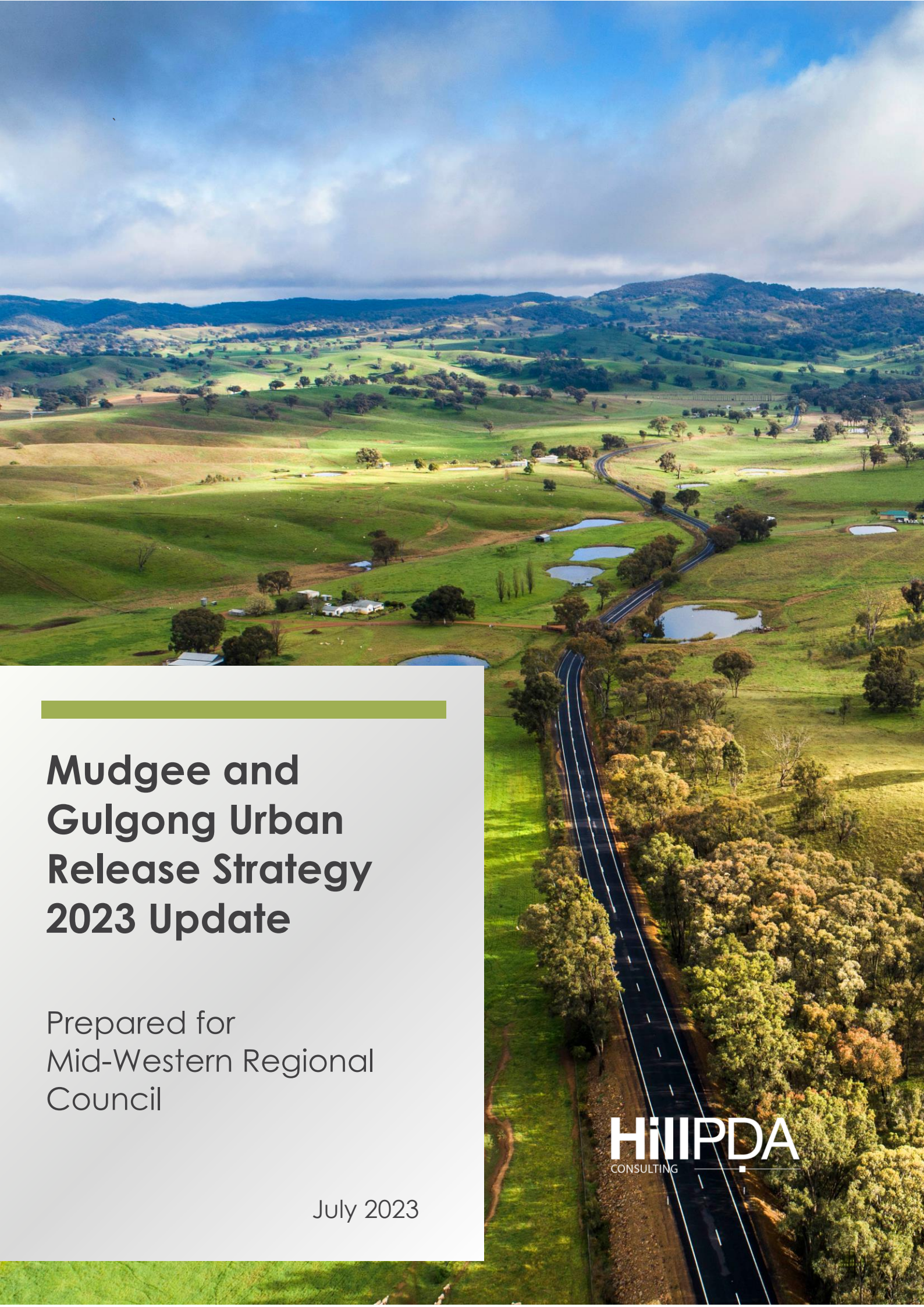

Mudgee and Gulgong Urban Release Strategy 2023 Update

Prepared for
Mid-Western Regional Council

July 2023

HillPDA CONSULTING

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The Mid-Western LGA is the traditional lands of the Wiradjuri people.

Wiradjuri people have lived on, cared for, and been sustained by the land across much of today's Central West, Orana, and Riverina for many thousands of years.

Early in Australia's colonial period, Wiradjuri lands became the subject of colonial expansion west across the Great Dividing Range, as the colonial population and demand for agricultural land grew.

This expansion led to a prolonged series of conflicts that are collectively referred to as the frontier wars. The historical record affirms the widespread violence that colonisation brought to Aboriginal people, including incidents recorded in the Mid-Western LGA.

In the spirit of reconciliation, HillPDA and Mid-Western Regional Council wish to acknowledge this past and its ongoing impacts, and to pay our respect to the Wiradjuri people and their ongoing connection to the land that this report pertains to.

EXECUTIVE SUMMARY

This is the *Mudgee and Gulgong Urban Release Strategy 2023 Update* (the URS 2023). Mid-Western Regional Council (MWRC) commissioned HillPDA to develop an update of an earlier strategy, the *Mudgee and Gulgong Urban Release Strategy*, released in 2014 (the URS 2014).

The URS 2023 seeks to provide an updated overview of housing supply and demand in Mudgee and Gulgong, two towns in the Mid-Western Regional Local Government Area (MWR LGA). The purpose of this strategy is to:

- Assess the supply and demand of residential land and the status of previously-identified urban release areas (URAs)
- Recommend any required changes to facilitate anticipated demand shortfalls
- Inform Council's strategic planning works and servicing, and
- Provide a framework for the systematic release of residential land to manage the balance of supply and demand over the study period (2021-2041).

The strategy updates the findings of the URS 2014, which focused on Mudgee and Gulgong. Mudgee is the administrative and population centre of the MWR LGA, located on the Cudgegong River. Gulgong is a smaller, historic town located to Mudgee's northwest. This strategy (and the URS 2014) It focuses on Mudgee and Gulgong as these towns are anticipated to receive the majority of population growth projected to occur across the LGA. In the LGA's other main towns, Rylstone and Kandos, significant population growth is not anticipated.

The strategy incorporates a demographic overview of Mudgee, Gulgong, and the MWR LGA. This work identified a wide range of noteworthy demographic features, however, most notable in terms of its impact on housing is population growth. Population figures dating back to 2006 identifies that growth in the MWR LGA has been unevenly distributed and inconsistent, reflective of structural and economic trends.

Both Mudgee and Gulgong are also notable for their young population, compared to other parts of Regional NSW, having a higher proportion of children and young adults. Most residents live in family households, though a large minority live in single-person households. The overwhelming majority of dwellings in both Mudgee and Gulgong are separate houses, over 80 per cent in Mudgee, and over 90 per cent in Gulgong.

A review of employment, upcoming projects in the region, and recent migration trends suggest that the MWR LGA will continue to grow, particularly in light of a vast swathe of renewable energy projects (both anticipated and underway) in and around the LGA. Existing and future employment in mining will continue to be important to the local economy, however, and multiple mining projects are also anticipated in the near future for the MWR LGA. Our analysis of these upcoming employment-generating projects suggests that over 6,500 workers from outside the MWR LGA will be based in or near Mudgee and Gulgong at the peak of several overlapping construction periods. This will have a significant impact on housing, with additional demand for market housing peaking at over 400 dwellings.

In addition to housing demand from new workers in the region, HillPDA undertook a range of methods to determine future demand for residential land and housing in Mudgee and Gulgong. Our analysis projected demand for between (roughly) 2,000 and 3,000 additional residential lots in Mudgee over the period 2021-2041, and between (roughly) 170 and 330 additional residential lots in Gulgong over the same period. Consultation with local property and real estate experts, and market analysis suggest that most of this demand will be for land suitable for detached dwellings, with a large minority of large-lot residential lots.

Despite having a large amount of land within the URAs (around 1,200 hectares in Mudgee and around 600 hectares in Gulgong), much of this land is constrained by environmental or infrastructure factors, or has already been developed. This significantly limits the potential for Mudgee in particularly to accommodate growth, with much of its area constrained by slope, flood risk, biodiversity, and lack of servicing. Meanwhile, Gulgong's URAs

are largely unconstrained, but their current lack of servicing results in a low level of short-term supply. This analysis is shown in Chapter 7.0

This strategy culminates in Chapter 8.0, which details the extent and status of land in Mudgee and Gulgong, and quantifies the amount of time remaining before existing supply is exhausted. We find that the supply of zoned and serviced land across all lot typologies insufficient in both Mudgee and Gulgong, with both general residential and large lot zoned and serviced residential land being exhausted within the first few years of the study period.

An overview of the relevant findings is shown in Table 1 and Table 2.

Table 1: Mudgee: supply and status overview (by lot type), 2021-2041

Status	5 year demand (lots)	Total supply	Lots remaining at period ending		Additional supply needed by
			2031	2041	
General residential (400sqm – 1,999sqm)					
Zoned and serviced	485	1,315	345	0	2029
Zoned and unserviced	485	181	181	0	2031
Unzoned	485	223	223	0	2033
Low density residential(2,000sqm – 1.9ha)					
Zoned and serviced	180	218	0	0	2023
Zoned and unserviced	180	205	61	0	2027
Unzoned	180	460	460	125	2039
Large lot residential s (2ha+)					
Zoned and serviced	10	71	51	31	2041+
Zoned and unserviced	10	0	0	0	2041+
Unzoned	10	0	0	0	2041+

Source: HillPDA

Table 2: Gulgong: supply and status overview (by lot type), 2021-2041

Status	5 year demand (lots)	Total supply	Lots remaining at period ending		Additional supply needed by
			2031	2041	
General residential (400sqm – 1,999sqm)					
Zoned and serviced	58	47	0	0	2023
Zoned and unserviced	58	164	79	0	2032
Unzoned	58	373	373	320	2041+
Low density residential(2,000sqm – 1.9ha)					
Zoned and serviced	25	6	0	0	2023
Zoned and unserviced	25	98	49	0	2035
Unzoned	25	237	237	231	2041+
Large lot residential s (2ha+)					
Zoned and serviced	5	13	3	0	2031
Zoned and unserviced	5	0	0	0	2023
Unzoned	5	37	37	29	2041+

Source: HillPDA

In summary, Mudgee has supply of:

- General residential land to around 2037.
- Low density residential land to around 2041.
- Large lot residential land to beyond 2041.

In order to maintain an appropriate supply of zoned and serviced land in Mudgee, in the short term, Council will need to progress servicing investigations or works, particularly in Caerleon and in Mudgee's southeast. Council will also need to encourage and enable infill development to ensure that additional pressure is not placed on the land identified in this strategy.

In the medium and longer term, to support the transition of unzoned and unserviced land to zoned and serviced land, master planning and rezoning works will be required to ensure that residential lots can be delivered efficiently and fragmentation can be avoided. Investigation areas for future supply may be required toward the end of the strategy period, and monitoring will be necessary to ensure that appropriate action is taken in a timely manner.

Gulgong has supply of:

- General residential land to beyond 2041.
- Low density residential land to beyond 2041.
- Large lot residential land to beyond 2041.

Despite this, most of Gulgong's supply is not available in the short term, and requires zoning and servicing works in order to be delivered. In order to maintain an appropriate supply of zoned and serviced land in Mudgee, in the short term, Council will need to progress servicing investigations or works, particularly north of the Guglong town centre to enable general residential and low density residential supply across the short, medium, and long term. Council will also need to encourage and enable infill development where appropriate, to ensure that additional pressure is not placed on the land identified in this strategy.

In the medium and long term, Council should investigate areas outside the URAs within Gulgong's existing urban area that are suitable for infill residential development. Master planning and rezoning works will be required (following the aforementioned servicing investigations and works) north of Gulgong's town centre to enable the supply of general residential land to progress to zoned and serviced. Monitoring of supply and demand of large lot residential s should also be undertaken to address uncertainties in demand for these lot typologies.

It is noted that the findings of this strategy could be significantly affected by the anticipated employment-generating projects set to occur in and around the LGA. Should the anticipated project pipeline change significantly, Council will need to consider the impact of this on the findings of this strategy.

Chapter 8.0 also includes a suite of other recommendations to housing in Mudgee and Gulgong. These recommendations could support Council in meeting demand for housing, addressing uncertainties, and diversifying housing in the LGA.

INTRODUCTION

1.0 INTRODUCTION

Strong population growth in the Mid-Western Regional Local Government Area (LGA) is increasing demand for land for residential development in Mudgee and Gulgong which is placing considerable pressure on Mid-Western Regional Council (Council). In response to these pressures, Council developed the *Mudgee and Gulgong Urban Release Strategy* (the URS 2014) in 2014. The URS 2014 has guided Council's decisions in relation to the timing, location, and intensity of residential development that would be required in Mudgee and Gulgong. New information has become available since the URS was prepared and it is appropriate for the URS to be updated to reflect current and future requirements.

This document, the *Mudgee and Gulgong Urban Release Strategy 2023 Update* (the URS 2023), presents a revised URS which reflects the latest available projections of population and housing growth to 2041. It includes a consideration of changes to external forces that influence residential development in Mudgee and Gulgong and incorporates an analysis of housing demand indicators from the 2021 Census and outcomes from discussions with key stakeholders during 2022.

1.1 Purpose of the strategy

This URS 2023 aims to:

- Provide Council with a framework for the systematic release of residential land
- Ensure that there is a balance between residential land supply and demand so as not to undermine the economic viability of greenfield development or cause adverse impacts on housing affordability
- Ensure that the staged release of land allows for the efficient and economic provision of infrastructure with particular regard to sewer and water
- Understand and cater for the anticipated demand for urban residential land, the current level of supply and the amount of additional land required to meet future demand
- Identify and address for the different housing sub-markets in Mudgee and Gulgong, and
- Identify the interplay between the Mudgee and Gulgong housing markets and variables that influence that interplay.

1.2 Land and Housing Supply Monitor

Demand for and supply of dwellings is constantly changing. As such, the data in this strategy must be regularly monitored to ensure Council remains nimble and ready to respond to the changing housing needs of its community. Council operates a Land and Housing Supply Monitor which records data on population, land rezonings, lot and dwelling approvals to track the need for additional land and dwellings. The Monitor tracks existing residential land supply and development in the pipeline, to flag trigger points for new land releases.

1.3 Strategy area

This URS 2023 relates to urban release areas located within the towns of Mudgee and Gulgong, in the Mid-Western Regional LGA, part of NSW's Central West region.

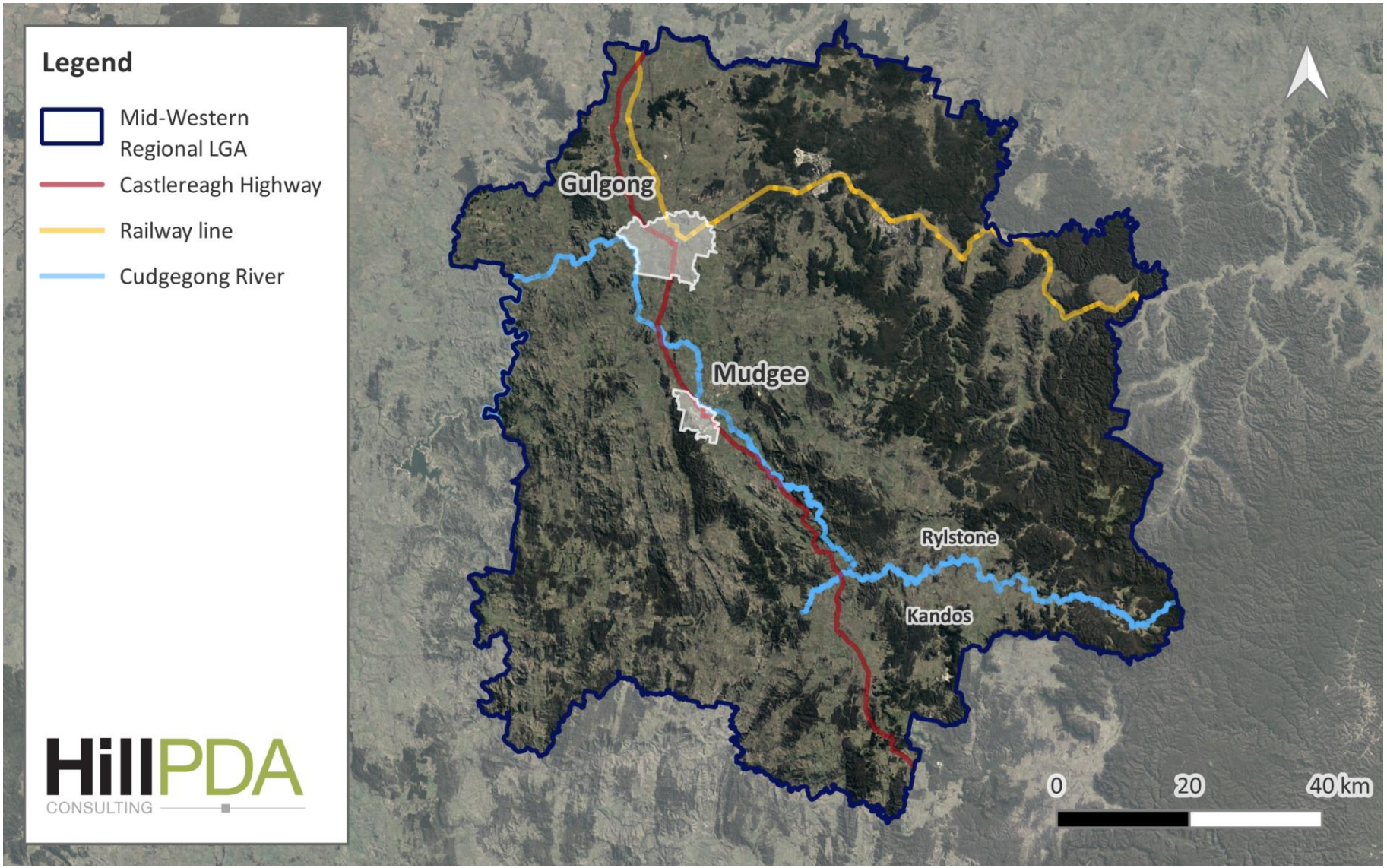
Mudgee is located approximately 261 kilometres north-west of Sydney and is the administrative heart of the Mid-Western Regional LGA. Mudgee's population of 11,680 includes a high proportion of young people (aged between 5 and 14 years) and families, attracted to its high amenity, medical facilities, schools, child care, and retail and commercial services.

Gulgong is located 29 kilometres north of Mudgee. A historically significant town, Gulgong retains much of its 19th century urban fabric which contributes to its appeal as a tourist destination. Social infrastructure provision in Gulgong is limited by its comparatively small population of 2,680 people, and residents must travel to Mudgee to access major medical, retail and commercial services.

The findings of this report are informed by demographic analysis of Mudgee, Gulgong, and the Mid-Western Regional LGA. To enable this, demographic study areas for Mudgee and Gulgong were identified, approximately equivalent to those in the URS, allowing comparisons between the two to be made. Further details are provided in Chapter 0.

The demographic study areas are shown in Figure 1, in the context of the Mid-Western Regional LGA and other features.

Figure 1: Strategy area



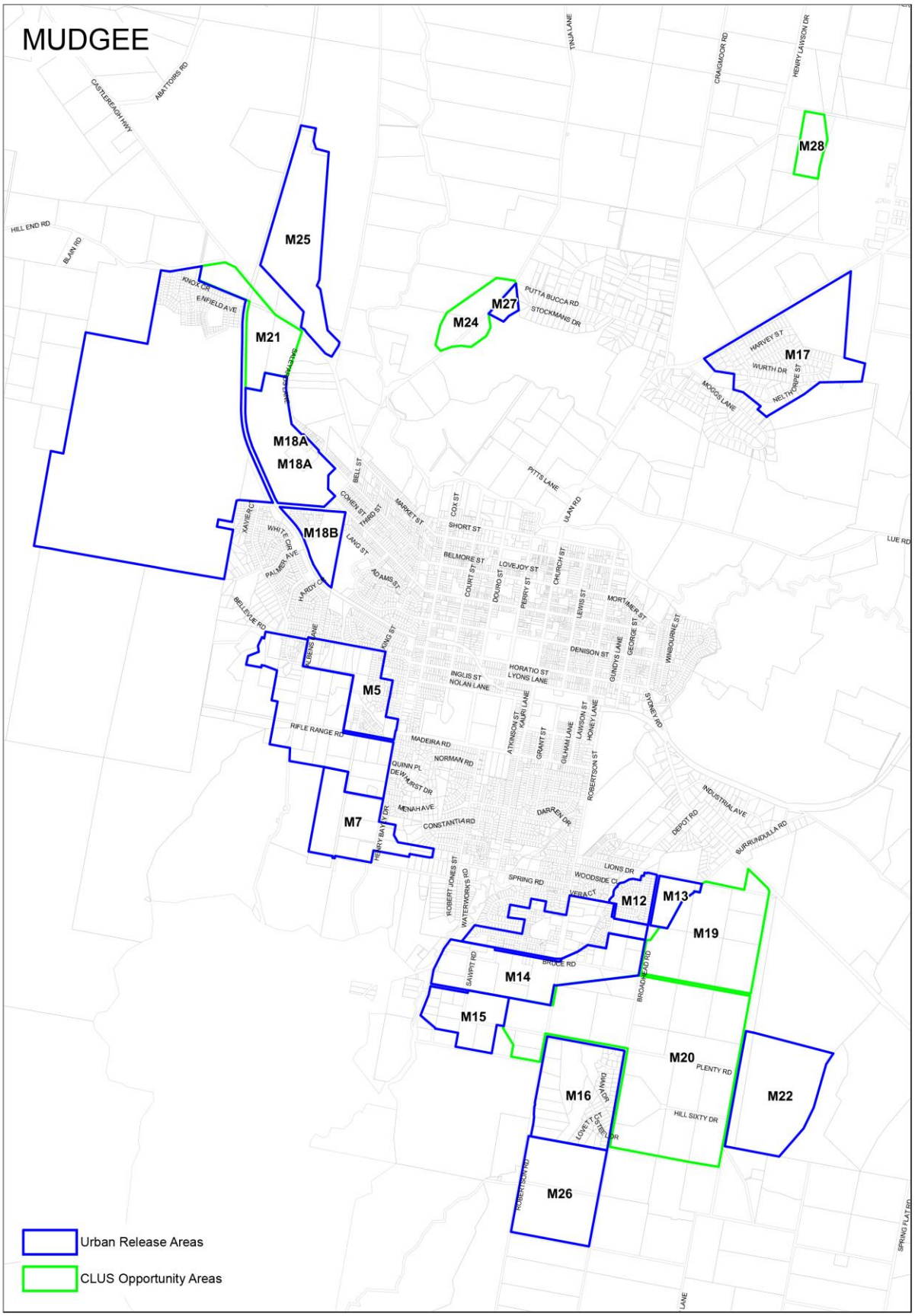
Source: HillPDA, Google Maps (2022)

1.4 Urban release areas

Urban release areas (URAs) are areas of land identified through the strategic planning process that are considered suitable for future residential development. The identification of URAs provides a unified and consistent approach to urban growth that enables Council to plan for and efficiently service new development over the long term, as well as providing certainty for residents and developers.

Council identified the original URAs in Mudgee and Gulgong in the URS 2014. These URAs were areas that had already been rezoned, reflecting the findings of earlier strategic planning work. Currently, the URAs from the URS are in varying stages of development, with some having been fully developed. URAs that have been fully or almost fully developed are not included in this strategy. The URAs in this URS 2023 include those from the URS that have not yet been fully developed, as well as areas identified in other strategic planning works undertaken by Council, including the Comprehensive Land Use Strategy (refer to Section 1.6). These are shown in the following figures and tables.

Figure 2: Mudgee urban release areas

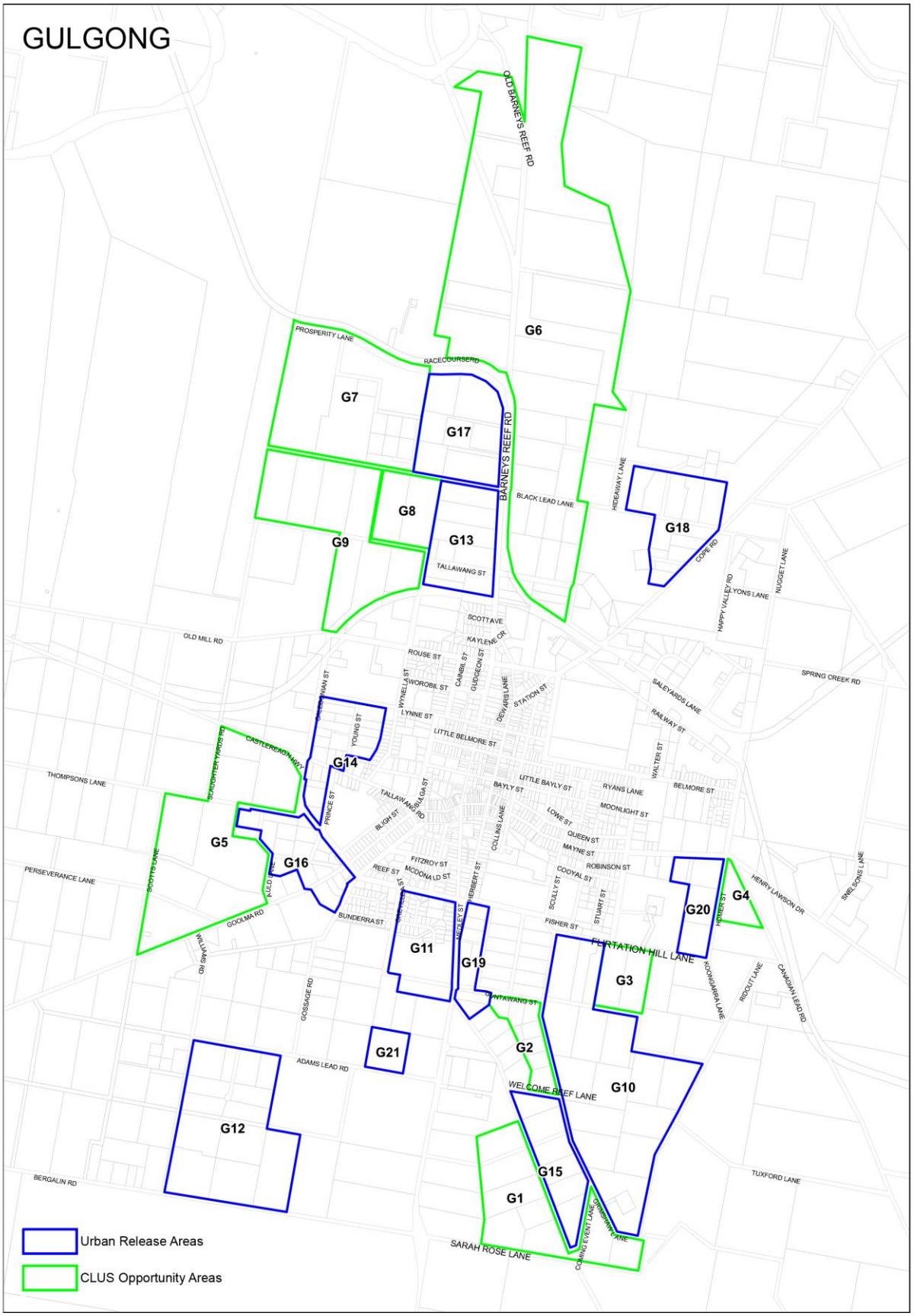


Source: Mid-Western Regional Council

Table 3: Overview of Mudgee URAs

URA ID	Source	Status	Size (ha)
M5	Included as a URA in the URS 2014 (area 5).	**Urban release area – partly developed** Most of M5 has been developed, though a small number of larger lots remain.	**32.1**
M6	Included as a URA in the URS 2014 (area 6).	**Urban release area – partly developed** Parts of M6 have been developed, though most consists of large lots.	**72.9**
M7	Included as a URA in the URS 2014 (area 7).	**Urban release area**	**37.6**
M11	Included as a URA in the URS 2014 (area 11).	**Urban release area – partly developed** Much of M11 has been developed, mostly as general residential lots. Undeveloped areas are spread throughout the area.	**40.5**
M13	Included as a URA in the URS 2014 (area 13).	**Urban release area**	**9.5**
M14	Included as a URA in the URS 2014 (area 14).	**Urban release area**	**56.1**
M15	Included as a URA in the URS 2014 (area 15).	**Urban release area**	**25.3**
M16	Included as a URA in the URS 2014 (area 16).	**Urban release area**	53.4
M17	Included as a URA in the URS 2014 (area 17).	**Urban release area – partly developed** The majority of M17 has been developed as large lot residential.	73.9
M18	Partly included in area marked 'future residential land release' in the CLUS. Included as a URA in the URS 2014 (area 18).	**Urban release area – partly developed** A large portion of the northern (less constrained) part of M18 has been developed, mostly as general residential lots.	**313.7**
M18A	Included in area marked 'future residential land release' in the CLUS. Included as a URA in the URS 2014 (area 18A).	**Urban release area – partly developed** A small section of M18A has been developed as general residential lots.	**45.2**
M18B	Included in area marked 'future residential land release' in the CLUS. Included as a URA in the URS 2014 (area 18B).	**Urban release area – partly developed** The western half of M18B has been fully developed.	16.5
M19	Included as a future development opportunity for 'urban purposes' in the CLUS. Included as a URA in the URS 2014 (area 19).	**Urban release area – partly developed** Over half of the total area of M19 has been developed, for a school and a manufactured home estate.	**66.8**
M20	Included as a low density residential opportunity in the CLUS.	**Urban release area**	**178.0**
M21	Included in area marked 'future residential land release' in the CLUS.	**Urban release area**	**31.3**
M22	Included as a URA in the URS 2014 (area 22).	**Urban release area**	**59.2**
M24	Included as a low density residential opportunity in the CLUS.	**Urban release area**	**18.1**
M25	Planning proposal.	**Urban release area**	**57.6**
M26	Partly included as a URA in the URS 2014 (area 26).	**Urban release area**	**52.0**
M27	Partly included as a URA in the URS 2014 (area 21).	**Urban release area**	**3.7**
M28	Included in area marked 'airport development opportunity' in the CLUS.	**Urban release area**	**10.5**

Figure 3: Gulgong urban release areas



Source: HillPDA, Mid-Western Regional Council

Table 4: Overview of Gulgong URAs

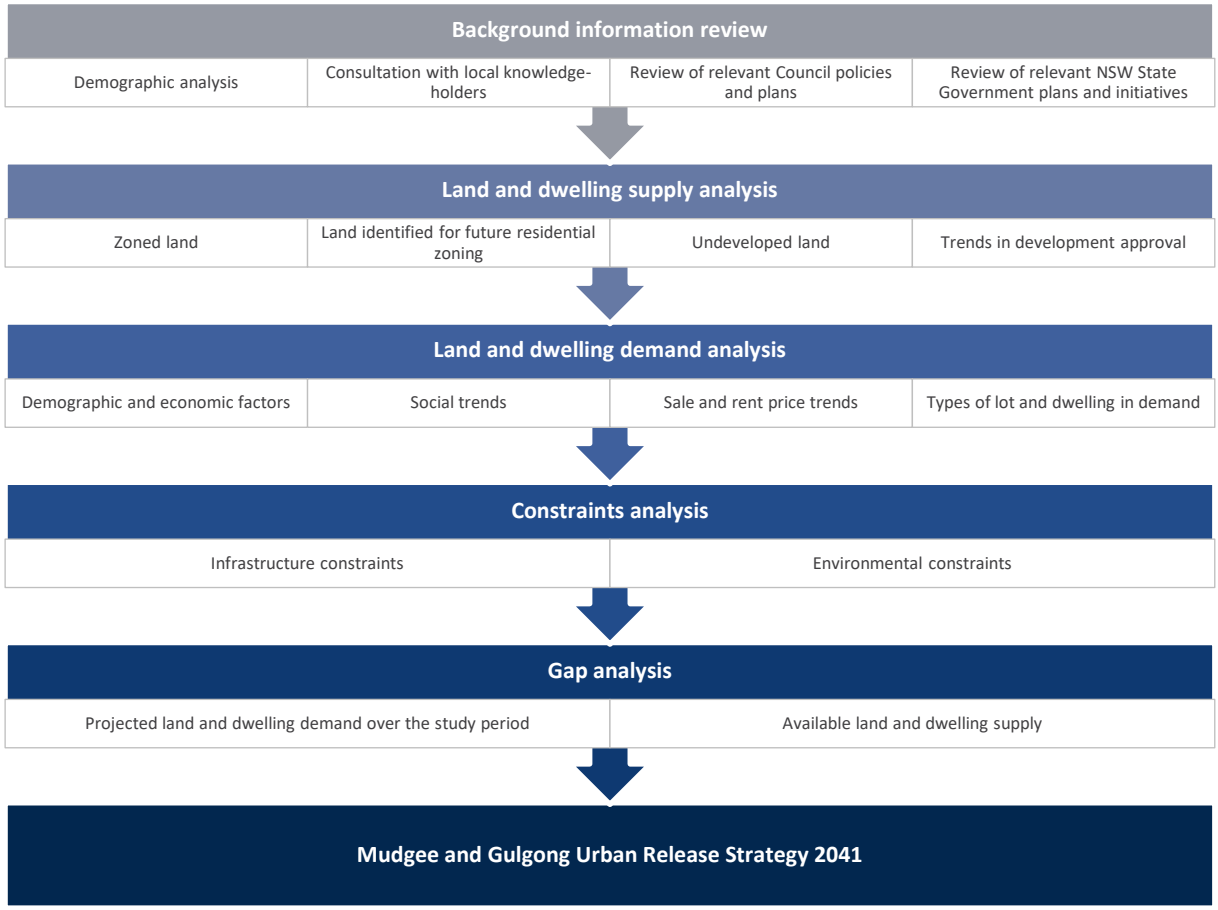
URA ID	Source	Status	Size (ha)
G1	Included as a low density residential opportunity in the CLUS.	**Urban release area**	**27.8**
G2	Included as a low density residential opportunity in the CLUS.	**Urban release area**	**7.5**
G3	Included as a future low density residential opportunity in the CLUS.	**Urban release area**	**8.1**
G4	Included as a future low density residential opportunity in the CLUS.	**Urban release area**	**4.0**
G5	Included as a future low density residential opportunity in the CLUS.	**Urban release area**	**49.9**
G6	Included as an opportunity for 2-6 hectare residential lots in the CLUS.	**Urban release area – partly developed** The southernmost part of G6 has been developed to or near the minimum lot size as large lot and large lot residential s.	**159.8**
G7	Included as a future low density residential opportunity in the CLUS.	**Urban release area**	**45.5**
G8	Included as a short-term future general residential opportunity in the CLUS. Partly included as a URA in the URS 2014 (area A3).	**Urban release area**	**10.9**
G9	Included as a medium-term future general residential opportunity in the CLUS. Partly included as a URA in the URS 2014 (area A3).	**Urban release area**	**36.6**
G10	Included as a URA in the URS 2014 (area A1).	**Urban release area**	**59.7**
G11	Partly included in investigation area for future residential use in the CLUS. Included as a URA in the URS 2014 (area A2).	**Urban release area – partly developed** Approximately half of G11 is yet to be developed, with the other half developed as general residential lots.	**15.4**
G12	Included as an opportunity for 2-6 hectare residential lots in the CLUS. Included as a URA in the URS 2014 (area A4).	**Urban release area – partly developed** The northern half of G12 has been developed to or near the minimum lot size as large lot residential s.	**43.3**
G13	Included as a short-term future general residential opportunity in the CLUS. Partly included as a URA in the URS 2014 (area A3).	**Urban release area**	**17.9**
G14	Included within area marked as low density residential in the CLUS.	**Urban release area**	**13.4**
G15	Included as a low density residential opportunity in the CLUS.	**Urban release area – partly developed** Most of G15 has been developed to or near the minimum lot size as large lot residential s.	**13.9**
G16	Included within area marked as 'additional residential land behind hospital' in the CLUS.	**Urban release area – partly developed** The easternmost parts of G16 have been developed to or near the minimum lot size as large lot residential s.	**14.3**
G17	Included as a low density residential opportunity in the CLUS.	**Urban release area**	**21.7**
G18	Included within area marked as low density residential in the CLUS.	**Urban release area**	**18.9**
G19	Partly included within area marked as low density residential in the CLUS.	**Urban release area – partly developed** Most of G15 has been developed to or near the minimum lot size as large lot residential s.	**6.7**
G20	Partly included within area marked as large lot residential, and partly within area marked as future low density residential in the CLUS.	**Urban release area**	**9.0**
G21	Mid-Western Regional Council suggestion.	**Urban release area**	**4.1**

1.5 Strategy approach

Housing supply and demand are influenced by a wide range of factors, including demographic change and economic and labour conditions. HillPDA has worked closely with Council to understand the drivers of housing supply and demand in Mudgee and Gulgong. This has informed an understanding of the challenges facing Council to provide an adequate and appropriate supply of residential land for the future.

Figure 4 shows a simplified overview of the approach taken to develop this strategy, which is detailed further in the following text.

Figure 4: Overview of strategy methodology



Source: HillPDA

To develop this URS 2023, research was conducted into:

- Population growth and household characteristics over the past decade
- Household incomes and housing affordability
- Housing needs and dwelling types.

In addition, the following tasks were carried out to understand the housing market and development activity:

- An analysis of median house prices and rents was carried out to understand movement in Mudgee and Gulgong's markets over time
- An overview of ongoing residential projects in Mudgee and Gulgong to understand market dynamics; and the development pipeline

- Interviews and discussions with Council staff and representatives of the real estate industry to inform our understanding of constraints and opportunities affecting housing supply and demand in Mudgee and Gulgong
- Housing market research was undertaken to understand current lot production, take up trends and expected future activity.

An analysis of the supply of both residential land and dwellings in Mudgee and Gulgong was carried out by examining historical supply as well as land capacity and availability to accommodate future lot production. The barriers to future supply were analysed to distinguish structural challenges from market cyclical factors, which cumulatively impact on housing supply.

The following tasks were undertaken by reviewing Council documents and information, market analysis, and informal interviews with a total of seven representatives of real estate agencies active in Mudgee and Gulgong:

- Analysis of historical supply and dwelling production trends
- Analysis of structural and cyclical factors that impact on housing supply and demand
- Identification and analysis of specific challenges for development in Mudgee and Gulgong.

This strategy utilises population projections prepared by the NSW Department of Planning and Environment, and projections by HillPDA are based on historical trends. The approach utilises two data sources for population projections to manage the uncertainty of projecting future growth. All projections commence from the observed usual resident population recorded in the study areas at the 2021 Census. Future changes in migration, aging and household formation may vary from those assumed in the projections and can all impact on the eventual population achieved.

The above findings inform a gap analysis that considers the difference between supply and demand in Mudgee and Gulgong over the study period. This is followed by the urban release strategy, which brings together the findings from the previous sections to present a holistic approach to guide residential development in Mudgee and Gulgong.

Where required, additional details relating to the specific methods used are provided in the relevant section or Chapter. The method has been developed in close collaboration with Council to the greatest extent possible and was informed by discussions with relevant local stakeholders.

1.6 Strategic planning context

Planning for housing is influenced by Council and State Government plans and strategies. To develop this URS 2023, a selection of relevant plans and strategies were considered, the findings of which are shown in this section.

1.6.1 State policies and plans

Central West and Orana Regional Plan 2041

In December 2022, NSW DPE published the *Central West and Orana Regional Plan 2041* (the regional plan). The regional plan applies to 19 LGAs (including the Mid-Western LGA), and its purpose is to consider strategic land use planning for the region, and update the findings of the previous regional plan. It aims to provide a cohesive vision for the region to 2041, across sustainability, housing, communities, economics, and region-specific policy interventions.

The regional plan provides objectives and strategies to achieve the identified vision. Table 5 contains the regional plan objectives that are relevant to this URS 2023.

Table 5: Relevant objectives from the *Central West and Orana Regional Plan 2041*

Regional Plan Part	Objective(s)
Part 1: Region shaping investment	• **Objective 2:** Support the State's transition to Net Zero by 2050 and deliver the Central-West Orana Renewable Energy Zone
Part 2: A sustainable and resilient place	• **Objective 7:** Plan for resilient places and communities • **Objective 9:** Ensure site selection and design embraces and respects the region's landscapes, character and cultural heritage
Part 3: People, centres, housing and communities	• **Objective 13:** Provide well located housing options to meet demand • **Objective 14:** Plan for diverse, affordable, resilient and inclusive housing • **Objective 15:** Manage rural residential development • **Objective 16:** Provide accommodation options for seasonal, temporary and key workers • **Objective 17:** Coordinate smart and resilient utility infrastructure
Part 4: Prosperity, productivity and innovation	• **Objective 18:** Leverage existing industries and employment areas and support new and innovative economic enterprises

Source: NSW Department of Planning and Environment, 2022

In addition, the regional plan establishes the following local government priorities for Mid-Western Regional LGA:

- making available diverse, sustainable, adaptable and affordable housing options through effective land use planning
- respecting and enhancing the historic character and aesthetic appeal of the towns and villages within the Region
- providing infrastructure and services to cater for the current and future needs of our community
- supporting the attraction and retention of a diverse range of businesses and industries.
- working with key stakeholders to minimise the impacts and leverage opportunities of State Significant Development.
- identifying opportunities for Mid-Western Regional Council as the wider region's economy diversifies, significant investment occurs in the Central-West Orana REZ and leveraging its accessibility to the Hunter Valley and Dubbo.

Central-West Orana Renewable Energy Zone

The Central-West Orana Renewable Energy Zone (the REZ) was declared by the NSW Minister for Energy and Environment under the *Electricity Infrastructure Investment Act 2020 (NSW)* and gazetted in November 2021 (NSW Government EnergyCo, 2022). REZs are intended to support NSW and Australia's electricity network and transition to renewable energy, by enabling the grouped delivery of renewable energy generation, storage, and transmission. The REZ is intended to deliver at least three gigawatts of renewable energy across its 20,000 square kilometre area, as well as significant amounts of regional investment and employment. The REZ is shown in Figure 5.

Figure 5: Central-West Orana Renewable Energy Zone boundaries

Source: NSW Government EnergyCo (2022)

The boundaries of the REZ contain a large portion of MWRC LGA, including both Mudgee and Gulgong. It is anticipated that the REZ will spur significant investment in renewable energy projects including solar farms, wind farms, and energy storage projects. The REZ has resulted in a significant volume of projects progressing through the planning process. These projects could generate large construction workforces in the region, as well as smaller (though still significant) operational workforces.

1.6.2 Local policies and plans

Mid-Western Regional Comprehensive Land Use Strategy 2010

In 2010, Council adopted the *Mid-Western Regional Comprehensive Land Use Strategy* (CLUS), prepared by Parsons Brinckerhoff. The CLUS was subsequently endorsed by the then NSW Department of Planning in 2011. The CLUS provides the strategic framework to guide urban planning and land use decisions within the LGA over a 25 year period. It includes 'town structure plans' for Mudgee, Gulgong, Rylstone and Kandos. These town structure plans identify future residential land supply. A recommendation of the CLUS was to prepare an Urban Release Strategy for residential land to assist in infrastructure planning into the future.

Development Servicing Plans (DSPs)

DSPs outline the works and associated timeframes for delivery of adequate water and sewerage infrastructure across the LGA. DSPs provide a basis for Council to undertake cost recovery for servicing works through developer contributions. At present, Council is in the process of updating its Development Servicing Plans (DSP).

The current DSPs were adopted in 2008 and have a horizon of 30 years. The DSPs include hypothetical growth beyond that envisaged in the CLUS or URS 2014. Furthermore, the DSPs consider residential development in areas that are not included or identified the URS 2014 or this strategy.

Council intends to update the DSPs to reflect changes since 2008. This work is dependent on the findings of strategic land use planning works (including this strategy), as the DSPs must be aligned with Council's strategic planning policy.

Our Place 2040: Mid-Western Regional Local Strategic Planning Statement

In May 2020, Council adopted *Our Place 2040: Mid-Western Regional Local Strategic Planning Statement* (the LSPS). The aim of the LSPS is to provide a 20 year land use vision for the LGA and link local and regional strategic planning objectives to ensure consistency. It identifies strengths and opportunity areas for the region, its unique characteristics, and was informed by community consultation, including almost 300 completed surveys.

The LSPS provides planning priorities, actions, and structure plans to achieve its aims. Of the 12 planning priorities, those which are most relevant to this update are shown in Table 6.

Table 6: Relevant planning priorities from *Our Place 2040: Mid-Western Regional Local Strategic Planning Statement*

LSPS theme	Planning priority(s)
Looking after our community	• **Planning Priority 1:** Respect and enhance the historic character of our Region and heritage value of our towns • **Planning Priority 2:** Make available diverse, sustainable, adaptable and affordable housing options through effective land use planning Ensure site selection and design embraces and respects the region's landscapes, character and cultural heritage • **Planning Priority 3:** Maintain and promote the aesthetic appeal of the towns and villages within the Region • **Planning Priority 4:** Provide infrastructure and services to cater for the current and future needs of our community • **Planning Priority 5:** Ensure land use planning and management enhances and protects biodiversity and natural heritage
Protecting our natural environment	• **Planning Priority 5:** Ensure land use planning and management enhances and protects biodiversity and natural heritage

Source: Mid-Western Regional Council, 2021

The LSPS acknowledges that a diversity of housing is important to attract new residents to the Region and to ensure existing residents have a choice of housing to suit their needs as their circumstances change. The LSPS commits Council to ongoing monitoring of land release and development as well as promoting affordable housing options across the Region.

Mid-Western Local Environmental Plan 2012

The Mid-Western Local Environmental Plan 2012 (MWLEP) is the local environmental planning instrument for Mudgee and Gulgong. It has been revised and amended numerous times since commencement, including changes to the supply of land for housing.

1.7 Limitations and uncertainty

All attempts have been made to ensure that this URS 2023 minimises uncertainty. However, long-term strategic planning activities have inherent uncertainties. The limitations and uncertainty of this URS 2023 are considered in this section.

