

Riverstone East (Stage 3)

Demographic and Housing Analysis

Hatch Roberts Day on
behalf of NSW DPE

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Document Control

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Executive Summary

BACKGROUND

Riverstone East is one of the remaining undeveloped precincts within Sydney's North West Growth Area (NWGA). The precinct is being delivered in three stages - Stage 1 and 2 were rezoned and finalised in 2016. The Department of Planning and Environment (DPE) is leading investigations into Stage 3 in collaboration with Blacktown City Council (Council). These investigations inform the Indicative Layout Plan (ILP) and planning proposal.

Hatch Roberts Day (Hatch) are the lead urban design consultant and have engaged Atlas Economics (Atlas) to carry out a Demographics and Housing Market Analysis (the Study). The purpose of this Study is to:

- Explore the potential future demographic profile of the Study Area.
- Identify the housing mix needed to satisfy future demand.
- Estimate the likely pace of development.
- Provide recommendations for incorporation into the final ILP and planning proposal.

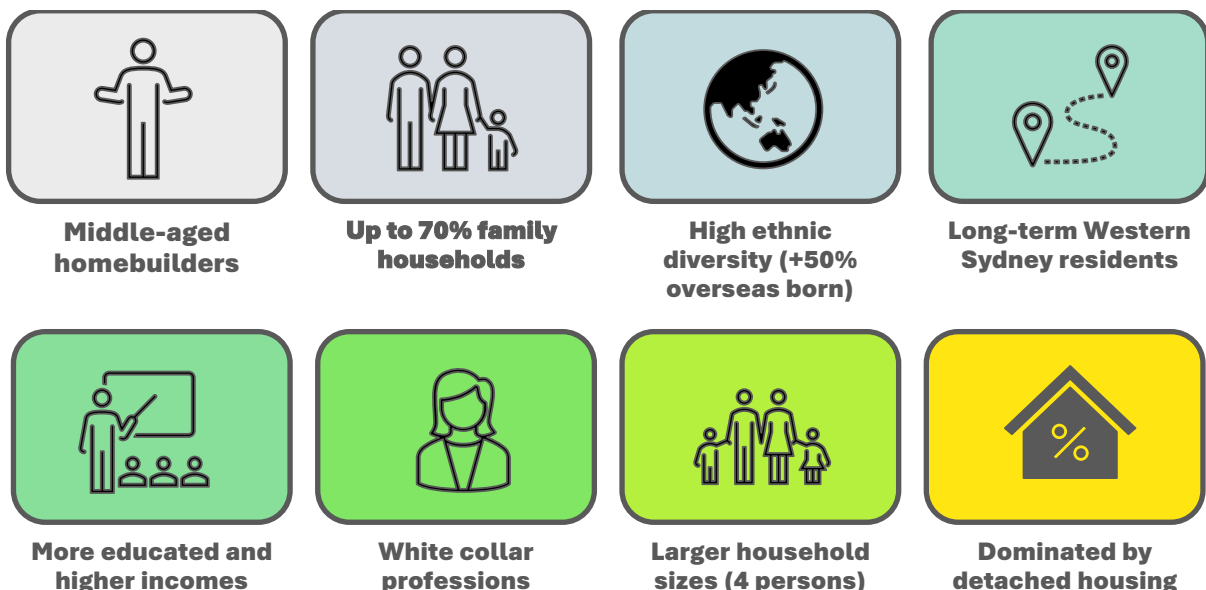
DEMOGRAPHIC PROFILE

Understanding the current and historical socio-demographic profile of residents in the NWGA is critical to planning for future housing demand in the Study Area. Of particular relevance is the profile of residents in neighbouring precincts where a significant amount of new residential development has occurred. Given their comparability, they provide a useful barometer for the type of residents which could be accommodated in Riverstone East (Stage 3).

The key findings from this analysis shows that the Comparable Precincts are:

- Characterised by **middle-aged residents**, with over 50% aged between 25 and 49 years old.
- **Family households**, with couple families with children accounting for up to 70% of households in some precincts.
- **Ethnically diverse** with over 50% residents born overseas, notably from India, the Philippines and Sri Lanka.
- **'Western Sydney' locals**, with most new residents previously living elsewhere in Western Sydney.
- **Increasingly educated and affluent**, with education and household income levels higher than Blacktown LGA average.
- **Larger households**, with average household sizes range from 3.2 persons to 3.5 persons per household.

Figure ES-1: : Common Socio-Demographic Characteristics, Comparable Precincts



Source: ABS (2021)/Atlas Economics

HOUSING DEMAND

A comprehensive assessment of the NWGA housing market concluded that:

- **Demand for new housing remains strong**

Market activity across the NWGA has been robust over the 2021-2023 period. Whilst a softening in market sentiment has been observed since the initial commencement of interest rate rises in May 2022, this has been transitional. Migration-fuelled population growth has continued to stimulate market activity over the course of 2023.

- **Younger couples and growing families continue to drive demand**

Demand from younger couples and growing families seeking low-density housing options to raise their family are the key buyer cohort in the NWGA. Many of these buyers grew up in Western Sydney and are seeking housing proximate their extended families, or have recently moved from overseas.

- **There is a continued shift towards smaller housing formats**

The housing affordability crisis, limited new housing supply and changing lifestyle preferences are continuing to drive interest towards more denser forms of housing product across the NWGA.

Whilst detached housing remains the most popular housing typology, the market is continuing to demand smaller lot sizes (250sqm-400sqm) in exchange for more affordable housing options. Demand for larger lots exists, though represent a significantly smaller buyer pool.

The market for medium-density housing typologies (e.g. townhouses) is well established across the NWGA, particularly when delivered on a single lot that can be Torrens titled. Some of the first apartment projects have begun to emerge over in recent years, though their market acceptance is less mature compared to medium-density housing formats.

- **The outlook for smaller housing formats is bullish**

Looking forward, the outlook for Greater Sydney's greenfield market remains largely tied to further interest rate escalations. Higher borrowing costs and falls in consumer confidence will expectedly be a drag on the market.

Whilst on 'the face of it' this could be considered positive from a housing affordability, it is important to recognise:

- The 'expensive' end of Sydney's housing market is more price responsive in market cycles, whereas the lower end of the market tends to fluctuate at lesser degrees of variance.
- Whilst overall loan values may be lower, servicing costs can be similar during periods of rising interest rates.
- Greater Sydney remains the second most unaffordable capital city in the developed world (Demographia, 2022).

These pressures will continue to present the opportunity for more affordable housing typologies in greenfield locations.

PREFERRED ILP SCENARIO

Three different ILP scenarios were prepared by HRD. These scenarios were analysed and assessed by the broader consultant and stakeholder team during the EbD workshop. This feedback was contextualised into a Preferred ILP Scenario which was further developed post-EbD by HRD in consultation with key stakeholders.

The Preferred ILP comprises a total gross developable area of ~125.1ha with a net development area (NDA) of ~88.5ha. A mix of low, medium and high-density housing typologies are proposed, which could deliver 3,147 dwellings.

It is understood that an aspirational Affordable Housing target of 10% is being sought in the Study Area.

Table ES-1: Densities and Dwelling Yields, Preferred ILP

Density Band (dw/ha)	Lot Sizes (sqm)	Hypothetical Mix	Developable Area (ha)	Yield (Lots)
Low (14-25)	400-700	20%	17.7	334
Medium (25-35)	300-400	50%	44.3	1,264
High (40-100)	100-250	30%	26.6	1,549
Total	100-700	100%	88.5	3,147

Source: Atlas Economics/HRD

FUTURE POPULATION

Socio-demographic analysis has demonstrated that recently established precincts in the NWGA generally accommodate larger households compared to more established areas. This reflects both the type of housing delivered in these precincts, as well as the types of households they attract. This is demonstrated in Schedule 1.

DPE projections for the NWGA suggest a declining household occupancy size over the coming decades to 2041, falling from 3.2 persons per household in 2021 to 2.8 persons per household in 2041 (DPE, 2022). Whilst this is considered appropriate for the more established parts of the NWGA, it is not expected to be reflective of the Precinct which will primarily attract larger households as it is progressively developed over the coming decades.

Based on previous experience and industry standards, the following household occupancy rates are considered appropriate:

- Larger lots (detached dwellings) - 3.8 persons.
- Traditional and smaller lots (detached dwellings) - 3.5 persons.
- Compact lots (semi-detached and attached dwellings) – 2.9 persons.
- High-density typologies (flats, units, apartments) - 2.5 persons.

Table ES.1 applies the adopted household occupancy rates to the proposed dwelling yields to estimate resident population.

Table ES.1: Population Estimates, Preferred ILP

Typology	Potential Dwellings	Household Occupancy	Population
Large lots (detached)	63	3.8	239.4
Large lots (detached)	74	3.5	259
Traditional lots (detached)	197	3.5	689.5
Small lots (semi-detached, detached)	1,264	3.5	4424
Compact lots (semi-detached, attached)	1,106	2.9	3207.4
Apartments	443	2.5	1107.5
Total	3,147	3.15	9,927

Source: Atlas

Application of these occupancy rates results in a population of nearly 10,000 residents, averaging to 3.15 persons per dwelling. This is consistent with occupancy rates of 3.2 persons per dwelling seen in recently developed parts of the NWGA.

Potential for Additional Population Growth

As outlined in section 3.1, there is potential for additional development beyond that envisaged in the Preferred ILP to proceed through the existing provisions of the Central River City SEPP and Housing SEPP.

High-level analysis by HRD indicates that if all these potential opportunities were taken up, a total dwelling yield of **circa 3,600 dwellings** could result. This would be approximately 453 more dwellings compared to the Preferred ILP.

It is difficult to estimate the breakdown of housing typologies which would be delivered under these SEPPs. For the purposes of estimating a total potential population which could be delivered in the Precinct, it has been assumed that 80% of the 453 additional dwellings would be duplexes, with the remaining 20% being secondary dwellings. Based on this high-level estimate, a total population of 11,159 residents would result. This is summarised in **Table 3.4**.

Table ES.2: Population Estimates, Maximum Scenario

Typology	Potential Dwellings	Household Occupancy	Population
Additional Dwellings	459		1,232
Duplexes @ 80%	362	2.9	1,051
Secondary dwellings @ 20%	91	2.0	181
Preferred ILP	3,147	3.15	9,927
Total (Maximum)	3,600	3.10	11,159

Source: Atlas Economics

POTENTIAL TAKE-UP OF HOUSING

In a greenfield environment such as the Study Area, the issue of development feasibility is more a question of ‘when’ than ‘if’. When development will be feasible, and the pace of development (or take-up), is dependent on the depth of market demand for different housing typologies.

To estimate the potential take-up of housing in the Precinct, consideration to the Study Area’s unique characteristics and historical take-up in other greenfield precincts has been made. Three take-up scenarios were developed:

- **Base Scenario**

The Base Scenario is the primary take-up scenario. The Base Scenario estimates that the dwelling capacity of 3,147 dwellings will be fully absorbed by 2037, reflecting a take-up rate of ~262 dwellings per annum over 2026-2037.

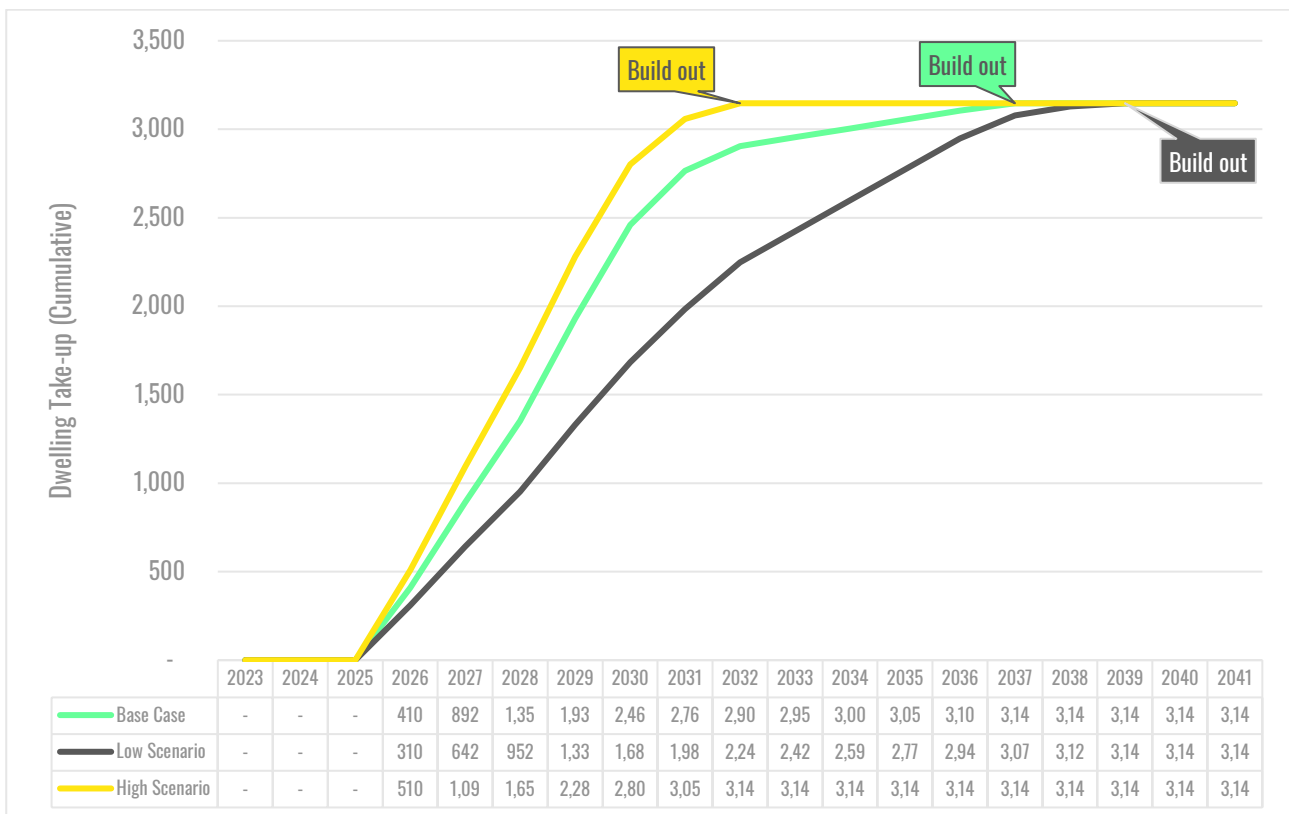
- **Low Scenario**

The Low Scenario is predicated on softer take-up of medium and high-density housing typologies. The dwelling capacity of 3,147 dwellings would be absorbed by 2039, analysing to an average take-up rate of ~225 dwellings.

- **High Scenario**

The High Scenario is based on a more opportunistic outlook for take-up of housing across the Study Area. Capacity would be fully absorbed by 2032 and reflects a take-up rate of 450 dwellings over 2026-2032.

Figure ES-2: : Take-up Estimates, Preferred ILP



Source: Atlas Economics

The intention of these take-up scenarios is to assist in infrastructure planning and staging for the Precinct.

CONCLUSION AND RECOMMENDATIONS

Housing Mix

The *North West Priority Growth Area Land Use and Infrastructure Implementation Plan 2017* (LUIP) originally identified the Study Area as having potential capacity for circa 2,300 dwellings. Market conditions have evolved rapidly since completion of the LUIP. In 2016, the median lot price and size across Sydney's greenfield precincts was \$465,000 and 396sqm respectively. By 2022, the lot price was \$716,000 – representing a 54% increase.

Whilst detached housing remains the most popular housing format across Sydney's growth areas, this deteriorating level of housing affordability, coupled with a genuine shift in lifestyle preferences from many buyers, has seen demand for smaller lots (where detached housing can still be delivered) continue to build momentum.

It is clear that a tipping point towards smaller housing formats is approaching. Market demand for medium-density housing is deepening as the capacity to pay for detached housing product is reaching its limits. New medium-density typologies such as townhouses and terraces are experiencing swift take-up across the NWGA. Demand for higher-density typologies is also growing (particularly when co-delivered within mixed-use centres and public transport), though is less mature.

The Preferred ILP aligns with current and future market demand, with a focus on smaller lots and medium-density typologies.

Maximum Dwelling Control

There is potential for additional development beyond that envisaged in the Preferred ILP to occur through the existing provisions of the Central River City SEPP and Housing SEPP, which enable some forms of medium-density housing in low density areas (subject to certain requirements being met).

High-level analysis by HRD indicates that if all these potential opportunities were taken up, a total dwelling yield of circa 3,600 dwellings could result. Population estimates suggest this would result in a total population of 11,159 residents.

To provide further certainty on the total quantum of new housing which could be developed in the precinct, a **maximum dwelling cap control** could be considered to avoid this maximum theoretical dwelling yield of 3,600 dwellings.

Recommendations

The Study recommends a broad set of actions is needed to ensure the successful delivery of housing across the Precinct.

Table ES-2: Summary of Housing Recommendations, Riverstone East Stage 3

1. Housing and Lot Size Mix

- Adopt the housing, density and lot size mixes proposed in the Preferred ILP.

2. Infrastructure Delivery

- Initiate costing of different infrastructure servicing needed to facilitate residential development.
- Finalise a Development Contributions Framework.

3. Affordable Housing

- In accordance with the aspirational 10% Affordable Housing target, initiate the development of an Affordable Housing Contributions Scheme.
- Prepare the Scheme in unison with a Development Contributions Framework.

4. Planning Controls

- Adopt similar land use zones to those already adopted in Riverstone East Stage 1-2.
- Implement a maximum dwelling yield control to ensure future development does not exceed the maximum dwelling yield of 3,600 dwellings.

