REDFERN NORTH EVELEIGH

Population and demographics

Prepared for Transport for NSW

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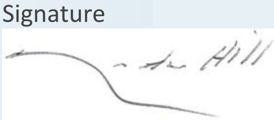

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Definitions and acronyms

Unless the context otherwise provides, words, phrases and abbreviations used in this study have the meaning given to them as set out in Table 1 below.

Table 1: Definitions

Term	Description
ABS	Australian Bureau of Statistics
Carriageworks sub-precinct	Refer to Figure 3
Clothing Store sub-precinct	Refer to Figure 3
CoS	City of Sydney
DPE	Department of Planning and Environment
DZ	Destination Zone (ABS employment data small area geography)
GFA	Gross Floor Area
GSC	Greater Sydney Commission
LGA	Local Government Area
NLA	Net Leasable Area
LSPS	Local Strategic Planning Statement
Paint Shop sub- precinct	Refer to Figure 3
FES	Floor Space Employment Survey
Greater Sydney	Greater Capital City Statistical Area as classified by the ABS
RNE	Redfern North Eveleigh Precinct Renewal Program
RNE Precinct	The area of the Redfern-Waterloo State Significant Precinct applicable to this scope of works shown in Figure 3.
RPA	Royal Prince Alfred Hospital
SEPP	State Environmental Planning Policy
Site	The Paint Shop sub-precinct which is the area applicable to this SSP Study.
SA1	Statistical Area Level 1 (ABS dwelling and population small area geography)
SSP	State Significant Precinct
Sub-precincts	Refers to the individual component sub-precincts labelled in Figure 3 as: • the Clothing Store • Carriageworks • the Paint Shop that the RNE Precinct is comprised of.
The Precinct	RNE Precinct
Transport	Transport for NSW
TZ	Travel Zone

EXECUTIVE SUMMARY

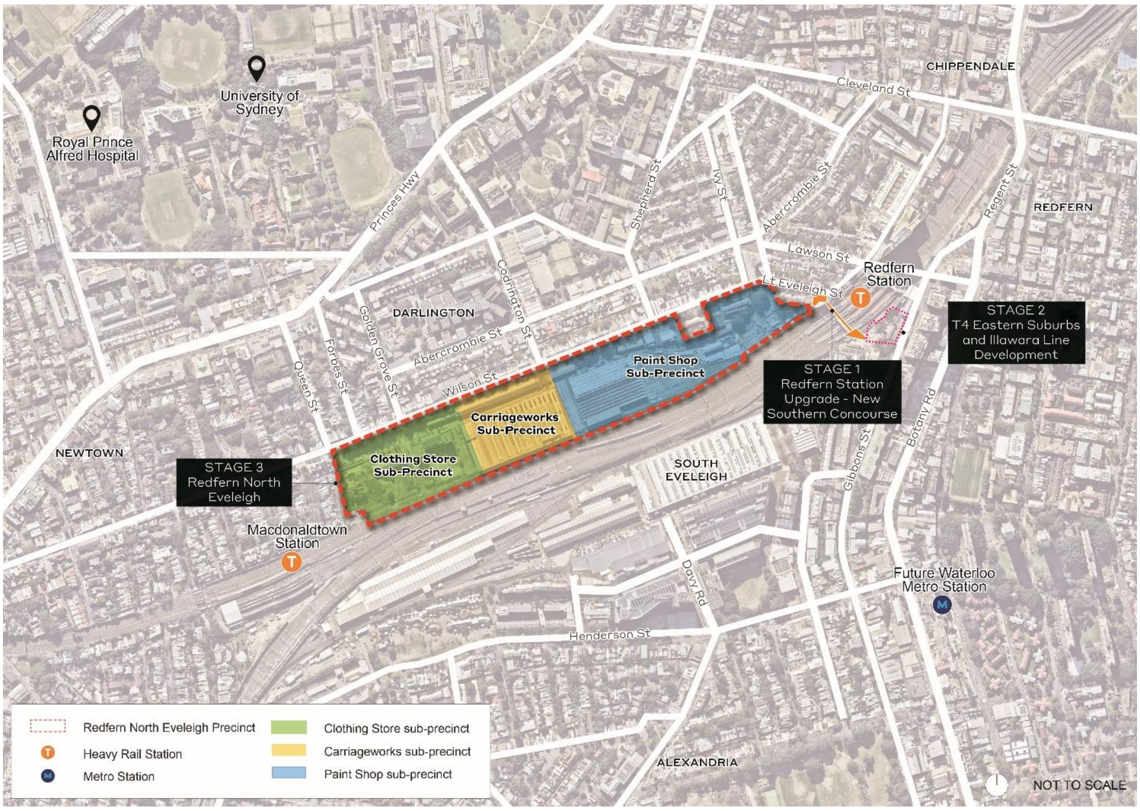
The NSW Government is investing in the renewal of the Redfern North Eveleigh Precinct to create a unique mixed-use development, located within the important heritage fabric of North Eveleigh. The strategic underpinning of this proposal arises from the Greater Sydney Region Plan and District Plan. These plans focus on the integration of transport and land use planning, supporting the creation of jobs, housing and services to grow a strong and competitive Sydney.

The Redfern North Eveleigh Precinct is one of the most connected areas in Sydney, and will be a key location for Tech Central, planned to be Australia's biggest technology and innovation hub. Following the upgrading of Redfern station currently underway, the precinct's renewal is aimed at creating a connected destination for living and working and an inclusive, active and sustainable place around the clock.

The Precinct comprises three sub-precincts, each with its own distinct character:

- The Paint Shop sub-precinct
- The Carriageworks sub-precinct
- The Clothing store sub-precinct.

Figure 1: Redfern North Eveleigh and sub-precincts



Source: Source: Ethos Urban

Purpose of this report

HillPDA was commissioned to provide a detailed population and demographics assessment of the proposed changes resulting from the development and consider any potential impacts within and surrounding the Paint Shop sub-precinct (hence referred to as the Site).

This report addresses study requirement *4. Population and demographics* as detailed in the Redfern North Eveleigh Precinct State Significant Precinct study requirements provided by the NSW Department of Planning, Industry and Environment in December 2020.

The core study requirements identified for the population and demographics report are as follows:

- Identifies the existing situation (the baseline), including constraints, opportunities and key issues.
- Outlines the likely impacts of the proposal in relation to population and demographics.
- Informs and supports the preparation of the proposed planning framework including any recommended planning controls or DCP/Design Guideline provisions.

Methodology

To fulfil the study requirements the following approach was applied:

- Utilised small area ABS 2016 census data to understand the existing resident and worker catchment profile surrounding the Site.
- Utilised ABS Census data, City's Floor Space Employment Survey (FES) to conduct benchmark analysis of other high-density locations in Sydney LGA that could inform and guide profiling the likely future socio-economic outcomes of the Site.
- Utilised Transport for NSW (Transport) inputs related to dwelling assumptions, ABS 2016 Census Data, Profile .id projections, benchmark analysis to forecast future population characteristics on the Site and wider Precinct.
- Utilised Transport inputs related to building assumptions and land use mix, benchmark analysis, FES employment ratios, and Transport for NSW employment projections to forecast future job creation on the Site and wider Precinct.
- Consultation with CoS and NSW DPE demographic modelling teams regarding, appropriate sources of demographic data and assumptions, methodology and findings for forecasting population and demographic impact of the Proposal.

Applying this methodology, the key finding to address the core study requirements are as follows.

Existing situation (the baseline)

Analysis of 2011 and 2016 Census data was undertaken to identify the resident and worker characteristics. Given the undeveloped nature of the Site, a catchment 800 metres surrounding the Site was analysed to determine resident and worker baseline characteristics (please refer to Figure 12 and Figure 38).

The key resident and worker catchment (Catchment) findings are as follows:

- In 2016, there were an estimated 34,330 residents living in the Catchment.
- Residents of the Catchment are a young population with 43% aged between 15 and 29 years. This is compared to the wider LGA and Greater Sydney in which this age cohort comprises 36% and 21% of the population.
- The population of the Catchment is highly multicultural with 50% being born overseas. This proportion is comparable that recorded for Sydney LGA (51%), however, higher than Greater Sydney (39%).
- Owing to the proximity of Sydney University and UTS campuses, the Catchment had a higher concentration of students with 27% of its population (over 15 years) attending a TAFE or university. This was higher than that for Sydney LGA (18%) and Greater Sydney (10%).
- Education attainment was high with 58% of residents aged 15 years and over in the Catchment having a post-school qualification. This is compared to 53% for Greater Sydney residents.

- Around 67% of occupied dwellings in the Catchment were apartments. This was lower than the 78% recorded across Sydney LGA, indicating increased densification could occur in the catchment.
- The Catchment had higher rates of renting (68%) and lower rates of ownership of dwellings (31%) when compared to Sydney LGA (65% and 35%, respectively) and Greater Sydney (35% and 65%, respectively).
- Smaller households (lone person, couples without children and group households) were the dominant household type in the Catchment, comprising 73% of households. This was comparable to Sydney LGA (72%) but higher than Greater Sydney (47%).
- The Catchment had lower levels of vehicle ownership (0.7 vehicles per dwelling) when compared to Sydney LGA (0.8) and Greater Sydney (1.6).
- The unemployment rate in the Catchment (7.6%) was higher than that recorded for Sydney LGA (6.0%) and Greater Sydney (6.0%). The higher unemployment rate in the Catchment is likely a result of the higher proportion of students and social housing when compared to the other localities.
- The main industries of employment for local residents in the Catchment were Professional, Scientific and Technical Services (17%); Education and Training (11%); and Accommodation and Food Services (11%).
- Most residents in the Catchment were employed within knowledge intensive/professional industries (42%). This proportion was lower than the wider Sydney LGA (45%), although higher than Greater Sydney (32%).
- Over half (56%) of occupations in the Catchment were professionals and managers in 2016. This was comparable to Sydney LGA (56%) but higher than Greater Sydney (41%).
- In 2016, there were an estimated 32,975 jobs generated in the Catchment, represented around 7% of employment in Sydney LGA.
- The top five employment industries in the Catchment were: Education and Training; Health Care and Social Assistance generating; Professional, Scientific and Technical Services generating; Accommodation and Food Services; and Information Media and Telecommunications.
- Analysis of Broad Industry Classifications (BIC), please refer to Table 22 for BIC definition, the highest employment generating BIC was health and education (48%) followed by knowledge intensive (28%), population serving (19%) and lastly industrial (8%).
- The knowledge intensive BIC had the second highest worker productivity rate at around $188,995/worker. This implies that increased knowledge intensive employment would have a comparably greater economic benefit to the local economy.
- Knowledge intensive industries had a location quotation of 0.5 in 2016, implying an opportunity to grow such industries in the Catchment.

Constraints, opportunities and key issues

Based on a review of the strategic context review of the Site (Chapter 2 of this report), review of the local resident characteristics (Chapter 3 of this report) and worker characteristics (Chapter 4 of this report), the following constraints, issues, trends and opportunities for the Site have been identified.

Table 2: Key considerations, trends, issues and opportunities for the Site

Key trend, issue and/or constraint	Description/reasoning	Opportunity for Site
Dwelling affordability	Over the 11 years to March 2021 the median dwelling price in Sydney LGA increased by $415,000 or 72%. Comparatively, apartments provide a more affordable dwelling option with the median price increasing by $367,000 or 67% to $918,000 over the period. This is compared to non-strata dwellings, which increased by $880,000 or 101% to a median of $1.75 million (March Quarter 2021). Apartments also offer a comparatively more affordable rental option in Sydney LGA, with an average median weekly rent of around $570, compared to $700 for houses and $780 for townhouses (June Quarter 2021).	The Site could provide additional dwellings. This additional supply could help place downward pressure on prices in the LGA. Increased provision of apartment style dwellings would also provide a dwelling type that is comparatively more affordable in the LGA.
Underutilised land	The Site comprises just over five hectares of inner-city land, which is predominantly undeveloped and underutilised.	The site provides an opportunity to provide a greater offer, mixture and density of residential dwellings, employment, community and social space in proximity to existing transport infrastructure and other renewal precincts.
Locational attributes and agglomeration effects	The Site is located near major assets, transport nodes and several government-driven innovation and urban renewal projects.	Development and concentration of knowledge intensive and other innovation/technology industries in the Site and surrounding urban renewal precinct, has the opportunity to increase the productivity benefits from agglomeration.
State and local strategic directions	Several State and local strategies identify the Site and the Redfern to Eveleigh location for the development and promotion of a mixture of land uses including innovation, creative industries and start-ups and residential and community uses.	Development of the Site would directly and indirectly contribute to the vision and direction of several Government strategic planning documents, including Tech Central Precinct.
Strong population growth	The Catchment's population increased by around 7,650 people or 29% between 2011-16. This was higher than the proportional growth experienced across Sydney LGA (23%). The Catchment, therefore, has experienced comparatively strong growth, with its share of the resident population also increasing. Sydney LGA is forecast house between an additional 58,890 to 115,290 people over the 20 years to 2036. A notable proportion of these would be expected to reside within the Site's Catchment.	The Site could provide additional housing for the Catchment's and Sydney's growing population.
Smaller households	In 2016, smaller households (lone person, couples without children and group households) were the dominant household type in the Catchment, comprising 73% of households. This was comparable to Sydney LGA (72%) but higher than Greater Sydney (47%). Over the 20 years to 2036, smaller households across Sydney LGA are expected to comprise most of the growth in household types, comprising between 73% to 80% of the forecast growth.	The Site could provide a dwelling type which is more suited to the types of households that are currently and forecast to be more prevalent in the Catchment and wider LGA.

Key trend, issue and/or constraint	Description/reasoning	Opportunity for Site
High growth in apartment style dwellings	In the five years to 2016, both the number and proportion of apartment style dwellings in the Catchment experienced strong growth. This is reflected in the Catchment having 5,100 more apartments over the period, while their proportional composition increased from 59% to 67%. This 2016 proportion was lower than the 78% recorded across Sydney LGA, indicating increased densification could occur in the catchment.	The higher growth and demand for apartment style dwellings in the Catchment is a result of its inner-city location with high land values and existing buildings. The Site could provide additional dwellings to support the population and household characteristics of the area.
Dwelling targets	The City of Sydney's Local Strategic Planning Statement (LSPS) sets a target for the LGA will accommodate 50,000 additional dwellings between 2016-36. Of these, around 9,300 are to be provided in the locality which includes the Site (refer to Figure 37).	Increased housing supply, such as that proposed in the Site, would contribute to the LGA attaining its dwelling targets.
Resident employment	In 2016, most residents in the Catchment were employed within knowledge intensive/professional industries (42%). This proportion was lower than the wider Sydney LGA (45%), although higher than Greater Sydney (32%). As the resident population increases in Sydney LGA it is reasonable that the demand for knowledge intensive employment opportunities would also increase.	The Site could increase the type of employment which aligns with the Catchment and Sydney's resident's employment characteristics.
Self-containment rates	Self-containment measures the proportion of working residents who are employed within the boundaries of Catchment or region. In 2016, the Catchment had a self-containment containment rate of 8%. This rate was low when compared to Sydney LGA (65%).	By providing increased employment opportunities, particularly knowledge intensive jobs, the Site would contribute to the catchment increasing its self-containment rates.
Vehicle ownership and travel method to work	The Catchment has lower levels of motor vehicle ownership (an average of 0.7 vehicles per dwelling) when compared to Sydney LGA (0.8/dwelling) and Grater Sydney (1.6/dwelling). Additionally, a third (33%) of employed residents in the Catchment travelled to work via train. This is compared to around a fifth for Sydney LGA residents (22%) and just 16% for Greater Sydney. Active transport (bicycle and walking) was the second largest travel method to work for residents in the Catchment (23%). This was significantly higher than in Greater Sydney (5%).	The location of the Site in proximity to existing public transport coupled with lower vehicle ownership levels and high rates of active transport when travelling to work, could provide the opportunity for lower resident and worker parking provision rates on Site.
Lower unemployment rates	The unemployment rate in the Catchment (7.6%) was higher than that recorded for Sydney LGA (6.0%) and Greater Sydney (6.0%).	Increased employment opportunities have the potential to decrease the local unemployment rate.
Strong employment growth	Over the five years to 2016, employment in the Catchment increased proportionally by 34%. This was around double the rate experienced across the LGA over the period (17%). Sydney LGA has an employment target of 200,000 additional jobs over the 20 years to 2036. Of these 14,500 are expected to be provided in the Redfern location.	The Site could provide increased employment opportunities to support the LGA's targets in a location that has experienced high growth.

Key trend, issue and/or constraint	Description/reasoning	Opportunity for Site
Opportunity to grow knowledge intensive industries and jobs	Knowledge intensive industries in the Catchment had a location quotation of 0.5 in 2016. That is, they were less prevalent in the Catchment when compared to the wider LGA. This implies an opportunity to grow knowledge intensive industries in the Catchment. In 2021, almost half (47%) of businesses in the Catchment were related to knowledge intensive industries. This concentration was lower than that recorded for Sydney LGA at 61%. this further highlights the opportunity for growth for in knowledge intensive industries in the Catchment.	The Site could increase the amount and type of knowledge intensive businesses and jobs in the Catchment, Tech Central and the Sydney LGA. This additional provision would contribute to Sydney LGA and Tech Central attaining their employment targets.
Sydney LGA job targets	The City of Sydney's LSPS sets a target for an additional 200,000 jobs to be accommodated in Sydney LGA between 2016-36. The Transport Performance and Analytics team within Transport also projects a similar increase in jobs over the period (+194,555 jobs). Most of these (61%) are projected to be knowledge intensive jobs. Tech Central also sets a target of 25,000 additional technology and innovations jobs. These fall within the knowledge intensive category.	The Site could contribute to Sydney and Tech Central meeting their employment targets. Additionally, the type of jobs proposed on the Site align with the types of industries projected to experience the greatest growth/demand, such as knowledge intensive jobs.
Increased economic contribution	Knowledge intensive industries combined had the second highest worker productivity rate at around $188,995/worker. That is, the average amount a worker in these industries contributed to the local, regional domestic product.	Increased knowledge intensive industries on the Site would have a comparatively greater economic benefit to the local economy than other industry types (population serving, industrial and or health/education).
Leverage of the proximity of education and health facilities	The Catchment had a location quotation of 4.0 for health and education industries, highlighting the locations major specialisation in these industries.	The Site could provide space which leverages and supports surrounding education and health businesses/facilities. Increased provision of these industries in the Site also could increase the productivity benefits from agglomeration.

Likely impacts of the Site

The likely impacts resulting from the development of the Site have been estimated. These include population, age composition, household structure and employment estimates.

These likely impacts have been based on the proposal to provide a minimum of 381 private dwellings and a maximum of 109,547sqm GFA of employment-related space on the Site.

Consultation was undertaken with the CoS and NSW DPE demographics team. This consultation discussed appropriate demographic data sources, assumptions, methodology and likely impact findings. Their input was incorporated into this study's final likely impact estimates.

Resident population estimate

Based on an average household size of 2.0 persons per dwelling and a 92% occupation rate, it is estimated that by 2036 the Site could house a resident population of approximately 700 persons.

Age composition

The Site is expected to attract younger adult age groups, primarily to the private dwellings, as well as a broader range of older ages. By 2036, just over half of the Site's population is expected to be in the young working professional and homebuilders age group of 20-39 years.

The following table provides a breakdown of the likely age composition of the Site's resident population.

Table 3: Projected age composition of Site's resident population

Age group	2031		2036	
	Number	Proportion	Number	Proportion
0-4 years	28	4.00%	28	4.00%
5-9 years	16	2.30%	16	2.30%
10-14 years	13	1.90%	13	1.80%
15-19 years	38	5.40%	40	5.60%
20-24 years	65	9.20%	68	9.70%
25-29 years	115	16.40%	116	16.60%
30-34 years	110	15.70%	111	15.80%
35-39 years	71	10.20%	71	10.20%
40-44 years	47	6.70%	47	6.60%
45-49 years	38	5.50%	38	5.40%
50-54 years	34	4.80%	33	4.70%
55-59 years	30	4.30%	29	4.20%
60-64 years	26	3.70%	25	3.60%
65-69 years	23	3.20%	22	3.20%
70-74 years	17	2.50%	17	2.40%
75-79 years	15	2.10%	14	2.00%
80-84 years	10	1.40%	9	1.30%
85 years +	6	0.80%	5	0.70%
Total	**702**	**100%**	**702**	**100%**

Household structure

Resulting from the 92% occupancy rate, it is estimated that the Site would increase the number of households in the Catchment by approximately 350 households. It is estimated that by 2036, the majority of these (82%) would be smaller households (couples without children, lone person, and group households).

The following table provides a breakdown of the types of households that are likely to be accommodated on Site.

Table 4: Likely household structure on Site

Household structure	2031		2036	
	Number	Proportion	Number	Proportion
Couple with children	35	9.8%	34	9.8%
Couple without children	98	27.9%	99	28.1%
One parent family	23	6.5%	21	6.0%
Other family	7	2.0%	7	2.0%
Lone person household	129	36.8%	130	37.1%
Group household	60	17.1%	60	17.0%
Total	**351**	**100%**	**351**	**100%**

Employment generation estimate

The Site would provide a maximum of around 109,547sqm GFA of employment space. The breakdown of this employment space in the Paint Shop sub-precinct, the following was assumed or provided:

- Retail space was provided by the project architects Bates Smart– at a total of around 9,006sqm GFA
- Community space was estimated from input provided by EthosUrban – at a total of around 2,518sqm GFA
- Remaining space is assumed to be a mix of commercial office space (commercial, finance, technology, and innovation space) – assumed to be the remaining 98,023qm GFA of space.

Floorspace is converted into employment by applying average employment densities, that is, the average amount of space occupied by one job. Employment densities vary across and within industry types and building layout. Employment densities have been sourced from the City of Sydney's 2017 FES. This analysis is undertaken and described in Section 5.11. From the FES data a blended average of 1 worker per 15sqm for commercial office space, 50sqm per worker for community space, 27sqm per worker for food retail space and 35smq per worker for general retail space was applied to the breakdown of employment space provided on the Site.

Using this methodology, it is estimated that upon completion and full occupation, the Site would generate a total of around 6,200 jobs.

Although not all the approximate 5,880 commercial jobs provided on the Site would be innovation and technology jobs, they would contribute to Tech Central attaining its minimal job target of an additional 25,000 innovation and technology jobs. Hence, development of the Site would significantly contribute to the job target and overall vision of Tech Central.

A breakdown of generated by the proposal by their land use is provided in the table below.

Table 5: Employment generation estimate of Site (Paint Shop sub-precinct)

Broad land use	GFA (sqm)	NLA (sqm) *	Worker density per sqm	Jobs
Commercial office	98,023	88,221	15	5,881
Community	2,518	2,140	50	43
Food retail	6,755	5,944	27	220
General retail/shopfront	2,251	1,981	35	57
Total	**109,547**	**98,286**		**6,201**

Likely impacts without and with Site

The likely impact without and with development of the Site is provided at the 400m and 800m catchment is provided in the table below.

Table 6: Population and employment impact with and without the Paint Shop proposal

Population	Area	2016	2021	2026	2031	2036	Change
Without Proposal	Site	0	0	0	0	0	0
	400m	7,574	8,666	9,753	10,278	10,413	2,839
	800m	29,578	34,519	36,489	38,882	40,994	11,416
With Proposal	Site	0	0	0	702	702	702
	400m	7,574	8,666	9,753	10,980	11,115	3,541
	800m	29,578	34,519	36,489	39,584	41,696	12,118
Impact	Site	0	0	0	702	702	702
	400m	0	0	0	702	702	702
	800m	0	0	0	702	702	702
Proportion of growth	400m	0%	0%	0%	6%	6%	20%
	800m	0%	0%	0%	2%	2%	6%
Employment	**Area**	**2016**	**2021**	**2026**	**2031**	**2036**	**Change**
Without Proposal	Site	0	0	0	0	0	0
	400m	11,879	25,943	29,372	30,917	32,903	21,024
	800m	27,938	44,068	50,622	55,173	59,046	31,108
With Proposal	Site	0	0	0	6,201	6,201	6,201
	400m	11,879	25,943	29,372	37,118	39,104	27,225
	800m	27,938	44,068	50,622	61,374	65,247	37,309
Impact	Site	0	0	0	6,201	6,201	6,201
	400m	0	0	0	6,201	6,201	6,201
	800m	0	0	0	6,201	6,201	6,201
Proportion of growth	400m	0%	0%	0%	17%	16%	23%
	800m	0%	0%	0%	10%	10%	17%

Source: HillPDA – 400m catchment includes Site and wider RNE Precinct while 800m incudes 400m Site and wider RNE Precinct

Recommendations to support the planning framework

From the analysis undertaken in this report, this section provides some high-level recommendations to support the planning framework for the Site.

