



93 Bridge Road, Westmead

Economic Impact Assessment

93 Bridge Road Pty Ltd

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Executive Summary

BACKGROUND

93 Bridge Road Pty Ltd (atf Bridge Road Unit Trust) are progressing a Planning Proposal for development of a large infill site at 93 Bridge Road, Westmead (**the Site**) within the Parramatta local government areas (**LGA**). The Site falls within the defined boundaries of the Westmead Health and Innovation Precinct.

The Planning Proposal envisages delivery of 409 apartments within a 69m mixed use building with a Floor Space Ratio (FSR) of 3.6:1. In November 2024, a Rezoning Review Panel unanimously recommended that the Proposal be submitted for Gateway Determination.

Atlas Economics (**Atlas**) is engaged by 93 Bridge Road Pty Ltd (atf Bridge Road Unit Trust) to prepare an Economic Impact Assessment (**EIA**) to assess the need for the Proposal and examine the economic impacts should the Proposal be delivered.

Scope and Approach

Atlas is engaged by 93 Bridge Road Pty Ltd to undertake an EIA to assess the need for the Proposal and examine the economic impacts should the Proposal be delivered. The Study principally considers:

- The need for the land use mix proposed on the Site by having regard to:
 - Trends and drivers of demand for new housing on the Site, noting its position within the Westmead Health and Innovation Precinct.
 - Housing supply outlook in the Westmead Health and Innovation Precinct given existing lot patterns and land uses, the development pipeline and the likelihood of future supply.
 - Gaps in supply (if any) and the need for additional residential development opportunities.
- The economic impacts (direct and indirect) resulting from the Proposal during construction and those which are ongoing upon completion of the development.

The overarching objective of the Study is to examine the need for the Proposal and the potential housing role for the Site.

THE NEED FOR MORE HOUSING

Existing Demand

Like much of Australia's East Coast, demand for housing in Parramatta has outstripped supply in recent years, resulting in significant price escalation and historically low rental vacancy rates. All levels of Government recognise that Australia is facing a 'housing crisis', with the National Cabinet announcing a National Housing Accord in October 2023 with the ambitious aim of delivering 1.2 million new dwellings over 2024-2029.

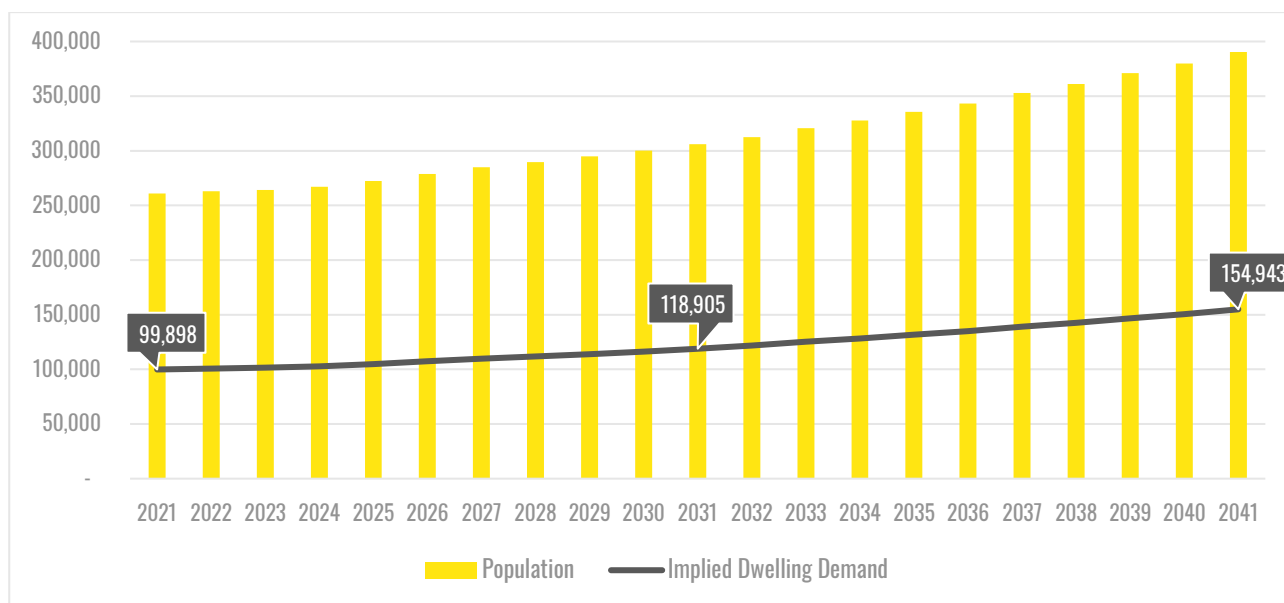
These housing fundamentals are playing out across Parramatta. As of December 2023, the median house price across the Parramatta LGA was recorded at \$1,710,000. This follows growth of over 125% over the past decade. Comparatively, strata properties have recorded much softer growth in the last 10 years, rising by 27% to reach just over \$680,000.

However, this has not mimicked in the rental market. Apartment rents have risen by over 41% in the 24-months to September 2023 to reach a historically high \$640 per week. House rents have also risen sharply (up 27% over this period), also reaching a record high of \$700 per week. The residential vacancy rate recorded in September 2023 was just 1.0%, the lowest levels observed since 2007-2008 during the Global Financial Crisis (SQM Research, 2024).

Future Demand

Based on population projections by the NSW Department of Planning, Housing and Infrastructure (DPHI), the Parramatta LGA's population will **grow by ~127,000 residents** by 2041. To support this level of population growth, there is an anticipated need for an **additional ~54,000 dwellings by 2041**. This is equivalent to over **2,800 dwellings per annum**.

Figure ES-1: Population Populations and Implied Dwelling Requirements (2021-2041), Parramatta LGA



Source: DPHI (2022a)

CAPACITY TO MEET HOUSING DEMAND

Housing supply forecasts are carried out by the DPHI at a regional and LGA level in the *Greater Sydney Urban Development Dashboard*. Three sets of forecasts of 5-year forecasts are prepared by DPHI – Low, Medium and High Scenarios.

A review of the most recent set of forecasts (prepared in 2022) for the 2022-2027 period shows that under each Scenario, the required rate of annual dwelling production (~2,800 dwellings) **will not** be achieved any year over the 2022-2027 period.

Accordingly, a growing cumulative undersupply is anticipated in the immediate term across the Parramatta LGA. This undersupply is expected to range from -4,400 dwellings in the High Growth Housing Supply Scenario and up to -6,200 dwellings in the Low Growth Housing Supply Scenario. This indicates a clear need for additional housing supply opportunities to be brought forward across the Parramatta LGA.

Table ES-1: Cumulative Undersupply under Various Supply Forecast Scenarios (2022-2027), Parramatta LGA

	FY2022-23	FY2023-24	FY2024-25	FY2025-26	FY2026-27	Total (2022-2027)
Low Growth Scenario						
Supply Forecast	305	1,235	2,020	2,100	1,950	7,610
Implied Dwelling Requirement	2,752	2,752	2,752	2,752	2,752	13,760
Cumulative Undersupply	-2,447	-3,964	-4,696	-5,348	-6,150	-6,150
Medium Growth Scenario						
Supply Forecast	355	1,430	2,095	2,370	2,385	8,635
Implied Dwelling Requirement	2,752	2,752	2,752	2,752	2,752	13,760
Cumulative Undersupply	-2,397	-3,719	-4,376	-4,758	-5,125	-5,125
High Growth Scenario						
Supply Forecast	405	1,640	2,195	2,560	2,605	9,405
Implied Dwelling Requirement	2,752	2,752	2,752	2,752	2,752	13,760
Cumulative Undersupply	-2,347	-3,459	-4,016	-4,208	-4,355	-4,355

Source: Atlas Economics/DPHI (2022a)/DPHI (2022b)

ROLE FOR THE PROPOSAL

This Study has concluded there is clear economic and market merit for the Proposal. This is based on:

- All levels of Government having identified that Australia is currently experiencing a 'housing crisis', with historically high dwelling prices and record low vacancy levels having significant negative social and economic impacts.
- The Parramatta housing market is facing pressure as demand is outstripping supply. Dwelling prices have risen markedly over the past decade, whilst apartment rents have surged by over 40% in the past 2-years alone.
- The most recent DPHI population projections for the Parramatta LGA indicate the over the coming decades to 2041, an additional ~54,000 dwellings will be required – equating to almost 2,800 dwellings per annum.
- DPHI's most recent housing supply forecasts indicate that for each year over the coming 5-years, the Parramatta LGA is unlikely to meet this implied dwelling target of 2,800 dwellings per annum. This will result in a cumulative undersupply of between -4,400 dwellings and -6,200 dwellings by 2028.

Whilst there are several areas identified for additional housing supply in the Westmead Place Strategy that would assist the Parramatta LGA achieve their implied dwelling target, not all of these areas will be redeveloped given feasibility constraints (e.g. Westmead East). Accordingly, the Site could play a role in providing more housing options in a location proximate to infrastructure, services and employment opportunities.

ASSESSMENT OF ECONOMIC IMPACTS

Economic impact modelling carried out in this Study estimates the Proposal would generate a **net increase in economic activity** during both the construction phase through a mix of direct and indirect (flow-on) activity, including:

- **\$341.7 million** in output (including \$198.9 million in additional direct activity)
- **\$130.1 million** in contribution to GRP (including \$56 million in additional direct activity)
- **\$73.7 million** in incomes and salaries paid to households (including \$37 million in additional direct income).
- **728 FTE jobs** (including 383 directly employed through construction activity on Site).

When operational, the Proposal is estimated to result in an annual **net increase in economic activity** with:

- **\$34.9 million** in additional output (including \$19.4 million in direct activity)
- **\$18.3 million** in additional contribution to GRP (including \$9.8 million in direct activity)
- **\$9.9 million** in additional incomes and salaries paid to households (including \$6 million paid directly)
- **90 additional FTE jobs** (including 53 additional FTE jobs that are directly related to activity on the Site)

The Proposal will also facilitate household expenditure impacts through delivery of new housing stock:

- **\$51.8 million** in additional total outputs (including \$30.7 million in additional direct output)
- **\$30.2 million** in additional total contribution to GRP (including \$18.5 million in direct contributions)
- **\$13.8 million** in additional total wages and salaries to local workers (includes \$8.6 million indirect additional income)
- **158 additional FTE jobs** (including 108 additional FTE jobs from direct impact)

Overall, the economic impacts estimated in this Study demonstrates the Proposal will deliver significant positive economic benefits, having the ability to contribute significantly to the Parramatta economy over the long-term.

Overall, the Proposal is considered to have clear economic and market merit and should be supported.

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1. Introduction

1.1 Background

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1.2 The Site and Proposal

The Site is a large infill site being approximately 8,663sqm in site area. It is currently improved with an aged housing estate comprising 31 detached and semi-detached single storey dwellings arranged around an internal access road.

Immediately adjoining the Site is 'Monarco Estate'; which comprises four clusters of multi-storey residential apartment towers (up to 16 storeys) set within landscaped gardens in a resort configuration with tennis courts and a swimming pool.

The Site is zoned R4 High Density Residential under the Parramatta Local Environmental Plan (**PLEP 2023**) with a permitted floor space ratio (FSR) of 1.7:1 and maximum building height of 20m. **Figure 1-1** depicts the formal boundaries of the Site and its immediate surrounds.

Figure 1-1: The Site



Source: NearMap/SixMaps

The Proposal

The Planning Proposal seeks the following amendments to the Parramatta LEP:

- Increase the maximum height of buildings from 20m to 69m.
- Increase the maximum floor space ratio (FSR) from 1.7:1 to 3.6:1.
- The amended controls would facilitate redevelopment of the Site to provide a high density mixed use development to complement the Westmead Health and Innovation Precinct.

Overall, the Planning Proposal envisages the delivery of a 20-storey mixed use building comprising 31,125sqm of gross floor area (GFA). Key features of the Planning Proposal include:

- 409 market apartments (~30,860sqm GFA).
- 264sqm of retail GFA at the ground floor.
- 40% of the Site being dedicated to public spaces, including a 2,470sqm pedestrian paved area and 978sqm of public open space and new shared streets.

Figure 1-2 depicts the Site Plan as envisaged in The Proposal.

Figure 1-2: Site Plan, The Proposal



1.3 Scope and Approach

Atlas is engaged by 93 Bridge Road Pty Ltd to undertake an EIA to assess the need for the Proposal and examine the economic impacts should the Proposal be delivered.