Source: Atlas Economics

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1. Introduction

1.1 Background

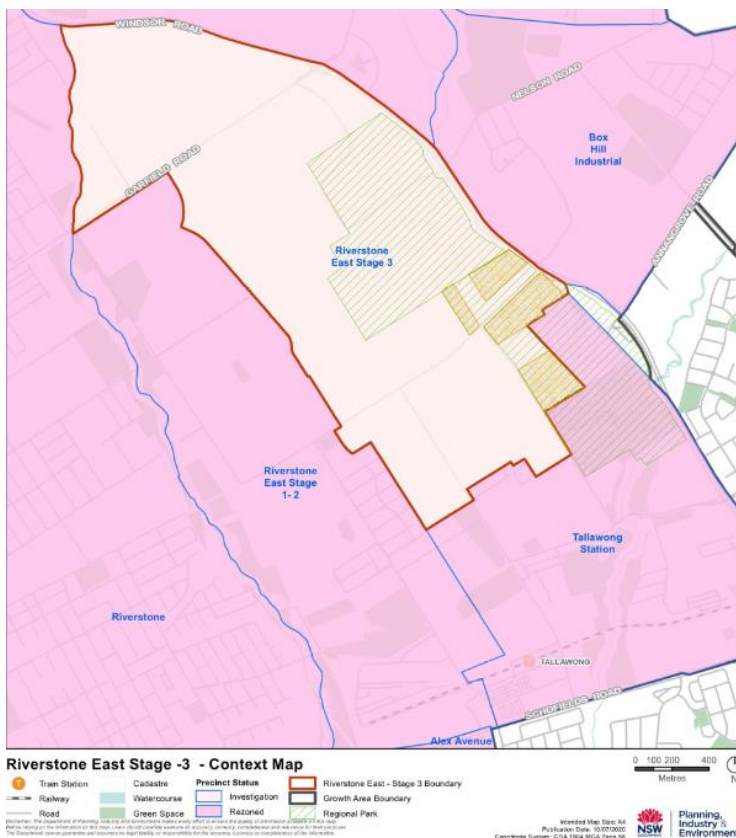
Riverstone East is one of the remaining undeveloped precincts within Sydney's North West Growth Area (NWGA). Falling within the Blacktown local government area (LGA), the Riverstone East Precinct (inclusive of Stages 1-3) measures ~650ha and is bounded by Schofields Road (south), Windsor Road (northeast), Junction Road and First Ponds Creek (west).

The Riverstone East precinct is being delivered in three stages - Stage 1 and 2 were rezoned and finalised in 2016. The Department of Planning and Environment (DPE) is leading investigations into Stage 3 in collaboration with Blacktown City Council (Council). These investigations inform the Indicative Layout Plan (ILP) and planning proposal.

The Study Area

The Riverstone East Precinct Stage 3 (referred to as 'the Precinct' or 'Study Area' interchangeably) is generally bound by Windsor Road, First Ponds Creek, the Rouse Hill Regional Park and lands within the Tallawong Station Precinct and Riverstone East Stage 1 and 2. The Precinct comprises a total area of ~174ha (when excluding Rouse Hill Regional Park).

Figure 1.1: Riverstone East Stage 3



Source: DPE

Various packages of technical studies are underway to support the precinct planning process for the Precinct. These include:

- Package A - urban design, local and regional open space, demographics and housing market analysis and social infrastructure.
- Package B - infrastructure servicing, transport, water cycle management and flood risk management.
- Package C - biodiversity and riparian, bushfire, contamination, Indigenous and non-Indigenous heritage, noise, vibration and odour

Hatch Roberts Day (HRD) are the lead consultant for Package A and have engaged Atlas Economics (Atlas) to carry out a Demographics and Housing Market Analysis (**the Study**).

1.2 Scope and Approach

To assist in the preparation of the ILP and planning proposal, Atlas' advice is provided in several parts:

- **Part 1: Draft Demographics and Housing Market Analysis Study** (the draft Study) which carried out baseline demographic and market analysis to understand the drivers of demand and supply of housing in the NWGA and potential role of Riverstone East in meeting future demand. The findings of this draft Study informed the development of ILP scenarios at the Enquiry by Design workshop.
- **Part 2: Attendance at the Enquiry by Design Workshop** in May 2023 with the wider Riverstone East consultant and stakeholder team which resulted in the preparation of various ILP scenarios and selection of a Preferred Scenario.
- **Part 3: Final Demographics and Housing Market Analysis Study (this Study)** which builds upon earlier findings, forecasts likely development take-up of the Preferred Scenario and makes recommendations for required interventions (e.g. planning controls, staging of services/ utility infrastructure) to ensure successful delivery.

Approach to Final Demographics and Housing Market Analysis Study

The purpose of this Study is to explore the potential future demographic profile of the Study Area, identify the housing mix needed to satisfy future demand, estimate the likely pace of development and provide recommendations for incorporation into the final ILP and planning proposal.

Accordingly, this Study:

- Summarises earlier baseline findings prepared, including:
 - Socio-demographic analysis and findings which provide a gauge on the potential size and characteristics of the future resident population in the Study Area.
 - Trends and market dynamics influencing the supply and demand of housing in the NWGA.
 - Population and dwelling projections and forecasts prepared for the NWGA.
- Reviews the yields and housing mix proposed in the Preferred ILP Scenario and comments on their commercial viability.
- Estimates the likely rate of development take-up in the Precinct over the coming decades to 2041, informed by the characteristics of the Precinct and observations of patterns of supply in other comparable greenfield precincts.
- Make recommendations for the desired delivery of housing, include staging of services/ utility infrastructure, affordable housing, planning controls and other interventions as appropriate.

1.3 Assumptions and Limitations

Atlas acknowledges several assumptions and limitations associated with the Study.

- The macro-economic outlook is currently subject to significant uncertainty, with COVID-19, labour shortages, inflation, and impacts from the war in the Ukraine. Inflationary pressure, particularly in the residential construction sector, is having a significant impact on the cost of construction and overall supply of new housing across NSW.
- Population projections (by DPE) were released in early 2022 (post-COVID-19), prior to release of census 2021 data.
- Third party data sources (ABS, DPE, .id, PriceFinder, etc) are assumed to be correct and have not been verified.

Notwithstanding the limitations of the Study, the findings and observations drawn are instructive in informing the nature of housing demand and the likely demographic characteristics of future residents.

2. Summary of Baseline Findings

2.1 Demographic Profile

Understanding the current and historical socio-demographic profile of residents in the NWGA is critical to planning for future housing demand in the Study Area.

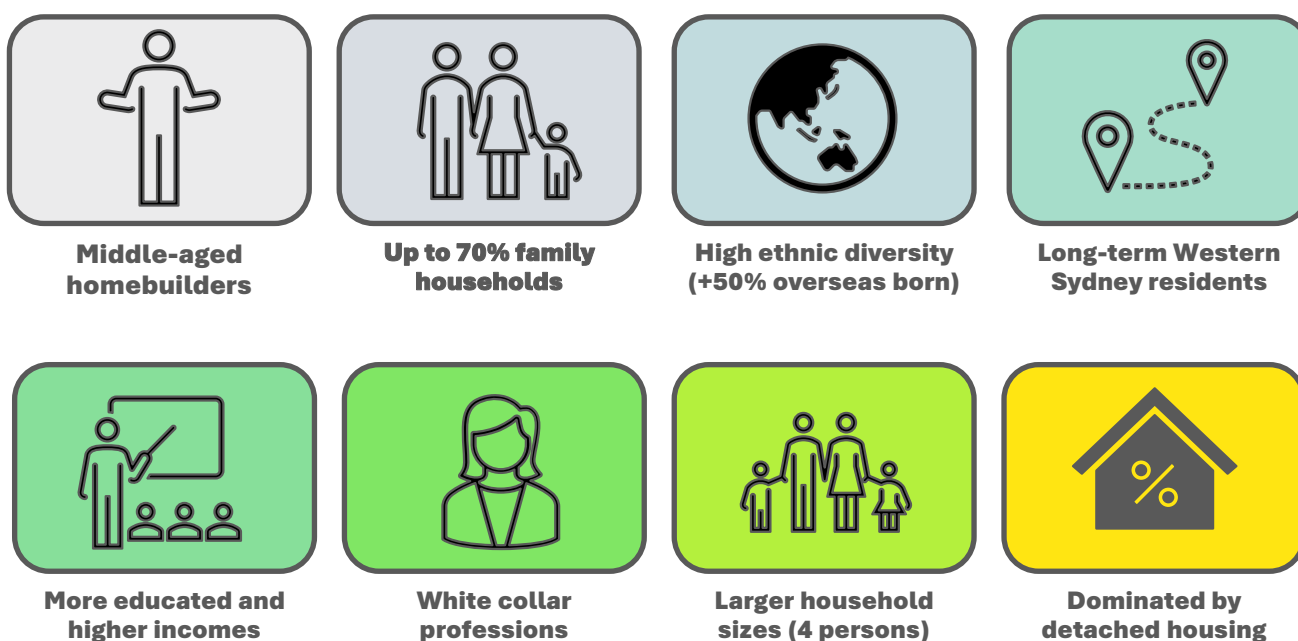
Of particular relevance is the profile of residents in neighbouring precincts (i.e., Schofields, Marsden Park, Riverstone, Riverstone East, The Ponds, Tallawong) where a significant amount of new residential development has occurred over the past decade. Given their comparability to the Study Area, they provide a useful barometer for the type of residents which could be accommodated in Riverstone East (Stage 3).

The Study carried out detailed socio-demographic profiling of these 'Comparable Precincts', which is included at SCHEDULE 1. The key findings from this analysis shows that the Comparable Precincts are:

- Characterised by **middle-aged residents**, with **over 50%** aged **between 25 and 49 years** old.
- **Family households**, with couple families with children accounting for up to 70% of households in some precincts.
- **Ethnically diverse** with over 50% residents born overseas, notably from India, the Philippines and Sri Lanka.
- **'Western Sydney' locals**, with ~85% of the residents recorded in 2021 having also resided in the Blacktown, Parramatta, Cumberland, Penrith and The Hills LGAs in 2016.
- **Increasingly educated and affluent**, with education and household income levels higher than Blacktown LGA average.
- Mainly **professionals, clerical and administrative workers and managers**, representing ~60% of local occupations.
- **Larger households**, with the most common household size being 4 persons whilst average household sizes range from 3.2 persons to 3.5 persons per household.
- **Reside in low-density housing formats**, with most households (irrespective of household size) living in dwellings of 3-4 bedrooms.

Figure 2.1 illustrates some of the key socio-demographic characteristics of the Comparable Precincts as at the 2021 Census.

Figure 2.1: Common Socio-Demographic Characteristics, Comparable Precincts



Source: ABS (2021)/Atlas Economics

2.2 Population Projections

The Study reviewed two sets of population estimates to understand potential demand for housing in the NWGA – the NSW DPE’s Population Projections (2022) and .id/Blacktown City Council’s Population and Dwelling Forecasts (2023).

DPE’s population projections are a potential scenario based on a variety of demographic assumptions. Projections differ from forecasts, which are intended to reflect an actual expectation of future activity.

There is a significant difference in expected population growth across the NWGA between both sets of estimates.

- **NSW DPE’s Population Projections (2022)**

The NSW DPE Population Projections expected the NWGA to reach a resident population of ~115,000 by 2041. This would represent an increase of ~74,500 residents over the 2022-2041 period. This would require an additional ~30,000 dwellings over 2021-2041, equating to an average annual dwelling requirement of some 1,500 dwellings.

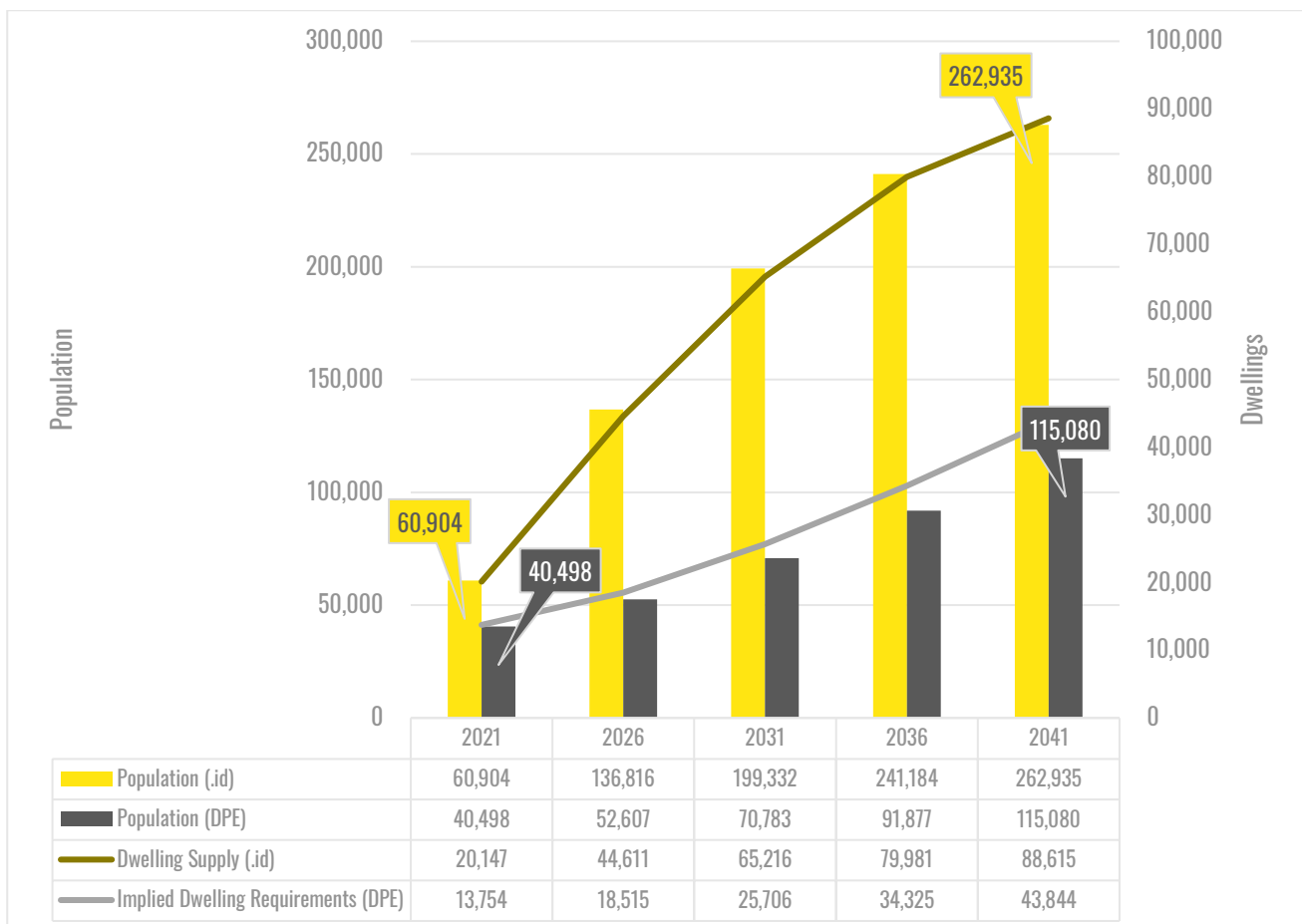
- **.id Population and Dwelling Forecasts (2023)**

Under the .id forecasts, the Catchment Area is expected to record **significantly** higher population growth than that anticipated in the DPE projections. By 2041, the Catchment Area is expected to reach a total population of almost 263,000 residents – some 147,000 more residents than anticipated in the DPE projections.

The .id forecasts suggest that an additional ~68,400 dwellings will be delivered across the Catchment Area over 2021-2041. This is some 38,000 more dwellings than projected to be required in the DPE projections.

Figure 2.2 shows the difference in expected population and dwellings in the Catchment Area between the .id forecasts and DPE projections.

Figure 2.2: Population Forecasts (.id) v Population Projections (DPE), Catchment Area



Source: DPE (2022)/ .id (2023)

2.3 Nature of Housing Demand

The Study carried out a comprehensive assessment of the NWGA housing market.

- **Demand for new housing remains strong.**

Market activity across the NWGA has been robust over the 2021-2023 period. Whilst a softening in market sentiment has been observed since the initial commencement of interest rate rises in May 2022, this has been transitional. Migration-fuelled population growth has continued to stimulate market activity over the course of 2023.

- **Younger couples and growing families continue to drive demand.**

Demand from younger couples and growing families seeking housing to raise their family are the key buyer cohort in the NWGA. Many of these buyers grew up in Western Sydney and are seeking housing proximate their extended families, or have recently moved from overseas and are seeking housing options close to existing migrant communities.

- **There is a continued shift towards smaller housing formats.**

The housing affordability crisis, limited new housing supply and changing lifestyle preferences are continuing to drive interest towards more denser forms of housing product across the NWGA.

Whilst detached housing remains the most popular housing typology, the market is continuing to demand smaller lot sizes (250sqm-400sqm) in exchange for more affordable housing options.

Demand for larger lots exists, though represent a significantly smaller buyer pool given the price points for larger blocks (i.e. excess of \$1 million for a vacant 600sqm block).

The market for medium-density housing typologies (e.g. townhouses) is well established across the NWGA, particularly when delivered on a single lot that can be Torrens titled. Some of the first apartment projects have begun to emerge over in recent years, though their market acceptance is less mature compared to medium-density housing formats.

- **The outlook for smaller housing formats is bullish.**

Looking forward, the outlook for Greater Sydney's greenfield market remains largely tied to further interest rate escalations. Higher borrowing costs and falls in consumer confidence will expectedly be a drag on the market.

Whilst on 'the face of it' this could be considered positive from the perspective of improving overall housing affordability, it is important to recognise:

- The 'expensive' end of Sydney's housing market is more price responsive in market cycles, whereas the lower end of the market tends to fluctuate at lesser degrees of variance.
- The driver behind falling property values – higher interest rates which increases the overall cost of borrowing. Whilst overall loan values may be lower, servicing costs can be similar during periods of rising interest rates.
- Greater Sydney remains the second most unaffordable capital city in the developed world¹. The current ratio of median house values to incomes is 13.3, with the average number of years to save a 20% house or apartment deposit being 18 years and 11 years respectively².

These pressures will continue to present the opportunity for more affordable housing typologies in greenfield locations.

Based on the findings of the baseline analysis, the Study recommended that precinct planning at a minimum seek to achieve the originally dwelling yield designated for the Study Area (2,300 dwellings). Opportunities to increase this were recommended to be explored, based on an initial dwelling mix of:

- Low density typologies: 40% of total housing (15dw/ha to 20dw/ha)
- Medium-density housing: 50% of total housing (25dw/ha to 35dw/ha)
- Higher-density housing: 10% of total housing (4-6 storeys)

These recommendations assisted in the development of a series of ILP scenarios developed at the EbD workshop.