Please note, although this section provides high-level recommendations, any specific planning recommendations would require consideration of a range of other factors, which will be explored in other specialist studies being undertaken in the preparation Planning Proposal for the Site. Future detailed design would be informed by relevant planning instruments and policies.

Table 7: Recommendations to support the planning framework

Characteristic	Recommendation
Apartment mixture	The Proposal should provide a mixture of apartment configurations and sizes to suit the Catchment's current and future population and household needs. Please refer to sections 3.1, 3.2, 3.6 and 3.7 of this report.
Increased density	Increased densities could be achieved on the Site and wider Catchment. The Sites resident catchment had a density of around 98 persons per hectare. This is compared to the benchmark areas, which ranged from 127 to 214 persons per hectare. Floorspace ratios and building heights should allow for appropriate build form and residential density on site.
Parking provision	There are several factors that provide the opportunity for the Site to consider providing lower residential parking rates that are reflective of the local area. These factors include (1) the transit orientated nature of the development (2) the lower levels of vehicle ownership in the surrounding resident catchment and (3) the higher rates of public and active transport to and from work (Please refer to Section 3.2 of this report). It is recommended, however, that the proposed parking rates do not detract from the attractiveness and/or viability of the proposed uses.
Non-residential space	Appropriate provision and mixture of employment and open space should be provided. This employment space composition should align with the current and forecast employment requirements of the catchment and LGA, with a focus on knowledge intensive and technology and innovation businesses (refer to sections 3.3, 4.1 and 4.7) and support services such as hospitality and retail. While open space should be appropriate to provide for the local resident, worker and visitor community.

INTRODUCTION

1.0 INTRODUCTION

The NSW Government is investing in the renewal of the Redfern North Eveleigh Precinct to create a unique mixed-use development, located within the important heritage fabric of North Eveleigh. The strategic underpinning of this proposal arises from the Greater Sydney Region Plan and District Plan. These Plans focus on the integration of transport and land use planning, supporting the creation of jobs, housing and services to grow a strong and competitive Sydney.

The Redfern North Eveleigh Precinct is one of the most connected areas in Sydney, and will be a key location for Tech Central, planned to be Australia's biggest technology and innovation hub. Following the upgrading of Redfern station currently underway, the Precinct's renewal is aimed at creating a connected destination for living and working, and an inclusive, active and sustainable place around the clock.

The Redfern North Eveleigh Precinct comprises three Sub-Precincts, each with its own distinct character:

- The Paint Shop Sub-Precinct which is the subject of this rezoning proposal
- The Carriageworks Sub-Precinct, reflecting the cultural heart of the Precinct where current uses will be retained
- The Clothing Store Sub-Precinct which is not subject to this rezoning proposal.

This State Significant Precinct (SSP) Study proposes amendments to the planning controls applicable to the Paint Shop Sub-Precinct to reflect changes in the strategic direction for the Sub-Precinct. The amendment is being undertaken as a State-led rezoning process, reflecting its status as part of a State Significant Precinct located within the State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021.

The amended development controls will be located within the City of Sydney Local Environmental Plan. Study Requirements were issued by NSW Department of Planning and Environment (DPE) in December 2020 to guide the investigations to support the proposed new planning controls.

1.1 Purpose of this report

The purpose of this report is to provide a detailed population and demographics assessment of the proposed changes and consider any potential impacts that may result within and surrounding the Paint Shop Sub-precinct (hence referred to as the Site). This report addresses study requirement *4. Population and demographics*. The relevant study requirements, considerations and consultation requirements, and location of where these have been responded to is outlined in Table 8 below.

Table 8: Population and demographics study requirements, considerations and consultation requirements

Ref.	Study requirement	Section of this report
	Study requirements	
4.1	• Identifies the existing situation (the baseline), including constraints, opportunities and key issues.	- Resident bassline summary - Section 3.7, p54 - Resident catchment considerations summary - Section 3.8, p59 - Worker baseline summary - Section 4.8, p72 - Worker catchment considerations summary - Section 4.9, p73 - Strategic context considerations summary - Section 2.4, p36 - Benchmarking considerations summary - Section 5.12, p94
4.1	• Outlines the likely impacts of the proposal in relation to population and demographics.	Sections of the likely impacts of the Proposal are as follows: - Population estimate - Section 6.2, p95 - Age composition - Section 6.3, p96 - Household structure - Section 6.4, p98 - Employment generation - Section 6.5, p99 - Summary table of impacts - Section 6.6, p100

Ref.	Study requirement	Section of this report
4.1	• Informs and supports the preparation of the proposed planning framework including any recommended planning controls or DCP/Design Guideline provisions.	- Section 6.7, p102
	Considerations	
4.2	• The employment and population profile of the Precinct and surrounding communities including age, ethnicity, education employment, income, trip to work mode and other relevant information.	- Population catchment profile - Chapter 3, p38 - Worker catchment profile - Chapter 4, p62
4.2	• Key employment and population drivers and trends impacting the Precinct and surrounding communities	- Chapter 2, p27 - Summary provided in Section 2.4, p36
4.2	• NSW Treasury's vision and objectives for Tech Central.	- Section 2.3, p33
4.2	• Time series (5-year increments) employment and population forecasts of the future Precinct and local area without the proposal.	- Section 6.6, p100
4.2	• Time series (5-year increments) employment and population forecasts of the future Precinct and local area with the proposal.	- Section 6.6, p100
	Consultation	
	• The Study is to be informed by consultation with the DPE's demographics team, the City of Sydney, the Greater Sydney Commission and NSW Treasury.	- Please refer to Section 1.6, sub-point five, p25

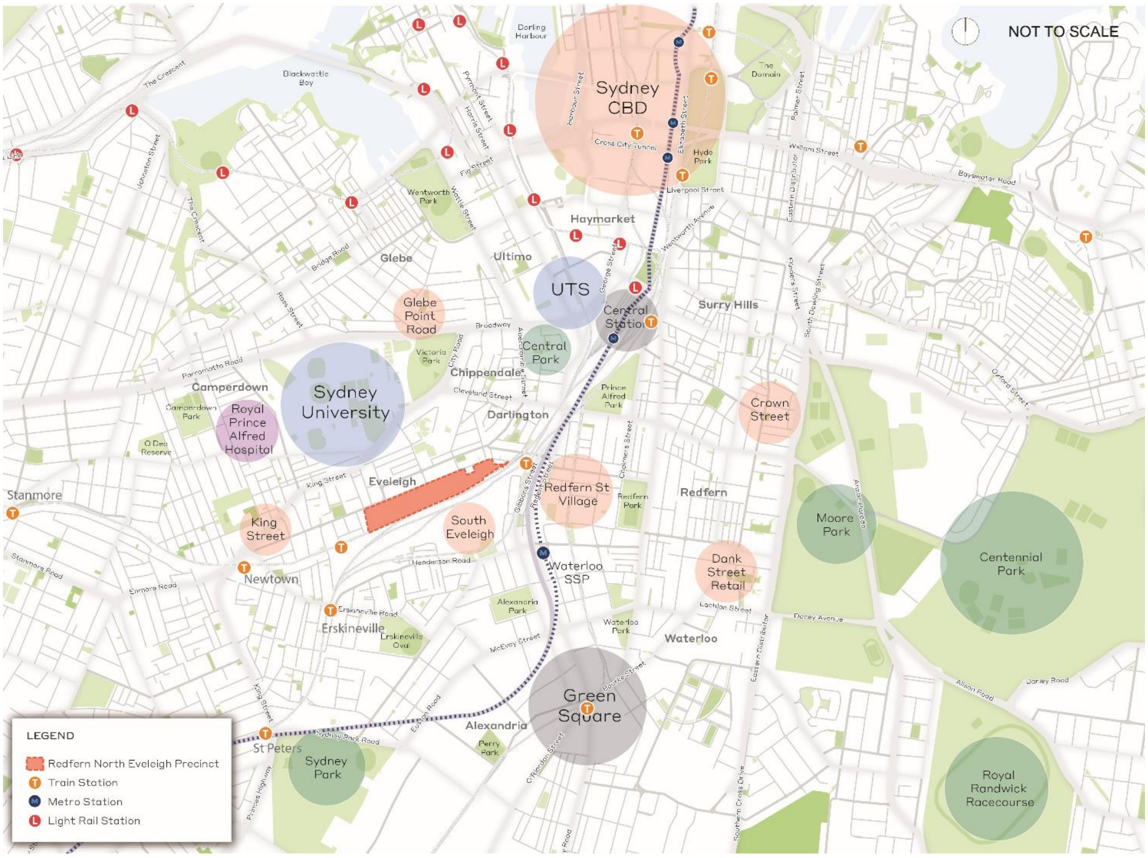
1.2 Redfern North Eveleigh Precinct

The Precinct is located approximately 3km south-west of the Sydney CBD in the suburb of Eveleigh (refer to Figure 2). It is located entirely within the City of Sydney local government area (LGA) on government-owned land. The Precinct has an approximate gross site area of 10.95 hectares and comprises land bounded by Wilson Street and residential uses to the north, an active railway corridor to the south, residential uses and Macdonaldtown station to the west, and Redfern station located immediately to the east of the Precinct. The Precinct is also centrally located close to well-known destinations including Sydney University, Victoria Park, Royal Prince Alfred Hospital, the University of Technology Sydney, and South Eveleigh, forming part of the broader Tech Central District.

The Precinct is located within the State Heritage-listed curtilage of Eveleigh Railway Workshops and currently comprises the Platform Apartments with 88 private dwellings, Sydney Trains infrastructure and key state heritage buildings including the Paint Shop, Chief Mechanical Engineer's Building, and the Carriageworks and Blacksmith Shop which provide shared community spaces for events including the Carriageworks Farmers Markets.

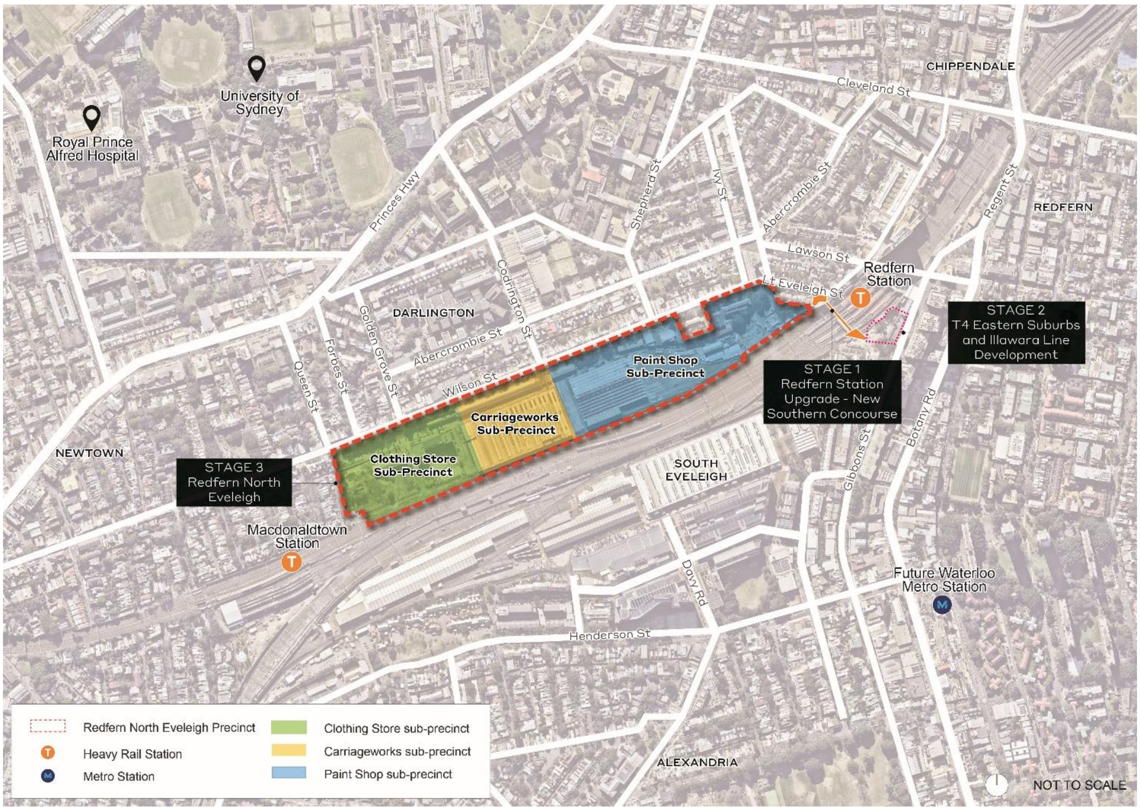
A map of the Precinct and relevant boundaries is illustrated in Figure 3.

Figure 2: Location plan of Redfern North Eveleigh precinct



Source: Ethos Urban

Figure 3: Redfern North Eveleigh and sub-precincts



Source: Ethos Urban

1.3 Redfern North Eveleigh Paint Shop sub-precinct

The Redfern North Eveleigh Paint Shop sub-precinct (referred to as the Site in this report) is approximately 5.15 hectares and is bounded by Wilson Street to the north, residential terraces and Redfern station to the east, the Western Line rail corridor to the south and the Carriageworks sub precinct to the west. The Site has a significant level change from a Reduced Level (RL) height of RL25 metres to RL29 metres on Wilson Street.

The Site currently hosts a number of items of heritage significance, including the Paint Shop building, Fan of Tracks, the Scientific Services Building No.1, the Telecommunications Equipment Centre, and the former Chief Mechanical Engineers Office building. The sub-precinct has a number of disused spaces adjacent to the rail corridor as well as functioning Sydney Trains infrastructure, offices and train stabling. Vehicle and pedestrian access to this area is used by Sydney Trains. The Site has a clear visual relationship to South Eveleigh and the Eveleigh Locomotive Workshops across the active rail corridor.

A map of the Site and relevant boundaries is illustrated in Figure 3.

1.4 Renewal vision

The Redfern North Eveleigh Precinct will be a connected centre for living, creativity and employment opportunities that support the jobs of the future. An inclusive, active and sustainable place for everyone, where communities gather.

Next to one of the busiest train stations in NSW, the Precinct will comprise a dynamic mix of uses including housing, creative and office spaces, retail, local business, social enterprise and open space. Renewal will draw on the past, adaptively re-using heritage buildings in the Precinct and will acknowledge Redfern's existing character and particular significance to Aboriginal peoples, culture and communities across Australia. The Precinct will evolve as a local place contributing to a global context.

1.5 Project description

An Urban Design and Public Domain Study has been prepared to establish the urban design framework for the Site. The Urban Design and Public Domain Study provides a comprehensive urban design vision and strategy to guide future development of the sub-precinct and has informed the proposed planning framework of the SSP Study.

The urban design framework for the Site comprises:

- Approximately 1.4 hectares of publicly accessible open space, comprising:
  - A public square – a 7,910 square metre public square fronting Wilson Street;
  - An eastern park – a 3,871 square metre park located adjacent to the Chief Mechanical Engineer's Building and the new eastern entry from Platform 1 of the Redfern station; and
  - Traverser No1 - a 2,525 square metre public square edged by Carriageworks and the Paint Shop.
- Retention of over 90% of existing high value trees.
- An overall greening coverage of 40% of the Sub-Precinct.
- A maximum of 142,650 square metre gross floor area (GFA), comprising:
  - between 103,700 - 109,550 square metres of gross floor area (GFA) for employment and community facility floor space (minimum 2,500 square metres). This will support approximately 6,200 direct jobs on the site across numerous industries including the innovation, commercial and creative sectors.
  - between 33,100 - 38,950 square metres of GFA for residential accommodation, providing for between 381 and 449 new homes (including 15% for the purposes of affordable housing).

- New active transport infrastructure and routes to better connect the Paint Shop Sub-Precinct with other parts of Tech Central and the surrounding localities.
- Direct pedestrian connections to the new Southern Concourse at Redfern station.
- Residential parking rates, comprising:
  - Studio at 0.1 per dwelling
  - 1 Bed at 0.3 per dwelling
  - 2 Bed at 0.7 per dwelling
  - 3 Bed at 1.0 per dwelling
- Non-residential car parking spaces (including disabled and car share) are to be provided at a rate of 1 space per 700 square metres of GFA.
- 66 car spaces are designated for Sydney Trains maintenance and operational use.

The key features of the Urban Design Framework, include:

- The creation of a new public square with direct pedestrian access from Wilson Street to provide a new social and urban hub to promote outdoor gatherings that will accommodate break out spaces and a pavilion structure.
- An eastern park with direct access from Redfern station and Little Eveleigh Street, which will provide a high amenity public space with good sunlight access, comfortable wind conditions and community character.
- Upgraded spatial quality of the Traverser No1 yard, retaining the heritage setting, and incorporating complementary uses and good access along Wilson Street to serve as a cultural linkage between Carriageworks and the Paint Shop Building.
- The establishment of an east-west pedestrian thoroughfare with new public domain and pedestrian links.
- A range of Water Sensitive Urban Design (WSUD) features.
- Activated ground level frontages with commercial, retail, food and beverage and community and cultural uses.
- Adaptive reuse of heritage buildings for employment, cultural and community uses.
- New buildings for the Sub-Precinct, including:
  - Commercial buildings along the rail corridor that range between 3 and 26 occupied storeys;
  - Mixed use buildings along the rail corridor, comprising a three-storey non-residential podium with residential towers ranging between 18 to 28 occupied storeys;
  - Mixed use buildings (commercial and residential uses) along Wilson Street with a four-storey street wall fronting Wilson Street and upper levels at a maximum of 9 occupied storeys that are set back from the street wall alignment;
  - A commercial building on the corner of Wilson Street and Traverser No.1 with a four-storey street wall fronting Wilson Street and upper levels at a maximum of 8 occupied storeys that are set back from the street wall alignment. There is flexibility to allow this building to transition to a mixed-use building with active uses at ground level and residential uses above; and
  - Potential options for an addition to the Paint Shop Building comprising of commercial uses. These options (all providing for the same GFA) include:
- A 5-storey commercial addition to the Paint Shop Building with a 3m vertical clearance, with the adjacent development site to the east comprising a standalone 3-storey commercial building (represented in Figure 3);

- A 3-storey commercial addition to the Paint Shop Building with a 3m vertical clearance which extends and connects to the commercial building on the adjacent development site to the east; and
- No addition to the Paint Shop Building, with the adjacent development site to the east comprising a standalone 12-storey commercial building.
- Commitment to a 5 Star Green Star Communities rating, with minimum 5 Star Green Star Buildings rating.
- All proposed buildings are below the Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) to ensure Sydney Airport operations remain unaffected.

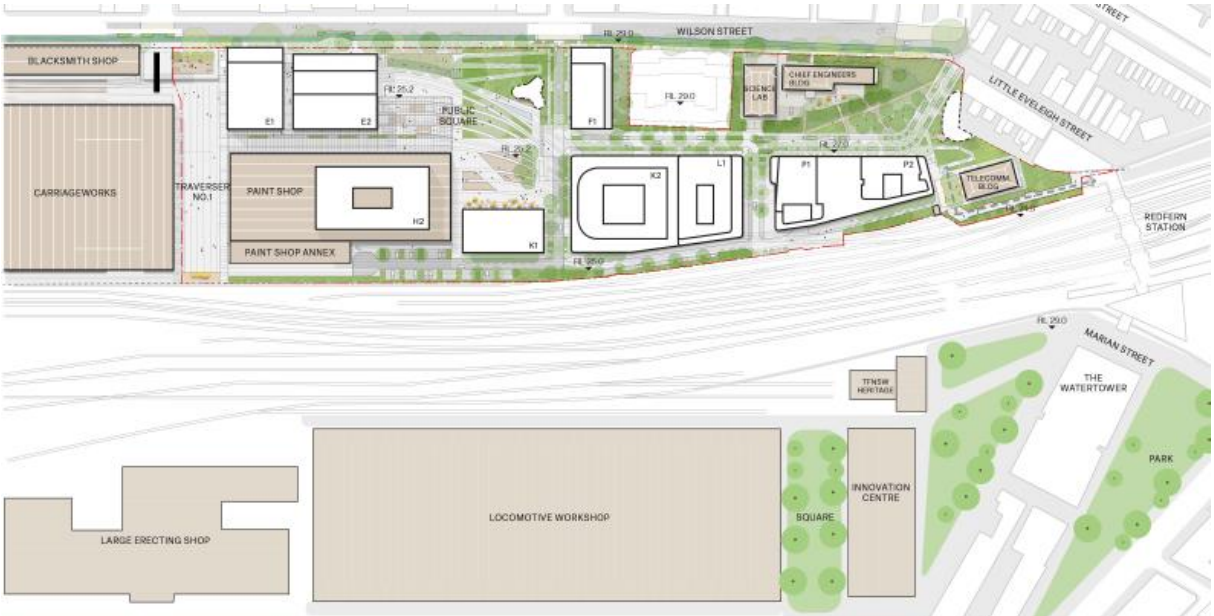
The proposed land allocation for the Site is described in the table below.

Table 9: Breakdown of allocation of land within the Site

Land allocation	Existing	Proposed
Developed area	15,723sqm / 30% of total site area	20,824sqm / 40% of total site area
Public open space (proposed to be dedicated to the City of Sydney)	Area not publicly accessible	14,306sqm / 28% of total site area
Other publicly domain areas (Including streets, shared zones and pedestrian pathways)	Area not publicly accessible	15,149sqm / 29% of total site area (Excludes privately accessible public links and private spaces ~ 3% of total site area)

The Indicative Concept Proposal for the Site is illustrated in Figure 4 below.

Figure 4: Indicative Concept Proposal



Source: Bates Smart and Turf

1.7 Methodology

To fulfil the study requirements the following approach was applied:

- Utilised small area ABS 2016 census data to understand the existing resident and worker catchment profile surrounding the Site.
- Utilised ABS Census data to conduct benchmark analysis of other high-density locations in Sydney LGA that could inform and guide profiling the likely future socio-economic outcomes of the Site.
- Utilised Transport for NSW (Transport) inputs related to dwelling assumptions, ABS 2016 Census Data, Profile .id projections, benchmark analysis to forecast future population characteristics on the Site and wider Precinct.
- Utilised Transport inputs related to building assumptions and land use mix, benchmark analysis, FES employment ratios, and Transport for NSW employment projections to forecast future job creation on the Site and wider Precinct.
- Consultation was undertaken in October of 2021 with CoS and NSW DPE's demographics team to discuss and present appropriate sources of demographic data, assumptions, methodology and findings for forecasting population and demographic impact of the Proposal.

1.8 Study structure

To meet the study requirements, the study is set out in the following manner:

- **Strategic context |** undertakes a review of the existing environment (including physical, policy and socio-economic macro trends) identify constraints, opportunities and key issues of the Precinct.
- **Resident catchment profile |** analysis to understand the unique resident profile in a defined catchment around the Site.
- **Worker catchment profile |** analysis to understand the unique worker profile in a defined catchment around the Site.
- **Case study analysis |** undertakes a review of other high-density locations around Sydney LGA with the purpose of providing benchmarks that could be applied to inform and guide profiling the likely future socio-economic outcomes of the Site.
- **Likely impacts of the Proposal |** estimates the likely population, age composition, household type and employment yield/profile resulting from development of the preferred concept for the Site.