The findings of this URS 2023 are reliant (to varying degrees) on projections and other data that predict future conditions. This causes a level of uncertainty particularly when projecting demand for residential land and housing. Additionally, as supply and demand of residential land and housing are subject to market forces, market volatility, structural changes, or other factors are possible and unpredictable.

Whilst all data utilised in this URS 2023 was considered up to date and accurate at the time of writing, any mistakes or inaccuracies could have impacts on the findings. Additionally, this URS 2023 relies on assumptions in several key areas. Whilst this introduces uncertainty, it was necessary to use assumptions to assist in developing projections for which data is not available.

The identified limitations and uncertainty must be considered when applying the findings of this URS 2023. However, their effects can be mitigated through:

- Monitoring the supply and demand of residential land and dwellings in Mudgee and Gulgong
- Assessing changes in supply and/or demand against the findings of this URS 2023
- Reviewing and updating the assumptions (and affected findings) of this URS 2023.

Additionally, in developing this strategy, steps were taken to minimise uncertainty and limitations, including:

- All assumptions were developed in collaboration with Council planning staff and technical experts, grounded in observed data, professional experience, and consultation with local real estate industry experts.
- Where assumptions have been used, this has been identified and outlined for transparency and reference.
- Multiple methods were utilised for assessing and projecting demand.
- Conservative assumptions have been employed where the application of the precautionary principle is considered appropriate, such as where a less conservative assumption could increase the burden faced by Council and MWR LGA residents.

1.8 Strategy timeframe and review

This URS 2023 is for the period 2021-2041 and is based on demographic, housing and other data from 2021 and the preceding five year period. It is anticipated that Council will review the status of the strategy findings every five years.

DEMOGRAPHIC TRENDS

2.0 DEMOGRAPHIC TRENDS

This Chapter contains analysis of demographic data from the 2021 Census to inform an understanding of the drivers of housing supply and demand. This analysis builds on the demographic data in the URS 2014, including a review of historic and projected population growth, household and dwelling characteristics, and tenure and income data. The demographic study period was also updated, to cover the period 2021 to 2041.

2.1 Study areas

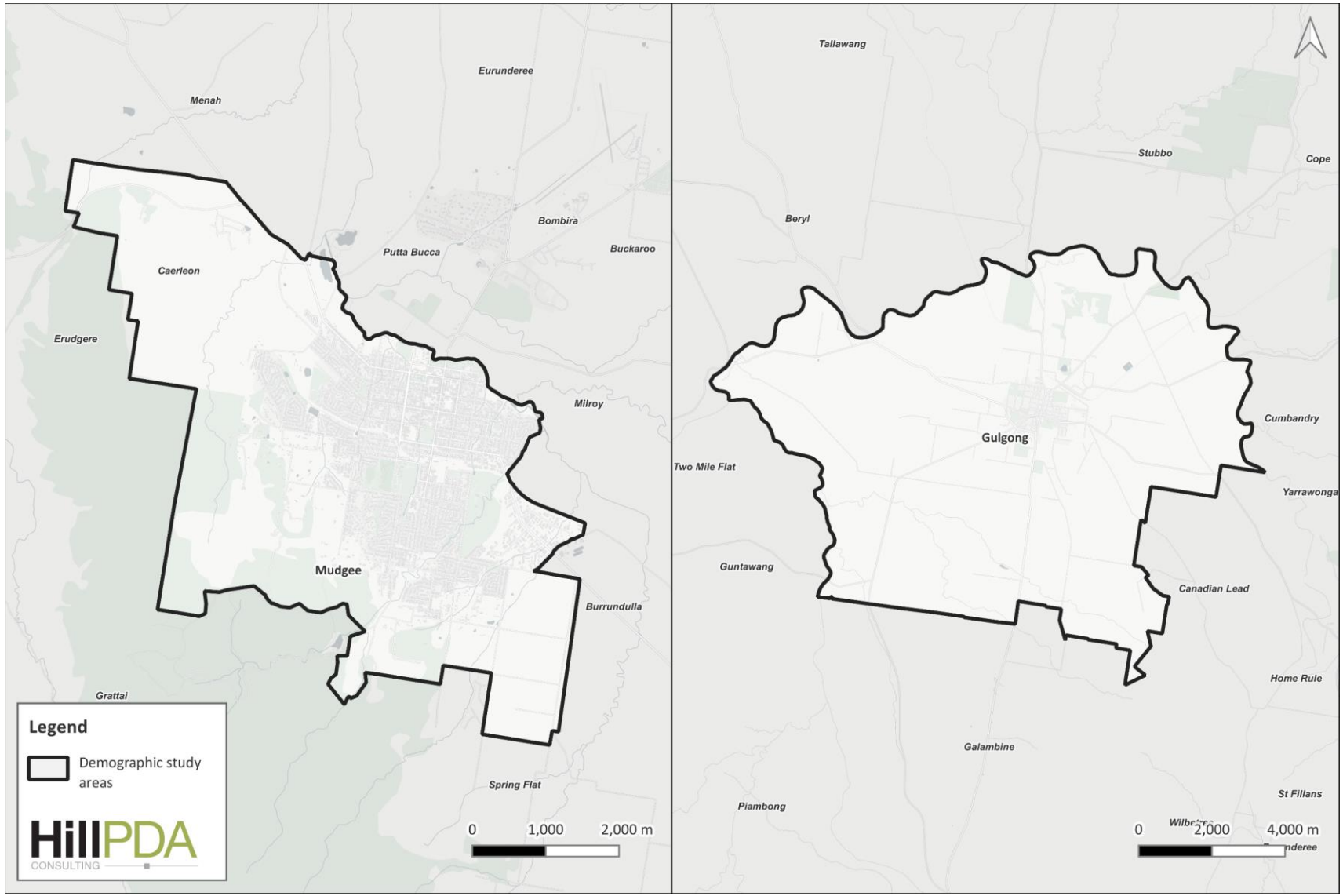
The demographic analysis undertaken for the URS 2014 utilised data and geographical areas from the 2011 Census. These areas included the Mid-Western Regional LGA and the State Suburbs (SSC) Mudgee and Gulgong. Mudgee (SSC) and Gulgong (SSC) provided appropriate boundaries for the purposes of this study, containing the urban core and residential area of each locality, and a similar extent of the surrounding land.

Since that time, the ABS has twice updated the Australian Statistical Geography Standard (ASGS), which defines geographical areas used for Census data. As such, demographic data is no longer provided for the geographical areas used in the URS 2014. Though equivalent geographies exist in the current ASGS for both Mudgee and Gulgong, they differ significantly from those used in the URS 2014. To enable comparison between the findings of this report and the URS 2014, custom geographies were created using ABS's TableBuilder service. These were constructed from Mesh Blocks (MBs), the smallest geographical areas provided by the ABS, and designed to approximate the areas used for demographic analysis in the URS 2014.

Whilst the custom geographies align with those used for the URS 2014 to the greatest extent possible, the boundaries of the MBs prevent perfect alignment. Only one of these areas of difference contains dwellings, a small section of the Gulgong boundary which contains up to three dwellings. For the purposes of demographic analysis, these differences are considered negligible. Caution should nonetheless be exercised in comparing demographic findings between the URS 2014 and this report. Unless otherwise stated, demographic findings for Mudgee or Gulgong refer to the custom geographies described above. Where relevant, demographic data has been benchmarked against the Mid-Western Regional LGA and the Rest of New South Wales (RNSW). RNSW includes all of NSW other than the Greater Sydney Greater Capital City Statistical Area.

The demographic study areas are shown in Figure 6.

Figure 6: Demographic study areas



Source: HillPDA, ABS (2021)

2.2 Population

In 2021, the population of Mudgee and Gulgong was 11,680 and 2,680, respectively. Together, these towns accommodate 55 per cent of the LGA's total population of 25,713 residents. As a proportion of the LGA's total population, Mudgee's share increased from 41 per cent in 2006 to 45 per cent in 2021, while Gulgong's share decreased from 14 per cent in 2006 to 10 per cent in 2021. The Balance of MWR LGA as a proportion of the LGA's total population remained at between 44-45 per cent between 2006 and 2021.

Table 7: Population Size (2006-2021)

Area	Population (# people)				% of MWR LGA Population Total			
	2006	2011	2016	2021	2006	2011	2016	2021
Mudgee	8,726	9,830	10,964	11,680	41%	44%	46%	45%
Gulgong	2,918	2,383	2,523	2,680	14%	11%	10%	10%
Balance of MWR LGA	9,442	10,105	10,589	11,353	45%	45%	44%	44%
MWR LGA	21,086	22,318	24,076	25,713	100%	100%	100%	100%

Source: HillPDA, Australian Bureau of Statistics Census (2022)

2.2.1 Age distribution

In 2021, the median age in Mudgee was 36, significantly lower than in Gulgong (41), MWR LGA (42) and Rest of NSW (43). This indicates Mudgee contains a higher proportion of younger families and workers. The median age in Gulgong (41) is closer to that of MWR LGA (42) and Rest of NSW (43) and suggests there is an older and more established population. As a reflection of this, the median age decreased from 37 to 36 in Mudgee and increased from 39 to 41 in Gulgong in the 10 years from 2011-2021.

These figures are shown in Table 8

Table 8: Median age (2011-2021)

Area	2011	2016	2021	Change 2011 -2021		Change 2016 -2011	
				#	%	#	%
Mudgee	37	36	36	-1.0	-3%	0.0	0%
Gulgong	39	40	41	2.0	5%	1.0	3%
MWR LGA	41	42	42	1.0	2%	0.0	0%
RNSW	41	43	43	2.0	5%	0.0	0%

Source: HillPDA, Australian Bureau of Statistics Census (2022)

In 2021, the proportion of people within the 0-14 age bracket in Mudgee (21 per cent), Gulgong (21 per cent) and the MWR LGA (20 per cent) was higher than in Rest of NSW (17 per cent). Mudgee had a higher proportion of people in the 25-44 age bracket at 27 per cent when compared to Gulgong (24 per cent) and the MWR LGA and Rest of NSW (both 23 per cent).

Mudgee appears to have a younger population, with a lower proportion of residents aged 55 years and over (30 per cent) compared to Gulgong (35 per cent), MWR LGA (34 per cent) and Rest of NSW (35 per cent). While Gulgong tends to have an older population, the proportion of the population within the 5-14 age bracket was higher in Gulgong (16 per cent) than in both Mudgee and across the MWR LGA (both 14 per cent).

This is shown in Table 9.

Table 9: Age distribution (2021)

Age group	Mudgee	Gulgong	MWR LGA	RNSW
0-4 years	7%	5%	6%	5%
5-14 years	14%	16%	14%	12%
15-19 years	6%	6%	6%	6%
20-24 years	5%	4%	4%	5%
25-34 years	15%	11%	11%	12%
35-44 years	12%	13%	12%	11%
45-54 years	11%	12%	13%	12%
55-64 years	11%	13%	14%	13%
65-74 years	9%	12%	11%	12%
75-84 years	7%	7%	7%	7%
85 years and over	3%	3%	2%	3%

Source: HillPDA, Australian Bureau of Statistics Census (2022)

2.2.2 Population growth

Between 2006 and 2021, the population of Mudgee grew by 34 per cent and the population of Gulgong declined by 8 percent. Although Gulgong experienced an overall decline over the last 15 years, its population increased by 12 per cent over the last 10 years and 6 per cent over the last 5 years. Overall, the LGA grew by 4,627 people or 22 per cent across the 15 year period. This is shown in Table 10.

Table 10: Population growth (2006-2021)

Area	Population growth 2006-2021 (15 years)		Population growth 2011-2021 (10 years)		Population growth 2016-2021 (5 years)	
	Number	Percentage	Number	Percentage	Number	Percentage
Mudgee	2,954	34%	1,850	19%	716	7%
Gulgong	-238	-8%	297	12%	157	6%
Balance of MWR LGA	1,911	20%	1,248	12%	764	7%
MWR LGA	4,627	22%	3,395	15%	1,637	7%

Source: HillPDA, Australian Bureau of Statistics Census (2022)

As shown in Table 11, Mudgee has attracted 64 per cent of the LGA's new residents while Gulgong's share decreased by five per cent since 2006. In the last 10 years, Gulgong attracted nine per cent of new residents in the LGA compared to 54 per cent for Mudgee while in the last 5 years, Gulgong attracted 10 per cent of the LGA's new residents compared to 44 per cent for Mudgee.

This indicates that a higher proportion of new residents are choosing to live in Gulgong than previously. This represents a significant change, particularly when considered in conjunction with the findings of the URS 2014, which found that over the period from 1991 to 2011, Mudgee attracted over 80 per cent of population growth in the LGA, whereas Gulgong attracted just 15 per cent.

Table 11: Share of population growth (2006-2021)

Area	Share of growth (%)		
	2006-2021 (15 years)	2011-2021 (10 years)	2016-2021 (5 years)
Mudgee	64%	54%	44%
Gulgong	-5%	9%	10%
Balance of MWR LGA	41%	37%	47%
MWR LGA	100%	100%	100%

Source: HillPDA, Australian Bureau of Statistics Census (2022)

As shown in Table 12, the average annual population growth rate for Mudgee between 2006 and 2021 was 2.3 per cent, which was higher than the rate for the LGA (1.5 per cent). The population of Gulgong decreased by an average rate of 0.5 per cent per annum across the 15 year period, though increased by 1.2 per cent per annum in the most recent 5 years between 2016 and 2021. Between 2016 and 2021, growth rates were consistent across Mudgee, Gulgong, and the LGA, with all areas recording over one per cent growth.

Table 12: Population growth rate (2006-2021)

Area	Compound annual growth rate (%)		
	2006-2021 (15 years)	2011-2021 (10 years)	2016-2021 (5 years)
Mudgee	2.3%	1.3%	1.3%
Gulgong	-0.5%	-1.8%	1.2%
Balance of MWR LGA	1.3%	0.7%	1.4%
MWR LGA	1.5%	0.6%	1.4%

Source: HillPDA, Australian Bureau of Statistics Census (2022)

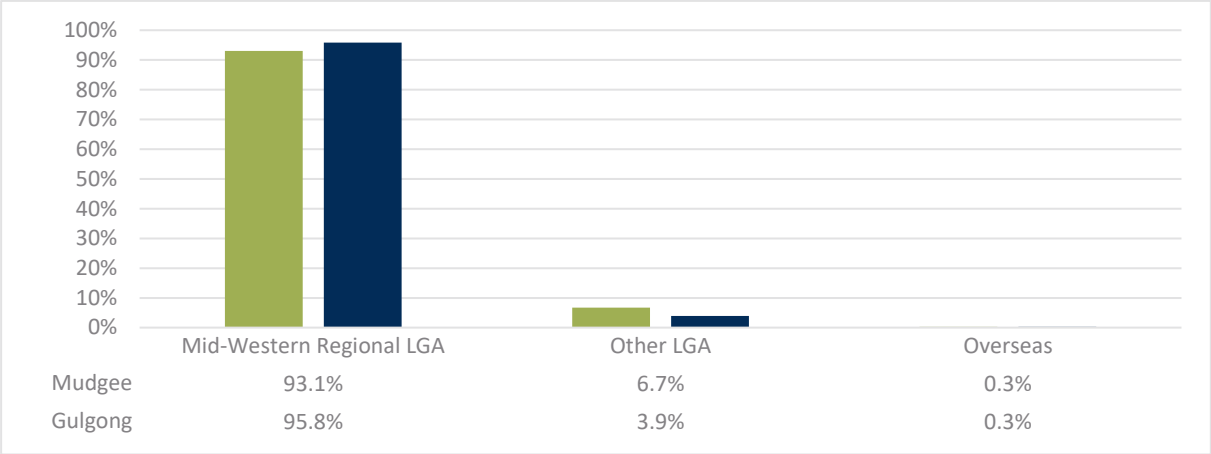
Table 12 also contains calculated compound annual growth rates for the study areas, according to Census data for the last 15 years to 2006. These growth rates show that, for Gulgong especially, population growth has been inconsistent.

2.2.3 Migration

Migration can be a significant factor in determining population growth, particularly in areas with small populations. Discussions with Council and local real estate agents suggested that the MWR LGA had been the subject of significant interest for migration in recent years, in part driven by employment opportunities and the COVID-19 pandemic (refer to Section 5.1).

Figure 7 and Figure 8 show Mudgee and Gulgong residents (as at the 2021 Census) by their place of usual residence one and five years ago, respectively. This gives an indication of how migration has affected Mudgee and Gulgong.

Figure 7: Mudgee and Gulgong residents: place of usual residence one year ago (2021)

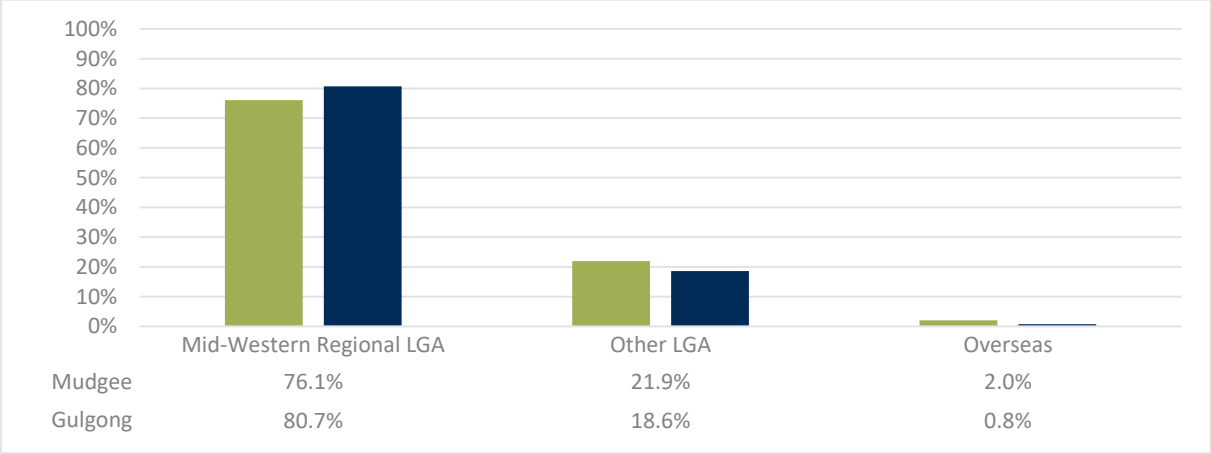


Source: HillPDA, Australian Bureau of Statistics Census (2022)

Note: Percentage calculations exclusive of '*not stated*' and '*not applicable*' responses.

Figure 7 indicates that almost 7 per cent of Mudgee residents had moved to Mudgee from outside the MWR LGA within the year preceding the 2021 Census, whilst around 4 per cent of Gulgong residents had moved to Gulgong from outside the MWR LGA in the same period. Only a small proportion of Mudgee and Gulgong residents were living overseas one year before the 2021 Census.

Figure 8: Mudgee and Gulgong residents: place of usual residence five years ago (2021)



Source: HillPDA, Australian Bureau of Statistics Census (2022)

Note: Percentage calculations exclusive of '*not stated*' and '*not applicable*' responses.

Figure 8 shows that almost one quarter of Mudgee residents and almost 20 per cent of Gulgong residents recorded at the 2021 Census were living outside the MWR LGA five years prior. Two per cent of Mudgee residents and slightly less than one per cent of Gulgong residents were living overseas five years before the 2021 Census. The majority of migration to Mudgee and Gulgong came from other LGAs, at 21.9 per cent and 18.6 per cent, respectively.

Table 13 shows the above findings in terms of number of residents.

Table 13: Mudgee and Gulgong residents by previous place of usual residence (2021)

Place of usual residence	Mudgee (number of current residents)		Gulgong (number of current residents)	
	One year ago	Five years ago	One year ago	Five years ago
Mid-Western Regional LGA	9,992	7,575	2,290	1,823
Other LGA	716	2,179	93	420
Overseas	28	198	7	17

Place of usual residence	Mudgee (number of current residents)		Gulgong (number of current residents)	
	One year ago	Five years ago	One year ago	Five years ago
Not stated / not applicable	923	1,666	256	409

Source: HillPDA, Australian Bureau of Statistics Census (2022)

Of Mudgee and Gulgong residents who lived in another LGA one or five years ago, most were from other parts of regional NSW (such as the Bathurst Regional, Dubbo Regional, Lake Macquarie, Maitland, Lithgow, or Warrumbungle LGAs), or the outer urban LGAs of Greater Sydney (such as the Penrith, Blue Mountains, Blacktown, or Cumberland LGAs). Other significant sources of migration to Mudgee and Gulgong included other NSW cities, including the LGAs of Wollongong and Shellharbour, the Central Coast, and Newcastle, whilst various inner-urban Sydney LGAs constituted smaller numbers.

2.2.4 Population projections

This section outlines how the populations of the MWR LGA and of Mudgee and Gulgong are projected to change over the 20 year period from 2021 to 2041. The findings of this section will inform our assessment of future land and dwelling demand in Mudgee and Gulgong (refer to Chapter 5.0).

Two methods were used for the population projections, providing a low and a high scenario for each area. This reflects the inherent uncertainties in projecting future population. The first method, scenario 1, utilises NSW DPE's population projections. Scenario 2 is based on observed data from the 2016 and 2021 Census to derive growth rates for each area.

The two projection scenarios are described below.

2.2.4.1 Scenario 1 – NSW DPE Population Projections

Scenario 1 utilises NSW DPE's population projections for the MWR LGA. DPE's projections are available for LGAs and Statistical Area Level 2 (SA2) geographies. Its projections are based on a range of sources including ABS population estimates that refer to 2016 Census data, as well as strategic planning information.

To ensure that later sections of this strategy did not add population(s) that had already been included in DPE's projections, HillPDA participated in a discussion about DPE's projections methodology. We were able to confirm that the worker populations discussed later in this report (refer to section 2.2.5) had not been included in DPE's population projections.

DPE's population projections refer to different geographical areas and utilise a different data source than those utilised elsewhere in this strategy. To enable comparison between the two population projection scenarios, we calculated a compound annual growth rate from DPE's projections and applied this rate to the observed 2021 Census population figure for the relevant study areas. It is noted that this represents a limitation in the projections, however, the SA2s are similar enough to the Mudgee and Gulgong study areas that any effects would be minimal.

Under Scenario 1, over the period 2021 to 2041:

- the MWR LGA is projected to grow by 4,442 people (0.8 per cent per year)
- Mudgee is projected to grow by 3,744 people (1.4 per cent per year)
- Gulgong is projected to grow by 223 people (0.4 per cent per year).

2.2.4.2 Scenario 2 – Observed growth (ABS Census)

Scenario 2 utilises the observed compound annual growth rate for each area between the 2016 and 2021 Census, as shown in Table 12 in the previous section. This rate was then applied to the observed 2021 Census population figures for each area.

Under Scenario 2, over the period 2021 to 2041:

- the MWR LGA is projected to grow by 8,243 people (1.4 per cent per year)
- Mudgee is projected to grow by 3,443 (1.3 per cent per year)
- Gulgong is projected to grow by 722 people (1.2 per cent per year).

2.2.4.3 Findings

The projected growth rates and population projections derived from these scenarios are shown in Table 14. Overall, Scenario 1 projects far less total population growth across the MWR LGA for the 20 year period, compared to Scenario 2. In addition, under Scenario 1, Mudgee is projected to grow significantly, capturing the majority of growth across the MWR LGA, whereas Gulgong is projected to grow by only a small amount. Under Scenario 2, a larger increase in population is projected for each of the areas except Mudgee, which is projected to grow by slightly fewer people than under Scenario 1.

Table 14: Selected population projections (2021-2041)

Area	Projection scenario	*2021**	2026	2031	2036	2041	Change (#) 2021-2041	Change (%) 2021-2041
Mudgee	Scenario 1	*11,680*	12,521	13,422	14,388	15,424	+3,744	+32.1%
	Scenario 2	*11,680*	12,459	13,290	14,177	15,123	+3,443	+29.5%
Gulgong	Scenario 1	*2,680*	2,734	2,789	2,845	2,903	+223	+8.3%
	Scenario 2	*2,680*	2,845	3,020	3,205	3,402	+722	+26.9%
Balance of MWR LGA	Scenario 1	*11,353*	11,503	11,634	11,744	11,828	+475	+4.2%
	Scenario 2	*11,353*	12,260	13,238	14,293	15,431	+4,078	+35.9%
Total MWR LGA	Scenario 1	*25,713*	26,758	27,846	28,977	30,155	+4,442	+17.3%
	Scenario 2	*25,713*	27,564	29,548	31,675	33,956	+8,243	+32.1%

Source: HillPDA, NSW DPE Population Projections (2022), ABS Census (2022)

* 2021 figures are sourced from the 2021 Census, and are not projections.

The above shows that across both scenarios, the populations of Mudgee and Gulgong are projected to grow over the study period. The rate of growth between the two projections methods differ to varying degrees, most notably for the MWR LGA and Gulgong. These differences are shown in the following figures.

Figure 9: Population projections to 2041: Mudgee

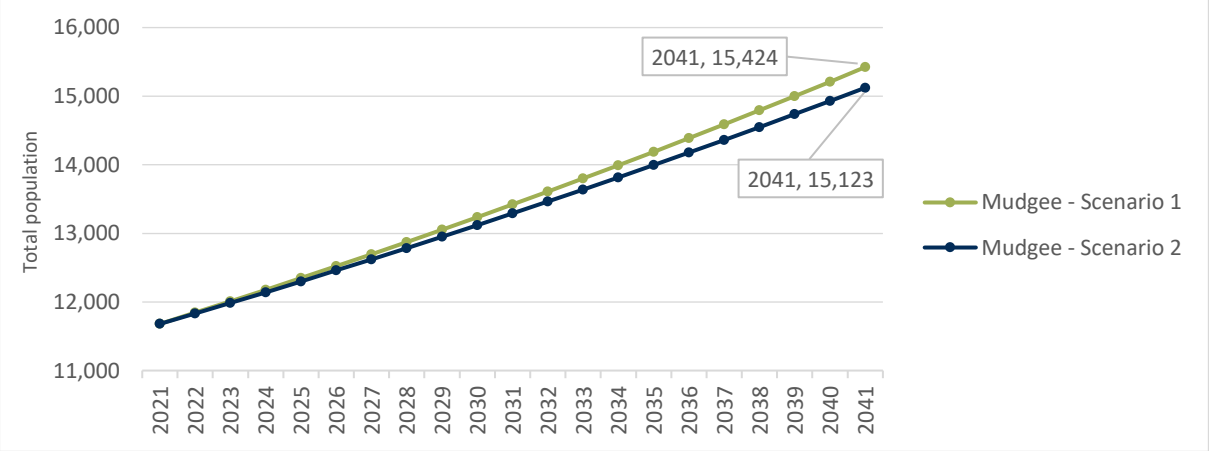


Figure 10: Population projections to 2041: Gulgong

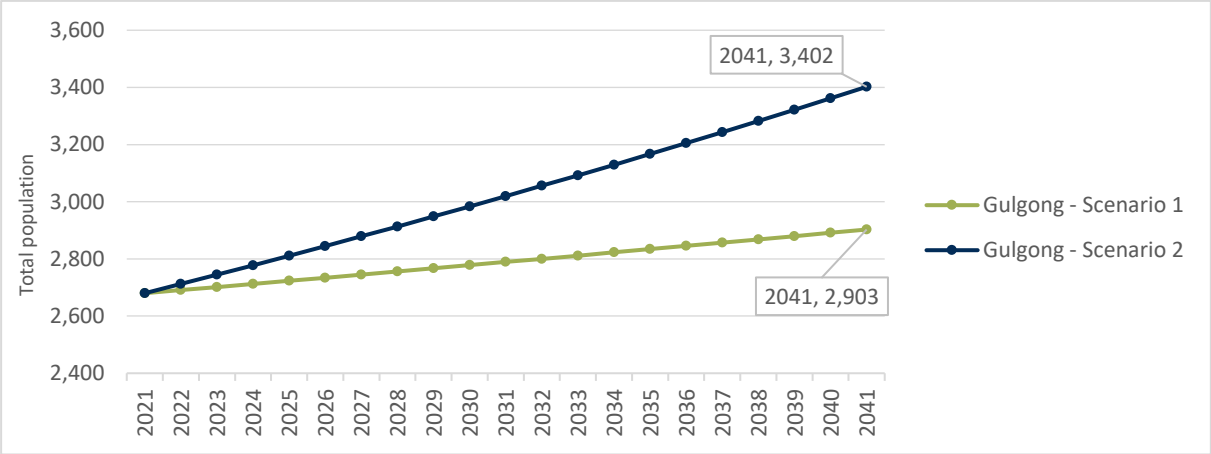
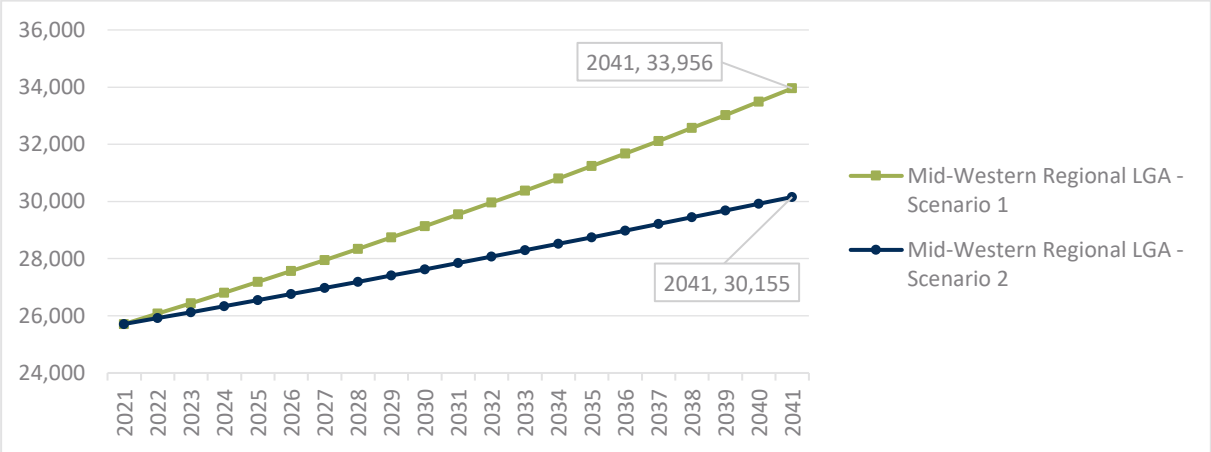


Figure 11: Population projections to 2041: Mid-Western Regional LGA



Source: HillPDA, NSW DPE Population Projections (2022), ABS Census (2021)

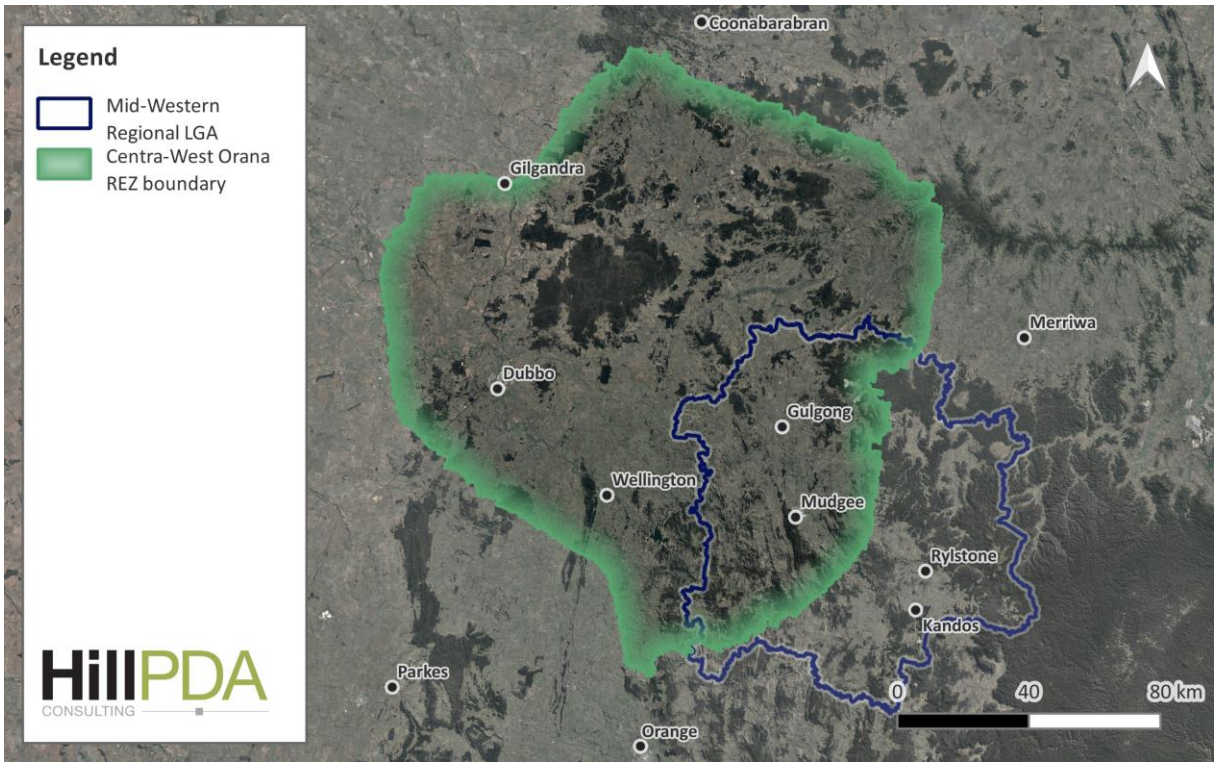
2.2.5 Employment-generating projects

This section contains an updated and expanded consideration of future employment in Mudgee and Gulgong. Council has identified the Central-West Orana Renewable Energy Zone (and the employment-generating projects anticipated to arise from its implementation) as a significant and potentially unpredictable driver of population growth. This section considers how a selection of employment-generating projects anticipated to occur in the region may contribute to population growth. These findings are then combined with the population projections (refer to section 2.2.4) to inform latter stages of the strategy.

The continued expansion of the mining sector is likely to create increased demand for dwellings in Mudgee and Gulgong. There are proposals to expand existing mines such as the Ulan and the Moolarben coal mines, north of Mudgee, as well as to construct the new Bowdens Silver Mine, east of Mudgee. The extension of operations at existing mines in the LGA are not anticipated to require additional workforces, and therefore these projects are not considered in this section.

In addition to these mining proposals, employment will arise from the Central-West Orana Renewable Energy Zone (REZ), declared by the NSW Government in November 2021, which includes Mudgee and Gulgong within its boundaries. As a result, there are multiple renewable energy projects that are either operational or under construction in the region, with many more proposed. The REZ and its relationship with the MWR LGA are shown in Figure 12.

Figure 12: Mudgee and Gulgong within the Central-West Orana Renewable Energy Zone



Source: HillPDA

With the assistance of Council, HillPDA have sought to estimate the population impacts of known mining and energy projects on Mudgee and Gulgong over the period to 2031. This work is predicated on employment levels and timings shown in the following tables. It is acknowledged the actual commencement date and employment populations of these projects may eventually differ from the estimate below.

2.2.5.1 Overview of identified projects

A review of NSW DPE's Major Projects website identified proposed employment-generating projects likely to affect population projections for Mudgee and Gulgong. Projects that met one or more of the following criteria were assessed for their potential impact on population growth in Mudgee and Gulgong:

- Located (entirely or partially) within the MWR LGA
- Within approximately 40 minutes by road of Mudgee or Gulgong
- Closer to Mudgee or Gulgong than any other significant centre.

Where a proposed employment-generating project meets one or more of these criteria, an estimation of its workforce requirements has been provided. These estimations are based on both the employment information provided in the Environmental Impact Statements for each project and information made available to Council, which is involved in ongoing discussions with proponents and potential proponents.

Employment-generating projects located within the MWR LGA are shown in Table 15.

Table 15: Employment-generating projects in the MWR LGA

Project details and phase	Estimated workforce		Timeframes (targeted)	Distance to	
	Construction	Operation		Mudgee	Gulgong
Bowdens Silver Mine SSD-5765 Approved	320	228	**Construction:** 2024, 18 months. **Operation:** 2026, to 2045.	37km (35 minutes)	62km (48 minutes)
Wollar Solar Project SSD-9254 Approved	400	5	**Construction:** 2023, 12-18 months. **Operation:** 2024, to 2050.	55km (45 minutes)	55km (45 minutes)
Stubbo Solar Project SSD-10452 Approved	507	10	**Construction:** 2024, 24 months. **Operation:** 2026, to 2050.	40km (35 minutes)	10km (10 minutes)
Tallawang Solar Farm SSD-23700028 Collate submissions	430	27	**Construction:** *TBD*, 34 months. **Operation:** *TBD*.	42km (40 minutes)	10km (10 minutes)
Birriwa Solar Farm SSD-29508870 Response to submissions	800	15	**Construction:** 2024, 36 months. **Operation:** 2027, to 2057.	68km (50 minutes)	38km (30 minutes)
Barneys Reef Wind Farm SSD-24106966 Prepare EIS	340	10	**Construction:** 2024, 28 months. **Operation:** 2026, to *TBD*.	60km (45 minutes)	30km (20 minutes)
Burrendong Wind Farm SSD-8950984 Prepare EIS	250	15	**Construction:** *TBD*, 30 months. **Operation:** *TBD*.	30km (25 minutes)	50km (35 minutes)
Bellambi Heights Battery SSD-3344237 Prepare EIS	100	*TBD*	**Construction:** *TBD*, 12-18 months. **Operation:** *TBD*.	38km (35 minutes)	8km (10 minutes)
Piambong Wind Farm N/A Preliminary engagement	400	15	**Construction:** 2026, 30 months. **Operation:** 2028, to 2058.	30km (30 minutes)	30km (30 minutes)
Ulan Solar SSD-46406974 Prepare EIS (on hold)	120	4	**Construction:** *TBD*, 12 months. **Operation:** *TBD* (30 years).	50km (40 minutes)	20km (20 minutes)
Orana Wind Farm N/A Feasibility	580	27	**Construction:** 2026, *TBD*. **Operation:** 2028, to *TBD*.	62km (50 minutes)	31km (30 minutes)
Liverpool Range Wind Farm* SSD-6696 Response to submissions	800	47	**Construction:** 2024, 36 months. **Operation:** 2027, to 2052.	Various (>1hr)	Various (up to 40 minutes)
Central-West Orana REZ Transmission SSI-48323210 Prepare EIS	1,200	43	**Construction:** 2024, 36 months. **Operation:** 2027, to *TBD*.	Various	Various

Source: Mid-Western Regional Council and NSW Planning Portal (2023)

Note: at the time of drafting, details were not available for all projects. Where information was not available, this is shown as *TBD*.

* For the Liverpool Range Wind Farm, whilst none of the main project structures (i.e. wind turbines) are proposed to be located within the MWR LGA, the project's boundary overlaps with that of the LGA.

In addition to the above, Table 16 shows employment-generating projects located outside the MWR LGA that have been considered in this strategy.

Table 16: Employment-generating projects outside the LGA

Project details and phase	Estimated workforce		Timeframes (targeted)	Distance to	
	Construction	Operation		Mudgee	Gulgong
Valley of the Winds SSD-10461 Response to submissions	400	50	**Construction:** 2023, 42 months. **Operation:** 2027, to *TBD*.	94km (>1hr)	63km (45 minutes)
Dunedoo Solar Farm SSD-8847 Determination	125	3	**Construction:** 2022, 12 months. **Operation:** 2023, to 2053.	86km (>1hr)	55km (40 minutes)
Spicers Creek Wind Farm SSD-41134610 Prepare EIS	250	12	**Construction:** *TBD*, 30 months. **Operation:** *TBD*, to *TBD* (30 years).	67km (50 minutes)	47km (35 minutes)
Cobbora Solar Farm SSD-29491142 Prepare EIS	700	8	**Construction:** 2024, 36 months. **Operation:** 2027, to *TBD*.	68km (55 minutes)	40km (35 minutes)
Sandy Creek Solar Farm SSI-41287735 Prepare EIS	700	15	**Construction:** 2024, 24 months. **Operation:** 2026, to 2061.	72km (1hr)	40km (40 minutes)
Dapper Solar Farm SSD-29491142 Prepare EIS	350	20	**Construction:** 2025, 18-24 months. **Operation:** 2027, to 2057.	70km (1hr)	40km (40 minutes)
Phoenix pumped hydro project N/A Preliminary engagement	500	50	**Construction:** 2026, 50 months. **Operation:** 2030, to 2080.	50km (1hr)	70km (>1hr)

Source: Mid-Western Regional Council and NSW Planning Portal (2023)

Note: at the time of drafting, details were not available for all projects. Where information was not available, this is shown as *TBD*.

Whilst the construction phase of these projects would constitute the most significant number of additional workers, most of the identified projects would also require an operational workforce. The total projected workforce from employment-generating projects in the MWR LGA for the period 2021-2031 (including both the construction and operational phases) is shown in Table 17.

It is acknowledged that any additional projects that are proposed for the region that are not yet at the approvals phase of development are not captured in this analysis. This may result in additional projects occurring during this period that are not accounted for in this analysis.

Table 17: Major projects in and near the MWR LGA and forecast workforce demands 2021-2031

Project	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Bowdens Silver Mine	0	0	0	320	320	228	228	228	228	228	228
Wollar Solar Project	0	0	400	400	5	5	5	5	5	5	5
Stubbo Solar Project	0	0	0	507	507	10	10	10	10	10	10
Tallawang Solar Farm	0	0	0	430	430	430	27	27	27	27	27
Birriwa Solar Farm	0	0	0	800	800	800	15	15	15	15	15
Barneys Reef Wind Farm	0	0	0	340	340	340	10	10	10	10	10
Burrendong Wind Farm	0	0	0	0	250	250	250	15	15	15	15
Bellambi Heights Battery	0	0	0	0	100	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*	*TBD*
Piambong Wind Farm	0	0	0	0	0	400	400	400	15	15	15
Ulan Solar Power Station	0	0	0	0	120	4	4	4	4	4	4
Orana Wind Farm	0	0	0	0	0	580	580	580	27	27	27
Liverpool Range Wind Farm	0	0	0	800	800	800	47	47	47	47	47
Central-West Orana REZ Transmission	0	0	0	1,200	1,200	1,200	43	43	43	43	43
Valley of the Winds Wind Farm	0	0	0	400	400	400	400	50	50	50	50
Dunedoo Solar Farm	0	0	125	3	3	3	3	3	3	3	3
Spicers Creek Wind Farm	0	0	0	0	250	250	250	12	12	12	12
Cobbora Solar Farm	0	0	0	700	700	700	8	8	8	8	8
Sandy Creek Solar Farm	0	0	0	700	700	15	15	15	15	15	15
Dapper Solar Farm	0	0	0	0	350	350	20	20	20	20	20
Phoenix pumped hydro project	0	0	0	0	0	500	500	500	500	500	50
Total	**0**	**0**	**525**	**6,600**	**7,275**	**7,265**	**2,815**	**1,992**	**1,054**	**1,054**	**604**

Source: Mid-Western Regional Council and the NSW Planning Portal (2023)

Note: at the time of drafting, details were not available for all projects. Where information was not available, this is shown as *TBD*.

2.2.5.2 Population impacts

As indicated above, a large number of workers are anticipated to be drawn to Mudgee and Gulgong over the period to 2031. These findings and discussions with Council inform the assumptions used in this report relating to how the anticipated additional workforce would contribute to population projections in Mudgee and Gulgong. These workforces have been assessed in order to enable the strategy to consider their potential impact on housing demand (refer to section 5.1.2). A set of assumptions has been utilised to undertake this consideration, as shown in Table 18.

Table 18: Employment-generating project workforce: population impact assumptions

Item	Assumption(s)
Local/non-local workforce	It is assumed that the majority of the anticipated additional workforce would consist of workers who currently reside outside the MWR LGA, with the remainder sourced locally (during both the construction and operational phase). Two scenarios have been considered for this assumption: • **Low estimate**: 80 per cent of additional workforce would be non-local, 20 per cent would be local • **High estimate**: 90 per cent of additional workforce would be non-local, 10 per cent would be local.
Construction worker accommodation	• 90 per cent of non-local construction workers would be accommodated in purpose-built temporary worker accommodation. • 10 per cent of non-local construction workers would require accommodation in market housing.
Operational worker accommodation	• 100 per cent of non-local operational workers would require accommodation in market housing.

The above assumptions have been applied to the anticipated workforces discussed previously. Table 19 shows the anticipated estimated workforce during the construction phase of employment-generating projects, whilst Table 20 shows the estimated operational phase workforce.

Table 19: Total additional construction workforce estimates and distribution between Mudgee and Gulgong, 2021-2031

Locality	Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Mudgee	Low estimate	0	0	256	1,880	2,084	2,019	976	656	400	400	0
	High estimate	0	0	288	2,115	2,345	2,272	1,098	738	450	450	0
Gulgong	Low estimate	0	0	164	3,398	3,729	3,581	928	528	0	0	0
	High estimate	0	0	185	3,823	4,195	4,028	1,044	594	0	0	0
Total additional workers	Low estimate	0	0	420	5,278	5,814	5,600	1,904	1,184	400	400	0
	High estimate	0	0	473	5,937	6,540	6,300	2,142	1,332	450	450	0

Source: Mid-Western Regional Council, NSW DPE Planning Portal (2023)

Table 20: Total additional operational workforce estimates and distribution between Mudgee and Gulgong, 2021-2031

Locality	Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Mudgee	Low estimate	0	0	0	28	31	186	203	220	230	230	270
	High estimate	0	0	0	31	35	209	228	248	258	258	303
Gulgong	Low estimate	0	0	0	9	10	24	109	153	177	177	177
	High estimate	0	0	0	10	11	27	122	172	199	199	199
Total additional workers	Low estimate	0	0	0	37	41	246	348	410	443	443	483
	High estimate	0	0	0	41	46	277	392	461	499	499	544

Source: Mid-Western Regional Council, NSW DPE Planning Portal (2023)

The number of additional non-local workers from employment-generating projects is anticipated to peak from 2024-2026. At the peak of the high estimate scenario, this would equate to over 6,500 additional workers across Mudgee and Gulgong. The majority of these are anticipated in Gulgong, due to its proximity to a larger number of projects. The estimated number of additional workers in Gulgong is projected to peak at nearly 4,200 in 2025 under the high estimate scenario, significantly higher than Mudgee's projected peak of around 3,700 workers in 2025 under the high estimate scenario.