The Study principally considers:

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 - Trends and drivers of demand for new housing on the Site, noting its position within the Westmead Health and Innovation Precinct.
 - Housing supply outlook in the Westmead Health and Innovation Precinct given existing lot patterns and land uses, the development pipeline and the likelihood of future supply.
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- The economic impacts (direct and indirect) resulting from the Proposal during construction and those which are ongoing upon completion of the development.

The rest of the Study is structured as follows:

- Chapter 2 examines the Site's strategic context, namely its location and position with the Westmead Health and Innovation Precinct, the socio-economic profile of the immediate surrounding area and expected population and worker growth in the years to 2041.
- Chapter 3 investigates the drivers and nature of housing demand, and if the outlook for housing supply will meet projected demand.
- Chapter 4 considers the economic impacts that could result from the Proposal and concludes the economic merit of the Proposal.

The overarching objective of the Study is to examine the need for the Proposal and the potential housing role for the Site.

1.4 Assumptions and Limitations

Atlas acknowledges several assumptions and limitations associated with this Study.

- The macro-economic outlook is currently subject to significant uncertainty due to, *inter alia*, global and domestic inflation, labour shortages and various military conflicts.
- The 2021 Census was administered during the COVID-19 pandemic and at a time of widespread lockdowns across Australia's east coast. Activity recorded at this time may not be accurately representative of employment levels.
- Population and dwelling projections (by the NSW Department of Planning, Housing and Infrastructure) were released in early 2022 (post-COVID-19) but prior to release of Census 2021 data.
- Market research is carried out on a 'desktop' basis without the benefit of site surveys and internal inspections.
- Specific assumptions related to economic impact modelling are detailed in Chapter 4.

Notwithstanding the above, all due care, skill and diligence has been applied to this Study as is reasonably expected.

2. Strategic Context

2.1 Location

The Site is located within an established residential area midway between the suburbs of Westmead and Wentworthville. It is surrounded predominantly by a mix of low and medium rise residential flat buildings with a primary school (Mother Teresa Primary School) and two secondary schools (Catherine McAuley Westmead and Parramatta Marist High School) located immediately east.

The Wentworthville Town Centre is located approximately 780m to the west and accommodates a broad mix of retail and commercial services. A small supermarket (Coles) and mix of small retailers is also located some 300m north of the Site.

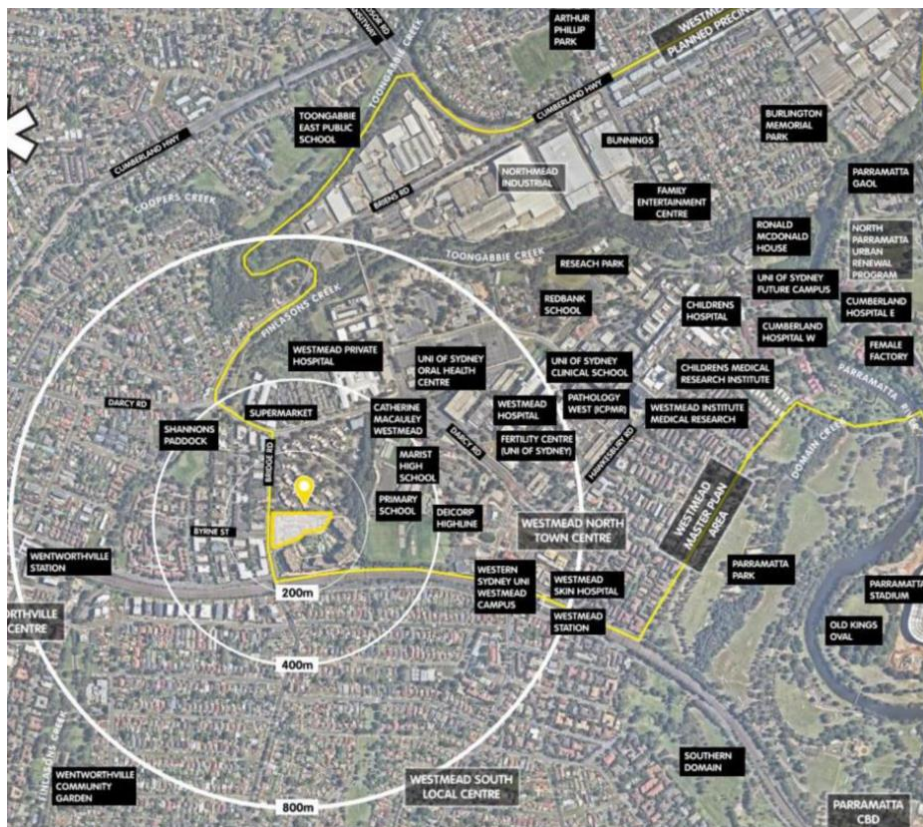
The Site is located just over 2km west of the Parramatta Central Business District (CBD) – a major Metropolitan Centre as defined in the Greater Sydney Region Plan (GCC, 2018). The Parramatta CBD is a major shopping destination, anchored by multiple shopping centres, national retailers and large dining and entertainment precinct.

The Site is well-served by public transport, with several public bus stops located immediately adjacent the Site. Wentworthville Train Station is ~775m to the west of the Site, with Westmead Train Station ~770m to the east. Both stations form part of North Shore and Western Line of the Sydney Train network, providing direct linkages to the Parramatta CBD, Sydney Olympic Park and Sydney CBD.

The Site is also within walking distance of several future light rail stops along the Parramatta Light Rail (Stage 1) which is due for completion in mid-2024. Additionally, the Site falls within 800m of the future Sydney Metro West Westmead Station which will provide additional linkages to Parramatta, Sydney Olympic Park, the Inner West and the Sydney CBD.

Importantly, the Site falls within the boundaries of the Westmead Health and Innovation Precinct which has Australia's largest concentration of hospital and health services. The precinct is anchored by Westmead Hospital, The Children's Hospital at Westmead, Cumberland Hospital, Westmead Private Hospital, Western Sydney University, University of Sydney and multiple specialist centres and medical research hubs. It accommodates over 26,000 jobs and 5,400 students, with the worker and student population set for significant growth in the coming decades (examined further in Chapter 3).

Figure 2-1: Location Map



Source: Hatch RobertsDay

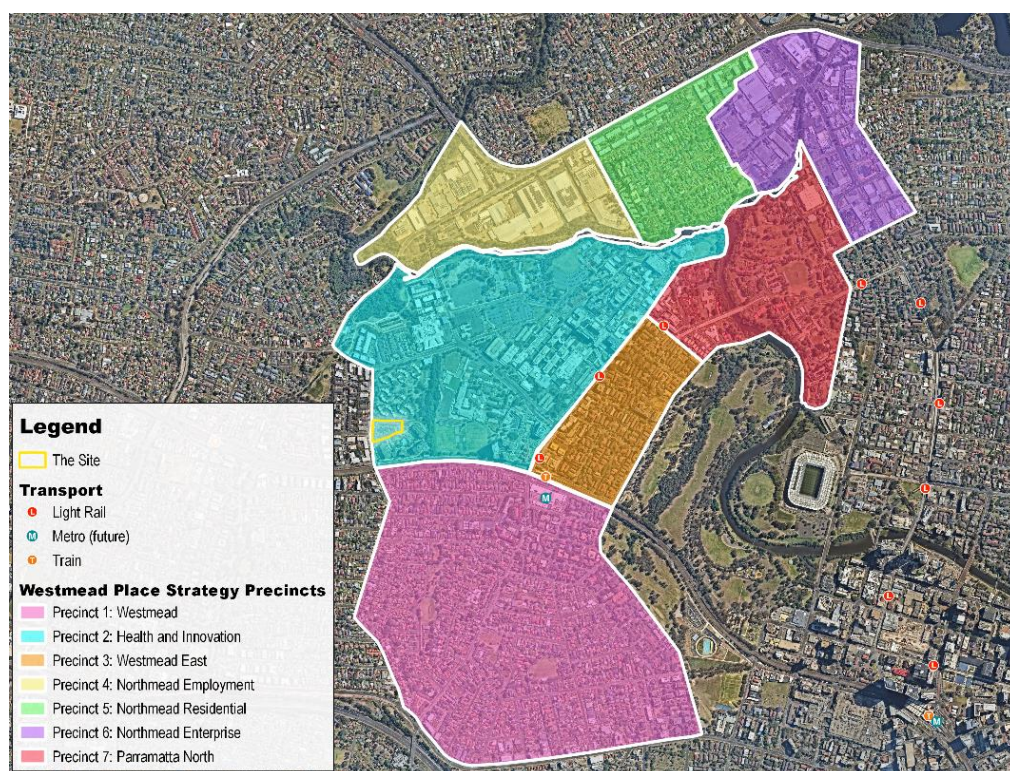
2.2 Westmead Place Strategy 2036

Owing to the significant amount of infrastructure investment underway in Westmead (including the Westmead Hospital expansion, Parramatta Light Rail, Sydney Metro West, etc), the NSW Government has identified a vision for Westmead to be Australia's premier health and innovation distribution - given its potential for economic growth and job creation focused on health care, medical research and commercialisation, education and training.

The *Westmead Place Strategy 2036* (the Place Strategy) builds upon this vision and includes a structure plan to guide detailed land use planning within the Precinct over the coming decades. The Place Strategy was finalised in August 2022 and is supported by a s9.1 Ministerial Direction.

The Place Strategy identifies seven 'sub-precincts'. The Site falls within the 'Health and Innovation Sub-Precinct (shown in Figure 2-2), which is anchored by most of the health, research, innovation and education facilities within Westmead.

Figure 2-2: Westmead Place Strategy Precinct Map



Source: Atlas Economics/Nearmap

Supporting the growth and expansion of medical, education and research activities is the core objective for the Health and Education sub-precinct. Specific land use and built form principles include:

- Create an active interface along Toongabbie Creek;
- Strengthen green corridors;
- Provide activation along Hawkesbury Road;
- Built form should address activity nodes (notably at the junction of Hawkesbury Road and Darcy Road);
- Reinforce heritage character within the major gateway at Westmead;
- Manage transition between land uses through built form character
- Create mixed use interface along Darcy Road;
- Ensuring a permeable environment that integrates with open space.

The Site is identified in the Place Strategy as 'existing residential' and does not include any site-specific objectives or land use principles. The Place Strategy does note that residential accommodation in the Health and Education sub-precinct can 'only be considered in conjunction with key worker housing accommodation at 105 Bridge Road'. This site is the adjoining property to the north of the Site and is improved with the State Government-owned 'Nurses Quarters Estate'.

2.3 Demographic Profile

The basis of demographic analysis is the Australian Bureau of Statistics (ABS) Census. The ABS define a series of geographies known as Statistical Areas (SA) which vary in size and range from SA4s (large regions) to SA1s (often smaller than a suburb). Census data can be extracted based on these statistical areas to understand local resident profiles.

A Catchment Area which broadly aligns with the Health and Innovation Sub-Precinct (Sub-Precinct 2) has been selected for the purposes of analysis. Whilst this Catchment Area also includes the adjoining Westmead East Sub-Precinct (Sub-Precinct 3), it is considered useful in understanding the demographic profile of the area surrounding the Site.

Understanding the current and historical socio-demographic profile of residents in the Catchment Area is useful in understand the types of residents currently attracted to housing proximate the Site.

A review of the socio-economic profile of the Study Area using 2021 Census data shows:

- A **large and dense existing population**, with ~8,300 residents reflecting a population density of ~53.8 persons/ ha. This makes it one of the most densely populated areas in the Parramatta LGA.
- The **population has been declining since 2017**, with 1,450 residents recorded over 20167-2022 (reflecting average annual growth of -3.2%). This is the opposite to that observed in the Parramatta LGA (which grew by 1.4% per annum).
- A **large proportion of young adults and middle-aged residents**, with 57% aged between 25 and 49 years old.
- An **ethnically diverse community**, with 69%% of residents born overseas (particularly from India, Nepal, Sri Lanka and Bangladesh). This is markedly higher than both the Parramatta LGA (53%) and Greater Sydney (39%).
- A **large number of couple only and lone person households**, with accounting for 47% of all households.
- **Smaller average household sizes** at 2.4 persons per household, compared to 2.6 in the Parramatta LGA.
- A **highly qualified resident pool**, with 62% of residents holding a Bachelor degree or higher.
- A high proportion of working residents employed in the **Health Care and Social Assistance and Professional Services** sectors, accounting for 21% and 16% of all working residents respectively.
- A **predominantly high density housing market**, 82% of dwellings being apartments and flats.

Figure 2-3 illustrates some of the key socio-demographic characteristics of the Catchment Area as at the 2021 Census.