2.0 STRATEGIC CONTEXT

This section provides an overview of several social and economic drivers that would likely influence redevelopment of the Site. It also highlights some of the strategic drivers for renewal and opportunities for the Precinct.

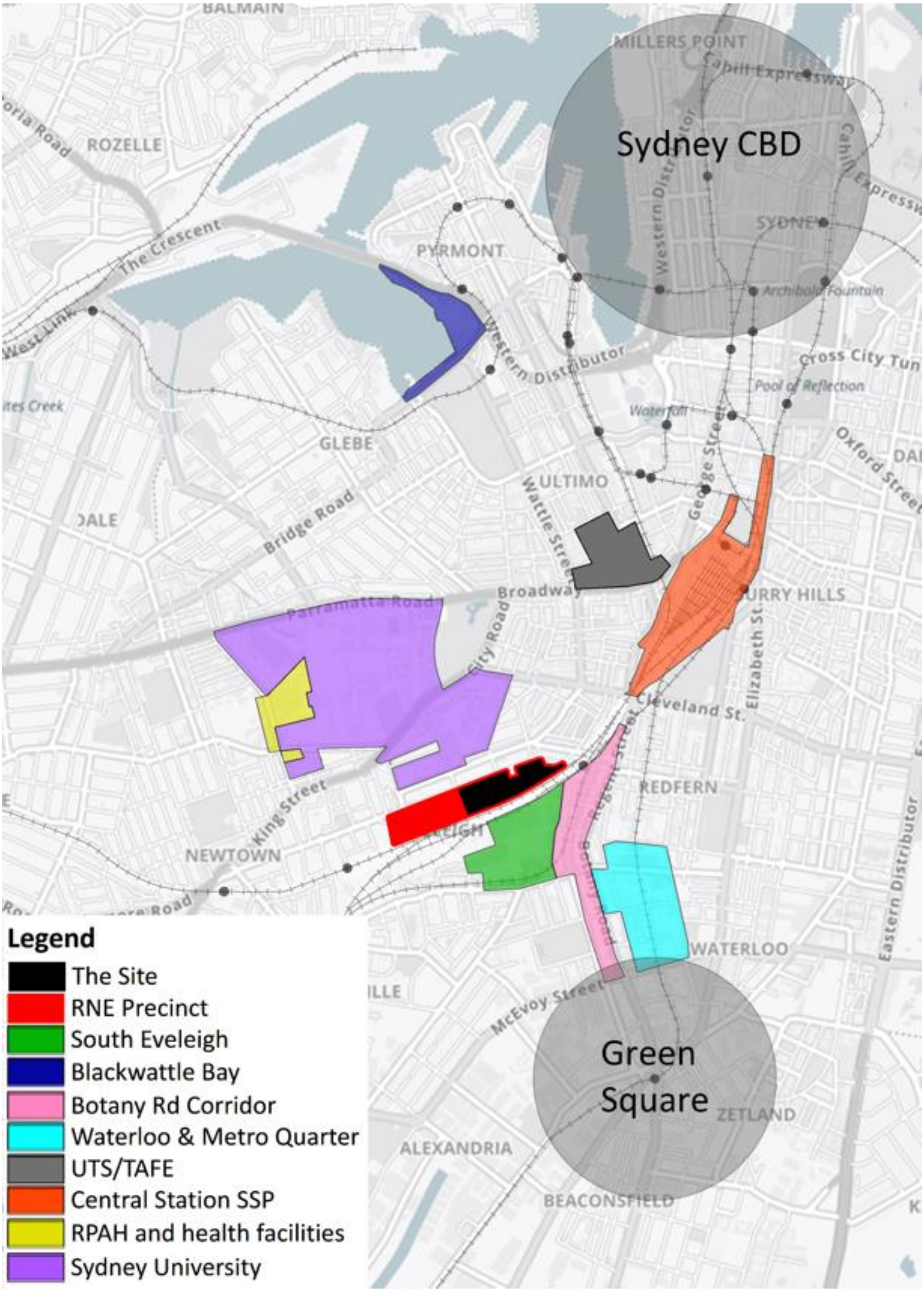
2.1 Site context

There are several government driven innovation and urban renewal projects and other major assets near the Site, some noted examples of these being:

- The Site is in the Tech Central Precinct which encompasses an area from Haymarket/Central Station westward to Camperdown and southward to Eveleigh (refer to Figure 11). Tech Central sets a target of generating 25,000 new innovation jobs across the Tech Central Precinct.

  The Tech Central Precinct will experience transformation with a focus on innovation and applied science, funded by local and state government initiatives to form a new global centre of technology. Development of the Site will incentivise further redevelopment and contribute to the overall vision of the wider Tech Central Precinct.
- Sydney University, Royal Prince Alfred Hospital (RPA) Hospital and other health facilities are in proximity to the Site.
- The Central Station Precinct (one of Tech Central precincts sub-precincts) and TAFE/UTS are linked to the Site along the heavy rail corridor, offering a high level of connectivity.
- Botany Road and Waterloo/Metro Quarter are located to the south-east.
- Sydney CBD is linked to the Site along the heavy rail corridor. This connection will likely increase the attractiveness of the Site for its future workers and residents.
- Green Square is located to the south-east. This significant urban renewal area, providing 30,500 new residential dwellings and house a population of over 60,000 by 2031, is located to the south of the Site. The Site will provide employment opportunities to these future residents.

Figure 5: Site and Precinct context



Source: HillPDA

2.2 Social and economic drivers

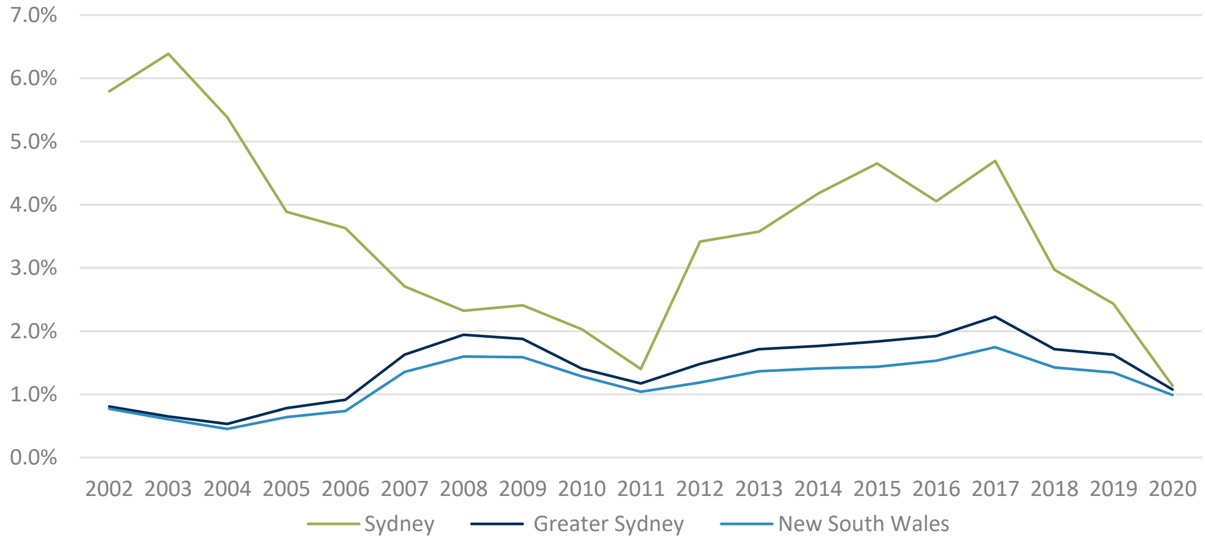
There are several key social and economic drivers that either directly or indirectly support redevelopment of the Site and wider Precinct. These are examined below.

Strong population growth

Sydney LGA has experienced strong population growth over the last two decades, growing at an average annual compounded growth rate of 3.5%. This is compared to an average annual compounded growth rate of 1.4% and 1.2% for Greater Sydney and New South Wales, respectively.

The strong growth experience in Sydney LGA implies increased demand for additional housing and employment opportunities to support this population.

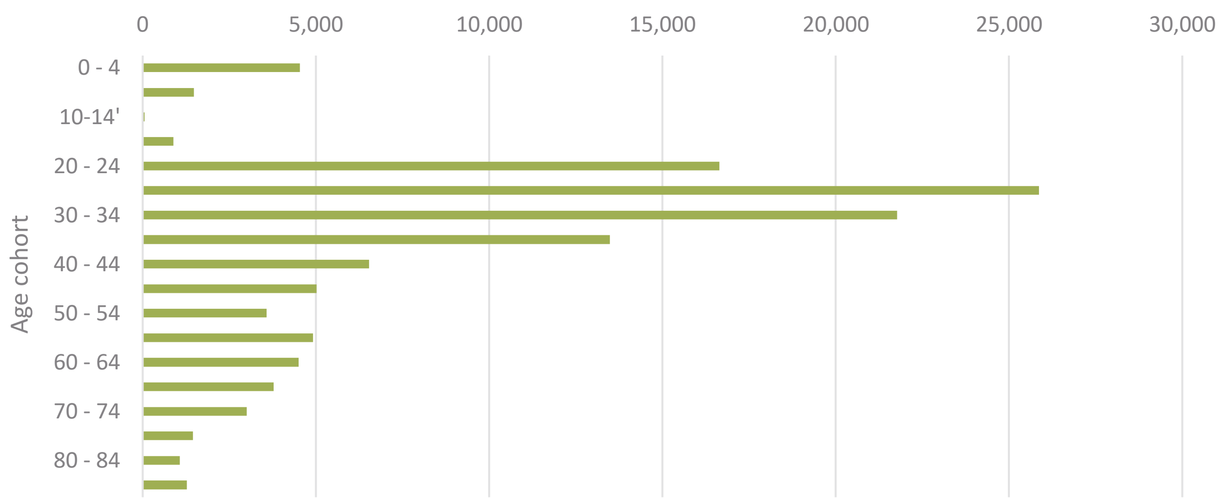
Figure 6: Estimated residential population annual proportional growth 2001-20



Source: ABS Stat

Over the two decades to 2020, residents aged 20-39 years in Sydney LGA increased by 77,765 persons which was 65% of the LGA's residential growth over the period. This reflects that Sydney LGA has become a more attractive destination for younger working residents. These residents are attracted to the benefits of inner-city living such as being closer to work, cafes, restaurants, a vibrant night-time economy and entertainment/cultural facilities.

Figure 7: Sydney LGA net change in population by age cohort 2001-20



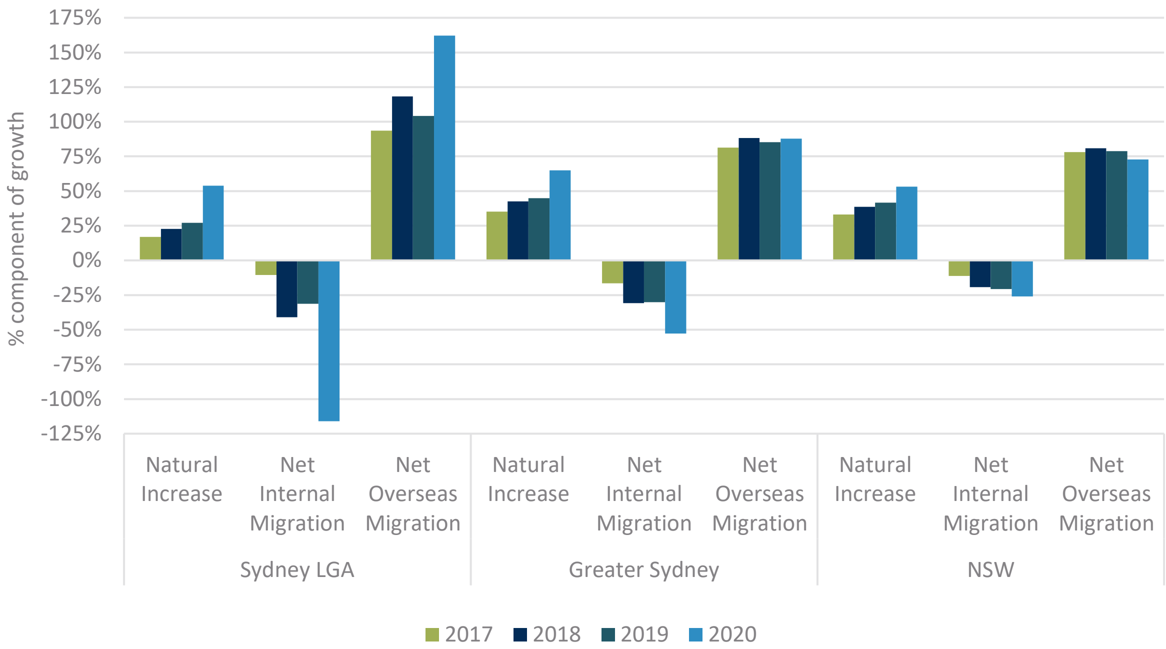
Source: ABS.Stat

Overseas migration

Examination of population growth by its various components shows that growth has mostly been driven from overseas migration. This is prominent in Sydney LGA where, 110% of its growth between 2017-20 was from overseas migration (please note that growth from net internal migration recorded a -35% reduction over this period). This growth in net overseas migration is compared to 85% for Greater Sydney and 99% for NSW.

This highlights that Sydney LGA is increasingly a multicultural location.

Figure 8: Net population growth by its components 2017-20

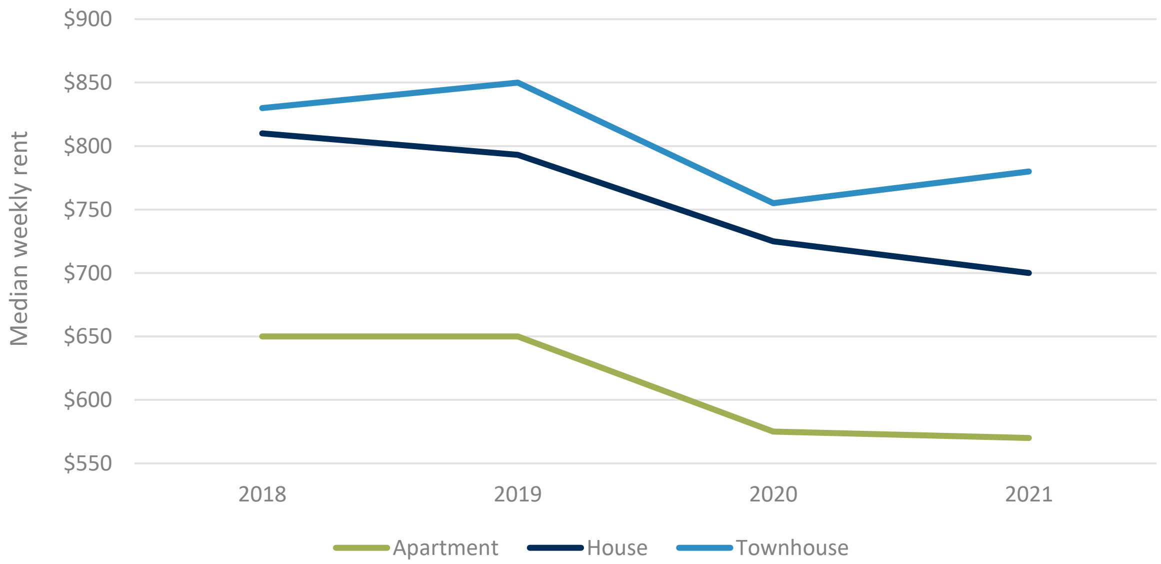


Source: ABS Stats

Dwelling affordability

Apartments offer a comparatively more affordable rental option in Sydney LGA, with an average median weekly rent of around $570, compared to $700/week for houses and $780 for townhouses (June Quarter 2021).

Figure 9: Sydney LGA median rent by dwelling type June Quarter 2017-2021



Source: NSW Communities and Justice Rent and Sales tables

Apartments provide a comparably more affordable dwelling option in Sydney LGA. For example, between March 2010-21 the median sale value for non-strata dwellings in Sydney LGA increased by $880,000 or 101%, while strata dwellings increased by $367,000 or 67%. An increased supply of apartments would be providing a comparatively more affordable dwelling option to the LGA's residents.

Table 10: Sydney LGA median sales growth March Quarter 2010-2021 ($,000)

Sydney LGA	2010	2021	Change	% change
Non-strata	$870	$1,750	$880	101%
Strata	$551	$918	$367	67%
All dwellings	$580	$995	$415	72%

Source: NSW Communities and Justice Rent and Sales tables

Strong forecast population and dwelling growth

Population growth

There are three main population projection data sets for Sydney LGA, these being those provided by Profile.id, NSW DPE, and Transport. Each projection was undertaken in 2019 and starts from a similar base in 2016 using ABS 2016 census data. These projections data sets are discussed in more detail in Section 3.7.

From these projection data sets, it is forecast that between 2016-36 Sydney LGA's resident population will increase by around 58,886 to 115,287 persons.

Based on forecast age composition and ABS labour participation rates, between 29,910 and 67,470 of these new residents will participate in the workforce. These residents would be seeking employment opportunities. Providing these opportunities close to where residents live would have economic, social and environmental benefits..

Dwelling growth

It is estimated that over the 2016-36 period, an additional 29,360 to 53,930 dwelling would be required to house Sydney LGA's growth in population. Increased supply within the LGA is likely required to house its future population with additional supply also placing downward pressure on rising housing values experienced between 2010-21 and discussed previously in this section.

Table 11: Forecast population, labour force and dwelling growth Sydney LGA 2016-36

	NSW DPE	Transport	Profile.id
Net population growth 2016-36	58,888	59,249	115,289
Growth in residents 15 years and over	46,586	47,113	105,096
Growth in residents in the labour force	29,908	30,247	67,472
Net dwellings growth 2016-36	29,361	32,211	53,930

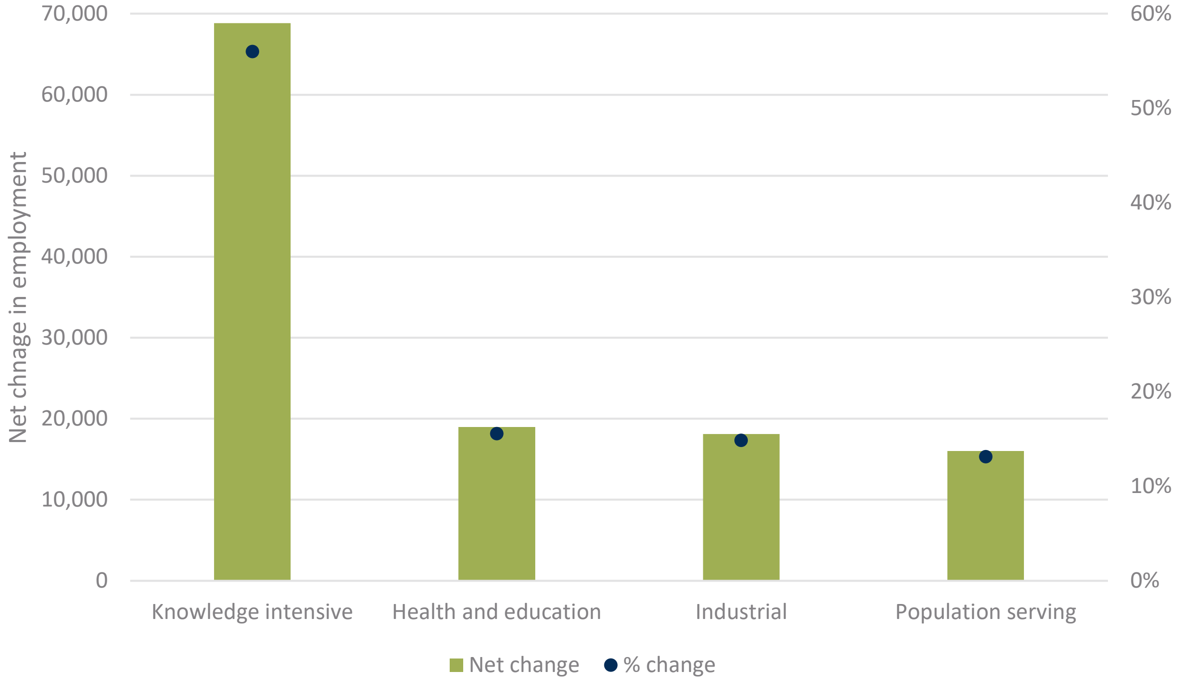
Source: NSW DPE 2019, Transport 2019, Profile.id, ABS 2016. HillPDA

Employment change by industry

Between 2006-16, employment generated in Sydney LGA increased by 140,665 jobs or 39%. Of these additional jobs, over half (56%) were related to knowledge intensive industries. This reflects the high concentration of commercial office, innovative, technology and other knowledge intensive jobs within Sydney LGA.

Development of the Site would provide the type of employment which has increasingly become more prevalent in Sydney LGA.

Figure 10: Net change in employment by broad industry codes (BICs) 2006-16



Source: ABS 2016, HillPDA

Employment forecasts

The City of Sydney's LSPS (LSPS) sets a target for an additional 200,000 jobs to be accommodated in Sydney LGA between 2016-36. Transport also projects a similar increase in jobs over the period (+194,555 jobs).

Analysis of the broad Industry Codes (BIC)[1] that make up these additional jobs reveals that the majority (61%) are related to commercial/knowledge intensive industries (which reflect the types of jobs proposed for Site) followed by health and education (17%), population serving (17%) and industrial (5%).

Development of the Site would contribute to Sydney LGA attaining its employment targets.

Table 12: Sydney LGA employment projections 2016-36

BIC	2016	2036	Net change	% of change
Knowledge intensive	343,377	461,482	118,105	61%
Population serving	129,804	163,098	33,294	17%
Health and education	64,586	97,727	33,140	17%
Industrial	41,255	51,271	10,016	5%
Total	**579,022**	**773,578**	**194,556**	**100%**

Source: TRANSPORT 2019 employment projections

[1] BIC are derived from the Greater Sydney Commissions classifications and are discussed in Chapter 4.0

2.3 Strategic drivers for renewal

There are several strategic drivers that either directly or indirectly support renewal of the Site. These are examined below.

Underutilised land

The Site comprises over five hectares of inner-city land. Despite being earmarked by Government for urban renewal for over 3 decades the land is still undeveloped and underutilised. The site provides an opportunity to deliver city shaping urban renewal with a mix and density of uses including residential dwellings, employment lands, community and social space in proximity to existing transport infrastructure and other renewal precincts.

Development of the Site with these types of land uses would contribute to Sydney LGA attaining its population, dwelling and employment targets. It would also contribute to achieving the overall vision for Tech Central, incentivising further development and supporting associated agglomeration benefits.

City of Sydney's Local Strategic Planning Statement (2020)

The City of Sydney's Local Strategic Planning Statement (LSPS) 2020 sets out a 20-year land use vision which balances the need for housing and economic activities while protecting and enhancing local character, heritage, public places and spaces.

The LSPS is categorised into five planning priorities:

1. Infrastructure
2. Liveability
3. Productivity
4. Sustainability
5. Governance and implementation.

The LSPS sets a target of an additional 50,000 dwellings and 200,000 additional workers to 2036. The LSPS notes the constrained land supply and development capacity of existing lands may have limited capacity to accommodate the target growth in dwellings and workers. Urban renewal precincts, such as the Site and wider Precinct, provides an opportunity to contribute to Sydney LGA attaining the projected growth in housing and jobs.

The LSPS highlights there is a lack of suitable employment floor plates in the LGA. This is a result of commercial office conversions and the development of student accommodation.

There is also an increasing importance to ensure that planning controls deliver built forms that accommodate the shift towards higher-order employment uses. This includes planning controls that will cater to the needs of both larger tenants in the financial and tech industries and knowledge-intensive small businesses and start-ups. The Site will provide a range of floorplate sizes to cater for a wide range of businesses and their needs.