At the operational phase, the uneven distribution outlined above shifts somewhat, as Mudgee is anticipated to peak at just over 300 operational workers in 2031 under the high estimate scenario, compared to Gulgong's peak of around 200 in 2029.

2.3 Household characteristics

2.3.1 Household size

Household size in Mudgee (2.4 persons per dwelling) and Gulgong (2.4 persons per dwelling) is consistent with that of MWR LGA and Rest of NSW. Between 2011 and 2021, household size remained stable at 2.4 across all areas.

Table 21: Household Size (2001-2011)

Area	2011	2016	2021	Change 2011-2021		Change 2016-2011	
				#	%	#	%
Mudgee	2.4	2.4*	2.4*	0.0	0%	0.0	0%
Gulgong	2.4	2.4**	2.4**	0.0	0%	0.0	0%
MWR LGA	2.4	2.4	2.4	0.0	0%	0.0	0%
RNSW	2.4	2.4	2.4	0.0	0%	0.0	0%

Source: Australian Bureau of Statistics Census

*Based on Mudgee SSC 2016 and Mudgee SAL 2021

**Based on Gulgong SSC 2016 and Gulgong SAL 2021

2.3.2 Household type

Table 22 shows that the proportion of family households in Mudgee (63 per cent) was slightly higher than in Gulgong (62 percent) in 2021, and the proportion across both towns was lower than across the LGA as a whole (67 per cent). Conversely, the proportion of lone person households in Mudgee (27 per cent) and Gulgong (28 per cent) was higher than the LGA (23 per cent). This could be attributed to the higher proportions of elderly people and fly-in, fly-out miners living alone.

Table 22: Household types (2011-2021)

Household type	Mudgee		Gulgong		MWR LGA	
	2021	Growth since 2011	2021	Growth since 2011	2021	Growth since 2011
Family	63%	21%	62%	9%	67%	11%
Lone person	27%	22%	28%	17%	23%	8%
Group households	3%	39%	2%	17%	2%	6%
Other households	7%	9%	8%	91%	7%	-18%
Total	100%	21%	100%	15%	100%	7%

Source: Australian Bureau of Statistics Census

2.3.3 Tenure

Table 23 shows that there was a much higher proportion of renters in Mudgee (34.1 per cent) when compared to Gulgong (23.0 per cent) and the MWR LGA (23.0 per cent) in 2021. This may be due to the large numbers of workers employed in the mines and energy projects living in Mudgee, who are less likely to buy property when they are on short term contracts during construction phase or when starting their employment with an operating mine. Gulgong reflects a more established community with higher rates of home ownership and lower levels of those renting when compared to Mudgee. There was a significant increase in homes being purchased with a mortgage in both Mudgee (29.5 per cent) and Gulgong (28.5 per cent) between 2011 and 2021.

Table 23: Household Ownership (2011-2021)

Tenure type	Mudgee		Gulgong		MWR LGA		RNSW	
	2021	Change since 2011	2021	Change since 2011	2021	Change since 2011	2021	Change since 2011
Owned outright	28.3%	16.9%	36.6%	10.2%	36.5%	11.5%	36.3%	14.0%

Tenure type	Mudgee		Gulgong		MWR LGA		RNSW	
	2021	Change since 2011	2021	Change since 2011	2021	Change since 2011	2021	Change since 2011
Owned with mortgage	29.7%	29.5%	31.4%	28.5%	29.9%	27.3%	29.4%	13.7%
Rented	34.1%	24.7%	23.0%	1.6%	23.0%	21.1%	25.7%	20.2%
Other or not stated	7.8%	-7.5%	9.0%	28.9%	10.5%	19.5%	8.7%	22.6%
Total	100.0%	20.5%	100.0%	14.6%	100.0%	19.0%	100.0%	16.2%

Source: Australian Bureau of Statistics Census

2.3.4 Income

Table 24 shows that all areas experienced a growth in median weekly household incomes between 2011 and 2021. Over these 10 years, the growth in incomes was most significant in Mudgee (64 per cent) and the MWR LGA (60 per cent), which were higher than Rest of NSW (49 per cent). Gulgong experienced growth of 20 per cent from $902 to $1,371, which was lower than Rest of NSW.

Table 24: Weekly Household Income (2011-2021)

Area	2011	2016	2021	Change 2011-2021 (10 years)		Change 2016-2021 (5 years)	
				#	%	#	%
Mudgee	$1,023	$1,256*	$1,678**	655	64%	422	34%
Gulgong	$902	$1,086*	$1,371**	556	20%	469	26%
MWR LGA	$930	$1,131	$1,486	$556	60%	$355	13%
RNSW	$961	$1,168	$1,434	$473	49%	$266	23%

Source: Australian Bureau of Statistics Census

*Based on Mudgee SSC 2016 and Mudgee SAL 2021

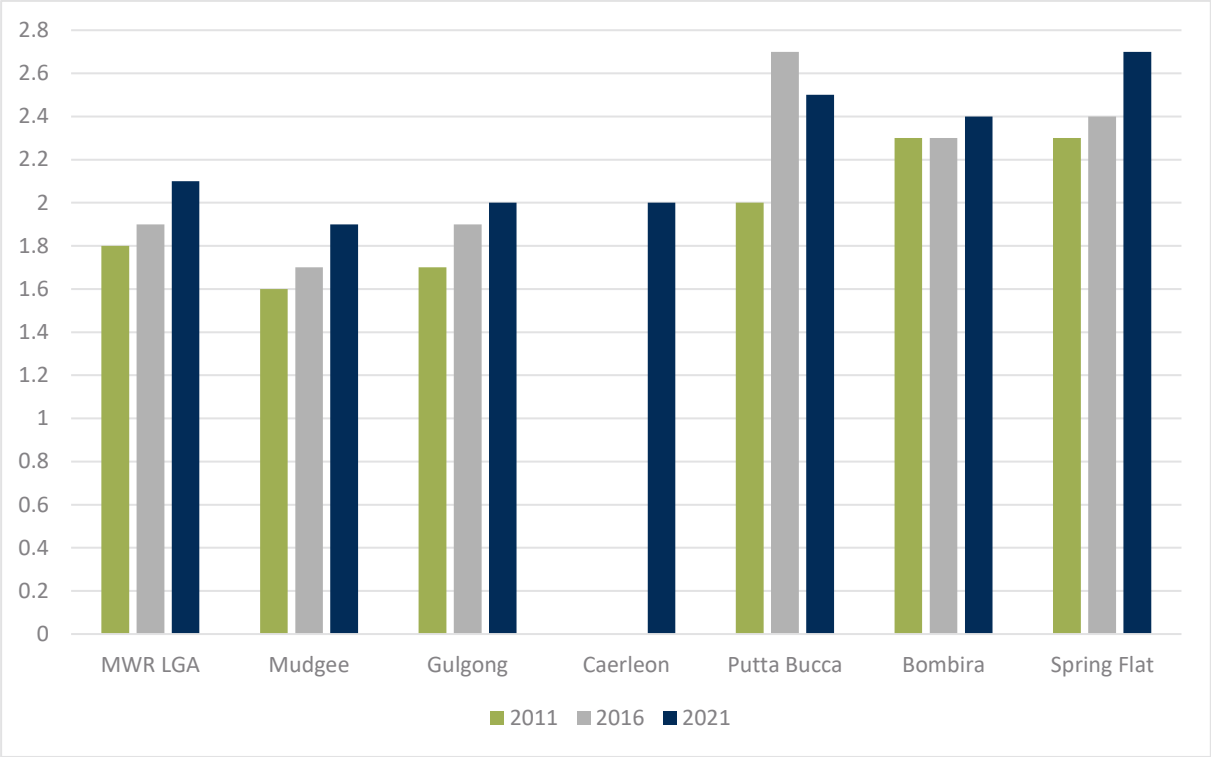
**Based on Gulgong SSC 2016 and Gulgong SAL 2021

2.3.5 Motor vehicles per dwelling

Discussions with Council and local real estate agents suggested that the combination of changing development patterns in some areas (such as smaller lot sizes or narrower roads) and more vehicles per dwelling had resulted in concerns relating to parking. This is reflected in the relevant data, which shows that across Mudgee, Gulgong, and the MWR LGA, the average number of motor vehicles per dwelling has increased significantly and consistently over the period 2011 to 2021.

This can be seen in Figure 13, which shows the average number of motor vehicles per dwelling in Mudgee, Gulgong, the MWR LGA, and selected suburbs surrounding Mudgee. In 2011, Mudgee recorded an average of 1.6 motor vehicles per dwelling, whilst Gulgong recorded 1.6 motor vehicles per dwelling. By 2021, these figures had grown to 1.9 and 2.0 motor vehicles per dwelling, respectively. Over the same period, the average across the MWR LGA grew from 1.8 to 2.1 motor vehicles per dwelling.

Figure 13: Average number of motor vehicles per dwelling, Mudgee (and surrounds) and Gulgong (2011-2021)

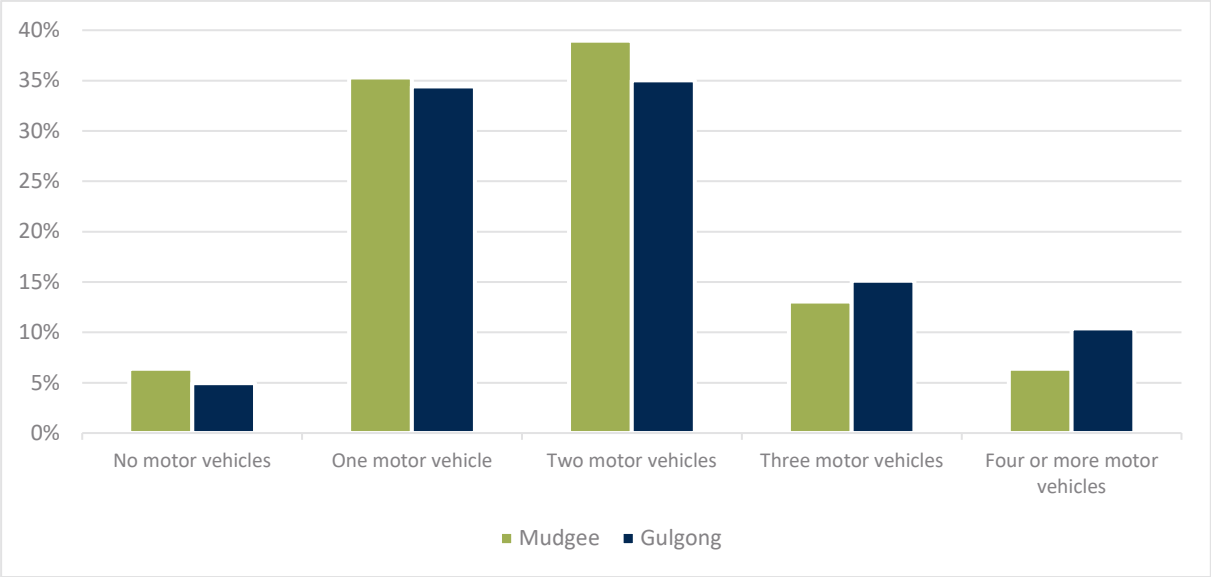


Source: Australian Bureau of Statistics Census (2023)
Note: The suburb areas in the figure refer to *State Suburb* (2011 and 2016) and *Suburb & Locality* (2021) Census geographies.

It is notable that Putta Bucca, Bombira, and Spring Flat all recorded higher averages than those in Mudgee, Gulgong, or the LGA as a whole, whilst Caerleon recorded a similar figure to Mudgee and Gulgong. As at the 2021 Census, Putta Bucca, Bombira, and Spring Flat recorded averages of 2.5, 2.4, and 2.7 motor vehicles per dwelling, respectively. Residential development in the 'fringe' areas around towns should therefore be considerate of this factor.

Figure 14 shows Mudgee and Gulgong's dwellings by number of motor vehicles. It can be seen that the vast majority of dwellings own at least one motor vehicle, with just 6.4 per cent of Mudgee dwellings and 4.9 per cent of Gulgong dwellings owning no motor vehicles. Almost three quarters of Mudgee dwellings (74.3 per cent) and 69.4 per cent of Gulgong dwellings owned one or two motor vehicles, whilst 19.4 per cent of Mudgee dwellings and 25.5 per cent of Gulgong dwellings owned three or more vehicles.

Figure 14: Dwellings by number of motor vehicles, Mudgee and Gulgong (2021)



Source: Australian Bureau of Statistics Census (2023)

2.4 Dwelling characteristics

2.4.1 Dwelling type

In 2021, there were a total of 5,386 private dwellings in Mudgee and 1,205 private dwellings in Gulgong. The total number of private dwellings increased by 1,047 (24 per cent) in Mudgee and 121 (11 per cent) in Gulgong between 2011 and 2021. The majority of new dwellings across both towns were separate houses which are the most common dwelling type, while the largest proportional growth was in semi-detached dwellings.

The data appears to show that there has been a decline in the number of flats or apartments, as well as other dwelling types (including caravans, cabins, houseboats etc.) in both Mudgee and Gulgong over the 10-year period. It is considered unlikely that the decrease in flats or apartments represents these buildings being demolished. Instead, it likely represents a statistical reclassification of these dwellings at more recent Census collections. These findings are shown in Table 25.

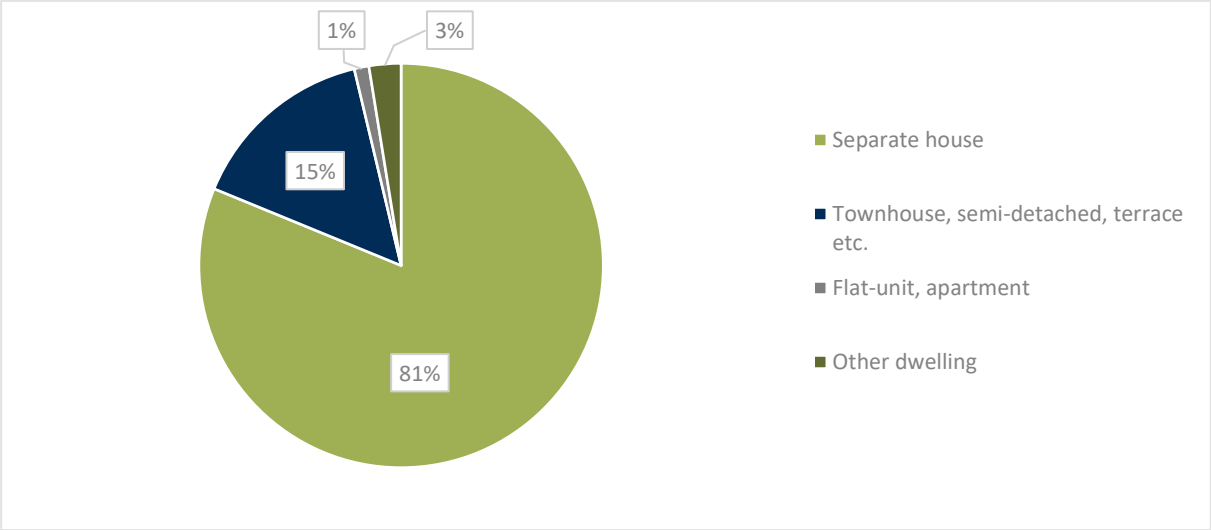
Table 25: Dwelling type by number of dwellings (2011-2021)

Type of dwelling	Mudgee				Gulgong			
	2011	2021	Change 2011-2021		2011	2021	Change 2011-2021	
			#	%			#	%
Separate house	3,464	4,358	894	26%	1,000	1,112	112	11%
Townhouse, semi-detached, terrace etc.	373	809	436	117%	3	32	29	967%
Flat-unit, apartment	337	63	-274	-81%	54	33	-21	-39%
Other dwelling	161	137	-24	-15%	27	21	-6	-22%
Dwelling structure not stated	4	19	15	375%	0	7	7	N/A
Total Private Dwellings	4,339	5,386	1,047	24%	1,084	1,205	121	11%

Source: Australian Bureau of Statistics Census

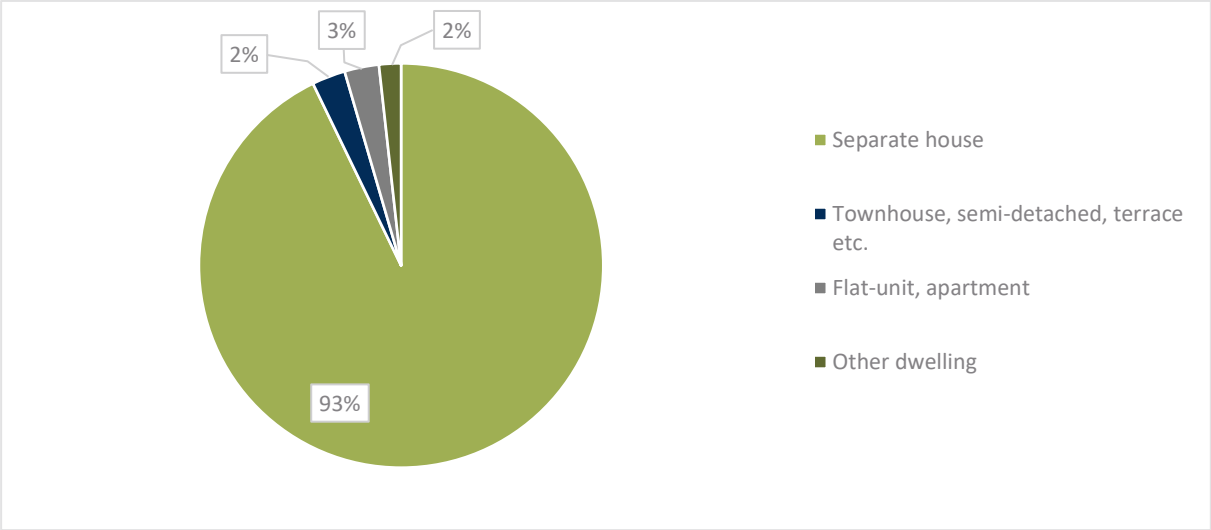
Figure 15 and Figure 16 show the distribution of dwellings in Mudgee and Gulgong at the 2021 Census by type. As shown above, the vast majority dwellings are separate houses, though Mudgee has a far larger minority of townhouse and semi-detached dwellings than Gulgong.

Figure 15: Proportion of dwellings by type, Mudgee (2021)



Source: Australian Bureau of Statistics Census

Figure 16: Proportion of dwellings by type, Gulgong (2021)



Source: Australian Bureau of Statistics Census

2.4.2 Dwelling structure by bedrooms

Table 26 shows that separate houses in Mudgee predominately contain 3 or 4 bedrooms, townhouses generally contain 2 or 3 bedrooms, and flats and apartments contain 1 or 2 bedrooms.

Table 26: Dwelling structure by number of bedrooms in Mudgee (2021)

Type of dwelling	Number of bedrooms in dwelling								
	0 (i.e. bedsits)	1	2	3	4	5	6	Not stated	Total
Separate house	0%	1%	8%	43%	37%	6%	1%	4%	100%
Townhouse, semi-detached, terrace etc.	1%	11%	43%	33%	2%	0%	0%	10%	100%
Flat-unit, apartment	0%	49%	42%	0%	0%	0%	0%	9%	100%
Other dwelling	0%	15%	15%	0%	0%	0%	0%	69%	100%

Source: Australian Bureau of Statistics Census

Table 27 shows that similarly to in Mudgee, separate houses in Gulgong predominantly contain between 3-4 bedrooms, while semi-detached dwellings contain 2-3 bedrooms, and flats or apartments contain 1-2 bedrooms.

Table 27: Dwelling structure by number of bedrooms in Gulgong (2021)

Type of dwelling	Number of bedrooms in dwelling								
	0 (i.e. bedsits)	1	2	3	4	5	6	Not stated	Total
Separate house	0%	2%	13%	43%	29%	6%	1%	7%	100%
Townhouse, semi-detached, terrace etc.	0%	0%	35%	27%	19%	0%	0%	19%	100%
Flat-unit, apartment	0%	38%	62%	0%	0%	0%	0%	0%	100%
Other dwelling	0%	29%	29%	21%	0%	0%	0%	21%	100%

Source: Australian Bureau of Statistics Census

In both study areas, the overwhelming majority of dwellings are separate houses, most of which are larger dwellings of three or more bedrooms. Though this indicates a strong and consistent preference for detached dwellings, growth over the period from 2011 to 2021 for this dwelling typology was relatively proportionate, particularly in Gulgong. Smaller, denser dwellings such as townhouses, semi-detached dwellings and terraces, experienced higher proportional growth in both Mudgee and Gulgong (albeit from a very low baseline in Gulgong), which suggests that the percentage share of these medium-density dwellings may increase in the future.

2.5 Key findings

The following key findings have been revealed following a review of demographic trends in the MWR LGA:

- As a proportion of the LGA's total residents, Mudgee's share increased and Gulgong's share has declined between 2006 and 2021.
- Mudgee has a younger population and higher proportion of family households than Gulgong and the MWR LGA.
- Far more Mudgee households rent their dwelling than Gulgong households, with Gulgong households much more likely to own their dwelling either outright or with a mortgage.
- The average number of motor vehicles per dwelling has increased in Mudgee and Gulgong over the period between 2011 and 2021, and settlements on Mudgee's fringes recorded higher averages than that seen within Mudgee or Gulgong.
- Separate houses are the most common dwelling type and have continued to increase, while the number of flats and apartments has declined.
- Incomes have increased steadily throughout the region, though particularly in Mudgee, which could be attributed to increases in the numbers of workers employed in in mining and renewable energy projects.
- Employment-generating projects currently proposed in the LGA are expected to provide a peak of approximately 6000 construction jobs and 500 operational jobs, and additional projects yet to be proposed are anticipated.

RESIDENTIAL MARKET SNAPSHOT

3.0 RESIDENTIAL MARKET SNAPSHOT

This Chapter describes the existing housing market in Mudgee and Gulgong, including indicators of housing demand, home ownership and rental markets, and housing affordability in Mudgee and Gulgong. The figures and calculations from this Chapter of the URS 2014 were updated with the most recent available data from a range of sources.

To support our understanding of the property market, including price and supply movements, current property market data was sourced from HTAG and CoreLogic RP Data, and the relevant calculations were updated. The assessment of available dwellings for sale was also updated using listings on realestate.com.au, and the affordability calculator was also updated.

In addition to updating the previous findings, HillPDA provided additional consideration of the existing residential market through an analysis of short-term residential accommodation in the LGA. A section considering housing stress (a broad indicator of financial strain induced by accessing housing) was also added using to support and inform the housing affordability findings.

This Chapter was also informed through consultation with representatives of the local real estate industry. Real estate agencies in the LGA were contacted to provide input via a phone survey and short discussion. In total, seven local real estate agents participated in this process, the findings of which have been incorporated in the report where relevant.

3.1 Existing housing market

3.1.1 Sales and yield overview

Table 28 presents typical sale prices and rental yields for Mudgee, Gulgong and the MWR LGA. The data indicates strong year on year growth in sale prices. The significant growth in sale prices can place pressure on housing affordability. It can also have indirect effects to the economic productivity of local industries if housing become unaffordable and businesses are unable to attract and retain employees.

Rental yields were consistently between 3-4 per cent across all areas. However, the observed decline in gross yield indicates the market may be less attractive for investors. This trend is being seen across regional NSW.

The ‘typical sale price’ used in this section is a term created by the provider of the data for this section, HTAG. Typical sale price is not an average or median sale price, but a price index, calculated through statistical analysis and data-fitting. This index is used instead of an average or median sale price, which can be unrepresentative in areas with smaller housing markets such as Mudgee and Gulgong.

Table 28: House sales and yield overview (MWR LGA, Mudgee (SAL), and Gulgong (SAL), as at November 2022

House	Measure	All	2 bed	3 bed	4 bed	5 bed
Mudgee (SAL)	Typical sale price Year on year growth	$761,000 +14.06%	N/A	$713,000 + 15.46%	$810,000 + 12.87%	N/A
	Median rent (per week) Year on year growth	$490 +8.59%	$404 N/A	$484 +5.9%	$586 +12.21%	N/A
	Gross yield Year on year growth	3.34% -4.8%	N/A	3.52% -8.27%	3.75% -0.59%	N/A
Gulgong (SAL)	Typical sale price Year on year growth	$536,000 +12.09%	N/A	N/A	N/A	N/A
	Median rent (per week) Year on year growth	$410 +2.75%	N/A	N/A	N/A	N/A
	Gross yield Year on year growth	3.97% -8.33%	N/A	N/A	N/A	N/A
Mid-Western Regional	Typical sale price Year on year growth	$761,000 +14.06%	N/A	$713,000 +15.46%	$810,000 +12.87%	N/A
	Median rent (per week) Year on year growth	$471 +11.08%	N/A	$418 +7.73%	$599 +15.16%	N/A
	Gross yield Year on year growth	3.21% -2.62%	N/A	3.04% -6.69%	3.84% +2.02%	N/A

Source: HTAG (2022)

Note: Gross Rental Yield is the value generated from an investment property represented as a percentage. HTAG derives this figure from Typical Price and Median Rent metrics.

3.1.2 Median dwelling prices

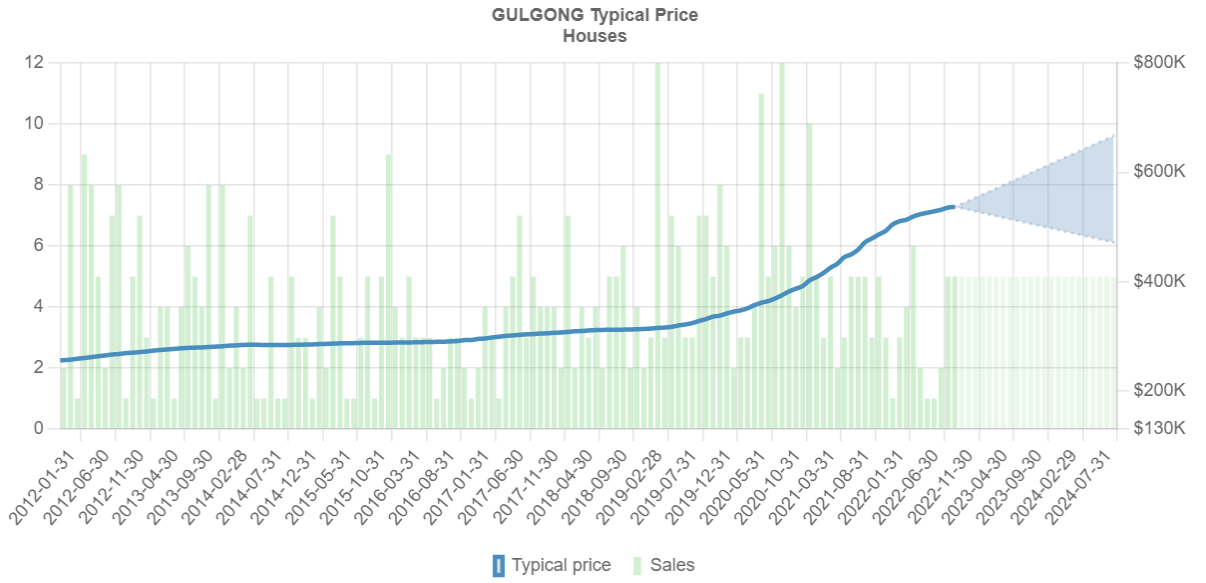
The following figures show the historical and projected quarterly typical price and number of sales over the last decade in Mudgee, Gulgong and the MWR LGA. In October 2022, Mudgee's median house and unit prices were $761,875 and $534,510 respectively. Figure 17 illustrates that while the number house sales has dropped in Mudgee, the price point is escalating, potentially indicating a lack of supply on the market.

Figure 17: Mudgee (SAL) historical and projected typical price and number of sales, as at November 2022

Source: HTAG (2022)

Figure 18 shows the historical and projected quarterly typical price and number of sales in Gulgong for houses over the last decade. In October 2022, Gulgong's median house price was $536,959, significantly lower than Mudgee's.

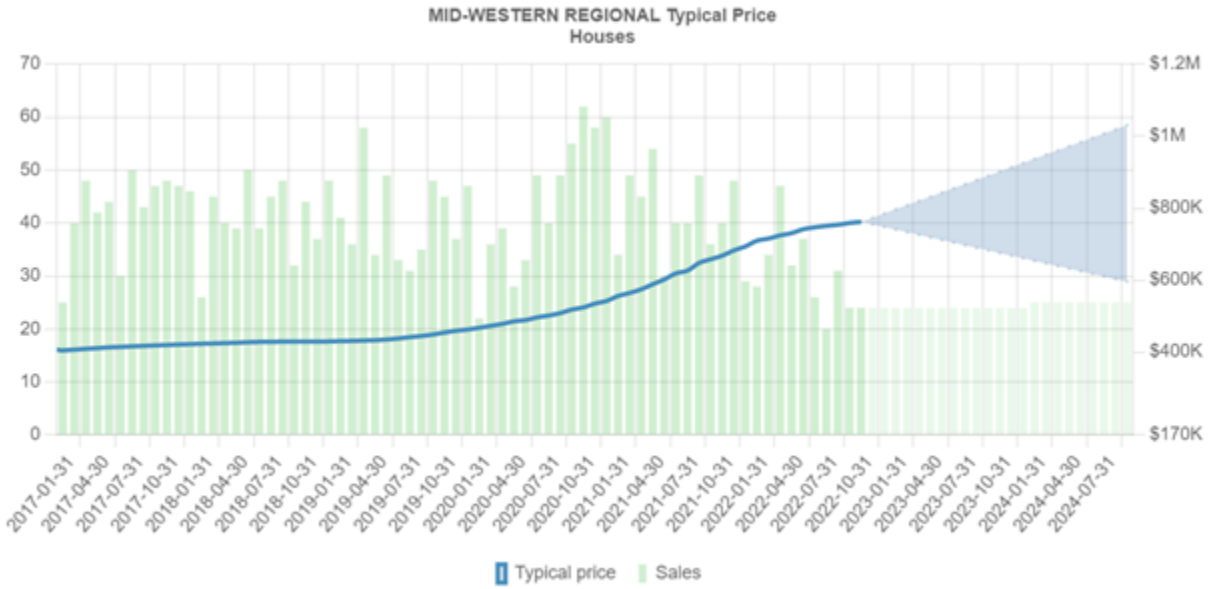
Figure 18: Gulgong (SAL) historical and projected typical price and number of sales, as at November 2022



Source: HTAG (2022)

Figure 19 shows the historical and projected quarterly typical price and number of sales in the Mid-Western Regional LGA for houses over the last decade. In October 2022, the median house price for the LGA was $761,874, similar to Mudgee's.

Figure 19: Mid-Western Regional (LGA) historical and projected typical price and number of sales, as at November 2022



Source: HTAG (2022)

A review of median dwellings prices in the LGA has demonstrated that house prices have increased significantly in Mudgee, Gulgong, and the MWR LGA since 2019/20, while the number of sales has generally remained stable or fallen.

The review of dwelling prices also reveals that housing in Mudgee is relatively expensive when compared to Gulgong and the LGA. In October 2022, the median price of a house in Mudgee was similar to the LGA median though approximately $225,000 higher than Gulgong's median. Gulgong is therefore a more attractive option for home buyers seeking affordable housing.

3.1.3 Dwelling price growth

The median price for houses in Mudgee increased by 114 per cent in 10 years, from $356,566 in October 2012, to $761,875 in October 2022. Meanwhile, the median price for units increased by 104 per cent from $262,067 in October 2012 to $534,510 in October 2022. Across the last 10 years, the sharpest increases in prices generally occurred between 2019 and 2022.

In Gulgong, the median price for houses increased by 100 per cent in 10 years, from $269,049 in October 2012 to $536,959 in October 2022. Similarly to in Mudgee, the sharpest increases in prices generally occurred between 2019 and 2022. Data on median unit prices is not available due to the low volumes of unit sales in Gulgong, which generally ranges between 0-5 sales per year.

Prices fell in 2013 as uncertainty around mining projects grew and more supply entered the market. Since 2012, growth in unit prices has almost matched growth in house prices, suggesting either strong demand for units or the presence of a supply shortage, or a combination of both.

Discussions with agents identified that prices peaked during the COVID-19 pandemic, and that growth has levelled since that time. Following the peak of prices and demand, interest in buying off the plan has decreased, whilst demand for existing dwellings has remained strong. Agents suggested that existing homes consisting of three or four bedrooms are in strong demand across all price brackets, and noted that equity gains achieved over recent years were enabling some existing residents to 'upgrade' to a more expensive dwelling.

Agents noted that few potential buyers could afford to purchase land as well as fund construction of a dwelling in low density residential developments (such as Bombira). Demand for land in release areas closer to Mudgee, with smaller lot sizes, remains strong.

3.1.4 Sales volume

Table 29 shows the number of houses and units sold in Mudgee and Gulgong between 2013 and 2022. House sales peaked in Mudgee and Gulgong in 2020-21, at approximately 450 and 110 sales per year respectively.

Flat and unit sales in Mudgee generally range between 19-60 sales per year, peaking at 60 sales in 2020. Flat and unit sales in Gulgong consistently remain low at between 0-4 sales per year.

Table 29: Number of house and unit sales by year, as at March 2023

Year	Houses		Flats and units	
	Mudgee	Gulgong	Mudgee	Gulgong
2013	308	28	19	0
2014	285	23	19	0
2015	252	28	27	0
2016	382	34	34	0
2017	433	48	40	0
2018	433	46	44	1
2019	406	62	49	1
2020	448	84	59	0
2021	446	99	54	5
2022	334	72	23	0
Average annual sales	**373**	**52**	**37**	**1**

Source: CoreLogic RP Data (2023)

3.2 Existing rental market

The rental market is diverse, with demand for a range of different households, from lone persons to larger families. As noted in Section 3.3.3, 23 per cent of households were renting in the MWR LGA in 2021, which is a 21.1 per cent increase in the number from 2011.

3.2.1 Rent overview

Increased rents can displace local households and can cause social isolation if those households are unable to relocate near their existing social and economic communities. Table 30 indicates that the median rent for houses in Mudgee ($490 per week) was significantly higher than in Gulgong ($410 per week), and slightly higher than the MWR LGA ($471 per week) in November 2022. Median rents in the MWR LGA ($396 per week) were slightly higher than in Mudgee ($378 per week), while no data was available on median rents in Gulgong.

Discussions with real estate agents found that the rental market in both Mudgee and Gulgong was particularly tight, with very low vacancy rates. Agents identified that pressure arising from housing major projects workforce was already being felt, particularly in Gulgong. It was noted that some households could no longer afford to or find an available dwelling to rent in Gulgong and were being forced to move elsewhere.

Table 30: Rent overview (MWR LGA, Mudgee (SAL), and Gulgong (SAL), as at November 2022

Area	Measure	All	2 bed	3 bed	4 bed	5 bed
Houses						
Mudgee (SAL)	Median rent (per week) Year-on-year growth	$490 +8.59%	$404 N/A	$484 +5.9%	$586 +12.21%	N/A
Gulgong (SAL)	Median rent (per week) Year-on-year growth	$410 +2.75%	N/A	N/A	N/A	N/A
Mid-Western Regional LGA	Median rent (per week) Year-on-year growth	$471 +11.08%	N/A	$418 +7.73%	$599 +15.16%	N/A
Units						
Mudgee (SAL)	Median rent (per week) Year-on-year growth	$378 +3.67%	N/A	N/A	N/A	N/A
Gulgong (SAL)	Median rent (per week) Year-on-year growth	N/A	N/A	N/A	N/A	N/A
Mid-Western Regional LGA	Median rent (per week) Year-on-year growth	$396 +3.85%	N/A	N/A	N/A	N/A

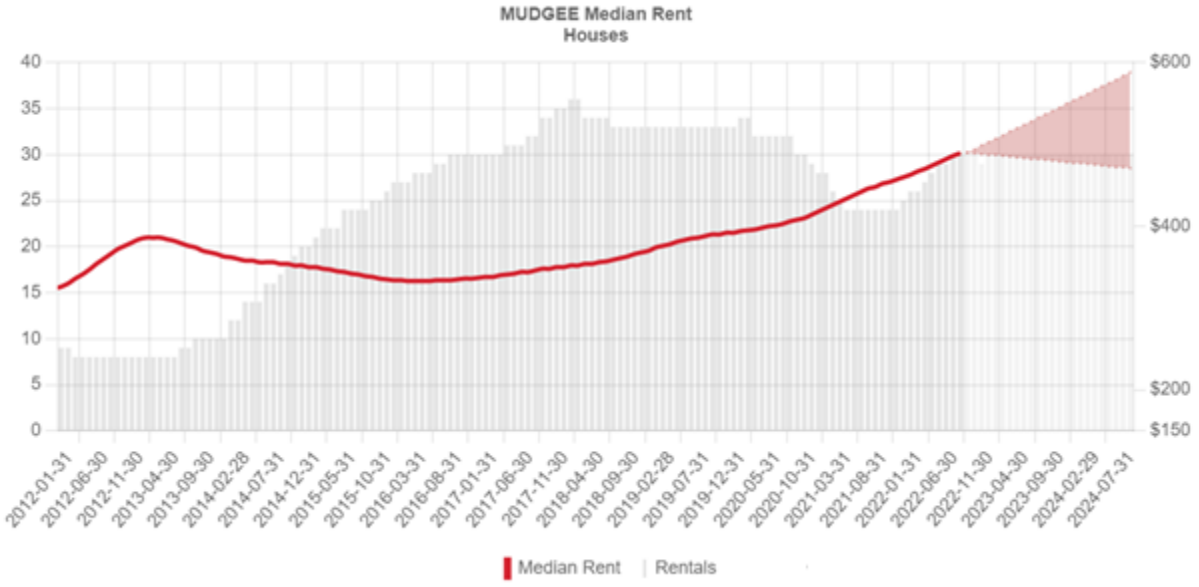
Source: HTAG (2022)

3.2.2 Median rent trend

The following figures outline the median rent price in Mudgee, Gulgong and MWR LGA. A review of these figures indicates that median rents have generally increased over the last 10 years.

Figure 20 shows that the median rent price in Mudgee (SAL) has continued to increase after a slow dip in 2016. The rental prices are projected to continually increase to 2024. This is likely to place additional pressure on housing affordability in the area. The median rent for a house in Mudgee in August 2022 was $489 per week.

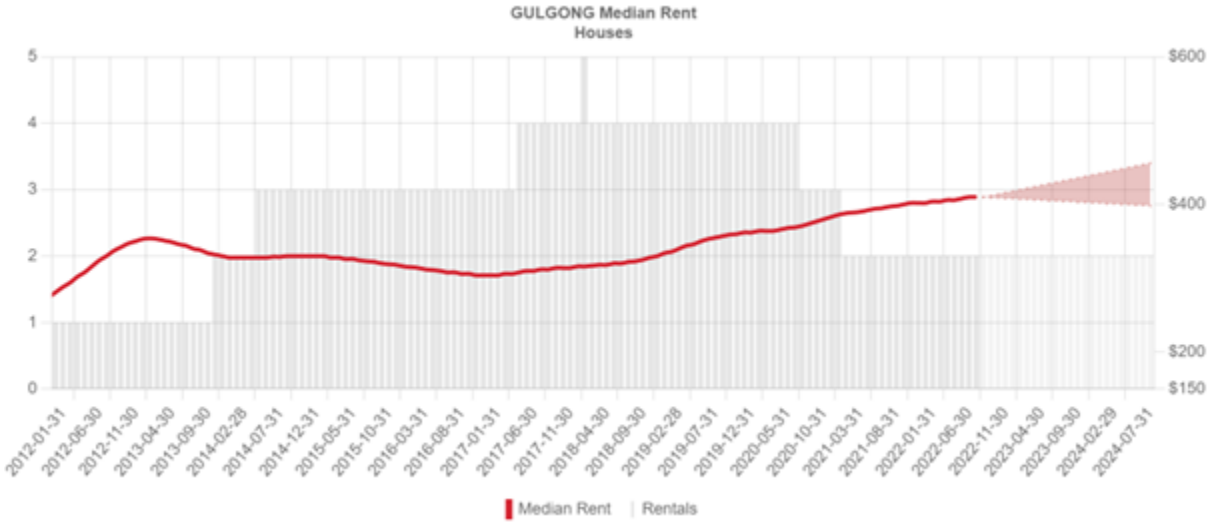
Figure 20: Mudgee (SAL) historical and projected rent median and number of rentals, as at November 2022



Source: HTAG (2022)

Figure 21 shows that median rents for houses in Gulgong have increased steadily since 2017, while the number of rentals in the ranges between 0-5 properties. The median rent for a house in Gulgong in August 2022 was $410 per week.

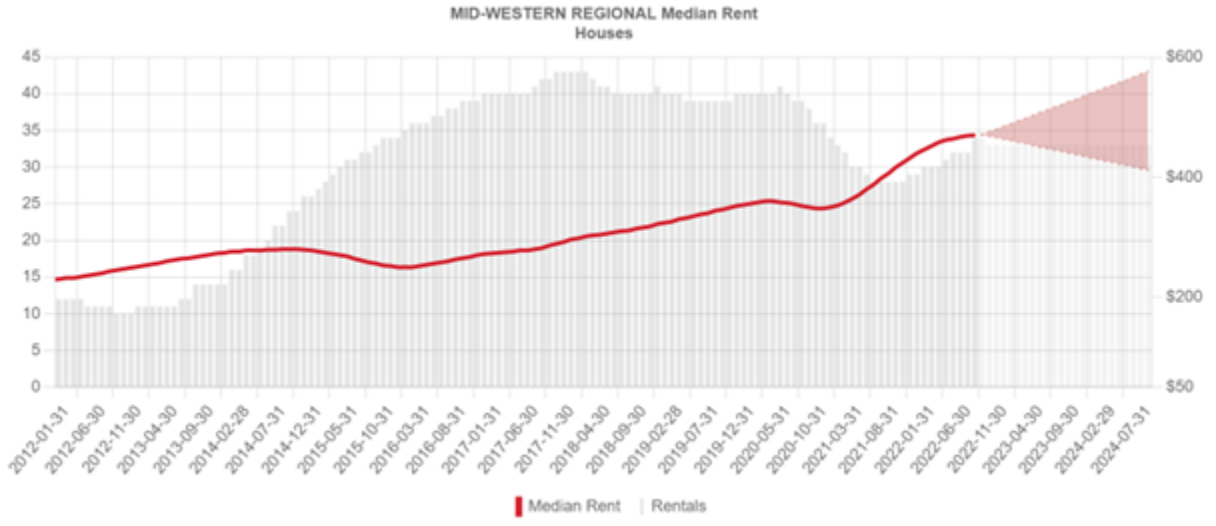
Figure 21: Gulgong (SAL) historical and projected rent median and number of rentals, as at November 2022



Source: HTAG (2022)

Figure 22 shows that median rents for houses in the MWR LGA have increased steadily since 2016. The median rent increased significantly over the last two years, following a small dip in 2020 which could be attributed to the COVID-19 pandemic. The median rent for a house in the MWR LGA in August 2022 was $470 per week.

Figure 22: Mid-Western Regional LGA historical and projected rent median and number of rentals, as at September 2022



Source: HTAG (2022)

Continued rental growth is likely due to the desirable amenity of the LGA and continued interest in the broader region from major projects (refer to section 2.2.5).

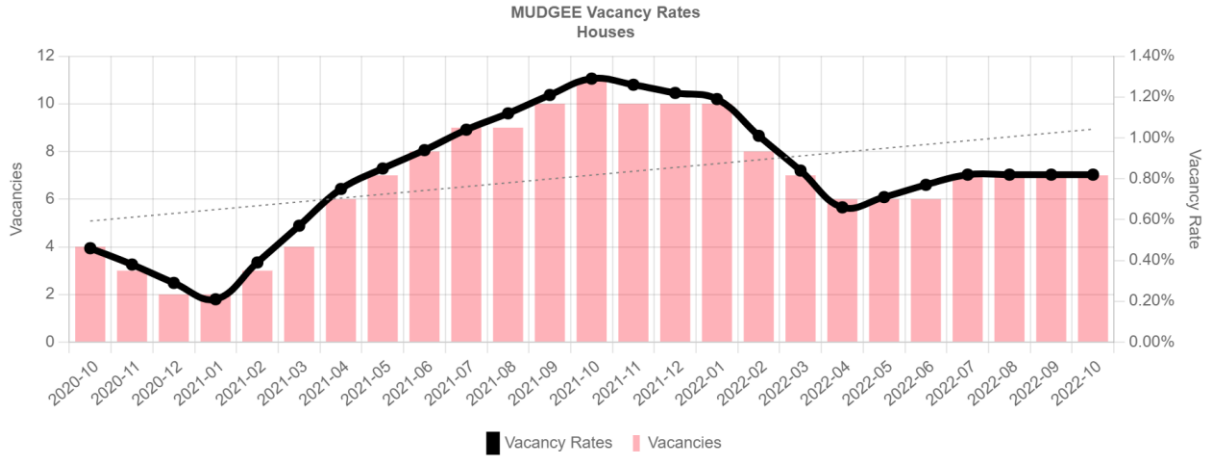
A tight rental market not only reduces affordability, but also creates misalignment between housing need and housing supply. For example, there may be increased instances of overcrowding or underutilisation as people choose to stay in their current house rather than risk not being able to find something more appropriate. There is evidence of this occurring across NSW where older couples remain in their large houses rather than downsizing due to limited availability of appropriate housing.

The following figures illustrate the month-by-month vacancy rates over the last two years. It serves as a rental market demand indicator with lower vacancy rates indicating greater rental demand. A vacancy rate of below one per cent indicates high demand, while a vacancy rate over 3.5 per cent indicates low demand. Over the last two years, demand for rental properties far outstripped supply in the MWR LGA with very few properties available.