¹ International Housing Affordability Survey, Demographia (2022)

² Housing Affordability Report May 2022, ANZ/CoreLogic (2022)

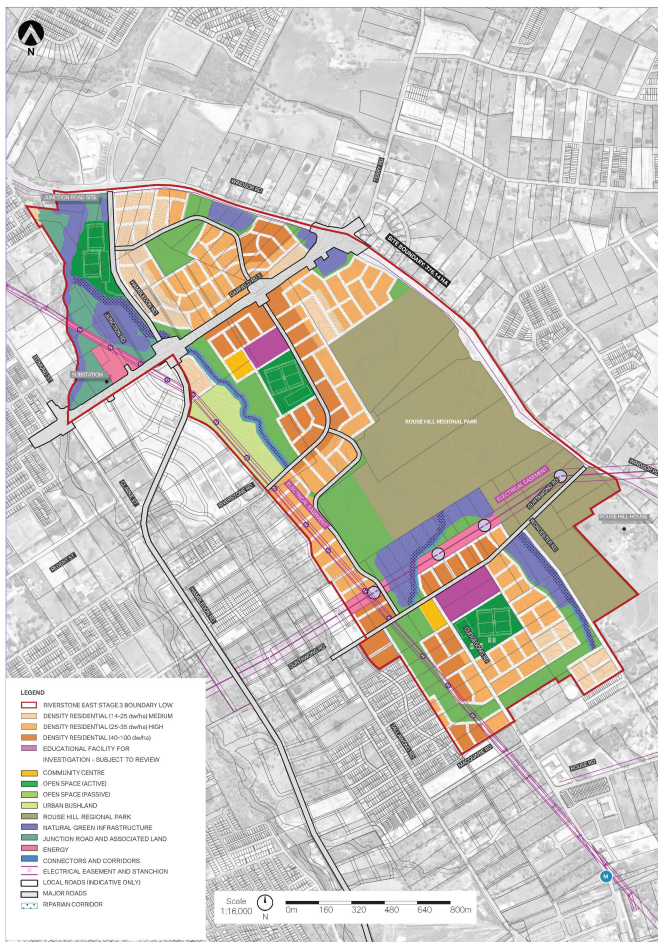
3. Preferred Indicative Layout Plan

3.1 Housing Scenario

Three ILP scenarios were prepared by HRD. These scenarios were analysed and assessed by the broader consultant and stakeholder team during the EbD workshop. This feedback was contextualised into a Preferred ILP Scenario which was further developed post-EbD by HRD in consultation with key stakeholders.

The Preferred ILP Scenario envisages a mix of residential housing typologies across the Precinct. Higher density typologies are clustered proximate new education and community infrastructure, with lower densities mainly proposed north of Garfield Road East. **Figure 3.1** illustrates the Preferred Indicative Layout Plan.

Figure 3.1: Preferred Indicative Layout Plan, Riverstone East (Stage 3)



Source: HRD

Dwelling Yield

The Preferred ILP comprises a total gross developable area of ~125.1ha with a net development area (NDA) of ~88.5ha. A mix of low, medium and high-density housing typologies are proposed, which could deliver 3,147 dwellings.

Table 3.1: Densities and Dwelling Yields, Preferred ILP

Density Band (dw/ha)	Lot Sizes (sqm)	Hypothetical Mix	Developable Area (ha)	Yield (Lots)
Low (14-25)	400-700	20%	17.7	334
Medium (25-35)	300-400	50%	44.3	1,264
High (40-100)	100-250	30%	26.6	1,549
Total	100-700	100%	88.5	3,147

Source: Atlas Economics/HRD

Additional Development Potential

Under the *State Environmental Planning Policy (Precincts—Central River City) 2021* (Central River City SEPP), a mix of medium-density housing formats are permitted within different density bands. As shown in **Error! Reference source not found.**, the Central River City SEPP outlines the minimum lot sizes for these housing typologies.

Table 3.2: Minimum Lot Sizes by Typology and Density Band, Central River City SEPP

Medium-density Housing Typology	Density Band (dw/ha)	Min. Lot Size (sqm)
Dual occupancy (duplex)	11	600
	15	500
	25	400
	35	300
Semi-detached dwelling	11	300
	15	200
	25-35	125
Attached dwelling	15	1,500
	25-35	375
Multi-dwelling housing	15	1,500
	25-35	375
Manor home	25-35	600

Source: Central River City SEPP

Additionally, the *State Environmental Planning Policy (Housing) 2021* (Housing SEPP) permits the development of secondary dwellings (such as a granny flat) within residential zones, subject to meeting certain lot size and site coverage requirements.

Accordingly, there is potential for additional development beyond that envisaged in the Preferred ILP to proceed through the existing provisions of the Central River City SEPP and Housing SEPP. High-level analysis by HRD indicates that if all these potential opportunities were taken up, a total dwelling yield of **circa 3,600 dwellings** would result. This would represent an increase of some 453 dwellings over the Preferred ILP.

To ensure the adequate provision of infrastructure, it will be important that the potential for this additional residential growth is considered. This is discussed in more detail in Chapter 4.

3.2 Expected Resident Profile

3.2.1 Resident Characteristics

New residential areas and greenfield precincts often comprise different demographic and socio-economic profiles compared to older, more established residential neighbourhoods.

Demographic analysis in SCHEDULE 1 shows that new residential areas proximate the Study Area (e.g. Marsden Park, The Ponds) have notably different characteristics as compared to the Blacktown LGA. For instance, these residents tend to be:

- Younger couples, with or without children
- Larger households with extended family households
- Families with children living in apartments.
- Ethnically diverse (particularly from the Southern Asian countries such as India)
- Educated and affluent.

As new residential areas mature, residential profiles often become more diverse and comparable to other established suburbs. This is a natural evolution, as younger residents relocate out of the area to access employment, education and housing opportunities elsewhere. These trends are anticipated to be replicated in the Study Area.

3.2.2 Future Population Size

Socio-demographic analysis has demonstrated that recently developed precincts in the NWGA generally accommodate larger households compared to more established/ older areas. This reflects both the type of housing delivered in these precincts, as well as the types of households they attract. This is demonstrated in Schedule 1.

DPE projections for the NWGA suggest a declining household occupancy size over the coming decades to 2041, falling from 3.2 persons per household in 2021 to 2.8 persons per household in 2041 (DPE, 2022). Whilst this is considered appropriate for the more established parts of the NWGA, it is not expected to be reflective of the Precinct which will primarily attract larger households as it is developed over the coming decades.

Based on previous experience and industry standards, the following household occupancy rates are considered appropriate:

- Larger lots (detached dwellings) - 3.8 persons.
- Traditional and smaller lots (detached dwellings) - 3.5 persons.
- Compact lots (semi-detached and attached dwellings) – 2.9 persons.
- High-density typologies (flats, units, apartments) - 2.5 persons.

Table 3.3 applies the adopted household occupancy rates to the proposed dwelling yields to estimate resident population.

Table 3.3: Population Estimates, Preferred ILP

Typology	Potential Dwellings	Household Occupancy	Population
Large lots (detached)	63	3.8	239
Large lots (detached)	74	3.5	259
Traditional lots (detached)	197	3.5	690
Small lots (semi-detached, detached)	1,264	3.5	4,424
Compact lots (semi-detached, attached)	1,106	2.9	3,207
Apartments	443	2.5	1,108
Total	3,147	3.15	9,927

Source: Atlas

Application of these occupancy rates results in a population of almost 10,000 residents, averaging 3.15 persons per dwelling. This is consistent with occupancy rates of 3.2 persons per dwelling seen in recently developed parts of the NWGA.

Potential for Additional Population Growth

As outlined in section 3.1, there is potential for additional development beyond that envisaged in the Preferred ILP through the existing provisions of the Central River City SEPP and Housing SEPP.

High-level analysis by HRD indicates that if all these potential opportunities were taken up, a total dwelling yield of **circa 3,600 dwellings** could result. This would be approximately 453 more dwellings compared to the Preferred ILP.

It is difficult to estimate the breakdown of housing typologies which would be delivered under these SEPPs. For the purposes of estimating a total potential population which could be delivered in the Precinct, it has been assumed that 80% of the 453 additional dwellings would be duplexes (dual occupancies), with the remaining 20% being secondary dwellings. Based on this high-level estimate, a total population of 11,159 residents would result. This is summarised in **Table 3.4**.

Table 3.4: Population Estimates, Maximum Scenario

Typology	Potential Dwellings	Household Occupancy	Population
Additional Dwellings	459		1,232
Duplexes @ 80%	362	2.9	1,051
Secondary dwellings @ 20%	91	2.0	181
Preferred ILP	3,147	3.15	9,927
Total (Maximum)	3,600	3.10	11,159

Source: Atlas Economics

3.3 Potential Housing Take-up

In a greenfield environment such as the Study Area, the issue of development feasibility is more a question of 'when' than 'if'. When development will be feasible and the pace of development (or take-up) is dependent on the depth of market demand for different housing typologies.

This section estimates potential take-up of the different dwelling typologies outlined in the Preferred ILP. The take-up analysis has regard to the Study Area's unique characteristics (e.g. land ownership patterns), competitive position within the Sydney's broader greenfield market and the estimated delivery timeframes for key infrastructure projects.

Underlying Assumptions

The take-up analysis undertaken in this section is underpinned by several universal assumptions:

- The Study Area is highly fragmented, presenting challenges to site consolidation and large scale masterplanning.
- Take-up likely to commence post-2026, allowing time for rezoning and submission of development applications.
- Detached and semi-detached housing formats will be absorbed first given their high level of market acceptance.
- The Sydney Metro Western Sydney Airport metro line and Western Sydney Airport will be operational by 2026.
- Any future metro line connecting Tallawong to the Western Sydney Airport will not be operational before 2041.
- Infrastructure contributions requirements are within tolerance of development feasibility.

These assumptions are consistent across each of the take-up scenarios.

Case Study Precincts

To assist in the take-up analysis, net dwelling production in greenfield precincts across Greater Sydney has been analysed. This analysis suggests that average annual dwelling take-up over 2011-2021 has ranged from ~250 dwellings (i.e. Austral, Colebee) and up to 1,100 dwellings (i.e. Oran Park). Average annual take-up rates appear to be circa of 500-600 dwellings.

Whilst a mix of location, market and time-specific factors have invariably influenced the take-up rates observed in these various precincts, they do provide a useful gauge to measure the potential take-up of housing in the Study Area.

Table 3.5: Net Dwelling Production (2011-2021), Sydney's Greenfield Precincts

Precinct	2011	2016	2021	Net Dwelling Production (Avg.)	
				2011-2021	2016-2021
Marsden Park	475	466	4,725	850	852
Riverstone - Vineyard - Grantham Farm	2,360	2,683	4,495	427	362
The Ponds	909	3,276	4,513	721	247
Ropes Crossing	508	1,826	2,115	321	58
Colebee	42	546	1,296	251	150
Gables	63	48	1,022	192	195
Box Hill	313	258	2,060	349	360
North Kellyville	568	1,469	5,458	978	798
Gledswood Hills	38	1,595	4,887	970	658
Catherine Field	1,599	1,902	3,600	400	340
Oran Park	45	1,555	5,612	1,113	811
Harrington Park	2,530	3,382	4,122	318	148
Austral	974	1,006	2,243	254	247
Edmondson Park	177	669	3,802	725	627
Average				418	562

Source: ABS (2022, 2017, 2012), sourced from .id

Take-up Analysis

Three take-up scenarios have been developed – a Base Scenario, Low Scenario and High Scenario.

- **Base Scenario**

The Base Scenario is the primary take-up scenario. The Base Scenario estimates that the dwelling capacity of 3,147 dwellings will be fully absorbed by 2037, reflecting a take-up rate of ~262 dwellings per annum over 2026-2037.

This rate of take-up is similar to other greenfield precincts characterised by fragmented ownership patterns (e.g. Austral, Colebee) and reflects the challenges to housing supply that could be faced in the Study Area.

Take-up in the Base Scenario is expected to peak over 2029-2030 (579 dwellings per annum) with widescale take-up of detached and semi-detached housing opportunities. As these opportunities are exhausted, take-up is expected to fall as the market absorbs higher density housing opportunities.

- **Low Scenario**

The Low Scenario is predicated on softer take-up of medium and high-density housing typologies. The dwelling capacity of 3,147 dwellings would be absorbed by 2039, analysing to an average take-up rate of ~225 dwellings.

Similar to the Base Scenario, take-up under the Low Scenario is expected to peak over 2029-2030 (380 dwellings per annum) with swift take-up of detached housing opportunities. Take-up falls from 2030 onwards as these opportunities are exhausted and take-up of higher density housing is more modest.

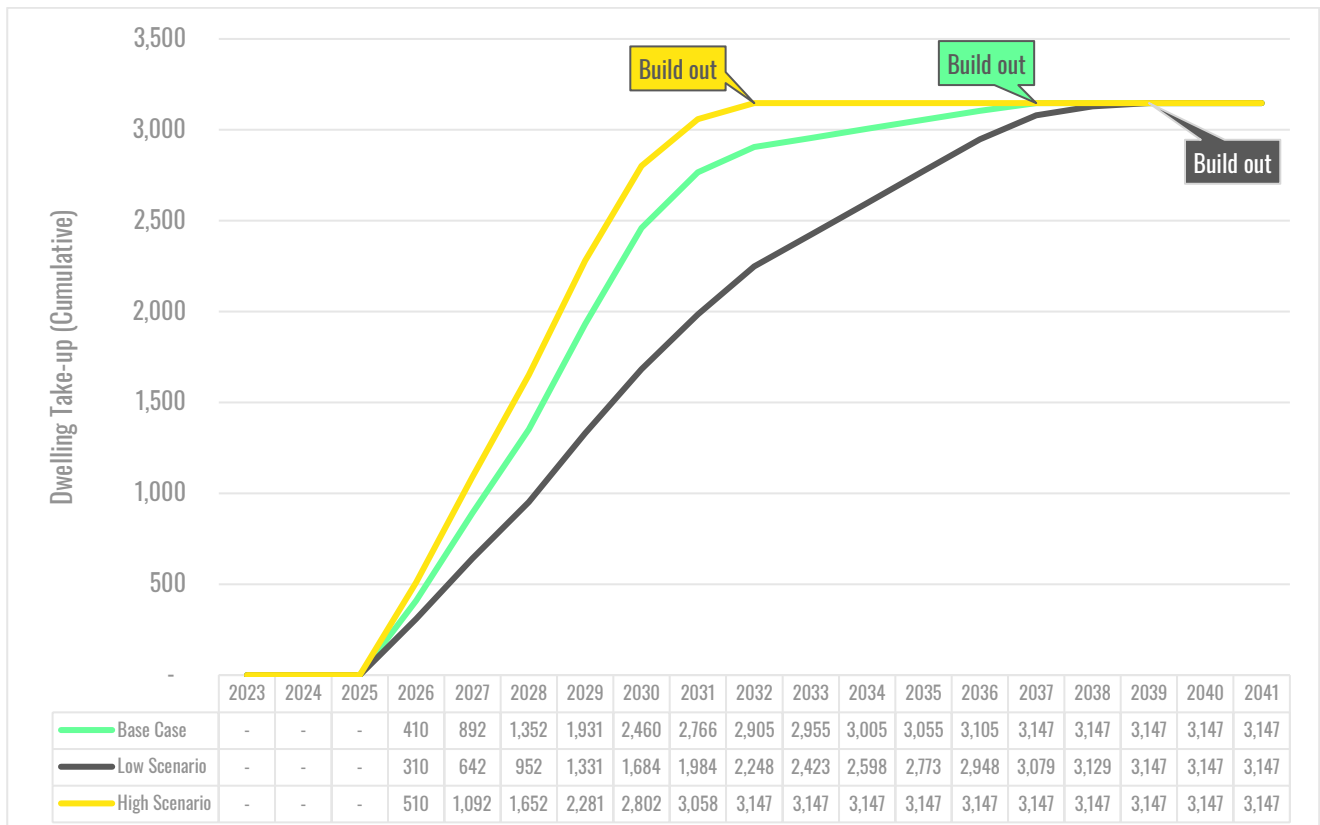
- **High Scenario**

The High Scenario is based on a more opportunistic outlook for site consolidation and take-up of housing across the Study Area. Dwelling capacity would be fully absorbed by 2032 (compared to 2037 in the Base Scenario) and reflects a take-up rate of 450 dwellings over 2026-2031.

Take-up under the High Scenario is expected to peak over 2028-2030 (630 dwellings per annum) with strong take-up of detached and semi-detached housing and quicker absorption of apartment typologies.

The estimates of development take-up under each Scenario are illustrated in **Figure 3.2**.

Figure 3.2: Take-up Estimates, Preferred ILP



Source: Atlas Economics

4. Recommendations and Conclusions

4.1 Housing and Lot Size Mix

The *North West Priority Growth Area Land Use and Infrastructure Implementation Plan 2017* (LUIIP) originally identified the Study Area as having potential capacity for circa 2,300 dwellings.

Market conditions have evolved rapidly since completion of the LUIIP. In 2016, the median lot price and size across Sydney's greenfield precincts was \$465,000 and 396sqm respectively. By 2022, the lot price was \$716,000 – representing a 54% increase. Lot sizes by contrast have only marginally reduced to 378sqm. Coupled with significant increases in building costs over the past 24-months, the cost of purchasing new housing in the growth areas has risen markedly.

Whilst detached housing remains the most popular housing format across Sydney's growth areas, this deteriorating level of housing affordability, coupled with a genuine shift in lifestyle preferences from many buyers, has seen demand for smaller lots (where detached housing can still be delivered) continue to build momentum.

It is clear that a tipping point towards smaller housing formats is approaching. Market demand for medium-density housing is deepening as the capacity to pay for detached housing product is reaching its limits. New medium-density typologies such as townhouses and terraces are experiencing swift take-up across the NWGA. Demand for higher-density typologies is also growing (particularly when co-delivered within mixed-use centres and public transport), though is less mature.

As shown in **Table 4.1**, the Preferred ILP would facilitate capacity for 3,147 dwellings across a mix of low, medium and high-density housing typologies.

Aligning with market demand, the ILP focuses on providing capacity for detached housing formats, with small lots (300sqm to 400sqm) accounting for 50% of total NDA. Smaller, 'compact lots' (150sqm-250sqm) which could accommodate a mix of detached and medium-density housing formats (e.g. terraces, townhouses, etc) account for 25% of total NDA. Traditional and larger lots (450sqm to 700sqm) comprise 20% of total NDA, whilst apartment typologies account for 5%.

Table 4.1: Lot Sizes and Dwelling Yields, Preferred ILP

Lot Types	Potential Housing Typologies	Avg. Lot Size (sqm)	NDA (ha)	% of NDA	Yield (Lots)
Large lots (1)	Detached housing	700	4.4	5%	63
Large lots (2)	Detached housing	600	4.4	5%	74
Traditional lots	Detached housing	450	8.9	10%	197
Small lots	Detached housing, semi-detached	350	44.2	50%	1,264
Compact lots	Terraces, townhouses, villas	200	22.1	25%	1,106
High-density	Terraces, apartments	100	4.4	5%	443
Total			88.5	100%	3,147

Source: Atlas Economics/HRD

The Preferred ILP aligns with current and future market demand, with a focus on smaller lots and medium-density typologies. There is importantly however a diversity of housing:

- Large lots (600sqm-700sqm) will cater to a small (but active) buyer pool which are less price conscious than the majority of the NWGA market.
- Apartments will be focused around recreation facilities, high quality green open space, future education and community facilities and leverage the southern portion of the Study Area's proximity to Tallawong Metro Station.

With a net residential developable area of 88.5ha, the 3,147 dwellings proposed in the Preferred ILP equates to residential density of 35.6 dwellings per hectare (dw/ha). This is considered appropriate in the context of its location, market demand and proposed level of public open space.