Greater Sydney Regional Plan (2018)

In 2018, the Greater Sydney Commission released *A Metropolis of Three Cities - Greater Sydney Region Plan* (the Plan). The Plan sets a vision to 2036 and establishes a direction to manage economic, social and environmental matters across Greater Sydney.

The vision of the Plan is to create a metropolis of three cities, specifically the Western Parkland City, Central River City and the Eastern Harbour City.

The Site is located in the Eastern Harbour City with its aim to – build on its recognised economic strength and address liveability and sustainability. The Site is located within the Eastern Economic Corridor. This Corridor is identified as fostering innovation and global competitiveness, supported by investment in transport and services, jobs growth and business activity.

There are several committed and potential transport infrastructure projects that will improve accessibility between the well-established economic agglomerations along and near the corridor and significantly increase the size of the labour market which can access the corridor by public transport, boosting productivity.

Economic activity in the Corridor is to be facilitated through the work of the NSW Department of Planning and Environment, Infrastructure NSW and Landcom in several growth areas and urban renewal corridors. One of these identified urban renewal areas in the Plan is the Redfern to Eveleigh growth area.

Development of the Site would strengthen the economic opportunities of the Corridor while contributing to the vision of the growth area.

Eastern City District (2018)

The Eastern City District Plan (District Plan) establishes a 20-year direction to manage economic, social and environmental matters. It contains the planning priorities and actions to implement the Greater Sydney Region Plan. Camperdown-Ultimo is identified as a Health and Education Collaboration Area in the District Plan. It identifies the stakeholders of: City of Sydney, Inner West Council, the Royal Prince Alfred Hospital, the University of Sydney, University of Technology Sydney, University of Notre Dame Sydney Campus, TAFE Ultimo and medical research institutions to inform the Place Strategy.

Redfern to Eveleigh precinct is part of the Innovation Corridor identified on the western and southern fringes of the Harbour City. The area contains knowledge intensive, creative and start-up industries along with health, education and research services that support the global competitiveness of the Harbour CBD.

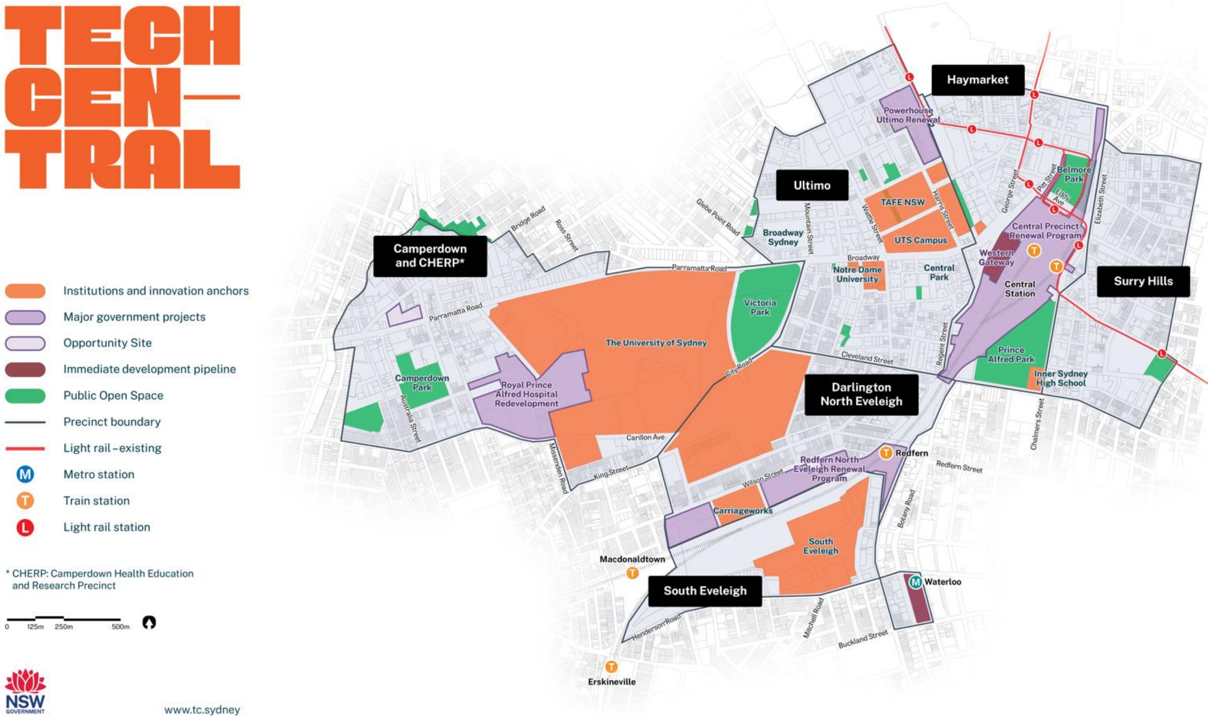
The priority for the area is to contribute to international competitiveness, support changing technologies, grow knowledge-intensive jobs and help create a 30-minute city.

The District Plan acknowledges that the Redfern to Eveleigh precinct is rapidly changing and growing in response to a multiplier effect on innovation, creative industries and start-ups. Existing impediments of the Redfern to Eveleigh precinct are seen as lack of affordable space, loss of employment floorspace, limited opportunities to create new commercial floor space, the need for suitably zoned employment land, and rising property and accommodation costs for students and key workers. Development of the Site with its proposed employment, community and residential space can contribute to addressing these impediments.

Tech Central Precinct

The Tech Central Precinct (formerly Sydney Innovation and Technology District/Camperdown-Ultimo Collaboration Area) includes six nodes that seek to attract a variety of industry investment. These six nodes include the area around Central Station referred to as the Haymarket node; the Darlington North-Eveleigh node; the South Eveleigh node; the Ultimo node; the Camperdown Health, Education and Research Precinct node; and the Surry Hills node.

Figure 11: The Tech Central Precinct



Source: provided by Transport

The Greater Sydney Commission (GSC) is working closely with other NSW Government agencies and stakeholders to implement initiatives to activate the Tech Central Precinct. These initiatives include creating 25,000 additional innovation jobs, attracting 25,000 new STEM and life sciences students, facilitating 250,000sqm in net lettable area for technology companies and 50,000sqm in net lettable area for startups, scaleups, innovation ecosystem partners and other early-stage companies.

The area between Central Station and Eveleigh is identified as an ideal location for the development of an Innovation and Technology Precinct. The Sydney Innovation and Technology Precinct Panel Report 2018 states that this location has the:

Opportunity to further grow this unique area into a centre for innovation. It is a long-term, strategic investment that responds to shifts in global economic power and the changing nature of work, including technological breakthroughs, global competition for talent, artificial intelligence (AI) and automation.

As the future focal point of Sydney's innovation and technology community, the Central to Eveleigh location would create a vibrant innovation and technology precinct in the heart of Sydney's CBD, with strong links to international markets, Greater Sydney, and the rest of NSW.

Recently, Atlassian an Australian software company, has confirmed itself as an anchor tenant through a direct dealing process in this location bringing over an estimated 4,000 employees to the innovation and technology precinct[2].

The vision is to create "*a vibrant and exciting place that unites a world-class transport interchange with innovative and diverse businesses and high-quality public spaces. It will embrace design, sustainability and connectivity, celebrate its unique built form and social and cultural heritage, and become a centre for the jobs of the future and economic growth*".

[2]NSW Government Premier media release 25th June 2020, Tech Central to become Australia's Silicon Valley https://www.nsw.gov.au/media-releases/tech-central-to-become-australias-silicon-valley

Development of the Site would support the activation and connectivity down the transport corridor between Central Station and Eveleigh station. As such, the Site has the potential to significantly contribute to the vision of the Tech Central Precinct through the development of a vibrant mixed-use precinct in the heart of the Central to Eveleigh innovation and technology precinct. Specifically, the development of the Site would contribute to the vision of the Tech Central Precinct through:

- The Site and wider RNE precinct being one of the largest Government controlled land parcels within Tech Central and as such activating it with innovation jobs will have a material impact on Governments ability to deliver on the outcomes of the Sydney Innovation and Technology Precinct 2018 report.
- The provision of commercial, retail and open space areas on the Site has the potential to deliver an important portion of the STIP Report/Governments Tech Central goal of 250,000sqm of Net Leasable Area (NLA) for technology companies through the commercial area uplift proposed in the masterplan.

2.4 Strategic context considerations and opportunities for the Site

From the above analysis, the following considerations and opportunities for the Site have been identified:

Table 13: Strategic context key considerations and opportunities for the Site

Key trend, issue and or constraint	Description/reasoning	Opportunity for Site
Strong population growth	Sydney LGA has experienced strong population growth over the last two decades, growing at an average annual compounded growth rate of 3.5%. This rate was two and half times greater than Greater Sydney and almost three times the rate recorded for NSW. This growth is forecast to continue with between an additional 58,890 and 115,290 people expected to be living in the LGA over the 20 years to 2036.	The Site could provide additional housing for Sydney's growing population.
Dwelling affordability	Over the 11 years to March 2021, the median dwelling price in Sydney LGA increased by $415,000 or 72%. Comparatively, apartments provide a more affordable dwelling option, with the median price increasing by $367,000 or 67% to $918,000 over the period. This is compared to non-strata dwellings, which increased by $880,000 or 101% to a median of $1.75 million (March Quarter 2021). Apartments also offer a comparatively more affordable rental option in Sydney LGA, with an average median weekly rent of around $570, compared to $700 for houses and $780 for townhouses (June Quarter 2021).	The Site could provide additional dwellings. This additional supply could help place downward pressure on prices in the LGA. Increased provision of apartment style dwellings would also provide a dwelling type that is comparatively more affordable in the LGA.
Demand for dwellings	Sydney LGA is forecast to require between 29,600 and 54,000 additional dwellings between 2016-36.	The Site could contribute to meeting the demand for additional dwellings in the LGA.
Sydney LGA job targets	The City of Sydney's LSPS 2020 sets a target for an additional 200,000 jobs to be accommodated in Sydney LGA between 2016-36. Transport also projects a similar increase in jobs over the period (+194,555 jobs). Most of these (61%) are projected to be knowledge intensive jobs.	The Site could contribute to Sydney meeting its employment targets. Additionally, the type of jobs provided on the Site align with the types of industries projected to experience the greatest growth/demand.

Key trend, issue and or constraint	Description/reasoning	Opportunity for Site
Underutilised land	The Site comprises just over five hectares of inner-city land, which is predominantly undeveloped and underutilised.	The site provides an opportunity to provide a greater offer, mixture and density of residential dwellings, employment, community and social space in proximity to existing transport infrastructure and other renewal precincts.
Locational attributes and agglomeration effects	The Site is located near major assets, transport nodes and several government-driven innovation and urban renewal projects.	Development and concentration of knowledge intensive and other innovation/technology industries in the Site and surrounding urban renewal precinct, has the opportunity to increase the productivity benefits from agglomeration.
State and local strategic directions	Several State and local strategies identify the Site and the Redfern to Eveleigh location for the development and promotion of a mixture of land uses, including innovation, creative industries and start-ups and residential and community uses.	Development of the Site would directly and indirectly contribute to the vision and direction of several Government strategic planning documents, including Tech Central Precinct.

3.0 RESIDENT CATCHMENT PROFILE

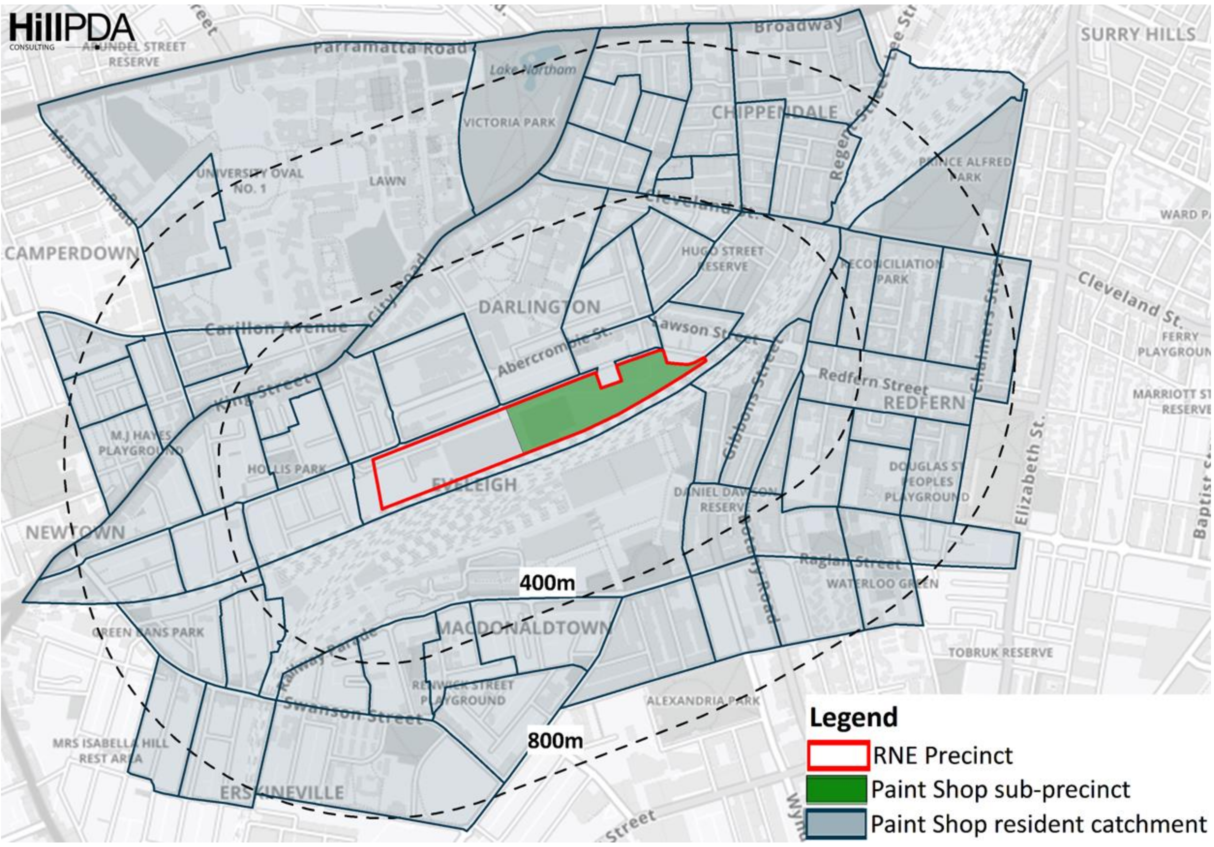
This section provides a representative demographic profile of a defined resident catchment (the Catchment) around the Site. This representative Catchment was defined because of the limited socio-demographic data at the Site boundary level.

The Catchment extends around 800m from the RNE Precinct's boundary (please refer to Figure 12) and is comprised of ABS geographical boundaries known as Statistical Area Level 1 (SA1s). SA1s are the smallest level for which the ABS provide extensive population and housing information.

The information in this section is primarily sourced from the 2011 and 2016 ABS Census. Unless otherwise stated, proportions in this section exclude not stated and not applicable categories.

The Catchment and the SA1s that it comprises, are provided in the figure below.

Figure 12: Resident catchment for the Site



Source: HillPDA

3.1 Population characteristics

In 2016, there were an estimated 34,330 residents living in the Catchment. This represented 16% of the Sydney LGA's resident population. The population of the Catchment increased by around 7,650 people or 29% between 2011-16. This was higher than the proportional growth rate experienced across Sydney LGA (23%). As such, the Catchment has experienced comparatively strong growth with its share of the resident population also increasing.

In 2011, the Catchment's density was 76 persons per hectare. This was higher than the wider LGA's density (63 persons per hectare). By 2016, the Catchment's density increased to 98 persons per hectare and remained higher than the wider LGA's density rate in 2016 (78 persons per hectare). This implies that the Catchment remains and has become denser over the period. This has primarily been achieved through the provision of high-density developments.

Table 14: Population growth and density

	2011	2016	Net change	% change
Resident catchment				
Population	26,676	34,328	7,652	29%
Area (ha)	351	351		
Density (pop/ha)	76	98	22	
Sydney LGA				
Population	169,505	208,374	38,869	23%
Area (ha)	2,675	2,675	-	
Density (pop/ha)	63	78	15	

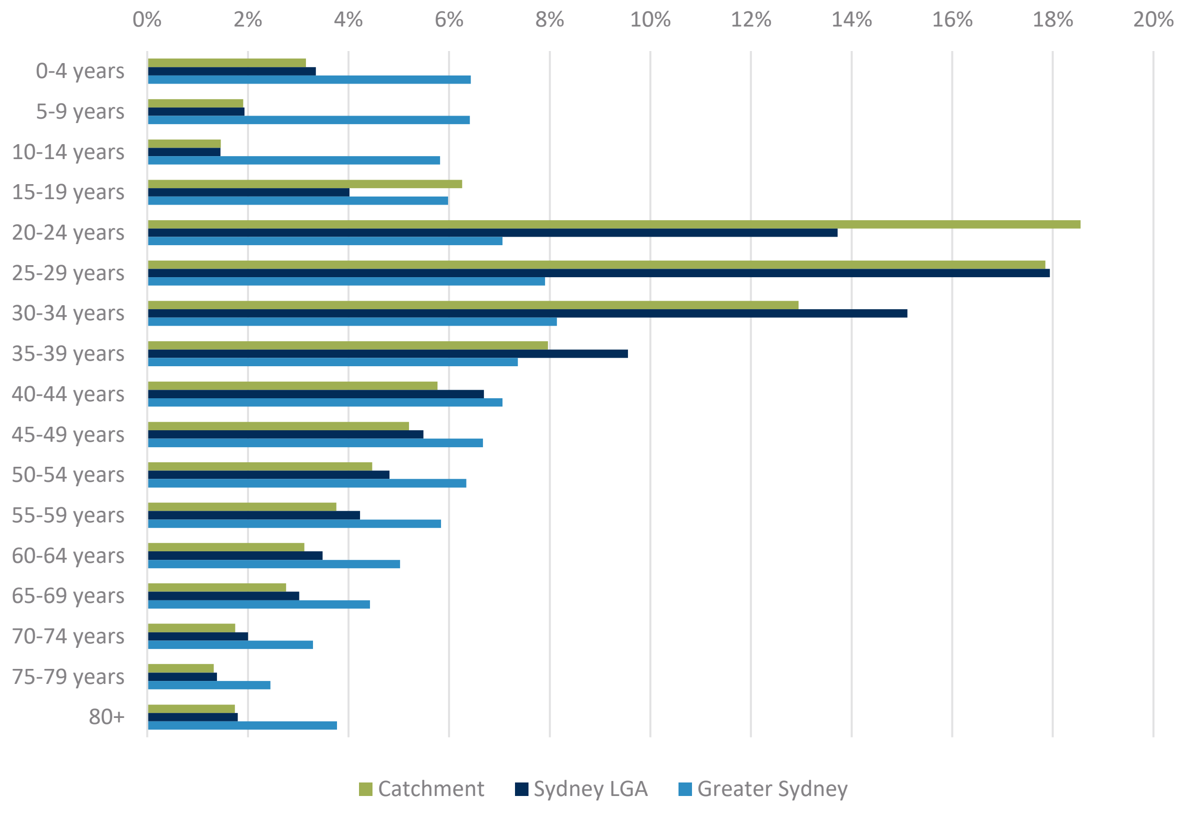
Source: ABS Census 2011 and 2016

Age structure

The residents of the Catchment are a young population with 43% aged between 15 and 29 years. This is compared to the wider LGA and Greater Sydney in which this age cohort comprises 36% and 21% of the population, respectively. These locations, particularly Greater Sydney, have a higher proportion of younger and older residents.

The younger age of the Catchment is also reflected in the median age of 32 years in 2016. This was comparable to Sydney LGA (32 years) and lower than Greater Sydney (36 years).

Figure 13: Age composition 2016



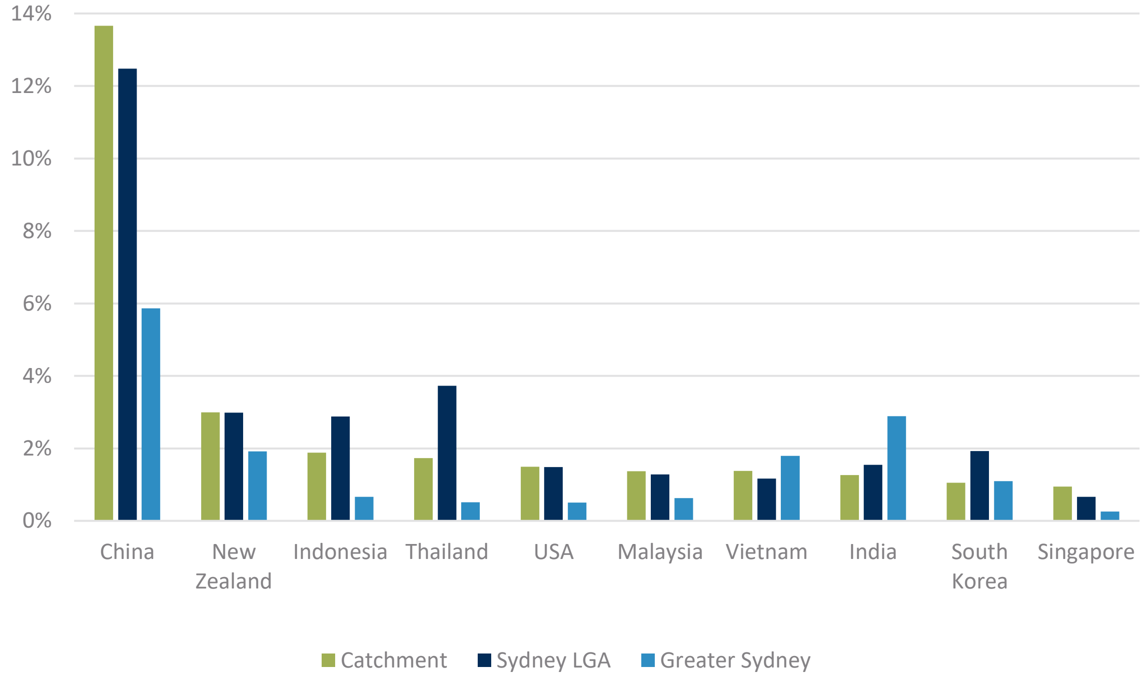
Source: ABS Census 2016

Country of birth

The population of the Catchment is highly multicultural, with 50% being born overseas. This proportion is slightly lower than that recorded for Sydney LGA (55%), however, it was higher than Greater Sydney, where 39% of residents were born overseas.

There is strong Asian influence in the Catchment, with almost half (49%) of all residents born overseas being from Asia. In fact, China was the most common country for residents being born overseas (27%). This is likely linked to the student population of Sydney University and the University of Technology Sydney.

Figure 14: Country of birth, 2016



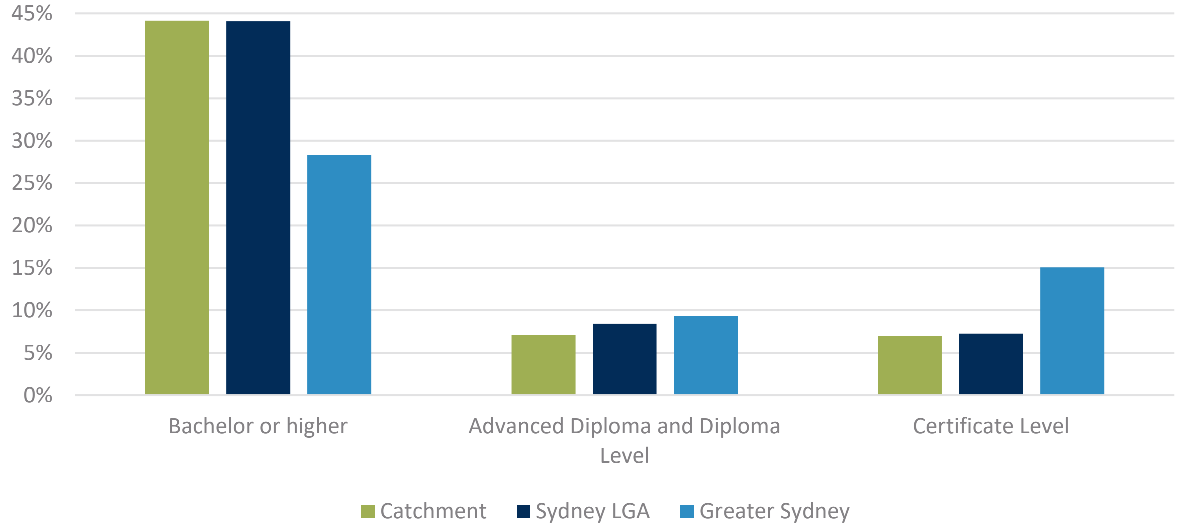
Source: ABS Census 2016

Post-school qualifications

In 2016, around 58% of residents aged 15 years and over in the Catchment had attained a post-school qualification. This was slightly lower than the wider Sydney LGA average of 60%, however, greater than the Greater Sydney average of 53%.