Engagement undertaken with local real estate agents revealed serious concerns about the availability of rental properties in Mudgee and Gulgong. All agents who participated in the consultation with HillPDA noted that demand for rentals was high, and that there is lack of rental availability in Mudgee and Gulgong, and across the LGA more broadly. Some agents attributed this (in part) to a lack of land supply. Agents also commented that rental prices had risen, most significantly in Gulgong, where the rental market was seen as being 'at capacity', and agents reported that they hardly needed to advertise for new tenants. One agent suggested that a low supply of developable land in the LGA was (in part) responsible for the tight rental market, as households who may otherwise purchase a house were forced to rent for longer.

Figure 23 illustrates that vacancy rates in Mudgee recorded a sharp decline between October 2021 and April 2022, then stabilised at approximately 0.80 per cent from July 2022.

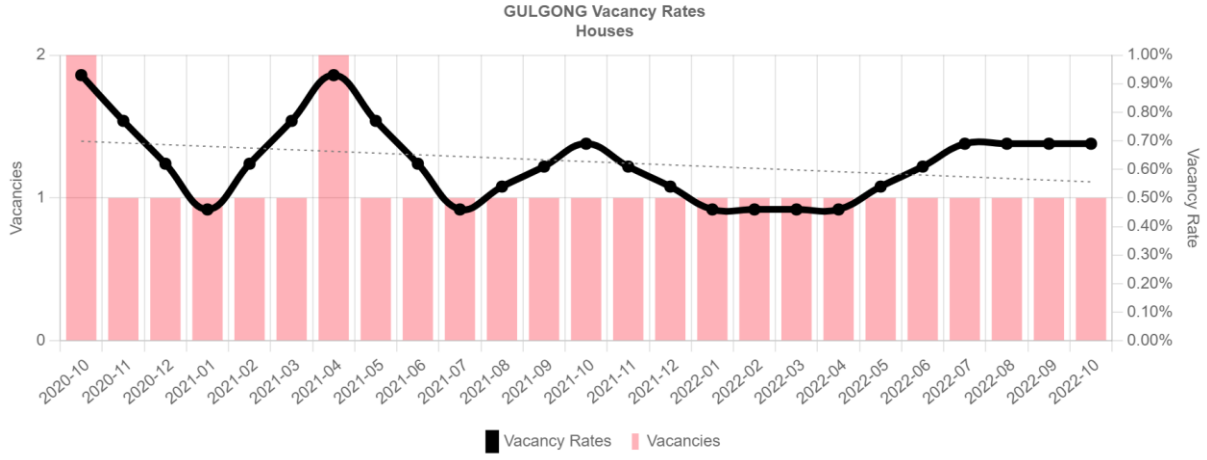
Figure 23: Mudgee (SAL) vacancy rates (houses), as at September 2022



Source: HTAG (2022)

Figure 24 illustrates that vacancy rates in Gulgong are currently at 0.70 per cent, having remained stable at this rate since July 2022.

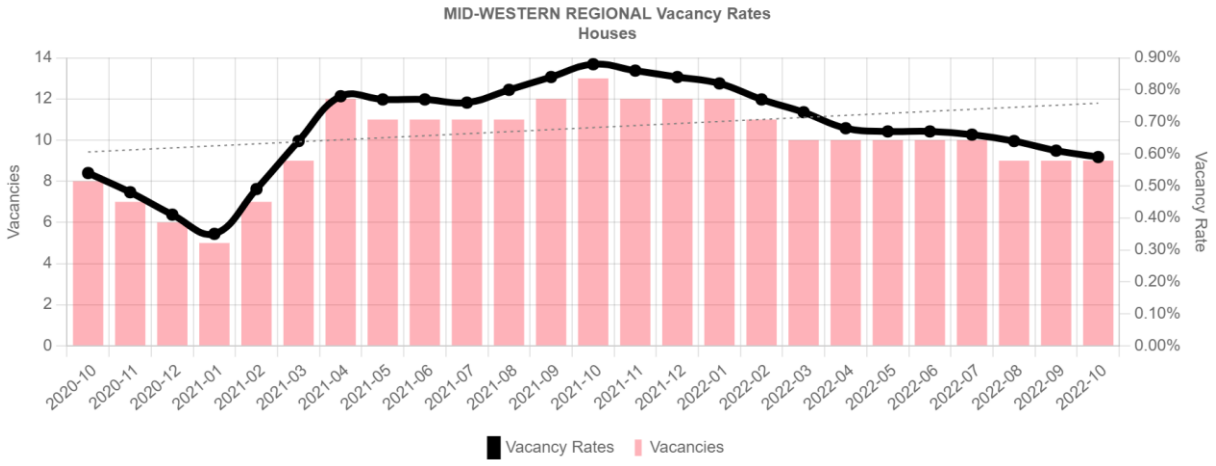
Figure 24: Gulgong (SAL) vacancy rates (houses), as at September 2022



Source: HTAG (2022)

Figure 25 shows that vacancy rates in the MWR LGA have been following a downward trend for the past one year. Rates have decreased from 0.90 per cent in October 2021 to 0.60 per cent in October 2022.

Figure 25: Mid-Western Regional LGA vacancy rates (houses), as at September 2022



Source: HTAG (2022)

Overall, vacancy rates over the past two years have been low, indicating high rental demand and low supply of rentals in the Mid-Western LGA. Vacancy rates in Gulgong and the MWR LGA have remained at below one per cent for the last two years, indicating very high rental demand over an extended period.

3.2.3 Short term rental accommodation

Short term rental accommodation (STRA) is a term that refers to dwellings used to provide accommodation on a commercial basis, for a temporary or short-term period, often facilitated through online booking platforms, such as Stayz or Airbnb (NSW DPE, 2021).

The success of online booking platforms has seen a surge in the number of STRAs in NSW, leading to a range of issues being raised with NSW DPE in affected communities. A Parliamentary Inquiry into the regulation of STRAs was undertaken in 2015 and 2016, with a final report published in October 2016. In response, the NSW Government made changes to the relevant legislation and planning policy.

These changes included the creation of an STRA policy and register, as well as the adoption of definitions and standards around STRA. The register requires STRAs to register their dwellings and ensure compliance with safety standards. The policy defines 'hosted' and 'non-hosted' STRAs, whereby a hosted STRAs has a host reside on the relevant premises whilst accommodation is provided, and non-hosted STRAs do not.

The STRA Register, whilst not publicly available, can be accessed by planning authorities and includes the number of STRA properties in an LGA, including whether they are hosted or non-hosted, and their status (registered, de-registered, or blocked). An STRA registration must be renewed every year. Where a registration is not renewed, it is held for three months, during which the STRA is blocked from accepting bookings from online platforms. After three months, the property is de-registered and a new property registration must be completed.

Table 31 shows the number of STRA properties in the MWR LGA area. The data is not publicly available below the LGA level, therefore it is unknown what proportion of MWR LGA STRAs are in Mudgee or Gulgong.

Table 31: MWRC STRAs (as at March 2023)

Status	Number of properties (MWR LGA)		Total
	Hosted STRA	Non-hosted STRA	
Registered	204	241	445
De-registered	3	12	15
Blocked	21	28	49
Total	**228**	**281**	**509**

Source: MWRC, NSW DPE (2023)

As at March 2023, a total of 509 properties in MWR LGA were recorded on the STRA register. This is equivalent to approximately 4.2 per cent of the total 12,207 dwellings recorded in the LGA at the 2021 Census. It is noted, however, that an STRA property may not be an entire dwelling – that is, it may be a room within a dwelling, or a secondary, temporary, or improvised dwelling not included in the total number of dwellings for the LGA.

Consultation undertaken with local real estate agents provided additional insight into the situation and effects of STRA in the LGA. The estimates for the quantity and proportion of STRAs that were provided by real estate agents were reflective of the number of registered STRAs. It was noted that STRA investment had slowed recently due to lowered occupancy and oversupply, though multiple real estate agents confirmed the ongoing importance of STRA properties in supporting tourism and absorbing demand from major projects.

Real estate agents also mentioned the negative impacts of STRAs in the local housing market, identifying that they restricted the supply of dwellings available for residents, and that they were (in part) responsible for increased rental costs.

3.3 Housing affordability

From our discussions with real estate agents and Council, there appears to be consensus that both Mudgee and Gulgong have experienced housing supply issues in recent years, which has worsened due to labour and supplies shortages stemming from the COVID-19 pandemic. The impact of low housing supply and strong market demand in Mudgee and Gulgong have driven the cost of housing upwards, as can be seen in the strong growth witnessed in median prices and median rents.

In order to understand the extent of the housing affordability issue in Mudgee, HillPDA prepared a model for the URS 2014, the 'household income affordability calculator'. The model profiles household income bands based on ABS Census data for Mudgee and Gulgong and the level of rent or mortgage debt that each household income level could afford to pay depending on key variables (i.e. interest rate, deposit and household income).

The model has been updated based on the 2021 Census data and is shown in Table 32. Rows shown in italics relate to the median household incomes recorded in Mudgee and Gulgong.

Table 32: HillPDA household income affordability calculator

Household income	Household income (weekly)	Rental (% income)	Weekly rental	Ownership (% income)	Monthly	Principal loan	Deposit	Home affordability
$20,000	$385	25%	$96	30%	$500	$75,154	$7,515	$82,669
$25,000	$481	25%	$120	35%	$729	$109,599	$10,960	$120,559
$30,000	$577	26%	$150	35%	$875	$131,519	$13,152	$144,671
$35,000	$673	27%	$182	37%	$1,079	$162,207	$16,221	$178,428
$40,000	$769	28%	$215	38%	$1,267	$190,390	$19,039	$209,429
$45,000	$865	30%	$260	40%	$1,500	$225,461	$22,546	$248,007
$50,000	$962	30%	$288	40%	$1,667	$250,513	$25,051	$275,564
$55,000	$1,058	30%	$317	40%	$1,833	$275,564	$27,556	$303,120
$60,000	$1,154	30%	$346	40%	$2,000	$300,615	$30,062	$330,677
$65,000	$1,250	30%	$375	40%	$2,167	$325,666	$32,567	$358,233
$70,000	$1,346	30%	$404	40%	$2,333	$350,718	$35,072	$385,789
$71,292	*$1,371*	*30%*	*$411*	*30%*	*$1,782*	*$267,893*	*$26,789*	*$294,682*
$71,292	*$1,371*	*30%*	*$411*	*40%*	*$2,376*	*$357,191*	*$35,719*	*$392,910*
$75,000	$1,442	30%	$433	40%	$2,500	$375,769	$37,577	$413,346
$80,000	$1,538	30%	$462	40%	$2,667	$400,820	$40,082	$440,902

Household income	Household income (weekly)	Rental (% income)	Weekly rental	Ownership (% income)	Monthly	Principal loan	Deposit	Home affordability
$85,000	$1,635	30%	$490	40%	$2,833	$425,871	$42,587	$468,459
$87,256	*$1,678*	*30%*	*$503*	*30%*	*$2,181*	*$327,881*	*$32,788*	*$360,669*
$87,256	*$1,678*	*30%*	*$503*	*40%*	*$2,909*	*$437,175*	*$43,717*	*$480,892*
$90,000	$1,731	30%	$519	40%	$3,000	$450,923	$45,092	$496,015
$95,000	$1,827	30%	$548	40%	$3,167	$475,974	$47,597	$523,571
$100,000	$1,923	30%	$577	40%	$3,333	$501,025	$50,103	$551,128

*Assumptions: 10% deposit, 7% interest rate, 30 year term

3.3.1 Purchase affordability

Mudgee

Based on the outputs from the household income affordability calculator shown above, a household with the median income in Mudgee ($1,678/week in 2021) could only afford to purchase a home for $360,000, assuming a debt service ratio of 30% of income. Assuming a higher debt service ratio of 40%, a household with the median income can afford to purchase a home in Mudgee for $480,000. Both figures are well below the median house price in Mudgee of $761,875.

Compared to the findings from the URS 2014 (reflective of 2011 Census data and March 2014 property market data), housing purchase affordability in Mudgee has decreased significantly. At the time of writing the URS 2014, the median household income in Mudgee could service a debt of $220,000 (at 30 per cent) and $294,000 (at 40 per cent).

These figures represented around 61 per cent and 81 per cent (respectively) of the median house price in Mudgee at the time, $362,500. As at October 2022, the median household income in Mudgee could service a debt amounting to around 47 and 63 per cent of the median house price (at the same ratios of household income to debt), a significant drop.

To inform our understanding of the property market in Mudgee and Gulgong, HillPDA undertook a review of real estate sales platforms and local agents' websites.

Table 33 provides a sample of dwellings for sale in Mudgee in November 2022 and their prices. Out of this sample, there was only one property with an asking price for less than $600,000. This suggests those living in Mudgee on average and below average incomes have little opportunity to purchase a home.

Table 33: Snapshot of dwelling prices in Mudgee (as at November 2022)

Dwelling description	Address	Site area (sqm)	Near-new or existing dwelling	Asking/ Sale Price
Detached dwelling (4 bed, 2 bath, 1+ car space)	Diana Drive	2,010	Near-new	$1,420,000
Detached dwelling (3 bed, 1 bath, 1+ car space)	Market Street	1,062	Existing	$305,000
Detached dwelling (4 bed, 1 bath, 1+ car space)	Redbank Road	762	Existing	$680,000
Detached dwelling (4 bed, 2 bath, 1+ car space)	Mulholland Court	N/A	Near-new	$740,000
Detached dwelling (4 bed, 3 bath, 1+ car space)	Clare Court	1,038	Near-new	$820,000
Detached dwelling (3 bed, 2 bath, 1+ car space)	Winter Street	1,070	Existing	$690,000
Detached dwelling (3 bed, 2 bath, 1+ car space)	Court Street	1,012	Existing	$680,000
Detached dwelling (3 bed, 2 bath, 1+ car space)	Hardy Crescent	943	Existing	$720,000
Detached dwelling (4 bed, 2 bath, 1+ car space)	Knox Crescent	676	Existing	$799,000
Detached dwelling (3 bed, 1 bath, 1+ car space)	Hardy Crescent	819	Existing	$600,000
Detached dwelling (3 bed, 2 bath, 1+ car space)	Bellevue Road	436	Existing	$630,000
Low density residential– 10ha	Henry Lawson Drive	101,200	Existing	$1,700,000
Low density residential– 10ha	Woorawa	101,250	Existing	$695,000
Low density residential– 5.6ha	Grant Bruce Court	5,604	Existing	$1,100,000

Source: realestate.com.au (2022)

Gulgong

The household income affordability calculator also shows that a household with the median income in Gulgong ($1,371/week in 2021) could only afford to purchase a home for $295,000 assuming a debt service ratio of 30% of income. With a 40% debt service ratio, a household with the median income can afford to purchase a home in Gulgong for $393,000. Both figures are well below the median house price in Gulgong of $536,959

Compared to the findings from the URS 2014, housing purchase affordability in Gulgong has decreased significantly. At the time of writing the URS 2014, the median household income in Gulgong could service a debt of $176,000 (at 30 per cent) and $235,000 (at 40 per cent).

These figures represented around 66 per cent and 88 per cent (respectively) of the median house price in Gulgong at the time, $267,000. As at October 2022, the median household income in Gulgong could service a debt amounting to around 55 and 73 per cent of the median house price (at the same ratios of household income to debt). This represents a significant fall, though less significant than that seen in Mudgee across the same period.

Table 34 provides a sample of Gulgong dwellings for sale in November 2022 and their prices. Out of this sample, there were six properties with an asking price for less than $600,000. This indicates that a household earning the median income or less would have limited opportunities when it comes to buying a house.

Table 34: Snapshot of dwelling prices in Gulgong (2022)

Dwelling description	Address	Site area (sqm)	Near-new or existing dwelling	Asking/Sale Price
Detached dwelling (4 bed, 1 bath, 1+ car space)	Mayne Street	1,012	Existing	$465,000
Detached dwelling (3 bed, 1 bath, 1+ car space)	Nandoura Street	841	Existing	$480,000
Detached dwelling (4 bed, 1 bath, 1+ car space)	Medley Street	1,148	Existing	$859,000
Detached dwelling (6 bed, 2 bath, 1+ car space)	Mayne Street	1,007	Existing	$849,000
Detached dwelling (3 bed, 1 bath, 1+ car space)	Belmore Street	1,695	Existing	$649,000
Detached dwelling (5 bed, 2 bath, 1+ car space)	Mayne Street	1,012	Existing	$525,000
Detached dwelling (2 bed, 1 bath, 1+ car space)	Medley Street	1,005	Existing	$519,000
Detached dwelling (4 bed, 2 bath, 1+ car space)	Cainbil Street	732	Existing	$580,000
Villa (3 bed, 2 bath, 1+ car space)	N/A	N/A	Existing	$450,000
Low density residential– 18.5ha	Black Lead Lane	18,500	Existing	$1,100,000

Source: realestate.com.au (2022)

3.3.2 Rental affordability

In relation to rent, Mudgee households earning the median income of $1,678 per week could afford to pay $503 per week in rent, which is $13 per week more than the median house rent ($490 per week in Mudgee). Gulgong households earning the median income of $1,371 per week could afford to pay $411 per week in rent, which is $1 per week more than then median house rent ($410 per week in Gulgong). While this indicates that rentals are affordable for Mudgee and Gulgong households earning the median weekly household income, the limited supply of rentals (as noted in section 3.2) remains a key barrier to the accessibility of rental accommodation.

It is notable that rental affordability in both Mudgee and Gulgong has shifted since the URS 2014. Whilst in the URS 2014 the housing affordability calculator indicated that median house rents in both Mudgee and Gulgong were higher than the calculated affordable rent figure (by $60 and $80 per week, respectively), the updated figures above show that median house rents are slightly below the calculated affordable rent figure.

These findings reflect those from consultation with local real estate agents, who advised HillPDA of extremely low rental vacancy rates that were contributing to higher rents. In addition, the lack of affordable and/or smaller format housing and mismatch between earning and rental prices suggests the private rental market in Mudgee and Gulgong are not catering well to the needs of:

- smaller households; and/or
- those people not earning larger incomes looking for affordable rental accommodation.

3.3.3 Housing stress

Housing stress is a term that describes households that experience financial strain in accessing the housing market, typically through analysis of income alongside housing expenditure. There are a wide range of factors involved in determining what proportion of its income a household spends on housing. This means that blanket thresholds or measures applied at a population level may not be able to accurately indicate whether an individual household experiences housing stress (AHURI 2019).

Nonetheless, exceeding a threshold of 30 per cent of household income spent on housing (not including maintenance, repairs etc) has been generally accepted as an indicator of housing stress (AHURI 2019). This applies to both mortgage repayments and rental payments, often termed 'mortgage stress' and 'rent stress'.

The proportion of Mudgee and Gulgong households experiencing mortgage and rent stress is shown in Table 35, alongside that for the LGA as a whole and the Rest of NSW.

Table 35: Housing stress in Mudgee and Gulgong (as at the 2021 Census)

Area	Mortgage stress: proportion of income spent on mortgage (per cent of households with mortgages)		Rent stress: proportion of income spent on rent (per cent of renter households)	
	Less than or equal to 30%	More than 30%	Less than or equal to 30%	More than 30%
Mudgee	89.2%	10.9%	63.6%	36.1%
Gulgong	85.1%	16.2%	61.3%	40.0%
MWR LGA	86.5%	13.5%	62.8%	37.2%
RNSW	85.6%	14.4%	60.0%	40.0%

Source: ABS Census 2021

The housing stress data above shows that generally, Mudgee and the MWR LGA as a whole experience less housing stress than RNSW. Proportionally far less households in Mudgee experience mortgage stress than the LGA or RNSW. In Gulgong, however, a far higher proportion of households experience mortgage stress compared to Mudgee, with this proportion also higher than that of the LGA or RNSW. Rent stress is also more widespread in Gulgong, occurring at the same rate as that of RNSW, somewhat elevated compared to Mudgee and the MWR LGA.

3.4 Key findings

The housing market of Mudgee and Gulgong, as well as that of the MWR LGA, have experienced significant change since the URS. Purchase and rental prices for dwellings have risen significantly over the period since 2011, though the market continues to consist of predominantly detached dwellings, with much of the available land and dwellings offered in greenfield release areas, typically on relatively large lots.

Other key features identified in Mudgee and Gulgong's residential housing markets are:

- Significant growth in dwelling sale prices, especially in Mudgee. The sharpest growth has occurred since 2019, though this appears to be stabilising.
- Both Mudgee and Gulgong are dominated by detached dwellings of three and four bedrooms, with few smaller dwellings available.
- Both Mudgee and Gulgong demonstrate exceptionally tight rental markets, with very few rental dwellings available and extremely low vacancy rates.
- Rental affordability has generally improved in both Mudgee and Gulgong since the URS and mortgage and rent stress in Mudgee are similar or lower than rates across RNSW. However, purchase affordability (particularly in Mudgee) has decrease significantly, and households in Gulgong experience housing stress at higher rates than those in Mudgee, the MWR LGA, or across RNSW.

These findings are of increased significance in the context of the likely population changes anticipated to arise from major projects workforces in the region.

LAND AND DWELLING SUPPLY

4.0 LAND AND DWELLING SUPPLY

This Chapter discusses the supply of residential land in Mudgee and Gulgong and culminates with an estimate of the existing residential land available to meet future housing demand. It includes an overview of strategic planning activity in Mudgee and Gulgong relating to residential land supply, consideration of development approval trends, and an overview of residential lots available for sale. This Chapter also contains analysis of current residential development capacity for Mudgee and Gulgong by zone, calculated using existing local development patterns and densities, along with area measurements completed using GIS software. This Chapter does not consider any potential constraints or limitations on the development of identified land as this is considered in Chapter 6.0.

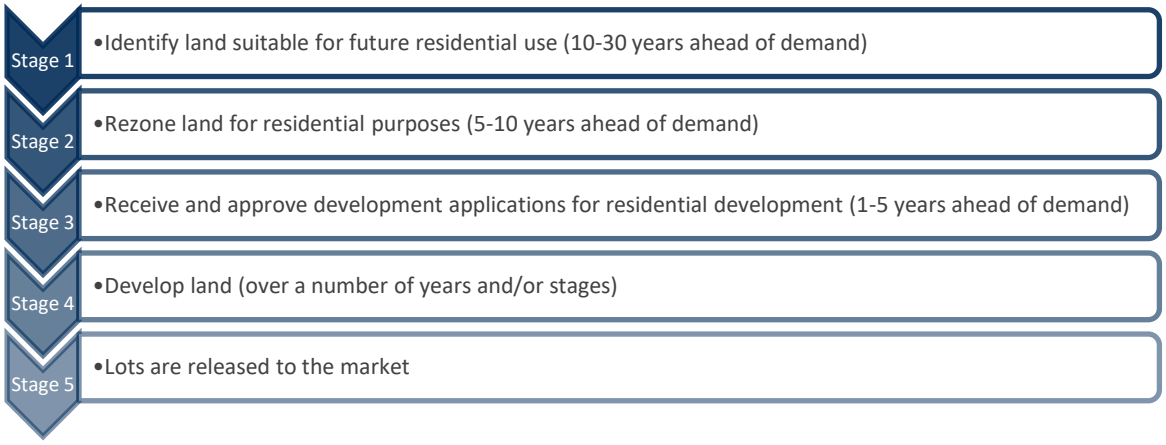
4.1 Factors affecting supply

A common misconception is that if land is zoned, vacant and undeveloped that is available for immediate development. In practice, this may not be the case. In fact there is often a 'disconnect' between the amount of zoned land and actual delivery of housing lots.

Land that is rezoned for residential development may not necessarily be delivered to the market. This could be due to a variety of reasons, including infrastructure or environmental constraints (e.g. bushfire or flood risk, sewerage and water servicing, or topography – refer to Chapter 6 for discussion of these matters), as well as other constraints such as feasibility or fragmented ownership.

As these factors are difficult to predict and manage, ensuring that land release is adequate and timely is crucial to enable the supply of housing. An overview of a typical staged approach to land release is shown in Figure 26.

Figure 26: Land identification and release process



The adequacy of land release is therefore crucial for the supply of housing. From first principles the supply of land directly impacts the price of housing. When land supply is constrained, the cost of assembling a suitable development site (and therefore the risk of such activities) is increased. These costs and risks will subsequently be reflected in both the likelihood of development activities occurring, and the eventual price any development that does eventuate.

Consultation with Council and real estate agents suggested the presence of a range of issues impacting the efficient supply of land in Mudgee and Gulgong. External factors such as changes in interest rates, cost of material, and cost of labour have contributed to delays in supply, but land fragmentation, viability, and concerns with the cost and transparency of the planning process were also identified as impacting supply. In particular, this was seen as discouraging potential infill development and subdivision of smaller parcels by owner-developers, with the vast majority of land supply being delivered in staged subdivisions across a small number

of larger release areas. Additionally, it was identified that some of Mudgee and Gulgong's zoned land supply is either highly fragmented or is owned by landholders that appear to be uninterested in developing their land.

4.2 Identification of land with strategic value

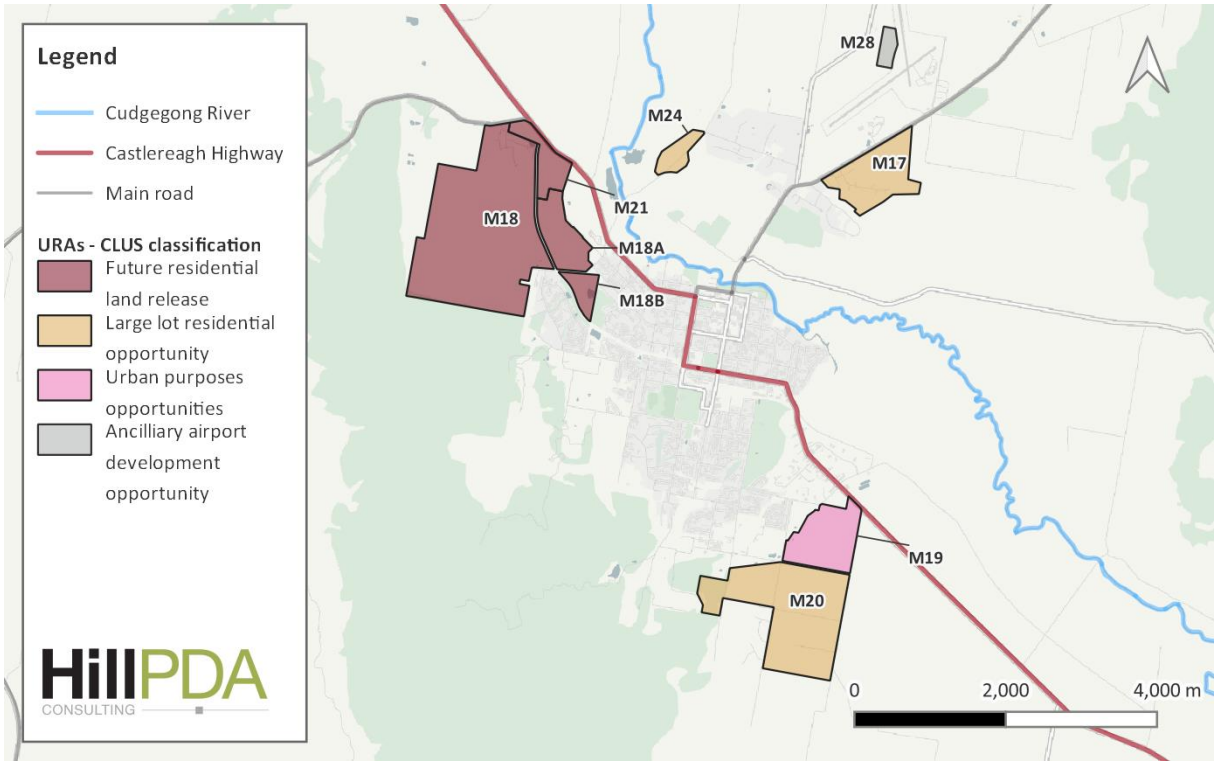
In 2007 Council commenced preparation of a Comprehensive Land Use Strategy (CLUS) to provide a strategic framework for planning and land use decisions within the LGA to 2030. The CLUS was adopted by Council in 2010 and the NSW Department of Planning and Environment in 2011 and helped inform the preparation of the Mid-Western Local Environmental Plan 2012 (MWLEP 2012), required to consolidate the Mid-Western Regional Interim LEP 2008, Rylstone LEP 1996 and Merriwa LEP 1992 into the Standard LEP format.

In addition to informing the MWLEP process, the CLUS involved preparing Town Structure Plans for Mudgee, Gulgong, Rylstone and Kandos which were visual representations of the outcomes of the strategy. The CLUS identified land parcels around Mudgee and Gulgong as strategic land suitable to meet the growing need for housing in the area. The CLUS also recommended the preparation of an Urban Release Strategy (URS) for residential land to assist in infrastructure planning.

These works resulted in land being rezoned for residential purposes under the MWLEP, as well as other rezoning and minimum lot size changes since that time, including through planning proposals. Consultation with Council has revealed no significant planning proposals are currently under consideration. Council does not anticipate any significant planning proposals in the near future.

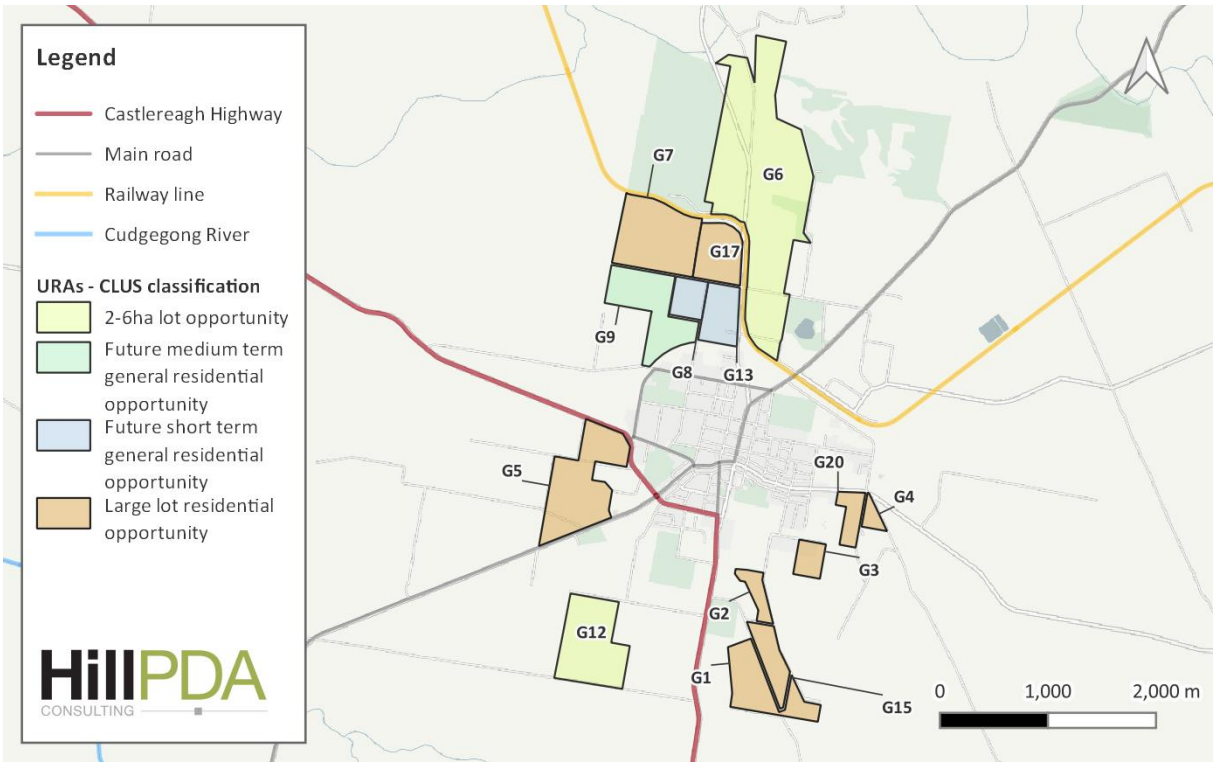
The figures below display the URAs that correspond with areas identified in the CLUS, and what the opportunity identified in the CLUS is for each area.

Figure 27: CLUS opportunities, Mudgee URAs



Source: HillPDA

Figure 28: CLUS opportunities, Gulgong URAs



Source: HillPDA

4.3 Development approvals

This section reviews data provided by Council relating to development approvals and certifications in Mudgee and Gulgong. Approved development applications relate to subdivisions and dwellings that have been submitted to Council (or a certifier) for development approval. This does not necessarily indicate the number of lots or dwellings that have been established.

Subdivision certificates and occupation certificates, however, indicate that a lot or dwelling has completed the approvals process and is available for further development, or that it can be occupied. This data is therefore a more accurate indicator of short-term supply and supply trends. At the time of writing, occupation certificate data was not made available.

4.3.1 Mudgee

Over the period 2015 to 2022, Council has approved an average of 55 residential subdivision lots per annum in Mudgee, whilst an average of 91 residential subdivision lots have been certified. Over the same period, Council approved an average of 46 development applications per annum for single dwellings, dual occupancies and secondary dwellings, whilst an average of 56 dwellings per annum were approved through complying development certificates (CDCs).

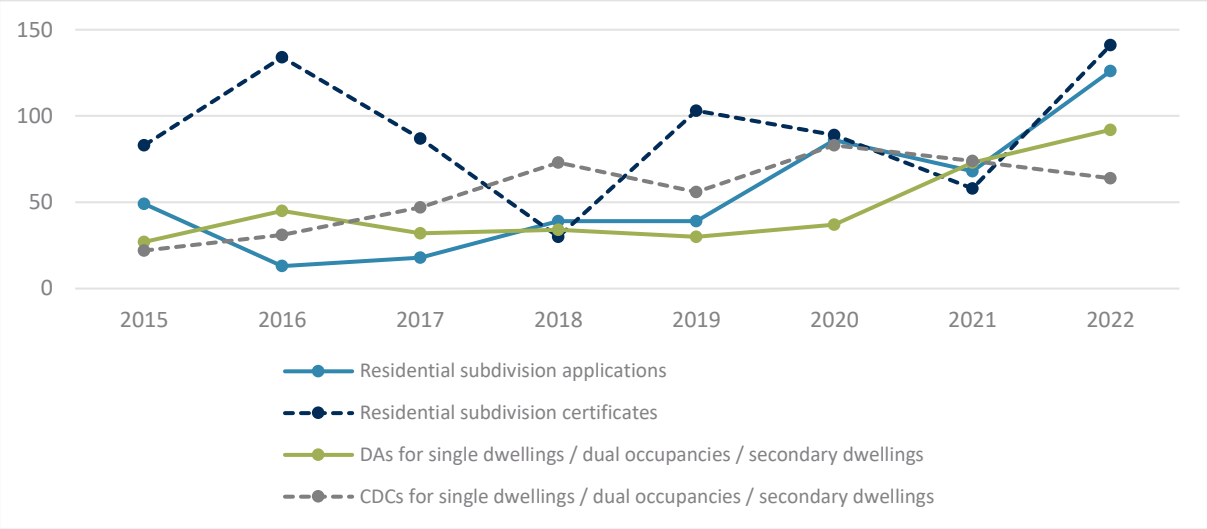
These findings are shown in Table 36, and charted over time in Figure 29.

Table 36: Development approvals/certificates per year by type, Mudgee (2015-2022)

Type of approval	Count of approved dwellings or lots									
	Year								Total	Average annual
	2015	2016	2017	2018	2019	2020	2021	2022		
Residential subdivision applications (lots)	49	13	18	39	39	86	68	126	438	55
Residential subdivision certificates (lots)	83	134	87	30	103	89	58	141	725	91
DAs for single dwellings / dual occupancies / secondary dwellings	27	45	32	34	30	37	73	92	370	46
CDCs for single dwellings / dual occupancies / secondary dwellings	22	31	47	73	56	83	74	64	450	56

Source: HillPDA, Mid-Western Regional Council

Figure 29: Development approvals/certificates per year by type, Mudgee (2015-2022)



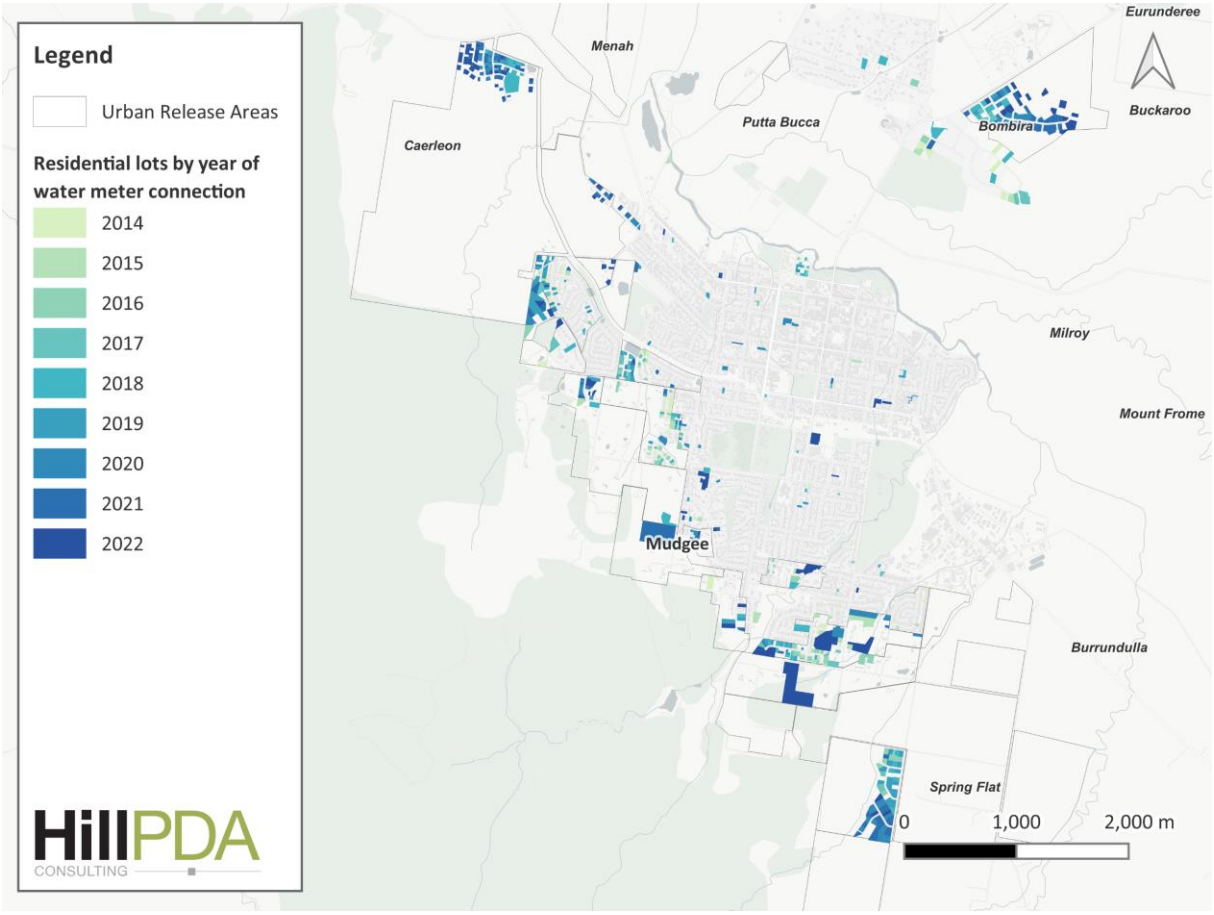
Source: HillPDA, Mid-Western Regional Council

In addition to the above, a further 12 development applications were approved between 2015 and 2022 for multi-unit housing in Mudgee (i.e. villas, townhouses and residential flat buildings). These approvals totalled 250 dwellings, at an average of 31 dwelling approvals per annum. It is noted that this included one extremely large recent approval (for 206 manufactured home dwellings), without which the total would be 44 approvals for multi-unit dwellings at an average of around 6 approvals per annum.

In total, over the period 2015 to 2022 (inclusive of CDCs and multi-unit housing), Council has approved development applications for 864 dwellings in Mudgee. This equates to an average of **around 108 dwelling approvals per annum**. Over the same period, a total of 725 lots were issued subdivision certificates, which equates to an average of **around 91 approved lots per annum.**

Figure 30 identifies where and when residential development has occurred in Mudgee since 2014 using Council's water meter connection data. The water meter connections data shows that the most recent development in Mudgee has generally occurred in Caerleon, Bombira, Spring Flat, and around Saleyards Lane. Other recent development has been distributed around Mudgee, particularly in the infill URAs to the south and southwest of the CBD.

Figure 30: Newly-established water meter connections, Mudgee (2014 to 2022)



Source: MWRC, HillPDA

4.3.2 Gulgong

Over the period 2015 to 2022, Council has approved the subdivision of an average of eight residential lots per annum in Gulgong, whilst an average of two residential subdivision lots per annum have been certified. Over the same period, Council approved an average of five development applications per annum for single dwellings, dual occupancies and secondary dwellings, and one dwelling per annum through CDCs. It is noted, however, that excluding the outlying large residential subdivision approval in 2022, the average number of such approvals over the period in Gulgong would decrease from eight to just three.

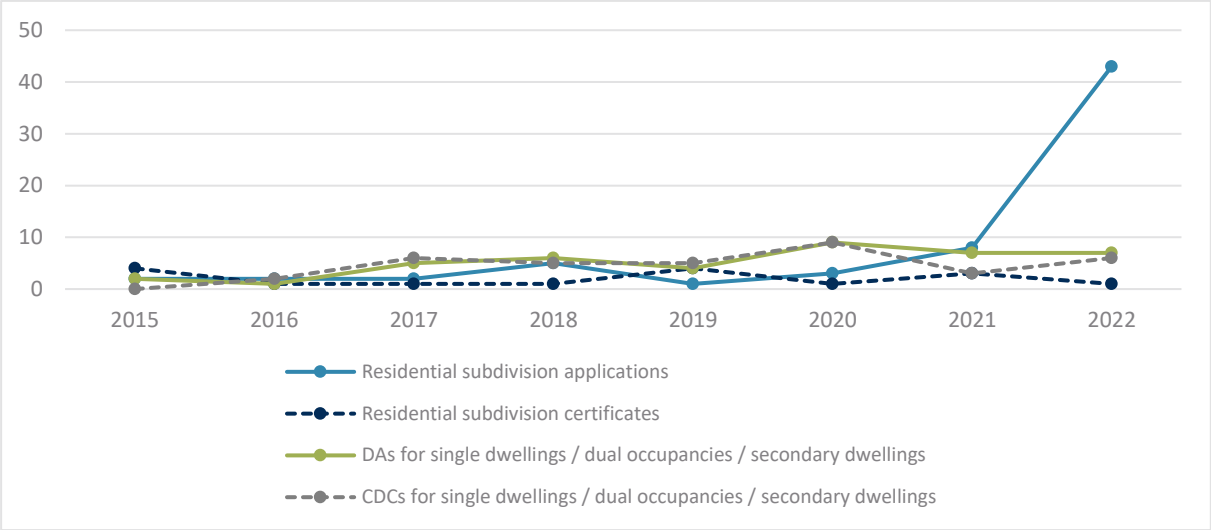
These findings are shown in Table 37, and charted over time in Figure 31.

Table 37: Development approvals/certificates per year by type, Gulgong (2015-2022)

Type of approval	Count of approved dwellings or lots									
	Year								Total	Average annual
	2015	2016	2017	2018	2019	2020	2021	2022		
Residential subdivision applications (lots)	2	2	2	5	1	3	8	43	66	8
Residential subdivision certificates (lots)	4	1	1	1	4	1	3	1	16	2
DAs for single dwellings / dual occupancies / secondary dwellings	2	1	5	6	4	9	7	7	41	5
CDCs for single dwellings / dual occupancies / secondary dwellings	0	2	6	5	5	9	3	6	36	5

Source: HillPDA, Mid-Western Regional Council

Figure 31: Development approvals/certificates per year by type, Gulgong (2015-2022)



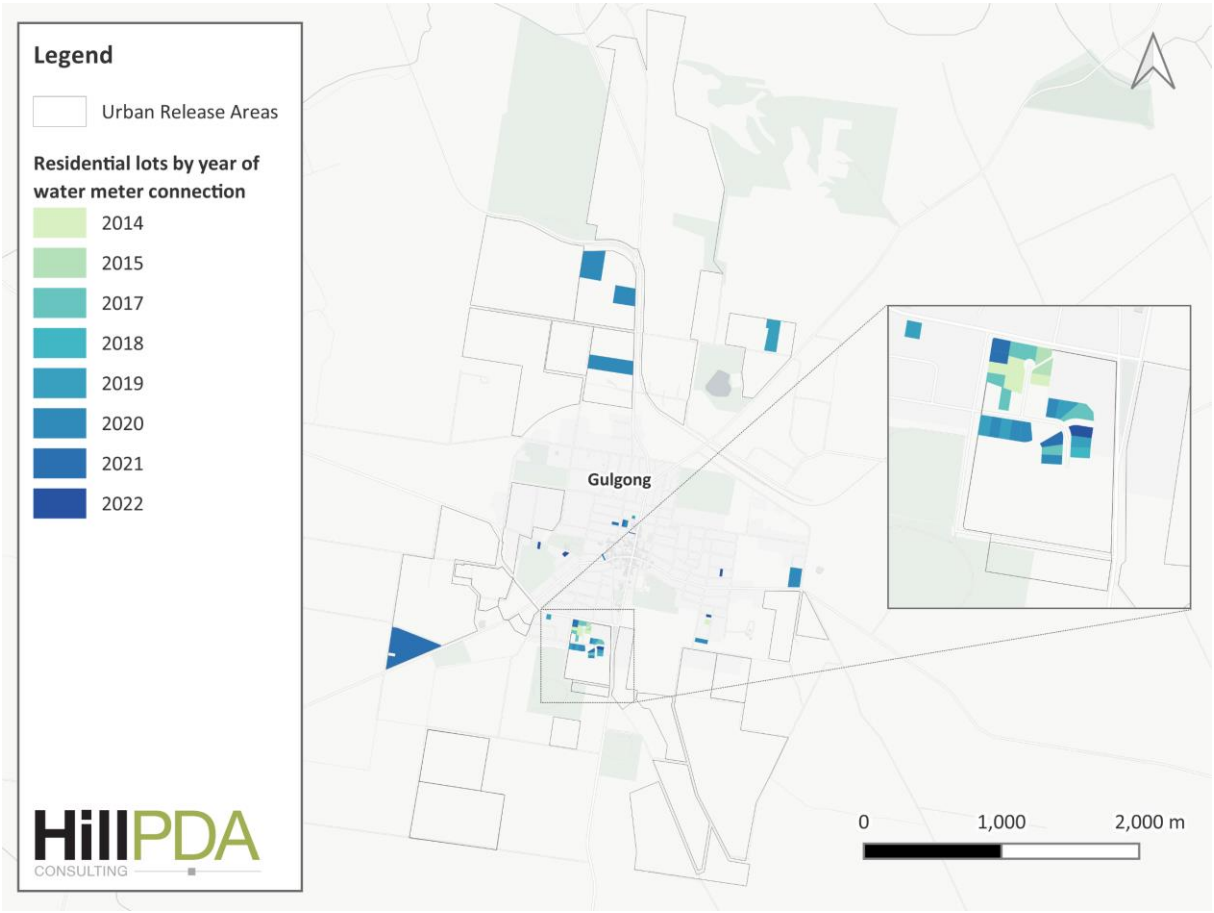
Source: HillPDA, Mid-Western Regional Council

In addition to the above, an additional development application was approved in Gulgong in 2015 for three multi-unit housing dwellings (i.e. villas, townhouses and residential flat buildings).