Figure 2-3: Common Socio-Demographic Characteristics, Westmead Catchment Area



Source: ABS (2022)/Atlas Economics

2.4 Employment Profile

Similar to demographic analysis, the ABS Census provides the basis for analysing the employment profile of small areas. The geographies defined by the ABS for the small area analysis are known as 'Destination Zones' (DZs).

A selection of DZs which broadly align with the boundaries of the Westmead Health and Innovation Precinct as defined in the *Westmead Place Strategy 2036*. This will enable a broad understanding of industries and worker profile of the area surrounding the Site.

2.4.1 Industry Profile

As at the 2021 Census, the Westmead Health and Innovation accommodated almost 20,000 jobs (19,924 jobs). The Precinct has grown considerably over the past decade, with an additional ~4,900 workers (increase of 33%).

Unsurprisingly, the Health and Education sectors account for the majority of employment in the Precinct. The Health Care and Social Assistance industry is the Precinct's major employer with just over 14,400 workers (72.3% of the total). This is followed by Manufacturing (3.8%), Education and Training (3.7%) and Professional, Scientific and Technical Services (3.1%).

The Health and Education sectors (predominantly Health Care and Social Assistance) has been the primary driver of growth in the past decade, increasing by ~3,900 jobs. This equates to ~80% of total employment growth across the Precinct.

Table 2-1: Employment by Industry (2011-2021), Westmead Health and Innovation Precinct

Industry	2011		2016		2021	
	No.	%	No.	%	No.	%
ANZSIC						
Agriculture, Forestry and Fishing	5	0.0%	8	0.0%	7	0.0%
Mining	-	0.0%	3	0.0%	3	0.0%
Manufacturing	1,058	7.1%	795	4.7%	759	3.8%
Electricity, Gas, Water and Waste Services	16	0.1%	14	0.1%	7	0.0%
Construction	108	0.7%	214	1.3%	238	1.2%
Wholesale Trade	241	1.6%	106	0.6%	157	0.8%
Retail Trade	263	1.8%	309	1.8%	456	2.3%
Accommodation and Food Services	265	1.8%	320	1.9%	498	2.5%
Transport, Postal and Warehousing	353	2.4%	112	0.7%	497	2.5%
Information Media and Telecommunications	20	0.1%	17	0.1%	29	0.1%
Financial and Insurance Services	47	0.3%	24	0.1%	48	0.2%
Rental, Hiring and Real Estate Services	84	0.6%	93	0.5%	89	0.4%
Professional, Scientific and Technical Services	382	2.5%	488	2.9%	613	3.1%
Administrative and Support Services	70	0.5%	210	1.2%	243	1.2%
Public Administration and Safety	446	3.0%	434	2.6%	233	1.2%
Education and Training	671	4.5%	736	4.3%	745	3.7%
Health Care and Social Assistance	10,566	70.5%	12,204	72.1%	14,402	72.3%
Arts and Recreation Services	59	0.4%	34	0.2%	37	0.2%
Other Services	261	1.7%	271	1.6%	280	1.4%
Inadequately described/Not Stated	67	0.4%	536	3.1%	583	2.9%
Total	14,982	100.0%	16,928	100.0%	19,924	100.0%
BIC						
Population Serving	956	6.4%	1,148	6.8%	1,509	7.6%
Knowledge Intensive	1,049	7.0%	1,266	7.5%	1,255	6.3%
Health and Education	11,237	75.0%	12,940	76.4%	15,147	76.0%
Industrial	1,673	11.2%	1,038	6.1%	1,430	7.2%
Inadequately Described/Not stated	67	0.4%	536	3.2%	583	2.9%
Total	14,982	100.0%	16,928	100.0%	19,924	100.0%

Source: ABS (2022, 2017, 2012)

2.4.2 Occupation Profile

Aligning with the nature of local industry activity, workers across the Westmead Health and Innovation Precinct are predominantly Professionals (52% of all workers). This is followed by Clerical and Administrative Workers (12%), Community and Personal Service Workers (9.6%) and Managers (6.9%). This reflects a highly qualified, 'white collar' workforce.

Table 2-2: Employment by Occupation (2011-2021), Westmead Health and Innovation Precinct

Occupation	2011		2016		2021	
	No.	%	No.	%	No.	%
Managers	938	6.3%	1,080	6.4%	1,374	6.9%
Professionals	7,757	51.8%	8,796	52.0%	10,382	52.1%
Technicians and Trades Workers	888	5.9%	1,029	6.1%	1,068	5.4%
Community and Personal Service Workers	1,214	8.1%	1,584	9.4%	1,914	9.6%
Clerical and Administrative Workers	2,181	14.6%	2,310	13.6%	2,398	12.0%
Sales Workers	383	2.6%	446	2.6%	540	2.7%
Machinery Operators and Drivers	560	3.7%	431	2.5%	762	3.8%
Labourers	926	6.2%	995	5.9%	1,144	5.7%
Inadequately described/Not Stated	88	0.6%	233	1.4%	324	1.6%
Total	14,982	100.0%	16,928	100.0%	19,924	100.0%

Source: ABS (2022)

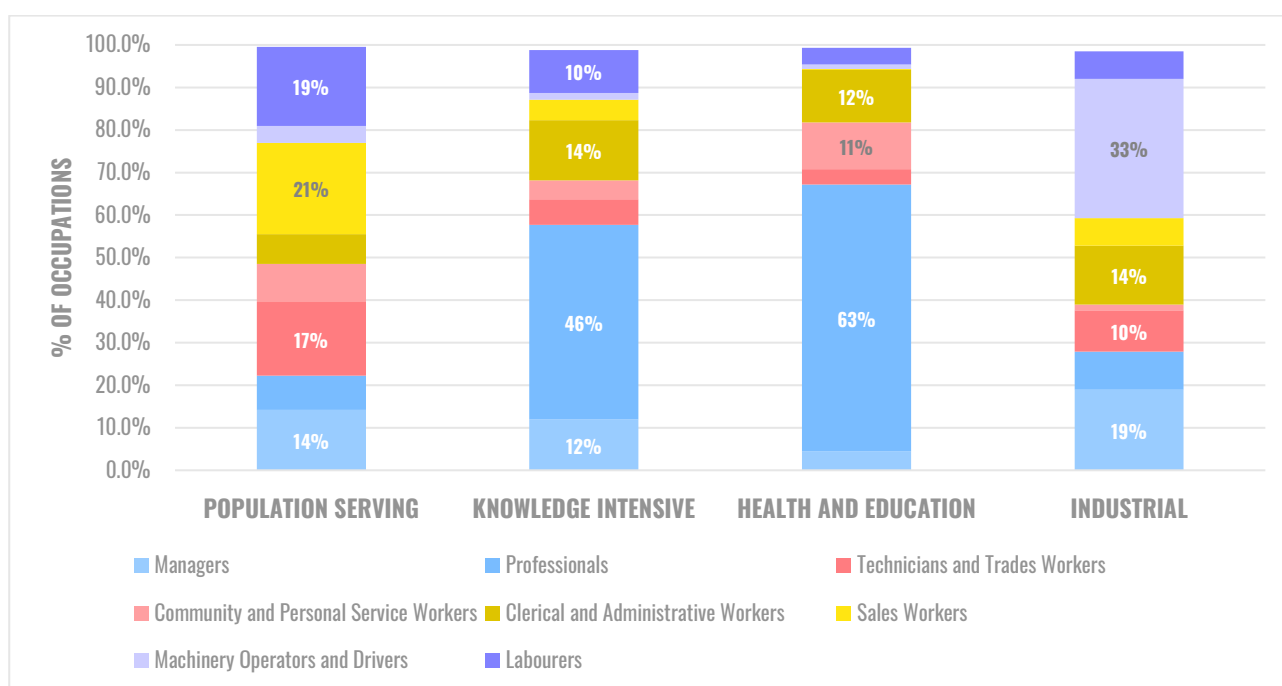
Occupation by Industry

When analysing the occupation profile in further detail, it is evident that most Professionals, Clerical and Administrative Workers and Community and Personal Service Workers are employed in the Health and Education sectors. For instance:

- Of the ~10,400 Professionals working in the Precinct, 91% are employed in the Health and Education sectors.
- Of the ~2,400 Clerical and Administrative Workers in the Precinct, 78% work in Health and Education industries.
- Of the ~1,900 Community and Personal Service Workers in the Precinct, 87% work in Health and Education industries.

Interestingly, 'blue collar' like labourers are also predominantly employed in the Health and Education sectors. Of the ~1,100 labourers recorded in 2021, more than 51% are employed in the Health and Education sectors. This is reflective of the broad mix of occupations and skills needed to support the health and education anchors of the Precinct.

Figure 2-4: Employment by Occupation and Industry (2021), Westmead Health and Innovation Precinct



Source: ABS (2022)

2.4.3 Employment by Industry and Income

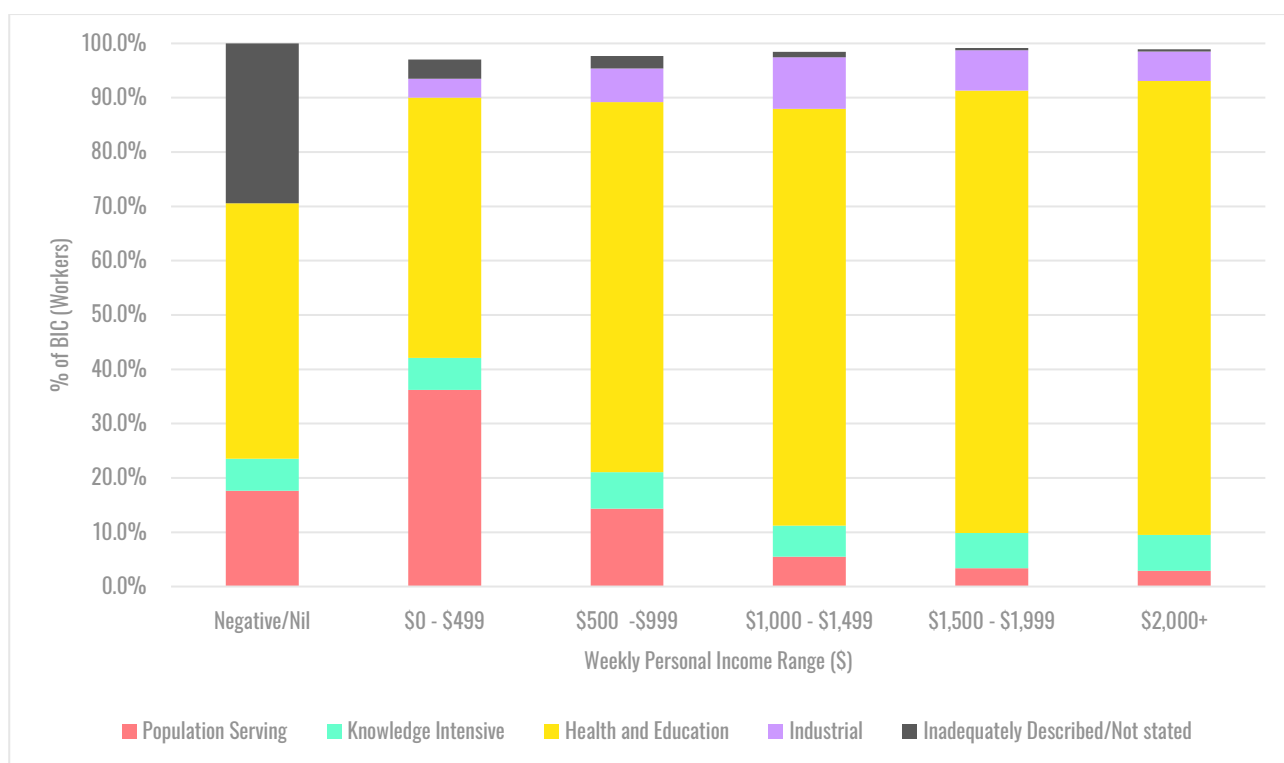
Analysis of income levels across the Westmead Health and Innovation Precinct provides further insight into the local worker profile. Key findings from this analysis include:

- 29% of workers earned between \$1,000 and \$1,499 per week (~\$52,000 and ~\$78,000 per annum).
- Around 23% recorded incomes between \$1,500 and \$1,999 per week (~\$78,000 to ~\$104,000 per annum).
- Almost a quarter (24.4%) earned over \$2,000 per week (>\$104,000 per annum).
- Approximately 23% of workers (~4,600 workers) earned below \$52,000 per annum.

Under the *Environmental Planning and Assessment Act 1979*, Affordable Housing is available to households within very low, low and moderate incomes bands. As at 2021, single adults earning \$67,800 or less would be eligible for Affordable Housing in NSW. Based on the income analysis, this suggests there could be up to ~7,700 workers in the Westmead Health and Education Precinct eligible for Affordable Housing (assuming they were the sole household income earner).