Of those with post-school qualifications, the majority had a bachelor degree or higher (44%). This was equivalent to the average for Sydney LGA (44%), and significantly above Greater Sydney (28%).

Figure 15: Post-school qualifications 2016

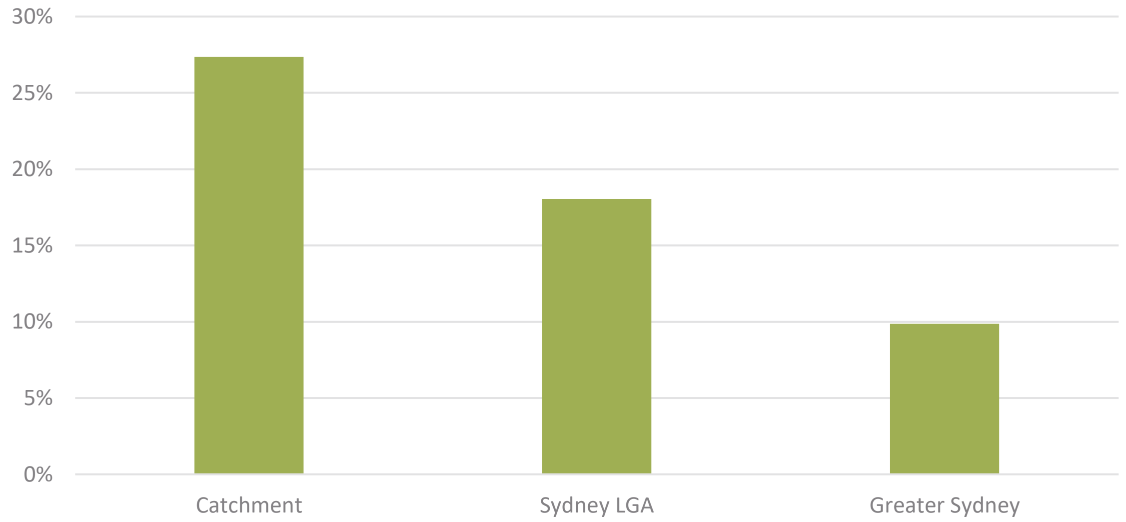


Source: ABS Census 2016

Student population

Owing to the proximity of Sydney University and UTS campuses, the Catchment had a higher concentration of students with 27% of its population (over 15 years) attending a TAFE or university. This was higher than that for Sydney LGA (18%) and Greater Sydney (10%).

Figure 16: Proportion of population attending TAFE or university 2016



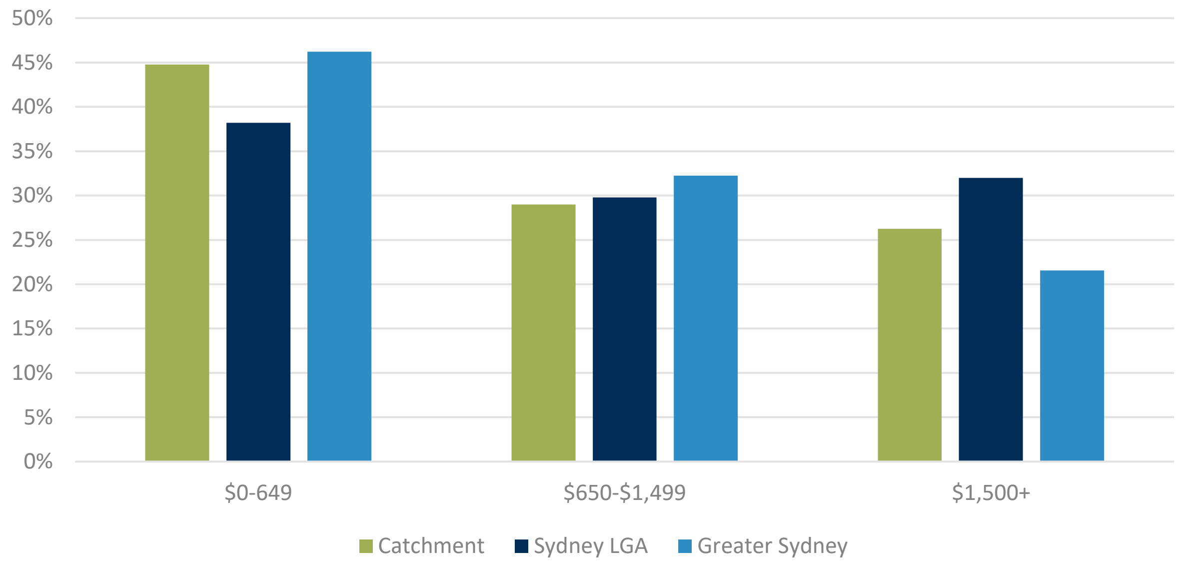
Source: ABS Census 2016 – proportion of residents 15 years and over

Personal incomes

In 2016, the median personal income for residents 15 years and over in the Catchment was $835 per week. This was lower than Sydney LGA ($953), although higher than Greater Sydney ($719).

Almost half (45%) of the residents in the Catchment were low-income earners ($0-$649/week). This is compared to 35% for Sydney LGA and 46% for Greater Sydney. The high proportion of low-income earners is likely reflective of the higher rates of students in the Catchment. These residents are more likely to seek employment in part-time jobs and lower paying industries such as those linked to hospitality.

Figure 17: Personal income per week



Source: ABS Census 2016

3.2 Dwelling characteristics

Over the five years from 2011, the number of occupied and unoccupied dwellings in the Catchment increased by around 4,415 dwellings, reaching a total of almost 16,820 dwelling in 2016. This represented a proportional growth of 38% over the period or an annual compounded growth rate of 6.6%.

This growth was higher than that recorded for Sydney LGA which proportionally increased by 16% or 3% per annum over the period and Greater Sydney which increased total stock by 8% or 1.5% per annum over the five years.

Table 15: Total dwellings 2011-16

	Catchment	Sydney LGA	Greater Sydney
2011	12,206	94,342	1,720,334
2016	16,819	109,496	1,855,731
Change #	4,613	15,154	135,397
Change %	38%	16%	8%
ACGR	6.6%	3.0%	1.5%

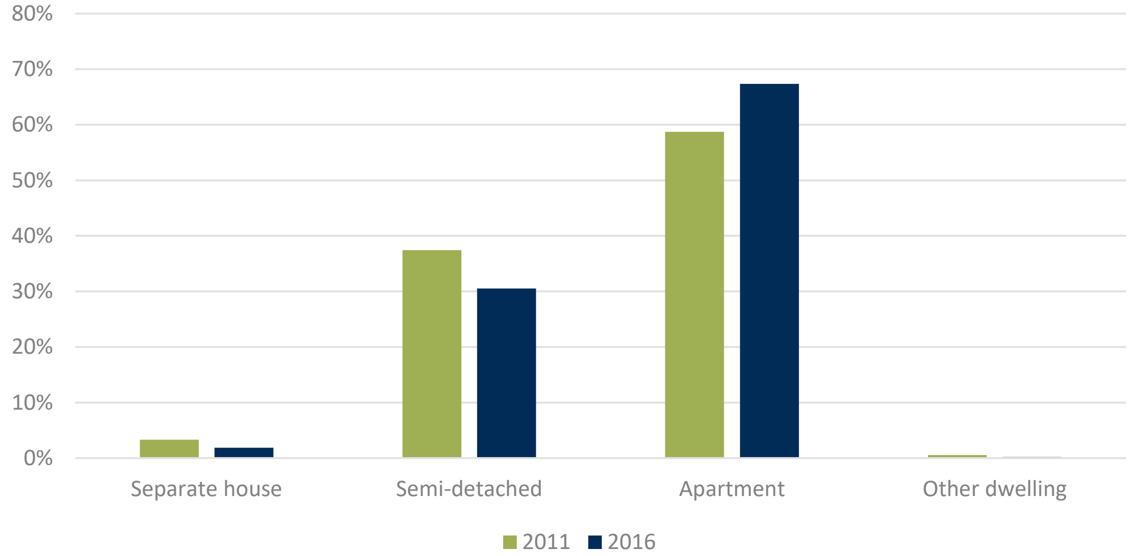
Source: ABS Census 2016

Dwelling type (occupied dwellings)

Of all occupied dwellings in the Catchment, the dominant dwelling type has remained apartments, which accounted for 67% of occupied dwelling stocks in 2016.

The proportion of occupied apartments increased in the Catchment between 2011-16 (59% to 67%) while semidetached dwellings and detached dwellings decreased (39% to 31% and 3% to 2%, respectively).

Figure 18: Catchment type 2011-2016 (occupied dwellings)

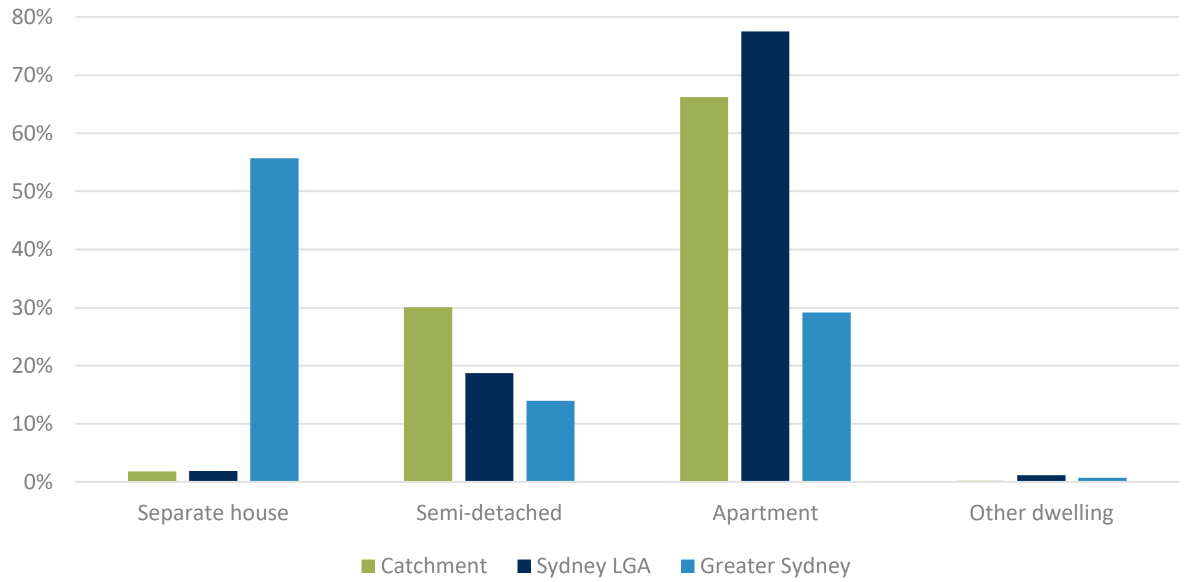


Source: ABS Census 2016

Dwelling composition, as of 2016, was comparable between the Catchment and Sydney LGA. However, the proportion of apartments was lower while there was a higher proportion of semi-detached dwellings in the Catchment.

Compared to Greater Sydney, the Catchment was overrepresented in apartments and underrepresented in detached dwellings. This, however, is a result of its inner-city location with high land values and existing buildings.

Figure 19: Dwelling type 2016

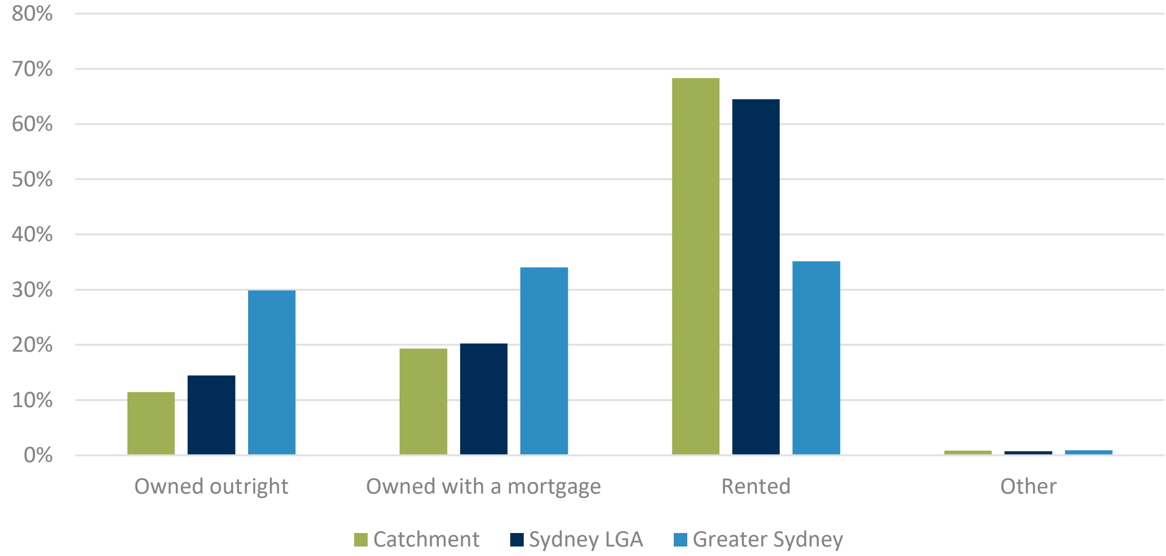


Source: ABS Census 2016

Tenure type

The Catchment had higher rates of renting (68%) and lower rates of ownership of dwellings (31%) when compared to Sydney LGA (65% and 35%, respectively) and Greater Sydney (35% and 65%, respectively).

Figure 20: Tenure type 2016



Source: ABS Census 2016 – Occupied private dwellings

Household structure

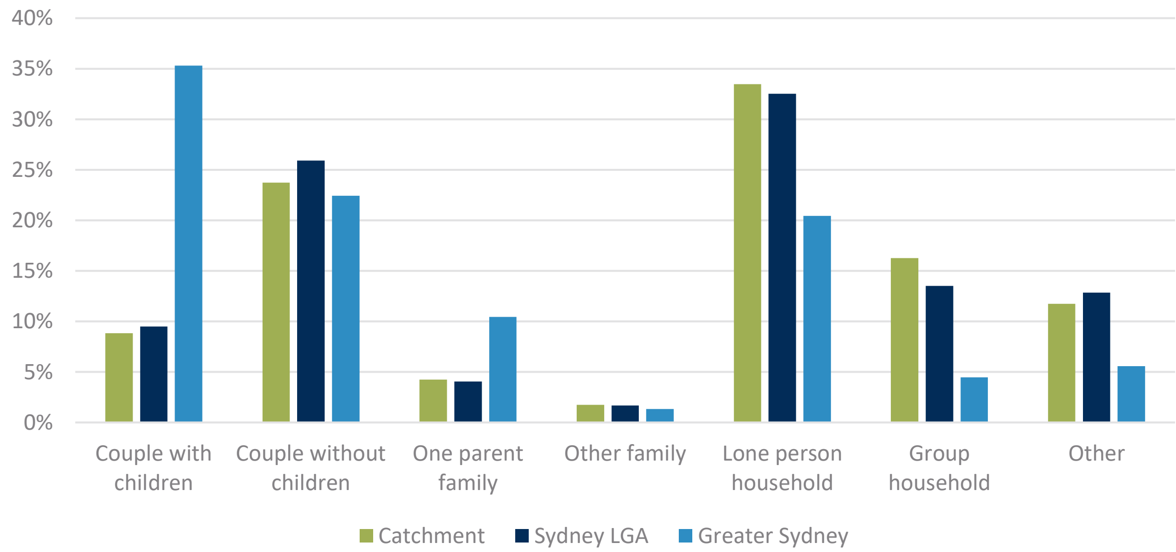
Lone person households comprised one third of households in the Catchment (33%). This was comparable to Sydney LGA (33%) but higher than Greater Sydney (20%).

Group households comprised 16% of households in the Catchment. This was higher than Sydney LGA (14%) and Greater Sydney (4%).

Overall smaller households (lone person, couples without children and group households) were the dominant household type in the Catchment, comprising 73% of households. This was comparable to Sydney LGA (72%) but higher than Greater Sydney (47%).

The high proportion of smaller households in the Catchment is likely reflective of its younger and student population.

Figure 21: Household structure 2016



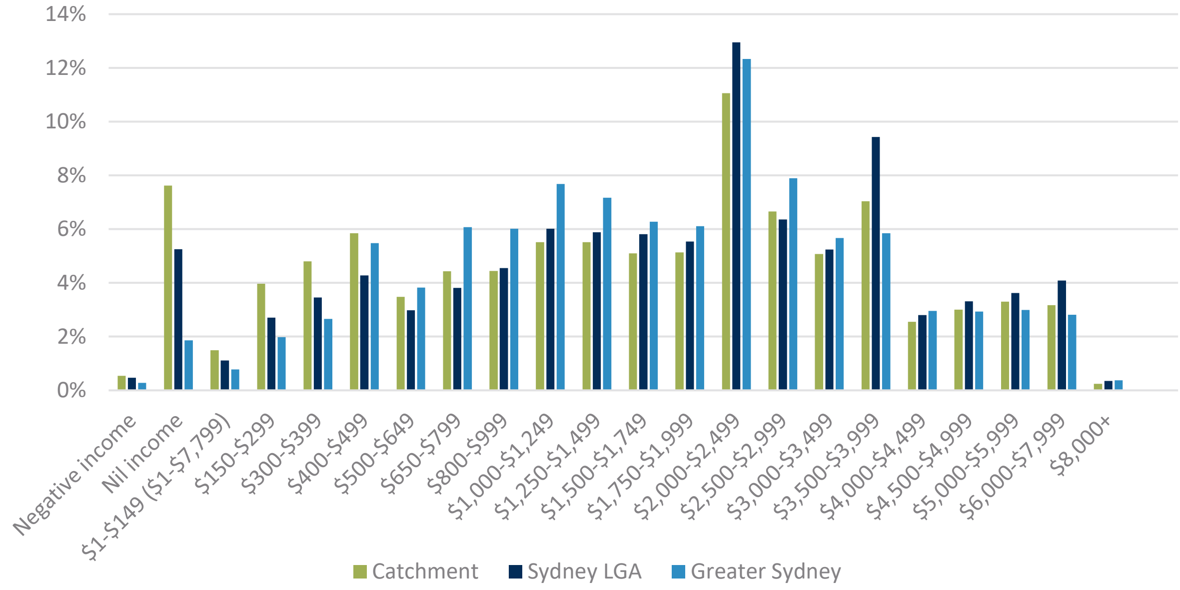
Source: ABS Census 2016

Household incomes

In 2016, the median household income in the Catchment was $1,583 per week. This was lower than Sydney LGA ($1,926) and Greater Sydney ($1,750).

All most a third (28%) of households in the Catchment were low-income earners ($0-$649/week). This is compared to 20% for Sydney LGA and 17% for Greater Sydney. The higher proportion of low-income households is likely reflective of the higher rates of students, social housing (Waterloo Estate) and smaller households in the Catchment.

Figure 22: Household income

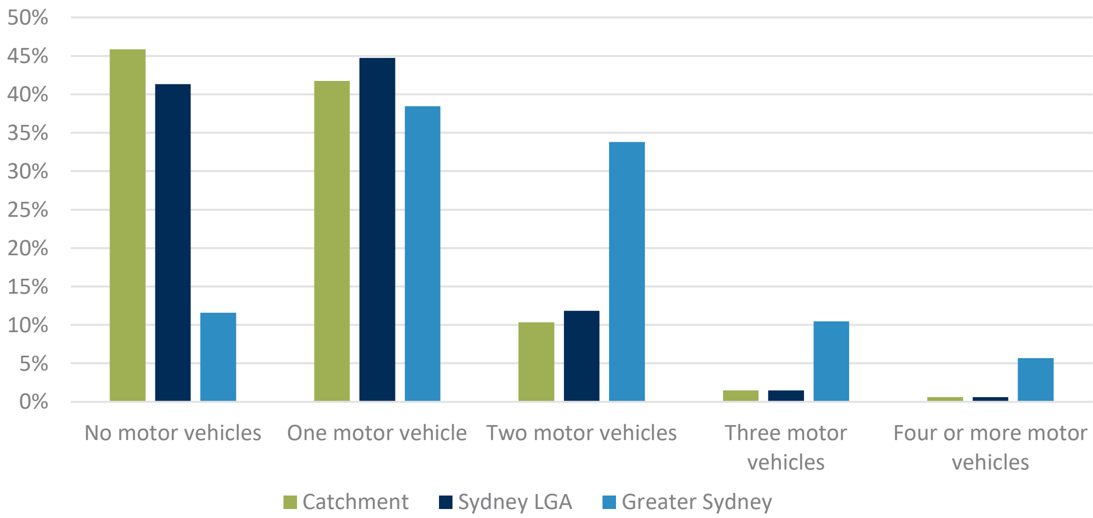


Source: ABS Census 2016

Vehicle ownership

In 2016, almost half (46%) of households in the Catchment did not own a vehicle. This is compared to Sydney LGA (41%) and Greater Sydney (12%). Vehicle ownership levels are significantly lower in the Catchment, when compared to the rest of Greater Sydney, reflecting its inner-city location, higher student population, lower income levels and connectivity of the Catchment through existing public transport infrastructure.

Figure 23: Vehicle ownership 2016



Source: ABS Census 2016

The ownership levels of motor vehicle ownership in the Catchment is further evident through it having an average motor vehicle per dwelling of 0.7. This is compared to 0.8 for Sydney LGA and an average of 1.6 motor vehicles per dwelling across Greater Sydney.

3.3 Resident employment characteristics

In 2016, there were around 32,095 residents aged over 15 years in the Catchment of which 61% participated in the workforce. This participation rate was lower than that for Sydney LGA (64%) and Greater Sydney (62%).

Conversely, the unemployment rate in the Catchment (7.6%) was higher than that recorded for Sydney LGA (6.0%) and Greater Sydney (6.0%).

The lower participation and higher unemployment rate in the Catchment are likely a result of the higher proportion of students and social housing when compared to the other localities.