In total, over the period 2015 to 2022 (inclusive of CDCs), Council has approved development applications for 77 dwellings in Gulgong. This equates to an average of **around 10 dwelling approvals per annum.** Over the same period, a total of 16 lots were issued subdivision certificates, which equates to an average of **two approved lots per annum.**

Figure 30 identifies where and when residential development has occurred in Gulgong since 2014 using Council's water meter connection data. The water meter connections data shows residential development in Gulgong has largely been concentrated within URA G11, where water meters have gradually been connected over the period from 2014 to present. The remaining residential water meter connections recorded in Gulgong are too few in number to indicate any pattern, though it is noted that most recent water meter connections to smaller lots have occurred close to Gulgong's centre.

Figure 32: Newly-established water meter connections, Gulgong (2014 to 2022)



Source: MWRC, HillPDA

4.3.3 Current pipeline

HillPDA and Council have identified that parts of some URAs are subject to development approvals for residential subdivisions. Our experience suggests that most approved subdivisions are eventually developed, though when this is likely to occur is uncertain. These approved subdivisions therefore contribute to the current development supply pipeline in Mudgee and Gulgong. The relevant development approvals are shown in Table 38.

Table 38: Current pipeline of approved residential subdivisions in Mudgee and Gulgong (as at March 2023)

URA ID	Lot size(s)	Approved yield*
M6	2,000sqm-3,200sqm	6
	2,200sqm-2,800sqm	6
M14	5ha	1
	1,500sqm-2,500sqm	26
M16	2,000sqm-5,000sqm	26
M17	4,000sqm	8
	4,000sqm-5,000sqm	44
M18A	600sqm-1,000sqm	22
M22	2ha-2.5ha	24
M25	2ha-2.8ha	25
M26	2ha-3ha	20
G11	1,000sqm-2,500sqm	37
G13	1,000sqm-1,400sqm	10
Total		**255**

Source: HillPDA, Mid-Western Regional Council

* Yield has been calculated exclusive of existing lots that would be consumed by the subdivision.

For the purposes of this strategy, we have assumed that all approved subdivisions will be developed. The lot yields have been included in the total yield estimates for the relevant URAs, and the lots subject to those approvals have been excluded from the yield calculations for the URAs. As the subdivision layout and yield for the relevant subdivisions have already been approved, this approach contributes to the accuracy of the URA yield estimates.

Overall, the current pipeline in Mudgee and Gulgong's URAs totals approximately 250 lots, the majority of which are low density residential style lots (around 120), with the balance made up of large lot residential (around 75) and general residential lots (around 60). Mudgee's URAs contribute around 200 lots to the current pipeline, whilst Gulgong's URAs contribute around 50 lots.

4.4 Snapshot of available residential lots

HillPDA undertook a review of real estate sales platforms and local agents' websites to identify residential development lots currently available for sale in Mudgee and Gulgong. The following table provides a snapshot of residential lots currently for sale in Mudgee and Gulgong, many of which are located within the urban release areas.

Table 39: Snapshot of residential lots available in Mudgee and Gulgong (as at December 2022)

Estate/area	Location (URA)	Lot sizes (sqm)	Average size of observed lots (sqm)	Number of lots for sale
Mudgee				
Caerleon Stage 3	Caerleon (URA_M18)	942	n/a	1
Caerleon Stage 4	Caerleon (URA_M18)	1,205	n/a	1
Caerleon Stage 5	Caerleon (URA_M18)	720-1020	889	4
Caerleon Stage 6	Caerleon (URA_M18)	622-921	772	2
Caerleon Stage 7a	Caerleon (URA_M18)	600-601	601	2
Caerleon Stage 8	Caerleon (URA_M18)	720-771	746	2
Caerleon Stage 9	Caerleon (URA_M18)	658-720	689	2
Caerleon Stage 12b	Caerleon (URA_M18)	450	n/a	1
Caerleon Estate total	***Caerleon (URA_M18)***	***450-1,205***	***784***	***15***
Bombira Stage 6	Bombira (URA_M17)	2,007	n/a	1
Bombira Stage 7	Bombira (URA_M17)	2,000-2,348	2,071	8
Bombira Stage 8	Bombira (URA_M17)	2,031-2,928	2,318	6
Bonnyview Estate	Bombira (URA_M17)	4,041-5,097	4,391	7
Bombira Estate total	***Bombira (URA_M17)***	***2,000-2,928***	***2,915***	***22***
Bellevue Road	***West Mudgee***	***2,000-7,907***	***4,064***	***3***
Spring Road	***South Mudgee (URA_M9)***	***10,279***	***n/a***	***1***
Barrington Court	***Southeast Mudgee (URA_M11/14)***	***1,021***	***n/a***	***1***
Flinders Avenue	***Southwest Mudgee***	***838***	***n/a***	***1***
295 Putta Bucca Road	***Putta Bucca***	***5,762***	***5,762***	***1***
Total Mudgee		**450-10,279**	**2,150**	**44**
Gulgong				
Millennium Estate	Railway Street, east Gulgong	600-1,040	796	6
4-6 Happy Valley Road	Northeast Gulgong	1,384	1,384	1
Total Gulgong		**600-1,384**	**880**	**7**

In total, as at December 2022, the number of vacant residential lots available for purchase in Mudgee and Gulgong was 51. Of these, 44 were in Mudgee, with the remaining 7 in Gulgong.

In terms of lot size, the majority of available lots in Mudgee (27 of 44) were over 2,000 square metres, with the average size of available lots in Mudgee being 2,150 square metres. Most of these larger lots were located in Bombira, to the north of Mudgee, with four available elsewhere in Mudgee. Few available lots were between 1,000 and 1,999 square metres, with two available in Caerleon and one in southeast Mudgee. The remaining

14 available lots were sized between 450 and 999 square metres, and were available almost exclusively in Caerleon.

In Gulgong, four of the total seven lots were sized between 600 and 999 square metres, and three were between 1,000 and 1,999 square metres. All of Gulgong's smaller lots and two of the 1,000-1,999 square metre lots were located in the Millennium Estate, east of the Gulgong CBD, whilst one 1,000-1,999 square metre lot was available northeast of Gulgong.

The above does not represent a definitive list of available lots in Mudgee and Gulgong, but it provides a sample of the location, number and size of residential lots available in Mudgee. Mudgee's available lots had a much higher average lot size, reflecting the large number of 2,000+ square metre lots available in Bombira as well as the lower proportion of sub-1,000 square metre lots currently available.

4.5 Summary of current capacity

This section summarises the estimated capacity of Mudgee and Gulgong's urban release areas by current zone and minimum lot size controls and considers the estimated dwelling/lot density, based on observed development patterns.

The findings in this section are provided as estimates of the total potential lot yield within the URAs. They do not account for land that has already been developed within a URA, nor other factors that may limit development potential. Infrastructure, environmental, and site-specific constraints limit the maximum achievable number of lots or dwellings and are highly variable, both between and within URAs. Further, the extent to which development-capable land is fragmented can also significantly impact the potential lot yield. These factors are considered in Chapter 6.0 and Chapter 7.0.

4.5.1 Development pattern analysis

To assess the potential residential development capacity in the URAs, HillPDA sampled residential dwelling and lot densities achieved in existing development in Mudgee and Gulgong across the aforementioned residential zones. This included older residential areas, as well as recent residential development in URAs. Residential development and potential dwelling yields in Mudgee and Gulgong are (in part) limited by the MWLEP's Clause 4.1, which outlines minimum subdivision lot sizes, which are shown on the relevant Lot Size Map. However, some areas can achieve smaller minimum subdivision lot sizes, as follows:

- **Clause 4.1 (3A):** if Council is satisfied that the relevant lots are or will be serviced by a water reticulation system and sewerage system, land identified as "Area A" may be subdivided to create lots of at least 2,000 square metres; and land identified as "Area B" may be subdivided to create lots of at least 4,000 square metres.
- **Clause 4.1 (3B):** if Council is satisfied that the relevant lots are or will be serviced by a water reticulation system, land identified as "Area D" may be subdivided to create lots of at least 2 hectares
- **Clause 4.1C:** land identified as "Area C" that is within 100 metres of land zoned as B4 has no minimum subdivision lot size, if subdivided for residential accommodation purposes.

Consistent with analysis undertaken for the URS, the average number of dwellings per hectare varies even within areas that have the same zone and minimum lot size. For example, in R1 General Residential areas with 450 square metre or 600 square metre minimum lot sizes, small infill estate developments were observed to achieve a dwelling density of up to 10 dwellings per hectare, whilst offering a range of lot sizes.

Despite having similar controls, larger greenfield estate developments were observed to achieve densities of around 7.5 to 8 dwellings per hectare. This is likely due to a combination of factors, including greenfield developments having to include more area for non-residential purposes (such as recreation and open space areas

or drainage detention areas), and higher land value in infill locations (due to their proximity to existing services and amenity) increasing the feasibility of developing smaller lot sizes.

Observed residential yields in R2 Low Density Residential and R5 Low density residential areas are far lower than those in R1 General Residential areas, and can vary significantly dependent on location, servicing, and the variation in applicable minimum lot sizes. Observed residential yields in R2 zoned areas in Mudgee and Gulgong were between 1.5 and 3 dwellings per hectare, despite the minimum lot size allowing for much higher yields under the aforementioned Clause 4.1 (3A). Observed residential dwelling yields in R5 zoned areas were less than one dwelling per hectare, between 0.1 and 0.3 dwellings per hectare.

Residential lot and dwelling yields in RU1 Primary Production and RU4 Primary Production Small Lots are difficult to observe and predict, but are generally very low. Additionally, the lack of residential development in B4 Mixed Use land in Mudgee and Gulgong makes it difficult to predict potential yields from these areas. Therefore, estimated dwelling yields have been adopted in line with R1 General Residential areas of the same minimum lot size.

4.5.2 Mudgee

Table 40 shows estimated lot yields for Mudgee's URAs based on the observations above, minimum lot sizes and total area, and does not take into account constraints or the amount of land that has already been developed. For those URAs identified in the CLUS, the proposed future minimum lot size has been used for these calculations, however, it is acknowledged that these areas would require rezoning to enable this to be achieved.

Table 40: Potential residential development capacity by URA (Mudgee URAs)

URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)	Estimated yield per hectare	Count of potential lots
M5	R1 General Residential	600sqm	32.1	8	257
	Total M5		**32.1**		**257**
M6	R1 General Residential	600sqm	6.1	8	49
	R2 Low Density Residential	2ha (Area A)	12.7	4	51
		10ha (Area A)	54.1	4	216
	Total M6		**72.9**		**316**
M7	R2 Low Density Residential	2ha (Area B)	37.6	2	75
	Total M7		**37.6**		**75**
M11	R1 General Residential	600sqm	40.5	8	324
	Total M11		**40.5**		**324**
M13	R1 General Residential	600sqm	9.5	8	76
	Total M13		**9.5**		**76**
M14	R2 Low Density Residential	10ha (Area A)	56.1	4	224
	Total M14		**56.1**		**224**
M15	R2 Low Density Residential	2ha (Area B)	25.3	2	51
	Total M15		**25.3**		**51**
M16	R2 Low Density Residential	2ha (Area A)	53.4	4	214
	Total M16		**53.4**		**214**
M17	R2 Low Density Residential	2ha (Area A)	40.0	4	160
		2ha (Area B)	33.7	2	67
	Total M17		**73.7**		**227**
M18	B4 Mixed Use	450sqm	4.2	12	50
	R1 General Residential	450sqm	101.8	9	916
		600sqm	56.6	8	453
		1000sqm	6.0	6	36
		4000sqm	2.9	2	6
	R2 Low Density Residential	2ha	3.9	0.3	1
	R5 Large Lot Residential	4000sqm	75.0	2	150
	Total M18		**250.4**		**1,610**
M18A	R1 General Residential	600sqm	45.2	8	362

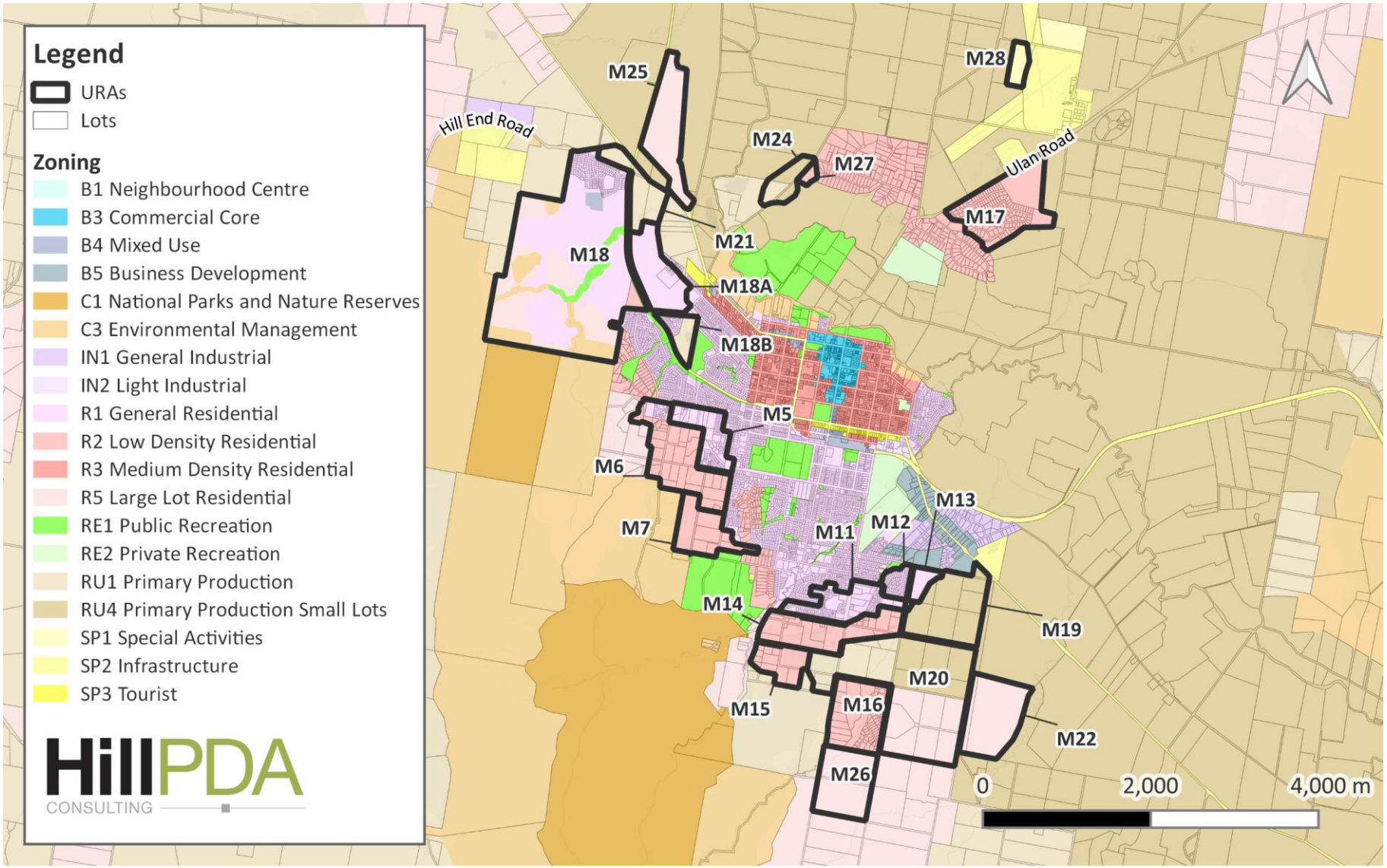
URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)	Estimated yield per hectare	Count of potential lots
	Total M18A		**45.2**		**362**
M18B	R1 General Residential	600sqm	5.5	8	44
	RU1 Primary Production	600sqm*	11.0	8	88
	Total M18B		**16.5**		**132**
M19	RU4 Primary Production Small Lots	2000sqm*	66.8	4	267
	Total M19		**66.8**		**267**
M20	RU1 Primary Production	2000sqm*	47.6	4	190
	RU4 Primary Production Small Lots	2000sqm*	57.9	4	232
	R5 Large Lot Residential	2000sqm*	72.3	4	289
	Total M20		**177.8**		**711**
M21	RU1 Primary Production	600sqm*	30.9	8	247
	Total M21		**30.9**		**247**
M22	R5 Large Lot Residential	5ha (Area D)	59.2	0.3	18
	Total M22		**59.2**		**18**
M24	RU1 Primary Production	2000sqm*	12.5	4	50
	RU4 Primary Production Small Lots	2000sqm*	5.6	4	22
	Total M24		**18.1**		**72**
M25	R5 Large Lot Residential	5ha (Area D)	57.5	0.3	17
	Total M25		**57.5**		**17**
M26	R5 Large Lot Residential	5ha (Area D)	52.0	0.3	16
	Total M26		**52.0**		**16**
M27	R2 Low Density Residential	2ha (Area B)	3.7	2	7
	Total M27		**3.7**		**7**
M28	SP1 Special Activities	2ha	10.3	0.3	3
	Total M28		**10.3**		**3**
				Total Mudgee	**5,229**

Note: Values have been rounded.

* Minimum lot sizes marked with an asterisk are indicative and would require rezoning to achieve the indicated yield.

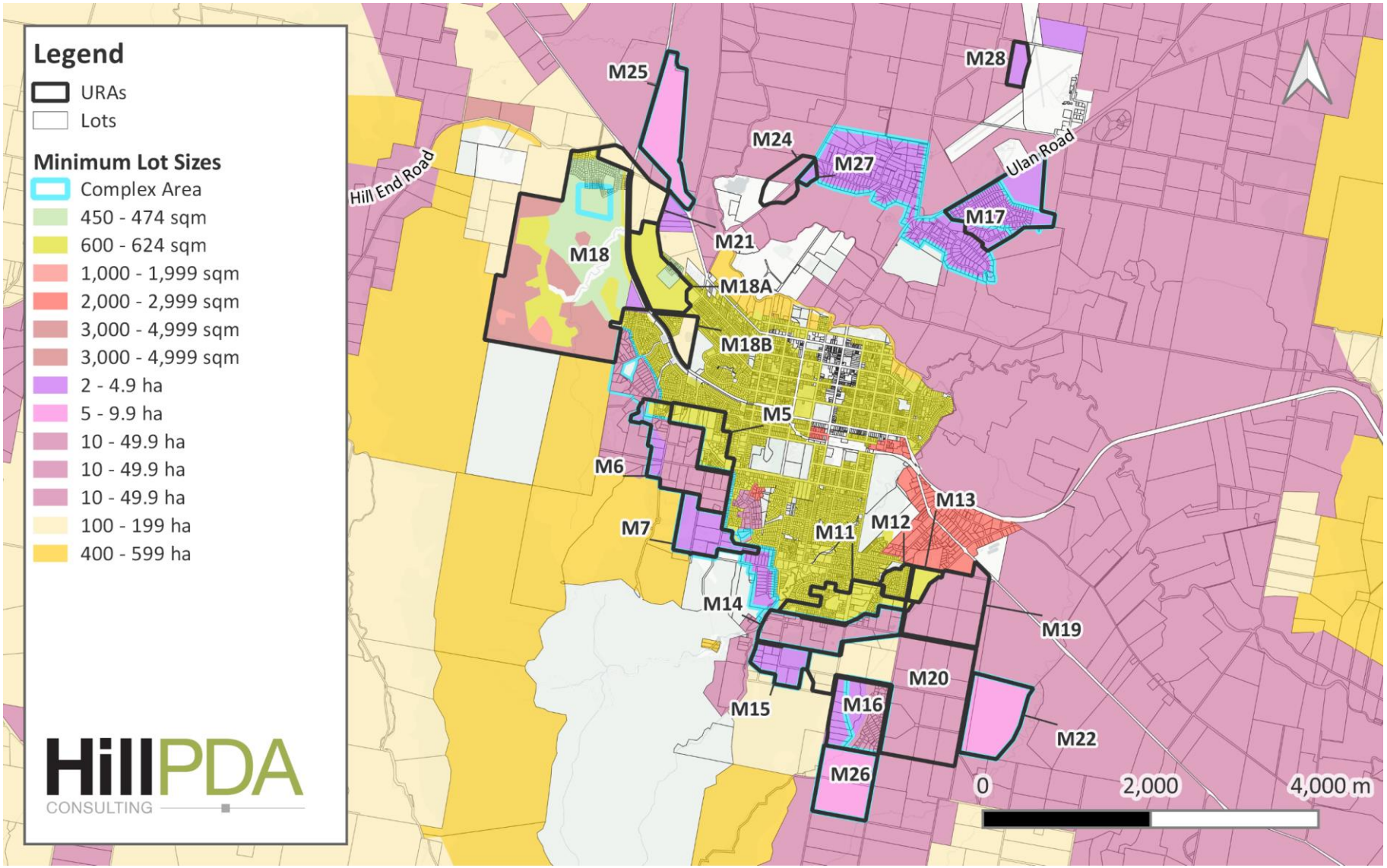
Mudgee's URAs and their zoning and minimum lot size are shown in the following figures.

Figure 33: MWLEP zoning, Mudgee URAs



Source: HillPDA, Mid-Western Regional Council

Figure 34: MWLEP minimum lot size, Mudgee URAs



Source: HillPDA, Mid-Western Regional Council

4.5.3 Gulgong

Table 41 shows estimated lot yields for Gulgong's URAs based on the observations above, minimum lot sizes and total area, and does not take into account constraints or the amount of land that has already been developed. For those URAs identified in the CLUS, the proposed future minimum lot size has been used for these calculations, however, it is acknowledged that these areas would require rezoning to enable this to be achieved.

Table 41: Potential residential development capacity by URA (Gulgong URAs)

URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)	Estimated yield per hectare	Count of potential lots
G1	RU1 Primary Production	2ha*	9.9	0.3	3
	R5 Large Lot Residential	2ha*	17.4	0.3	5
	Total G1		**27.8**		**8**
G2	R2 Low Density Residential	4000sqm*	7.5	2	15
	Total G2		**7.5**		**15**
G3	R5 Large Lot Residential	2000sqm*	8.1	4	32
	Total G3		**8.1**		**32**
G4	R5 Large Lot Residential	2000sqm*	4.0	4	16
	Total G4		**4.0**		**16**
G5	R2 Low Density Residential	10ha (Area A)	4.6	4	18
	R5 Large Lot Residential	12ha	43.9	0.1	4
	Total G5		**48.5**		**22**
G6	R5 Large Lot Residential	2ha-6ha*	81.9	0.3	25
	RU1 Primary Production	2ha-6ha*	77.9	0.3	23
	Total G6		**159.8**		**48**
G7	R5 Large Lot Residential	2000sqm*	45.4	4	182
	Total G7		**45.4**		**182**
G8	R5 Large Lot Residential	600sqm*	10.9	8	87
	Total G8		**10.9**		**87**
G9	R5 Large Lot Residential	600sqm*	36.6	8	293
	Total G9		**36.6**		**293**
G10	R1 General Residential	600sqm	59.7	8	478
	Total G10		**59.7**		**478**
G11	R1 General Residential	600sqm	15.4	8	123
	Total G11		**15.4**		**123**
G12	R5 Large Lot Residential	2ha	43.2	0.3	13
	Total G12		**43.3**		**13**
G13	R1 General Residential	600sqm	17.9	8	143
	Total G13		**17.9**		**143**
G14	R2 Low Density Residential	2000sqm*	13.4	4	54
	Total G14		**13.4**		**54**
G15	R2 Low Density Residential	2ha	13.5	0.3	4
	Total G15		**13.7**		**4**
G16	R2 Low Density Residential	2ha (Area B)	14.2	2	28
	Total G16		**14.2**		**28**
G17	R2 Low Density Residential	2ha (Area B)	21.7	2	43
	Total G17		**21.7**		**43**
G18	R2 Low Density Residential	2ha (Area B)	18.9	2	38
	Total G18		**18.9**		**38**
G19	R2 Low Density Residential	2ha (Area B)	6.1	2	12
	Total G19		**6.1**		**12**

URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)	Estimated yield per hectare	Count of potential lots
G20	R2 Low Density Residential	2ha (Area B)	5.4	2	11
	R5 Large Lot Residential	12ha (Area B)	3.6	2	7
	Total G20		**9.0**		**18**
G21	R5 Large Lot Residential	2ha	4.1	0.3	1
	Total G21		**4.1**		**1**
	Total Gulgong				**1,660**

Note: Values have been rounded.

* Minimum lot sizes marked with an asterisk are indicative and would require rezoning to achieve the indicated yield.

Gulgong's URAs and their zoning and minimum lot size are shown in the following figures.

Figure 35: MWLEP zoning, Gulgong URAs

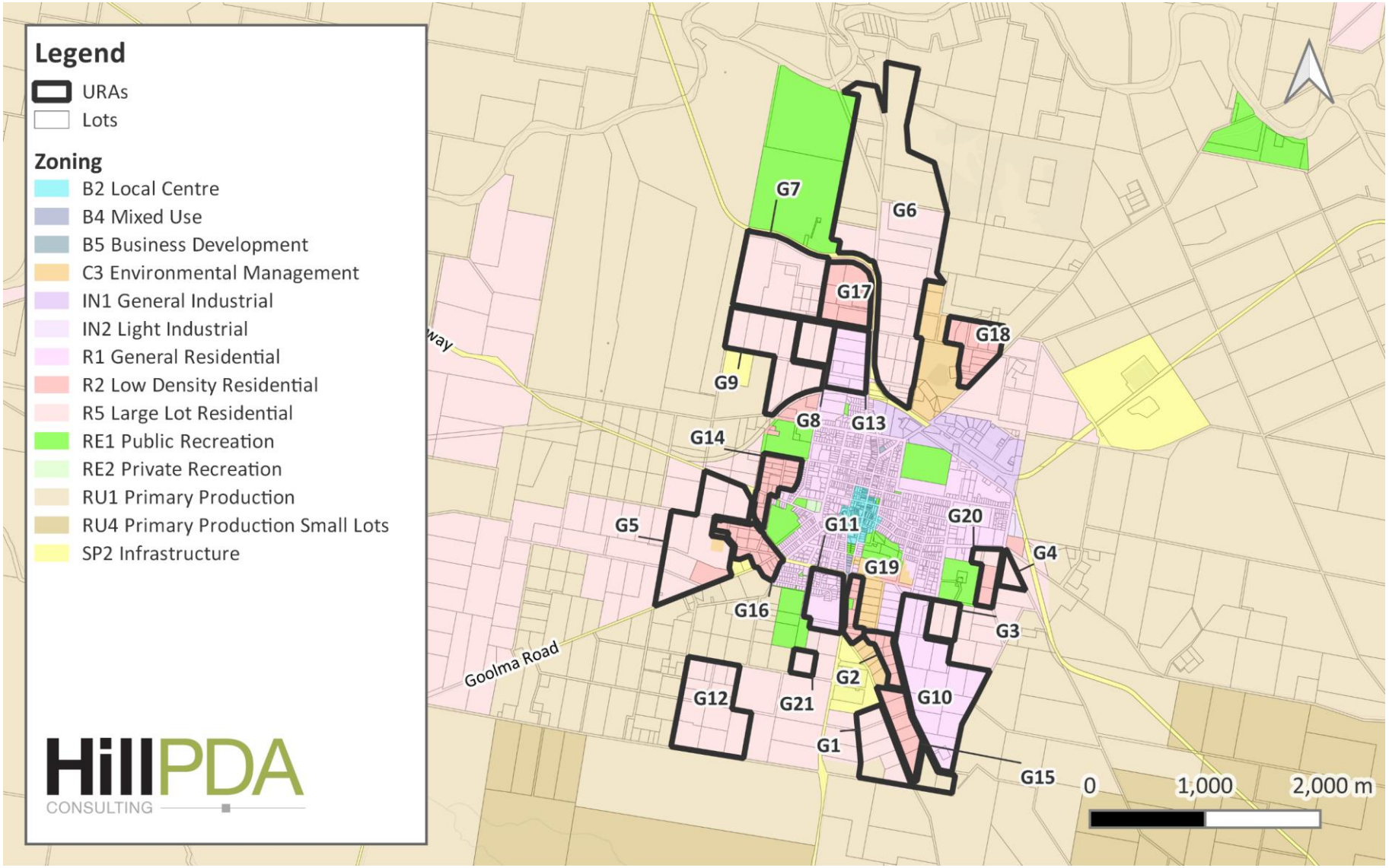
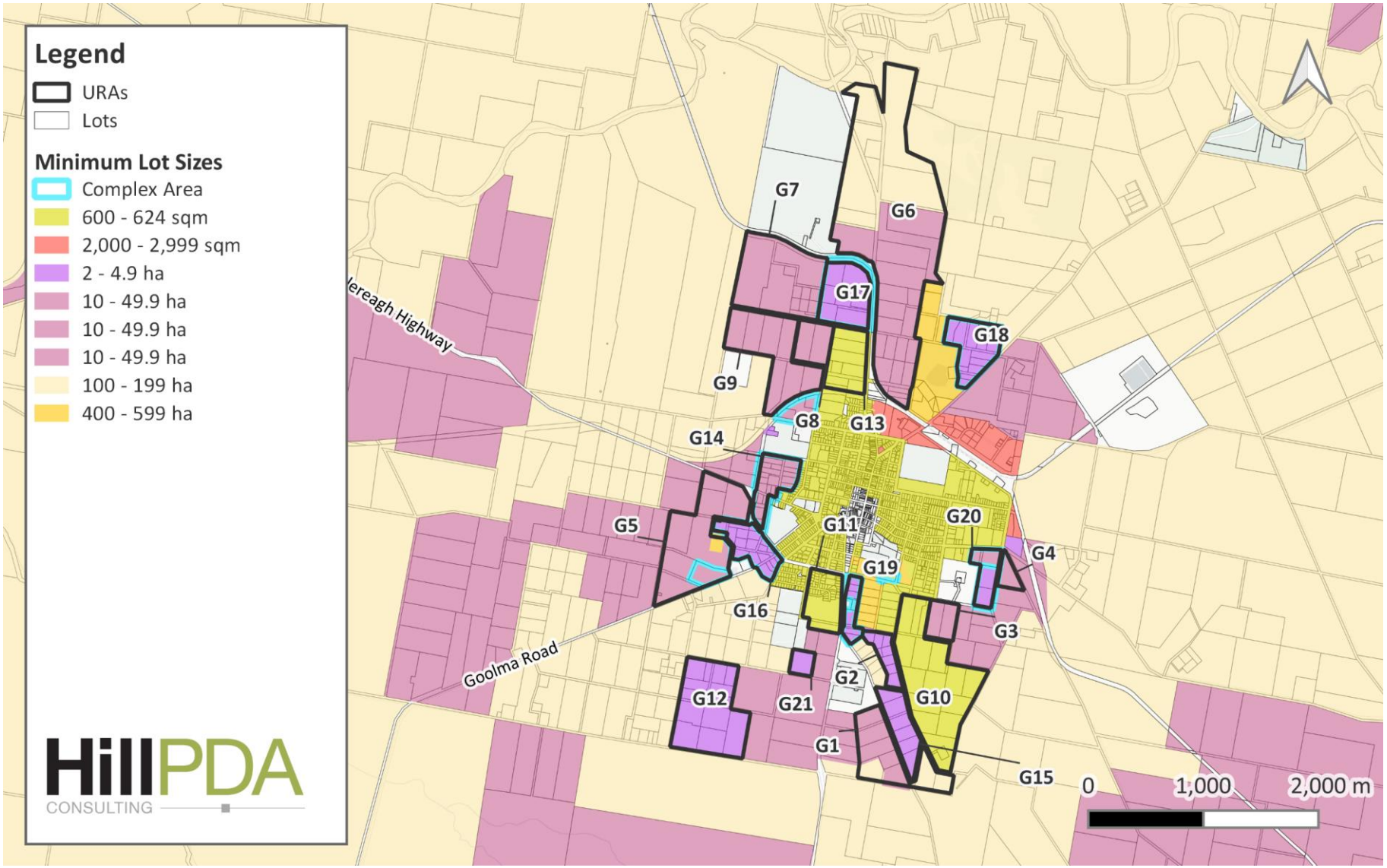


Figure 36: MWLEP minimum lot sizes, Gulgong URAs



Source: HillPDA, Mid-Western Regional Council

4.6 Temporary worker accommodation

Temporary worker accommodation (TWAs) are purpose-built accommodation facilities designed to accommodate workers for the life of a project (or project phase) in remote areas, or where other accommodation may be unavailable. TWAs can also be suitable for fly-in-fly-out (FIFO) or drive-in-drive-out (DIDO) who may not permanently reside near the project, or even in the LGA.

TWAs may have a significant impact upon housing needs in Mudgee and Gulgong. The previous URS included commentary that (at that time), DAs for three TWAs had been approved by Council (400 rooms in Gulgong, 140 rooms in Ulan, and 300 rooms in Turill). TWA development in the LGA is guided by section 6.11 of the MWLEP, which covers the locating and servicing requirements for TWAs.

Only one of these approved TWAs has eventuated, known as Ulan Village Green, operating at 94 Main Street, Ulan, offering meals, laundry facilities, and communal facilities across a 140 room facility, mainly servicing mining workers in the LGA's north. At the time of writing this strategy, temporary worker accommodation is proposed for workers associated with the Central-West Orana REZ Transmission project (SSI-48323210 – refer to 2.2.5). This is outlined in that proposal's Scoping Report, and Council has been in discussion with proponents regarding the development of TWA(s).

The likelihood or extent of any TWAs arising from future employment-generating projects in and around the LGA (refer to section 2.2.5) is difficult to anticipate and may not be considered or determined prior to the approval of a project. As such, an accurate projection of the extent to which the influx of construction phase workers will impact housing supply in Mudgee or Gulgong is not able to be provided. Nonetheless, any new TWAs would have a significant lead time (in terms of approvals pathways and construction) and existing TWA provision is low and caters to existing mining operations. Therefore, TWAs would not significantly impact land or dwelling supply in Mudgee or Gulgong.

The impact of workers on land and dwelling demand in Mudgee and Gulgong is considered in section 5.1.2.

LAND AND DWELLING DEMAND

5.0 LAND AND DWELLING DEMAND

Demand for land and dwellings in Mudgee and Gulgong is influenced by a range of factors. Continued population and employment growth, migration arising from the COVID-19 pandemic and increased abilities to work remotely are some of the factors currently influencing housing demand.

This Chapter first considers some of the factors that affect demand for land and dwellings in Mudgee and Gulgong. Then, in alignment with the URS 2014, three approaches were used to project demand for dwellings:

- population projections method
- dwelling approvals method
- water meter connections method.

To project land and dwelling demand using the population projections method, HillPDA utilised the population projections detailed in section 2.2.4 in combination with Mudgee and Gulgong's observed household size (2.4 persons). This provides a lower and upper estimate of potential future demand, reflecting the use of two population projection scenarios.

For the dwelling approvals method, we used Council's development approvals records to calculate projected dwelling demand. This method projects future demand based on observed average demand over the period 2015 to 2022.

For the water meter connections method, we utilised Council's water meter connection data for Mudgee and Gulgong over the eight year period from 2014 to 2022. In contrast to the dwelling approvals method above, this method may be a more accurate reflection of development that has proceeded. Whereas the development of land or dwellings may have been approved, the water meter connections method is better able to ascertain whether a lot or dwelling is readily available.

The total additional population (and implied dwelling demand, as relevant) arising from employment-generating workforces was then added to each of the demand projection methods outlined in section 5.2.

5.1 Factors affecting demand

5.1.1 Existing employment

The MWR LGA has a diverse and growing economic base which drives and contributes to demand for housing. Though mining and renewable energy development are currently among the most significant industries in the LGA, other local industries such as agriculture and viticulture, tourism, construction, manufacturing, and retail support the diversity and resilience of the LGA's economy. As per discussions with local real estate agents and Council, the mining sector has historically been the largest and most influential industry in the LGA by some margin, though this is anticipated to shift as major renewable energy projects commence.

As at the 2021 Census, nearly 20 per cent of employed residents in Mudgee and Gulgong (18.1 and 19.4 per cent, respectively) worked in the mining industry. In both instances, this was nearly double the proportion of workers employed in the next largest employment industry. The other top five employment industries for both towns were (in order of largest to smallest) healthcare and social assistance, retail trade, accommodation and food services, and education and training.

As discussed in the URS 2014, the earlier expansion of mining employment in the MWR LGA contributed to reduced availability and affordability of housing in Mudgee and Gulgong, due to increased demand from additional workers as well as higher incomes becoming available in the area through mining employment.

5.1.2 Proposed employment-generating projects

As outlined in section 2.2.5, a large number of projects are anticipated to occur in and near the MWR LGA, particularly in mining and renewable energy. The size and shifting nature of the anticipated workforce from these projects are likely to have significant bearing on demand for housing in Mudgee and Gulgong over the study period.

5.1.2.1 Mining projects

Mining employment is anticipated to remain an important component of local housing demand, as existing mines continue to operate and expand, and new mines become active. Proposed extensions to work at the Moolarben and Ulan coal mines will see existing workforces retained at those mines, and the construction of the new Bowdens Silver Mine will create additional demand for housing from mining workers (refer to section 2.2.5).

Whilst future mines may be proposed or constructed, it is noted that employment in extractive industries such as mining is limited by the quantity of the relevant resource (and the viability of extracting it), as well as exposure to market forces. These factors can result mine closure or fluctuations in employment, impeding housing demand projection.

5.1.2.2 Renewable energy projects

Whilst new or expanded mining projects in the LGA will generate some additional demand, the main source of major projects is set to shift to renewable energy projects arising from the Central-West Orana REZ (refer to section 1.6.1). This is expected to have significant impacts on demand for residential accommodation. Anticipated population arising from employment-generating projects is considered in detail in section 2.2.5.

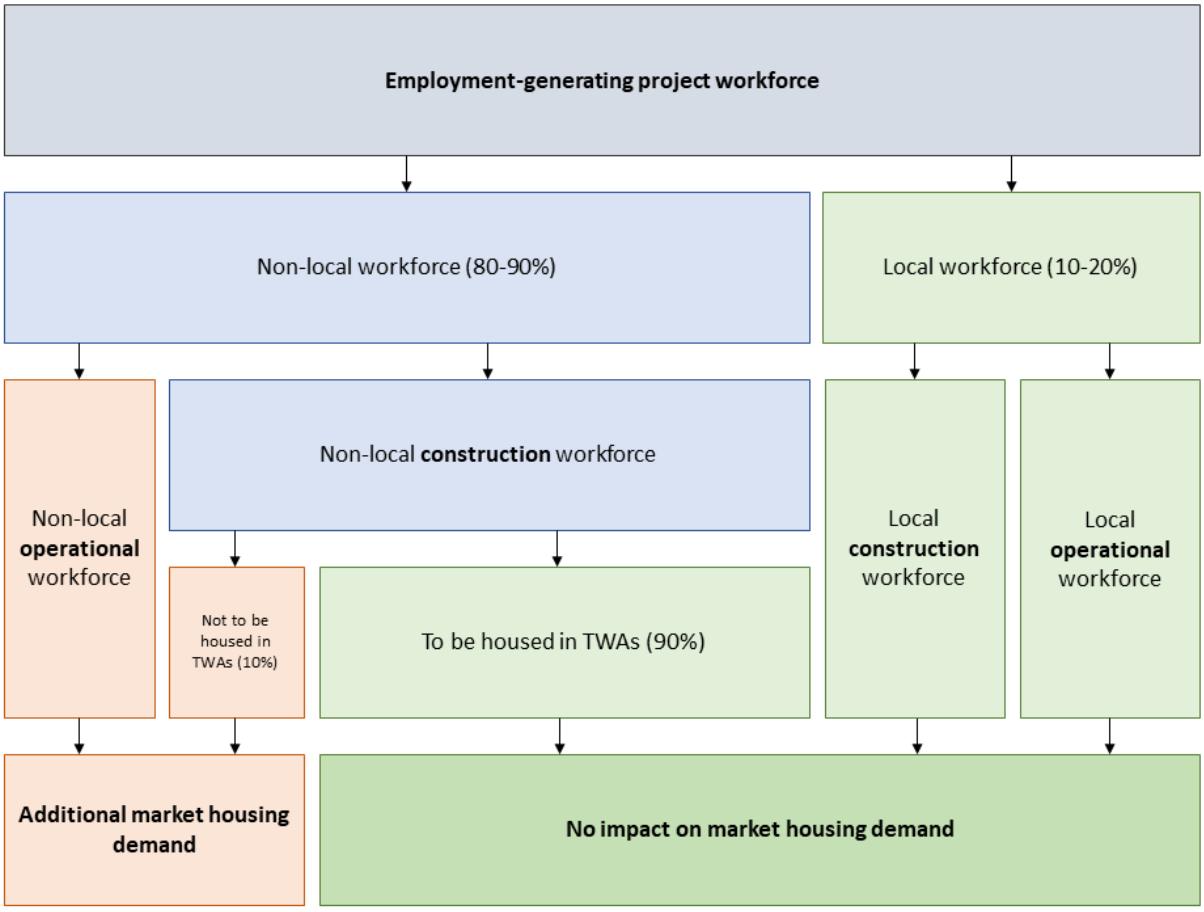
Overall, the REZ is expected to result in the construction and operation of numerous renewable energy projects in and around the MWR LGA, though it is noted that renewable energy projects have different employment profiles to those typically seen in extractive industry projects. As shown in section 2.2.5, the REZ is likely to result in high peak workforces during overlapping construction periods, and far smaller operational workforces as construction periods end. This poses significant challenges in predicting and meeting residential accommodation demand as it is likely that the vast majority of workers for these projects will be drawn from outside Mudgee and Gulgong, and will therefore require additional accommodation.

The scale and timeframe of employment-generating projects and the small population and workforce of the LGA mean that, regardless of any interventions to reduce reliance on a non-local construction workforce, it is likely that the majority of workers will be sourced from outside the LGA and therefore require accommodation. Consultation undertaken with local REAs suggested that, as at late 2022, multiple agencies were involved in negotiations with renewable energy project companies for long-term housing leases for early planning stage workers, and that Gulgong in particular already hosted multiple workers related to these projects.

5.1.2.3 Impact on dwelling demand

With specific details about how workers will be housed unavailable, this section relies on the assumptions outlined in section 2.2.5. The assumptions include that the vast majority of workers would be sourced from outside the region, and that a small proportion of these workers would require accommodation in Mudgee or Gulgong during the construction phase, whilst all operational workers would require accommodation in Mudgee or Gulgong. Figure 37 shows how these assumptions have been implemented.

Figure 37: Employment-generating projects impact on market housing demand



Source: HillPDA

Table 42 shows the identified projects, their workforces, and how the resultant dwelling demand has been allocated between Mudgee and Gulgong. As outlined in section 2.2.5, it has been assumed that workforces would be split between Mudgee and Gulgong based on an approximation of the existing ratio of their population sizes at the 2021 Census: 80 per cent in Mudgee and 20 per cent in Gulgong (excepting where a project is near Mudgee or Gulgong only).

Table 42: Employment-generating projects overview and dwelling demand allocation

Project	Workforce		Timeframe		Dwelling demand allocation
	Construction	Operation	Construction	Operation	
Bowdens Silver Mine	320	228	2024	2026	Mudgee*
Wollar Solar Project	400	5	2023	2024	Both
Stubbo Solar Project	507	10	2024	2026	Both
Tallawang Solar Farm	430	27	2024	2027	Both
Birriwa Solar Farm	800	15	2024	2027	Gulgong
Barneys Reef Wind Farm	340	10	2024	2026	Gulgong
Burrendong Wind Farm	250	15	2025	2027	Both
Bellambi Heights Battery	100	*TBD*	2025	2026	Both
Piambong Wind Farm	400	15	2026	2028	Both
Ulan Solar Power Station	120	4	2025	2026	Both
Orana Wind Farm	580	27	2026	2028	Gulgong
Liverpool Range Wind Farm	800	47	2024	2027	Gulgong
Central-West Orana REZ Transmission	1,200	43	2024	2027	Both
Valley of the Winds Wind Farm	400	50	2023	2027	Gulgong
Dunedoo Solar Farm	125	3	2023	2023	Gulgong
Spicers Creek Wind Farm	250	12	2025	2028	Both
Cobbora Solar Farm	700	8	2024	2027	Gulgong
Sandy Creek Solar Farm	700	15	2024	2026	Gulgong
Dapper Solar Farm	350	20	2025	2027	Gulgong
Phoenix pumped hydro project	500	50	2026	2030	Mudgee
Total	**9,272**	**604**			

Source: HillPDA, Mid-Western Regional Council, NSW DPE Planning Portal (2023)

* Note: 80 per cent of dwelling demand from Bowdens Silver Mine's operational workforce is allocated to Mudgee, with the remaining 20 per cent allocated to Rylstone and/or Kandos.

