historical houses.
Liverpool Plains LEP 2011	Wallabadah		Camping Grounds (RU5, R1, RE1, RE2, zones) Caravan Parks (RU5, R1, RE1, RE2 zones)	N/A.	N/A.	Heritage Items in the Town Centre e.g. Marshall MacMahon Hotel, Anglican Church etc.
Upper Hunter LEP 2012	South of Murrurundi Town Centre		Camping Grounds (RU1, RU5, R1, RE1, RE2 zones) Caravan Parks (RU1, RU5, R1 RE1, RE2 zones)	1:1, 1.5:1, 0.5:1 no FSR for RU1	8.5m, 13m, 10m, no HOB for RU1	Heritage Items/Conservation area within the Town Centre e.g. Murrurundi Conservation Area.

Table A1.3…cont

Environmental Plan	Location	Current Zones	Permitted uses	Max height	Max fsr	Heritage
Muswellbrook LEP 2009	East of Muswellbrook Town Centre		Camping Grounds (RU1, RU5, RE1, RE2 zones) Caravan Parks (RU1, RU5, RE1, RE2, zones)	12m, 13m & 8.5m	0.5:1& 2:1 in Town Centre	Heritage Items & Conservation Area within the Town Centre e.g. Muswellbrook Business Heritage Conservation Area

URBAN PLANNING REVIEW | DEVELOPMENT APPROVAL PATHWAYS FOR NEW HOUSING

There are nine (9) different planning approval pathways in NSW, based on our review the listed planning pathways below are the most relevant pathways for temporary workers accommodation.

1. State Significant Development (SSD) / State Significant Infrastructure (SSI)

Certain development types are deemed to have State significance due to their size, economic value, or environmental impacts. Accommodation for temporary workers may be developed through a state development pathway, if the proposal meets the thresholds for development as set out in the *State Environmental Planning Policy (Planning Systems) 2021* and it can be ancillary works to that development.

An example of this pathway was the temporary workers accommodation to support the Inland Rail project from Narromine to Narrabri. The project was SSI and the proposal included 5 temporary worker's accommodation, which accommodated 500 people. The temporary workers' accommodation in this instance was assessed as part of the state-significant infrastructure application and considered application process. This assessment would consider various factors such as planning regulations, environmental impacts, community considerations, and other relevant 'ancillary' development. The approval of accommodation for temporary workers as part of these developments depends upon a full assessment as part of the criteria to ensure the development complies with applicable laws and regulations.

This pathway is unlikely to be utilised, as there is not a standalone SSD/SSI pathway for accommodation for temporary workers. The temporary workers accommodation needs to be ancillary to the state significant development infrastructure project, which is based on merit, size, density, traffic and parking. To overcome this barrier, it is recommended a temporary workers accommodation pathway be included in the State Environmental Planning Policy (Planning Systems) 2021, to allow for this type of development to be fast tracked through the assessment process at the NSW Department of Planning level rather than Council level.

Recommendation: This pathway is unlikely, unless relevant SSD/SSI applications are proposed, and the temporary workers accommodation can be ancillary to the DA.

2. Review of Environmental Factors (REF)

Public authorities are responsible for essential infrastructure like hospitals, schools, roads, railways, emergency services, water supply or electricity. There are several assessment pathways that these types of development can take in NSW. One of these uses Part 5, Division 5.1 of the *Environmental Planning and Assessment Act* is known as a review of environmental factors (REF). An REF means a determining authority can assess the environmental impact of certain activities that they are either carrying out themselves or approving. These activities are defined as development 'permitted without consent' in an environmental planning instrument. The *Transport and Infrastructure SEPP* does not identify any temporary housing infrastructure development categories in the SEPP; therefore, the pathway is not applicable.

Recommendation: The REF pathway should not be pursued because it is not listed as a land use for which Part 5 REF approvals can be granted under the SEPP.

3. Regional Development

Regionally significant development is larger in investment value, scale and/or complexity. Typical regionally significant developments include projects with a capital investment value of more than $5 million that are council-related, lodged for the State of NSW, private infrastructure and community projects or eco-tourism facilities. This pathway is one of the most likely planning pathways. To obtain a fast development assessment process and obtain development consent quickly, the DA process would require close collaboration between the proponent and Council.

Recommendation: This pathway leverages the Council/DPHI priority to deliver housing to progress the applications. This is a recommended pathway.

4. Local Development

The Local development is the most common type of development in NSW, with projects ranging from home extensions to medium sized commercial, retail and industrial developments. Local development include projects with a capital investment value of less than $5 million that are council-related. This pathway is one of the most likely planning pathway. To obtain a fast development assessment process and obtain development consent quickly, the DA process would require close collaboration between the and Council.

Reproponent**commendation:** This pathway leverages the council/DPHI priority to deliver housing. This is a recommended pathway.

5. Complying Development

Complying development is a combined planning and construction approval for straightforward development that can be determined through a fast-track assessment by an accredited certifier (or Council). The State Policy for exempt and complying development is contained within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Recommendation: This is considered an unlikely planning pathway for the project given the size of the proposal, economic value and environmental layers of the land in the Study Areas, such as flooding and bushfire risks.

Recommended Planning Pathway

- The recommended planning pathway is to submit a local or regional development application through council.
- This pathway:
  - Provides an opportunity to work closely and collaboratively with Council to aim for an efficient assessment process and early consent.
  - Applies pressure for council to process the application, and accountability for Planning Panel referral.
  - Leverages the council/DPHI priority to deliver housing.
  - Provides the option to take DA to Land and Environment Court if assessment is delayed.

Table A1.4

Average Development Assessment Time frame

LGA	Armidale	Uralla	Walcha	Tamworth	Inverell	Glen Innes	Liverpool Plains	Upper Hunter	Muswellbrook
Days of average DA assessment time	11	21	10	13	11	14	20	31	19

Recommendation: Engage with Council to discuss potential planning proposal pathway options. Prepare initial concept plans and test plans with consultant team.

URBAN PLANNING REVIEW | PROPOSED SEPP BENEFITS

As identified the NSW Government exhibited a reform package in August / September 2023. The proposed changes to the State Environmental Planning Policy (SEPP) to include specific controls for Renewable Energy Zones (REZ) represent a significant step forward in streamlining the planning and development process for critical infrastructure projects. These changes are particularly pertinent for the accommodation of workers involved in the New Infrastructure Projects (NIP) and generator projects within the REZ. The SEPP will provide a pathway that is appropriate the specific requirements of temporary workers accommodation. Noting that efficiency is critical as there will be pressure on lead times for accommodation which is critical enabling infrastructure for major projects in the REZ zones.

Key benefits of the proposed streamlined planning pathway are:

- Efficiency – the approval process for worker accommodation can be expedited
- Consistency - the SEPP provide a consistent framework for developers and planners
- Standards - The SEPP controls can ensure that accommodation facilities meet high standard
- Integration - The SEPP can include provisions to ensure that worker accommodation integrates well with existing communities
- Sustainability - The SEPP controls can mandate sustainable building practices
- Legacy infrastructure - The SEPP can include provisions for the adaptive reuse of these structures
- Scalability - The SEPP should be flexible enough to accommodate future growth and changes in the scale of projects.