Table 16: Participation and unemployment rate 2016

Category	Catchment	Sydney LGA	Greater Sydney
Labour force participation rate	61.3%	64.2%	61.6%
Unemployment rate	7.6%	6.0%	6.0%

Source: ABS Census 2016

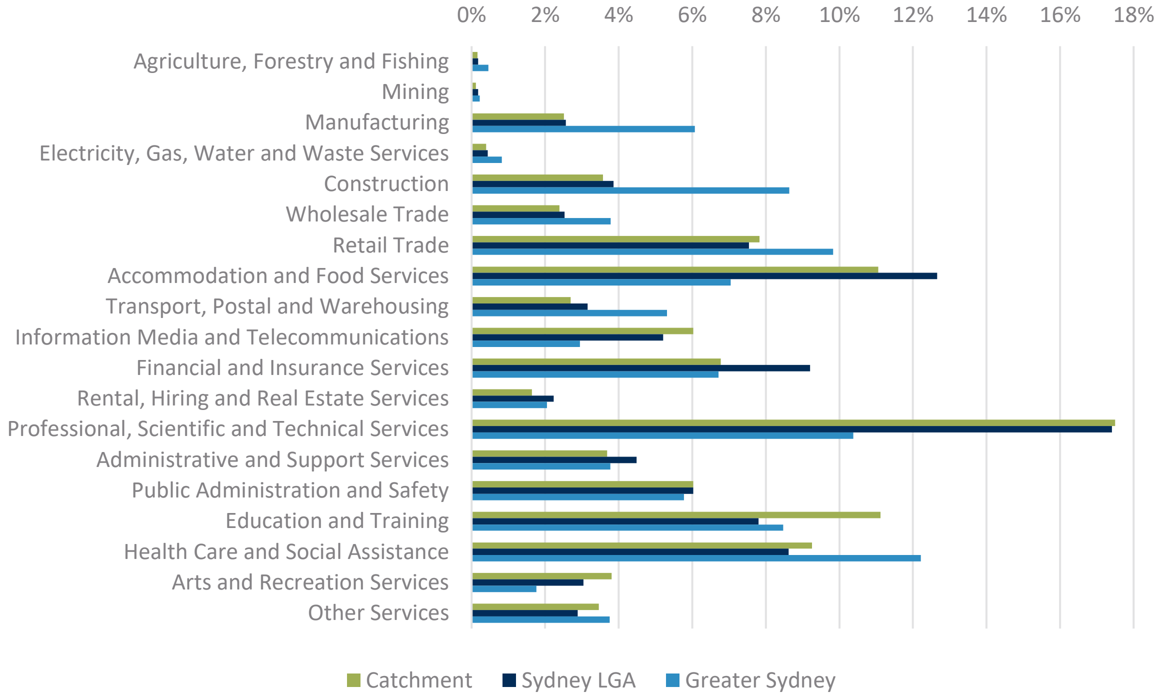
Employment by industry

In 2016, most residents in the Catchment were employed within knowledge intensive/professional industries (42%)[3]. This proportion was lower than the wider Sydney LGA (45%), although higher than Greater Sydney (32%).

The top five industries that residents of the Catchment were employed within were: Professional, Scientific and Technical Services (17%); Education and Training (11%); Accommodation and Food Services (11%); Health Care and Social Assistance (9%); and Retail Trade (8%).

[3] Knowledge intensive industries are the combination of Information Media and Telecommunications; Financial and Insurance Services; Rental, Hiring and Real Estate Services; Professional, Scientific and Technical Services; Administrative and Support Services; and Public Administration and Safety.

Figure 24: Resident employment by industry



Source: ABS Census 2016

Persons working from home (2016)

In 2016, around 4.2% of employed residents in the Catchment worked from home. This was comparable to Sydney LGA (4.3%) and Greater Sydney (4.6%).

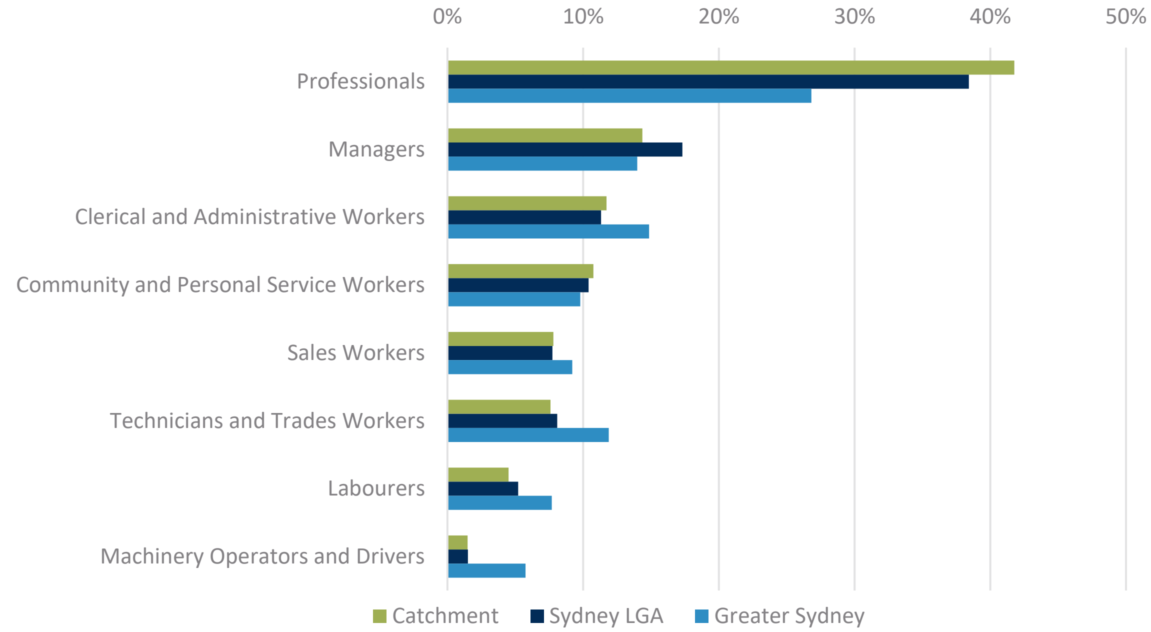
Working from home rates across industries were also comparable. However, when compared to Greater Sydney, the noted exceptions to this were that the Catchment had a lower rate for Professional, Scientific and Technical Services (7% and 12%, respectively). This is likely a result of the characteristics of the Catchment having higher accessibility/connectivity via public transport and shorter distances to travel to work.

Occupation

Over half (56%) of occupations in the Catchment were professionals and mangers in 2016. This was comparable to Sydney LGA (56%) but higher than Greater Sydney (41%).

There was a lower representation of traditional "blue collar" occupations in the Catchment with 14% of residents having occupations as labourers, technicians, trades and machinery operators. This was compared to 25% for Greater Sydney.

Figure 25: Employment by occupation



Source: ABS Census 2016

Self-containment rates and where residents worked

Self-containment measures the proportion of working residents who are employed within the boundaries of Catchment or region. In 2016, the Catchment had a self-containment rate of 8%. This was low when compared to Sydney LGA (65%).

The largest destination for working residents of the Catchment was Sydney LGA with around 63% working in the LGA. The next largest destination LGAs were the Inner West (5%) and North Sydney (4%).

A closer look at where working residents in the Catchment travel to work at the smaller ABS geographical boundaries known as Statistical Area Level 2's (SA2s) shows that over a quarter (28%) of residents worked in the Sydney - Haymarket - The Rocks SA2 followed by Newtown - Camperdown – Darlington (8%). In fact, of the top ten SA2 destinations, six were in Sydney LGA.

Table 17: Working resident, place of work by SA2 2016

Statistical Area Level 2 (SA2)	Working residents	%
Sydney - Haymarket - The Rocks	5,107	28%
Newtown - Camperdown - Darlington	1,519	8%
Redfern - Chippendale	1,072	6%
Pyrmont - Ultimo	927	5%
Surry Hills	868	5%
Erskineville - Alexandria	772	4%
North Sydney - Lavender Bay	558	3%
POW No Fixed Address (NSW)	458	3%
St Leonards - Naremburn	317	2%
Waterloo - Beaconsfield	310	2%
Other	6,073	34%

Source: ABS Census 2016

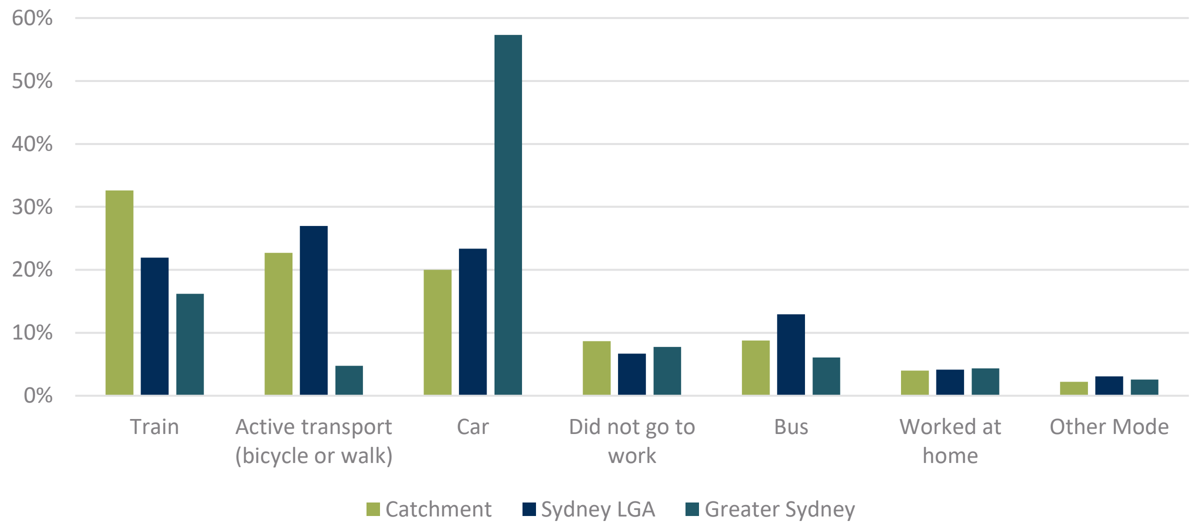
How residents travel to work

Around a third (33%) of employed residents in the Catchment travelled to work via train. This is compared to around a fifth for Sydney LGA residents (22%) and just 16% for Greater Sydney.

Active transport (bicycle and walking) was the second largest travel method to work for residents in the Catchment (23%). This rate was lower than that for the wider Sydney LGA (27%) and significantly higher than in Greater Sydney (5%).

The proportion of residents travelling to work by car (either as driver or passenger) was lower (20%) in the Catchment when compared to Sydney LGA (22%) and Greater Sydney (57%). This was likely a result of the inner-city location of the catchment with its high connectivity through the existing rail network and walkability to employment locations.

Figure 26: Method of travel to work 2016



Source: ABS Census 2016

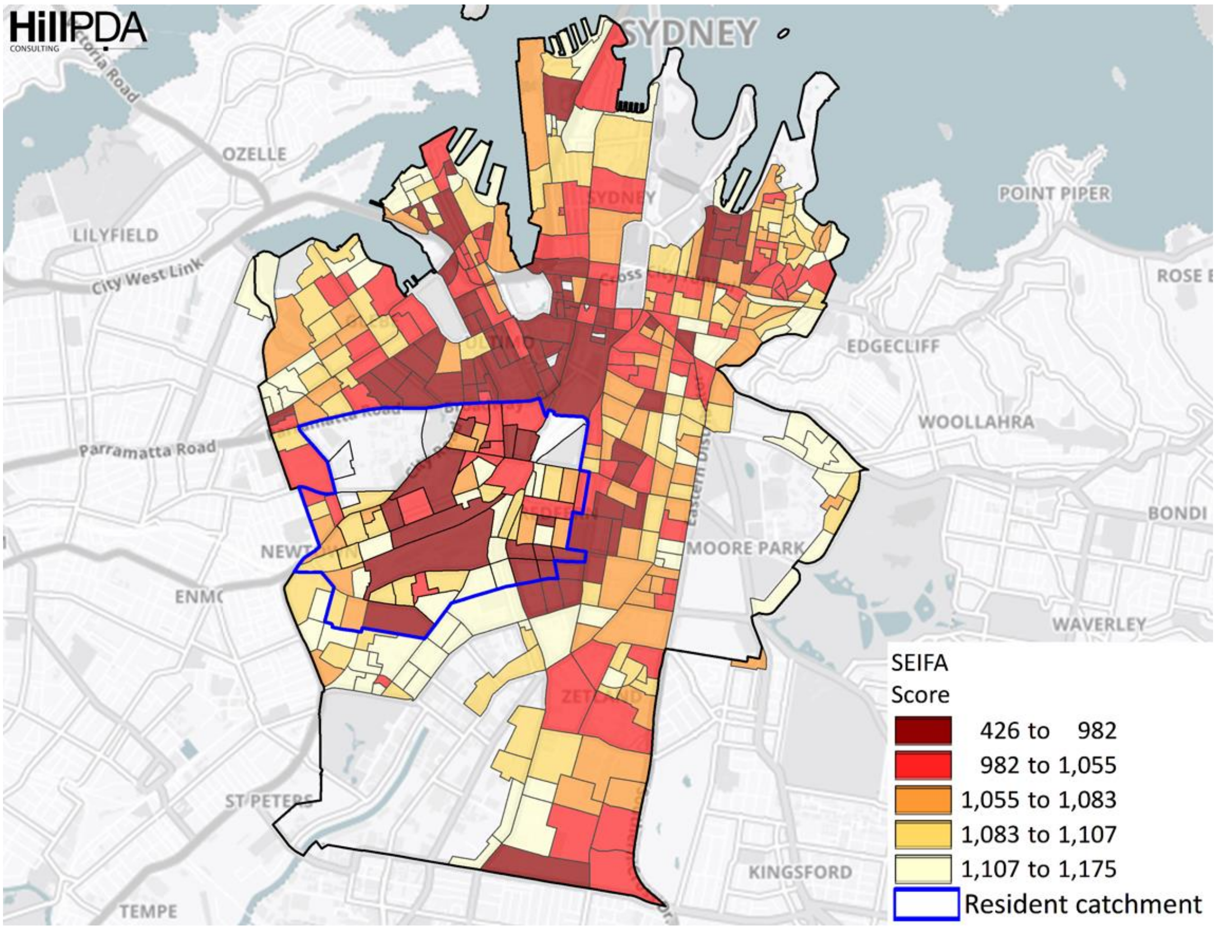
3.5 SEIFA 2016

The Socio-Economic Indexes for Areas (SEIFA) measures the relative level of socio-economic disadvantage. This index contains only disadvantage indicators (e.g. unemployment, low incomes or education levels, lack of internet access), so is best used to distinguish between disadvantaged areas.

In the figure below, the lower score indicates areas that are more disadvantaged while, conversely, the higher index identifies locations that are more advantaged.

Analysis of the 2016 SEIFA indexes highlight that the Catchment contains a diverse mixture of highly advantaged and disadvantaged households. This mix implies that some residents would be well positioned to benefit from the highly skilled employment opportunities and premium retail/commercial experiences provided in the Site. Additionally, the less advantaged households would benefit from improved access to community/other public facilities and increased employment opportunities.

Figure 27: SEIFA 2016



Source: ABS 2016 and HillPDA

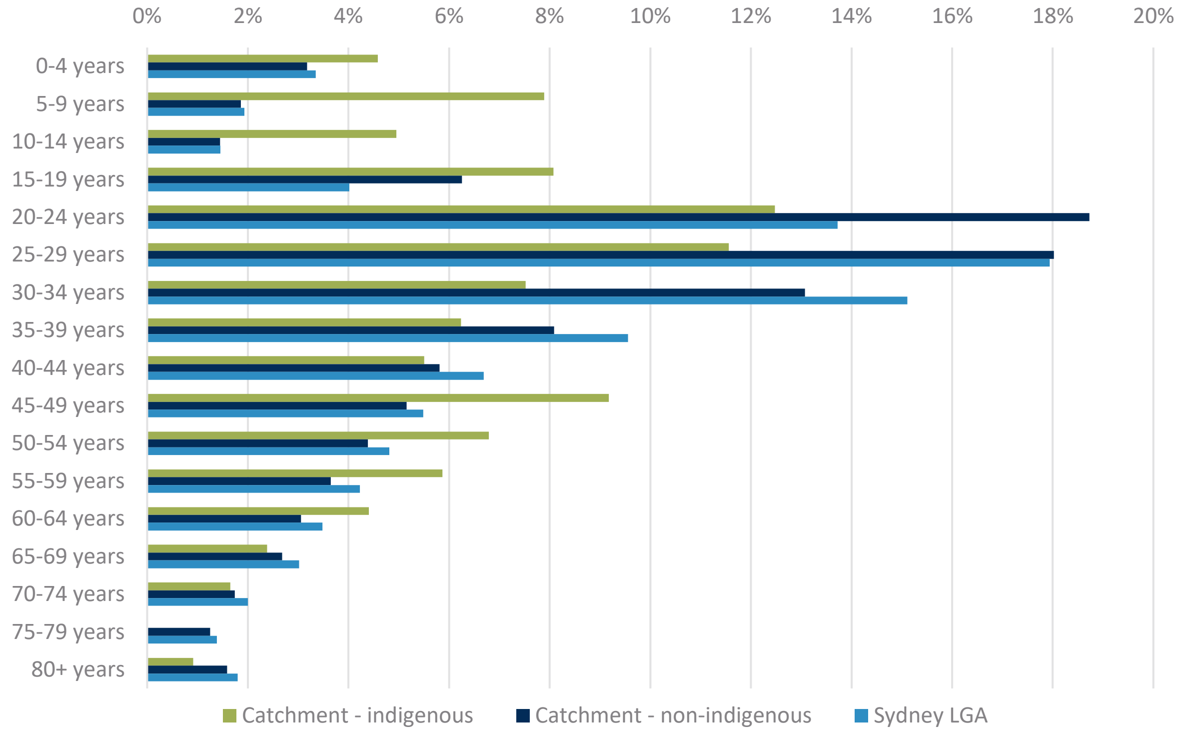
3.6 Aboriginal and Torres Strait Islander community

In 2016, there were around 545 Aboriginal and Torres Strait Islander residents (indigenous residents) living in the Catchment, representing 1.8% of the community. The proportion of indigenous residents in the Catchment was slightly higher than that recorded for Sydney LGA (1.3%).

There was a higher representation of indigenous residents aged under 20 years in the Catchment (26%) when compared to non-indigenous residents in the Catchment (13%) and the wider Sydney LGA (11%).

There was also a higher representation of indigenous residents aged 40-65 years in the Catchment (32%) when compared to non- indigenous residents in the Catchment (21%) and the wider Sydney LGA (25%).

Figure 28: Indigenous and non-Indigenous age profile



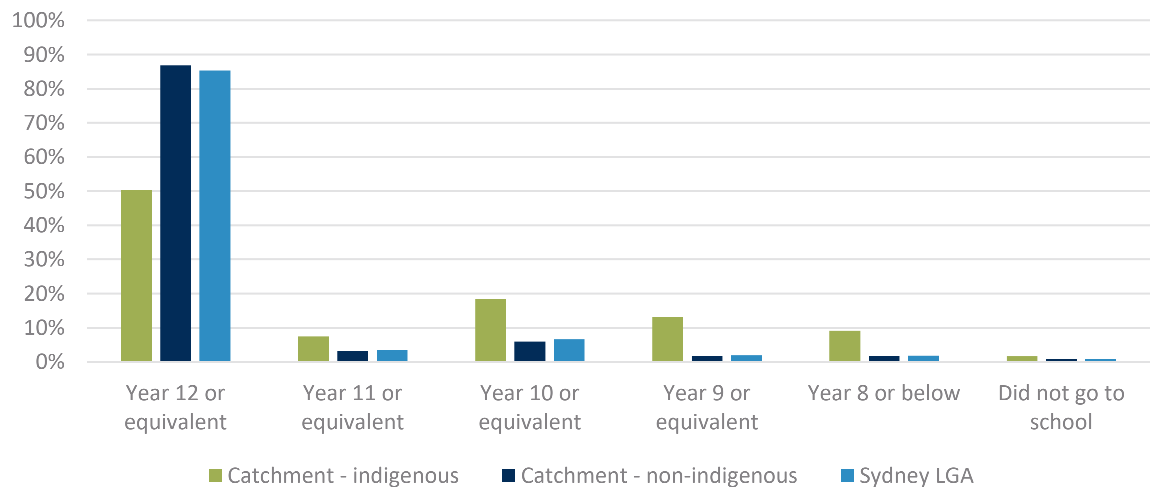
Source: ABS Census 2016

Highest year of school completed

In 2016, around a half (50%) of indigenous residents aged 15 years and over in the Catchment had completed year 12 as their highest school year. This is compared to 87% for non-Indigenous residents in the Catchment and 85% for Sydney LGA residents.

Correspondingly, Indigenous residents in the Catchment had higher rates for completing years 11, 10, 9 or 8 as their highest school year (48% combined) than non-Indigenous residents in the Catchment (13%) Sydney LGA (15%).

Figure 29: Indigenous and non-Indigenous highest year of school competed



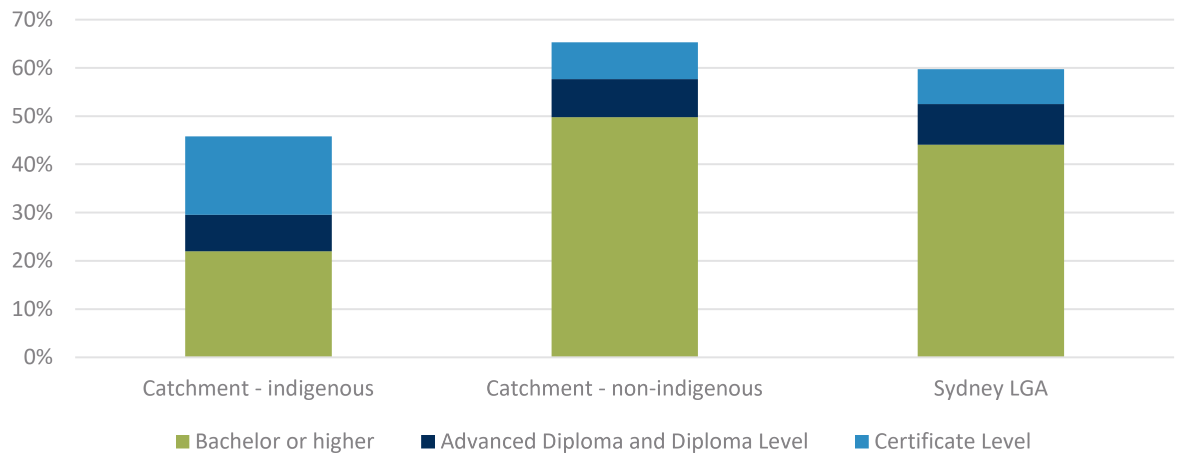
Source: ABS Census 2016

Post-school qualifications

In 2016, around 46% of Indigenous residents aged 15 years and over in the Catchment had attained a post-school qualification. This was lower than the attainment rate for non-Indigenous residents in the Catchment (64%) and Sydney LGA residents (60%).

Of Indigenous residents with post-school qualifications, the majority had a bachelor degree or higher (22%), followed by a certificate level qualification (16%). For non-Indigenous residents in the Catchment half (50%) had attained a bachelor degree or higher while only 8% had a certificate level qualification. These proportions were comparable to Sydney LGA (44% and 7%, respectively).

Figure 30: Indigenous and non-Indigenous post-school qualifications



Source: ABS Census 2016

Labour force statistics

In 2016, of the around 450 Indigenous residents aged over 15 years in the Catchment around 58% participated in the workforce. This participation rate was lower than that non-Indigenous residents in the Catchment (69%) and Sydney LGA residents (64%).

Conversely, the unemployment rate for Indigenous residents was higher (13.8%) than that recorded for non-Indigenous catchment residents (7.6%) and Sydney LGA (6.0%).