Utilising the employment-generating workforce calculations in section 2.2.5 combined with the estimated timeframes for the relevant projects, a timeline of anticipated additional workers over the period 2021-2031 has been generated and distributed between Mudgee and Gulgong (as shown above). This is shown in Table 43. It can be seen that the additional population arising from the major projects is anticipated to peak in the 2024 to 2026 period, reducing to operational workforce levels thereafter.

Table 43: Total additional workforce, Mudgee and Gulgong, 2021-2031 (combined construction and operation)

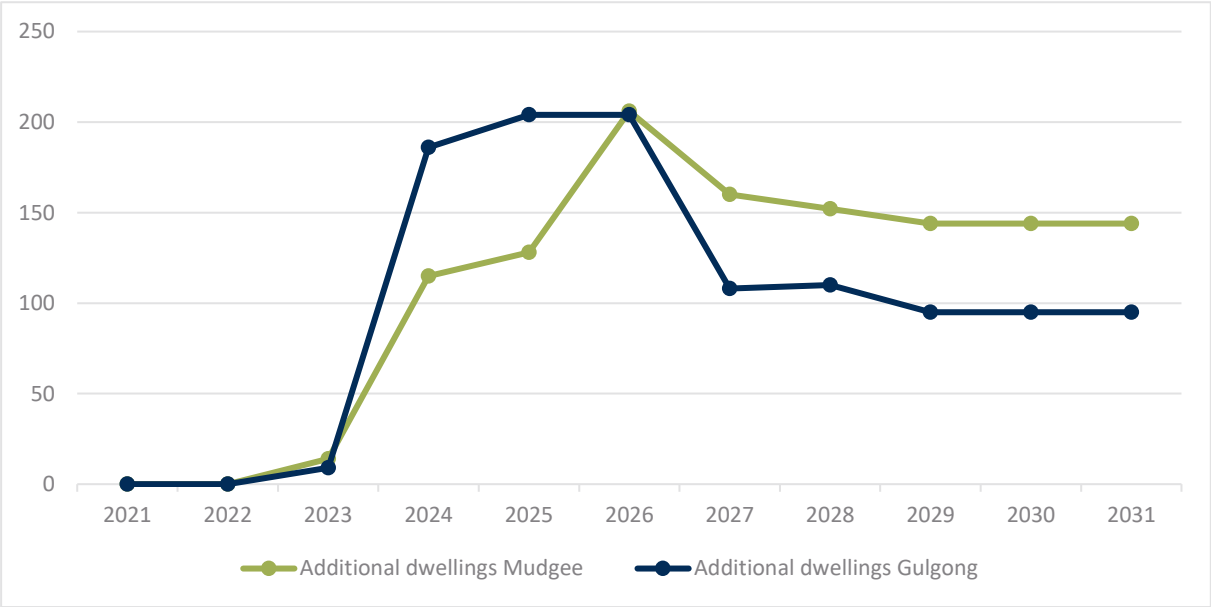
Locality	Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Mudgee	Low estimate	0	0	256	1,907	2,115	2,205	1,179	876	630	630	270
	High estimate	0	0	288	2,146	2,380	2,480	1,326	986	708	708	303
Gulgong	Low estimate	0	0	164	3,407	3,739	3,605	1,037	681	177	177	177
	High estimate	0	0	185	3,833	4,207	4,056	1,166	766	199	199	199
Total additional workforce	Low estimate	0	0	420	5,314	5,854	5,846	2,252	1,594	843	843	483
	High estimate	0	0	473	5,979	6,586	6,577	2,534	1,793	949	949	544

Source: HillPDA, Mid-Western Regional Council, NSW DPE Planning Portal (2023)

The total additional workforce shown in the previous table would not be reflective of the total increase in demand for housing. As per the assumptions shown in section 2.2.5, the vast majority of construction phase workers (90 per cent) are anticipated to be housed in TWAs (refer to section 4.6). This significantly reduces the impact on housing demand, with 100 per cent of the smaller operational phase workforce and only 10 per cent of the construction phase workforce adding to housing demand. Further, some additional housing demand may be met through hotels, motels, short-term rental accommodation or other types of accommodation instead of through residential dwellings.

Figure 38 and Table 44 combine the above findings and shows a derived dwelling demand from employment-generating projects. This was determined by using an average of the low and high estimate scenarios above, then applying the aforementioned assumptions to determine the number of workers requiring market housing. The resulting totals were then divided by Mudgee and Gulgong's average household size (both 2.4 persons per household, as per section 2.3.1), giving a total number of anticipated additional dwelling demand.

Figure 38: Derived dwelling demand arising from employment-generating projects, Mudgee and Gulgong, 2021-2031



Source: HillPDA

Table 44: Derived dwelling demand arising from employment-generating projects, Mudgee and Gulgong, 2021-2031

Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Additional dwellings Mudgee	0	0	14	115	128	206	160	152	144	144	144
Additional dwellings Gulgong	0	0	9	186	204	204	108	110	95	95	95
Total additional dwellings	0	0	23	300	331	429	287	281	257	257	257

Note: all figures are inclusive of 20 per cent contingency

The above findings indicate that demand for additional dwellings will peak in around 2026, as construction and operation workforces overlap, before most major projects move into their operational phase from around 2028. The number of additional dwellings demanded in Mudgee rises sharply in 2026, in accordance the operational workforce of the Bowdens Silver Mine. Overall, the estimated additional dwelling demand is projected to require an additional 144 dwellings by 2031 in Mudgee, and an additional 95 dwellings by 2031 in Gulgong.

The peak additional dwelling demand is estimated to be over 400 dwellings, with around 200 additional dwellings demanded in each of Mudgee and Gulgong. To meet peak additional dwelling demand in 2026, around 140 additional dwellings would need to be approved and constructed per year across Mudgee and Gulgong, commencing immediately. This would be in addition to the baseline housing demand.

It is likely that the scale and timeframe of this additional demand exceeds not only Council's development assessment capacity, but the capacity of the local development industry to plan housing and construct housing.

5.1.3 Lifestyle and demographic changes

Across NSW, the COVID-19 pandemic has resulted in widespread and unanticipated changes. Of most importance to land and dwelling demand are work and lifestyle changes that have increased demand for regional and rural lifestyles, and resulted in (to varying degrees) a decentralisation process for some metropolitan residents. Consultation with real estate agents confirmed that this process had affected Mudgee and Gulgong, and was exacerbated by the existing tight market. The influx of residents associated with these changes is shown in the 2021 Census data. Around 7 per cent of Mudgee residents and around 4 per cent of Gulgong residents lived in a different LGA a year ago, whilst nearly 22 per cent of Mudgee residents and around 19 per cent of Gulgong residents lived in a different LGA five years ago (refer to section 2.2.3).

The proliferation of online short term residential accommodation (STRA) services and interstate and international travel restrictions arising from the COVID-19 pandemic have combined to place (often seasonally) increased pressure on housing availability. These recent changes have changed the housing market significantly since the URS was prepared. STRAs in Mudgee and Gulgong are outlined in section 3.2.3.

The increased pressure arising from STRAs has been confirmed through consultation with local real estate agents. Agents suggested that the STRA situation in the MWR LGA was less extreme than in some areas, but the impacts were exacerbated due to the existing housing market, and that STRAs were (in part) to blame for increased rents in some areas. It was, however, noted that as COVID-19 pandemic-related travel restrictions have eased or been removed, investor interest in STRAs has decreased significantly and some existing STRAs have been re-sold, or reverted to permanent rental housing.

5.1.4 Other factors

HillPDA's consultation with local real estate agents also identified a range of factors that affect land and dwelling demand in the local market. Most notably, observations included demand balance shifts between existing and newly-developed dwellings, and decreased demand (following high peak demand during the COVID-19 pandemic) resulting in more dwelling stock being listed for sale at any given time.

The above findings suggest (to some extent) that the heightened demand that arose during the COVID-19 pandemic may have waned or been accommodated. However, identified financial and time constraints on building and development may remain and continue to impact residential development in Mudgee and Gulgong in the short to medium term future.

5.2 Projected demand for dwellings

A number of methods can be used to estimate future dwelling demand. This section updates the three projection methods utilised in the URS, as outlined at the start of this Chapter. The application of multiple dwelling demand projections approaches allows for a range of scenarios to be considered and contrasted.

All dwelling demand projections in this section include:

- 20 per cent contingency (to allow for lots that may be approved by Council but not delivered to market and to account for vacancy rates)
- The derived dwelling demand arising from employment-generating projects in the region (refer to sections 2.2.5 and 5.1.2).

An overview of this section's findings is shown in Table 45.

Table 45: Overview of dwelling demand projection findings

Demand projection method	Additional lots			Lot demand from additional workers	Total additional lots		
	2021-2031	2021-2041	Avg./year		2021-2031	2021-2041	Avg./year
Mudgee							
Population projections	838	1,797	90	144	982	1,941	97
Dwelling approvals	1,188	2,376	119	144	1,332	2,520	126
Water meter connections	1,421	2,843	142	144	1,565	2,987	149
Gulgong							
Population projections	112	236	12	95	207	331	17
Dwelling approvals	72	144	7	95	167	239	12
Water meter connections	91	181	9	95	186	276	14

Note: All estimates include +20 per cent contingency

5.2.1 Population projections method

This section is informed by the findings of section 2.2.4 of this report. That section outlines the methodology used to develop the population projections.

Mudgee

Mudgee's population is projected to grow to between 13,290 and 13,422 persons by 2031, and to between 15,123 and 15,424 persons by 2041. Using the average of the two population projection scenarios (13,356 by 2031, and 15,274 by 2041) and assuming Mudgee's average household size remains consistent at 2.4 persons per dwelling, Mudgee will need:

- 982 additional dwellings by 2031
- 1,941 additional dwellings by 2041.

This equates to an average of **97 additional dwellings per year** over the period to 2041.

Gulgong

Gulgong's population is projected to grow to between 2,789 and 3,020 persons by 2031, and to between 2,903 and 3,402 persons by 2041. Using the average of the two population projection scenarios (2,905 by 2031, and 3,153 by 2041) and assuming Gulgong's average household size remains consistent at 2.4 persons per dwelling, Gulgong will need:

- 207 additional dwellings by 2031
- 331 additional dwellings by 2041.

This equates to an average of **17 additional dwellings per year** over the period to 2041.

5.2.2 Dwelling approvals method

The second approach to estimating the demand for dwellings applies the average number of dwellings approved over the period 2015 to 2022 and projects this forward over the study period to give an estimate of future demand. This approach also counts a CDC as an approval.

Mudgee

Council has approved an average of 108 dwellings per annum in Mudgee over the period 2015 to 2022, whilst over the same period, an average of 91 residential lots per annum were issued subdivision certificates. Using the average of these two rates (99 per annum), Mudgee will need:

- 1,332 additional dwellings by 2031
- 2,520 additional dwellings by 2041.

This equates to an average of **126 additional dwellings per year** over the period to 2041.

Gulgong

Council has approved an average of eight dwellings per annum in Mudgee over the period 2015 to 2022, whilst over the same period, an average of two residential lots per annum were issued subdivision certificates. Using the average of these two rates (five per annum), this equates to:

- 167 additional dwellings by 2031
- 239 additional dwellings by 2041.

This equates to an average of **12 additional dwellings per year**.

5.2.3 Water meter connections method

The third approach to projecting the demand for dwellings is based on water meter connection. The connection of a water meter is a good indicator of dwelling occupation. Water meter connection data dating from 2014 to 2022 has been considered for these projections. The average number of water meter connections per annum over this period is then projected forward over 20 years to return an estimate of future demand.

Mudgee

Since 2014, an average of 118 new connections to Mudgee's water supply have been established per annum. This equates to demand for:

- 1,565 additional dwellings by 2031
- 2,987 additional dwellings by 2041.

This equates to an average of **149 additional dwellings** per annum.

Gulgong

Since 2014, an average of eight new connections to Gulgong's water supply have been established per annum. This equates to demand for:

- 186 additional dwellings by 2031
- 276 additional dwellings by 2041.

This equates to an average of **14 additional dwellings** per annum.

5.2.4 Types of dwellings in demand

As informed by market research, consultation with local REAs, and discussions with Council staff, HillPDA have estimated the proportion of anticipated demand for residential dwellings / lots by typology. Research indicated that the strongest demand has been and continues to be for three and four bedroom detached dwellings (or suitable lots for the development of such dwellings), though lot size preferences have shifted slightly since the development of the previous URS. Increased land prices and lack of availability in the market has led to higher demand for smaller lots. We anticipate that detached dwellings on 450 square metre to 1,000 square metre lots will account for the majority of demand over the coming period, particularly closer to existing urban centres.

Our research indicates that low density residential and large lot residential s remain popular, but that larger residential blocks in urban release areas are unaffordable for the majority of current or potential residents. It is noted that a large number of large lot residential s were approved following the URS 2014, but these have not yet been registered. Generally, whilst there is some demand for large lot residential size lots, this demand will be delivered outside the URAs.

Consultation with REAs did not identify findings relating to higher density dwellings such as townhouses or units, but a review of the market shows that these continue to be delivered near the Mudgee town centre in small numbers.

As informed by the above, Table 46 contains estimates of the proportion of future demand for different housing types in Mudgee.

Table 46: Anticipated share of demand by dwelling and lot typology, Mudgee

Dwelling / lot type	Density	Lot sizes (approximate)	Estimated dwellings per hectare	Share of demand
Townhouse / villa / unit	General residential	300sqm+	12	10%
Detached house / dual occupancy on small-to-standard lot	General residential	400sqm-999sqm	9	40%
Detached house on standard-to-generous lot	General residential	1,000sqm-1,999sqm	6	25%
Low density residential(standard)	Low density residential	2,000sqm-3,999sqm	2	20%
Low density residential(large)	Low density residential	4,000sqm-1.9ha	1	4%
Large lot residential	Low density residential	2ha+	<1	1%

Reflective of market research findings and discussions with local REAs and Council staff, our anticipated demand share for Gulgong differs slightly from that of Mudgee. Few sales or development approvals for multi-unit housing in Gulgong were observed, and this is not anticipated to shift in the short to medium term future. As such, we anticipate that demand for multi-unit housing in Gulgong will account for only a small proportion of demand over the period to 2041. Any such demand would likely occur as sporadic infill developments where opportunities arise.

Analysis of development patterns as well as the aforementioned market research and consultation suggest that larger lot sizes are more typical in Gulgong. As such, we anticipate that demand for smaller residential lots (under 1,000 square metres) will be lower than in Mudgee, whilst demand for larger lots (between 1,000 and 4,000 square metres) is anticipated to be higher than in Mudgee.

Table 47 contains estimates of the proportion of future demand for different housing types in Gulgong.

Table 47: Anticipated share of demand by dwelling and lot typology, Gulgong

Dwelling / lot type	Density	Lot sizes (approximate)	Estimated dwellings per hectare	Share of demand
Detached house / dual occupancy on small-to-standard lot	General residential	400sqm-999sqm	9	35%
Detached house on standard-to-generous lot	General residential	1,000sqm-1,999sqm	6	35%
Low density residential(standard)	Low density residential	2,000sqm-3,999sqm	2	25%
Low density residential(large)	Low density residential	4,000sqm-1.9ha	1	4%
Large lot residential	Low density residential	2ha+	<1	1%

5.3 Comparison of three demand approaches

The following section summarises the future dwelling demand based on the three approaches.

Mudgee

Table 48 shows that over the next 10 years (2021-2031) Mudgee will require:

- 982 residential lots to accommodate demand for new dwellings, when applying the population projections method.
- 1,332 residential lots to accommodate demand for new dwellings, when applying the dwelling approvals method.
- 1,565 residential lots to accommodate demand for new dwellings when applying the water meter connections method.

The table also shows that over the next 20 years (2021-2041) Mudgee will require:

- 1,941 residential lots to accommodate demand for new dwellings, when applying the population projections method.
- 2,520 residential lots to accommodate demand for new dwellings, when applying the dwelling approvals method.
- 2,987 residential lots to accommodate demand for new dwellings, when applying the water meter connections method.

Table 48: Lots required to 2041 by projection approach, Mudgee

Demand projection method	Dwelling / lot type	Number of additional lots	
		2021-2031	2021-2041
Population projections	Townhouse / villa / unit*	98	194
	Detached house or dual occupancy on small-to-standard lot	393	776
	Detached house on standard-to-generous lot	246	485
	Low density residential(standard)	196	388
	Low density residential(large)	39	78
	Large lot residential	10	19
	Total	**982**	**1,941**
Dwelling approvals	Townhouse / villa / unit*	133	252
	Detached house or dual occupancy on small-to-standard lot	533	1008
	Detached house on standard-to-generous lot	333	630
	Low density residential(standard)	266	504
	Low density residential(large)	53	101
	Large lot residential	13	25
	Total	**1,332**	**2,520**
Water connections	Townhouse / villa / unit*	157	299
	Detached house or dual occupancy on small-to-standard lot	626	1,195
	Detached house on standard-to-generous lot	391	747
	Low density residential(standard)	313	597
	Low density residential(large)	63	119
	Large lot residential	16	30
	Total	**1,565**	**2,987**

* It is assumed that demand for townhouse and multi-unit development will occur as infill in and around CBD areas.

Note: Figures have been rounded. All estimates include +20 per cent contingency and demand arising from employment-generating projects workforce.

Gulgong

Table 49 shows that over the next 10 years (2021-2031) Gulgong will require:

- 207 residential lots to accommodate demand for new dwellings, when applying the population projections method.
- 167 residential lots to accommodate demand for new dwellings, when applying the dwellings approvals method.
- 186 residential lots to accommodate demand for new dwellings, when applying the water meter connections method.

The table also shows that over the next 20 years (2021-2041) Gulgong will require:

- 331 residential lots to accommodate demand for new dwellings, when applying the population projections method.
- 239 residential lots to accommodate demand for new dwellings, when applying the dwellings approvals method.
- 276 residential lots to accommodate demand for new dwellings, when applying the water meter connections method.

Table 49: Lots required to 2041 by projection approach, Gulgong

Demand projection method	Dwelling / lot type	Number of additional lots	
		To 2031	To 2041
Population projections	Detached house or dual occupancy on small-to-standard lot	73	116
	Detached house on standard-to-generous lot	73	116
	Low density residential(standard)	52	83
	Low density residential(large)	8	13
	Large lot residential	2	3
	Total	**207**	**331**
Dwelling approvals	Detached house or dual occupancy on small-to-standard lot	58	84
	Detached house on standard-to-generous lot	58	84
	Low density residential(standard)	42	60
	Low density residential(large)	8	10
	Large lot residential	2	2
	Total	**167**	**239**
Water connections	Detached house or dual occupancy on small-to-standard lot	65	97
	Detached house on standard-to-generous lot	65	97
	Low density residential(standard)	46	69
	Low density residential(large)	7	11
	Large lot residential	2	3
	Total	**186**	**276**

Note: Figures have been rounded. All estimates include +20 per cent contingency and demand arising from employment-generating projects workforce.

5.4 Key findings

The number of residential lots required over the next 20 years to meet future demand in Mudgee and Gulgong varies somewhat dependent on projection methods, however, in general the findings are consistent. When nominating a preferred approach Council must be mindful that underestimating demand for additional residential land and lots could have a negative impact on the community through price increases or dislocation. However, overestimating demand can also negatively impact the community through Council funding additional works that may not be required.

Despite this, in light of the anticipated significant growth in Mudgee and Gulgong and our observations of the existing land and dwelling market, a conservative approach is recommended. For both Mudgee and Gulgong, the highest projection has been used. For Mudgee, that is the water connections method, and for Gulgong, the population projections method.

Table 50 summarises the required lots using these approaches and the preferences shown in section 5.2.4.

Table 50: Preferred lot/dwelling demand projection method, Mudgee and Gulgong (2021-2041)

Locality	Dwelling / lot type	Number of additional lots / dwellings		Lots required per year (2021-2041)
		To 2031	To 2041	
Mudgee	Townhouse / villa / unit*	157	299	15
	Detached house or dual occupancy on small-to-standard lot	626	1,195	60
	Detached house on standard-to-generous lot	391	747	37
	Low density residential(standard)	313	597	30
	Low density residential(large)	63	119	6
	Large lot residential	16	30	1
	Mudgee total	**1,565**	**2,987**	**149**
Gulgong	Detached house or dual occupancy on small-to-standard lot	73	116	6
	Detached house on standard-to-generous lot	73	116	6
	Low density residential(standard)	52	83	4
	Low density residential(large)	8	13	1
	Large lot residential	2	3	0
	Gulgong total	**207**	**331**	**17**
	Total	**1,773**	**3,318**	**166**

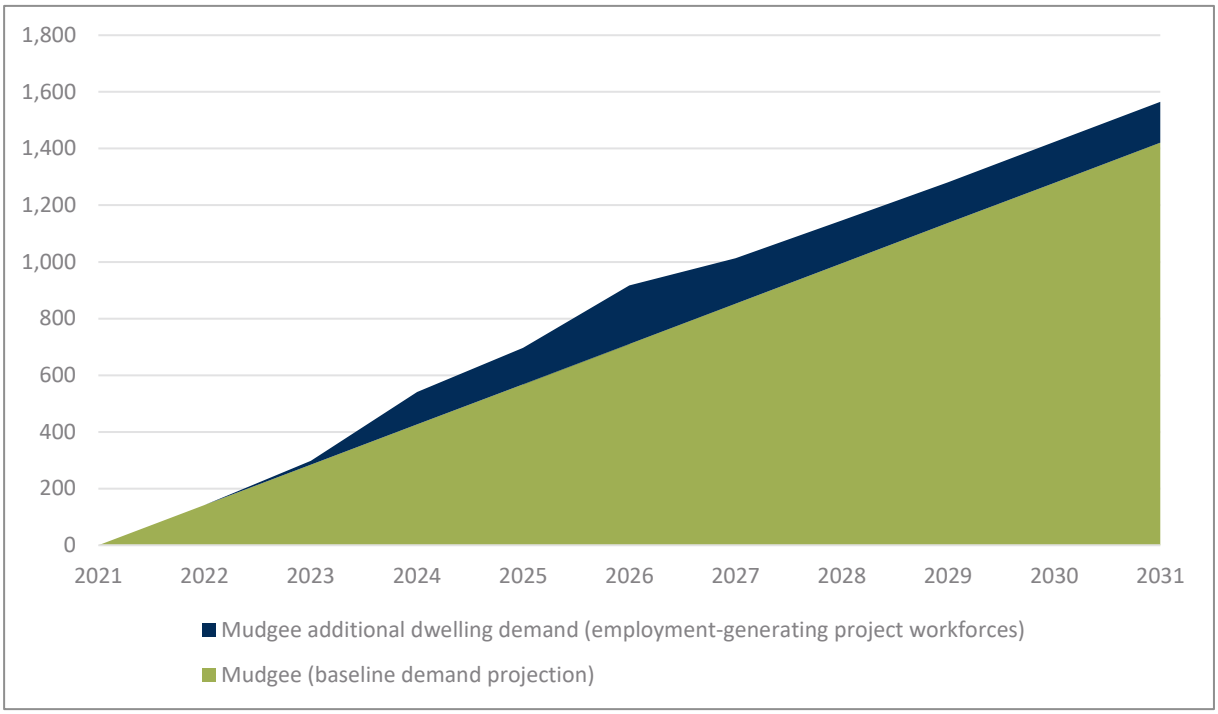
* Count of dwellings. It is assumed that demand for townhouse and multi-unit development will occur as infill in and around CBD areas.

Note: Figures have been rounded. All estimates include +20 per cent contingency and demand arising from employment-generating projects workforce.

To meet the demand across Mudgee and Gulgong over the period 2021-2041, Council would need to approve around **166 dwellings per annum**.

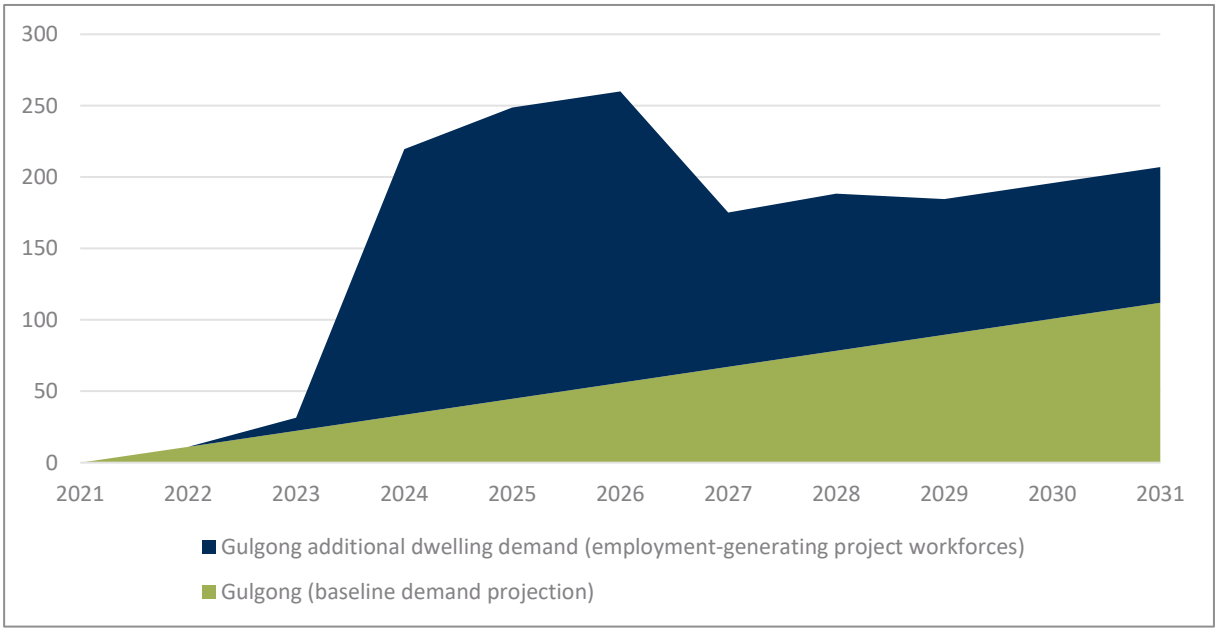
The above figures are inclusive of the additional demand driven by employment-generating projects. To demonstrate the relative scale of this demand, Figure 39 and Figure 40 show projected dwelling demand in Mudgee and Gulgong with the overall demand projection and the additional demand from employment-generating projects shown separately.

Figure 39: Projected dwelling demand, Mudgee, 2021-2031



Source: HillPDA

Figure 40: Projected dwelling demand, Gulgong, 2021-2031



Source: HillPDA

DEVELOPMENT CONSTRAINTS

6.0 DEVELOPMENT CONSTRAINTS

To consider the effect of potential constraints on the development of the urban release areas, a land suitability analysis was undertaken for the URAs in Mudgee and Gulgong. The methodology used in this report aims to identify and evaluate a range of constraints that restrict the suitability of land for residential purposes. Utilising a sound methodology to evaluate these constraints enables Council, the community, and potential developers to better understand the process with respect to releasing land for residential purposes.

Though some constraints make residential development impossible or unfeasible, the presence other constraints may only reduce the potential yield or feasibility of development. Other constraints may require infrastructure upgrades or site-specific mitigations to overcome their limitations on potential development. Constraints can also occur in combination, altering or increasing restrictions on the development potential of land.

Examples of land that may be too constrained to develop include land that is too steep to access or to build on, or land that cannot be supplied with water or sewerage connections. Land that is partially constrained may, for example, be affected by local heritage provisions, or flood or bushfire risk. Existing land uses may also act as constraints on development, whereby the protection of land uses identified as socially or economically important (such as prime agricultural land or environmentally sensitive areas) is determined to be a higher use than residential land development.

In alignment with the original URS, this URS update considers environmental and infrastructure constraints as the most significant in terms of their potential impact on the URAs. These are outlined below:

- **Infrastructure constraints on development:** the existing and potential infrastructure requirements of residential development, including the ability to service land with water, sewerage, roads, and waste. These constraints are considered in section 6.1.
- **Environmental constraints on development:** limitations on potential development arising from the environmental context of the land (including natural, built, and socio-cultural elements). The environmental constraints assessed in this report include topography, flood and bushfire risk, groundwater vulnerability, visually sensitive land and heritage, important agricultural and biodiversity land, and naturally occurring asbestos. These constraints are considered in section 6.2.

For each identified constraint, its potential impact on the URAs has been analysed and considered, in collaboration with Council representatives. Where possible, GIS analysis has been utilised to assess the extent of each constraint in relation to the URAs. Where GIS analysis was not suitable, constraints have been discussed qualitatively. The significance of the presence of each constraint in terms of potential future residential development was also considered.

Constraints were sorted into three categories, based on HillPDA's experience and observations, input from Council, and analysis of a range of data sources. The three categories are:

- **Constraints:** factors likely to significantly limit development potential.
- **Manageable constraints:** factors that could reduce potential yield or feasibility but that do not generally prevent development.
- **Negligible constraints:** factors that may be of some impact to certain land uses, or that may impact yield or feasibility on a site-specific basis and cannot be effectively assessed at a macro level.

The method used to assess each constraints' impact on the URAs is detailed further (as required) in the relevant section. The classification of constraints is shown in Table 51.

Table 51: Classification of constraints

Constraints	Manageable constraints	Negligible constraints
• Mapped as "High Biodiversity Sensitivity or "Moderate Biodiversity Sensitivity", under the MWLEP or mapped on DPE's Biodiversity Values Map • Probable maximum flood (PMF) or riverine flood • Slopes greater than 20 degrees • Mudgee sewerage treatment plant buffer • Water servicing (certain lands in Mudgee above 520 or 480 metres of elevation) • Land subject to easement(s) or road corridors	• Classed as class 4 or lower in the land and soil capability dataset (ie important agricultural land) • Bushfire affected • Overland flood • Slopes between 14.5 and 19.9 degrees • Mapped as visually sensitive land under the MWLEP	• Groundwater vulnerability • Heritage item, object, landscape, or Heritage Conservation Area • Aboriginal heritage sites • Naturally-occurring asbestos • Slopes below 14.5 degrees

Identified constraints that were not included in the above categories were considered either to have minimal impact on potential dwelling or lot yields or were impractical to consider at the scale of this report. In addition to those constraints categorised as negligible, some uncategorised constraints may have significant impacts on yields or feasibility on a site-specific basis, though across the URAs it is considered unlikely.

6.1 Infrastructure constraints

Prior to the release of land for residential purposes, it is important to ensure areas can be economically and efficiently serviced in terms of water, sewer, roads and waste facilities and that providing these services does not impose an unacceptable burden to Council and existing residents.

Clause 6.9 of the MWLEP enables Council to refuse development consent for applications where services "that are essential for the proposed development" (water, electricity, sewer, stormwater management, and road access) are not available. Where services are not available, development may still be approved if "adequate arrangements" are in place to make them available when required.

Generally, all potential urban release lands in Mudgee and Gulgong are technically able to be serviced, however, some areas are likely to be significantly more expensive to service than others. Previous strategic planning work undertaken by Council indicates that shortfalls in funding restrict Council's ability to replace infrastructure t and service extension (to non-growing areas) (further information can be found in Council's *Asset Management Plans*). Council also identifies increasing environmental standards and operational costs for existing infrastructure as significant factors affecting its ability to meet its infrastructure provision expectations.

Developer-contributed assets can aid in minimising these impacts by providing initial capital outlay where Council may not be in a position to do so. However, it is important to consider any such provision of assets strategically. Developer-contributed assets may enable residential development that would otherwise not be supported, increasing housing supply in the local area. However, this could result in Council being burdened with operation and maintenance cost for assets that were not considered in strategic planning works, resulting in decreased ability to undertake services or requiring Council to increase rates or cost recovery activities.

A number of issues relating to the servicing of the growing population and proposed residential areas are considered in the following section. Additionally, easements that facilitate infrastructure (such as water pipelines or electricity transmission lines) affect some of the URAs. Whilst different types of easements may require different levels of avoidance, the presence of easements has been assessed as a constraint on development for the purposes of this strategy.

6.1.1 Water supply

Council operates potable and chlorinated bore water systems in Mudgee and Gulgong, providing drinking and irrigation water. Both Mudgee and Gulgong are situated near the Cudgegong River, downstream of the 368 gigalitre Windamere Dam, which supplies water from the Cudgegong for irrigation and domestic purposes. Both Mudgee and Gulgong have their own water supply schemes and water treatment plants. Both systems were provided with new potable water treatment plants in the early 2000s. Council has commenced preparing an updated water servicing model for Mudgee. Similar modelling for Gulgong is not prioritised for the short term.

In terms of water infrastructure funding, Council charges water users annual and usage fees for the supply of potable water. Additionally, headworks and distribution works are charged to developers under Section 64 of the *Local Government Act 1993 (NSW)*.

To inform this section of the report, HillPDA undertook engagement with representatives of Council's water infrastructure staff on 24 November 2022. Constraints to residential development in Mudgee and Gulgong arising from water supply and servicing were identified, as outlined below.

Mudgee

Potable water supply for Mudgee is sourced from the Cudgegong River and the Burrundulla bore field, treated at the Mudgee Water Treatment Plant, adjacent to Burrundulla Road (refer to Figure 41). The treatment plant currently has a capacity of 14 megalitres per day. Water is distributed to the Mudgee community via a system of reservoirs, pumping stations, and metered connections. Metered chlorinated bore water is also supplied to Mudgee, for the purposes of irrigating parks, gardens, and sporting fields.

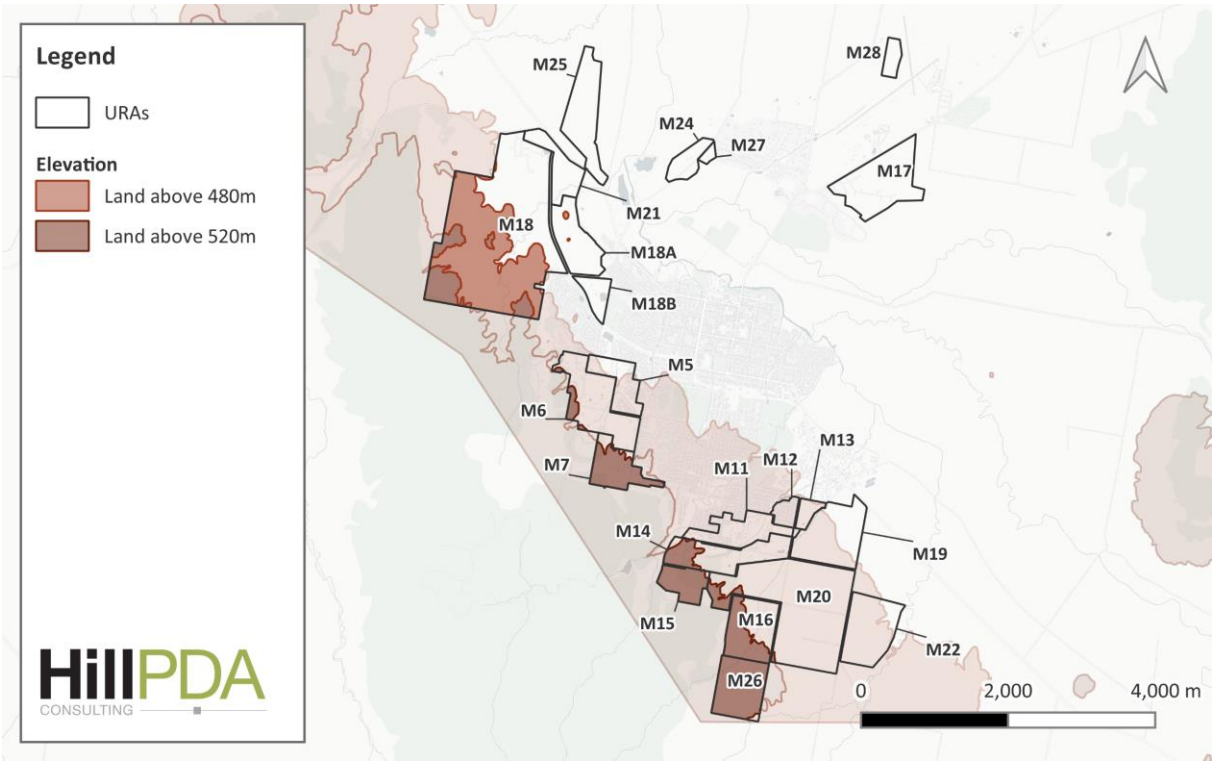
The Mudgee Water Treatment Plant is approaching its servicing capacity, and additional residential development will require the facility to be upgraded. This is possible, though Council has indicated its preference is to ensure that it completes required works efficiently. As such, Council's preference is for strategic planning works (ie this strategy) to be undertaken prior to upgrade works to inform an upgrade of the facility's capacity that is suitable for a longer period of time.

If the dwelling yields outlined in the URS were achieved, significant water servicing works would be required in Mudgee including the development of a new reservoir at higher elevation, upgrades to the water distribution main, and a booster pump station.

Water servicing in Mudgee is limited by the ability to pressurise water with gravity. Water can only be delivered via such a system to areas that are below the level of the relevant water reservoir. For Mudgee, this generally restricts water supply to areas below around 520 metres in elevation, however, areas located further from the water supply are further constrained, with water servicing currently limited to areas below 480 metres elevation. This includes URAs M18 and M18A, though it is noted that Council has agreed to facilitate works to enable servicing above 480 metres elevation for development in M18. For the purposes of this URS update, land that is above the current water servicing limit is considered **constrained**.

Figure 41 shows the elevation constraints relevant to water supply in Mudgee.

Figure 41: Water supply constraints, Mudgee



Source: HillPDA, MWRC

Gulgong

Potable water supply for Gulgong is also sourced from the Cudgegong River, stored off-river, and processed at the Gulgong Water Treatment Plant. The treatment plant currently has a capacity of four megalitres per day. Water is distributed to the Gulgong community via a system of reservoirs, pumping stations, and metered connections. Metered chlorinated bore water is also supplied to Gulgong.

Council staff have indicated that any significant additional residential development in Gulgong would trigger works to expand water supply capacity. Full development as outlined in the URS 2014 would require the construction of a new water storage reservoir and distribution works in Gulgong. This scenario would also require significant further works to determine upgrade requirements of the water treatment plant and associated infrastructure.

Water servicing in Gulgong is not constrained to the same extent as that of Mudgee. Due to the lower and flatter terrain, water servicing is not considered to be a significant constraint for any of the URAs in Gulgong.

6.1.2 Sewerage supply

Council operates separate reticulated sewerage systems in Mudgee and Gulgong, with individual property connections, pumping stations, and centralised sewage treatment plants. Council has commenced preparing an updated sewerage servicing model for Mudgee. Similar modelling for Gulgong is not prioritised for the short term.

In terms of sewerage infrastructure funding, Council does not charge annual fees for residential sewer connections. Much of Council's sewerage network has been constructed by developers or through government grants. It is noted that this practice has often neglected to consider long-term matters such as operation and maintenance costs, and the cost of replacing ageing infrastructure. Residential development can occur Mudgee

and Gulgong without sewerage supply, though in some instances the achievable minimum lot size would be reduced.

To inform this section of the report, HillPDA undertook engagement with representatives of Council's sewerage infrastructure staff on 24 November 2022. Constraints to residential development in Mudgee and Gulgong arising from sewerage supply and servicing were identified, as outlined below.

Mudgee

Sewerage treatment for Mudgee is supplied by the Mudgee Sewage Treatment Plant (STP), commissioned in 2013, which is located at 33 Blain Road, Caerleon, on Mudgee's northwestern outskirts. It is noted that the Mudgee STP induces a 'buffer' area, in accordance with Clause 6.12 of the MWLEP. Within this area, Council must consider the potential impact of noise, odour and other emissions from the operation of the plant when determining any residential development applications. This buffer constitutes a constraint on development arising from sewerage infrastructure, affecting URA M18.

HillPDA has held discussions with Council on this matter and notes that the impact of the buffer on residential development is yet to be tested in processing a DA. Nonetheless, for the purposes of this URS update, land affected by the Mudgee STP buffer is considered **constrained**, as it is considered likely that dwellings will not be developed within the buffer, though it is noted that parts of larger residential lots may be able to be located within the buffer.

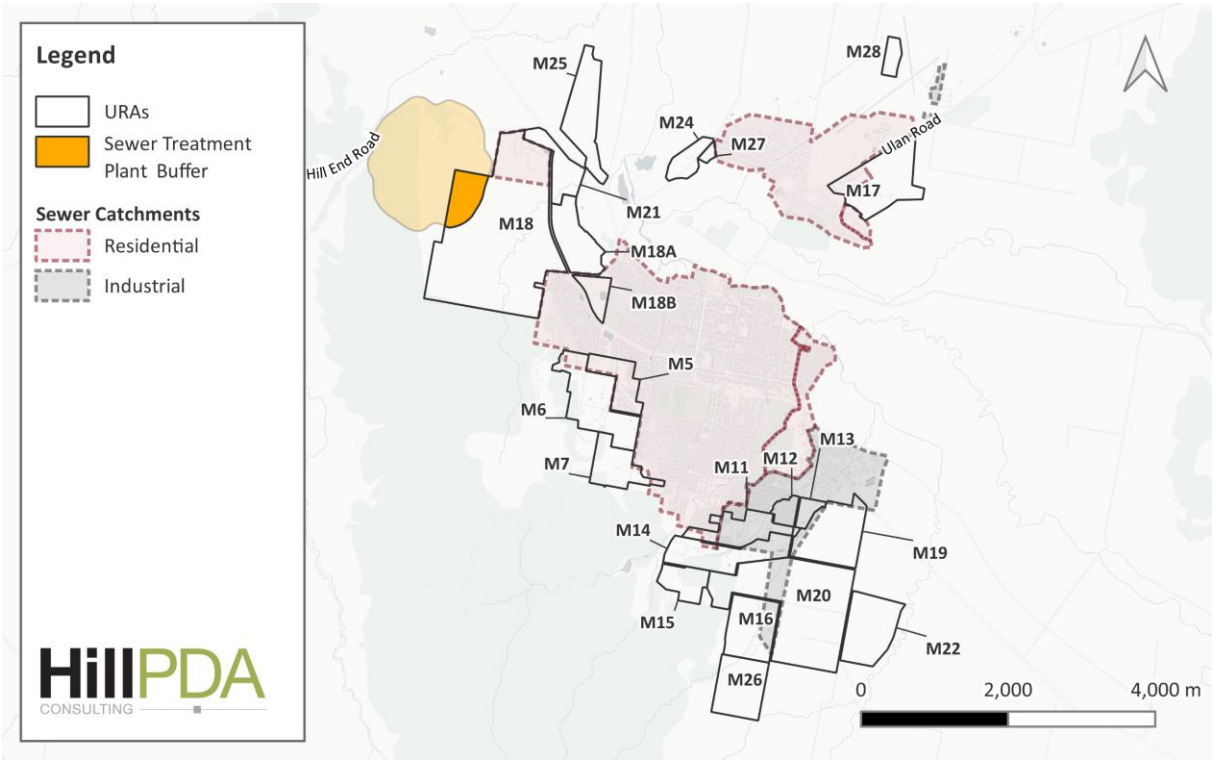
In terms of capacity and delivery constraints for sewerage in Mudgee, the Mudgee STP is designed to service an estimated residential population of 14,000 and a non-residential equivalent of 2,000 'people'. The population of Mudgee is projected to exceed this capacity by around 2036 (refer to section 2.2.4), and the plant would require upgrades.

The primary sewerage constraint on development potential in Mudgee is currently servicing limitations, particular in the area to the southeast of the town centre. Facilitating further residential development in the vicinity of Spring Flat would require significant costs, as the existing sewerage service in the area is identified as an industrial catchment, though recent residential development connects to that network. Residential development in this area is effectively limited already due to this constraint, and any further development will require separating these networks and constructing 2-3 additional sewage pump stations.

URAs within the area currently serviced by the industrial sewer catchment are considered **manageably constrained**.

These findings are shown in Figure 42.

Figure 42: Sewage Treatment Plant buffer and sewer catchments, Mudgee



Source: HillPDA, MWRC

Gulgong

Sewerage treatment for Gulgong is supplied by the Gulgong STP, commissioned in 1997, which is located to the town's northeast, at 107 Spring Creek Road. Unlike in Mudgee, there is no buffer area for residential development associated with the Gulgong STP. The Gulgong STP is designed to service an estimated residential population of 4,450, to service residential, commercial, and industrial uses.

Sewerage servicing in Gulgong is not subject to major constraints, though additional sewerage works would be required to facilitate certain development. These would include sewer main and pumping station upgrades, sewer pumping station catchment relocations, as well as developing a new sewer pumping station and catchment to Gulgong's north.

6.1.3 Roads

Recent and projected increases in resident and worker population in the Mid-Western Regional LGA has resulted in increased vehicle movements on the LGA's roads. The lack of transport alternatives in Mudgee and Gulgong suggest that adequate provision and maintenance of road assets is likely to be of key importance in supporting movement throughout the region. Additionally, key local industries such as agriculture and mining depend on road transport to move goods and labour.

Roads in Mudgee and Gulgong are provided and maintained by Council, though some roads are managed in partnership with the NSW State Government. Funding is raised through general rate revenue, as well as State and Federal government grants (where available). As per Council's 2022/23 Operational Plan, the largest asset management expense category (by some margin) was roads. Council has identified that it cannot fund the extension of its road maintenance network or its sealed road network, or increased grading frequency for unsealed roads.

Funding of road assets is difficult in areas such as the Mid-Western Regional LGA due to low population (therefore a smaller potential funding pool through rates) and its large geographical area, resulting in a small amount of funding that must support a large number of assets. This is a highly important consideration for strategic land use planning. Developer-contributed roads associated with urban release areas increase Council's operation and maintenance liability, and providing housing that is only accessible by private motor vehicle impacts the existing road network's capacity and maintenance requirements.

In addition to the above funding and operational matters, road corridors can also present a physical constraint on the amount of area that can potentially be developed.