Further analysis shows that almost 68% (~5,200 workers) the majority of these eligible workers (i.e. those earning \$67,800 or less) are employed in the Health and Education sectors.

Figure 2-5: Employment by Industry and Income (2021), Westmead Health and Innovation Precinct



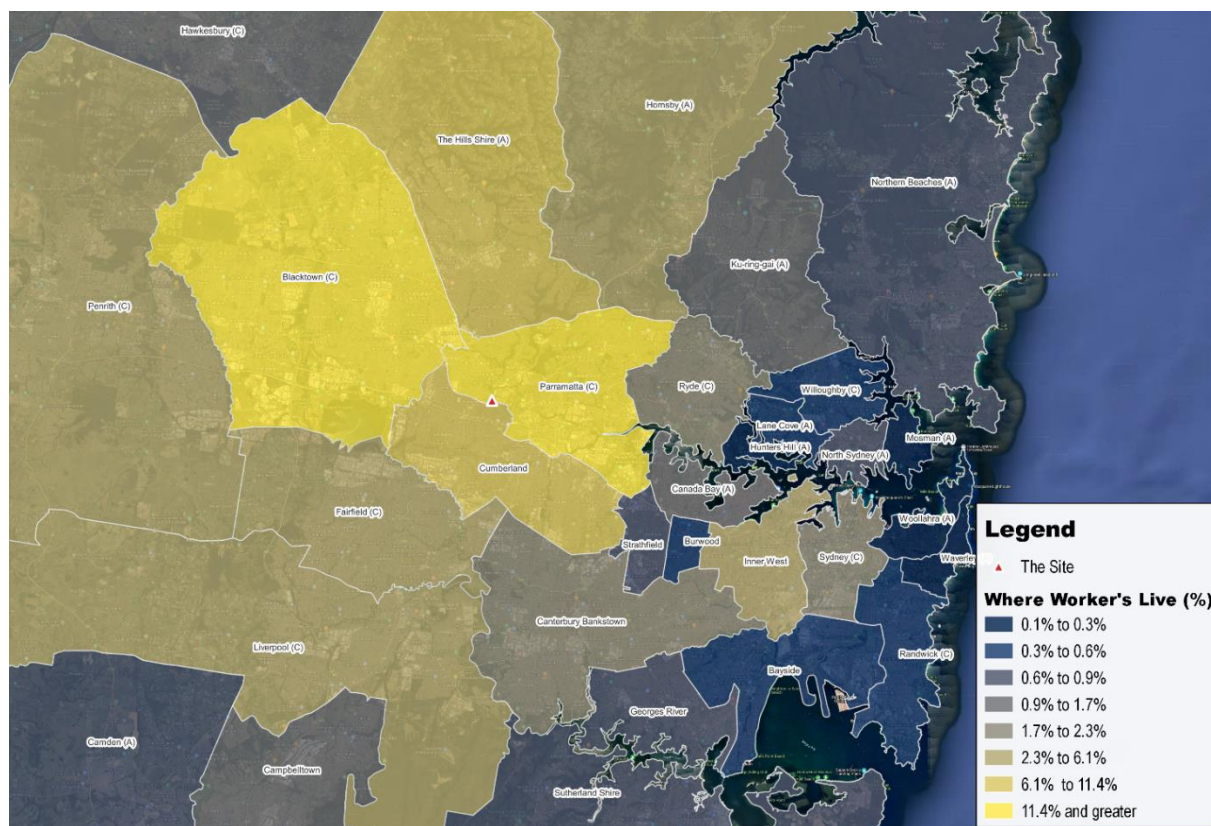
Source: ABS (2022)

2.4.4 Where Worker's Live

As at 2021, approximately 60% of workers in the Westmead Health and Innovation Precinct lived in the surrounding LGAs of Blacktown (19.6%), Parramatta (18.8%), Cumberland (11.4%) and The Hills Shire (9.5%). This represents ~11,800 workers.

The other major areas of residence include other LGAs across Western Sydney, including Penrith, Fairfield and Liverpool. Very few workers reside in the eastern areas of Greater Sydney, which are characterised by markedly higher housing costs.

Figure 2-6: Where Workers Live by LGA (2021), Westmead Health and Innovation Precinct



Source: ABS (2022)/Atlas Economics

Where Low Income Workers Live

When cross tabulating where workers live against income levels, it is evident that the majority of workers who would be eligible for Affordable Housing also reside in Western Sydney. The analysis shows that of the ~7,700 workers in the Westmead Health and Education earning \$67,800 per annum or less:

- ~1,800 (24%) reside in the Blacktown LGA;
- ~1,600 (21%) reside in the Parramatta LGA;
- ~1,200 (16%) reside in the Cumberland LGA;
- ~550 (7%) reside in the Penrith LGA.

Collectively, around 68% of all low and moderate income workers in the Precinct reside in these LGAs.

The number of low and moderate income workers in the Precinct which reside in the Parramatta LGA grew over the 2016-2021 period, increasing by some 40%. This is considered reflective of the significant amount of new housing supply brought online across various parts of the Parramatta LGA during this period.

Despite this growth however, the Blacktown LGA remains the largest concentration of low and moderate income workers in the Precinct, reflective in part of lower housing costs in the Blacktown LGA. As at August 2021 (the month of the 2021 Census), the Parramatta LGA recorded a median unit price and weekly rent of \$690,000 and \$440 respectively (CoreLogic, 2021). This contrasts with \$605,000 and \$400 in the Blacktown LGA. For workers on low to moderate incomes, these are substantially more affordable housing costs.

2.5 Employment Projections

Employment projections in NSW are carried out by Transport for NSW's Transport, Performance and Analytics (TPA) division. The NSW TSP 2022 (TSP2022) projections are a long-term view of the future patterns of employment growth.

These projections are carried out at a large, regional level and disaggregated into small geographies known as Travel Zones (TZs). TSP2022 are an important input into the NSW Governments Common Planning Assumptions and consider a series of major infrastructure, housing and employment projects.

Major projects included in TSP22 relevant to the Proposal are:

- Sydney Metro West.
- Parramatta Light Rail (Stage 1).
- The expansion of Westmead Hospital.
- The future University of Sydney Westmead Campus.

Growth in the Study Area as envisaged in the Westmead Place Strategy *was not* considered in TSP2022.

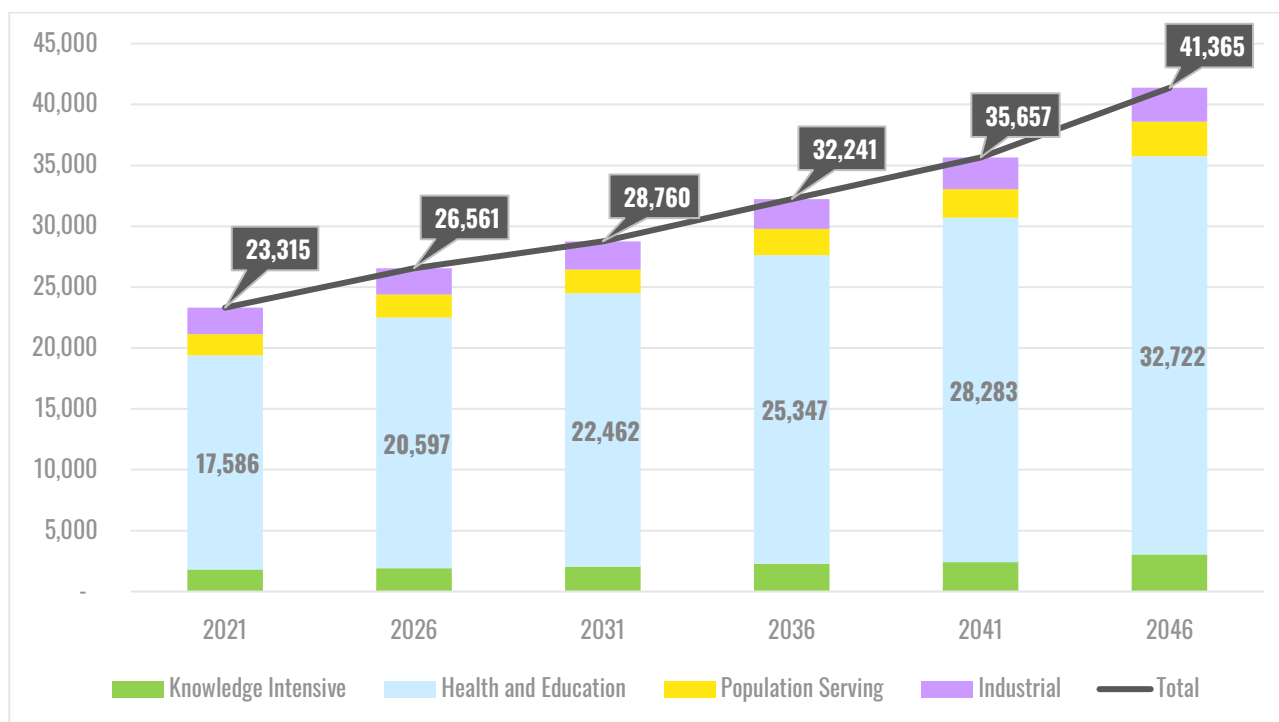
For the purposes of this Study, a selection of TZs which broadly align with the boundaries of the Westmead Health and Innovation Precinct were selected for analysis¹.

The Westmead Health and Innovation Precinct is poised for significant employment growth over the coming 25 years to 2041 with the Precinct almost doubling in size from ~23,300 workers in 2021 to 41,400 workers in 2046.

Whilst growth is anticipated across almost all industries, the majority of growth is unsurprisingly expected from the Health and Education sectors with an additional ~15,100 workers by 2046. Much of this growth will be linked to the expansion of the Westmead Hospital and development of the future University of Sydney Westmead Campus.

As demonstrated in Chapter 2, the Health and Education sectors comprise a diverse workforce with a mix of income levels, with the majority of workers living in the immediate area (Blacktown, Parramatta and Cumberland LGAs). Accordingly, there will be a need for suitable housing options to cater to the future growth of the Health and Education sectors in Westmead.

Figure 2-7: Projected Employment Growth (2021-2046), Westmead Health and Innovation Precinct



Source: TSP (2022)

¹ The following Travel Zones were selected for analysis: 1007, 1009, 1011, 1013, 1018, 1036, 1037, 1043, 1044, 1045, 1046, 1047, 1048.

2.6 Implications for the Site

Based on the analysis of the Site's strategic context and socio-economic profile, key implications of relevance to the Proposal which can be drawn from this Chapter include:

- The Site is highly accessible and surrounded by a diverse mix of amenity, retail uses, infrastructure and services. From a locational perspective, it is considered highly suitable for high-density residential uses as envisaged in the Proposal.
- The Site falls within the boundaries of the Westmead Health and Innovation Precinct as defined in the Westmead Place Strategy 2036. Specifically, the Place Strategy defines the Site as falling within the Health and Innovation Sub-Precinct.
- The Place Strategy envisages retention of residential land uses on the Site.
- The resident profile of the area immediately surrounding the Site is characterised by as young, ethnically diverse, highly educated and generally working in Health and Education and Knowledge Intensive sectors.
- The Health and Innovation Sub-precinct is the engine room of the broader Westmead Health and Innovation Precinct, accommodating almost 20,000 jobs in 2021.
- Based on an analysis of worker incomes, around ~7,700 workers in the Westmead Health and Innovation Sub-Precinct could be eligible for Affordable Housing. Around 68% of these workers are employed in Health and Education sectors.
- The largest number of workers (including low and moderate income workers) in the Health and Innovation Sub-precinct reside in the Blacktown LGA, followed by the Parramatta LGA. This is conceivably influenced by housing costs, with the Blacktown LGA notably more affordable than Parramatta.
- Looking forward, the Westmead Health and Innovation Precinct is poised to almost double in size by 2041 with an additional 18,100 workers (the majority within the Health and Education sectors). Accordingly, there will be a need for suitable housing options to cater to the future growth of the Health and Education sectors in Westmead.

Collectively, these findings affirm the strategic economic merit for the land uses envisaged in the Proposal. As the Westmead Health and Innovation Precinct, along with the broader Parramatta LGA, continue to grow, the need for more housing in Westmead is expected to further increase. This need is explored in detail next.