Table 18: Indigenous and non- indigenous participation and unemployment rate 2016

Category	Catchment - Indigenous	Catchment - non-Indigenous	Sydney LGA
Labour force participation rate	57.8%	68.7%	64.2%
Unemployment rate	13.8%	7.6%	6.0%

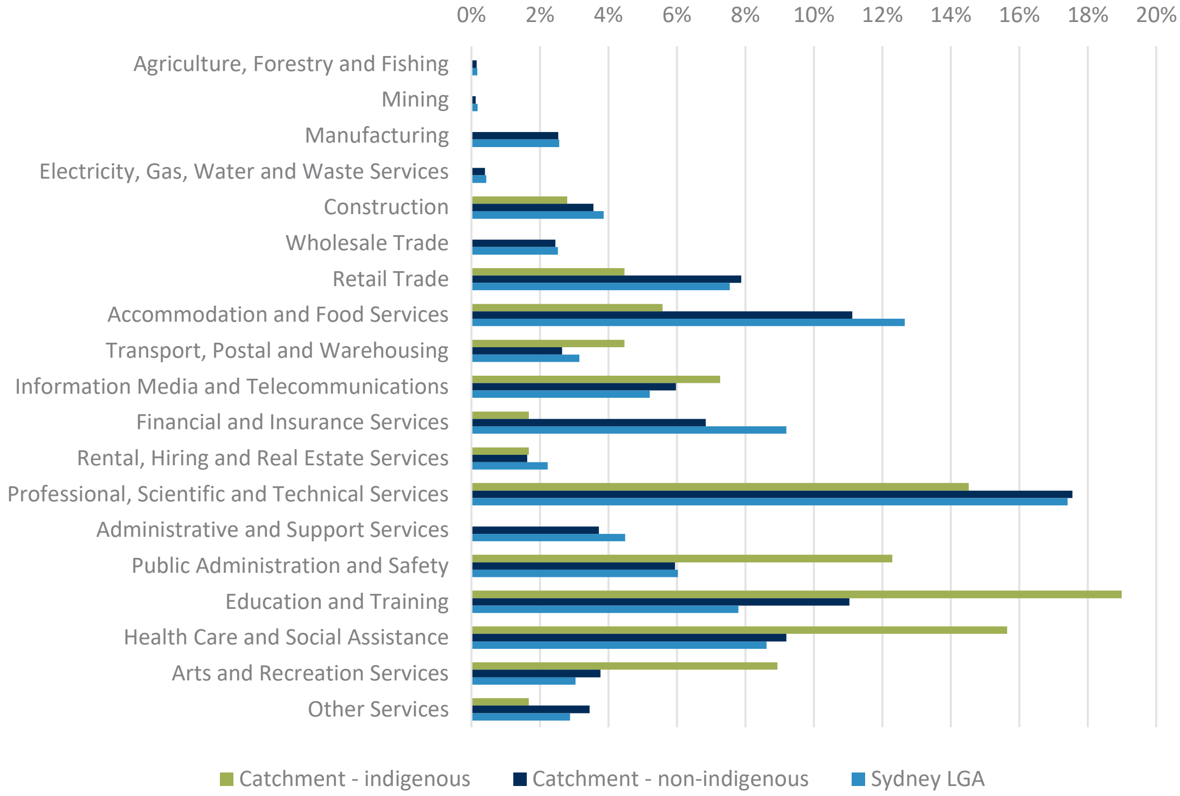
Source: ABS Census 2016

Employment profile

In 2016, almost half (49%) of Indigenous residents in the Catchment were employed within the three industries of Education and Training; Health Care and Social Assistance; and Professional, Scientific and Technical Services. This is compared to 38% of non-Indigenous residents being employed in these three industries and 34% of Sydney LGA residents.

Of note, was the two industries of public administration and safety and arts and recreation services industry which were the fourth and fifth largest employment industry for Indigenous residents in the Catchment. The proportion of Indigenous residents employed in these two industries (21%) was double that for non-Indigenous residents (10%) and Sydney LGA (9%).

Figure 31: Indigenous and non-Indigenous employment profile by industry



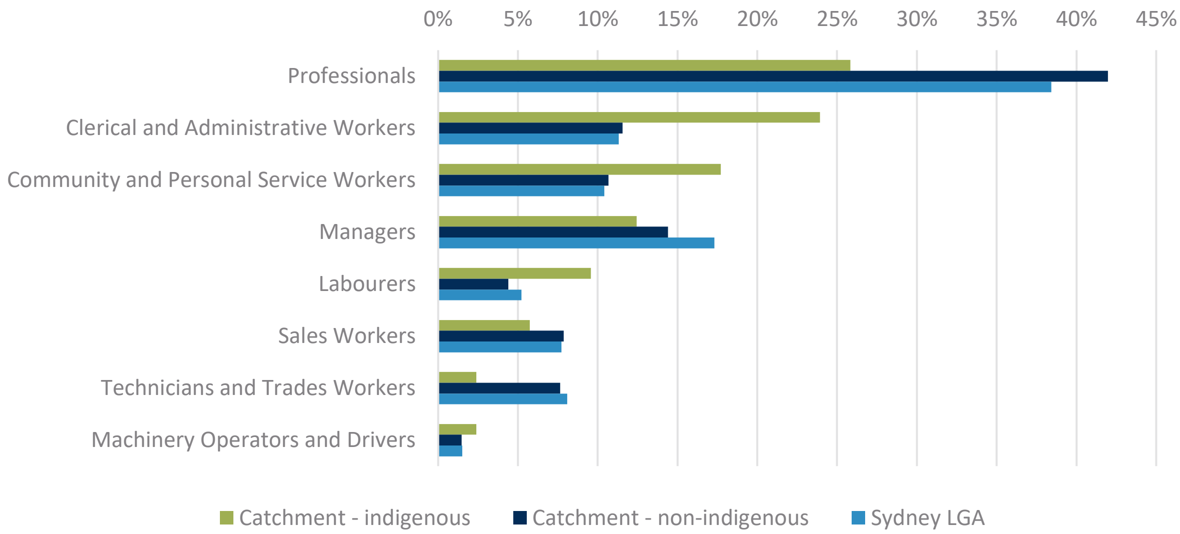
Source: ABS Census 2016

Occupation

The most common occupation for indigenous residents in the Catchment was as professionals (26%). This proportion was lower than for non-indigenous (42%) and Sydney LGA (38%) residents.

Indigenous residents had a higher representation in the occupations of clerical and administrative workers (24%) and community and personal service workers (18%) when compared to non-indigenous residents (12% and 11%, respectively) and Sydney LGA (11% and 10%, respectively).

Figure 32: Indigenous and non-Indigenous occupation



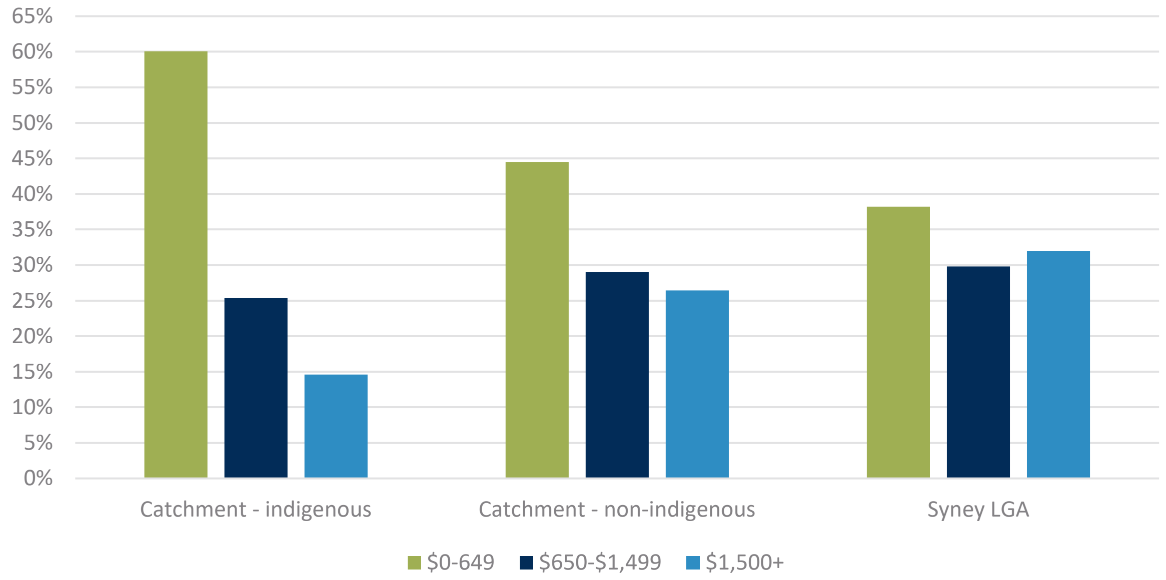
Source: ABS Census 2016

Personal incomes

In 2016, the median personal income for residents in the Catchment was $834 per week. This was lower than Sydney LGA ($953), although higher than Greater Sydney ($719).

Almost two thirds (60%) of the indigenous residents in the Catchment were low-income earners ($0-$649/week). This is compared to 45% for non-Indigenous residents and 38% for Sydney LGA. Correspondingly, there was a lower proportion of Indigenous residents earning $1,500 and above per week (15%) when compared to non-Indigenous residents in the Catchment (26%) and wider Sydney LGA (32%).

Figure 33: Indigenous and non- indigenous median weekly personal incomes



Source: ABS Census 2016

3.7 Population, dwelling and household projections

There are four main projection data sets for Sydney LGA, these being those provided by Profile.id, NSW DPE, the Transport Performance and Analytics team within Transport (referred to as Transport) and the City of Sydney's LSPS. Each projection was undertaken in 2019 and starts from a similar base in 2016 (refer to Table 20). The exception to this is the LSPS which was informed by Profile .id.

As seen in the table below, Transport is the only data set that provides population, dwelling and employment forecasts. NSW DPE and Profile .id only provide population and dwelling forecasts while the LSPS provides dwelling and employment forecasts.

Each projection data set provides these projections at the LGA level, however, only Transport, Profile .id and the City of Sydney's LSPS provide projections at a geographical area which is smaller than an LGA. For example, Transport provides projections at the TZ (travel zone) level while Profile .id and the LSPS provide them at a higher level which is comparable in size to around 3-4 suburbs (please refer to Figure 37).

The differing boundaries across the projection data sets at the smaller level make direct comparison difficult. This is compounded by the smaller areas not conforming to the resident catchment area defined above. Despite this, the proportionate distribution of characteristics such as age composition and household structure may be reflective of the future population of the Site. As such, these characteristics have been assessed at the small area level.

Table 19: Projections and targets by source

		NSW DPE	Transport	Profile.id	LSPS
Year	2019	2019	2019	2020	Year
Type of projection provided	Population	Yes	Yes	Yes	n/a
	Dwelling	Yes	Yes	Yes	Yes
	Households	Yes	n/a	Yes	n/a
	Employment	n/a	Yes	n/a	Yes
Projection provided at LGA level	Population	Yes	Yes	Yes	n/a
	Dwelling	Yes	Yes	Yes	Yes
	Households	Yes	n/a	Yes	n/a
	Employment	n/a	Yes	n/a	Yes
Projection provided at small area level	Population	n/a	Yes	Yes	n/a
	Dwelling	n/a	Yes	Yes	Yes
	Households	n/a	n/a	Yes	n/a
	Employment	n/a	Yes	n/a	Yes

Population projections - Sydney LGA

Each projection was undertaken in 2019 and starts from a similar base in 2016. This base population is comparable to that estimated by the ABS (22,720 persons). Profile .id projects the most growth in the LGA at around 115,290 additional persons by 2036. This is compared to NSW DPE and Transport which project 58,885 and 61,835 additional persons, respectively.

The recently released City of Sydney's LSPS does not specifically provide population projections for Sydney LGA. However, it provides a private dwelling target of an additional 50,000 dwellings between 2016-36. Assuming a 10% vacancy rate and around 2 persons per dwelling (ABS Sydney LGA Community Profile) these dwelling could accommodate around 90,000 residents.

It must be noted that recent ABS resident population estimates indicate a population of around 248,735 for Sydney LGA in 2020. This is around 14,680 persons greater than that estimated by NSW DPE, 13,770 greater than Transport and 9,720 persons less than that estimated by Profile .id.

Development of the Site and wider Precinct could contribute to Sydney LGA attaining these projections/targets.

Table 20: Population projections

Population source	2016	2020	2021	2026	2031	2036	Change 16-36
Profile .id	224,211	258,453	267,014	299,879	322,514	339,498	115,287
NSW DPE	222,717	234,056	236,891	242,984	266,759	281,603	58,886
Transport	222,783	234,964	238,009	245,161	269,337	284,619	61,835
ABS ERP*	222,717	248,736					

Source: Profile.id 2019 projections, NSW DPE 2019 population projections, Transport 2019 projections

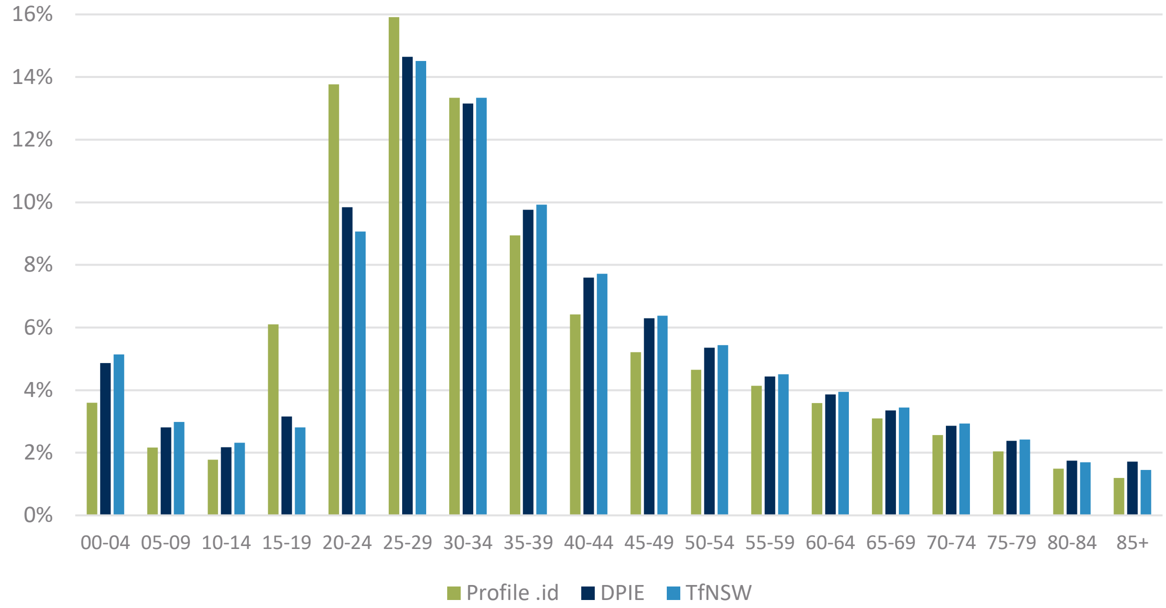
Age composition – Sydney LGA

The distribution of age groups in 2036 across the three projection data sets is comparable. However, Profile .id project the proportion of residents aged 15-29 years old to comprises a greater proportion (36%) when compared to NSW DPE and Transport (28% and 26% respectively).

Interestingly, Profile id forecasts 46% of its net change in population to be aged between 15-34 years, while only 18% is aged 60 years and over. This contrasts with NSW DPE and Transport which both forecast an ageing of the population. This is reflected in only 2% and 6%, respectively, of their forecasted net growth in population being aged 15-34 years and 31% and 29%, respectively being aged 60 years and over.

In fact, NSW DPE and Transport both forecast negative growth in residents aged 15-24 years (around 3,655 and 2,345 fewer residents) while Profile .id projects around 26,900 additional residents in this age group.

Figure 34: Age composition 2036 by projection data set



Source: Profile.id, Transport, NSW DPE 2019 projections

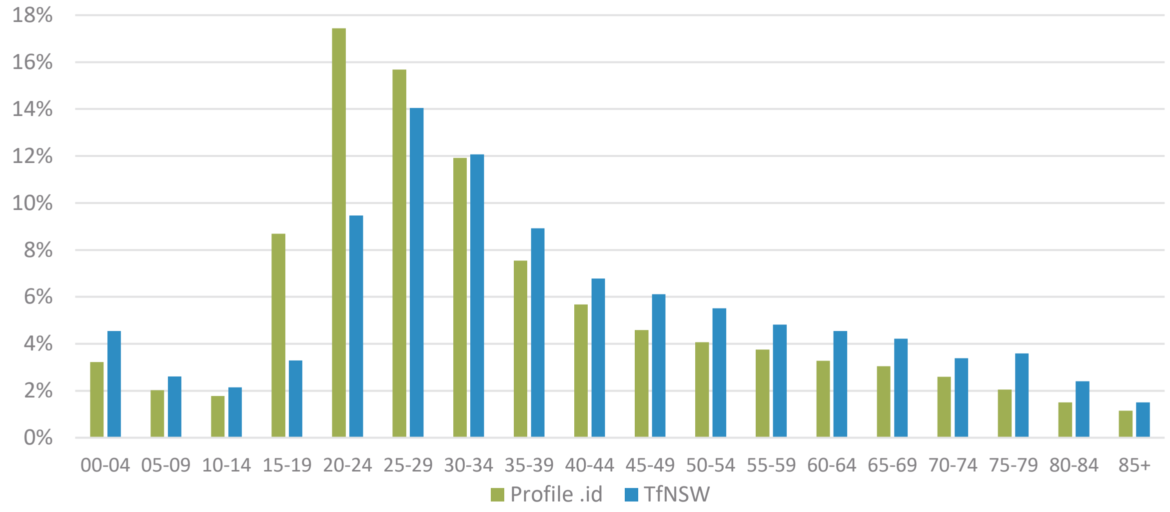
Age composition small area level

For this assessment the Profile.id small area of Redfern Street has been analysed. The boundary of this area can be seen in Figure 37. Small area analysis for Transport has been undertaken at the TZ level. This boundary conforms to the worker catchment (see Figure 38) which is larger than the resident catchment. No adjustments to account for the difference in area have been made.

The distribution of age groups in 2036 across the two projection data sets is comparable. However, Profile .id project the proportion of residents aged 15-34 years to be greater (54%) when compared to Transport (39%). Transport also forecasts residents aged 40 years and over to be a higher proportion of the population in 2036 (43%) when compared to Profile .id (32%).

When compared to the LGA, Profile .id estimates a higher proportion of residents aged 15-34 years in the smaller area (54% compared to 49%) while Transport estimates comparable proportions between the LGA and the smaller area (39% and 40%).

Figure 35: Small area age composition by 2036



Source: Profile.id, Transport, NSW DPE 2019 projections

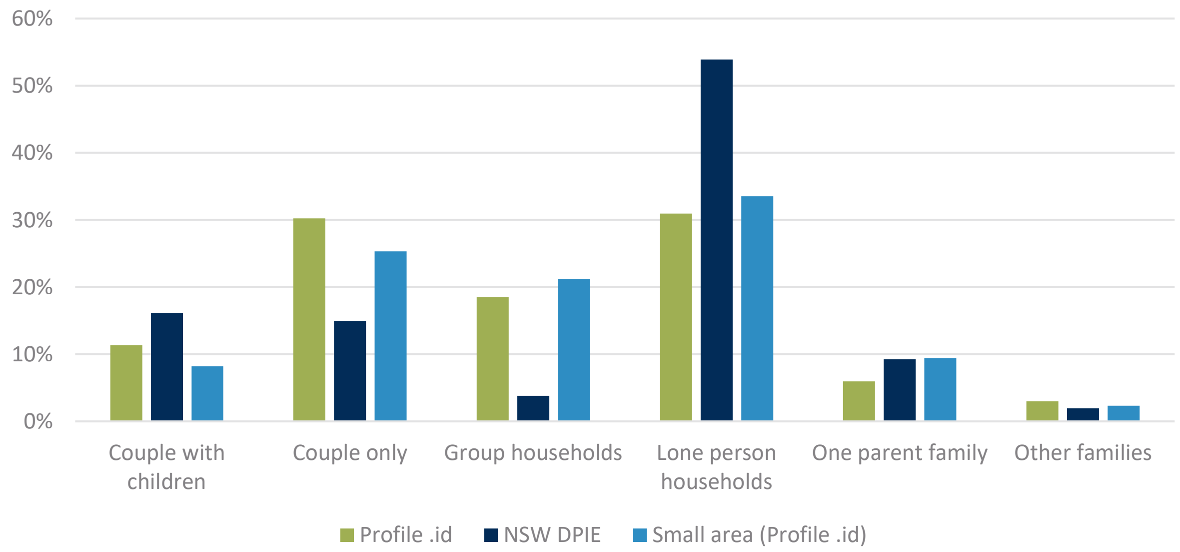
Household projections

Profile .id project that there will be an additional 48,690 households in Sydney LGA by 2036. Of these, the majority are to be lone person household (31%) followed by couples without children (30%). In fact, 80% of the growth in households are to be smaller households.

For the Redfern Street small area, Profile .id projects an additional 7,630 by 2036. The majority of these will be lone person households (34%) followed by couples without children (25%). When compared to the LGA, Redfern Street is forecast to have a higher proportion of lone person and group households. This is likely reflective of the higher number of students in the location.

NSW DPE project that there will be an additional 29,610 households in Sydney LGA by 2036. Of these, the majority are to be lone person household (54%) followed by couples with children (16%). In fact, 73% of the growth in households is to be in smaller households.

Figure 36: Net change in households, 2016-36



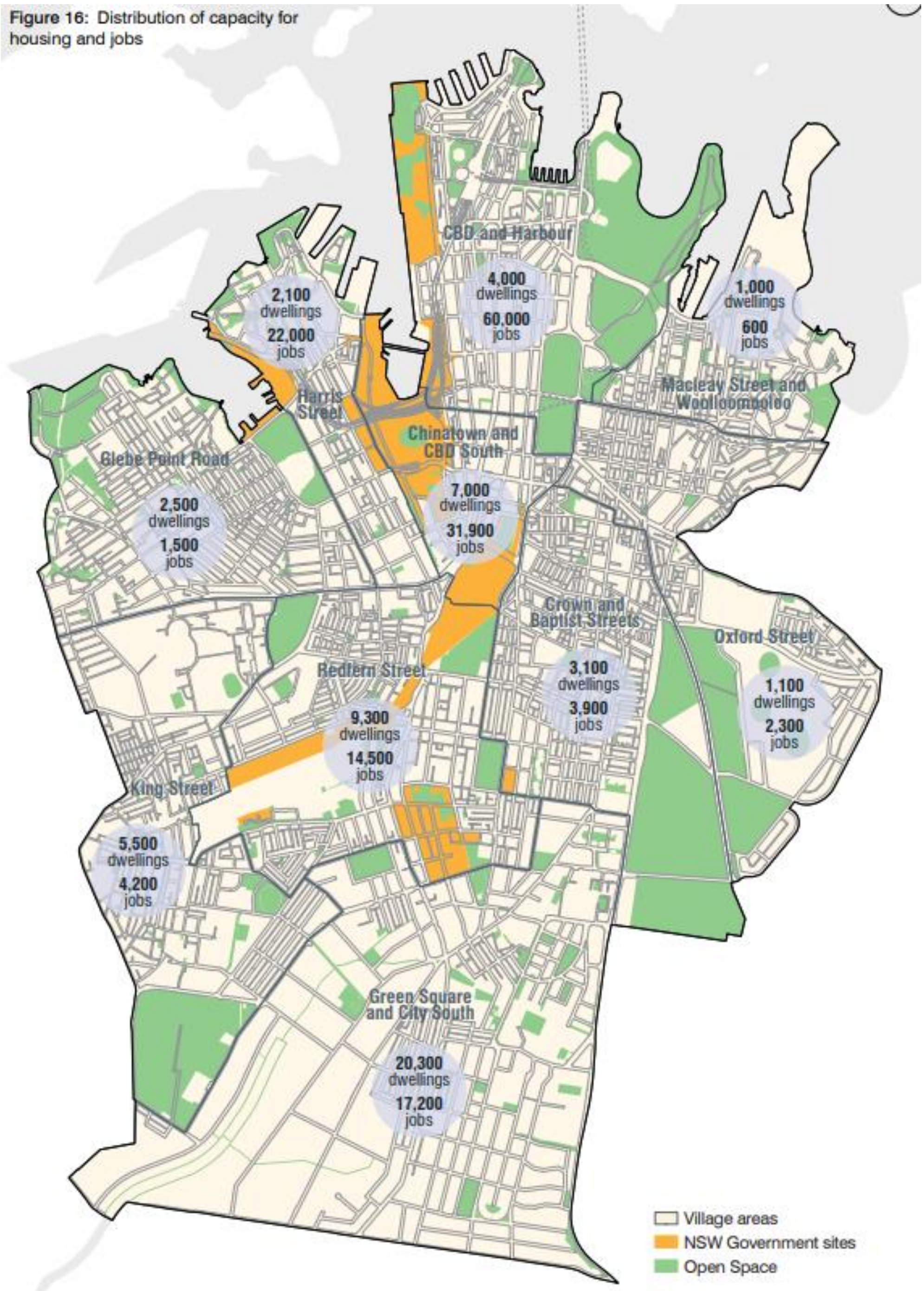
Source: Profile .id and NSW DPE

Dwelling projections

The Greater Sydney Commission (GSC) set a five-year dwelling target (2016-21) for Sydney LGA of 18,300 additional dwellings by 2021. Analysis of NSW DPE dwelling completions data from January 2016 to December 2020 (five years) reveals that 14,953 additional dwellings were developed in the LGA. This implies that the LGA has fallen short of this target by around 3,350 dwellings.