A2

RESIDENTIAL FUTURE PROJECT LIST

FUTURE RESIDENTIAL SUPPLY PROJECTS

Table A2.1

Project Address	Project City	Project Council	Lots	Year	Urbis Stage	Main Category
15 Karina Close & 38 Sutherland Avenue (Lot 902 & Lot 2)	Armidale	Armidale	41	2025	Subdivision Approval	Residential Subdivision
1-9 Northcott Street	Armidale	Armidale	64	2025	Subdivision Approval	Residential Subdivision
1A Niagara Street (Lot 86)	Armidale	Armidale	26	2025	Subdivision Approval	Residential Subdivision
32A Crest Road (Lot 42)	Armidale	Armidale	22	2025	Subdivision Approval	Residential Subdivision
6 Harrison Place (Lots 5-7)	Armidale	Armidale	30	2025	Subdivision Application	Residential Subdivision
7-11 Warwick Road (Lots 13-15)	Hillvue	Tamworth	54	2025	Subdivision Approval	Residential Subdivision
9 Link Road (Lot 14 & 100)	Armidale	Armidale	21	2025	Subdivision Approval	Residential Subdivision
Duri Road (Lot 6)	Hillvue	Tamworth	939	2027+	Subdivision Application	Residential Subdivision
Lots 52, 165 & 166 Browns Lane cnr Bowdens Lane Moores Creek	Tamworth	Tamworth	225	2025	Subdivision Application	Residential Subdivision
38 Barton Street (Lot 30)	Scone	Upper Hunter	92	2025	Subdivision Application	Residential Subdivision
Lots 52, 165 & 166 Bowdens Lane (DP1120933 & DP753851)	Moore Creek	Tamworth	255	2024	Under Construction	Residential Subdivision
Lots 7, 722 & 121 Moore Creek Road	Moore Creek	Tamworth	211	2026	Subdivision Approval	Residential Subdivision
9027 New England Highway & Lot 8 Day Street (Lot 12)	Muswellbrook	Muswellbrook	75	2025	Subdivision Application	Residential Subdivision
97 Hill Street	Scone	Upper Hunter	30	2025	Subdivision Approval	Master Plan Communities/Mini City

FUTURE RESIDENTIAL SUPPLY PROJECTS

Table A2.1…cont.

Project Address	Project City	Project Council	Lots	Year	Urbis Stage	Main Category
Lots 1010 & 103 Ironbark Road (DP1170190)	Muswellbrook	Muswellbrook	600	2026	Early Planning	Residential Subdivision
Almond Rd	Denman	Muswellbrook	750	2026	Early Planning	Residential Subdivision
17 Blaxland Street (Lot 61)	Merriwa	Upper Hunter	3	2025	Development Application	Units, apartments, flats, townhouses, villas
20 Medora Street (Lot 8)	Inverell	Inverell	10	2026	Development Application	Units, apartments, flats, townhouses, villas
59 Tindale Street (Lot 2)	Muswellbrook	Muswellbrook	30	2027+	Development Application	Units, apartments, flats, townhouses, villas
143-145 Marius Street & 23 Bourke Street (Lot 2 DP620964 & Lots 3 & 4 DP629335)	Tamworth	Tamworth	31	2027+	Development Application	Units, apartments, flats, townhouses, villas
24-28 Marius Street	North Tamworth	Tamworth	12	2025	Development Approval	Units, apartments, flats, townhouses, villas
25 Marsh Street	Armidale	Armidale	6	2025	Development Approval	Units, apartments, flats, townhouses, villas
32 White Avenue	Armidale	Armidale	3	2025	Development Approval	Units, apartments, flats, townhouses, villas
36 Francis Avenue (Lots 39)	Tamworth	Tamworth	5	2025	Development Approval	Units, apartments, flats, townhouses, villas
50 Barney Street (Lot 101)	Armidale	Armidale	10	2025	Development Approval	Units, apartments, flats, townhouses, villas
75 Hill Street	East Tamworth	Tamworth	6	2026	Development Application	Units, apartments, flats, townhouses, villas
76-82 Darling Street (Lots 1-7)	Tamworth	Tamworth	7	2025	Development Approval	Units, apartments, flats, townhouses, villas
Grey Street	Glen Innes	Glen Innes Severn	5	2025	Development Approval	Units, apartments, flats, townhouses, villas
19 John Howe Circuit (Lot 514 DP1089307)	Muswellbrook	Muswellbrook	16	2026	Development Application	Units, apartments, flats, townhouses, villas
98E Piper Street (Lot 103)	Tamworth	Tamworth	5	2025	Development Approval	Units, apartments, flats, townhouses, villas

A3

CONSTRUCTION & OPERATIONAL WORKERS DEMAND ASSESSMENT ASSUMPTIONS

PROJECT SELECTION

Project list and relevant project data and assumptions

Projects

The project list is provided in Appendix A6. The list of projects is non-exhaustive, it is from data provided by Energyco and supplemented by information from Cordell Connect

Not all projects provided by EnergyCo were relevant to each cumulative impact study, these were removed from the analysis.

Study Area
LGAs of:

- Armidale
- Walcha
- Tamworth
- Uralla
- Upper Hunter
- Muswellbrook
- Liverpool Plains
- Glen Innes Severn
- Inverell

Relevant Projects

The following high-level filtering has been applied to projects:

Criteria 1 Project Types

- GDPs (NE REZ/HCC REZ) - Projects proposing to connect to NE REZNIP or HCC REZNIP)
- Renewable Energy Projects connecting to Transgrid
- Non-Energy Projects (that meet Criteria 2, 3 and 4 below)

Criteria 2 Project Location

Located within the following LGAs: Armidale, Glen Innes Severn, Inverell, Liverpool Plains Shire, Muswellbrook Shire, Tamworth, Upper Hunter, Uralla, Walcha.

Criteria 3 Project Status

Projects in the following planning status: Pre-planning, In-planning, Approved, In Construction, Operational.

Criteria 4 Project Size / Significance

Projects of the following planning significance is considered in the study: Major Project, State Significant Development, State and Critical State Significant Infrastructure.

Criteria 5 Enough critical information available

CONSTRUCTION PERIOD

Timing and Workforce Assumptions

Where data was not readily available assumptions were made based on the size of the projects output.

Construction Period Assumptions

The timing of construction periods were determined by the megawatt size of the project. The assumptions used are shown in table 6.7.

Workforce Assumptions

Using the project megawatts and applying the estimated megawatts of energy expected to be produced per worker, we were able to calculate the estimated peak workforce for construction and operations of projects. The benchmarks are shown in table 6.8.

Workforce Volume Timing Assumptions

Start-to-peak and peak-to-trough workforce timing was calculated using histograms provided by EnergyCo for Wind, Solar, Battery and other projects. Adjustments to timing were made by changing the Bin width of the histograms to match the timing for the individual projects.

For the transmission line, we have adopted the transmission workforce data provided by EnergyCo.