3. Need for Housing

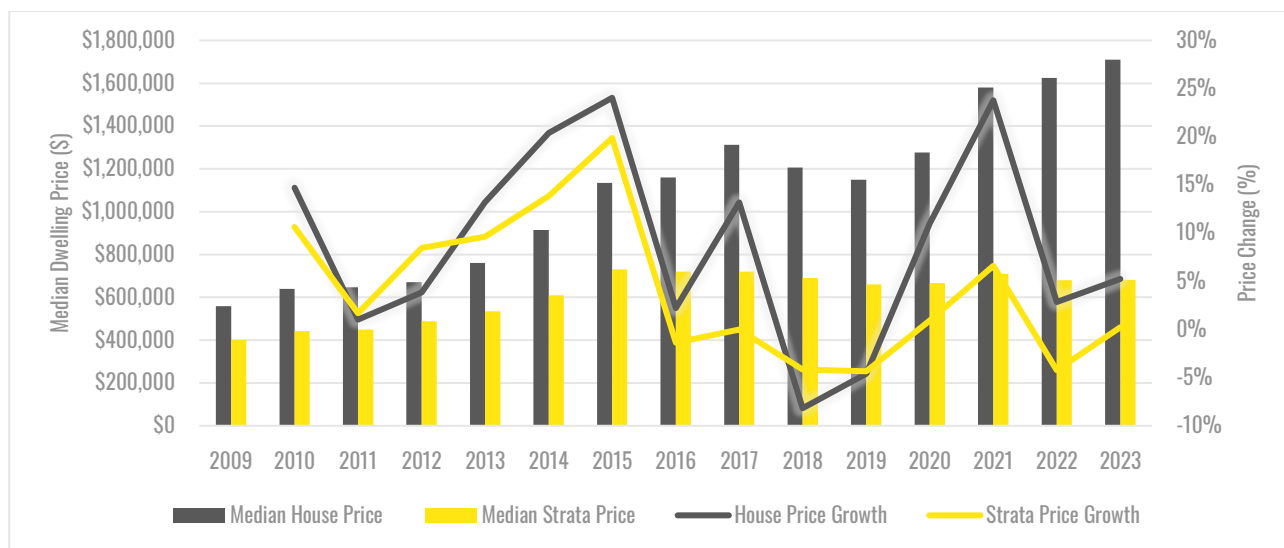
3.1 Existing Demand

Like much of Australia's East Coast, demand for housing in Parramatta has outstripped supply in recent years, resulting in significant price escalation and historically low rental vacancy rates. All levels of Government recognise that Australia is facing a 'housing crisis', with the National Cabinet announcing a National Housing Accord in October 2023 with the ambitious aim of delivering 1.2 million new dwellings over 2024-2029.

These housing fundamentals are playing out across Parramatta. As of December 2023, the median house price across the Parramatta LGA was recorded at \$1,710,000. This follows growth of over 125% over the past decade. Comparatively, strata properties have recorded much softer growth in the last 10 years, rising by 27% to reach just over \$680,000. Notably, strata values have remained largely unchanged in recent years as Parramatta has benefited from increased apartment supply.

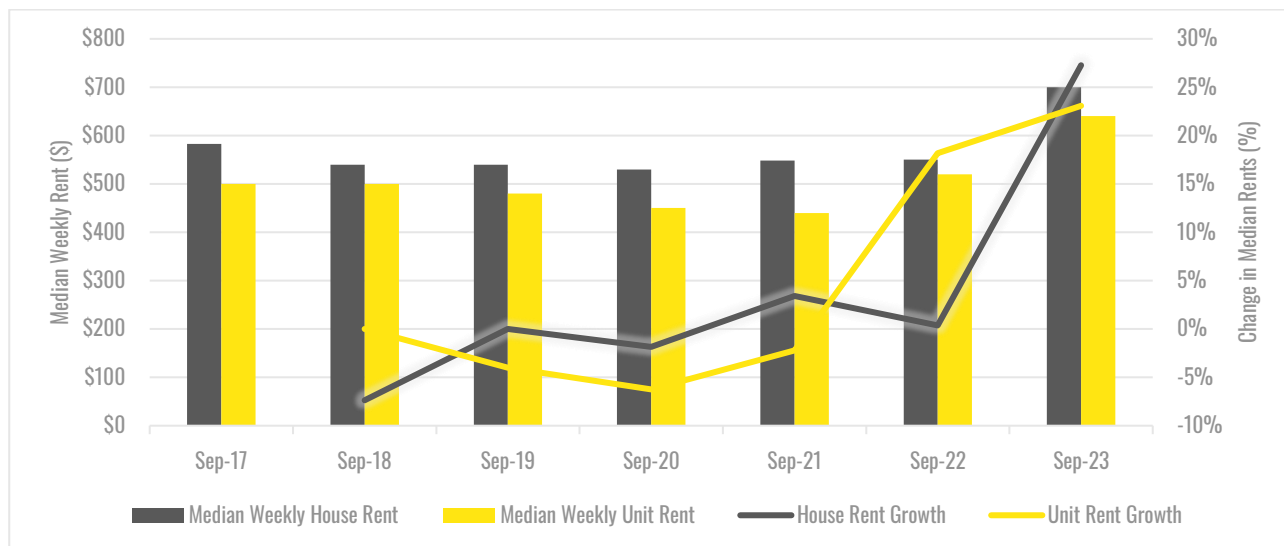
Despite the soft market conditions in the apartment market, apartment rents have risen by over 41% in the 24-months to September 2023 to reach a historically high \$640 per week. House rents have also risen sharply (up 27% over this period), also reaching a record high of \$700 per week. The residential vacancy rate recorded in September 2023 was just 1.0%, the lowest levels observed since 2007-2008 during the Global Financial Crisis (SQM Research, 2024).

Figure 3-1: Dwelling Values (Dec 2009-Dec 2023), Parramatta LGA



Source: PriceFinder (2024)

Figure 3-2: Weekly Dwelling Rents (Sep 2017-Sep 2023), Parramatta LGA



Source: DCJ (2024)

Growing Demand for Higher Density Housing

Over the last decade, there has been a surge in demand for medium and high-density housing formats. This demand has spread from the Eastern Harbour City with apartment typologies now viable in the Central River City and parts of the Western Parkland City. This is directly observed in the Parramatta LGA, notably in Westmead.

Numerous factors have contributed to this increasing demand for higher density housing across Greater Sydney:

- **Persistent Housing Affordability Pressure**

The cost of standalone homes in many parts of Greater Sydney has risen to the point where they are no longer affordable for a large number of households.

- **Shifting Lifestyle Preferences**

Many households now prefer smaller housing formats due to changes in their life stages (like downsizing) or a desire for residences with lower maintenance requirements. These households often prioritise living in high-amenity areas, such as the inner city and its fringes, even if it means sacrificing dwelling size.

- **Migration Patterns**

A significant portion of new migrants come from countries where living in medium and high-density housing is more common and accepted, thus influencing their preferences in the Australian market.

Proximity to public transport, open space, school infrastructure and employment make the Site an ideal location for a high-density residential uses (above that currently permitted in the planning framework).

3.2 Future Demand

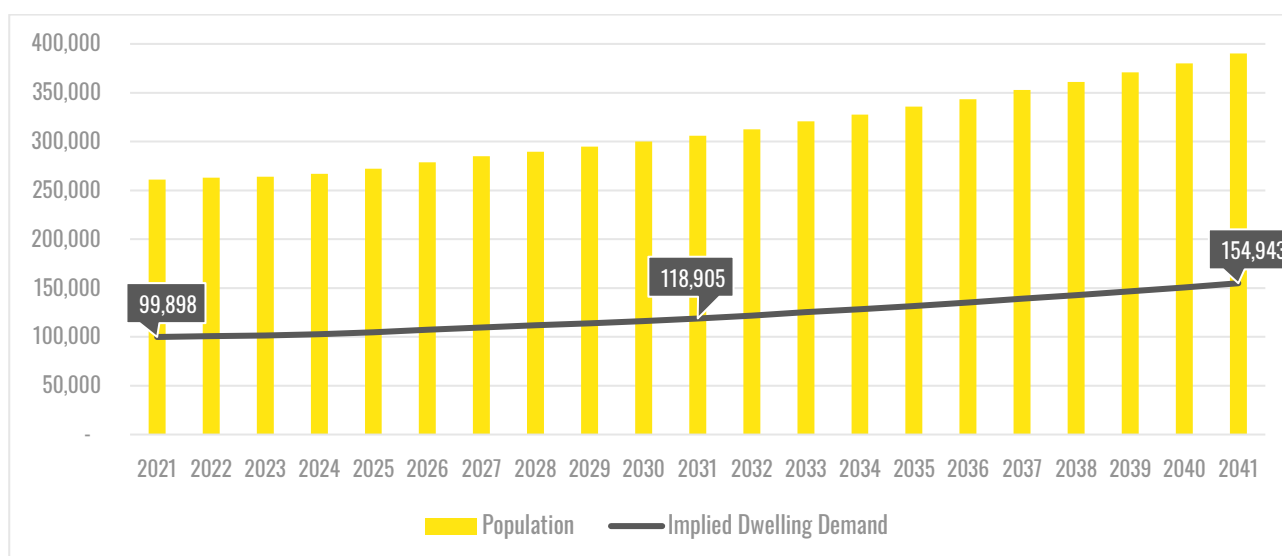
Official population and demographic projections in NSW are carried out by the NSW Department of Planning, Housing and Infrastructure (DPHI), who project population growth on a mix of demographic assumptions (e.g. birth and fertility rates, mortality rates, migration levels and household formation patterns). These projections of population growth are divided by projected household occupancy rates to assess the number of dwellings required to accommodate this growth.

To understand the Site's role in accommodating housing demand, projections were examined for the Parramatta LGA.

Based on DPHI population projections, the Parramatta LGA's population will **grow by ~127,000 residents** by 2041. This rate of growth (2% per annum) is markedly faster than that expected across Greater Sydney (1.2% per annum).

To support this level of population growth, there is an anticipated need for an **additional ~54,000 dwellings by 2041**. This is equivalent to over **2,800 dwellings per annum**.

Figure 3-3: Population Projections and Implied Dwelling Requirements (2021-2041), Parramatta LGA



Source: DPHI (2022a)

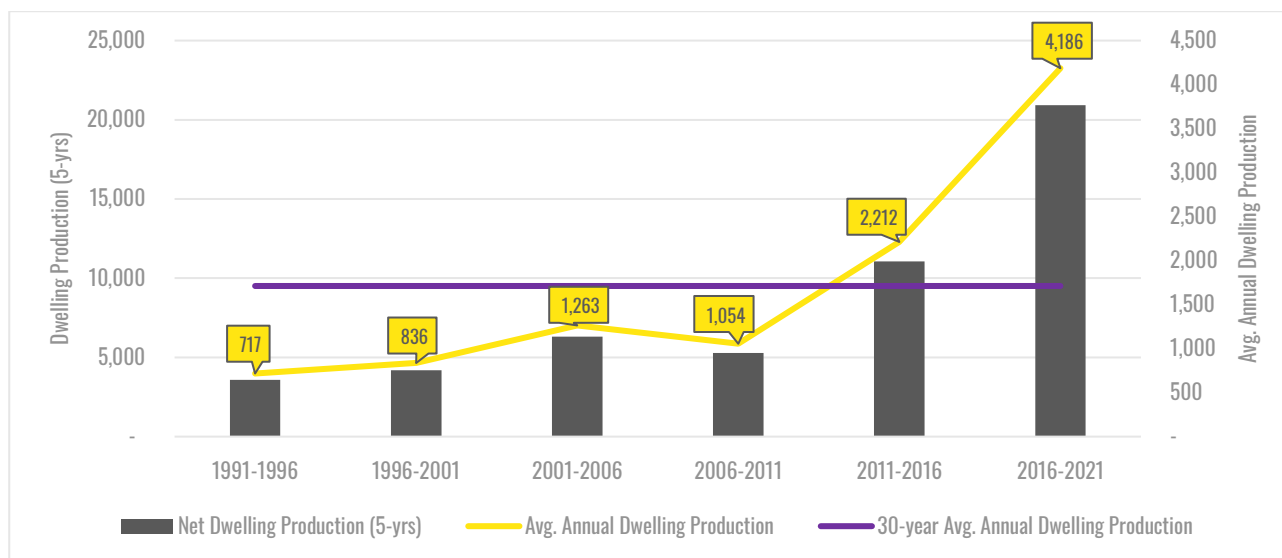
3.3 Supply Outlook

Historical Supply

To partly understand the capacity for Parramatta to achieve the dwelling growth needed to meet its projected population growth to 2041, it is useful to understand historical dwelling growth across the LGA.