4.2 Infrastructure Delivery

It is well-recognised that development across the NWGA has historically outpaced the delivery of supporting infrastructure, including road upgrades, public open space and community infrastructure.

This has been largely attributed to the Growth Centres SEPP which adopted minimum residential density controls across the NWGA. As a result of significant demand, the minimum densities identified in many of the NWGA's have been exceeded with developments generally permitted if they do not contravene development controls. Accordingly, the level of infrastructure originally planned for in these precincts has not kept pace with development activity.

The Preferred ILP is proposing a significant amount of public open space and community infrastructure. This includes:

- Two school sites (subject to further investigation) totalling 6.1 in land area
- Two community centre sites totalling 2.1ha in land area
- Retention of the 96.5ha Rouse Hill Regional Park
- 52.2ha of public open space
- 29.9ha of natural green infrastructure
- 8.7ha of urban bushland

The delivery of these community infrastructure items, in addition to new major roads and/or upgrades to existing roads (i.e. Guntawong Road, Riverstone Road, Garfield Road East) should have the take-up rates assumed in **Figure 3.2**. Effective coordination between Transport for NSW, DPE and Blacktown City Council is critical.

4.3 Affordable Housing

Over the course of precinct planning, the opportunity for affordable housing (delivered in-kind or via monetary contributions) in the Study Area has been identified. This section provides context into future planning for affordable housing in the Study Area.

4.3.1 Legislative Context

“Affordable Housing” is defined in the *Environmental Planning and Assessment Act 1979 (EP&A Act)* as “housing for very low income households, low income households or moderate income households, being such households as are prescribed by the regulations or as are provided for in an environmental planning instrument”.

The EP&A Act permits requiring land or contributions for Affordable Housing if a SEPP identifies there is a need for Affordable Housing within an area. Affordable housing contributions have not historically been sought in Sydney's Growth Areas (via the Growth Centres SEPP), with contributions (beyond local development contributions) instead being limited to Special Infrastructure Contributions (SIC).

The introduction of the *State Environmental Planning Policy (Housing) 2021* (which combined five SEPPs including SEPP 70) has identified the need for affordable housing across NSW and applies to all LGAs across the state. The Housing SEPP has planning mechanisms to facilitate delivery of affordable housing. Both are voluntary (opt-in) and are:

1. **Affordable Housing Contribution Schemes** which enable the imposition of developer contributions subject to councils meeting criteria under Part 1 of Chapter 2 of the SEPP.
2. **Infill Affordable Housing Incentives** which are available to developments that provide a minimum amount of affordable housing and subject to criteria under Part 2 of Chapter 2 of the SEPP.

If Affordable Housing contributions were to be required as a condition of consent, this would require amendment to the Growth Centres SEPP. This in turn would require the preparation of an Affordable Housing Contribution Scheme (ACHS) which meets the requirements of the Housing SEPP.

The steps involved in the preparation of an ACHS are briefly summarised next.

4.3.2 Procedural Requirements

Before a consent authority can impose affordable housing contributions, councils must develop an Affordable Housing Contribution Scheme (AHCS) which sets out how, where and at what rate development contributions can be collected for affordable housing. The local environmental plan will then reference the AHCS and required contribution rates.

In 2019 DPE developed and released the *Guideline for Development an Affordable Housing Contribution Scheme* to assist councils preparing an AHCS.

The Guideline implements the Greater Sydney Region Plan's recommendations that Affordable Rental Housing Targets are only to be applied in areas where an uplift of land value is created (i.e. where there is a rezoning or planning uplift). It notes that the contribution rate needs to be viable when taking into consideration local and state infrastructure charges and the ability for developers to achieve a reasonable profit margin.

4.3.3 Administration and Implementation of an ACHS

There are critical governance and management matters which need to be considered with the formal implementation of an ACHS. As the administrative authority responsible for the ACHS, Councils must endorse these positions based on their own unique circumstances and organisational priorities.

Key governance and managerial issues which needed to be considered include, *inter alia*:

- Contributions methodology and preferred form of contributions (i.e. monetary, in-kind)
- Exemptions and exclusions to contributions
- Distribution and management of funds
- Financial governance arrangements
- Payment frameworks.
- Frequency of reviews and monitoring.

4.3.4 Potential for Affordable Housing

It is understood that an aspirational Affordable Housing target of 10% is being sought in the Study Area.

The capacity for affordable housing contributions in the Study Area will be largely tied to:

- The quantum, density and typology of uses envisaged in the precinct, and
- Local and State contribution requirements (the former is currently unknown).

In greenfield precincts, land values rise significantly when they are rezoned for urban uses from rural uses. While this provides scope for development to pay for infrastructure (including Affordable Housing), there are other contribution needs (including s7.11 and state/ regional contributions) that influence how much Affordable Housing contributions can be levied.

There are a series of steps required to develop an ACHS. An assessment on the viability of affordable housing contributions in the Study Area would need to be assessed during the preparation of an ACHS and be cognisant of the level of local development contributions. An ACHS and local contributions plan would be prepared in unison.

It is understood that Council is participating in the development of a regional Western Sydney ACHS being developed by the Western Sydney Planning Partnership. The timing and progress of this regional approach is unknown.

It is critical that any future requirement for affordable housing contributions is made apparent to the market as early as possible. Clear and definitive notice for new contributions and their phasing-in will be critical for managing impact on feasibility. Sites already purchased can be progressed for development and sites yet to be acquired can be purchased at prices that allow for the new contributions.

Advance notice to the market of intentions for Affordable Housing contributions would provide certainty for investment and development planning. This enable parties to be informed at the outset and make informed decisions on site purchase. Over time, market dynamics will adjust as the market accounts for the cost of the contributions.

4.4 Planning Controls

The Study Area is currently zoned RU4 Primary Production Small Lots. A change of land use zone will be required to facilitate urban development upon the Site. Neighbouring residential areas within the Riverstone East Stage 1 and 2 precincts are currently zoned a mix of R2 Low Density Residential and R3 Medium Density Residential and are subject to maximum height controls of 9m and 12m respectively.

It is recommended that a similar zoning approach is adopted in the Study Area. Development densities would be best governed by maximum building height controls to ensure the typologies envisaged for different parts of the precinct are developed.

Maximum Dwelling Control

There is potential for additional development beyond that envisaged in the Preferred ILP to occur through the existing provisions of the Central River City SEPP and Housing SEPP, which enable some forms of medium-density housing in low density areas (subject to certain requirements being met).

High-level analysis by HRD indicates that if all these potential opportunities were taken up, a total dwelling yield of circa 3,600 dwellings could result. Population estimates suggest this would result in a total population of 11,159 residents.

To provide further certainty on the total quantum of new housing which could be developed in the precinct, a **maximum dwelling cap control** could be considered to avoid this maximum theoretical dwelling yield of 3,600 dwellings.

4.5 Summary of Recommendations

A broad set of actions is needed to ensure the successful delivery of new housing across the Precinct. A summary of the housing recommendations provided in this Chapter is provided in **Figure 4.1**.

Figure 4.1: Summary of Housing Recommendations, Riverstone East

1. Housing and Lot Size Mix

- Adopt the housing, density and lot size mixes proposed in the Preferred ILP.

2. Infrastructure Delivery

- Initiate costing of different infrastructure servicing needed to facilitate residential development.
- Finalise a Development Contributions Framework.

3. Affordable Housing

- In accordance with the aspirational 10% Affordable Housing target, initiate the development of an Affordable Housing Contributions Scheme.
- Prepare the Scheme in unison with a Development Contributions Framework.

4. Planning Controls

- Adopt similar land use zones to those already adopted in Riverstone East Stage 1-2.
- Implement a maximum dwelling yield control to ensure future development does not exceed the maximum dwelling yield of 3,600 dwellings.

Source: Atlas Economics

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Socio-Demographic Profiling

In order to anticipate the likely demographic profile of the Study Area when developed, socio-demographic characteristics of other precincts in the locality were selected for analysis.

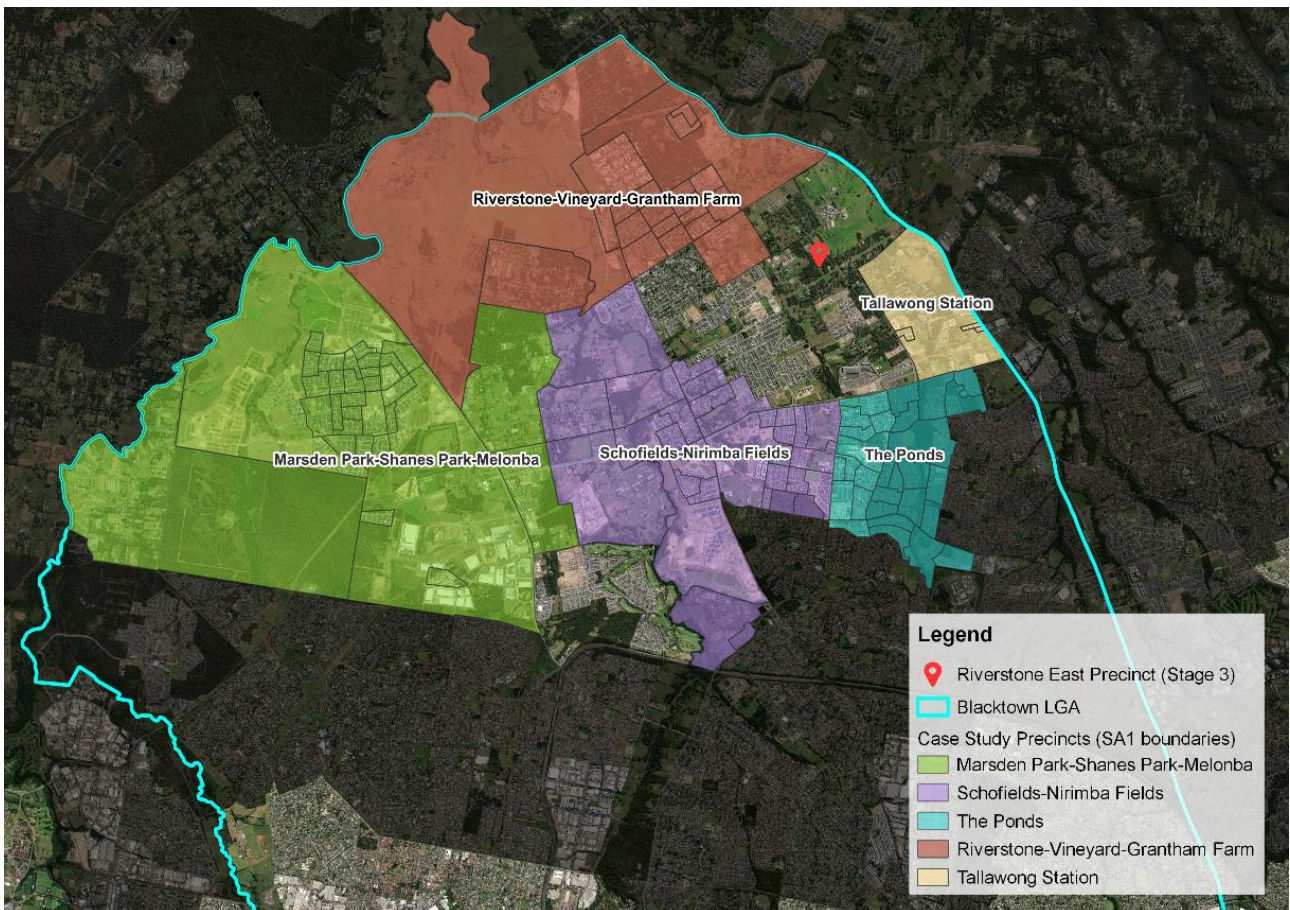
The case study precincts (the Precincts) were selected based on Statistical Area Level 1 (SA1) geographies that broadly align with the NWGA precinct boundaries, as defined below:

- 'Riverstone' - Riverstone and Riverstone East Stages 1-2.
- 'Marsden Park' - Marsden Park, Shanes North, West Schofields and Marsden Park Industrial.
- 'Schofields' - Schofields and Alex Avenue.
- 'The Ponds' - The Ponds.
- 'Tallawong' - Tallawong Station.

The Precincts are located within the Blacktown LGA, form part of the NSWGA and have been rezoned for a number of years. Development activity has been ongoing since their rezoning and new communities have formed.

Figure S1.1 illustrates the geographical boundaries of the Precincts within the Blacktown LGA.

Figure S1.1: Case Study Precincts



Source: Atlas Economics

Residents and Households

Historical Population Growth

In 2021, the Precincts collectively recorded a population of approximately 69,800 residents. Marsden Park was rezoned in 2013 and recorded the largest population of the Precincts with some 22,150 residents. This was driven by significant population growth over the 2016-2021 period (adding 17,900 new residents). This was followed by Schofields (rezoned in 2012) which recorded a resident population of some 16,400 in 2021 (adding 11,600 new residents).

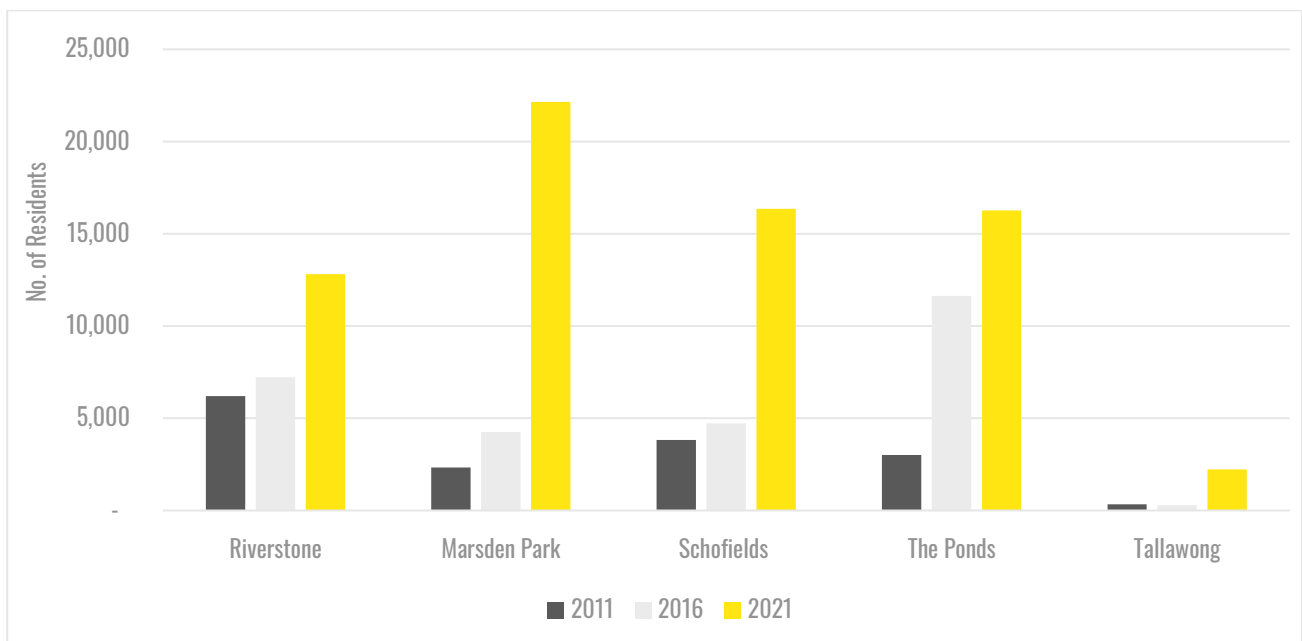
The Riverstone precinct largely accommodates Stages 1 and 2 of Riverstone East which were rezoned in 2016. Over the 2016-2021 period, the resident population of Riverstone added 5,600 new residents, to reach some 12,800 residents in 2021.

Whilst precinct planning for Tallawong was finalised in 2015, many residential developments are still ongoing. It recorded modest population growth over 2016-2021. In 2021, the Tallawong population was estimated at some 2,200 residents, an increase of some 1,900 residents from 2016.

The Ponds comprises the most established residential estate across the Precincts, with development occurring over the last two decades to 2016. In 2011, it recorded an estimated resident population of 3,010 residents, growing at an average annual rate of 31% to reach 11,640 residents in 2016. By 2021, approximately 16,300 residents were recorded.

Figure S1.2 depicts the historical population growth recorded within the Precincts over the 2011-2021 period.

Figure S1.2: Historical Population Growth (2011-2021), The Precincts



Source: ABS (2021)

Overall, the recorded population growth across the Precincts aligned with their various stages of residential development. Unsurprisingly, population growth is observed to be most significant following rezoning a decade ago (i.e. Schofields in 2012 and Marsden Park in 2013). The Riverstone and Tallawong resident population is similarly expected to accelerate following the more recent rezoning in 2016.

Population growth in The Ponds was most notable immediately following its land release in 2016, with growth slowing over the period to 2021 upon development build-out.

Previous Place of Residence

In 2021, the 55% majority of Precinct residents (~30,900 residents) were already living in the Blacktown LGA in 2016. This implies that 45% of the Precinct population in 2021 were residing elsewhere in 2016.

Table S1.1 provides an overview of the notable LGAs where Precinct residents lived in 2016 compared to 2021.

Table S1.1: Previous Place of Residence (2021)

Previous Place of Residence in 2016(LGA)	Precinct Residents	
	No.	%
Blacktown	30,879	55%
The Hills Shire	8,023	14%
Parramatta	4,759	9%
Cumberland	2,652	5%
Penrith	1,053	2%
Elsewhere	8,569	15%
Total		100%

Source: ABS (2021)

The analysis reveals that a large proportion of existing Precinct residents lived in surrounding LGAs in 2016 - a notable 14% of whom relocating from the neighbouring The Hills Shire. The Precinct also attracted residents from other areas southeast of the Blacktown LGA, namely the Parramatta and Cumberland LGAs. Collectively, they accounted for 23% of Precinct residents in 2021.

Overall, new developments within the Precincts attracted over 40% of residents from areas outside the Blacktown LGA over the 2016-2021 period.