Renewable Energy Construction Period **Table A3.1**

Type	Per Project Size in MW	Construction Period Assumption (in Months)
Wind	<500 MW	24
	500MW - 1000MW	36
Solar	<50MW	9
	50MW - 500MW	18
	500MW - 1000MW	24
Battery	100 - 500MW	18
	>500MW	24
Hydro	N/A	60

Construction Workforce Assumptions **Table A3.2**

Type	Estimated Peak Construction Workforce (MW/worker)	Estimated Peak Construction Workforce (Number of workers) @ a Minimum	Estimated Operational Workforce (MW/worker)
Wind	0.55	40	0.035
Solar	1.01	50	0.035
Battery	0.42	20	0.02
Hydro	1.06	60	0.06

WORKFORCE DATA

Workforce Data & Assumptions

Solar Farm Workforce

- Small Solar Farm Projects that are under <50MW are assigned a minimum workforce size of 50 workers.
- Where actual data on peak construction workforce has not been provided in their Project EIS or direct RFI from developers, assumptions in Table 4 are used. These were based on the range of workforce ranges provided by solar farm projects in the NSW Planning Portal.

Wind Farm Workforce

- Small Wind Farm Projects that are under <50MW are assigned a minimum workforce size of 40 workers.
- Where actual data on peak construction workforce has not been provided in their Project EIS or direct RFI from developers, assumptions in Table 4 are used. These were based on the range of workforce ranges provided by wind farm projects in the NSW Planning Portal.

Battery Workforce

- Small Battery Projects that are under <50MW are assigned a minimum workforce size of 20 workers.
- Where actual data on peak construction workforce has not been provided in their Project EIS or direct RFI from developers, assumptions in Table 4 are used. These were based on the range of workforce ranges provided by BESS projects in the NSW Planning Portal.

Pumped Hydro Workforce

- Where actual data on peak construction workforce has not been provided in their Project EIS, an assumption of 0.99 workers/MW for Pumped Hydro is used.
- Construction workforce for PHES is highly variable based on the conditions of the site and amount of civils required for the project.
- An average value of peak workforce was taken across a number of actual projects in Australia to estimate the peak workforce of a standard Pumped Hydro Project:

Non-energy Project Workforce

- This version does not contain workforce number assumptions or calculations for non-energy projects. The Project List data was gathered from the NSW Planning Portal.

Operational Workforce

- Where operational workforce data is unavailable via EIS or direct RFIs from developers, assumptions were used to calculate the operational workforce. This was based on a range of operational workforce ranges provided by the projects in the NSW Planning Portal.

Operational Dates

- For renewable energy projects, where actual operational dates are unavailable via EIS or direct RFIs, the operational date for projects occurs about 6 months after construction completion date.

CONSTRUCTION PERIODS AND TIMING

Construction Periods and Timing Assumptions

Construction Duration Assumptions

- Construction durations of Renewable Energy Projects (Solar, Wind, Battery and Pumped Hydro) are taken as the value provided in either their project EIS or via direct RFI from the developer, otherwise assumptions are used to calculate duration as shown in table 6.7.
- If actual values are not available, construction duration assumptions are based on an average of construction periods for similar-sized (MW) projects available on the NSW Planning Portal. Refer to table 6.7 for details.
- Operational projects are noted as "Operational" for their construction timing data as they are not relevant.
- Where an assumption on timing cannot be made for a project, we have either adopted information from Cordell or online public knowledge.

Construction Start/End Dates

(Projects intending to connect to NE REZ)

- GDPs connecting to the REZ are assumed to complete construction within 12 months of NE REZ construction end dates for Stage 1, 2 or 3. The Stage in which each Generator Design Partner may be completed by will be informed by EnergyCo.
- Note: Generator Design Partner information is preliminary and updated on a regular basis.

Timing for Renewable Energy Projects connecting to Transgrid or other networks

- Construction Start and End Dates for Renewable Energy Projects connecting to Transgrid, or other networks are based on the latest information provided from project websites, NSW Planning Portal or via direct RFI from the developers.
- If construction start/end dates are unavailable, it is assumed solar and battery projects will commence construction 24 months after receiving their SEARS, and wind farm projects will commence construction 36 months after receiving their SEARs. This is based on typical lag-times from previous projects.

Non-Energy Projects Construction Period, Start and End Dates

- Construction start and end dates for non-energy projects are based on any public information available.

LIMITATIONS

Project Limitations

Limitations Of The Information

- Information on projects is limited and is as accurate as possible based on publicly available information as of October 2024. Reliable sources have been used including the NSW Planning Portal and Project Websites as well as information received from developers.
- Information on have been provided through direct RFIs. Most have not commenced their planning approval.
- Our sources are updated periodically following the release of new source material. The data book's current baseline date is August 2024.
- Connection from Hubs to generator sites/feeder hubs has not been considered at this stage due information available. This will be further considered in the programme as information made available with generator partners and delivery methodology.

A4

SPATIAL ANALYSIS METHODOLOGY

DRIVING CATCHMENTS ANALYSIS

Driving Catchments – Methodology

- Imported latest access tracks data provided by EnergyCo.
- Calculated time taken to travel along tracks – assuming a speed of 15 kmh^{-1}. Use time = distance/speed.
- Points are then placed at the end of the tracks closest to the existing road network and are assigned matching travel time data.
- These times were rounded to the nearest 5 minutes, then all the points with the same times are grouped together for analysis.
- Then the full driving time Catchments are run, considering the time taken to drive along access tracks.
  - E.g., if a track takes 10 minutes to drive along, and we are calculating a 45-minute Catchment, we subtract the access track time and calculate a 35-minute Catchment.
- ArcGIS drive-time areas are calculated using historical traffic data, following traffic laws and finding the quickest route away from each point.
  - Specifically, we opted to use the 'Rural Driving Time' variant, which differs by *not* discouraging use of unpaved roads.
    - Further – we allowed the analysis to consider private roads and roads with gates.
- Within the overall Catchment, each set of Catchments based off the smaller individual times were intersected to calculate the number of overlaps within the entire Catchment.
  - E.g., the 10, 20, & 25-min track Catchments overlapping in one part of the = a count of three on the map.

Cleaning Data

- Clean data – There are hundreds of access tracks around future project locations. Urbis needed to simplify to the most likely to be used for the driving Catchments.
- A good portion of this was arbitrary. When there was no clear reason to choose one section of excess track over another, our choice was informed by considering the other paths in the area – trying to find the minimal combination of paths that would serve the greatest area.
- If there were two or more different routes a track could take (that ended in the same destination) keep the shortest one.
- Deleted excess sections/loops along tracks.
- Where two paths meet in a fork with the same duration, delete one.
- Deleted multiple small connections branching off one larger track.
- Generally deleted sections that were below the 5-minute travel time threshold – except when they appeared to be short access tracks connecting directly to an existing road (or were the only tracks in the area).
- For tracks that connected to existing roads at both ends, we split them into two equal length sections, to calculate the time to get to the middle from either end.
  - If the track crossed over an existing road, we split it at the intersection.
- Topologically, most of the track segments didn't connect, so necessitating a time intensive manual process to join them up so that the travel times could be calculated.
- This introduced a source of error since the data was manipulated.
  - Impact is likely minimal since the data was simplified substantially beyond that point, and the travel times along the tracks were rounded at the last stage.

JOB DENSITY MAPPING

Methodology:

- We used the Inverse Distance Weighted (IDW) tool in ArcGIS pro to create our density maps.
- It uses an inverse distance weighted formula to interpolate a surface on a map based on a set of input points.
- It is ideal for this application since it performs well with datasets where nearby points are to be interpreted as more significant.
- It attempts to estimate the value of 'imaginary' points, based on the values of those nearby. Points closer to the location on the interpolated surface will have more of an influence than those further away. This is the 'surface' mentioned above.
    - This increased influence depends on the power used for the calculation – we used the default of 2. A lower value will create a smoother surface, giving more influence to points further away. A higher value has the opposite effect.
- We added in four dummy points in each corner of the map, very far away from the Study Area. Without these, the output surface would only cover a bounding box with the same extent as the input points.
    - These points were assigned the average value of the data to try minimise any adverse impact.