6.1.4 Waste

Council provides a domestic waste, recycling service, and food organic, garden organic (FOGO) collection service for the urban areas of Mudgee and Gulgong. Waste and recycling are collected and transported to the Mudgee Waste Facility at 31 Blain Road, Mudgee, where recycling is sorted and baled for sale, and waste is landfilled. FOGO waste is transported under contract to the Dubbo Regional Processing Plant and is turned into valuable compost. Council also operates the Gulgong Waste Facility.

The existing landfill cell at the Mudgee Waste Facility is expected to reach capacity in 2024, with construction on a new landfill cell scheduled to commence in 2023. The landfill site at 31 Blain Road will reach capacity for landfilling in approximately 2060.

Council also operates 14 waste transfer stations to provide opportunity for those without a kerbside service to dispose of their household waste and recycling. Commercial waste is accepted at the Mudgee Waste Facility, and limited types and quantities of commercial waste are accepted at the Gulgong Waste Facility.

Council funds domestic waste management in the LGA through annual levies charged on properties, with a user pays system in place for commercial waste.

6.2 Environmental constraints

This Chapter discusses a selection of environmental constraints that may impact upon the orderly release of land for future residential purposes. In addition to physical and technical constraints on development such as geological instability, flooding, and bushfire, social and policy considerations can also lead to environmental constraints on land. These can include such factors as protecting agricultural or environmentally sensitive land, limits on built form and development density to protect scenic views or heritage assets, or the separation of intensive industrial or agricultural land uses from residential or other more vulnerable land uses.

6.2.1 Topography

Site topography is one of the most important considerations in facilitating urban development. The Mid-Western Regional LGA hosts varied topography, including alluvial plains and rolling hills, as well as deep valleys, ridges, mountains, and cliffs. Much of the geographical area of the LGA is therefore highly constrained in terms of topography. The presence of steep slopes is a major environmental constraint, and is a significant factor that impacts soil erosion, drainage and bushfire hazard. Equally, sloping terrain impacts the physical and financial feasibility of servicing development, as well as providing infrastructure, roads and social services across a local area.

Council has identified sloping terrain as a key environmental constraint in its existing strategic planning works, including the previous URS, the CLUS, and its DCP. As identified in the CLUS and the Mudgee Structure Map, land above 520 metres in elevation is considered unsuitable for development, though this is largely to enable servicing (refer to section 6.1) and to protect views and vistas from encroachment (refer to section 6.2.4).

The DCP, however, applies restrictions on urban residential subdivision lot sizes for sloped sites (between 10 and 20 degree slopes), and does not permit urban subdivision where a site's slope exceeds 20 degrees. These restrictions do not apply for rural subdivisions (ie in RU or R5 zones), however the DCP does include a more general provision limiting the amount of terracing that can be undertaken to provide level development area on a site. The CLUS also advises restricting development to areas not subject to topographical constraints. It identifies land that slopes at greater than 26 per cent as constrained (approximately equivalent to a 14.5 degree slope). These topographical constraints on development in Mudgee and Gulgong are summarised in Table 52.

Table 52: Development constraints arising from topography

Source	Development constraint	
Mid-Western Regional Council Development Control Plan 2013	**Part 7.1 Urban Subdivision Minimum lot size: subdivision of land in R1, R2, or R3 zones**	
	Slope of land	**Applicable minimum lot size**
	0-10°	600sqm (or as per the MWLEP)
	10-15°	700sqm
	15-20°	800sqm
	>20°	**Development not permitted**.
	Fast track development applications	
	Slopes >15°	Fast track development applications (for single-storey residential dwellings and dual-occupancies) are **not permitted**.
CLUS Part A	**Opportunities and constraints mapping**	
	Slope of land	**Residential development implications**
	<26% (14.5°)	Not constrained for residential development.
	>26% (14.5°)	Limited opportunities for residential development.

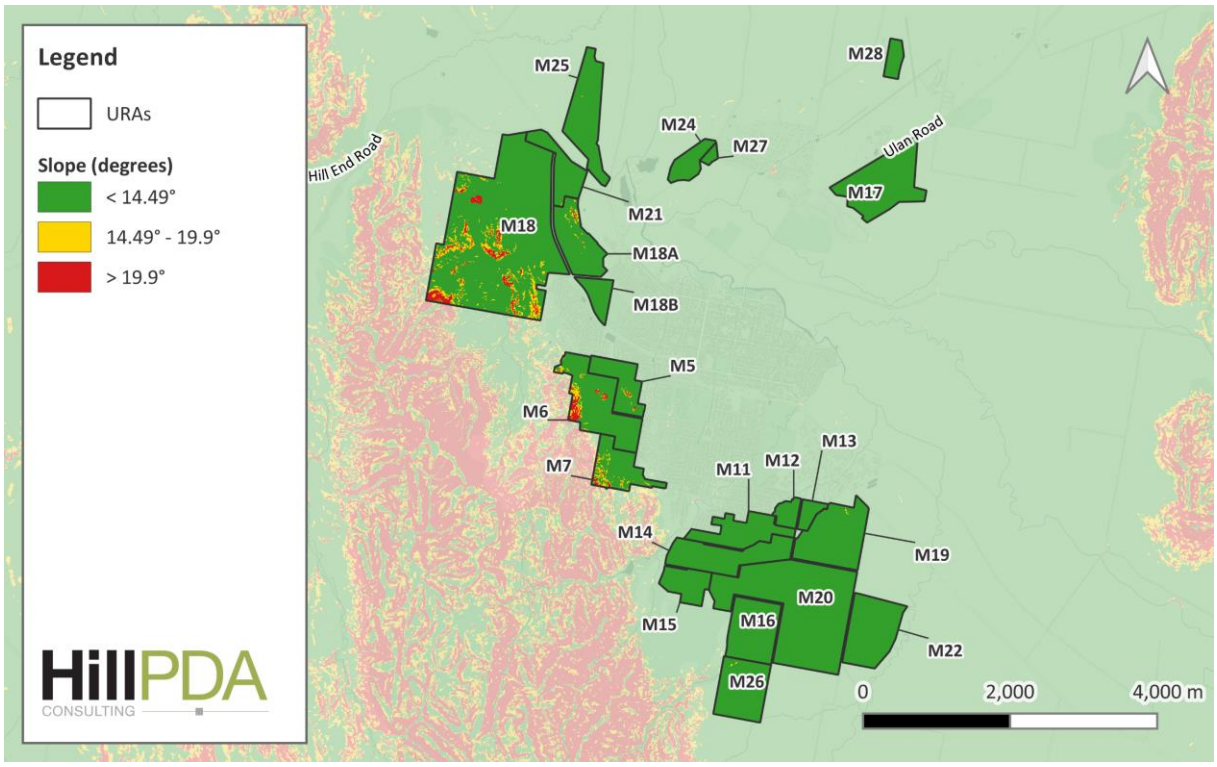
To enable GIS analysis of topographical constraints on development, the above constraints have been rationalised into three categories as follows:

- **Class 1 topography – negligible constraint:** areas of 14.5° or less slope
- **Class 2 topography – manageable constraint:** areas of between 14.5° and 20° slope
- **Class 3 topography – constraint:** areas of 20° or more slope.

This classification system reflects the existing planning frameworks for Mudgee and Gulgong and enables consideration of the URAs from a topographical perspective. Class 1 topography areas are considered **negligibly constrained**, and would be most suited to residential land release and development. These areas should generally be prioritised for release. Class 2 topography areas are considered **manageably constrained**, and may be suited to development of part(s) of the site, or for lower intensity development (ie rural residential development). Class 2 areas may otherwise be appropriate for consideration as longer-term opportunity areas. Class 3 topography areas are considered **constrained** and should generally not be significantly developed.

The main areas impacted by constrained topography are the westernmost parts of Mudgee's URAs, with some other areas distributed throughout. These areas are mapped in Figure 43.

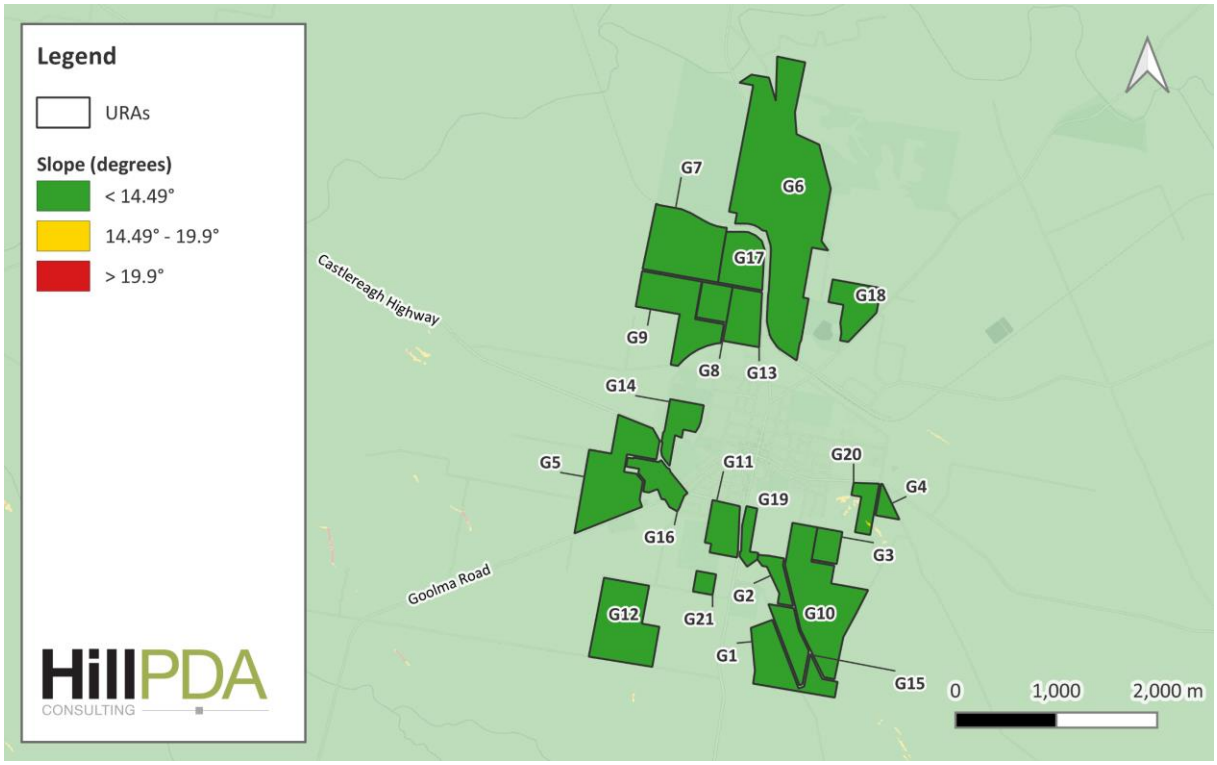
Figure 43: Topographical constraints, Mudgee



Source: HillPDA, MWRC

Gulgong's URAs are largely unconstrained by topography. These areas are mapped in Figure 44.

Figure 44: Topographical constraints, Gulgong



Source: HillPDA, MWRC

6.2.2 Flood prone land

Flood prone land presents a significant constraint to development as it has implications with respect to the capital cost and provision of infrastructure, roads and social services that may be physically located with flood plains. In accordance with the principles of the CLUS and the requirements of the MWLEP, residential development in the MWR LGA should avoid development on flood prone land, in order to minimise the potential of flood risk to life and property. Clause 5.21 of the MWLEP requires that Council not grant development consent in flood planning areas to development that is incompatible with the relevant expected flood behaviour, or to development that would adversely affect safe occupation for potential residents. Flood prone land is also barred from accessing Council's fast track development application pathway.

Flooding is identified as a significant environmental constraint in Mudgee, mostly along the Cudgegong River. Mudgee's urban limit to the north has typically been defined by the Cudgegong River, and much of the land immediately north of the river is considered unsuitable for urban development. This is due to both flood risk and the agricultural importance of the low-lying area adjacent to the Cudgegong River and Lawsons Creek.

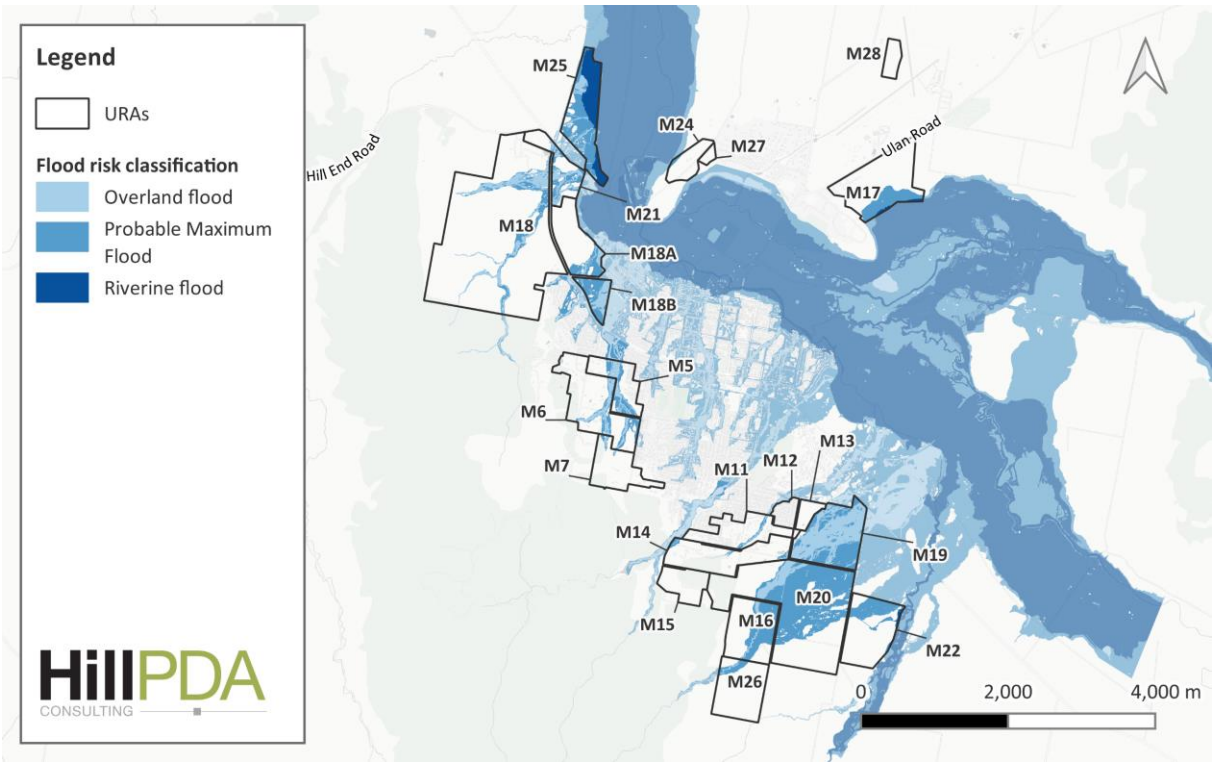
Flood mapping for Mudgee designates three categories of flood prone land:

- **Probable maximum flood (PMF):** the area that would be inundated under the largest expected/modelled flood
- **Riverine flood:** flooding associated with rising river levels and river bankfull events (when water exceeds the height of the river banks and spills onto the floodplain)
- **Overland flood:** flooding associated with runoff intense rainfall events.

Considering the potential impact and anticipated frequency of the above categories of flood prone land, land mapped as subject to the PMF or riverine flooding is assessed as **constrained**. Land mapped as subject to overland flooding is assessed as being **manageably constrained**.

In total, 24 of Mudgee's URAs are partially subject to the PMF, whilst four are partially subject to riverine flooding. 20 URAs are partially subject to overland flooding. The most affected URAs are those to the southeast of Mudgee, toward Spring Flat, and those to the west and northwest of Mudgee. It is noted that the existing Mudgee centre is also affected by flood risk. This is shown in Figure 45.

Figure 45: Flood prone land, Mudgee



Source: HillPDA, MWRC

Gulgong is unconstrained by flood risk, due to its physical separation from the nearby Cudgegong and Wialdra floodplains. None of Gulgong's URAs are subject to mapped flood risk.

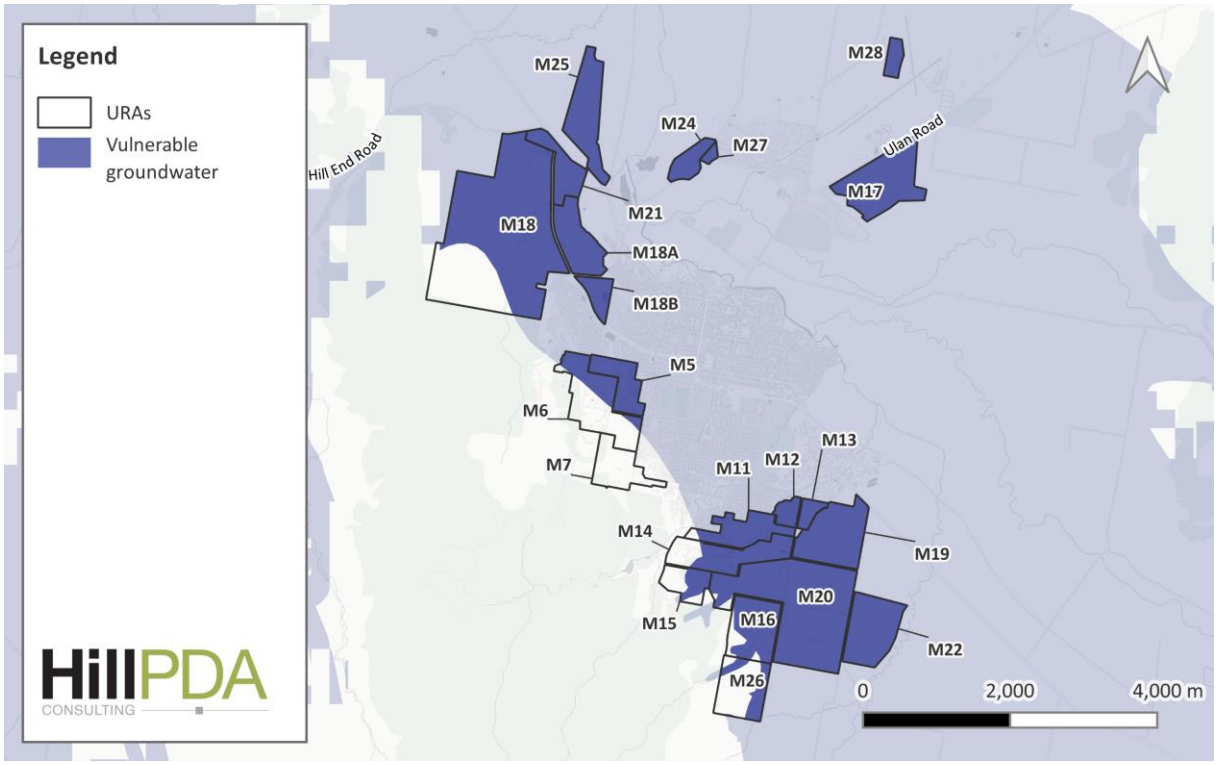
6.2.3 Groundwater vulnerability

Groundwater vulnerability in Mudgee and Gulgong is derived from mapping for the Macquarie River catchment, to which the Cudgegong is a major tributary. It is established by measuring variables including the depth to the water table, how easy surface water can move to groundwater, topography, soil permeability, and how water moves between aquifers. Groundwater vulnerability as an environmental constraint is principally about maintaining the hydrological function of key groundwater systems whilst protecting vulnerable groundwater resources from depletion and/or contamination.

In order to facilitate this, section 6.4 of the MWLEP requires Council to assess the potential impacts of development on areas subject to groundwater vulnerability. In determining applications on such land, Council must consider the impact that the proposed development may have through groundwater contamination, adverse impacts to ecosystems, cumulative impacts of groundwater use, and whether mitigation measures are proposed to avoid any such impacts. This is especially important where water and sewer servicing is impractical, where Council must ensure that planning controls are appropriate to maintain groundwater recharge. In terms of impact on residential development potential, for the purposes of this URS update, groundwater vulnerability is considered a **negligible constraint**.

Almost all of Mudgee is subject to groundwater vulnerability, which affects the majority of the URAs, particularly in the north, north-east and south east areas. The URAs directly south of the Mudgee CBD are least constrained by groundwater vulnerability. This is shown in Figure 46.

Figure 46: Groundwater vulnerability, Mudgee



Source: HillPDA, MWRC

URAs in Gulgong are less affected by groundwater vulnerability, particularly close to the urban centre, though many are still affected (to varying degrees). This is shown in Figure 47.

Figure 47: Groundwater vulnerability, Gulgong

Source: HillPDA, MWRC

6.2.4 Visually sensitive land

In the MWR LGA, visually sensitive land has been identified to protect the visually and environmentally significant upper slopes from development encroachment. This land is generally located to the south and southeast of Mudgee, and forms a semicircle around from east to west, protecting Mudgee's visual backdrop.

Section 6.10 of the MWLEP provides Council with a mechanism to limit urban fringe development to the south of Mudgee. Any development in this area must complement Mudgee's visual backdrop and respond sympathetically to the surrounding landform. For the purposes of this URS update, this is considered to be a **manageable constraint**.

In the southwest, the area affected by this constraint is limited to the 520 metre elevation contour. To the southeast and east however, the visually sensitive land area diverges from this line, effectively placing a limit on significant development east of the existing primary production and large-lot residential land at Spring Flat, and the industrial land north of Spring Flat. Most of the URAs in Mudgee are constrained by visually sensitive land to some degree. These findings are shown in Figure 48.

Figure 48: Visually sensitive land, Mudgee

Source: HillPDA, MWRC

No visually sensitive land is identified in Gulgong.

6.2.5 Heritage

The protection of heritage items and heritage conservations are considered constraints to future residential development and due consideration needs to be given when in or adjacent to areas with identified heritage value.

The town centres of both Mudgee and Gulgong are subject to heritage conservation areas (HCAs). HCAs provide an additional layer of protection over a larger area, as compared to individual heritage listings. Both towns also host a range of heritage listed items, properties, and areas, which may constrain development potential. Heritage listed items and properties may also have curtilages: land surrounding the item that contributes to its heritage significance.

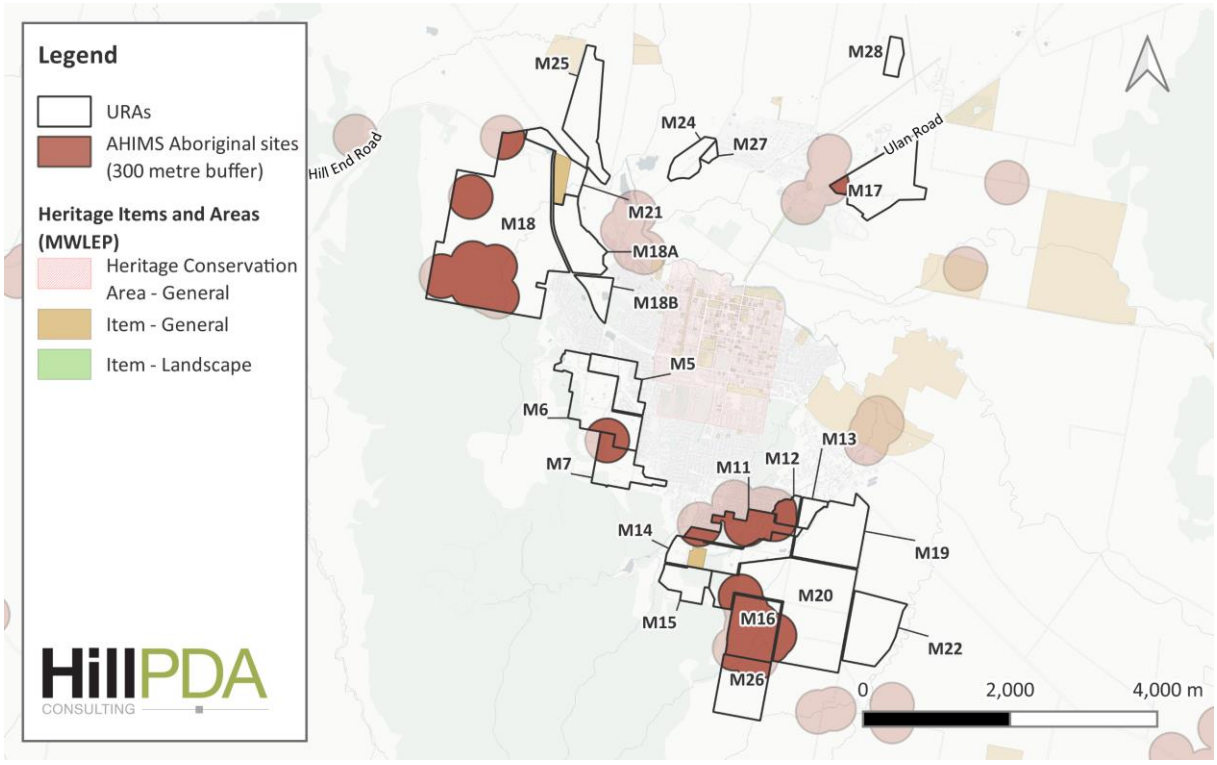
Under section 5.10 of the MWLEP, development consent is required for subdivision or building construction within an HCA. Council would then be required to consider the potential impact of any development or subdivision on the heritage significance of the HCA. Any such development may also require proponents to provide additional reporting to identify and manage heritage impacts, such as a heritage impact statement or a heritage conservation management plan.

In addition to heritage provisions in the MWLEP, Council has also identified an array of areas deemed being of some Aboriginal significance and/or sensitivity. These areas include sensitive sites, as well as lakes and waterways. Whilst HillPDA acknowledges the importance of Aboriginal cultural heritage and preserving and maintaining connections to the land, the areas provided cover the vast majority of the LGA. As such, HillPDA have incorporated those areas classed as sensitive sites into our analysis. These sites are from the Aboriginal Heritage Information Management System (AHIMS). AHIMS is a register of recorded Aboriginal sites across NSW that can be utilised for planning purposes. A buffer of 300 metres has been applied to each recorded site.

The presence of or proximity to a heritage item, area, or AHIMS site buffer can generally be managed on a site-by-site basis and is unlikely to significantly affect potential yield across a URA. Therefore, for the purposes of this URS update, areas affected by heritage are considered to be **negligibly constrained**.

In Mudgee, none of the URAs intersect with the HCA. Two Mudgee URAs overlap with heritage items, and several more are located adjacent to or near heritage items. Generally, URAs in Mudgee are not significantly constrained by heritage. Several Mudgee URAs contain or intersect AHIMS sites or their buffers. These findings are shown in Figure 49.

Figure 49: Heritage items and areas, Mudgee



Source: HillPDA, MWRC

In Gulgong, two of the URAs (G11 and G19) lie partially within the HCA. Two Gulgong URAs overlap with heritage items, and several more are located immediately adjacent to heritage items. The URAs to the north of Gulgong are least constrained by heritage, as well as those beyond the HCA in the southeast. No URAs in Gulgong contain or intersect AHIMS sites or their buffer areas. These findings are shown in Figure 50.

Figure 50: Heritage items and areas, Gulgong

Source: HillPDA, MWRC

In addition to the HCAs and heritage items considered in this section, the URAs in Mudgee and Gulgong are likely to have some level of Aboriginal cultural heritage significance, or contain Aboriginal archaeological sites. It is of minimal utility to consider Aboriginal cultural heritage matters at this scale, with insufficient detail to make an assessment. These matters should be assessed on a site-specific basis, in consultation with the relevant Aboriginal stakeholders and alignment with any relevant guidelines and/or policies.

It is also noted that both Mudgee and Gulgong host NSW State heritage listed items, and the Mudgee Post Office is on the Commonwealth Heritage List. These significant heritage items are all located near their respective town centres and are therefore not considered relevant to any of the URAs.

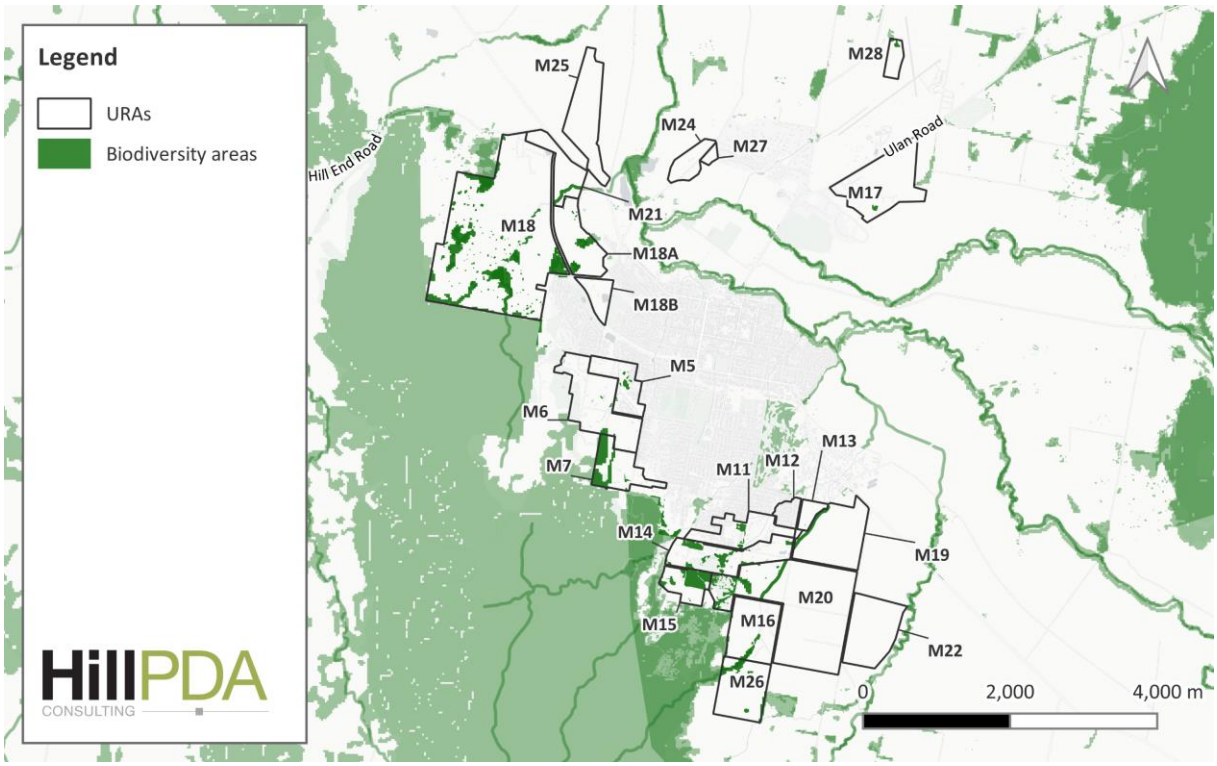
6.2.6 Biodiversity values

The main objective of identifying areas of biodiversity value is to maintain terrestrial biodiversity by protecting native fauna and flora whilst encouraging the conservation of habitats. Section 6.5 of the MWLEP requires Council to consider the impact of development on these areas. Additionally, the CLUS notes that development should avoid heavily vegetated areas, retain trees, and avoid clearance of vegetation.

To align with the MWLEP and CLUS, development must therefore avoid, minimise, and mitigate impacts to areas of biodiversity value to the greatest extent possible. For the purposes of this URS update, areas affected by the presence of biodiversity values are considered **constrained**.

Mudgee has significant areas of land identified as having biodiversity value. Most of this land is associated with the natural areas immediately southwest and west of Mudgee, as well as the riparian corridors and areas with remnant vegetation scattered throughout Mudgee and its surrounds. Several of Mudgee's URAs have large proportions of their total area mapped as biodiversity land (M7, M14, M15, and M18), though some URAs have no land (or only a very small proportion of their total land) affected by biodiversity constraints. This is shown in Figure 51.

Figure 51: Biodiversity areas, Mudgee



Source: HillPDA, MWRC

A much smaller amount of land in the vicinity of Gulgong is identified as hosting biodiversity value. Such land is generally restricted to riparian corridors on the outskirts of Gulgong's urban area, as well as isolated clusters of remnant vegetation, including along roadsides. Three of Gulgong's URAs have a significant proportion of their area mapped as constrained by biodiversity (G6, G15, and G20), whilst others are constrained to a lesser degree. This is shown in Figure 52.

Figure 52: Biodiversity areas, Gulgong

Source: HillPDA, MWRC

6.2.7 Agricultural land

Agriculture is a key land use in the Mid-Western Regional LGA, and as much of the LGA's terrain is unsuitable for agricultural use, the encroachment of other land uses on agricultural lands could become an issue. It is noted that the CLUS specifies that rural residential development should avoid Biophysical Strategic Agricultural Land (BSAL) in order to prevent this outcome. The CLUS also notes the importance of providing buffers around intensive agricultural land and vineyards, to protect potential residents as well as agricultural operations. A buffer of 300 metres is suggested.

The NSW Department of Planning and Environment manages a state-wide database of land and soil capability called the *Land and Soil Capability dataset* (LSC). In the classification system used for the LSC, the 'capability' rating of land is derived from scores against eight 'hazards'. Each is scored between one and eight, with one representing the lowest hazard and eight representing the greatest hazard. A parcel of land is then classified as determined by its highest scoring hazard.

Under the LSC classification system, Class 1 land refers to 'Extremely high capability land', capable of sustaining all rural land uses and land management practices. Class 8 land, however, refers to land with 'Extremely low capability land', with severe limitations rendering it "incapable of sustaining any land use apart from nature conservation". The full classification system is shown in Table 53. The LSC can be used to identify areas in and near Mudgee and Gulgong which have a high level of agricultural capability.

Table 53: Land and soil capability classes, general definitions

Class	Title	Description
	Land capable of a wide variety of land uses (cropping, grazing, horticulture, forestry, nature conservation)	
1	Extremely high capability land	Land has no limitations. No special land management practices required. Land capable of all rural land uses and land management practices.
2	Very high capability land	Land has slight limitations. These can be managed by readily available, easily implemented management practices. Land is capable of most land uses and land management practices, including intensive cropping with cultivation.
3	High capability land	Land has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices. However, careful management of limitations is required for cropping and intensive grazing to avoid land and environmental degradation.
	Land capable of a variety of land uses (cropping with restricted cultivation, pasture cropping, grazing, some horticulture, forestry, nature conservation	
4	Moderate capability land	Land has moderate to high limitations for high-impact land uses. Will restrict land management options for regular high-impact land uses such as cropping, high-intensity grazing and horticulture. These limitations can only be managed by specialised management practices with a high level of knowledge, expertise, inputs, investment and technology.
5	Moderate-low capability land	Land has high limitations for high-impact land uses. Will largely restrict land use to grazing, some horticulture (orchards), forestry and nature conservation. The limitations need to be carefully managed to prevent long-term degradation.
	Land capable for a limited set of land uses (grazing, forestry, and nature conservation, some horticulture)	
6	Low capability land	Land has very high limitations for high-impact land uses. Land use restricted to low-impact land uses such as grazing, forestry and nature conservation. Careful management of limitations is required to prevent severe land and environmental degradation.
	Land generally incapable of agricultural land use (selective forestry and nature conservation)	
7	Very low capability land	Land has severe limitations that restrict most land uses and generally cannot be overcome. On-site and off-site impacts of land management practices can be extremely severe if limitations not managed. There should be minimal disturbance of native vegetation.
8	Extremely low capability land	Limitations are so severe that the land is incapable of sustaining any land use apart from nature conservation. There should be no disturbance of native vegetation.

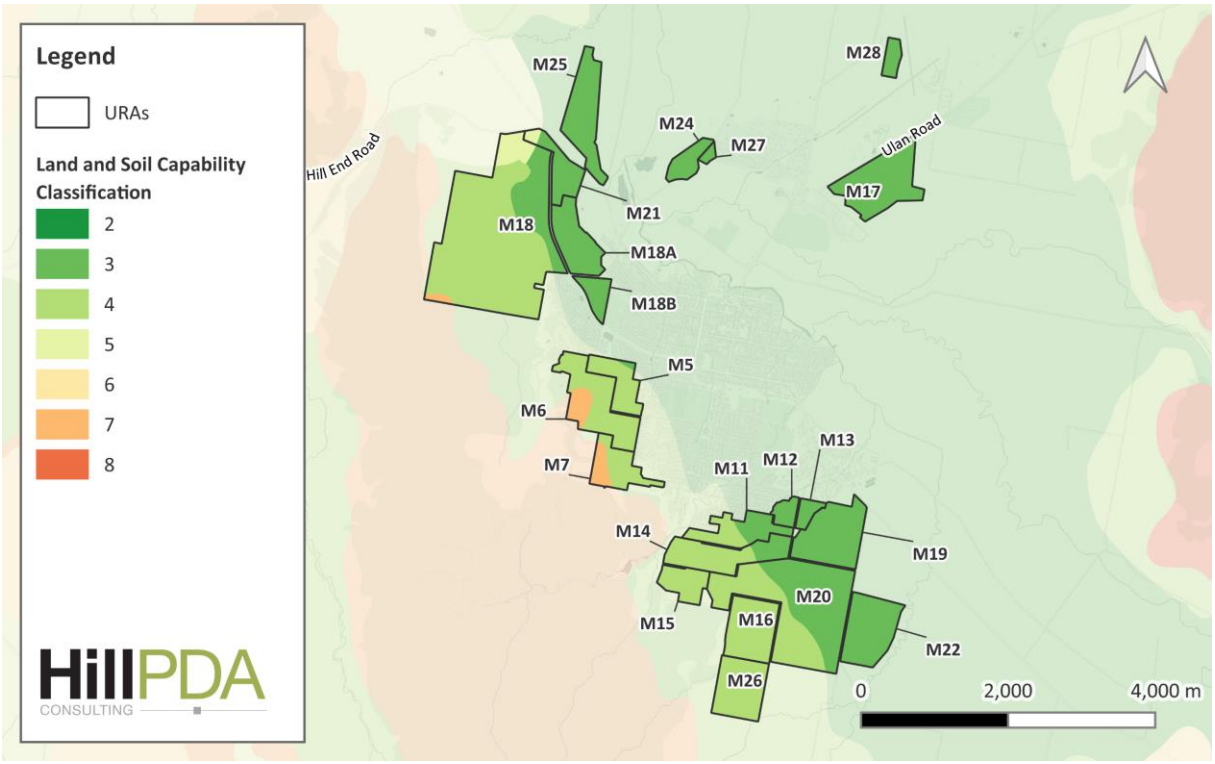
Source: State of NSW and NSW Office of Environment and Heritage, 2012

Under this LSC system, much of the land in the Mid-Western Regional LGA is shown to be of low capability, with few areas of Class 2 and 3 land. Most of the LGA constitutes land classed between Class 5 and Class 7, or moderate to very low capability land. The LGA has no Class 1 land, though Class 2 land occurs in limited quantities on the eastern fringes of the region. Most significantly, however, most of the Mid-Western Regional LGA's Class 3 and 4 land, with high and moderate capability, is located near the Cudgegong River floodplain, and correlates with the urban and peri-urban areas of Mudgee and Gulgong. Mudgee and Gulgong's Class 3 land is closely aligned with the land mapped as BSAL.

For the purposes of this URS update, all Class 3 and 4 land is considered **manageably constrained**. This reflects the importance of agricultural land in the LGA and supports meeting demand for residential land by prioritising the development of less capable agricultural land.

Mudgee's URAs are located almost exclusively on Class 3 and 4 land. URAs located closer to the Castlereagh Highway are collocated with proportionally higher amounts of Class 3. Class 3 areas are generally fringed by areas of Class 4 land, which extends significantly to the north and east. The balance of the more rugged surrounding land to the southeast and southwest largely consists of Class 7 and 8 land. These findings are displayed in Figure 55.

Figure 53: Land and soil capability classification, Mudgee



Source: HillPDA, MWRC

In Gulgong, all most URAs are also entirely contained within Class 3 and Class 4 land. The remainder of land within Gulgong's URAs is categorised as Class 6 land. Class 3 land is generally limited to the north and west of Gulgong, whilst Class 4 land constitutes the majority of the town centre and Gulgong's southern areas. The wider area surrounding Gulgong is generally categorised as Class 5 land. These findings are shown in Figure 54.

Figure 54: Land and soil capability classification, Gulgong

Source: HillPDA, MWRC

6.2.8 Bushfire hazard

In planning for the release of land for urban development purposes, it is important to take into account the potential threat from bushfire. Bushfire hazard can be a major constraint to future residential development given the likelihood for bushfire risks. The existing vegetation, topography, and other environmental factors determine the level of bushfire hazard.

For this constraint, Council's LEP bushfire risk mapping has been utilised. Land in the LGA is classified according to guidance published by the NSW Rural Fire Service. At the time of developing the mapping for Mudgee and Gulgong, the RFS defined three risk categories:

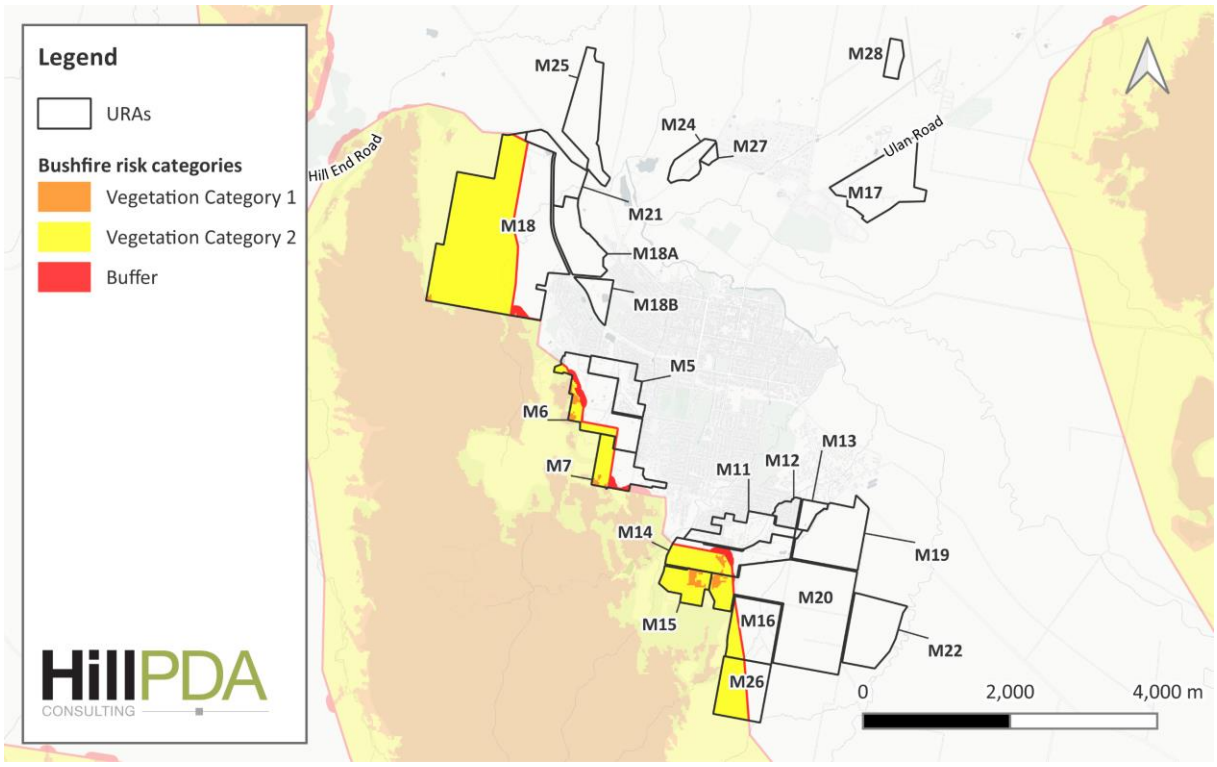
- **Vegetation Category 1:** areas with the highest risk of bushfire. Typically consists of areas of forests, woodlands, timber plantations etc.
- **Vegetation Category 2:** areas with lower risk of bushfire than Category 1 areas, but higher than unmapped areas. Typically consists of rainforests, shrubland and grasslands, urban reserves, land with topography unsuited to fire generation, and small areas of Category 1 land separated from other bushfire risk areas.
- **Buffer zones:** areas extending 100 metres and 30 metres from Category 1 and 2 areas (respectively). Buffer zones aid in minimising the risk of proximity to bushfire prone areas.

Areas affected by bushfire risk must submit a bushfire risk assessment along with any application for development or subdivision, and cannot make use of Council's fast track development application pathway. Vegetation Category 1 areas are likely to require clearing or other intervention to enable compliant and safe residential development, and may be otherwise unsuitable for development due to biodiversity and topographical constraints.

Vegetation Category 2 areas are generally suitable for development as the level of risk can be managed, including through bushfire management plans and asset protection zones, but these represented an added cost to developers as well as potentially reducing the developable area of the relevant site. For the purposes of this URS update, all bushfire risk affected land is considered **manageably constrained**.

Much of Mudgee's southwestern fringe is affected by bushfire risk. The risk areas largely consist of Vegetation Category 2 areas, with a small amount of Vegetation Category 1 area and the associated buffer zones. This is shown in Figure 55.

Figure 55: Bushfire hazard areas, Mudgee



Source: HillPDA, MWRC

In comparison, Gulgong has no identified bushfire risk affected land in the area, with the nearest area located around eight kilometres east of the Gulgong town centre.

6.2.9 Naturally occurring asbestos

Asbestos is a fibrous mineral, best known as a commercial product commonly used in construction, textiles, and insulation, though it occurs naturally. Naturally occurring asbestos (NOA) distinguishes asbestos materials that occur in rocks and soil under particular conditions from those that have been commercially or industrially produced.

When undisturbed, NOA is not dangerous to humans or animals. However, when asbestos materials are not contained, the extremely thin fibres can be inhaled, where they can cause lung damage. Long-term exposure to asbestos fibres leads to increased risk of developing certain types of cancer, including cancer of the lung, ovary, and larynx, as well as mesothelioma, a cancer that affects organ linings. Asbestos exposure is the only known risk factor for mesothelioma (Cancer Council, n.d.). In agricultural settings, asbestos fibres have been found in the lungs of livestock in areas with NOA (NSW Trade and Investment, 2015).