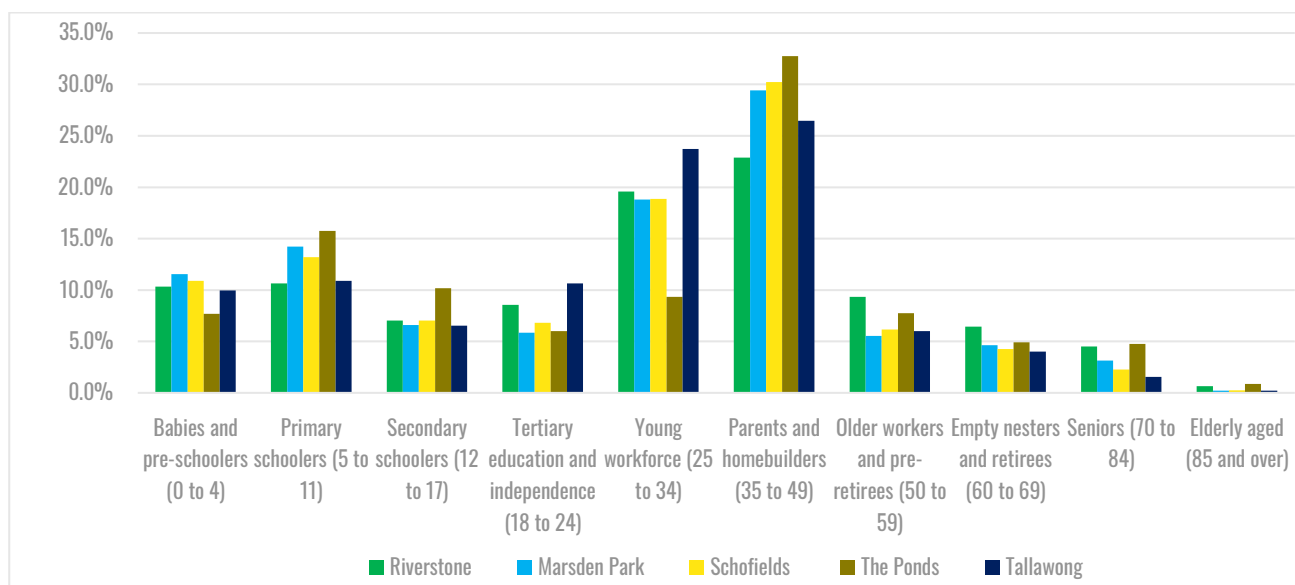
Age Cohorts

In 2021, most Precinct residents were aged 25-49 years, typically reflective of the young workforce and parents/homebuilder age cohorts. The representation of young (25-34 years) and middle-aged (35-49 years) residents were mostly proportionate in the Precincts, except for The Ponds. Compared to the other precincts, The Ponds recorded many more middle-aged residents (33%) than young residents (9%).

The younger age cohorts were also well represented across the Precincts, with a notable proportion of babies (0-4 years) and primary schoolers (5-11 years) recorded. This proportion was highest in Marsden Park, where some 4,200 babies and primary schoolers were recorded in 2021, accounting for 26% of the population collectively.

Whilst dependent children also formed a notable proportion of The Ponds population, they were generally older. In 2021, approximately 2,570 primary schoolers were recorded in the Ponds (16%) followed by 1,700 secondary schoolers (10%). Only 8% of the population was aged 4 years and under (1,260 residents).

Figure S1.3: Age Profile (2021), The Precincts



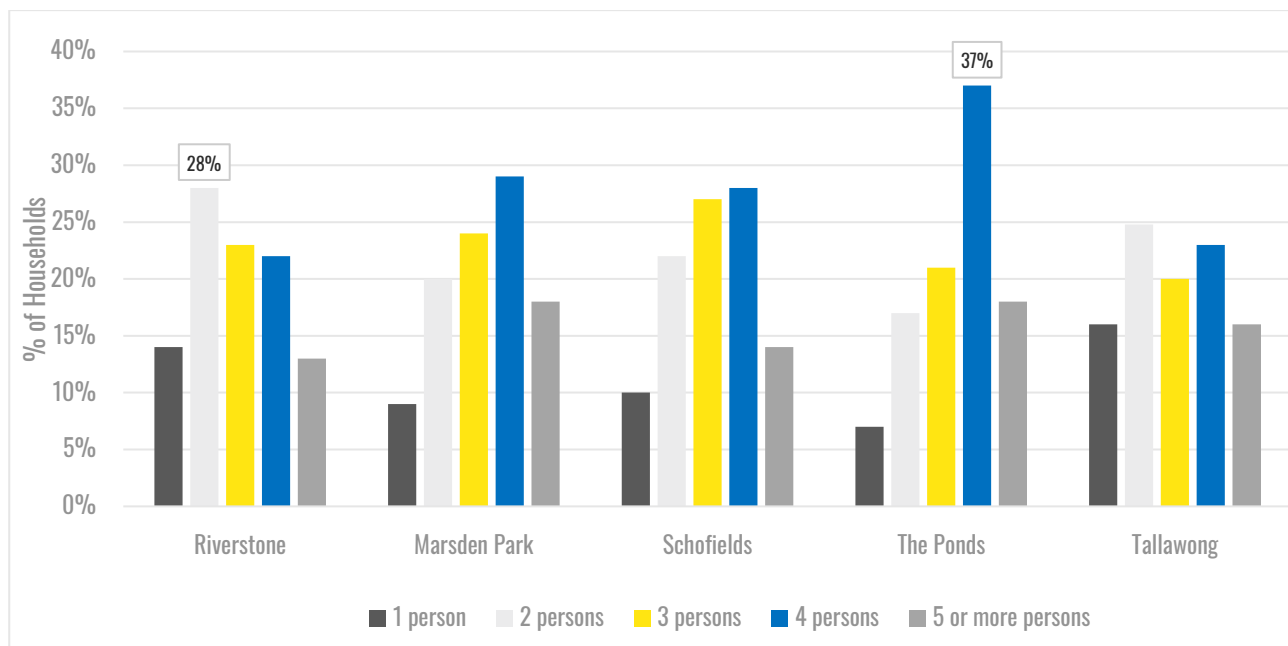
Source: Profile.id (2021)

Overall, the age profiles indicate that most residents are young and middle-aged, many of whom have dependent children.

Average Household Size

In 2021, a majority 30% of households within the Precincts comprised of **four persons**, reflecting the average household size. Riverstone and Tallawong households were generally smaller, where the majority 28% and 25% of households comprised of two persons respectively.

Figure S1.4: Household Sizes (2021), The Precincts



Source: ABS (2021)

Almost 70% of households across the Precincts were larger sized with three or more persons. The Ponds accommodated the largest households, with 77% comprising at least three persons.

In 2011, the average household size within the Precincts was **two persons** per household, accounting for 30% of households. This indicates that household sizes have become significantly larger in the last decade.

Household Types

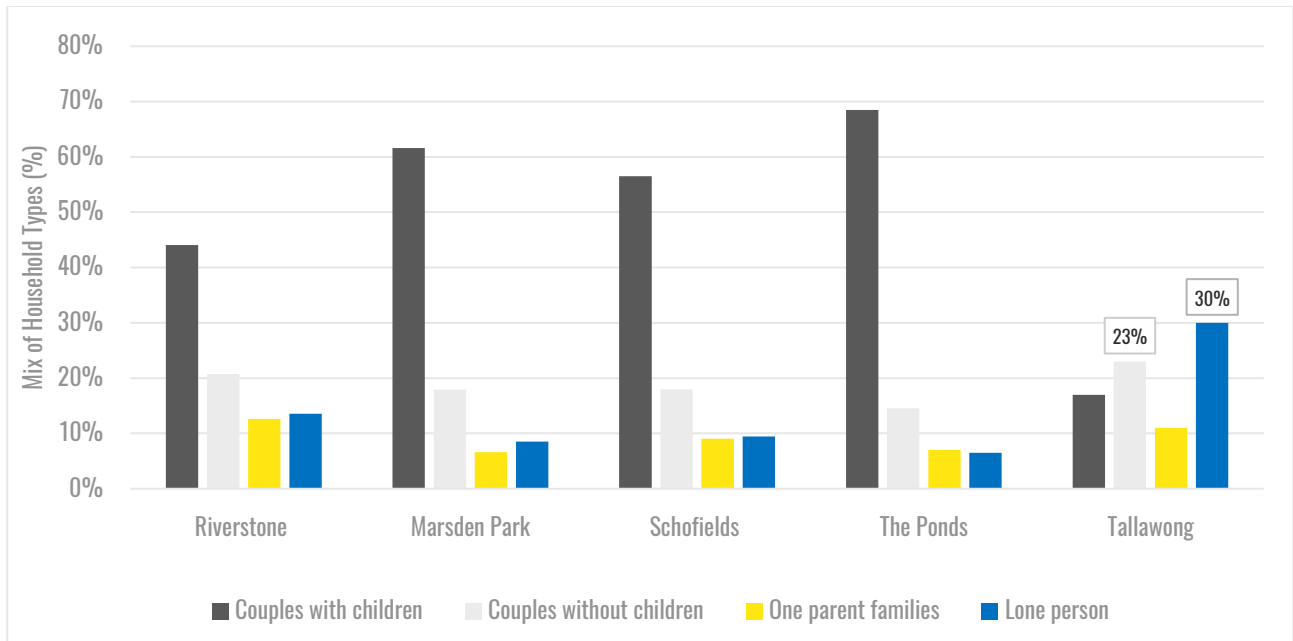
In 2021, households within the Precincts were predominantly couples with children. This was most apparent in The Ponds, where 68% of households were couples with children. Conversely, smaller households were dominant in Tallawong, where the majority 30% of households comprised of lone persons. This was followed by the 23% of couple-only households.

Over the 2011-2021 period, the Precincts recorded significantly more couple families with children. In 2011, couples with children households in Marsden Park and Schofields accounted for 30% and 40% of households respectively. By 2021, these proportions grew to some 62% and 57% of households respectively.

Similarly, Riverstone has been increasingly attractive to couples with children households. In 2011, couples with children households represented 36% of Riverstone households. By 2021, this rose to 44%. The Ponds also recorded notable growth in its couples with children households, which represented 11% more households over 2011-2021. Most of this growth was realised in the earlier period of 2011-2016.

Whilst there were more couple families with children residing in Tallawong in 2021 than 2011, this growth was outpaced by lone person and couple-only households.

Figure S1.5: Household Types (2021), The Precincts



Source: ABS (2021)

The change in household profiles over 2011-2021 reveal the attractiveness of the Precincts to various household types. Whilst most Precincts have predominantly attracted larger, couple families with children households, the majority of new households in Tallawong are smaller households comprising of lone persons or couples without children.

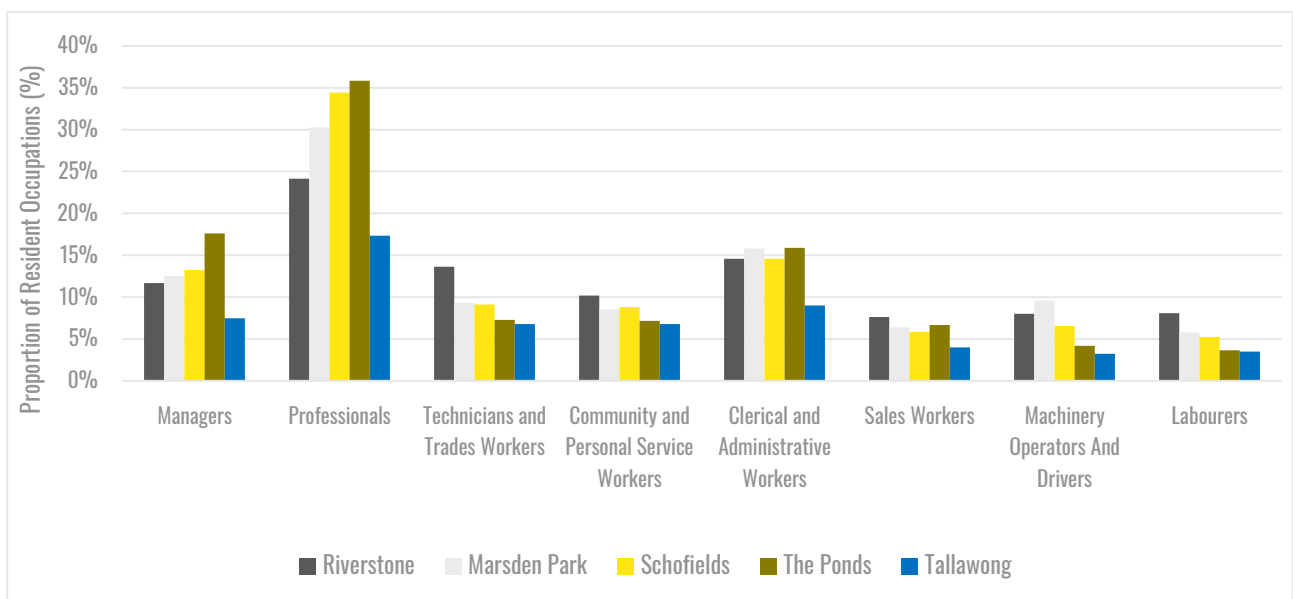
Resident Occupation Profile

The occupation profile of Precinct residents has evolved in the last decade. In 2011, white-collar occupations (i.e., managers, professionals, community/ personal service workers and clerical/ administrative workers) accounted for less than 50% of resident workers in Riverstone, Marsden Park, Schofields and Tallawong. Over the 2011-2021 period, an increasing number of white-collar workers (and fewer blue-collar workers ‘technicians, machinery operators and drivers, labourers’) were recorded across the Precincts. Particularly, new residents are increasingly professionals and managers.

In 2021, an overwhelming majority of residents within the Precincts had white-collar jobs, most of whom were employed as professionals. This proportion was highest in The Ponds, where 69% held white-collar occupations.

Figure S1.6 illustrates the 2021 occupation profile of residents in the Precincts.

Figure S1.6: Occupation Profile (2021), The Precincts



Source: ABS (2021)

Household Income

In order to understand incomes of Precinct households, their income quartiles were analysed over the 2011-2021 period.

Household income quartiles are provided by the ABS as a measure to analyse the changing income profile of households within a geographical region over time. Under this methodology, households are ranked from the lowest incomes to the highest incomes and then divided into four equal groups - Highest, Medium highest, Medium Lowest and Lowest.

The income quartile metric provides a more robust analysis of changing household income over time, as opposed to actual household income categories (\$) which does not account for influences of economic change such as inflation.

Table S1.2 examines the change in household income quartiles within the Precincts over the 2011-2021 period.

Table S1.2: Change in Household Income Quartiles (2011-2021), The Precincts

Quartile Group	Change in Households (2011-21)									
	Riverstone		Marsden Park		Schofields		The Ponds		Tallawong	
	No.	%	No.	%	No.	%	No.	%	No.	%
Highest	652	33%	1,659	41%	1,551	43%	1,842	53%	838	37%
Medium highest	842	42%	1,542	38%	1,326	37%	842	24%	872	38%
Medium lowest	342	17%	597	15%	556	15%	499	14%	473	21%
Lowest	156	8%	264	6%	172	5%	267	8%	105	5%
Total Change	1,992		4,062		3,605		3,450		2,288	

Source: Profile.id (2021)

Over the 2011-2021 period, it is evident that households across the Precincts have become increasingly affluent, with many new households within the highest and medium highest income quartiles. This is especially significant in The Ponds, where 53% more households were within the highest income quartile over the 2011-2021 period.

Place of Birth

In 2021, most residents were born overseas (over 50% in Marsden Park, Schofields, The Ponds and Tallawong). Whilst Australian-born residents represented the majority of Riverstone population in 2021 at 63%, this was lower than the 81% recorded in 2011.

The Precincts are diverse, recording significant growth in the number and proportion of overseas-born residents. In 2021, the most common resident countries of birth recorded across Precincts included India, Philippines, Sri Lanka and Pakistan.

In 2011, over 70% residents in the Precincts were Australian-born (except for the 54% in The Ponds). Of the overseas-born residents, most were from the United Kingdom, Malta and New Zealand. This signals a shift in the cultural composition of the Precincts, which are increasingly attractive to overseas-born residents of diverse countries of origin.

Ancestry

In 2021, the ancestries of residents within the Precincts were notably diverse, with the largest ancestries estimated at:

- 16,000 Indian residents (18%).
- 12,200 Australian residents (14%).
- 10,700 English residents (12%).
- 5,400 Filipino residents (6%).
- 3,800 Chinese residents (4%).

Similar to the resident countries of birth, the ancestry profile of the Precincts has been transitioning over the last decade. In 2011, the dominant resident ancestry was Australian, accounting for nearly 30% of residents (~5,300 residents). This was followed by other large ancestries being English (23%), Maltese (6%), Irish (6%), and Scottish (5%).

Family Composition and Dwelling Occupation by Residents' Country of Birth

The ABS provides data on the family composition of residents and dwelling occupation by country of birth at a LGA level. In order to understand the nature of demand for dwelling sizes, the family composition and household size for Blacktown LGA residents were analysed.

Table S1.3 illustrates family household sizes by predominant countries of birth recorded within the Blacktown LGA in 2021.

Table S1.3: Family Household Composition by Country of Birth (2021), Blacktown LGA

Family Household Size	No. of Usual Residents/ dwelling	Australia	India	Philippines	New Zealand	Fiji	Elsewhere	Total	
								No.	%
One family household	2 persons	27,041	4,026	3,900	1,063	1,258	17,915	55,203	18%
	3 persons	34,441	11,304	5,008	1,239	1,634	16,258	69,884	23%
	4 persons	55,471	17,501	6,261	1,556	1,946	20,473	103,208	33%
	5 or more persons	48,711	5,268	5,229	2,451	1,167	17,616	80,442	26%
	Total	165,664	38,099	20,398	6,309	6,005	72,262	308,737	100%
Two family households	2 persons	-	-	-	-	-	-	-	-
	3 persons	-	-	-	-	-	-	-	-
	4 persons	1,489	355	331	88	120	847	3,230	12%
	5 or more persons	10,435	4,000	2,007	878	786	5,479	23,585	88%
	Total	11,924	4,355	2,338	966	906	6,326	26,815	100%
Three family households	2 persons	-	-	-	-	-	-	-	-
	3 persons	-	-	-	-	-	-	-	-
	4 persons	-	-	-	-	-	-	-	-
	5 or more persons	1,137	427	229	142	50	608	2,593	100%
	Total	1,137	427	229	142	50	608	2,593	100%

Source: ABS (2021)

Based on the 2021 household compositions and dwelling occupation, the following observations can be made:

- Some 179,000 Blacktown LGA residents were Australian-born, accounting for 53% of the population. Conversely, 47% of residents (~159,000) were born overseas, many of whom with origins from India (13%), Philippines (7%), New Zealand (2%) and Fiji (2%).
- Most Blacktown LGA residents were part of one family households (~309,000 residents), accounting for 91% of the population. These households predominantly comprised of four residents per dwelling (33%).
- This was followed by the 8% of Blacktown LGA residents within two family households. Expectedly, these were larger households, with some 23,600 residents in dwellings occupied by five or more persons (88%).
- A small proportion of residents were three family households, accounting for 1% of the population. These were the ~2,600 residents in dwellings occupied by five or more persons.
- Residents born in Australia, India and New Zealand generally occupied dwellings comprised of larger families (families with four or more residents/ dwelling). Across the family household types, 69% of New Zealand-born residents shared dwellings with larger families. This was higher than the 65% and 64% recorded for Australian- and Indian- born residents. Comparatively, only 57% of residents from elsewhere occupied dwellings with larger families.