IDW Steps:

1. Input point features, choose the value field (in this case, peak construction jobs).
2. Distance between the input points, and all prediction points within the analysis area (this can be millions depending on the pixel size of the output raster).
3. Weight assigned to inputs based on the inverse of their distance to the prediction points (in our case, inverse square).
4. The estimated value at a given point on the output surface is interpolated as a weighted average of the input values.
5. The output raster surface is created, with each pixel having a value based on the above process.

Potential limitations:

- If points are not evenly distributed, the representation of job density (might) not be as accurate based on the disclaimer ESRI put on their website.
- This is something we can re-consider by playing with the variable search radius feature of the tool.

A5

ACCOMMODATION SUITABILITY DRIVE TIME & JOB DENSITY MAPS

ACCOMMODATION SUITABILITY DRIVE TIME AND JOB DENSITY MAPS

Accommodation Suitability Maps

All Energy and Infrastructure Projects

45-minute Drive Time Study Area

60-minute Drive Time Study Area

90-minute Drive Time Study Area

Renewable Energy and NRNIPs

45-minute Drive Time Study Area

60-minute Drive Time Study Area

90-minute Drive Time Study Area

Density of Jobs

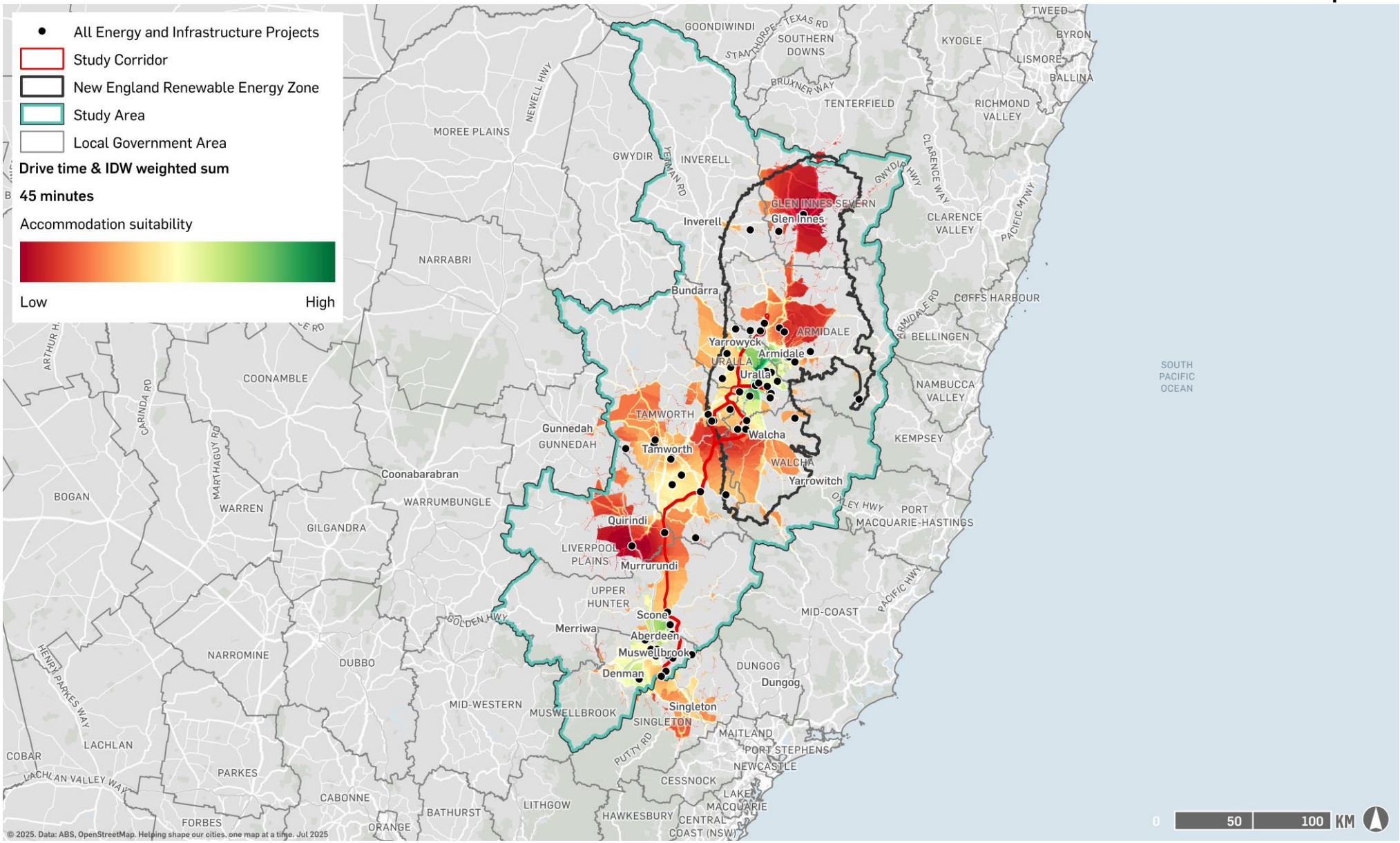
All Energy and Infrastructure Projects compared to Renewable Energy and NRNIP.

Observation:

Overall, it is considered that changing the drive time from 45 minutes to 60 or 90 would not have a major impact on the accommodation locations selected.