As per ABS Census data, the Parramatta LGA delivered a net increase of ~51,300 dwellings (averaging to ~1,700 dwellings per annum) over the 30-years to 2021. Annual dwelling supply increased over the 2011-2021 period (aligning with Greater Sydney's housing boom), with annual dwelling production reaching almost ~4,200 dwellings over 2016-2021. However, this is the only period over the past 30-years where net dwelling production has exceeded that expected to be required over the coming years to 2041 (~2,800 dwellings per annum).

Figure 3-4: Historical Net Dwelling Production (1991-2021), Parramatta LGA



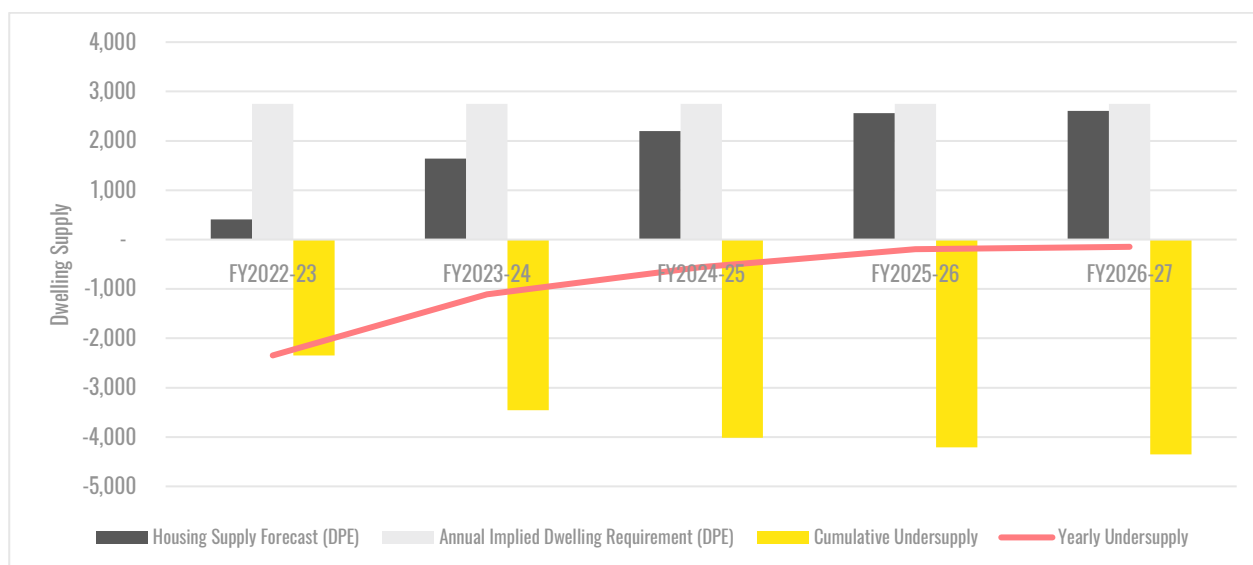
Source: ABS, sourced from .id

Supply Forecast

Housing supply forecasts are carried out by the DPHI at a regional and LGA level in the *Greater Sydney Urban Development Dashboard*. Three sets of forecasts of 5-year forecasts are prepared by DPHI - Low, Medium and High Scenarios.

A review of the most recent set of forecasts (prepared in 2022) for the 2022-2027 period shows that under Scenario, the required rate of annual dwelling production (~2,800 dwellings) **will not** be achieved any year over the 2022-2027 period.

Figure 3-5: Historical Net Dwelling Production (1991-2021), Parramatta LGA



Source: DPHI (2022b)

Accordingly, a growing undersupply is anticipated to accumulate in the immediate term across the Parramatta LGA. This undersupply is expected to range from -4,400 dwellings in the High Growth Housing Supply Scenario and up to -6,200 dwellings in the Low Growth Housing Supply Scenario.

This indicates a clear need for additional housing supply opportunities to be brought forward across the Parramatta LGA.

Table 3-1: Cumulative Undersupply under Various Supply Forecast Scenarios (2022-2027), Parramatta LGA

	FY2022-23	FY2023-24	FY2024-25	FY2025-26	FY2026-27	Total (2022-2027)
Low Growth Scenario						
Supply Forecast	305	1,235	2,020	2,100	1,950	7,610
Implied Dwelling Requirement	2,752	2,752	2,752	2,752	2,752	13,760
Cumulative Undersupply	-2,447	-3,964	-4,696	-5,348	-6,150	-6,150
Medium Growth Scenario						
Supply Forecast	355	1,430	2,095	2,370	2,385	8,635
Implied Dwelling Requirement	2,752	2,752	2,752	2,752	2,752	13,760
Cumulative Undersupply	-2,397	-3,719	-4,376	-4,758	-5,125	-5,125
High Growth Scenario						
Supply Forecast	405	1,640	2,195	2,560	2,605	9,405
Implied Dwelling Requirement	2,752	2,752	2,752	2,752	2,752	13,760
Cumulative Undersupply	-2,347	-3,459	-4,016	-4,208	-4,355	-4,355

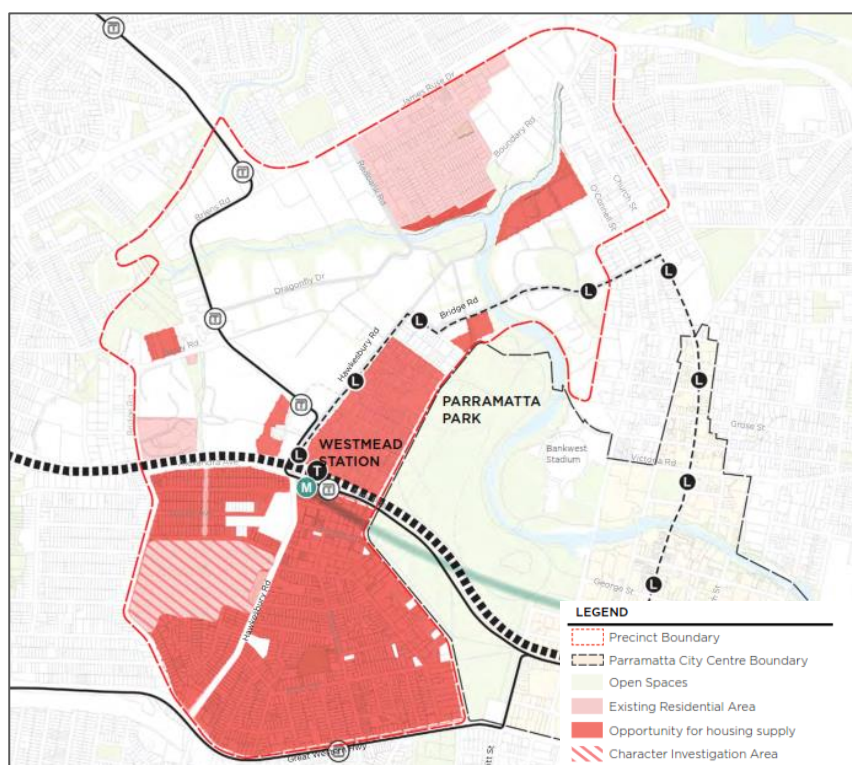
Source: Atlas Economics/DPHI (2022a)/DPHI (2022b)

Planned Growth in Westmead

Supporting new housing opportunities is an important objective of the Westmead Place Strategy. The Place Strategy identifies 'opportunity areas' where new housing supply could be targeted.

Housing opportunity areas on the northern side of rail line (i.e. within the Parramatta LGA) are focused in the 'Westmead East', 'Parramatta North' and 'Northmead Residential' sub-precincts.

Figure 3-6: Housing Opportunity Areas, Westmead Place Strategy






Source: DPHI (2022a)

The likelihood of new housing supply in these various parts of the Westmead Health and Innovation Precinct are mixed. The nature of existing land uses, lot patterns and land ownership will collectively influence underlying land and property values in each of these areas and accordingly the viability of future development.

A high-level assessment of the prospects of future housing development in each of these areas is considered in turn.

Table 3-2: Key Housing Opportunity Areas (Within Parramatta LGA), Westmead Place Strategy

Sub-Precinct	
	<p>Westmead East</p> <p>The Westmead East sub-precinct is located immediately east of Hawkesbury Road and the Westmead Public Hospital. It is currently zoned R4 High Density Residential.</p> <p>Westmead East is characterised by strata-titled, 3-4 storey, 'walk up' apartment blocks and shop top housing. Apartment blocks typically accommodate between 8 and 30 dwellings per apartment block. The overwhelming majority of properties are privately held with few consolidated landholdings.</p> <p>Owing to the highly fragmented nature of existing land uses across the sub-precinct, there has been little new development observed in the past decade.</p> <p>The cost and practical challenges of consolidating development opportunities within the sub-precinct will prove highly challenging for new housing development as earmarked in the Place Strategy without a significant increase in density controls.</p>
	<p>Northmead Residential</p> <p>The areas identified for new housing supply within the Northmead Residential sub-precinct are a small cluster of detached houses focused along Toongabbie Creek. This cluster is currently zoned R2 Low Density Residential.</p> <p>This part of Northmead is currently occupied by single storey, detached houses in moderate condition. These existing properties attract relatively strong existing values given their frontage to Toongabbie Creek. Limited consolidated ownership patterns are currently observed.</p> <p>Overall, the prospects for site consolidation in this cluster of the sub-precinct are considered positive. However, the potential housing supply which could be accommodated in this cluster is likely to be low given the small size of the cluster and its proximity to Toongabbie Creek which will limit future density.</p>
	<p>Parramatta North</p> <p>The Parramatta North sub-precinct is characterised by a mix of large, NSW Government owned landholdings accommodating a mix of health and administrative facilities (e.g. Cumberland Hospital precinct).</p> <p>Precinct planning for the Parramatta North sub-precinct has been underway by the NSW Government for over a decade. Part of the sub-precinct was rezoned in 2015 to MU1 Mixed Use.</p> <p>Lands identified for additional housing in the sub-precinct are yet to be rezoned. These lands are currently in NSW Government ownership and their prospects for redevelopment are strong, albeit the quantum of future supply which could be unlocked is yet to be identified.</p>

Source: Atlas Economics/Nearmap

3.4 Role for the Proposal

The Proposal envisages the delivery of some 409 dwellings on the Site. This Chapter has examined the market need for these additional dwellings and makes the following observations.

- All levels of Government have identified that Australia is currently experiencing a 'housing crisis', with historically high dwelling prices and record low vacancy levels having significant negative social and economic impacts.
- The National Cabinet agreed to a National Housing Accord to collectively deliver 1.2 million dwellings across Australia over 2024-2029. NSW would need to deliver 375,000 dwellings over this period to meet the Accord.
- The Parramatta housing market is facing pressure as demand is outstripping supply. Dwelling prices have risen markedly over the past decade, whilst apartment rents have surged by over 40% in the past 2-years alone.
- The most recent DPHI population projections for the Parramatta LGA indicate the over the coming decades to 2041, an additional ~54,000 dwellings will be required – equating to almost 2,800 dwellings per annum.
- DPHI's most recent housing supply forecasts indicate that for each year over the coming 5-years, the Parramatta LGA is unlikely to meet this implied dwelling target of 2,800 dwellings per annum. This will result in a cumulative undersupply of between -4,400 dwellings and -6,200 dwellings by 2028.

Whilst there are several areas identified for additional housing supply in the Westmead Place Strategy that would assist the Parramatta LGA achieve their implied dwelling target, not all of these areas will be redeveloped given feasibility constraints (e.g. Westmead East).

Accordingly, there is clear economic and market merit to supporting additional housing supply on the Site given its location, proximity to infrastructure and services and strong prospects for development.

The next Chapter examines the economic impacts of the Proposal during construction and upon completion.

4. Economic Impact Assessment

4.1 Overview and Approach

This chapter examines the economic activity and impacts that could be facilitated through progression of the Proposal during construction and upon completion. The analysis estimates economic activity supported in the following scenarios:

- **Base Case:** no development occurs under existing planning controls with the existing 32 dwellings remaining as is.
- **Proposal Case:** the Planning Proposal proceeds and facilitates the development of:
 - 409 market apartments.
 - 264sqm of ground floor retail floorspace.
 - Upgrades to the public realm, including 978sqm of public open space, 2,470sqm of pedestrian paved area and a new shared street.

The economic impacts are assessed at the Parramatta LGA level. An Input-Output model (including the development of specific regional Input-Output transaction tables) was developed to reflect the economic structure of the Parramatta LGA.

Input-Output modelling considers economic activity through examining four types of impacts as described in **Table 4-1**.