The analysis reveals that households within Blacktown LGA are relatively large, with at least four occupants per dwelling across family household types. Given that residents within the LGA and the Precincts share similar cultural profiles, this enables insight into the nature of family household sizes and dwelling occupation within the Precincts.

Dwelling Profile

Dwelling Profile

In 2016, approximately 8,500 dwellings were recorded within the Precincts. Of this, there were 6,880 separate houses (81%), 1,540 medium-density dwellings (i.e., semi-detached houses/ townhouses) (19%) and no apartments.

By 2021, there were 19,600 separate houses and 1,680 apartments recorded within the Precincts, accounting for 86% and 7% of the housing stock respectively.

Table S1.4: Dwellings Growth by Precinct (2011-2021)

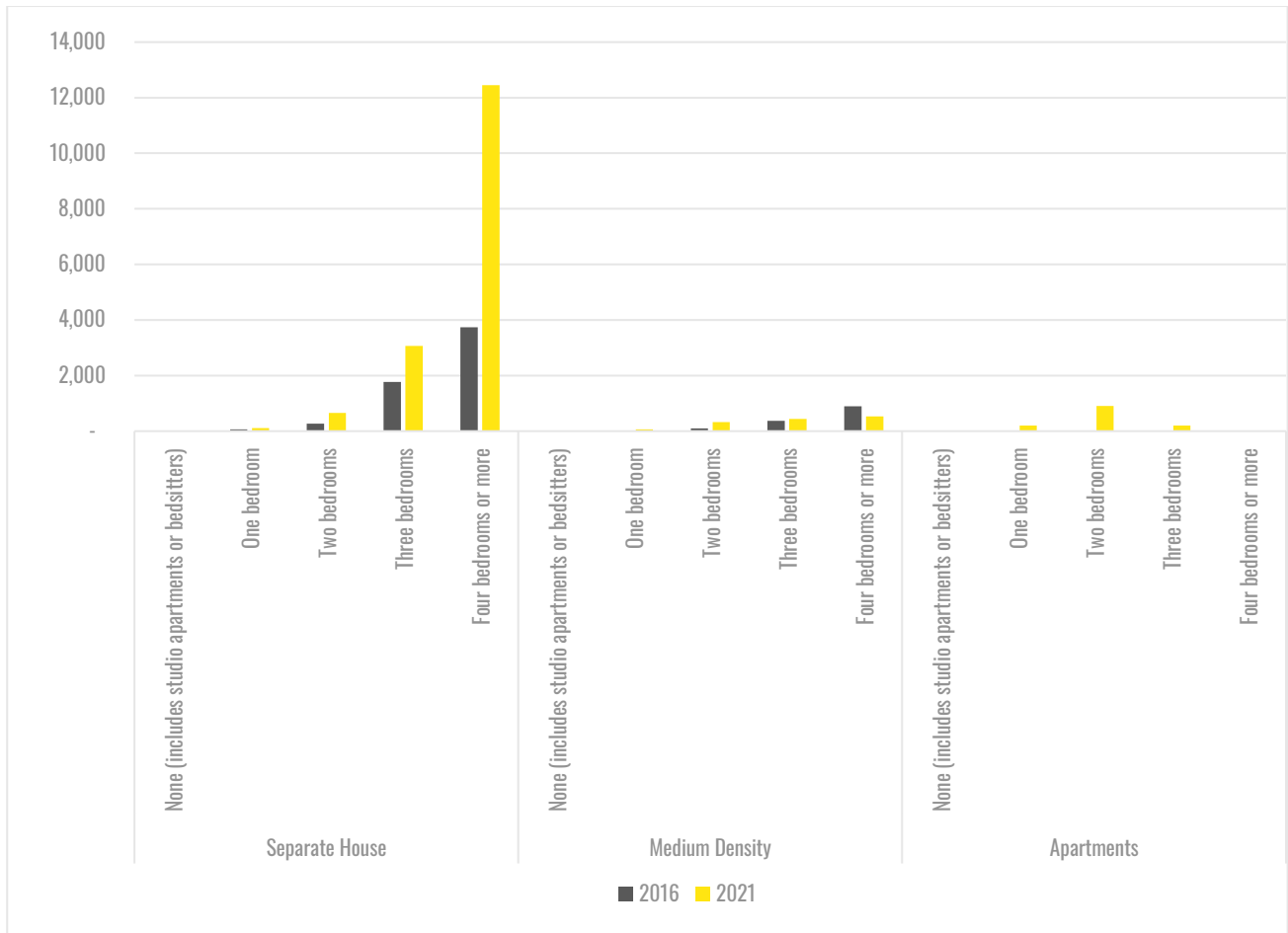
Precinct	2011	2016	2021	Average per annum	
				2011-16	2016-21
Schofields					
Separate House	1,287	1,249	4,409	-8	632
Medium Density	82	330	338	50	2
Apartments	-	-	611	-	122
Total	1,369	1,579	5,358	42	756
Marsden Park					
Separate House	350	419	4,893	14	895
Medium Density	10	2	115	-2	23
Apartments	-	-	-	-	-
Total	360	421	5,008	12	917
The Ponds					
Separate House	916	2,383	3,980	293	319
Medium Density	91	1,093	758	200	-67
Apartments	-	-	-	-	-
Total	1,007	3,476	4,738	494	252
Riverstone					
Separate House	2,213	2,499	4,316	57	363
Medium Density	78	113	163	7	10
Apartments	-	-	-	-	-
Total	2,291	2,612	4,479	64	373
Tallowong					
Separate House	323	381	2,037	12	331
Medium Density	-	-	267	-	53
Apartments	-	-	1,065	-	213
Total	323	381	3,369	12	598

Source: Profile.id (2011, 2016, 2021)

Schofields and Marsden Park reached peak dwelling production in 2016-2021, averaging 750 dwellings and 900 dwellings per annum respectively. Most of these new dwellings were separate houses. Tallowong also delivered an estimated 600 dwellings over the same period. Whilst the majority of new dwellings in Tallowong were separate houses, apartments also accounted for a large proportion of new housing.

Figure S1.7 depicts the change in dwelling profile of the Precincts over the 2016-2021 period.

Figure S1.7: Dwelling Profile by Precinct (2016-2021)



Source: ABS (2021)

Based on the dwelling profile of the Precincts over the 2016-2021 period, the following observations are drawn:

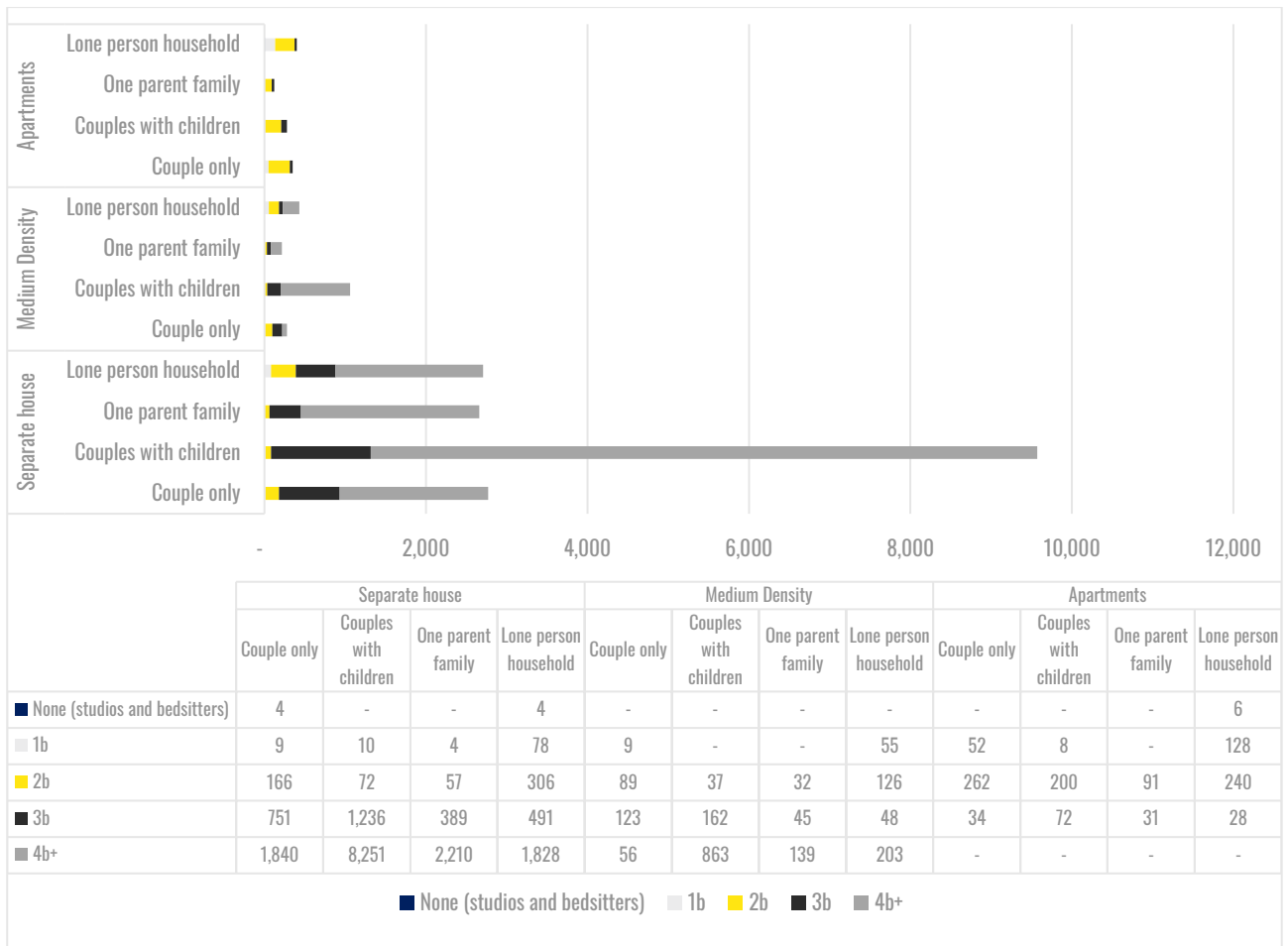
- An additional 8,700 4+ bedroom dwellings were delivered, accounting for 74% of new housing. Comparatively, the growth of 3-bedroom houses represented just 11% of additional detached dwellings delivered.
- In contrast, new medium density housing within the Precincts were limited and delivered smaller 2-bedroom floorplans.
- New apartment developments were predominantly delivered in Tallawong. These predominantly comprised smaller floorplans. Over 2016-2021, some 1,680 additional apartments were recorded in the Precincts collectively, representing 12% of new housing stock. Of this, a 70% majority were 2-bedroom floorplans. This was followed by the 15% of 1-bedroom and 14% of 3-bedroom units.

This indicates that new housing supply in the Precincts has been dominated by low-density dwellings, most of which comprise large floorplans (4+ bedrooms). In contrast, smaller housing typologies account for a far smaller proportion of the new housing stock, most of which having 2 bedroom floorplans.

Dwelling Occupation by Household Type

In 2021, separate houses accounted for the predominant dwelling type occupied across households within the Precincts.

Figure S1.8: Dwelling Occupation by Household Type (2021), The Precincts



Source: ABS (2021)

Several key observations can be drawn from this analysis:

- Couples with children occupied some 9,600 separate houses, or 54% of existing low-density dwelling supply. Most of these households occupied detached dwellings with 4 or more bedrooms. This was similarly observed across the other household types, aligning with typical floorplans provided within this housing type.
- Couples with children also occupied the majority of medium-density dwellings, accounting for 53% of total households. Smaller households (2 or less residents) accounted for some 36% of total households within medium-density dwellings.
- Apartment typologies are mostly occupied by smaller households, with lone persons and couple only households accounting for 65% of total households within high-density housing. This is not surprising given the majority of apartment dwellings comprise two bedrooms or less.

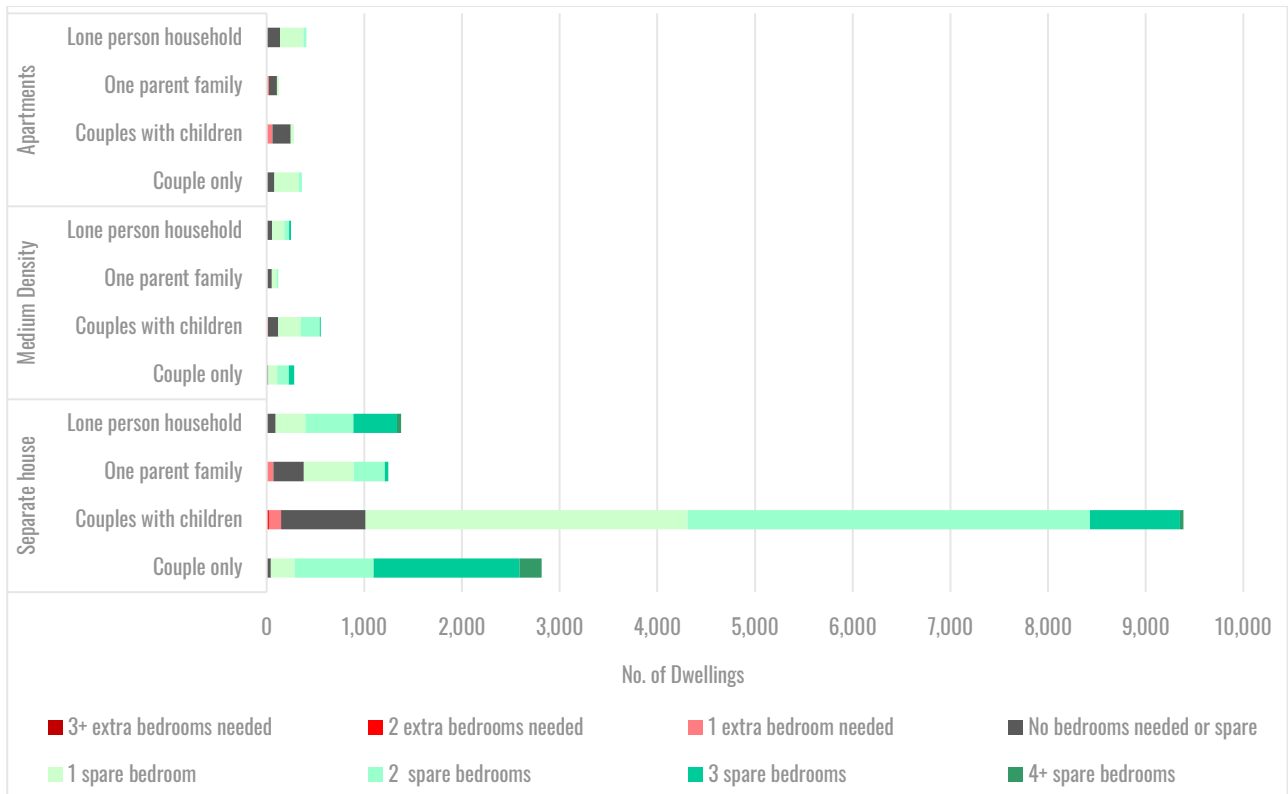
Overall, the dwellings occupied in the Precincts indicate a general preference for larger dwellings. An overwhelming majority of households occupy separate houses, with those in medium density dwellings still preferring at least 3 bedrooms.

Dwelling Utilisation

In 2021, some 4,120 separate houses occupied by couples with children households had 2 spare bedrooms (44% of occupied separate houses). This proportion was slightly higher than those who lived in medium-density dwellings (198 dwellings/ 36%). In contrast, most apartments occupied by couples with children provided no extra bedrooms (188 dwellings/ 67%).

Figure S1.9 provides an overview of dwellings occupied by household types and the number of spare bedrooms in 2021.

Figure S1.9: Dwelling Utilisation by Household Type (2021), The Precincts



Source: ABS (2021)

Overall, most households within the Precincts resided in separate houses with at least 1 spare bedroom. Particularly, couple-only households occupied far larger houses than required, with 53% (1,495) of detached dwellings having 3 spare bedrooms. Comparatively, more than 35% of detached dwellings occupied by couples with children (4,120 dwellings) and lone-person households (490 dwellings) had 2 spare bedrooms.

Households who resided in medium density dwellings had fewer spare bedrooms. Of those occupied by couples with children households, only 36% had 2 spare bedrooms (compared to the 44% of detached dwellings). Couple-only and lone person households also had fewer spare bedrooms compared to those residing in detached dwellings – having 1-2 spare bedrooms rather than 2-3 spare bedrooms.

Compared to low and medium density dwellings, households in apartments had the least number of spare bedrooms. This is most significant for couples with children, with the 67% of occupied apartments (188 units) having no spare bedrooms. In contrast, many couple-only and lone person households in apartments had at least 1 spare bedroom.

The dwelling utilisation analysis shows that households within the Precincts generally prefer larger floorplans with spare bedrooms. Of those in apartments (mostly 2-bedrooms), a large proportion lack any spare bedrooms (490 dwellings/42%).

Residential Market Appraisal

Sydney's Greenfield Housing Market

Drivers of Demand

Whilst forming part of the overall housing market, the greenfield housing market is distinct from the established housing market in many respects. Affordability has arguably become the key driver of demand in Sydney's greenfield areas, with residential land and/or house and land packages often priced below the cost of established housing in many markets.

Whilst many of the general drivers of demand for greenfield housing are similar to that of the broader housing market, key factors which have historically influenced market activity in the NWGA include:

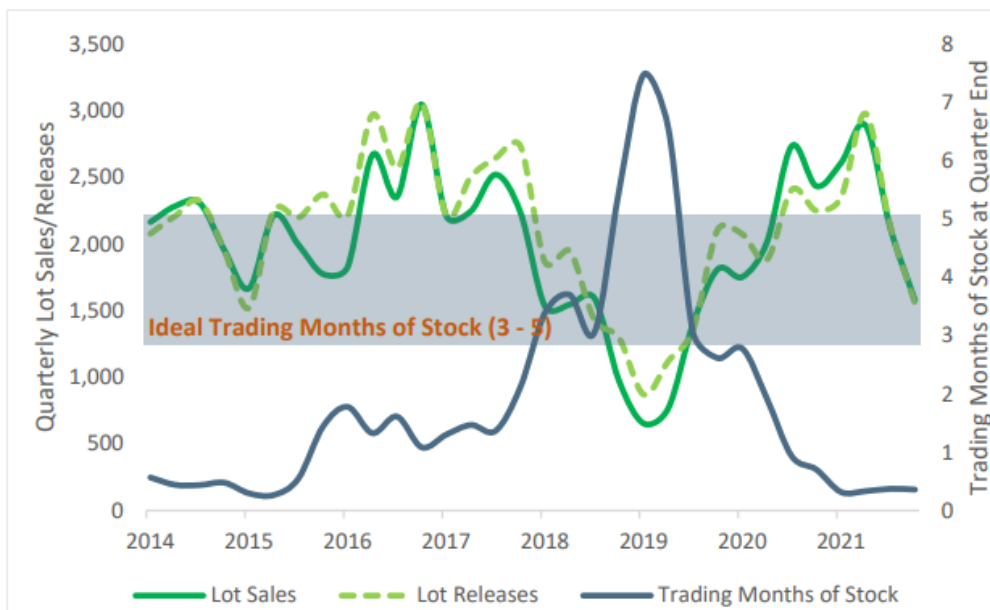
- **Strong and sustained population growth**, aligning with the broader Blacktown LGA.
- **Demographic change**, with many of Greater Sydney's migrant communities seeking housing in the NWGA.
- **Demand from younger couples and growing families** seeking low-density housing options to raise their family, particularly families which grew up in Western Sydney and are seeking housing proximate their extended families.
- The persistence of the **'Australian dream'** phenomena driving demand for traditional detached housing formats irrespective of lot size.
- **Significant price growth in Greater Sydney's established housing market** over the past decade, driving demand to outer suburban location such as the NWGA where comparatively **affordable housing options** are available.