ACCOMMODATION SUITABILITY MAPS| ALL PROJECTS 45 MINUTE DRIVE TIME

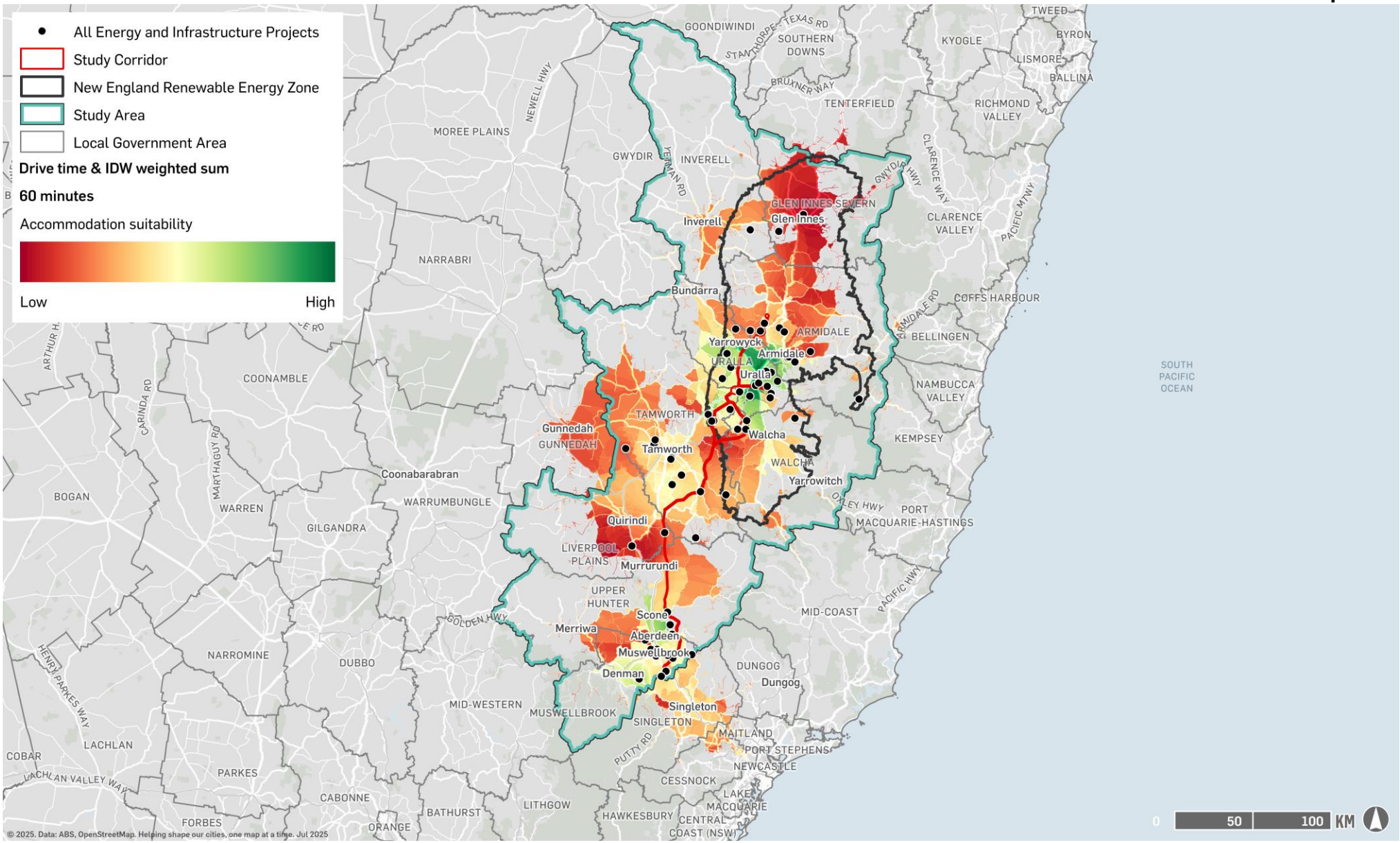
Map A5.1



Note: Projects as of November 2024. One project is not represented on the map for confidentiality purposes