Table 4-1: Economic Indicators

Indicator	Description
Output	The gross value of goods and services transacted, including the cost of goods and services used in the development and provision of the final product. Care should be taken when using output as an indicator of economic activity as it counts all goods and services used in one stage of production as an input to later stages of production, thus overstating economic activity.
Gross Product	The value of output after deducting the cost of goods and services inputs in the production process. Gross product (e.g., Gross Regional Product (GRP)) defines a net contribution to economic activity.
Incomes	The wages and salaries paid to employees as a result of the Project either directly or indirectly.
Employment	Employment positions generated by the Project (either full time or part time, directly or indirectly). Employment is reported in terms of Full-time Equivalent (FTE) positions or person-years.

Source: Atlas Economics

Types of Economic Activity

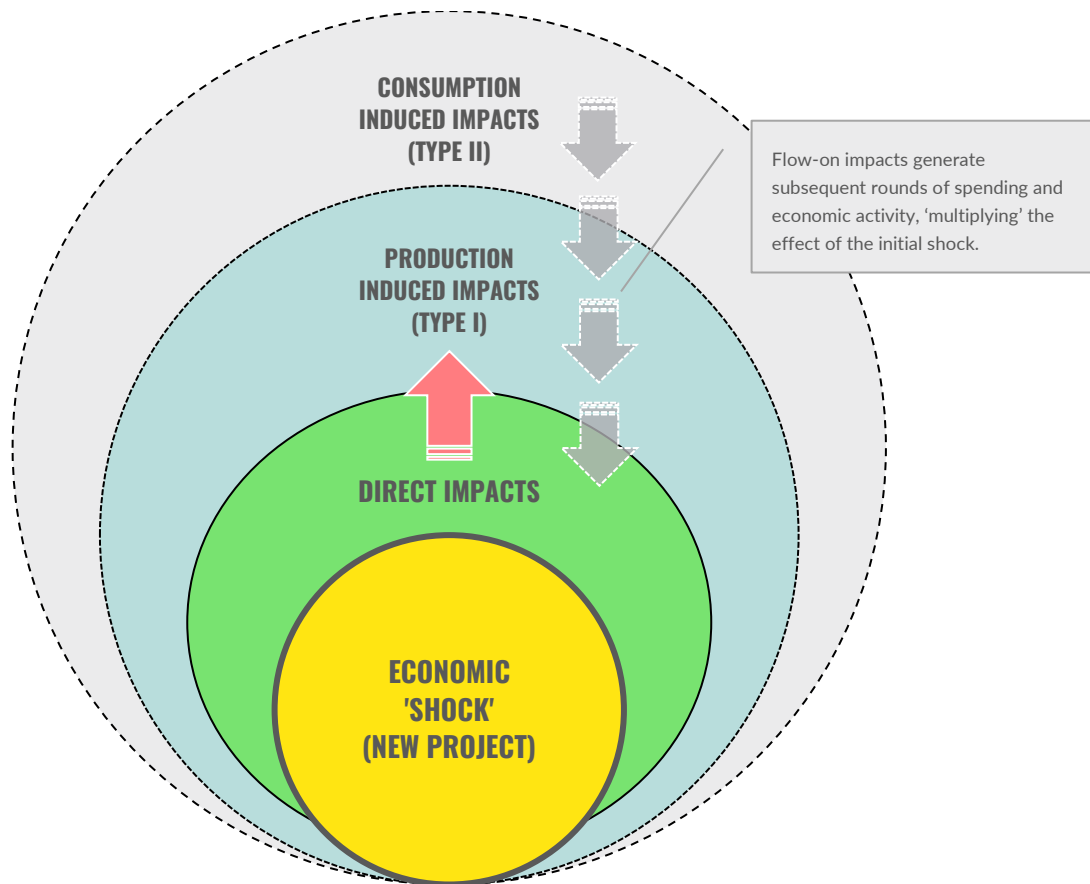
Input-Output modelling traces the economic impact resulting from a 'shock' to a local economy through measuring a series of impacts – referred to as 'Direct' and 'Flow-on' impacts.

- **Direct impacts**, which are the first round of effects from direct operational expenditure on goods and services.
- **Flow-on impacts**, which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
 - **Production-induced impacts (Type I)** show the effects of additional activities undertaken by supply chain industries increasing their production in response to direct and subsequent rounds of spending.
 - **Consumption-induced impacts (Type II)** estimate the re-circulation of labour income earned as a result of the initial spending, through other industry impacts, or impacts from increased household consumption.

The estimates of economic impacts consider production and consumption-induced flow-on impacts. Type II impacts are commonly considered to overstate economic activity and therefore the types of flow-on impacts are reported separately.

Figure 4-1 illustrates the types of economic impacts and their subsequent rounds of impacts.

Figure 4-1: Types of Economic Impacts (Direct and Flow-on)



Source: Atlas Economics

Drivers of Economic Activity

To properly understand the economic impacts likely to result from the Proposal, it is necessary to distinguish economic impacts during the construction phase and those economic impacts that will be more permanent in nature following completion of construction and commencement of operations.

▪ **Construction Phase**

Construction activity will draw resources from and thereby generate economic activity within and from outside Parramatta. Assumptions are made on the proportion sourced from within and from outside the Parramatta LGA.

The construction phase is assessed for the Proposal Case only.

▪ **Operational Phase**

- Base Case: the Site will continue to accommodate 32 dwellings, with a proportion of residents on Site working from home.
- Proposal Case: on completion of construction, the Proposal is expected to generate ongoing economic/operational activity through the direct activity generated by:
 - Ongoing employment from new retail floorspace.
 - Dispersed employment through persons working from home in new housing.
 - Additional household expenditure from new residents.

Refer to SCHEDULE 1 for a description of the drivers and assumptions that underpin the assessed economic impacts.

4.2 Economic Activity and Impacts

4.2.1 Construction Phase

During construction, the Proposal Case is projected to generate additional economic activity for Parramatta, including:

- **\$341.7 million** in output (including \$198.9 million in additional direct activity)
- **\$130.1 million** in contribution to GRP (including \$56 million in additional direct activity)
- **\$73.7 million** in incomes and salaries paid to households (including \$37 million in additional direct income).
- **728 FTE jobs** (including 383 directly employed through construction activity on Site).

Economic impacts during construction are summarised in **Table 4-2**.

Table 4-2: Construction Impacts in Parramatta LGA, Proposal Case

Indicator	Output (\$M)	GRP (\$M)	Incomes (\$M)	Employment (FTE)
Direct	\$198.9	\$56.0	\$37.0	383
Flow-on Type I (Production-induced)	\$84.4	\$39.4	\$22.9	203
Flow-on Type II (Consumption-induced)	\$58.5	\$34.7	\$13.8	142
Total	\$341.7	\$130.1	\$73.7	728

Note: Totals may not sum due to rounding. Construction impacts are reported in total for the construction phase and are not an average annual estimate.
Source: Atlas Economics

4.2.2 Operational Phase

Economic impacts in both the Base and Proposal Case during the operational phase are summarised in **Table 4-3**.

Table 4-3: Operational Impacts in Parramatta LGA, Base Case and Proposal Case

Indicator	Output (\$M)	GRP (\$M)	Incomes (\$M)	Employment (FTE)
Base Case				
Direct	\$1.5	\$0.8	\$0.5	4
Flow-on Type I (Production-induced)	\$0.6	\$0.3	\$0.2	1
Flow-on Type II (Consumption-induced)	\$0.7	\$0.4	\$0.2	2
Total	\$2.7	\$1.4	\$0.8	7
Proposal Case				
Direct	\$20.9	\$10.6	\$6.4	57
Flow-on Type I (Production-induced)	\$7.7	\$3.8	\$2.1	18
Flow-on Type II (Consumption-induced)	\$9.1	\$5.4	\$2.1	22
Total	\$37.6	\$19.7	\$10.7	97
Net Operational Impacts				
Direct	\$19.4	\$9.8	\$6.0	53
Flow-on Type I (Production-induced)	\$7.1	\$3.5	\$2.0	17
Flow-on Type II (Consumption-induced)	\$8.4	\$5.0	\$2.0	20
Total	\$34.9	\$18.3	\$9.9	90

Note: Totals may not sum due to rounding.
Source: Atlas Economics

Compared with the Base Case, the Proposal Case facilitates a more intensified use of the Site, resulting in greater levels of output and contribution to the local economy.

The Proposal is estimated to result in a **net increase in economic activity** (i.e. over and above that generated in the Base Case) through direct and indirect (flow-on) annually at:

- **\$34.9 million** in additional output (including \$19.4 million in direct activity)
- **\$18.3 million** in additional contribution to GRP (including \$9.8 million in direct activity)
- **\$9.9 million** in additional incomes and salaries paid to households (including \$6 million paid directly)
- **90 additional FTE jobs** (including 53 additional FTE jobs that are directly related to activity on the Site)

4.2.3 Household Expenditure Impacts

In addition to the economic activity estimated in the Operational Phase, the Proposal Case is projected to generate additional household expenditure supported through new households accommodated on the Site. This activity is estimated to support on an ongoing annual basis (once the Proposal is fully developed and occupied):

- **\$51.8 million** in additional total outputs (including \$30.7 million in additional direct output)
- **\$30.2 million** in additional total contribution to GRP (including \$18.5 million in direct contributions)
- **\$13.8 million** in additional total wages and salaries to local workers (includes \$8.6 million indirect additional income)
- **158 additional FTE jobs** (including 108 additional FTE jobs from direct impact)

Table 4-4: Household Expenditure Impacts in Parramatta LGA, Base Case and Proposal Case

Indicator	Output (\$M)	GRP (\$M)	Incomes (\$M)	Employment (FTE)
Base Case				
Direct	\$2.7	\$1.6	\$0.8	10
Flow-on Type I (Production-induced)	\$0.8	\$0.4	\$0.2	2
Flow-on Type II (Consumption-induced)	\$1.1	\$0.6	\$0.2	3
Total	\$4.6	\$2.7	\$1.2	15
Proposal Case				
Direct	\$33.5	\$20.2	\$9.3	118
Flow-on Type I (Production-induced)	\$10.2	\$5.1	\$2.7	24
Flow-on Type II (Consumption-induced)	\$12.8	\$7.6	\$3.0	31
Total	\$56.5	\$32.9	\$15.1	173
Net Operational Impacts				
Direct	\$30.7	\$18.5	\$8.6	108
Flow-on Type I (Production-induced)	\$9.4	\$4.7	\$2.5	22
Flow-on Type II (Consumption-induced)	\$11.8	\$7.0	\$2.8	29
Total	\$51.8	\$30.2	\$13.8	158

Note: Totals may not sum due to rounding.
Source: Atlas Economics

4.3 Summary of Economic Modelling Findings

The development of the Proposal is shown to deliver positive economic impacts to the Parramatta economy.

Compared with the Base Case, it is estimated to result in a **net increase in economic activity** during the construction phase through a mix of direct and indirect (flow-on) activity, including:

- **\$341.7 million** in output (including \$198.9 million in additional direct activity)
- **\$130.1 million** in contribution to GRP (including \$56 million in additional direct activity)
- **\$73.7 million** in incomes and salaries paid to households (including \$37 million in additional direct income).
- **728 FTE jobs** (including 383 directly employed through construction activity on Site).