More recently, escalating affordability constraints coupled with shifting lifestyle preferences to more maintenance friendly housing options have seen a rise in demand for smaller lot detached housing product and medium-density typologies. This trend is clearly observed in the NWGA, with lot sizes becoming progressively smaller to match market demand.

Sales Volumes

The Sydney greenfield market recorded significant demand over the 12-months to Q1 2022. A total of 9,200 greenfield lots were sold over the 2021 calendar year –17% above the 7-year average (UDIA, 2022). Notably, the trading months of stock (i.e. the number of available residential lots being marketed) equated to just 0.4 months of demand in December 2021, reflecting a critically low level of supply.

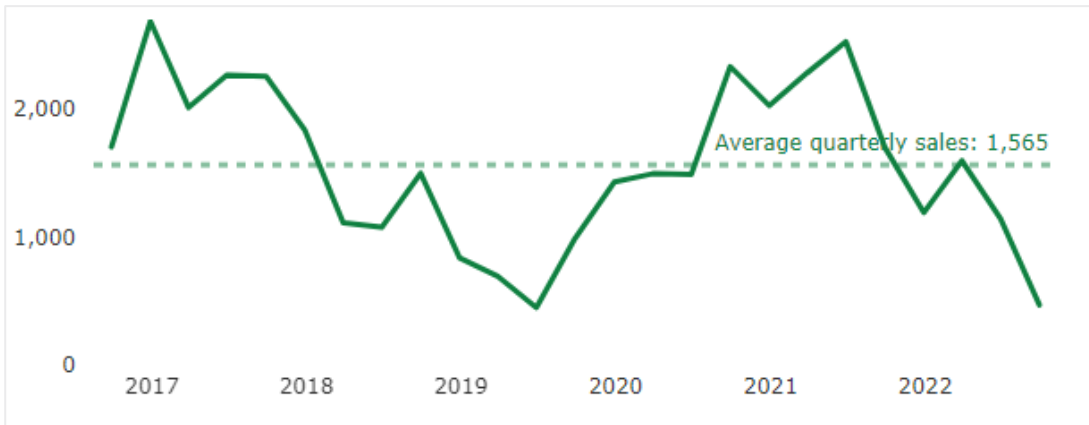
Figure S2.1: Sales Activity (2014-2021), Sydney's Greenfield Housing Market



Source: UDIA (2022)

More recent data for the 2022 calendar year shows the number of greenfield sales has declined sharply following the cessation of many fiscal stimulus packages (e.g. HomeBuilder, stamp duty concessions) and, more importantly, the rise in the cash rate from 0.1% in April 2022 to 3.35% in February 2023. As demonstrated in **Figure S2.2**, approximately 469 greenfield sales were recorded in the September 2022 quarter – just 30% of the historical quarterly average.

Figure S2.2: Sales Activity (2014-2021), Sydney's Greenfield Housing Market



Source: DPE (2023)

Price Growth and Lot Sizes

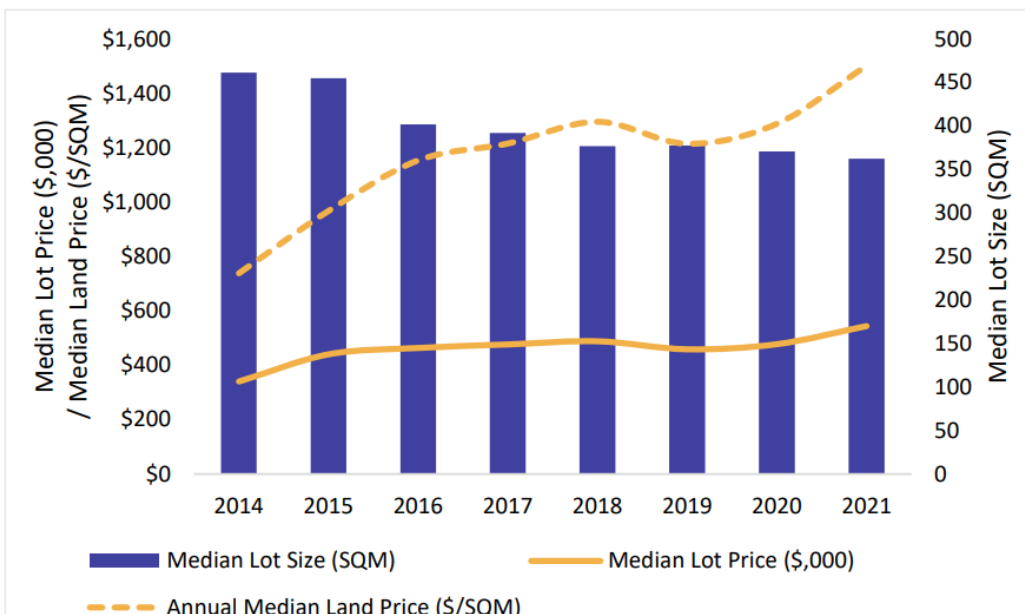
Aligning with the broader housing market, Sydney's greenfield market recorded significant price growth over the 2021 calendar year. The median lot price in 2021 was recorded at \$544,000 (\$1,500/sqm of site area), reflective of a 17% annual increase. A lack of active supply and record low interest rates were the primary drivers of this spike in prices.

Sydney's median lot price represented 44% of the established market median house price of \$1.23m in the December 2021 quarter. This reflects the importance of affordability as a driver of greenfield market activity. At a median lot price of \$544,000 however – Sydney remains by far the most expensive land market in the country.

Lot sizes continued to compress over the 2021 calendar year, with the median greenfield lot size recorded at 362sqm. This is in direct response to housing affordability pressures and a growing market preference for low maintenance living.

This shift in market preference is directly reflected in take-up rates, the take-up of larger lots distinctly slower compared to the take-up of smaller lots across the North West Growth Area. Smaller detached lot product is the most quickly absorbed lot typology in new releases. Developers have responded to these market signals and progressively increased the proportion of smaller lots in new estates to meet demand.

Figure S2.3: Sales Activity (2014-2021), Sydney's Greenfield Housing Market



Source: UDIA (2022)

North West Growth Area

Along with the South West Growth Area (SWGA) and Greater Macarthur Growth Area (GMGA), The North West Growth Area ('NWGA') is one of Greater Sydney's three major release areas. With the first initial rezoning in 2008 (North Kellyville), the NWGA is Greater Sydney's most established greenfield area.

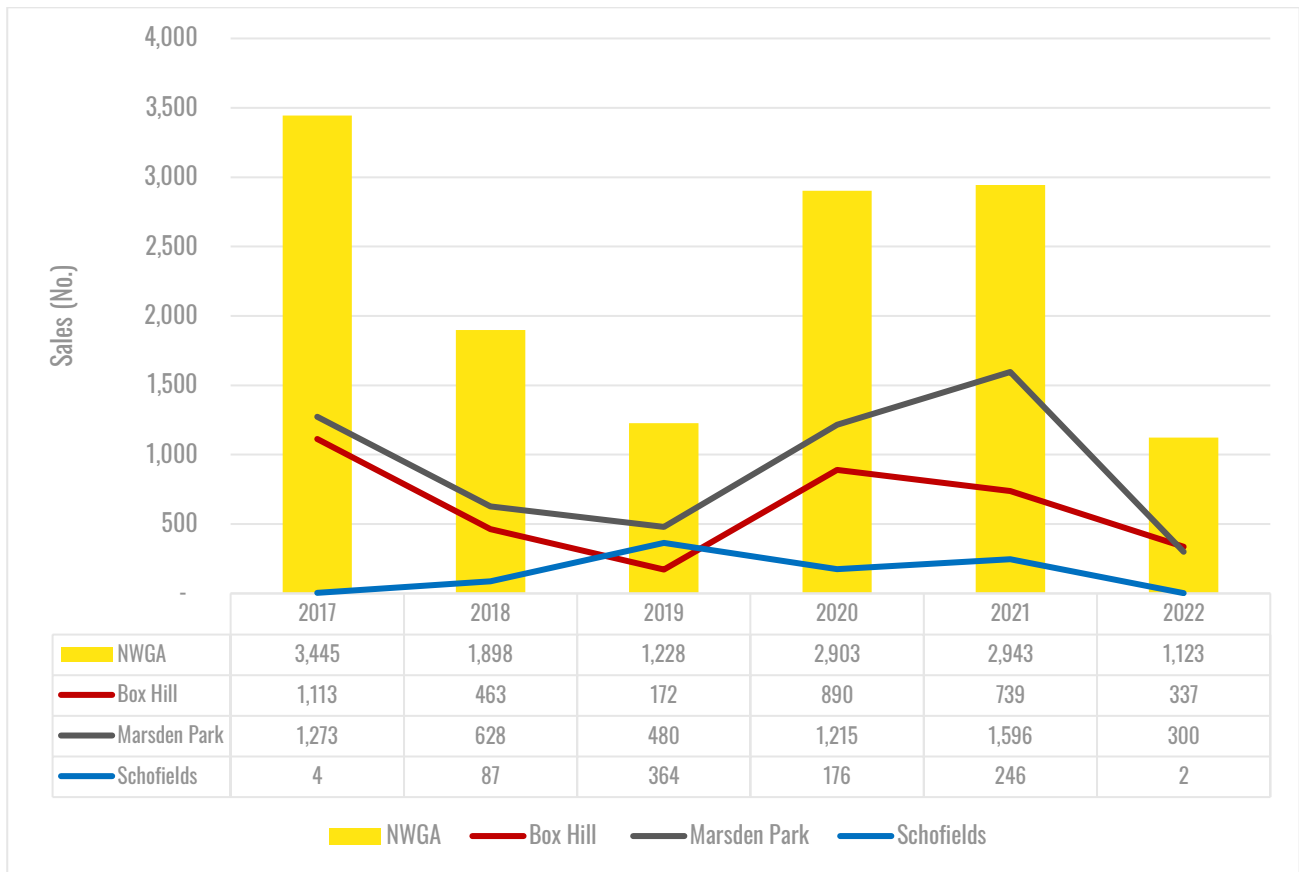
Sales Activity

Sales data in the NWGA is tracked in DPE's *Greenfield Housing Monitor*. This is useful in understanding the potential demand for new housing in the Study Area.

In the four years to September 2022, a total of 8,200 sales were recorded in precincts which have been released in the NWGA at an average rate of 2,050 sales per annum. Three precincts accounted for 80% of these sales, being Marsden Park (~3,600 sales), Box Hill (~2,150 sales) and Schofields (~790 sales).

Sales activity across the NWGA was strong over the 2020-2021 period (circa 2,900 sales each year) albeit well below peak sales activity observed in 2017 (~3,400 sales). This sustained uptick in sales volumes over 2020-2021 was largely attributed to the various government incentive schemes provided during the COVID-19 pandemic and record low interest rates. In the three quarters to September 2022, a total of just over 1,100 sales were recorded across the NWGA – a marked drop in activity compared to 2020-2021 and a reflection of the downturn in the broader housing market.

Figure S2.4: Sales Activity (2017-2022*), NWGA and Key Precincts



Source: NSW DPE (2023)

Current House and Land Packages

There are multiple estates immediately surrounding the Study Area within the Riverstone, Riverstone Stage 1-2 and Box Hill precincts which are currently marketing a mix of vacant lots and house and land packages.

Market investigations into some of these directly neighbouring estates suggests demand remains steady though sales activity has softened over the past 9-12 months. A summary of some of these estates is provided in turn.

- Fairwood Rise, 280 Garfield Road East, Rouse Hill (Riverstone Stage 1-2)**

Located immediately south of the Study Area, 'Fairwood Rise' is a 170-lot subdivision currently being developed by Clarendon Homes associated developer Lindsay Bennelong Developments. The estate predominantly features lots ranging from 250sqm to 320sqm in site area, with some larger corner blocks of up to 670sqm site area. The estate commenced marketing in 2020 and is approximately 80% sold.



Remaining house and land packages are attracting strong pricing in line with other estates nearby. Single storey 3-bedroom detached houses (270sqm site area) are attracting prices of \$1,025,000, with larger two-storey, 4-bedroom houses (310sqm site area) achieving pricing of just under \$1.4m.

- Harkness Place, 56 Harkness Place, Oakville**

Located just north-west of the Study Area, the Harkness Place estate is one of the first estates being delivered in the Vineyard Stage 1 precinct.

Comprising some 100-lots with a slightly larger mix of lot sizes as compared to estates in Riverstone and Schofields (generally ranging from 300sqm to 450sqm in site area), the estate was released to market in 2022 and is approximately 11% sold.

Despite being further located from public transport infrastructure and existing retail amenity, house and land packages at Harkness Place are achieving strong price points. Single storey 3-bedroom detached houses (300sqm site area) are attracting prices at just over \$1m, whilst larger two-storey, 4-bedroom houses (490sqm site area) have attracted sale prices in the order of \$1.5m.



Emerging Housing Typologies

Demand for housing in the NWGA has historically been focused on low-density, detached housing product. Whilst detached housing typologies undoubtedly remain the preferred housing type for most buyer cohorts, persistent pressure on housing affordability, changing lifestyle preferences and demand have seen housing demand shift towards medium and higher-density housing formats in recent years. This trend aligns with the drivers behind declining lot sizes of detached products.

Medium-Density Housing

Medium-density housing typologies (i.e. townhouses) are now well established across the NWGA and are well-received by the market, particularly when delivered on a single lot that can be Torrens titled.

One of the more successful examples of medium-density development in the NWGA is at the 'Elara' estate in Marsden Park. A 176-townhouse release within the broader estate was marketed over the course of 2017-2018 and received swift market take-up, particularly from price sensitive First Home Buyers and young families. Resales of two-bedroom townhouses in this estate have been achieving pricing from \$700,000 to \$720,000, representing a sizeable discount to the entry price point of typical house and land packages across the NWGA.

In the Tallawong Station precinct, the first stage of the 'Parkland Estate' comprised 62, two-storey terraces with frontages to Cudgong Road. Released to market in 2017, recent resales shows these terraces (4-bedrooms) have attracted prices from \$1.1m to \$1.2m – akin to some new entry level house and land packages. This premium is a direct reflection of the strong amenity and public transport offering in the Tallawong Station Precinct.

There are now multiple medium-density projects currently being marketed within the NWGA, including several within the Riverstone, Riverstone East Stage 1-2, Box Hill and Tallawong precincts proximate the Study Area. These include:

- **Collection** at 49 Terry Road, Rouse Hill (Tallawong Precinct) which comprises circa 100, 3-bedroom townhouses.
- **Boddington Gardens Estate** at 17-21 Mason Road, Box Hill (Box Hill Precinct) which includes approximately 111 townhouses (mix of two and three storeys) and 325 apartments.
- **Riviera Residences** at 102-106 Cranbourne Street, Riverstone (Riverstone Precinct) which comprises circa 180 two-storey townhouses (mix of two and three bedrooms).

Multiple developer-builders who have secured sites are also progressing small scale (sub-10 dwellings) medium-density developments, predominantly duplexes and townhouses.

Market feedback suggests demand for medium-density housing in the NWGA is expected to persist and further strengthen over the coming decade as housing affordability and lifestyle preferences continue to drive purchasing activity towards smaller, denser housing formats.

High-Density Housing

Demand for high-density housing has been building in the NWGA for years, largely because of improved public transport accessibility with the completion of the Sydney Metro Northwest metro line and deteriorating housing affordability.

Some of the earliest apartment typologies in the NWGA were observed in the Alex Avenue (adjacent the existing Schofields train station) and Box Hill precincts. Market response to these developments has historically been relatively tempered as compared to low or medium-density housing typologies, with interest mostly observed from investors, first home buyers and price-sensitive purchasers. One and two-bedroom apartments have often been priced below \$600,000, reflecting the demand-value hierarchy of the NWGA - buyers are unlikely to purchase an apartment for a higher or equivalent price to that of a townhouse or detached house.

In more recent years, the Tallawong precinct has emerged as the focal point of apartment activity in the NWGA. Multiple medium-rise (4-7 storey) residential flat buildings have been developed in the precinct since 2019, with numerous projects currently being marketed for sale.

For instance, the initial stages of the Tallawong Station Precinct South (being marketed as **Tallawong Village**) immediately opposite Tallawong Metro Station are currently being marketed off-the-plan. One bedroom apartments are being offered for between \$540,000 to \$560,000, with two bedroom apartments from circa \$700,000. Large three bedroom apartments (over 100sqm internal) are attracting prices of \$935,000. These high prices are a direct reflection of strong amenity offering anticipated at the future Tallawong Town Centre and strong public transport connectivity.

Figure S2.5: Render Image of Tallawong Station Precinct South



Source: Realestate.com.au

Buyer Profile

Market investigations indicate the purchasing activity in new residential estates surrounding the Study Area has been fundamentally driven by owner occupiers, particularly First Home Buyers (couples and small families) and older, larger and more established families. Investors remain an important (albeit smaller) component of the local market, and are particularly active in townhouse and apartment projects.

A summary of the three key buyer cohorts actively seeking new housing proximate the Study Area is summarised below:

- **Local First Home Buyers**

Local First Home Buyers are amongst the most active buyer cohorts across the NWGA and across all housing typologies. Demand drivers for this cohort are mixed – many are seeking suitable housing options to accommodate new and/or growing families. Many local first home buyers have grown up and/or lived within the Western and Central Cities and value housing options proximate their existing family, social and employment networks.

Many First Home Buyers from sub-continent backgrounds (e.g. Southern Asia) seek larger households capable of accommodating multiple generations (e.g. primary couple and children with grandparents).

- **Upgraders and Established Families**

Arguably the largest component of the NWGA housing market, upgraders and established families are generally seeking newer housing options in order to 'settle down' for the longer-term. Many of these buyers are seeking larger housing options to accommodate extended families, and are willing to compromise on backyard size in order to secure more floor area (i.e. number of bedrooms).