ACCOMMODATION SUITABILITY MAPS| ALL PROJECTS 60 MINUTE DRIVE TIME

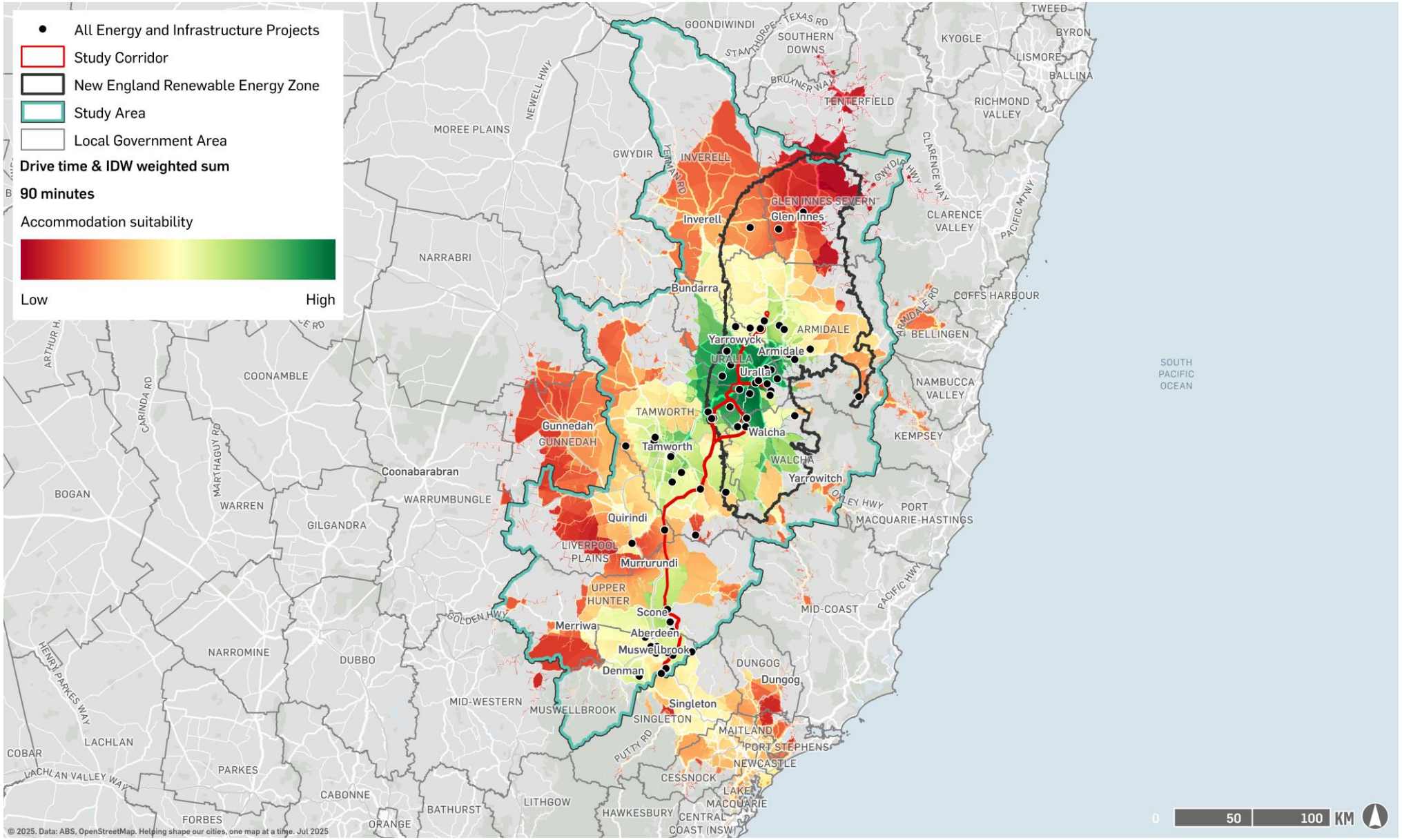
Map A5.2



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

ACCOMMODATION SUITABILITY MAPS| ALL PROJECTS 90 MINUTE DRIVE TIME

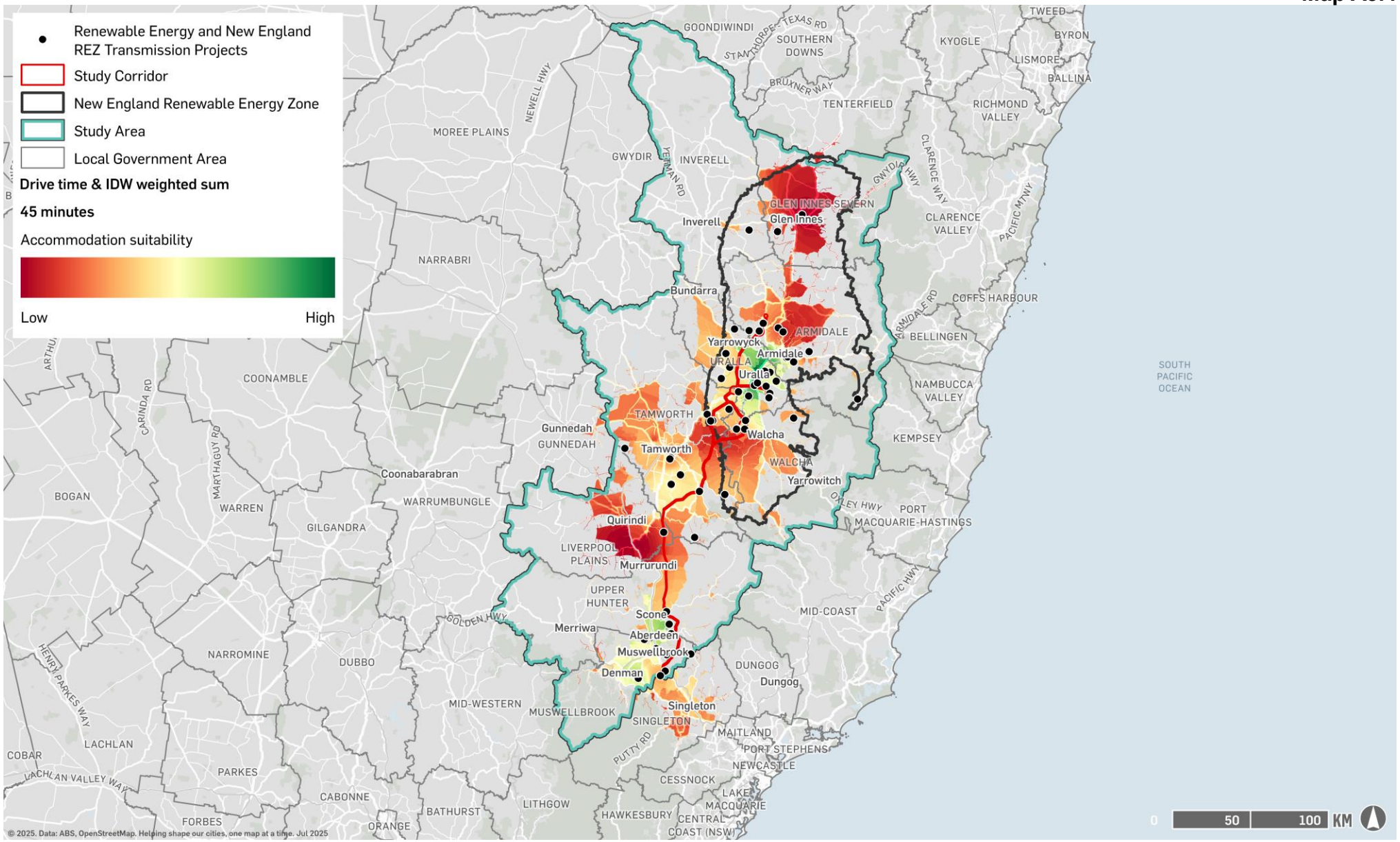
Map A5.3



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

ACCOMMODATION SUITABILITY MAPS| RENEWABLE & TRANSMISSION 45 MINUTE DRIVE TIME

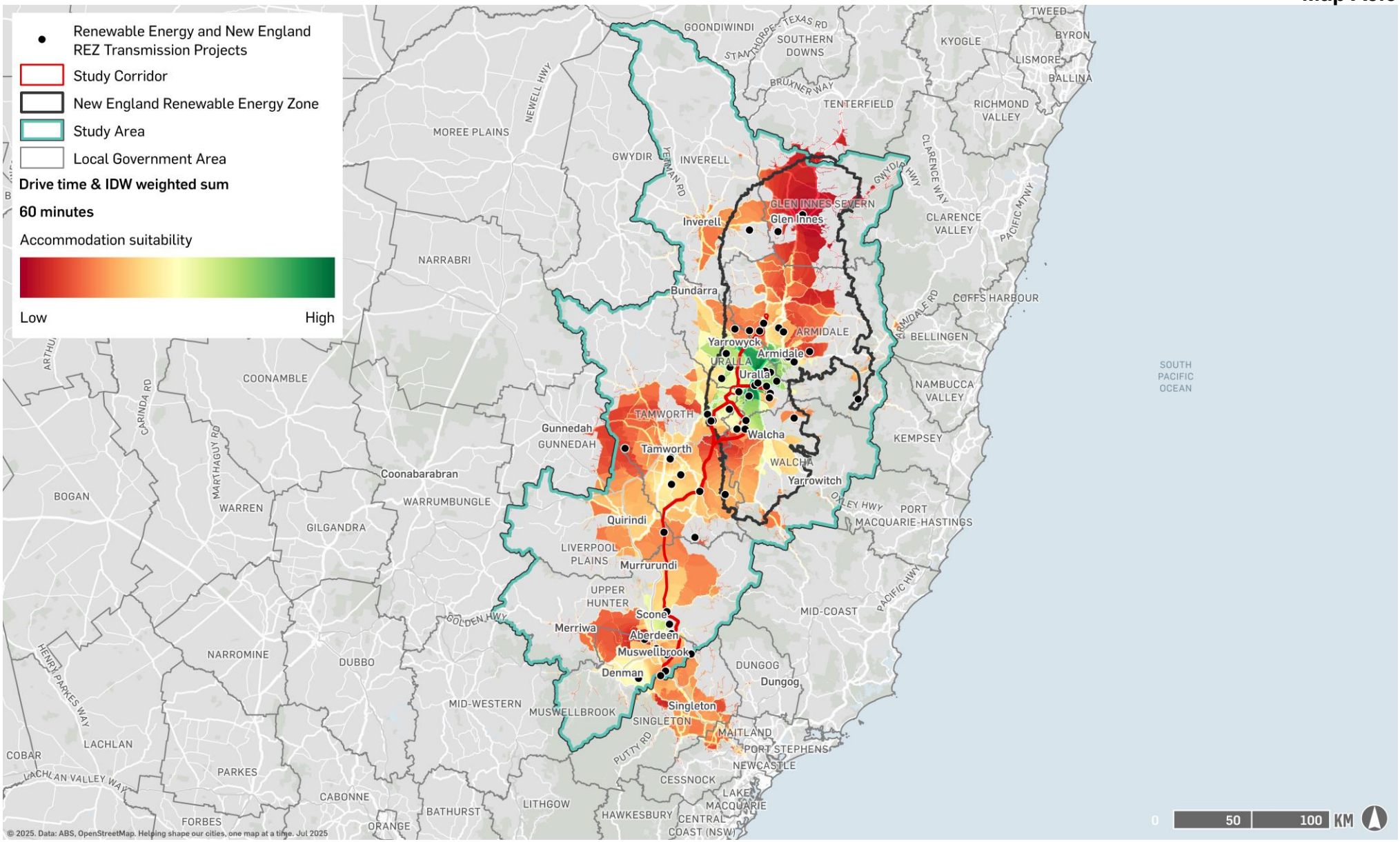
Map A5.4



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