Asbestos fibres can be disturbed through weathering, human activities, or through other natural processes. In light of these risks, the Geological Survey of NSW has prepared mapping and analysis of known and predicted NOA sites and areas across NSW, where asbestos occurs or is likely to occur within ten metres of the surface. NOA is generally rare, with most of NSW having little or no potential or identified sites. NOA areas equate to less than one per cent of NSW's total area, inclusive of areas of high, medium, and low potential for NOA, with the remaining area considered to have no *identified* potential for NOA (NSW Trade and Investment, 2015). It is important to note that asbestos could be present at some distance from identified mapped occurrences.

In terms of how the presence of NOA may constrain the development potential of affected URAs in Gulgong, guidance published alongside the mapping referenced above suggests that ground disturbing activities in areas of identified low potential should proceed with caution and be alert to the potential presence of NOA (NSW Trade and Investment, 2015). It suggests that specialist geological advice be sought if certain minerals or textures are found during works. Overall, it is considered unlikely that the presence of NOA would significantly constrain residential development. For the purposes of this assessment, the presence of NOA is considered a **negligible constraint**.

In the Mid-Western LGA, only two areas are identified as having medium potential for NOA. These are:

- a large area in the south of the LGA, shared with Bathurst Regional LGA and Lithgow City LGA, and
- a small area on the eastern edge of Windamere Dam.

Other than these areas, the LGA contains around ten discrete areas identified as having low potential for NOA, with the balance of the LGA area having no potential for NOA. The identified low potential areas are generally confined to more rugged and less developed areas west of Mudgee and Gulgong, including in Meroo, Windeyer, Grattai, Piambong, Yarrabin, and Goolma.

No potential NOA areas exist within or near Mudgee.

An area of low potential for NOA of around 123 hectares occurs in Gulgong, immediately west to north of the town centre. This area correlates with some of Gulgong's URAs to varying degrees, as shown in Figure 56.

Figure 56: Potential for naturally occurring asbestos, Gulgong

Source: HillPDA, State Government of NSW & Department of Regional NSW, 2015

GAP ANALYSIS

7.0 GAP ANALYSIS

This Chapter brings together the supply and demand analysis for Mudgee and Gulgong undertaken in Chapters 4.0 and 5.0 and synthesises these findings with the development constraints identified in Chapter 6.0.

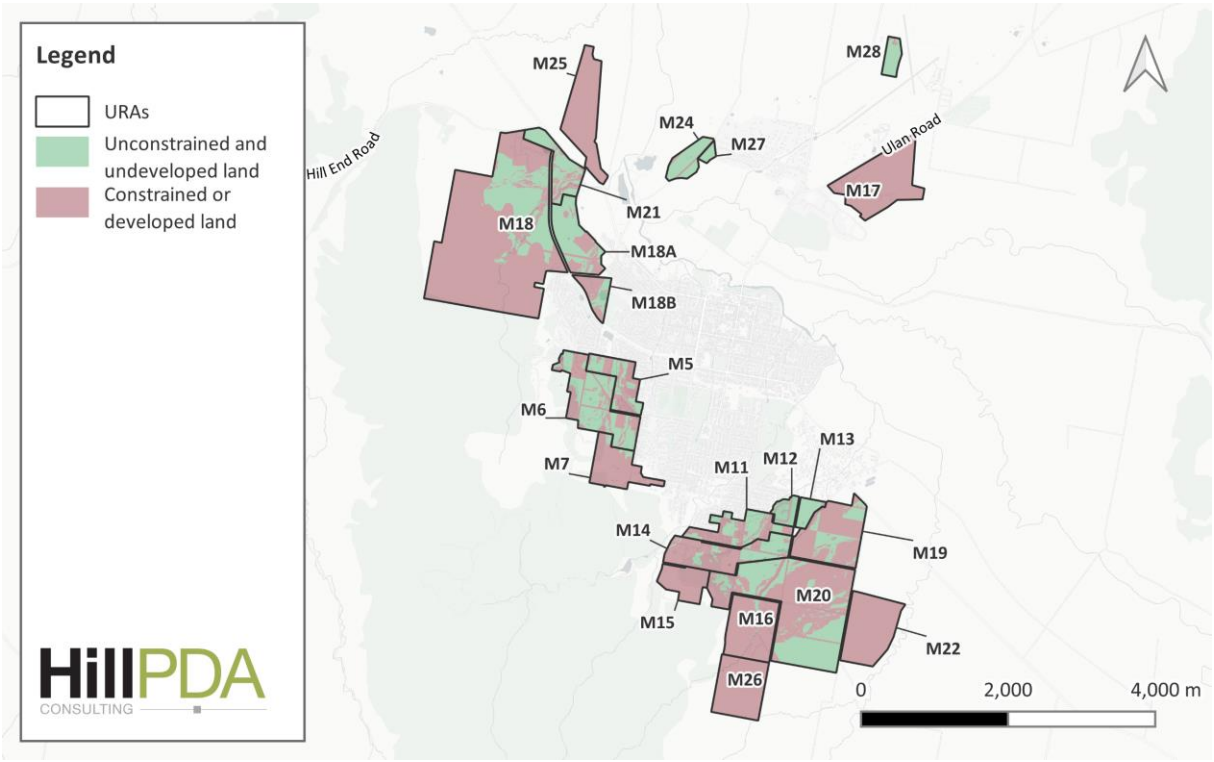
This Chapter includes an overview of the projected demand and available supply in Mudgee and Gulgong, and details the zoning information and total available area for each URA, including consideration of:

- The amount of area that is both unconstrained and not yet developed
- A per hectare yield estimate based on the analysis in section 4.5 and consideration of land fragmentation.
- Yields from approved DAs (refer to section 4.3.3).

From this, a figure for the total number of potential lots in each URA can be calculated. It is noted, however, that some of the URAs would require rezoning in order to enable the minimum lot size and subsequent yields to be achieved. This is considered in Chapter 4.0.

Application of the constraints analysis undertaken in Chapter 6.0 and removing land that has already been developed results in a significant reduction in the amount of available land in the URAs. As identified elsewhere in this strategy, Mudgee's URAs are shown to be significantly more constrained than those in Gulgong. This is shown in the following figures.

Figure 57: Remaining developable area, Mudgee URAs



Source: HillPDA

Figure 58: Remaining developable area, Gulgong

Source: HillPDA

7.1 Mudgee

Table 54 compares the forecast demand for lots/dwellings in Mudgee to 2041 and the estimated lot yield available in Mudgee's URAs. Whilst Mudgee's URAs contain a significant amounts of zoned and identified land, a large portion of this land is constrained and unsuitable for residential development. Further, many of the included URAs have been significantly developed already. Overall, of the roughly 1,250 hectares of zoned residential land in Mudgee's URAs, only around 348 hectares have residual unconstrained capacity. With the removal of the servicing constraint for land above 480 metres (refer to section 6.1), this figure increases to approximately 450 hectares of unconstrained land.

Mudgee's general residential and low density residential supply is constrained, with the supply of general residential lots (up to 1,999 square metres) projected to be exhausted inside the study period. Low density residential lots are also projected to be exhausted shortly after the study period, requiring additional supply to be identified near the end of the study period.

Mudgee's URAs appear to have sufficient supply of large lot residential s to last well beyond the study period. However, demand for these is difficult to ascertain, and therefore a degree of uncertainty applies to this finding this, which could easily be impacted by a small increase in demand. Additionally, around 300 higher density dwellings are anticipated to be demanded across the study period, outside the URAs, as infill development. If the actual level of infill demand is far lower than predicted, demand would need to be accommodated in the other (already limited in supply) categories.

Table 54: Existing lot supply capacity and projected future demand to 2041, Mudgee

Lot/dwelling type	Estimated lot yield remaining	Estimated future demand for residential lots (2021-2041)	Difference	Average lots required per year (2021-2041)	Years of supply remaining
Townhouse / villa / unit*	n/a	299	n/a	15	n/a
General residential (400sqm-1,999sqm)	1,718	1,941	-223	97	18
Low density residential(2,000sqm-1.9ha)	881	717	164	36	25
Large lot residential (2ha+)	71	30	41	2	47
Total	**2,670**	**2,987**	**-317**	**149**	**18**

Note: Values have been rounded.

* It is assumed that demand for townhouse and multi-unit development will occur as infill in and around CBD areas.

Table 55 details the zoning information and total available area for each Mudgee URA. It also shows the total estimated number of lots and their status per each URA and the number of years of supply that amount represents (based on the projected average annual demand for each lot type).

The table shows that the bulk of Mudgee's available short term residential land supply is located to the west and southwest of Mudgee's CBD, in M18 and M18A, with the remainder in M11 and M13, and a further longer term, unzoned supply in M18B. All of these areas would require some amount of work in either planning or servicing to be delivered, however. Significant supply of larger lots is also available, south and southeast of Mudgee's CBD, whilst Mudgee's current pipeline lots are located in various locations, around the fringes of Mudgee's existing urban development.

Table 55: Lot supply capacity, Mudgee URAs

URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)		Yield per hectare	Lot yield from approved DAs	Count of lots			Years of supply (approx.)
			Total	Unconstrained and undeveloped			Zoned and serviced	Zoned and unserviced	Unzoned	
M5	R1 General Residential	600sqm	32.1	13.2	5	0	66	0	0	1
	Total M5		**32.1**	**13.2**		**0**	**66**	**0**	**0**	**1**
M6	R1 General Residential	600sqm	6.1	3	6	0	0	18	0	0
	R2 Low Density Residential	2ha (Area A)	12.7	4.4	2	0	0	13	0	0
		10ha (Area A)	54.1	35.5	2	12	12	72	0	2
	Total M6		**72.9**	**42.9**		**12**	**12**	**103**	**0**	**3**
M7	R2 Low Density Residential	2ha (Area B)	37.6	2.7	1	0	0	25	0	1
	Total M7		**37.6**	**2.7**		**0**	**0**	**25**	**0**	**1**
M11	R1 General Residential	600sqm	40.5	18.3	5	0	0	91	0	1
	Total M11		**40.5**	**18.3**		**0**	**0**	**91**	**0**	**1**
M13	R1 General Residential	600sqm	9.5	9.1	8	0	0	72	0	1
	Total M13		**9.5**	**9.1**		**0**	**0**	**72**	**0**	**1**
M14	R2 Low Density Residential	10ha (Area A)	56.1	18.7	2	27	27	56	0	2
	Total M14		**56.1**	**18.7**		**27**	**27**	**56**	**0**	**2**
M15	R2 Low Density Residential	2ha (Area B)	25.3	0	2	0	0	29	0	1
	Total M15		**25.3**	**0**		**0**	**0**	**29**	**0**	**1**
M16	R2 Low Density Residential	2ha (Area B)	53.4	1.7	4	26	32	1	0	1
	Total M16		**53.4**	**1.7**		**26**	**32**	**1**	**0**	**1**
M17	R2 Low Density Residential	2ha (Area A) 10ha (Area B)	73.9	0	4	52	52	0	0	1
	Total M17		**73.9**	**0**		**52**	**52**	**0**	**0**	**1**
M18	B4 Mixed Use	450sqm	4.2	2.9	12	0	34	0	0	0
	R1 General Residential	450sqm	101.8	70.0	9	0	629	0	0	7
		600sqm	56.6	36.0	8	0	287	0	0	3
		1000sqm	6	4.6	6	0	27	0	0	0
		4000sqm	2.9	2.9	2	0	5	0	0	0
	R2 Low Density Residential	2ha	3.9	0.1	0.3	0	0	0	0	0
	R5 Large Lot Residential	4000sqm	75	45.3	2	0	90	0	0	3
	Total M18		**250.4**	**161.9**		**0**	**1,038**	**0**	**0**	**13**

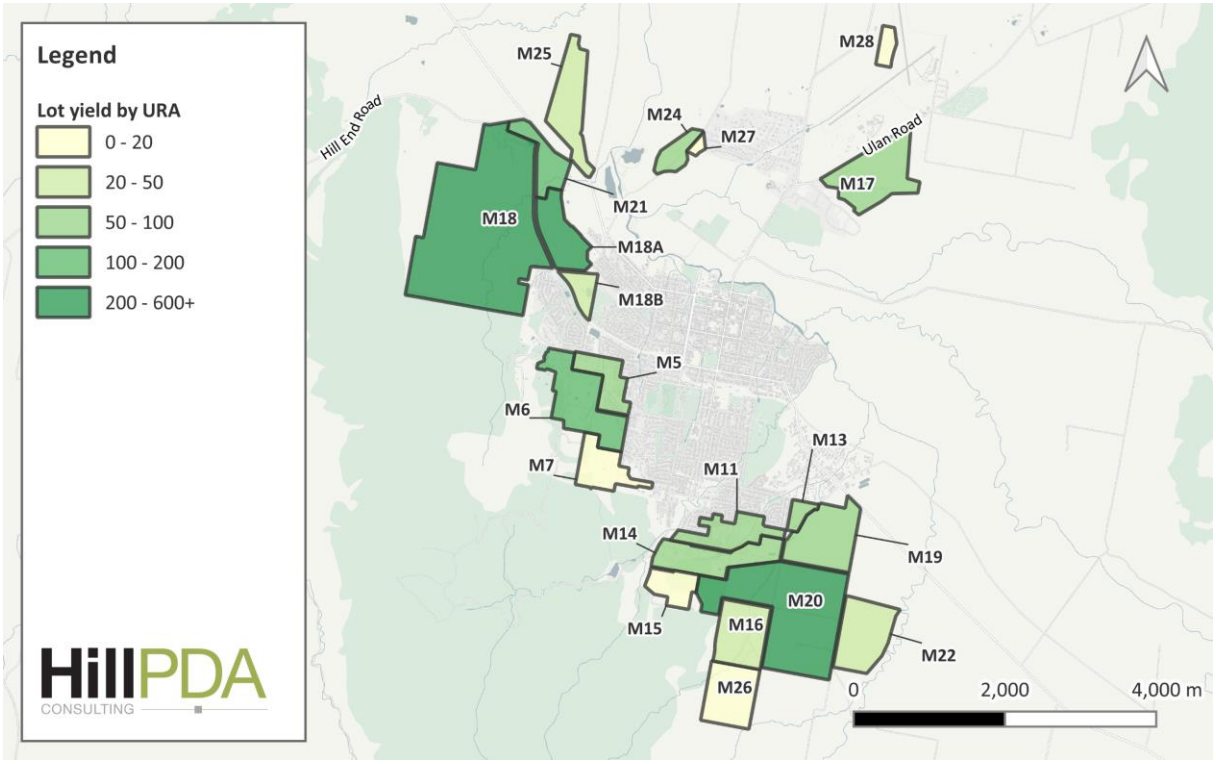
URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)		Yield per hectare	Lot yield from approved DAs	Count of lots			Years of supply (approx.)
			Total	Unconstrained and undeveloped			Zoned and serviced	Zoned and unserviced	Unzoned	
M18A	R1 General Residential	600sqm	45.2	31.0	8	22	270	0	0	3
	Total M18A		**45.2**	**31.0**		**22**	**270**	**0**	**0**	**3**
M18B	R1 General Residential	600sqm	5.5	0	8	0	0	0	0	0
	RU1 Primary Production	600sqm*	11	6.0	8	0	0	0	48	1
	Total M18B		**11**	**6.0**	**8**	**0**	**0**	**0**	**48**	**1**
M19	RU4 Primary Production Small Lots	2000sqm*	66.8	16.5	4	0	0	0	66	2
	Total M19		**66.8**	**16.5**	**4**	**0**	**0**	**0**	**66**	**2**
M20	RU1 Primary Production	2000sqm*	47.6	24.1	4	0	0	0	120	3
	RU4 Primary Production Small Lots	2000sqm*	57.9	7.6	4	0	0	0	30	1
	R5 Large Lot Residential	2000sqm*	72.3	45.1	4	0	0	3	182	5
	Total M20		**177.8**	**76.8**		**0**	**0**	**3**	**332**	**9**
M21	RU1 Primary Production	600sqm*	30.9	21.9	8	0	0	0	175	2
	Total M21		**30.9**	**21.9**		**0**	**0**	**0**	**175**	**2**
M22	R5 Large Lot Residential	5ha (Area D)	59.2	0	0.3	24	24	0	0	12
	Total M22		**59.2**	**0**		**24**	**24**	**0**	**0**	**12**
M24	RU1 Primary Production	2000sqm*	12.5	10.5	4	0	0	0	42	1
	RU4 Primary Production Small Lots	2000sqm*	5.6	5.2	4	0	0	0	20	1
	Total M24		**18.1**	**15.7**		**0**	**0**	**0**	**62**	**2**
M25	R5 Large Lot Residential	5ha (Area D)	57.5	0	0.3	25	25	0	0	13
	Total M25		**57.5**	**0**		**25**	**25**	**0**	**0**	**13**
M26	R5 Large Lot Residential	5ha (Area D)	52	0	0.3	20	20	0	0	10
	Total M26		**52**	**0**		**20**	**20**	**0**	**0**	**10**
M27	R2 Low Density Residential	2ha (Area B)	3.7	3.7	2	0	0	7	0	0
	Total M27		**3.7**	**3.7**		**0**	**0**	**7**	**0**	**0**
M28	SP1 Special Activities	2ha	10.3	9.9	0.3	0	2	0	0	1
	Total M28		**10.3**	**9.9**		**0**	**2**	**0**	**0**	**1**
Total Mudgee			**1,189**	**449.8**		**208**	**1,602**	**387**	**683**	

Note: Values have been rounded.

* Minimum lot sizes marked with an asterisk are indicative and would require rezoning to achieve the indicated yield.

Mudgee's URAs and the total yield shown in the table above are mapped in Figure 59.

Figure 59: URAs classified by lot yield, Mudgee



Source: HillPDA, MWRC

7.2 Gulgong

Table 56 compares the forecast demand for lots/dwellings in Gulgong to 2041 and the estimated lot yield in in Gulgong's URAs. Gulgong's URAs are significantly less constrained than Mudgee's URAs, and the potential supply of lots they provide far exceeds the demand anticipated over the study period. Of the approximately 585 hectares of zoned residential land within Gulgong's URAs, around 450 hectares are unconstrained and as yet undeveloped, a much higher proportion than that observed in Mudgee's URAs.

Gulgong's URAs contain a large amount of zoned land, however much of it would require rezoning and servicing to achieve the yields outlined below. Assuming land is rezoned as appropriate, both general residential and low density residential lots can adequately meet demand in Gulgong over the study period and beyond.

Additionally, Gulgong's URAs have a large surplus supply of large lot residential s in comparison to the anticipated demand. As mentioned above in relation to large lot residential s in Mudgee, a small shift in demand could rapidly change this.

Table 56: Lot supply capacity and projected future demand to 2041, Gulgong

Lot/dwelling type	Estimated lot yield remaining	Estimated future demand for residential lots (2021-2041)	Difference	Average lots required per year (2021-2041)	Years of supply remaining
General residential (400sqm-1,999sqm)	584	232	352	12	50
Low density residential(2,000sqm-1.9ha)	341	96	245	5	71
Large lot residential (2ha+)	50	3	48	<1	340
Total	**976**	**331**	**645**	**17**	**59**

Note: Values have been rounded.

Table 57 details the zoning information and total available area for each Mudgee URA. It also shows the total estimated number of lots and their status per each URA and the number of years of supply that amount represents (based on the projected average annual demand for each lot type). The table also provides an estimated yield

The bulk of lot supply in Gulgong is anticipated to be in URAs G7, G8, G9, and G13, to the northwest of Gulgong's existing centre, whilst current pipeline lots available in Gulgong are largely located in G11, immediately south of Gulgong's CBD.

Table 57: Lot supply capacity, Gulgong URAs

URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)		Yield per hectare	Lot yield from approved DAs	Count of lots			Years of supply (approx.)
			Total	Unconstrained and undeveloped			Zoned and serviced	Zoned and unserviced	Unzoned	
G1	RU1 Primary Production	2ha*	9.9	2.3	0.3	0	0	0	0	0
	R5 Large Lot Residential	2ha*	17.4	7.9	0.3	0	0	0	2	2
	Total G1		**27.8**	**10.3**		**0**	**0**	**0**	**2**	**2**
G2	R2 Low Density Residential	4000sqm*	7.5	7.2	2	0	0	3	14	3
	Total G2		**7.5**	**7.2**		**0**	**0**	**3**	**14**	**3**
G3	R5 Large Lot Residential	2000sqm*	8.1	8.1	4	0	0	0	32	6
	Total G3		**8.1**	**8.1**		**0**	**0**	**0**	**32**	**6**
G4	R5 Large Lot Residential	2000sqm*	4.0	3.8	3	0			11	3
	Total G4		**4.0**	**3.8**		**0**			**11**	**3**
G5	R2 Low Density Residential	10ha (Area A)	4.6	4.6	3	0	0	13	0	3
	R5 Large Lot Residential	12ha	43.9	42.8	0	0	0	0	0	0
	Total G5		**48.5**	**47.4**		**0**	**0**	**13**	**0**	**3**
G6	R5 Large Lot Residential	2ha-6ha*	81.9	60.0	0.3	0	5	0	18	18
	RU1 Primary Production	2ha-6ha*	77.9	59.0	0.3	0	0	0	17	17
	Total G6		**159.8**	**119.0**		**0**	**5**	**0**	**35**	**35**
G7	R5 Large Lot Residential	2000sqm*	45.4	40.1	4	0	0	4	160	32
	Total G7		**45.5**	**40.1**		**0**	**0**	**4**	**160**	**32**
G8	R5 Large Lot Residential	600sqm*	10.9	10.9	8	0	0	0	86	7
	Total G8		**10.9**	**10.9**		**0**	**0**	**0**	**86**	**7**
G9	R5 Large Lot Residential	600sqm*	36.6	36.0	8	0	0	0	287	24
	Total G9		**36.6**	**36.0**		**0**	**0**	**0**	**287**	**24**
G10	R1 General Residential	600sqm	59.7	59.1	1	0	0	59	0	5
	Total G10		**59.7**	**59.1**		**0**	**0**	**59**	**0**	**5**

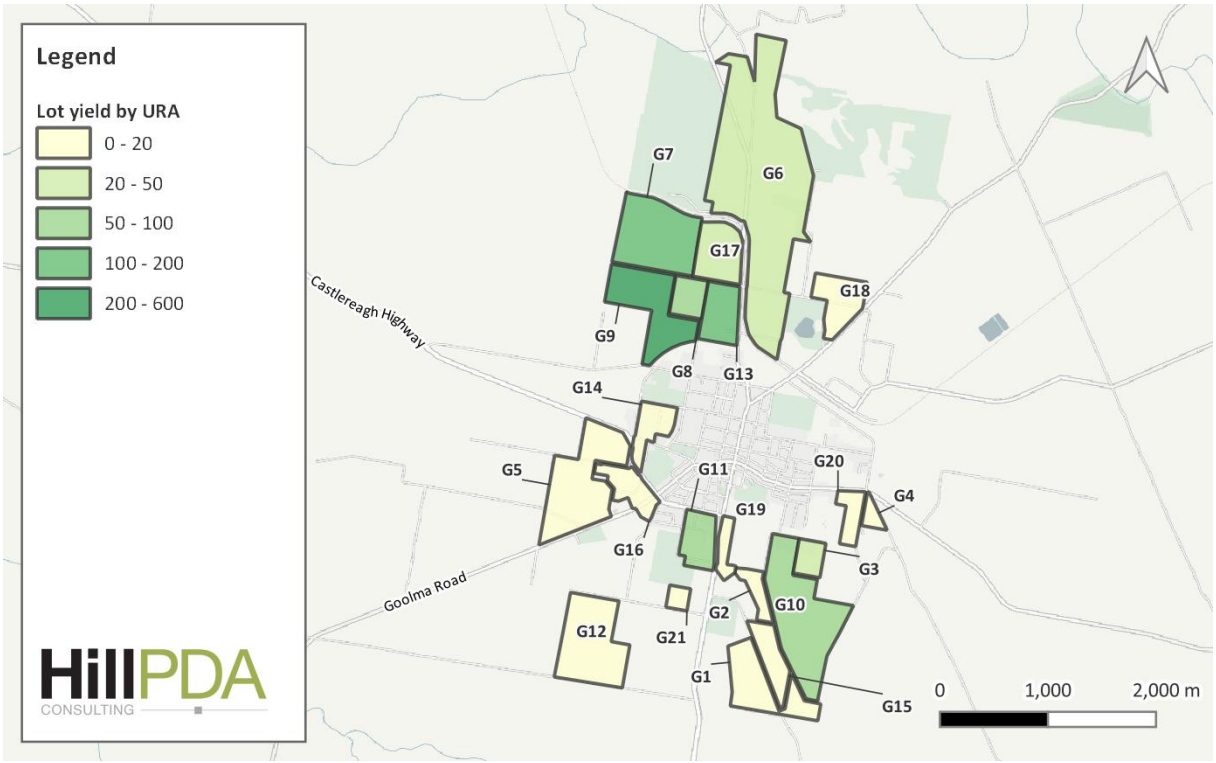
URA ID	Zone(s)	Minimum lot size(s)	Zoned area (hectares)		Yield per hectare	Lot yield from approved DAs	Count of lots			Years of supply (approx.)
			Total	Unconstrained and undeveloped			Zoned and serviced	Zoned and unserviced	Unzoned	
G11	R1 General Residential	600sqm	15.4	1.9	8	37	37	14	0	4
	Total G11		**15.4**	**1.9**		**37**	**37**	**14**	**0**	**4**
G12	R5 Large Lot Residential	2ha	43.2	23.9	0.2	0	7	0	0	7
	Total G12		**43.3**	**23.9**		**0**	**7**	**0**	**0**	**7**
G13	R1 General Residential	600sqm	17.9	15.2	6	10	10	91	0	8
	Total G13		**17.9**	**15.2**		**10**	**10**	**91**	**0**	**8**
G14	R2 Low Density Residential	2000sqm*	13.4	10.1	2	0	0	20	20	4
	Total G14		**13.4**	**10.1**		**0**	**0**	**20**	**20**	**4**
G15	R2 Low Density Residential	2ha	13.5	0.0	0.3	0	0	0	0	0
	Total G15		**13.9**	**0.0**		**0**	**0**	**0**	**0**	**0**
G16	R2 Low Density Residential	2ha (Area B)	14.2	7.1	1	0	0	7	0	1
	Total G16		**14.3**	**7.1**		**0**	**0**	**7**	**0**	**1**
G17	R2 Low Density Residential	2ha (Area B)	21.7	21.4	1.5	0	0	32	0	6
	Total G17		**21.7**	**21.4**		**0**	**0**	**32**	**0**	**6**
G18	R2 Low Density Residential	2ha (Area B)	18.9	16.3	1	0	0	16	0	3
	Total G18		**18.9**	**16.3**		**0**	**0**	**16**	**0**	**3**
G19	R2 Low Density Residential	2ha (Area B)	6.1	4.0	1	0	0	3	0	1
	Total G19		**6.7**	**4.0**		**0**	**0**	**3**	**0**	**1**
G20	R2 Low Density Residential	2ha (Area B)	5.4	3.7	1	0	3	0	0	1
	R5 Large Lot Residential	12ha (Area B)	3.6	3.5	1	0	3	0	0	1
	Total G20		**9.0**	**7.2**		**0**	**6**	**0**	**0**	**1**
G21	R5 Large Lot Residential	2ha	4.1	4.1	0.3	0	1	0	0	1
	Total G21		**4.1**	**4.1**		**0**	**1**	**0**	**0**	**1**
	Total Gulgong		**585.1**	**453.0**		**47**	**66**	**262**	**647**	

Note: Values have been rounded.

* Minimum lot sizes marked with an asterisk are indicative and would require rezoning to achieve the indicated yield.

Gulgong's URAs and the total yield shown in the table above are mapped in Figure 59.

Figure 60: URAs classified by lot yield, Gulgong



Source: HillPDA, MWRC

LAND RELEASE STRATEGY

8.0 LAND RELEASE STRATEGY

This Chapter brings together the research and findings of this and the URS 2014 and provides an updated set of principles and recommendations for land release in Mudgee and Gulgong.

8.1 Guiding principles

In alignment with the URS, this strategy implements guiding principles to inform future residential land release. These principles are outlined below.

Principle	Detail
Principle 1: Encourage higher density residential development in and near Mudgee and Gulgong town centres	Council should continue to encourage the development of higher density forms of residential development near Mudgee and Gulgong town centres. This would support housing affordability and diversity, as well as meet the identified demand for around 300 such dwellings in Mudgee over the period to 2041.
Principle 2: Rely on areas already zoned and nominated for residential development in the first instance to meet future demand	A substantial amount of land already exists in Mudgee and Gulgong that is zoned or identified residential purposes. Where possible, future growth should occur in these areas before further rezonings and strategic land identification.
Principle 3: Efficiently use of Council infrastructure	New residential development in Mudgee and Gulgong should maximise the utility of Council's current and future servicing infrastructure, particularly water and sewage. This will minimise costs to consumers, rate payers, and Council.
Principle 4: Encourage and enable dwelling and lot diversity	Housing demand in Mudgee and Gulgong is diverse and dynamic. Council must enable demand across different market segments to be delivered through encouraging different lot sizes and making zoned land available in various locations and configurations.
Principle 5: Facilitate an orderly and coordinated approach to residential growth	The location and timing of new residential release areas should be informed by accurate and timely supply and demand monitoring. Rezonings must be strategically justified, and in response to an identified demand.
Principle 6: Maintain a supply buffer of residential land	Council should maintain a supply buffer equivalent to around 5 years of demand for each category of zoned residential land (e.g. if there is demand for 100 lots per year, a buffer would consist of 500 lots of zoned supply). This will ensure that the time required to identify and prepare land ahead of demand is accounted for.
Principle 7: Protect employment and agricultural land	Demand for residential land can result in land use changing from employment or agricultural uses to residential. Employment and agriculture are important to Mudgee and Gulgong and wider region, and land suited to these purposes should be retained.
Principle 8: Avoid environmentally sensitive areas and natural hazards	Residential growth should not be facilitated in areas identified as environmentally sensitive, or areas with natural hazards or other environmental constraints.
Principle 9: Demonstrate strategic fit with Council's broader aims and objectives	Strategic planning for and development of residential land in Mudgee and Gulgong should be aligned with Council's goals. This includes those articulated in Council's strategic planning policies, as well as the goals of the local community. Alignment with existing social infrastructure, communities, and employment and services should also be considered.

8.2 Urban development program

This section includes summaries of the assessment undertaken in earlier sections. In this section, for each URA, the amount of each category of land (as per Table 58) has been assessed against the projected average demand per year, providing an estimate for the amount of time that the current supply will last. To align with Principle 6 of this strategy, this has also been assessed in five year blocks, providing an indication of when the residential land supply pipeline would need to be considered.

In this section, land within the URAs is considered as per the categories shown in Table 58.

Table 58: Land supply status

Category	Description	Supply type
Zoned and serviced land	Land that: • Is currently zoned for residential purposes • Existing minimum lot size facilitates the anticipated yield • Is either currently serviced or would require minimal and/or affordable works to provide servicing.	Short term
Zoned and unserviced land	Land that: • Is currently zoned for residential purposes • Existing minimum lot size facilitates the anticipated yield • Is not currently serviced and/or poses significant financial or other challenge to provide servicing.	Medium term
Unzoned land	Land that: • Has been identified for residential purposes but is not zoned for residential purposes, or is zoned for lower-density residential purposes.	Long term

8.2.1 General residential (400 to 1,999 square metres)

Table 59 shows demand and supply for general residential lots in Mudgee and Gulgong. Mudgee does not have an adequate supply of land to maintain a five year buffer of supply of general residential lots. Mudgee's short term supply is likely to be exhausted around the middle of the study period. Delivering much of the supply in Mudgee's zoned and serviced and zoned and unserviced land requires servicing works to occur.

Gulgong can accommodate its given general residential lot demand and maintain an appropriate supply buffer to beyond the end of the study period, provided that servicing occurs and some identified land is rezoned before the period end.

Table 59: Assessment of general residential (400sqm-1,999sqm) supply to 2041

Area	5 year demand (lots)	Total supply	Lots remaining at period ending				Additional supply required by
			2021-2026	2026-2031	2031-2036	2036-2041	
Mudgee							
Zoned and serviced	485	1,315	830	345	0	0	2029
Zoned and unserviced	485	181	181	181	0	0	2031
Unzoned	485	223	223	223	113	0	2033
Gulgong							
Zoned and serviced	58	47	0	0	0	0	2023
Zoned and unserviced	58	164	139	79	19	0	2032
Unzoned	58	373	373	373	373	320	2041+

Source: HillPDA

Recommendations

Table 60: General residential land recommendations

Recommendation		URA(s)	Timeframe	Supply impact
Topic	**Detail**			
Infill development	Consider barriers to the delivery of smaller-scale infill development as other infill sites are consumed (short and medium term). This could reduce the pressure on constrained and unserviced greenfield development. Council could consider undertaking engagement with property developers and/or community housing providers to assess options.	N/A	Short-medium term	N/A
Servicing	A significant number of zoned and unserviced lots would become developable if land above 480 metres in M18 were serviceable. Additional zoned and unserviced lots in M18A would also become developable if serviced at the same time.	M18 M18A	Short term	+440 (M18) and +250 (M18A) general residential lots shift to zoned and serviced.

Recommendation		URA(s)	Timeframe	Supply impact
Topic	Detail			
	Council has commenced water and sewer servicing modelling for Mudgee, to inform the future servicing of this area. To reflect this, the relevant land has been included as zoned and serviced.			This additional zoned and serviced supply has been included in the findings above.
Planning	Council should consider rezoning M21 to general residential in the mid-late 2020s and also consider developing a master plan ensuring lot and dwelling typology diversity can be delivered.	M21	Medium term	+175 general residential lots shift to zoned and unserviced.
Servicing	Servicing works to facilitate future development in M21 could be undertaken as part of servicing works for M18 and M18A. This would enable a significant number of general residential lots to be released and development-ready, when required. Rezoning and full servicing should be a medium term plan, though efficiencies may be achieved if servicing works can be bundled.	M21	Short term	+175 general residential lots would be able to be progressed to zoned and serviced.
Servicing	Facilitating a new residential sewer system in Mudgee's southeast would enable general residential development in M11 and M13. Investigations should be prioritised to determine costings and detailed timeframes.	M11 M13	Short term	+160 general residential lots shift to zoned and serviced.
Servicing	As a short term priority, investigate servicing costings for the URAs north of Gulgong. G13 should be prioritised for servicing to add general residential lots to Gulgong's zoned and serviced supply as soon as possible.	G13	Short term	+90 general residential lots shift to zoned and serviced.
Servicing	Efficiencies could be gained if costings or works can be undertaken for G8 and G9 as medium-long term options to add nearly 400 potential general residential lots.	G8 G9	Short term	+370 general residential lots would be able to progressed (when rezoned).
Planning	Dependent on the outcomes of servicing investigations, undertake master planning works to assess the general residential suitability of G8 and G9. If considered appropriate, rezone G8 and G9 to R1 General Residential with a 600 square metre minimum lot size.	G8 G9	Medium-long term	+370 general residential lots shift to zoned and serviced.
Planning	As a medium term opportunity, consider rezoning G14 to R1 General Residential with a 600 square metre minimum lot size. The area is extremely well-located, but highly fragmented. Changing to this zoning may allow an improved yield there through opportunistic subdivision.	G14	Medium term	+50 (approx.) general residential lots added to zoned and serviced (20 low density residential lots would be removed from supply to enable this)
Investigation area	As future investigation area, consider infill development opportunities for R1 General Residential development in the north and northeast of Gulgong (outside existing URAs), including on unused Crown land and unused industrial zoned land.	N/A	Long term	N/A
Planning Servicing	Investigate servicing constraints with regard to M6. M6 is well-located and largely unconstrained. If able to be serviced, it could be a suitable option for infill development via a future rezoning to R1 General Residential infill development.	M6	Long term	+350 (approx.) general residential lots added to zoned and serviced (approx. 100 low density residential lots would be removed from supply to enable this).

8.2.2 Low density residential(2,000 square metres to 1.9 hectares)

Table 61 shows demand and supply for low density residential lots in Mudgee and Gulgong.

Mudgee has a solid pipeline of identified low density residential land, however, much of it is dependent on being serviced, and a larger amount is as yet unzoned.

Gulgong has adequate supply of low density residential opportunities in the long term, but its short term supply is minimal.

Mudgee will require investigation areas to be considered to secure low density residential land supply around the end of the period.

Table 61: Assessment of low density residential(2,000sqm-1.9ha) supply to 2041

Area	5 year demand (lots)	Total supply	Lots remaining at period ending				Additional supply required by
			2021-2026	2026-2031	2031-2036	2036-2041	
Mudgee							
Zoned and serviced	180	218	38	0	0	0	2023
Zoned and unserviced	180	205	205	61	0	0	2027
Unzoned	180	460	460	460	305	125	2039
Gulgong							
Zoned and serviced	25	6	0	0	0	0	2023
Zoned and unserviced	25	98	74	49	24	0	2035
Unzoned	25	237	237	237	237	231	2041+

Source: HillPDA

Recommendations

Table 62: Low density residentialland recommendations

Recommendation		URA(s)	Timeframe	Supply impact
Topic	**Detail**			
Servicing	Servicing works at M18 to enable general residential development should also enable low density residential development on suitably zoned land in M18.	M18	Short-medium term	+90 large lot shift to zoned and serviced.
Servicing	Servicing investigations to facilitate general residential development in M11 and M13 could also support low density residential development in M14 and M15. This could reduce the likelihood of a large lot shortfall in Mudgee toward the middle of the study period (around 2030).	M14 M15	Medium term	+80 large lots shift to zoned and serviced.
Servicing	Alongside aforementioned general residential servicing investigations north of Gulgong, investigate opportunities to service G17 and enable low density residential development.	G17	Short term	+30 large lots shift to zoned and serviced.
Planning	Rezone the RU1 Primary Production and RU4 Primary Production Small Lots parts of M24 to R2 Low Density Residential, with a 2,000 square metre minimum lot size.	M24	Long term	+60 large lots shift to zoned and unserviced.
Planning **Servicing**	Consider undertaking master planning works for M6 to maximise and optimise the remaining yield and overcome servicing and fragmentation barriers. Early consultation works with relevant landowners should be undertaken to assess the potential benefit of this recommendation.	M6	Short-medium term	+85 large lots shift to zoned and serviced.
Planning	Consider undertaking master planning works for M19 to maximise the potential yield and ensure integration with the recent developments adjacent to the remaining land. As appropriate (pending outcome of master planning works), rezone M19 to R2 Low Density Residential with a 2,000 square metre minimum lot size.	M19	Medium term	+65 large lots shift to zoned and unserviced.
Planning **Servicing**	Consider undertaking master planning works for M20 to maximise the potential yield and assess optimal location and layout of future development to avoid constraints. As appropriate (pending outcome of master planning works), rezone M20 to R2 Low Density Residential with a 2,000 square metre minimum lot size.	M20	Medium term	+305 large lots shift to zoned and unserviced (+330 if development occurs above 520m)

Recommendation		URA(s)	Timeframe	Supply impact
Topic	Detail			
	Development at elevations above the 520m in M20 could support an increased yield, if achievable and desirable. This should also be considered.			
Investigation area	Mudgee will require **investigation areas** for low density residential development before the end of the study period. Where (and if) this should be delivered should be carefully considered in relation to land fragmentation and protection of agricultural land (refer to 8.3 for further discussion).	N/A	Long term	N/A

8.2.3 Large lot residential (2+ hectares)

Table 63 shows supply and demand for large lot residential s in Mudgee and Gulgong.

As discussed previously, the assessed level of demand for large lot residential s is very low. This is both due to it being difficult to capture, and as the ability to deliver large lot residential s in the current URAs is limited to some extent.

Overall, both Mudgee and Gulgong have an adequate supply of land suitable for large lot residential s to the end of the study period. Gulgong, however, would require land to be rezoned early in the study period in order to maintain an appropriate supply buffer.

Table 63: Assessment of large lot residential s (2ha+) supply to 2041

Area	5 year demand (lots)	Total supply	Lots remaining at period ending				Additional supply required by
			2021-2026	2026-2031	2031-2036	2036-2041	
Mudgee							
Zoned and serviced	10	71	61	51	41	31	2041+
Zoned and unserviced	10	0	0	0	0	0	2041+
Unzoned	10	0	0	0	0	0	2041+
Gulgong							
Zoned and serviced	5	13	8	3	0	0	2031
Zoned and unserviced	5	0	0	0	0	0	2023
Unzoned	5	37	37	37	34	29	2041+

Source: HillPDA

Recommendations

Table 64: Large lot residential land recommendations

Recommendation		URA(s)	Timeframe	Supply impact
Topic	Detail			
Monitoring	For the reasons listed above, demand for large lot residential s may not be sufficiently captured in this strategy. Council should carefully monitor and assess this situation on an ongoing basis to inform the next URS review.	N/A	Medium-long term	N/A
Planning	Early in the study period, Council will need to rezone land for large lot residential s in Gulgong. The vast majority of large lot residential supply is located in G6. As a priority, Council should reduce the minimum lot size in the R5 Low density residential component of G6 to 2 hectares. Dependent on uptake, the RU1 Primary Production component of G6 could then be rezoned to align with the above. This is unlikely to be required by the end of the study period.	G6	Short-medium term	+13 large lot residential s shift to zoned and serviced (R5 area). +17 large lot residential s shift to zoned and serviced (RU1 area).
Planning	As discussed previously, Council should carefully consider the merit of rezoning agricultural land to meet large lot residential supply. This matter could be revisited by Council in the future, informed by monitoring of the situation.	N/A	Long term	N/A

8.3 Other considerations and directions for further consideration

In addition to the land supply matters shown above, this section considers strategic planning matters that are less directly related to the URAs.

Action	Detail	Timeframe
Prepare updated Development Servicing Plans	Prepare updated DSPs that investigate the feasibility and cost of servicing residential development in relation to: • Servicing land above the 480 metre contour (M18 and M18A). • Servicing land north of Gulgong (G13, and G8 and G9). • Constructing a separate sewer catchment in Mudgee's southeast to facilitate development of remaining URAs (M11 and M13).	Short term
Land and Housing Supply Monitor	Implement a simple Land and Housing Supply Monitor that can be updated to track the progress of development against the URAs.	Short term
Complete a new Development Control Plan for Caerleon	Caerleon (M18) has the most land supply available for residential development, however, works are required to facilitate it. Council should ensure that current and future residents are able to benefit from this, including through opportunities to diversity the MWR LGA's housing stock. Undertake a new DCP for Caerleon that focuses on: • Housing diversity • Parking and street widths • Social infrastructure • Active transport. Also consider the benefits of undertaking a Place Plan for Caerleon.	Short-medium term
Infill and development engagement program	Investigate the barriers to delivering infill development in Mudgee and Gulgong. Are there opportunities that are not being considered? Consider whether Council or government owned land could be provided for housing delivery to improve feasibility dead-ends. Develop application pathway guidance for infill development and identify potentially capable sites that may support increased density and infill on smaller sites as the supply of other infill URA land is consumed Undertake ongoing (ad hoc and/or formal) engagement with local property developers and real estate agents as appropriate to: • Identify any planning process issues that could be addressed, or whether collateral could be produced to improve understanding and ease of use of the planning system. • Promote Council's urban release goals and priorities and increase awareness of the URS 2023. • Consider options and appropriateness of Council collaborating with local developer on a site to support land supply.	Short medium term
Partner with a community housing provider	Investigate opportunities to secure housing delivery through partnerships with CHPs.	Medium term
Temporary worker accommodation	Engage with NSW Government and project proponents to investigate opportunities to secure housing outcomes for Mudgee and Gulgong and create a 'social legacy' from employment-generating projects in and around the MWR LGA. Opportunities could include: • Offering land for TWA development in exchange for housing provision or future residential uses. • Partnering with project proponents to develop market housing for operational workers.	Short-medium term.
Engage with NSW Government	Participate in ongoing program of engagement with NSW Government (various departments) and encourage collaborative relationships. In particular: • Increased development of social and/or affordable housing in the LGA and consideration of potentially suitable sites, including on any Council or NSW Government owned land.	Short-medium term

Action	Detail	Timeframe
	• Engage with NSW Government regarding opportunities to receive funding to assist Council in expanding or upgrading servicing infrastructure. • Consider whether opportunities exist to undertake joint development of residential land in Mudgee or Gulgong and/or to receive funding to develop residential land directly. • Participate in ongoing discussions with NSW Government and REZ project proponents about employment-generating projects, particularly with regard to opportunities for leveraging project workforce presence to deliver housing supply.	
Strategic balance policy position	The MWR LGA is heavily biased toward Mudgee, with the balance of population between Mudgee and Gulgong being around 80:20, and even more if contrasted with that of Rylstone or Kandos. In combination with the array of constraints to residential development identified in this strategy, it may be of some benefit to consider how this situation could be altered. A (more) polycentric model, where residents can live and access services and facilities in places such as Caerleon, Bombira, and Gulgong could reduce pressure to deliver housing and services in Mudgee and be more sustainable in the long term. Additionally, well-located, unconstrained, or infill sites have largely been consumed in Mudgee, which provides additional impetus to consider alternatives. A future strategy could: • Consider the potential benefits and risks of a shift away from Mudgee, and what mechanisms Council could utilise to effect change. • Consider accelerating rezoning in G8 and G9 to R1 General Residential; collaborate with appropriate Council staff to scope servicing works required to facilitate development in this area; and/or undertake master planning works for future development of these areas.	Long term
Urban development boundary	The MWR LGA is surrounded by fertile agricultural land and environmental amenity. The current development pattern appears to be sustainable in the short-medium term, however, (at least in Mudgee), continued expansion of Mudgee through low density residential development and large lot residential s could negatively impact agriculture and the environment through land fragmentation and degradation. Toward the end of the study period, additional low density residential land in Mudgee will need to be identified as an investigation area. A future strategy could: • Consider whether Council and the community desire to continue meeting this demand. • Identify an urban development boundary for Mudgee to limit future marginal residential development.	Long term

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9.0 REFERENCES

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