When operational, the Proposal is estimated to result in an annual **net increase in economic activity** with:

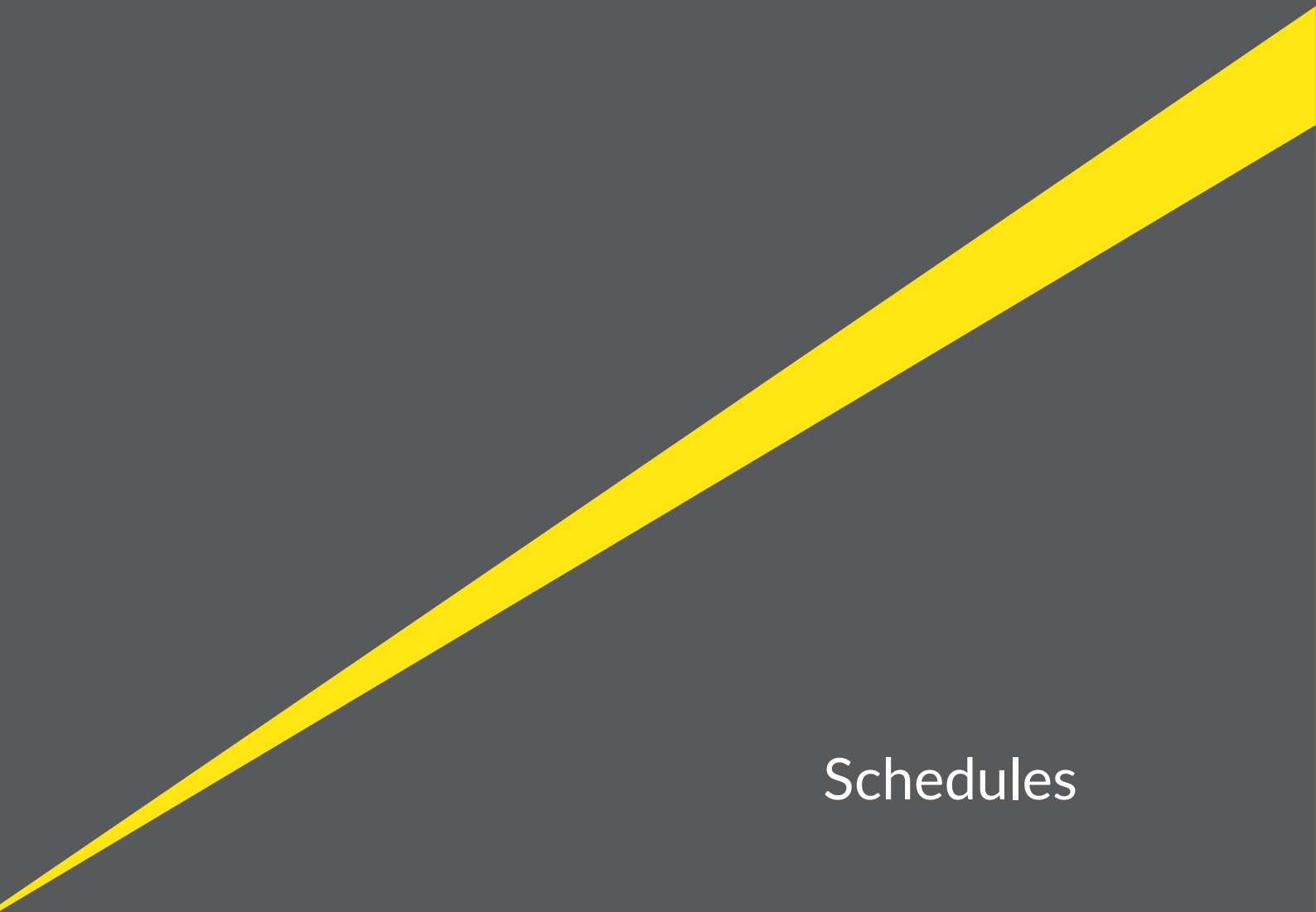
- **\$34.9 million** in additional output (including \$19.4 million in direct activity)
- **\$18.3 million** in additional contribution to GRP (including \$9.8 million in direct activity)
- **\$9.9 million** in additional incomes and salaries paid to households (including \$6 million paid directly)
- **90 additional FTE jobs** (including 53 additional FTE jobs that are directly related to activity on the Site)

The Proposal will also facilitate household expenditure impacts through delivery of new housing stock:

- **\$51.8 million** in additional total outputs (including \$30.7 million in additional direct output)
- **\$30.2 million** in additional total contribution to GRP (including \$18.5 million in direct contributions)
- **\$13.8 million** in additional total wages and salaries to local workers (includes \$8.6 million indirect additional income)
- **158 additional FTE jobs** (including 108 additional FTE jobs from direct impact)

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Schedules

Input-Output Modelling Methodology

Input-Output models are a method to describe and analyse forward and backward economic linkages between industries based on a matrix of monetary transactions. The model estimates how products sold (outputs) from one industry are purchased (inputs) in the production process by other industries.

The analysis of these industry linkages enables estimation of the overall economic impact within a catchment area due to a change in demand levels within a specific sector or sectors.

Impacts are traced through the economy via:

- Direct impacts, which are the first round of effects from direct operational expenditure on goods and services.
- Flow-on impacts, which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
 - Industry Support Effects (Type I) derived from open Input-Output models. Type I impacts represent the production induced support activity as a result of additional expenditure by the industry experiencing the stimulus on goods and services, and subsequent round effects of increased purchases by suppliers in response to increased sales.
 - Household Consumption Effects (Type II) derived from closed Input-Output Models. Type II impacts represent the consumption induced activity from additional household expenditure on goods and services resulting from additional wages and salaries being paid within the catchment economy.

Economic analysis considers the following four types of impacts.

Table S1-1: Economic Activity Indicators

Indicator	Description
Output	The gross value of goods and services transacted, including the cost of goods and services used in the development and provision of the final product. Care should be taken when using output as an indicator of economic activity as it counts all goods and services used in one stage of production as an input to later stages of production, thus overstating economic activity.
Gross Product	The value of output after deducting the cost of goods and services inputs in the production process. Gross product (e.g. Gross Regional Product (GRP)) defines a net contribution to economic activity.
Incomes	The wages and salaries paid to employees as a result of the Project or Proposal either directly or indirectly.
Employment	Employment positions generated by the Project or Proposal (either full time or part time, directly or indirectly). Employment is reported in terms of Full-time Equivalent (FTE) positions or person-years.

Source: Atlas

Regional Model Development

Multipliers used in this assessment have been created using a regionalised Input-Output model derived from the 2020-2021 Australian transaction table (ABS, 2023a).

Estimates of gross industry production in the catchment area were developed based on the share of employment (by place of work) of the catchment area within the Australian economy (ABS, 2022) using the Flegg Location Quotient and Cross Hauling Adjusted Regionalisation Method (CHARM). See Norbert (2015) and Kronenberg (2009) for further details. Where required, values were indexed to current dollar values using CPI (ABS, 2023b).

Modelling Limitations and Assumptions

Input-Output modelling is subject to a number of key assumptions and limitations (ABS, 2023a):

- **Lack of supply-side constraints:** The most significant limitation of economic impact analysis using multipliers is the implicit assumption that the economy has no supply-side constraints. That is, it is assumed that extra output can be

produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.

- **Fixed prices:** Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. Prices are assumed to be unaffected by policy and any crowding out effects are not captured.
- **Fixed ratios for intermediate inputs and production:** Economic impact analysis using multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. As such, impact analysis using multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. In reality, however, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount.
- **No allowance for purchasers' marginal responses to change:** Economic impact analysis using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- **Absence of budget constraints:** Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints.

Despite these notable limitations, Input-Output techniques provide a solid approach for assessing the direct and flow on economic impacts of a project or policy that does not result in a significant change in the overall economic structure.

Drivers of Economic Impact

In order to understand the economic impacts likely to result from the Proposal, it is necessary to distinguish economic impacts during the construction phase and those economic impacts that will be more permanent following construction completion.

- **Construction Phase:** Construction activity will draw resources from and thereby generate economic activity in the Parramatta economy as well as from outside Parramatta LGA.

Assumptions are made on the proportion sourced from within and from outside Parramatta,

- **Base Case**
 - The Base Case assumes that no development occurs on the Site and that the 32 residential dwellings remain in the current state.
- **Proposal Case**
 - The proposed FSR increase from 1.7:1 to 3.6:1, and sought-after change of building height change from 20m to 69m to facilitate the development of 409 residential dwellings and 264sqm of retail floorspace.
 - 978sqm parklands connecting to Monarco Green, 2,470sqm new pedestrian paved area, a 915sqm new street and a new shared street are facilitated.
 - The Site will facilitate additional household expenditure by residents in the new dwellings.

Construction Phase

For modelling purposes, construction costs (including contingency) for the Proposal Case were broken down into their respective Australian and New Zealand Standard Industrial Classification (ANZSIC) industries.

The breakdowns were developed based on the following assumptions by Atlas regarding the most appropriate ANZSIC industries for each activity.

Table S1-2: Construction Cost Allocation (including Contingency)

Item	Cost (\$M)	ANZSIC
Site Preparation	\$0.9	Construction Services
Residential Construction	\$191.9	Residential Building Construction
Community	\$0.7	Non-Residential Building Construction
Food & Beverage Catering	\$0.2	Non-Residential Building Construction
Gym	\$0.5	Non-Residential Building Construction
Parking	\$32.4	Heavy and Civil Engineering Construction
Site Costs	\$11.3	Heavy and Civil Engineering Construction
Professional Fees	\$27.2	Professional Services
Total	\$265.1	

Note: numbers may not sum due to rounding
Source: Atlas

Of the above capital outlay, not all activity will be undertaken within the Parramatta LGA economy. It was assumed:

- Approximately 75% of the direct expenditure on construction-related activity would be sourced from local businesses and labour. Of this:
- Approximately 25% of purchases on goods and services (supply chain related activity) made by construction-related businesses sourced from outside Parramatta would be spent within the local economy (i.e., 25% of the Type I flow on activity associated with non-local construction companies is assumed to represent additional local activity in Parramatta).
- Approximately 5% of wages and salaries paid to construction-related workers sourced from outside the region would be spent on local goods and services, such as food and beverages (i.e., 5% of the Type II).

Only flow-on activity of locally sourced professional, scientific and technical services activity (75%) is included, as it is not anticipated these businesses located outside of Parramatta would purchase goods/ services locally.

Operational Phase

In order to model the economic impacts, operational employment levels for the economic activity occurring in Base and Proposal Case were categorised into the ANZSIC industries. In the Base Case, employment was estimated based on current uses within the Site (i.e., the existing 32 residential dwellings).

In the Proposal Case, employment was estimated through converting the floorspace envisaged in the Proposal with industry standard workspace ratios (Landcom, 2019, Atlas estimates). Estimates were also generated for potential dispersed employment (i.e. residents working from home) within the Proposal Case.

Employment by industry estimates were converted to a direct output value using a multiplier based on the transaction tables developed for this assessment (ABS, 2023a). The resultant estimates of output were modelled as the direct activity associated with the Base Case and Proposal Cases.

Table S1-3: Operational FTE Allocation of Floorspace

Use/ANZSIC	GFA (sqm)	Workspace Ratio (sqm/FTE)	Employment (FTE)	Output (\$M)
Base Case				
Dispersed Employment	-	8% work from home ¹	4 ²	-
Total	-	-	-3	\$1.2
Proposal Case				
Retail Trade	264	35	7.5	\$1.4
Dispersed Employment		8% work from home ¹	49 ²	\$19.5
Total	264	35	7.5	\$20.9

¹ Calculated assuming an average 2% vacancy, 1.5 FTE workers per household. ² A conservative estimate considering post-COVID trends.
Source: Atlas Economics

Household Expenditure

This section outlines the household expenditure that would be associated with the new dwellings proposed as part of the Proposal Case, and potential economic activity supported.

The household expenditure activity supported should not be combined with the impacts in the section above, as some of these impacts are likely to have already been captured in the assessment.

This section is to understand specific economic activity supported in Parramatta LGA through household expenditure as its own separate analysis.

The ABS Household Expenditure Survey (ABS, 2017) was used to identify the proportion of weekly household incomes that are spent across expenditure items in the Parramatta LGA. The third quintile of NSW residents was used to best represent the expenditure patterns of residents in the surrounding catchment area.

The household survey only contains household expenditure data, and individual residents must be converted to an equivalent number of households. This was achieved by applying the estimated number of dwellings (83) and a vacancy rate of 2% (representative of the current rental market).

This data was converted to 2023 values (ABS, 2023b), annualised, and allocated into their respective ANZSIC industries. The breakdown to ANZSIC industries was developed based on assumptions by Atlas regarding the most appropriate ANZSIC industries for each activity.

Table S1-4: Household Expenditure Estimates (Proposal Case)

ANZSIC	Total Spend (\$M)	% Spent in Parramatta LGA	Local Spend (\$M)
Ownership of Dwellings	\$9.0	100%	\$9.0
Retail Trade	\$8.5	80%	\$6.8
Food and Beverage Services	\$4.5	80%	\$3.6
Personal Services	\$2.4	75%	\$1.8
Other Services	\$2.7	70%	\$1.9
Telecommunication Services	\$1.5	60%	\$0.9
Road Transport	\$4.1	80%	\$3.3
Rail Transport	\$2.0	50%	\$1.0
Air and Space Transport	\$0.7	20%	\$0.1
Sports and Recreation	\$3.5	75%	\$2.6
Primary and Secondary Education Services (incl Pre-Schools and Special Schools)	\$0.5	75%	\$0.4
Technical, Vocational and Tertiary Education Services (including Undergraduate and Postgraduate)	\$0.4	75%	\$0.3
Arts, Sports, Adult and Other Education Services (including Community Education)	\$0.1	75%	\$0.1
Health Care Services	\$2.3	80%	\$1.8
Heritage, Creative and Performing Arts	\$1.5	80%	\$1.2
Electricity Transmission, Distribution, On Selling and Electricity Market Operation	\$0.5	60%	\$0.3
Total	\$44.1	79%	\$35.00

Note: numbers may not sum due to rounding

Source: Atlas

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