ACCOMMODATION SUITABILITY MAPS| RENEWABLE & TRANSMISSION 60 MINUTE DRIVE TIME

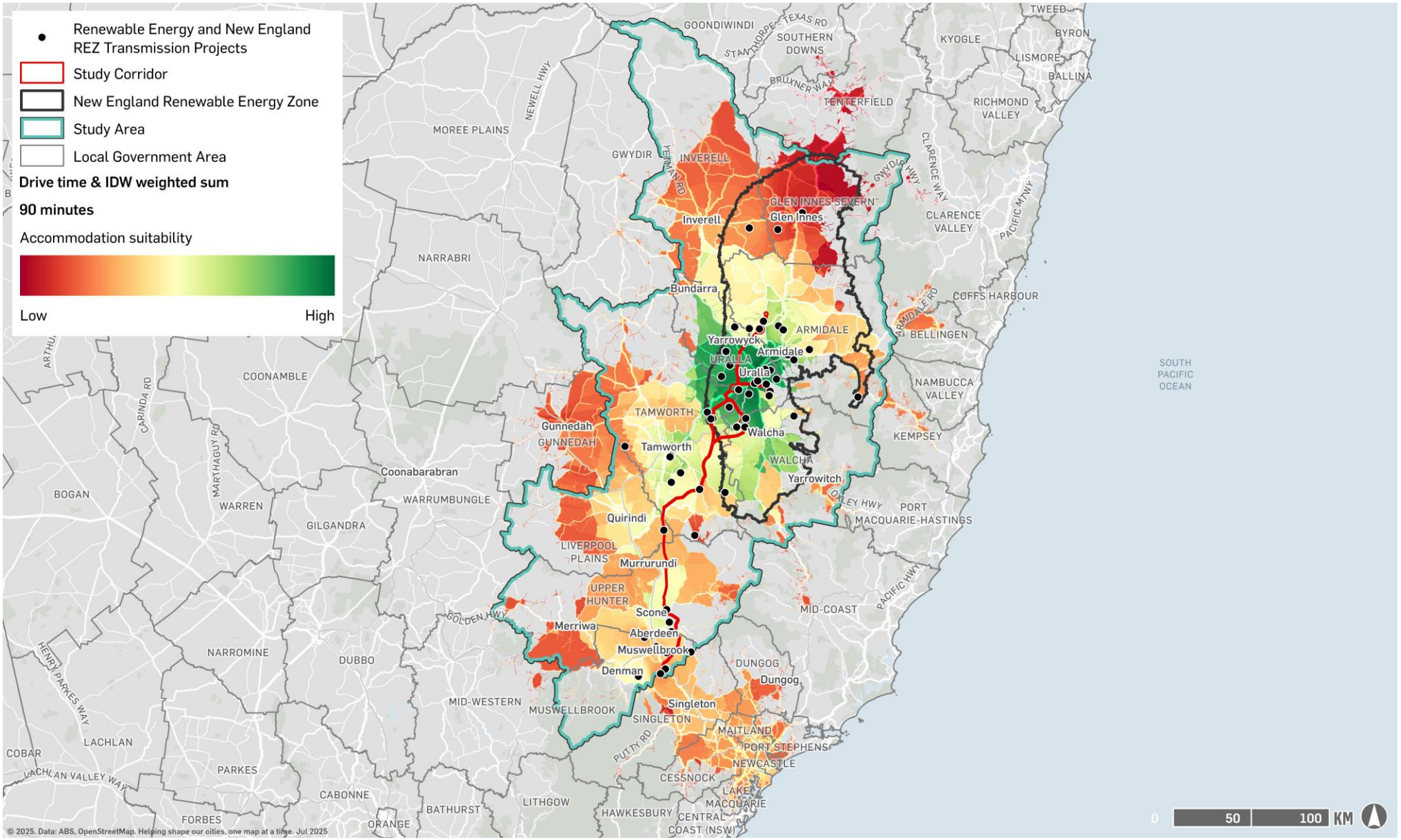
Map A5.5



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

ACCOMMODATION SUITABILITY MAPS| RENEWABLE & TRANSMISSION 90 MINUTE DRIVE TIME

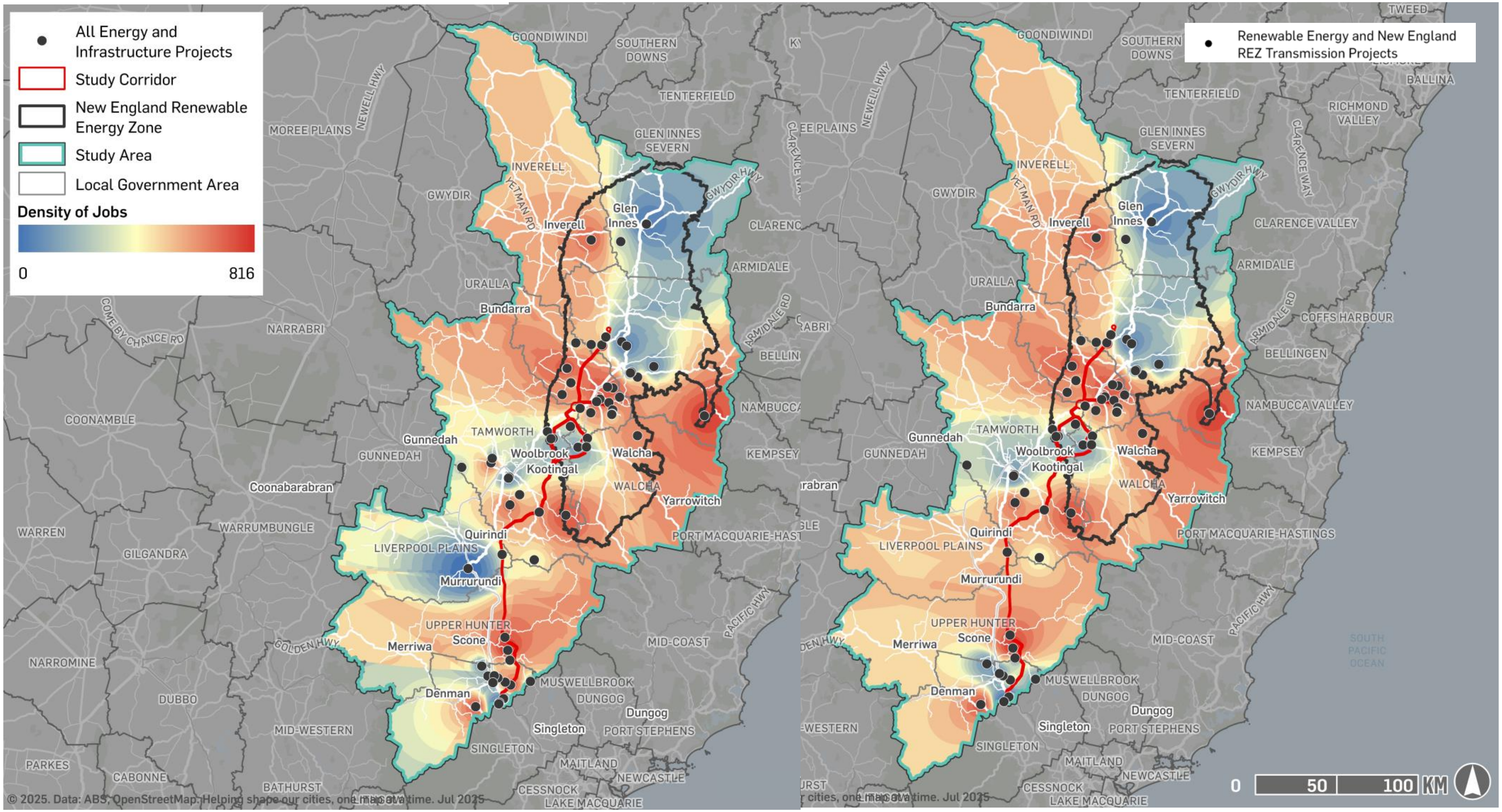
Map A5.6



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

DENSITY OF JOBS | TOTAL PROJECTS COMPARED TO RENEWABLE & NE REZ TRANSMISSION

Map A5.7



Note: Projects of November 2024. One project is not represented on the map for confidentiality purposes