- **Investors**

Investors remain a small but active market segment, particularly in the townhouse and apartment markets. Market investigations suggest these are a mix of locals and residents from elsewhere in Greater Sydney who are buoyed by the level of infrastructure investment planned for the NWGA.

Supply Activity

Historical Precinct Planning

In 2006, the State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (the Growth Centres SEPP) was adopted to provide the legislative framework to implement Sydney's two major growth areas – the NWGA and SWGA. The Growth Centres SEPP was informed by structure plans for both the NWGA and SWGA to inform the planning framework.

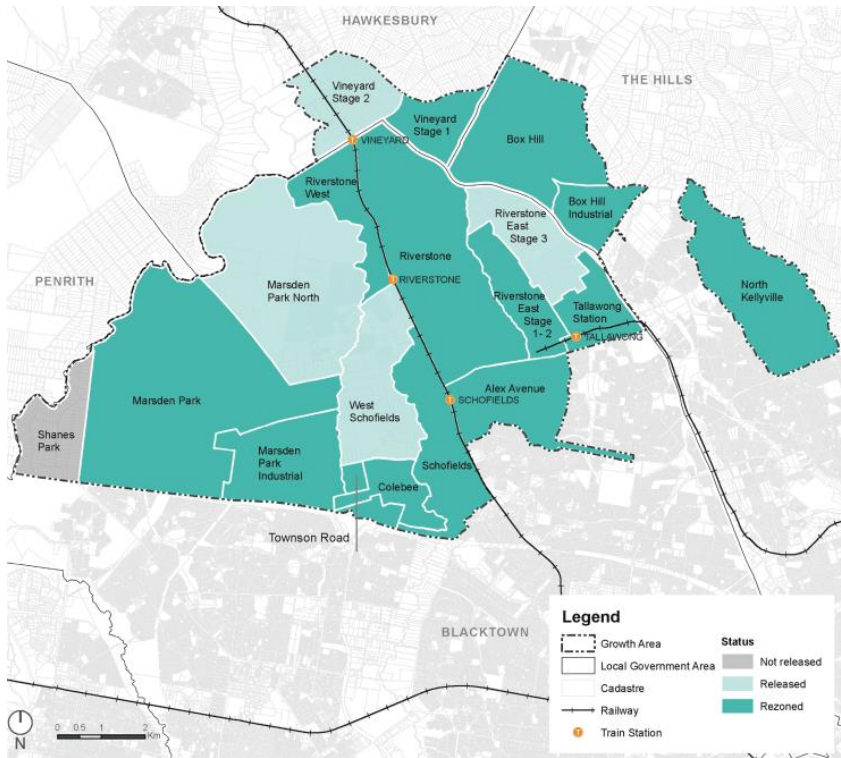
The Growth Centres SEPP identified 16 individual precincts across the NWGA, 12 located within the Blacktown LGA. Over the course of 2008-2013, nine of the NWGA's precincts were rezoned with a further four released for precinct planning.

A key feature of the Growth Centres SEPP was the inclusion of minimum residential density controls. These were adopted to ensure precinct dwelling targets were achieved. As a result of significant demand and sustained price growth across Greater Sydney's housing market for much of the past decade, the minimum densities identified in many of the NWGA's have been exceeded with planning authorities generally granting consent for developments if they do not contravene development controls.

In 2017, the NSW Government released the North West Priority Growth Area Land Use and Infrastructure Implementation Plan (LUIIP) to update the strategic framework that was initially established in the North West Structure Plan. The LUIIP introduced maximum dwelling densities for the NWGA's various precincts and revised housing projections by precinct.

The LUIIP identified an ultimate theoretical capacity of ~86,000 dwellings across the NWGA, with the 12 precincts located within the Blacktown LGA having the potential capacity for just over 60,600 dwellings. The Riverstone East (Stage 3) precinct (i.e. the Study Area) was identified as having capacity for some 2,300 dwellings.

Figure S2.6: Precinct Planning Status, NWGA



Source: DPE

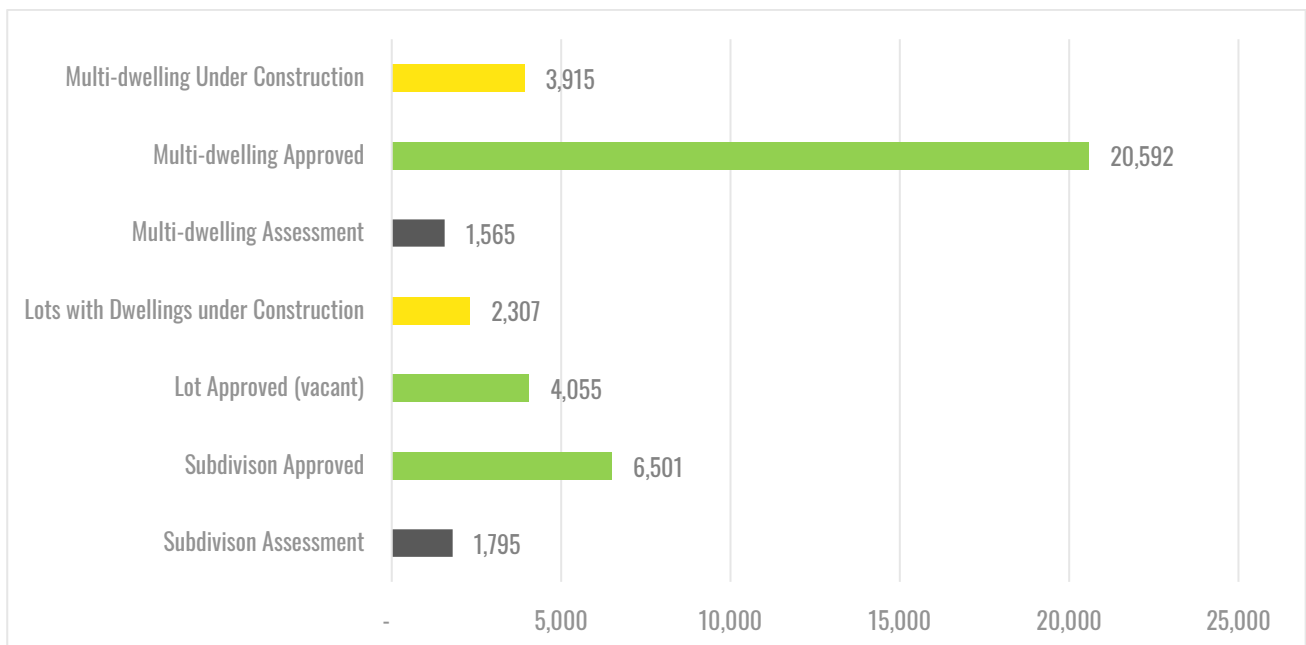
Development Pipeline

As at December 2021, just over **40,700 dwellings** were identified in the development pipeline across the NWGA’s various precincts (NSW DPE, 2023). Multi-dwelling housing (e.g. apartments) accounts for the majority of proposed supply at over two thirds of the pipeline (~26,000 dwellings).

Whilst the development pipeline is strong (equivalent to almost half of the theoretical capacity identified in the LUIIP), dwellings under construction account for just 16% of the total pipeline. The overwhelming majority of dwellings in the pipeline (circa 76%) have been approved however have not proceeded to construction.

Figure S2.7 illustrates the NWGA’s development pipeline by status and dwelling typology.

Figure S2.7: Development Pipeline by Stage and Typology, NWGA



Source: DPE (2023)

Almost 60% of the NWGA’s development pipeline is focused in three precincts – Marsden Park (23%), Box Hill (18%) and Tallawong Station (16%). All three precincts benefit from majority ownership, whereas other precincts are characterised by more fragmented ownership patterns.

A review of the development pipeline and recent completions activity clearly identifies precincts where actual supply will likely exceed the theoretical capacities identified in the LUIP. Prominent examples include Tallawong Station, Marsden Park and Alex Avenue.

Figure S2.8 compares historical dwelling completions and the development pipeline of each precinct against the theoretical dwelling capacities identified in the LUIP.

Figure S2.8: Development Pipeline and Completions v Announced Capacity, NWGA



Source: DPE (2023)

Dwelling Sizes and Mixes

A review of the development pipeline indicates that new residential subdivision being progressed across the NWGA are remaining focused on delivering smaller sized lots (sub-350sqm) given their broad market appeal to price-sensitive buyers. This trend appears consistent across all active precincts across the NWGA and aligns with the broader decline in lot sizes observed across Greater Sydney’s greenfield markets.

Analysis of new medium-density developments across the NWGA indicates a market focus on larger (3-bedroom and 4-bedroom) typologies. These are generally focused on lots sub 250sqm, with freestanding product proving highly popular and often marketed as ‘quasi houses’.

New apartment developments being proposed across the NWGA are generally focusing on larger style apartment product, with unit sizes exceeding the minimums outlined in the *NSW Apartment Design Guide*. This is unsurprising with developers needing to provide larger apartment product to generate interest against new medium-density typologies.

Population Projections

Official population projections in NSW are carried out by DPE’s Demography and Research Unit project population growth on a variety of demographic assumptions, including birth and fertility rates, mortality rates, migration levels and household formation patterns. These projections of population growth are divided by projected household occupancy rates to arrive at the number of dwellings impliedly required to accommodate the projected population.

The most recent population projections prepared by DPE were released in 2022. These projections were prepared prior to the release of the 2021 Census are relied upon the ABS 2020 Estimated Resident Population (ERP) as a ‘base’ starting point.

Three projection scenarios were released within the 2022 projections:

- **Main Series Projections:** the NSW Government’s ‘central scenario’ for population growth over the coming decades to 2041 and the standard set of population projections used in the State strategic and transport planning.
- **High Scenario Projections:** an alternative set of population projections based on higher levels of population growth.
- **Low Scenario Projections:** an alternative set of population projections based on lower levels of population growth.

DPE’s population projections were prepared State, Capital City and Statistical Area 2 (SA2) level and disaggregated into non ABS geographies including local government areas (LGAs).

SA2 Catchment Area

The smallest geography that DPE’s population projections were prepared for is SA2 – which generally comprises a collection of 1-2 suburbs. For the purposes of understanding the future resident and household profile of the Study Area, the Riverstone -Marsden Park SA2 has been selected for analysis. This SA2 encompasses much of the NWGA, including the Riverstone East (Stage 3) precinct.

Figure S3.1 illustrates the boundaries of the Riverstone -Marsden Park SA2 (referred to as the Catchment Area).

Figure S3.1: DPE Population Projections, Catchment Area



Source: Atlas Economics

Population Projections

Under the Main Series population projections, the Catchment Area is expected to reach a resident population of ~115,000 over the coming years to 2041. This would represent an increase of ~74,500 residents over the 2022-2041 period, equivalent to an average annual growth rate of 5.4%.

Under Low Scenario, the Catchment Area would reach a population of ~78,000 residents, reflecting average annual growth of 3.5%. In the High Scenario, a population of ~134,000 would be reached, reflecting average annual growth of 6.1%.

Table S3.1: Population Projections (Main, Low, High; 2016-2041), Catchment Area

Indicator	2021	2026	2031	2036	2041	Change (2016-41)
Main Series	40,498	52,607	70,783	91,877	115,080	74,582
Change (5-yr)		12,109	18,176	21,094	23,204	
Avg. Annual Growth		5.4%	6.1%	5.4%	4.6%	5.4%
Low Scenario	39,070	39,989	49,681	63,383	77,889	38,820
Change (5-yr)		920	9,692	13,702	14,506	
Avg. Annual Growth		0.5%	4.4%	5.0%	4.2%	3.5%
High Scenario	40,747	58,773	78,805	105,454	134,257	93,510
Change (5-yr)		18,026	20,032	26,649	28,802	
Avg. Annual Growth		7.6%	6.0%	6.0%	4.9%	6.1%

Source: DPE (2022)

Age Composition

The Catchment Area is expected to gradually age over the coming decades as younger households gradually age. The median age is expected to increase from 32.2 years in 2021 to 36.7 years in 2041. Whilst this aligns with the general ageing of the population expected across NSW, this still represents a markedly younger population than Greater Sydney.

Table S3.2: Age Composition Projections (2016-2041, Main Series), Catchment Area

Age Cohort (years)	2021	2026	2031	2036	2041
0-4	10.2%	8.2%	7.5%	7.3%	7.3%
5-9	9.6%	7.4%	6.7%	6.4%	6.3%
10-14	7.8%	8.3%	6.9%	6.5%	6.3%
15-19	5.1%	7.1%	7.3%	6.4%	6.1%
20-24	5.0%	5.2%	6.3%	6.4%	5.7%
25-29	6.9%	6.0%	6.0%	6.6%	6.4%
30-34	11.0%	8.5%	7.9%	7.7%	7.9%
35-39	13.2%	10.8%	9.6%	9.0%	8.7%
40-44	9.2%	11.1%	10.0%	9.3%	8.8%
45-49	6.2%	7.8%	9.1%	8.6%	8.2%
50-54	4.4%	5.6%	6.5%	7.5%	7.3%
55-59	3.2%	4.2%	4.9%	5.5%	6.3%
60-64	2.6%	3.2%	3.8%	4.2%	4.7%
65-69	1.8%	2.5%	2.8%	3.2%	3.5%
70-74	1.6%	1.6%	2.0%	2.3%	2.6%
75-79	1.1%	1.2%	1.2%	1.5%	1.7%
80-84	0.7%	0.8%	0.9%	1.0%	1.2%
85+	0.6%	0.5%	0.6%	0.8%	0.9%
Median Age	32.2	34.2	35.3	36.0	36.7

Source: DPE (2022)

Household and Family Composition

Under the Main Scenario, the number of households in the Catchment Area is expected to increase to just over 40,600 households – reflecting growth of ~27,800 households over 2021-2041.

Couples with families are anticipated to remain the dominant cohort over this period, accounting for the majority of new households. Smaller households are however anticipated to record strong growth, notably couple only and lone person households. This aligns with the gradual ageing of the population expected in the decades to 2041 and is indicative of the gradual evolution of new residential precincts into more established neighbourhoods.

Aligning with the gradual increase in smaller household types, the average household size in the Catchment Area is anticipated to decline from 3.17 persons per household in 2021 to 2.83 persons per household in 2041.

Table S3.3 shows the projected household composition across the Catchment Area over the 2021-2041 period.

Table S3.3: Household Composition Projections (2016-2041), Catchment Area

Household Type	2021	2026	2031	2036	2041	2021-2041
Couple only	2,379	3,389	5,044	7,003	9,149	6,770
Couple with children	6,291	8,039	10,577	13,615	16,954	10,663
Single parent	1,517	2,104	2,936	3,923	4,996	3,479
Other family	640	849	1,173	1,555	1,962	1,322
Lone person	1,677	2,428	3,574	4,993	6,639	4,962
Group	259	369	535	727	921	662
Total Households	12,763	17,179	23,839	31,817	40,621	27,858
Avg. Household Size	3.2	3.1	3.0	2.9	2.8	

Source: DPIE (2019)

Implied Dwelling Requirements

Under the Main Scenario, there is expected to be demand for an additional ~30,000 dwellings over the 2021-2041 period. This equates to an average annual dwelling requirement of some 1,500 dwellings.

The projected implied dwelling needs for the Catchment Area are shown in **Table S3.4**.

Table S3.4: Implied Dwelling Projections (2021-2041), Catchment Area

Indicator	2021	2026	2031	2036	2041	Change (2016-41)
Implied Dwelling Requirement	13,754	18,515	25,706	34,325	43,844	30,090
Change (5-yr)		4,761	7,191	8,619	9,519	
Avg. Annual Production Rate (No.)		952	1,438	1,724	1,904	
Avg. Annual Growth (%)		6.1%	6.8%	6.0%	5.0%	6.0%

Source: DPE (2022)

Population Forecasts

DPE's population projections are a potential scenario based on a variety of demographic assumptions. Projections differ from **forecasts**, which are intended to reflect an actual expectation of future activity.

To further inform the potential population characteristics of the Study Area in the coming decades, population forecasts prepared by demographers .id (2023) in partnership with Blacktown City Council have been examined.

A smaller set of geographies are used in the .id forecasts as compared to the DPE projections (i.e. smaller than SA2). A collection of forecast geographies has been selected for the forecast analysis which align with the defined Catchment Area.

Population and Dwelling Forecasts

Under the .id forecasts, the Catchment Area is expected to record **significantly** higher population growth than that anticipated in the DPE projections.

By 2041, the Catchment Area is expected to reach a total population of almost 263,000 residents – some 147,000 more residents than anticipated in the DPE projections.

Average annual growth of 7.6% is anticipated over the 2021-2041 period, compared to 6.1% in the DPE projections.

Key drivers of the difference between the .id forecasts and DPE projections include:

- **Different 2021 'starting points'** – the .id forecasts are based on an estimated resident population of 60,900 residents and ~20,100 dwellings for 2021 (based on recent ABS and Council data). This is higher than the 40,500 residents and ~13,700 dwellings adopted as the 2021 starting points in the DPE projections.
- **Greater levels of dwelling supply** – the .id forecasts suggest that an additional ~68,400 dwellings will be delivered across the Catchment Area over 2021-2041. This is some 38,000 more dwellings than projected to be required in the DPE projections.

Household Composition Forecasts

The .id forecasts indicate that the Catchment Area will record an additional 65,000 households over the 2021-2041 period – significantly higher than the ~27,800 additional households anticipated in the DPE projections.

Similar to the DPE projections, the .id forecasts suggest that the majority of new households in the Catchment Area will be couple families with children.

However, household forecasts anticipate that the average household size in the Catchment Area will remain elevated at above 3 persons per dwelling in the decades to 2041. Only a slight decline in household sizes is forecasts, declining from 3.18 persons per household in 2021 to 3.11 persons per household in 2041.

Table S3.5 summarises the household forecasts for the Catchment Area over the 2021-2041 period.

Table S3.5: Household Forecasts (2021-2041), Catchment Area

Household Type	2021		2031		2041		2021-2041
	No.	%	No.	%	No.	%	
Couple families with dependents	7,455	38.9%	25,152	40.6%	32,858	38.9%	25,403
Couples without dependents	3,235	16.9%	10,277	16.6%	14,442	17.1%	11,207
Group households	834	4.4%	2,761	4.5%	3,999	4.7%	3,165
Lone person households	1,768	9.2%	5,855	9.5%	8,787	10.4%	7,019
One parent family	2,287	11.9%	7,408	12.0%	11,160	13.2%	8,873
Other families	3,583	18.7%	10,497	16.9%	13,206	15.6%	9,623
Total Households	19,162	100.0%	61,950	100.0%	84,452	100.0%	65,290
Avg. Household Size	3.18		3.22		3.11		

Source: .id (2023)

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