A6

FUTURE NEW ENGLAND MAJOR PROJECTS – PROJECT LIST

FUTURE REZ PROJECTS

Table A6.1

Project Name	LGA	Accommodation Catchment	Category	Type
Eastern Hub Firming Battery	Uralla Shire	Uralla	Battery	New England Renewables
New England Battery	Uralla Shire	Uralla	Battery	New England Renewables
Liddell Battery	Muswellbrook Shire	Muswellbrook	Battery	Other Energy
Calala Battery Energy Storage System	Tamworth Regional	Tamworth	Battery	Other Energy
Glen Innes Battery Energy Storage System	Glen Innes Severn	Glen Innes	Battery	Other Energy
Muswellbrook BESS	Muswellbrook Shire	Muswellbrook	Battery	Other Energy
Armidale East BESS	Armidale Regional	Armidale	Battery	Other Energy
Kingswood Battery Energy Storage System	Tamworth Regional	Tamworth	Battery	Other Energy
Upper Hunter Battery Energy Storage System	Upper Hunter Shire	Muswellbrook	Battery	Other Energy
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Armidale Battery Energy Storage System	Armidale Regional	Armidale	Battery	Other Energy
Bayswater Power Station Upgrade	Muswellbrook Shire	Muswellbrook	Coal	Other Energy
Mount Pleasant Optimisation Project	Muswellbrook Shire	Muswellbrook	Coal	Other Energy
Richard Gill School	Upper Hunter Shire	Muswellbrook	Education	Other Infrastructure

FUTURE REZ PROJECTS

Table A6.1…cont.

Project Name	LGA	Accommodation Catchment	Category	Type
Liddell Future Land Use and Enabling Works Project	Muswellbrook Shire	Muswellbrook	Electricity Generation	Other Energy
Willow Tree Gravel Quarry Extension	Liverpool Plains Shire	Wallabadah	Extractive industries	Other Energy
Baiada Integrated Poultry Processing Facility	Tamworth Regional	Tamworth	Food, beverages and tobacco manufacturing	Other Infrastructure
Queensland-Hunter Gas Pipeline	Muswellbrook Shire	Muswellbrook	Gas pipeline	Other Energy
Dungowan Pumped Hydro Project	Tamworth Regional	Tamworth	Hydro	New England Renewables
Muswellbrook Pumped Hydro Energy Storage Project	Upper Hunter Shire	Muswellbrook	Hydro	Other Energy
Oven Mountain Pumped Hydro	Armidale Regional	Walcha	Hydro	Other Energy
Glenbawn Pumped Hydro	Upper Hunter Shire	Muswellbrook	Hydro	Other Energy
Tangaratta Feedmill	Tamworth Regional	Tamworth	Other	Other Infrastructure
Muswellbrook Bypass Project (REF)	Muswellbrook Shire	Muswellbrook	Roads	Other Infrastructure
Hillview Solar Farm	Uralla Shire	Uralla	Solar	New England Renewables
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Deeargee Solar Farm	Uralla Shire	Uralla	Solar	New England Renewables
New England Solar Farm Stage 2	Uralla Shire	Uralla	Solar	Other Energy

FUTURE REZ PROJECTS

Table A6.1…cont.

Project Name	LGA	Accommodation Catchment	Category	Type
Sundown Solar Farm	Inverell Shire	Glen Innes	Solar	Other Energy
Kayuga Solar Farm	Muswellbrook Shire	Muswellbrook	Solar	Other Energy
Nottingham Park Solar Farm	Tamworth Regional	Tamworth	Solar	Other Energy
Edderton Solar Project and BESS	Muswellbrook Shire	Denman	Solar	Other Energy
Tilbuster Solar Farm	Armidale Regional	Armidale	Solar	Other Energy
Tilbuster 2 Solar Farm	Armidale Regional	Armidale	Solar	Other Energy
Muswellbrook Solar Farm	Muswellbrook Shire	Muswellbrook	Solar	Other Energy
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Bendemeer Solar Farm	Tamworth Regional	Walcha	Solar	Other Energy
Oxley Solar Farm	Armidale Regional	Armidale	Solar	Other Energy
Uralla Solar Farm	Uralla Shire	Armidale	Solar	New England Renewables
Middlebrook Solar Farm	Tamworth Regional	Tamworth	Solar	Other Energy
Lambruk Solar Project	Tamworth Regional	Tamworth	Solar	Other Energy

FUTURE REZ PROJECTS

Table A6.1…cont.

Project Name	LGA	Accommodation Catchment	Category	Type
Hunter Transmission Project - Muswellbrook	Muswellbrook Shire	Wallabadah	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Armidale	Armidale Regional	Muswellbrook	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Liverpool Plains	Liverpool Plains Shire	Armidale	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Muswellbrook	Muswellbrook Shire	Wallabadah	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Tamworth	Tamworth Regional	Muswellbrook	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Upper Hunter	Upper Hunter Shire	Tamworth	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Uralla	Uralla Shire	Denman	Transmission	New England REZ Transmission (EnergyCo)
New England REZ Transmission - Walcha	Walcha Shire	Uralla	Transmission	New England REZ Transmission (EnergyCo)
Hillview Wind Farm	Uralla Shire	Uralla	Wind	New England Renewables
Bowmans Creek Wind Farm	Muswellbrook Shire	Muswellbrook	Wind	Other Energy
Yarrowyck Wind Farm	Uralla Shire	Armidale	Wind	New England Renewables
Hills of Gold Wind Farm	Tamworth Regional	Wallabadah	Wind	Other Energy
White Rock 2 Wind Farm	Glen Innes Severn	Glen Innes	Wind	Other Energy
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

FUTURE REZ PROJECTS

Table A6.1…cont.

Project Name	LGA	Accommodation Catchment	Category	Type
Bendemeer Wind Farm	Tamworth Regional	Walcha	Wind	New England Renewables
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Thunderbolt Wind Farm	Uralla Shire	Uralla	Wind	Other Energy
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Northern Tablelands Wind Farm	Armidale Regional	Armidale	Wind	New England Renewables
Skye Ridge Wind Farm	Walcha Shire	Walcha	Wind	New England Renewables
Uralla Wind Farm	Uralla Shire	Armidale	Wind	New England Renewables
Boorolong Wind Farm	Armidale Regional	Armidale	Wind	New England Renewables
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Glenbawn Wind Farm	Upper Hunter Shire	Muswellbrook	Wind	Other Energy
Winterbourne Wind Farm	Walcha Shire	Walcha	Wind	Other Energy
Balala Wind Farm	Uralla Shire	Uralla	Wind	New England Renewables
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Salisbury Solar Farm	Uralla Shire	Uralla	Solar	Other Energy

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