The City of Sydney's LSPS sets a target for the LGA will accommodate 50,000 additional dwellings between 2016-36. Of these, around 9,300 are to be provided in the locality which includes the Site. Increased housing supply, such as that proposed in the Site, would contribute to the LGA attaining its dwelling targets.

Figure 37: Sydney LGA distribution and capacity for additional housing/jobs



Source: City of Sydney LSPS

3.8 Key resident baseline findings

- In 2016, there were an estimated 34,330 residents living in the Catchment.
- Residents of the Catchment are a young population with 43% aged between 15 and 29 years. This is compared to the wider LGA and Greater Sydney in which this age cohort comprises 36% and 21% of the population.
- The population of the Catchment is highly multicultural with 50% being born overseas. This proportion is comparable that recorded for Sydney LGA (51%), however, higher than Greater Sydney (39%).
- Owing to the proximity of Sydney University and UTS campuses, the Catchment had a higher concentration of students with 27% of its population (over 15 years) attending a TAFE or university. This was higher than that for Sydney LGA (18%) and Greater Sydney (10%).
- Education attainment was high with 58% of residents aged 15 years and over in the Catchment having a post-school qualification. This is compared to 53% for Greater Sydney residents.
- Around 67% of occupied dwellings in the Catchment were apartments.
- The Catchment had higher rates of renting (68%) and lower rates of ownership of dwellings (31%) when compared to Sydney LGA (65% and 35%, respectively) and Greater Sydney (35% and 65%, respectively).
- Smaller households (lone person, couples without children and group households) were the dominant household type in the Catchment, comprising 73% of households. This was comparable to Sydney LGA (72%) but higher than Greater Sydney (47%).
- The Catchment had lower levels of vehicle ownership (0.7 vehicles per dwelling) when compared to Sydney LGA (0.8) and Greater Sydney (1.6).
- The unemployment rate in the Catchment (7.6%) was higher than that recorded for Sydney LGA (6.0%) and Greater Sydney (6.0%). The higher unemployment rate in the Catchment is likely a result of the higher proportion of students and social housing when compared to the other localities.
- The main industries of employment for local residents in the Catchment were Professional, Scientific and Technical Services (17%); Education and Training (11%); and Accommodation and Food Services (11%).
- Most residents in the Catchment were employed within knowledge intensive/professional industries (42%)[4]. This proportion was lower than the wider Sydney LGA (45%), although higher than Greater Sydney (32%).
- Over half (56%) of occupations in the Catchment were professionals and managers in 2016. This was comparable to Sydney LGA (56%) but higher than Greater Sydney (41%).

[4] Knowledge intensive industries are the combination of Information Media and Telecommunications; Financial and Insurance Services; Rental, Hiring and Real Estate Services; Professional, Scientific and Technical Services; Administrative and Support Services; and Public Administration and Safety.

3.9 Resident socio-economic review key considerations and opportunities for the Site

From the above analysis, the following considerations and opportunities for the Site have been identified:

Table 21: Resident socio-economic review key considerations and opportunities for the Site

Key trend, issue and or constraint	Description/reasoning	Opportunity for Site
Strong population growth	The Catchment's population increased by around 7,650 people or 29% between 2011-16. This was higher than the proportional growth experienced across Sydney LGA (23%). The Catchment, therefore, has experienced comparatively strong growth, with its share of the resident population also increasing. Sydney LGA is forecast house between an additional 58,890 to 115,290 people over the 20 years to 2036. A notable proportion of these would be expected to reside within the Site's Catchment.	The Site could provide additional housing for the Catchment's and Sydney's growing population.
A highly educated, young and professional population	In 2016, residents in the Catchment were reflective of a diverse, younger, highly educated and professional population. This was reflected in 50% of the population being born overseas, 43% being aged between 15 and 29 years, 58% having attained a post-school qualification and 56% having a professional occupation. This was compared to Greater Sydney, where 39% were born overseas, 23% were aged 15-34 years, 53% had a post-school qualification, and 41% had a professional occupation.	The Site could provide housing and employment opportunities for the Catchments comparatively younger and highly professional population.
Smaller households	In 2016, smaller households (lone person, couples without children and group households) were the dominant household type in the Catchment, comprising 73% of households. This was comparable to Sydney LGA (72%) but higher than Greater Sydney (47%). Over the 20 years to 2036, smaller households across Sydney LGA are expected to comprise most of the growth in household types, comprising between 73% to 80% of the forecast growth.	The Site could provide a dwelling type which is more suited to the types of households that are currently and forecast to be more prevalent in the Catchment and wider LGA.
High growth in apartment style dwellings	In the five years to 2016, both the number and proportion of apartment style dwellings in the Catchment experienced strong growth. This is reflected in the Catchment having 5,100 more apartments over the period, while their proportional composition increased from 59% to 67%.	The higher growth and demand for apartment style dwellings in the Catchment is a result of its inner-city location with high land values and existing buildings. The Site could provide additional dwellings to support the population and household characteristics of the area.
Dwelling targets	The City of Sydney's LSPS sets a target for the LGA will accommodate 50,000 additional dwellings between 2016-36. Of these, around 9,300 are to be provided in the locality which includes the Site (refer to Figure 37).	Increased housing supply, such as that proposed in the Site, would contribute to the LGA attaining its dwelling targets.
Resident employment	In 2016, most residents in the Catchment were employed within knowledge intensive/professional industries (42%). This proportion was lower than the wider Sydney LGA (45%), although higher than Greater Sydney (32%). As the resident population increases in Sydney LGA it is reasonable that the demand for knowledge intensive employment opportunities would also increase.	The Site could increase the type of employment which aligns with the Catchment and Sydney's resident's employment characteristics.

Key trend, issue and or constraint	Description/reasoning	Opportunity for Site
Self-containment rates	Self-containment measures the proportion of working residents who are employed within the boundaries of Catchment or region. In 2016, the Catchment had a self-containment containment rate of 8%. This rate was low when compared to Sydney LGA (65%).	By providing increased employment opportunities, particularly knowledge intensive jobs, the Site would contribute to the catchment increasing its self-containment rates.
Vehicle ownership and travel method to work	The Catchment has lower levels of motor vehicle ownership (an average of 0.7 vehicles per dwelling) when compared to Sydney LGA (0.8/dwelling) and Grater Sydney (1.6/dwelling). Additionally, a third (33%) of employed residents in the Catchment travelled to work via train. This is compared to around a fifth for Sydney LGA residents (22%) and just 16% for Greater Sydney. Active transport (bicycle and walking) was the second largest travel method to work for residents in the Catchment (23%). This was significantly higher than in Greater Sydney (5%).	The location of the Site in proximity to existing public transport coupled with lower vehicle ownership levels and high rates of active transport when travelling to work, could provide the opportunity for lower resident and worker parking provision rates on Site.
Lower unemployment rates	The unemployment rate in the Catchment (7.6%) was higher than that recorded for Sydney LGA (6.0%) and Greater Sydney (6.0%).	Increased employment opportunities have the potential to decrease the local unemployment rate.

4.0 WORKER CATCHMENT PROFILE

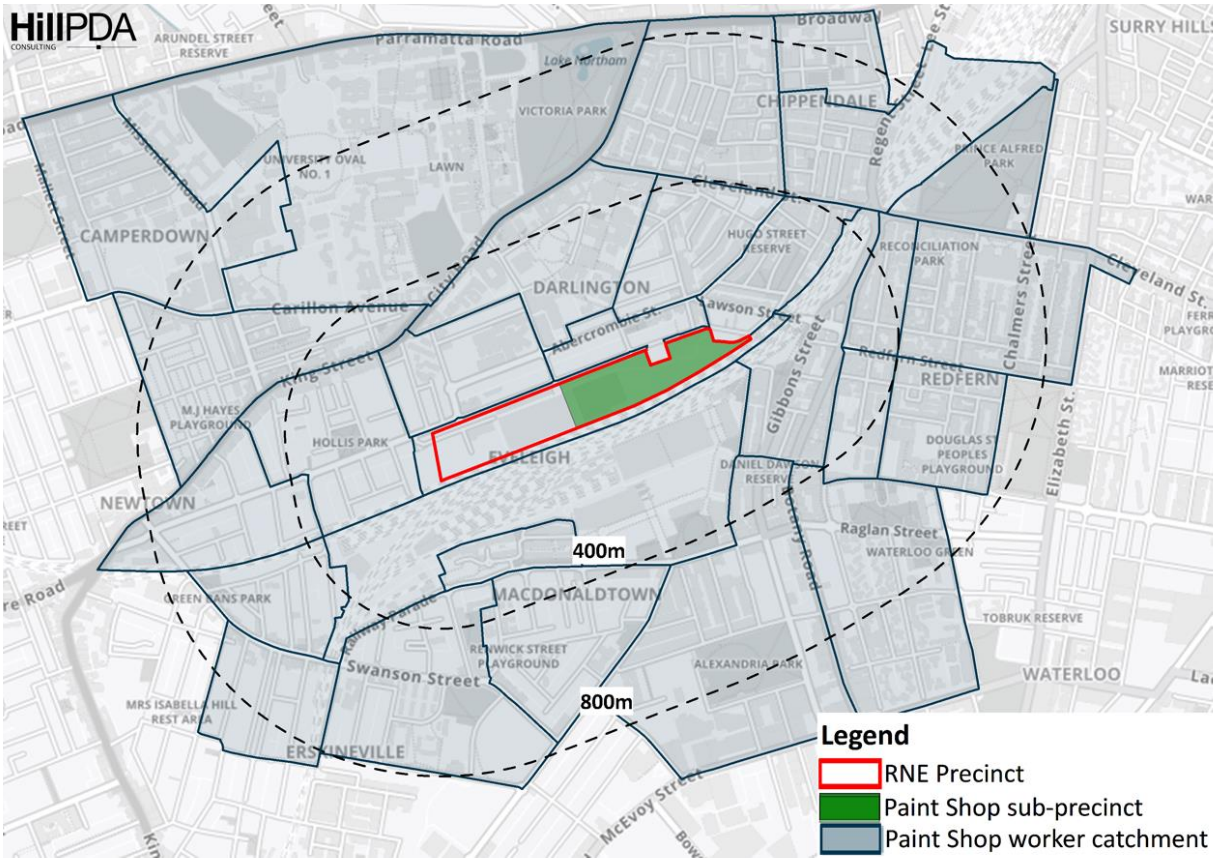
This section provides a representative demographic profile for a defined worker's catchment (Catchment) around the Site. This representative Catchment was defined because of the limited employment data at the Site boundary level.

The Catchment extends around 800m from the RNE Precinct's boundary (please refer to Figure 38) and is comprises ABS geographical boundaries known as Destination Zones (DZs). DZs are the smallest level that the ABS provide employment and journey to work information.

The information in this chapter is primarily sourced from the 2011 and 2016 ABS Census. Unless otherwise stated proportions in this chapter exclude not stated and not applicable categories.

The Catchment and the DZs that comprise it are provided in the figure below.

Figure 38: Site's worker catchment



Source: HillPDA

The ABS categorises employment activity into 19 industry classifications referred to as ANZSIC 1-digit codes (Australian New Zealand Standard Industry Classification). ANZSIC 1-digit codes are the most utilised categories used when analysing an area's employment profile.

That being said it is often more useful to consider employment composition in broader industry terms. Broad industry classifications (BICs) developed by the Greater Sydney Commission, group the 19 ANZSIC 1-digit codes into four main industry categories. These categories are, population-serving, knowledge intensive, health and education and industrial. These BIC groupings and their corresponding ANZSIC 1-digit codes are in the table below.

Throughout this chapter ABS data is amalgamated into these BICs.

Table 22: Broad industry classifications and ANZSIC 1-digit categories

Health and education	Industrial	Knowledge intensive	Population serving
Education and training	Agriculture, forestry and fishing	Information media and telecommunications	Construction
Health care and social assistance	Mining	Financial and insurance services	Retail trade
	Manufacturing	Rental, hiring and real estate services	Accommodation and food services
	Electricity, gas, water and waste services	Professional, scientific and technical services	Arts and recreation services
	Wholesale trade	Administrative and support services	Other services
	Transport, postal and warehousing	Public administration and safety	

4.1 Employment characteristics

In 2016, there were an estimated 32,975 jobs generated in the worker catchment (the Catchment). This represented 7% of employment in Sydney LGA. The employment in the Catchment increased by around 8,300 jobs or 34% between 2011-16. This was higher than the proportional growth rate experienced across Sydney LGA (17%) and therefore its share of employment has been increasing.

In 2016, the top five employment industries in the Catchment were:

- Education and Training generating 7,800 jobs or 25% of employment
- Health Care and Social Assistance generating 7,290 jobs or 23% of employment
- Professional, Scientific and Technical Services generating 3,195 jobs or 10% of employment
- Accommodation and Food Services generating 2,255 jobs or 7% of employment
- Information Media and Telecommunications generating 2,040 jobs or 6% of employment.

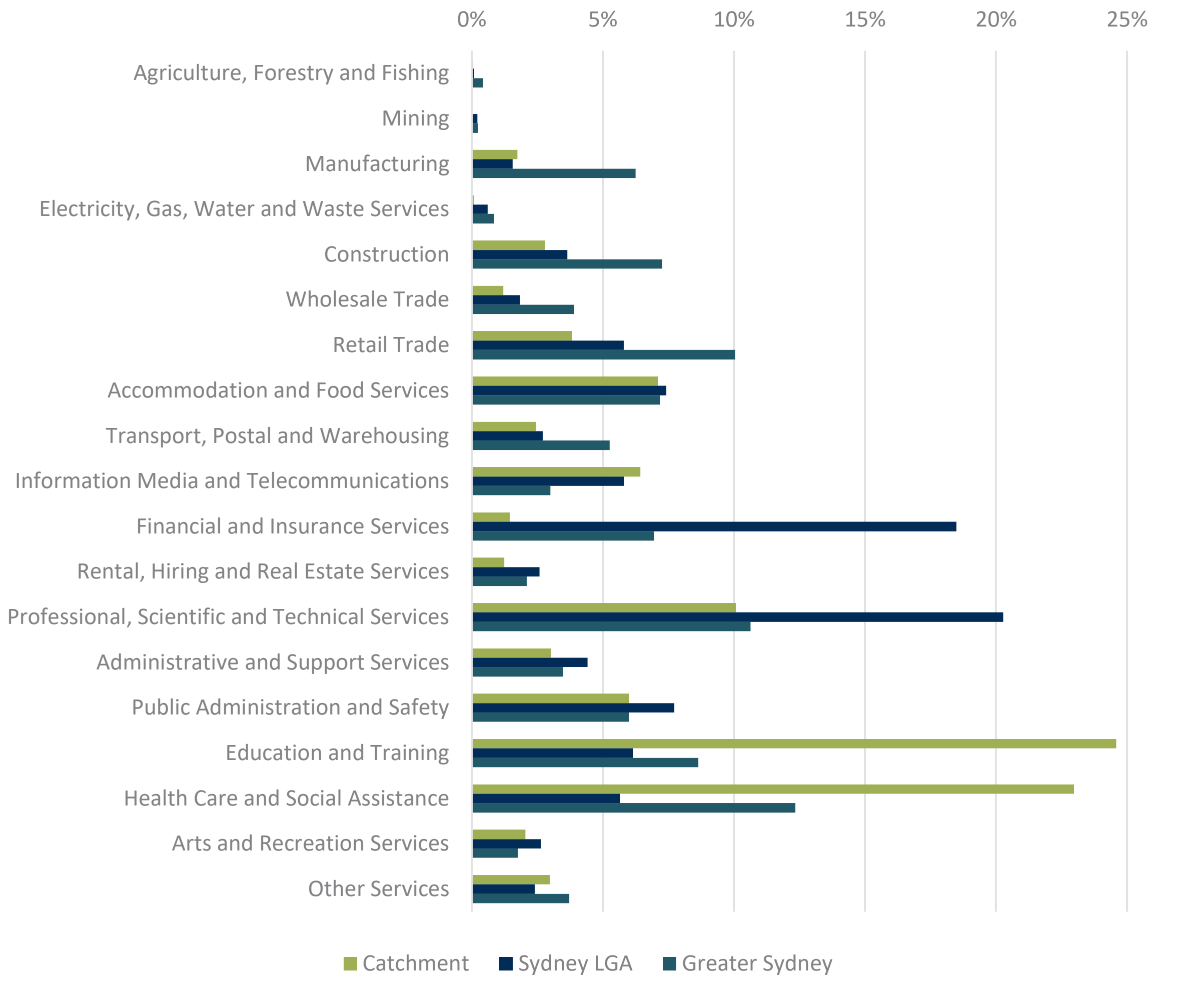
When compared to Sydney LGA, proportionally the Catchment had a higher representation in the following industries:

- Education and Training
- Health Care and Social Assistance.

Conversely, compared to Sydney LGA, proportionally the Catchment had a lower representation in the following industries:

- Financial and Insurance Services
- Professional, Scientific and Technical Services.

Figure 39: Employment by industry



Source: ABS Census 2016

Growth and decline of key industries

Between 2011-16 employment generated within the Catchment increased by around 8,300 jobs or 35%. The top five growth industries over this period were:

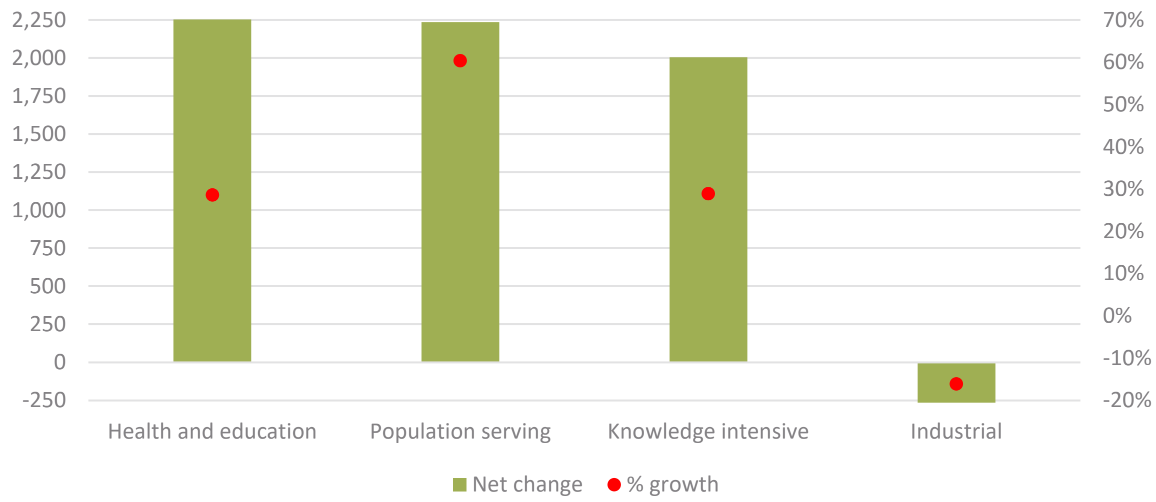
- Health Care and Social Assistance with 1,733 additional jobs
- Education and Training with 1,6,20 additional jobs
- Accommodation and Food Services with 1,070 additional jobs
- Professional, Scientific and Technical Services with 685 additional jobs
- Administrative and Support Services with 410 additional jobs.

Conversely, there were four industries which decreased in employment over this period, these being:

- Wholesale Trade with 175 fewer jobs
- Manufacturing with 120 fewer jobs
- Transport, Postal and Warehousing with 65 fewer jobs
- Mining with 12 fewer jobs.

Analysis of BIC codes show that, owing to the presence of the universities and hospital, employment within health and education increased the most (3,355 jobs) followed by population serving (2,240 jobs) and knowledge intensive jobs (2,005 jobs). However, looking at the proportional increase from 2011, population serving industries became more concentrated in the Catchment with a proportional increase by 60% over the period. This is compared to 29% for health and education and knowledge intensive employment, respectively.

Figure 40: Net change in employment by BIC 2011-16



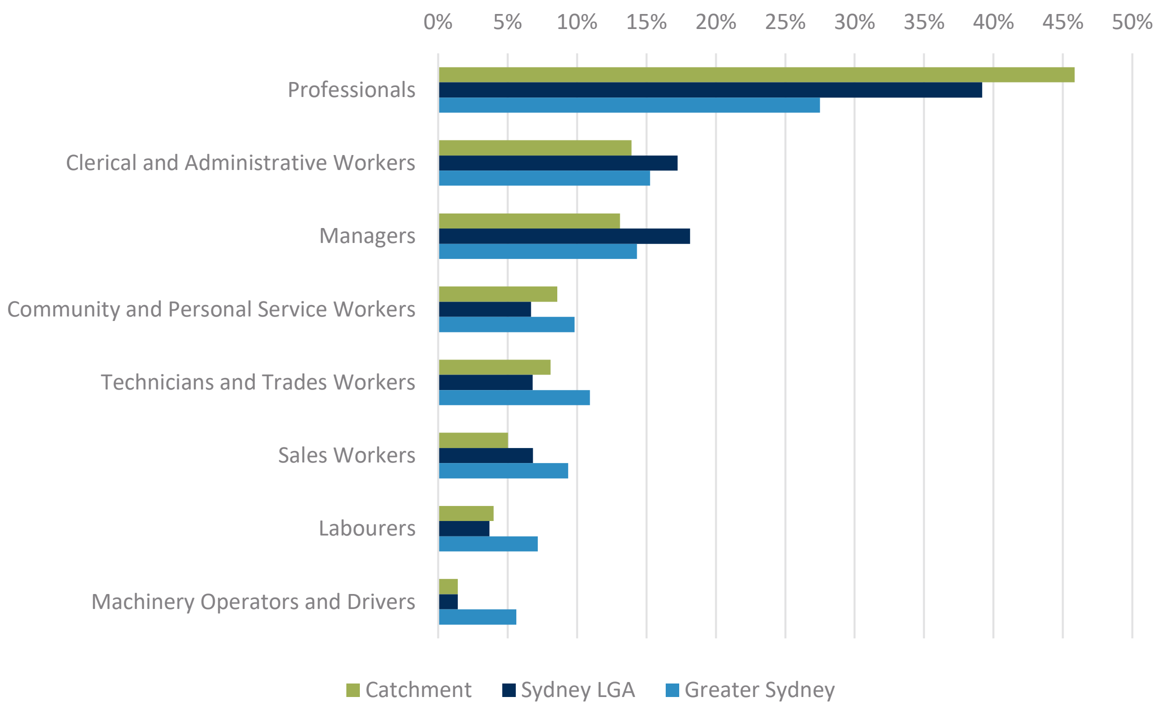
Source: ABS Census 2016, HillPDA

Occupation

Over half (59%) of all occupations in the Catchment were professionals and managers in 2016. This was comparable to Sydney LGA (57%) but higher than Greater Sydney (42%).

There was a lower representation of traditional "blue collar" occupations in the Catchment with 14% of residents having occupations as labours, technicians, trades and machinery operators. This was compared to 24% for Greater Sydney.

Figure 41: Employment by occupation 2016



Source: ABS Census 2016, HillPDA

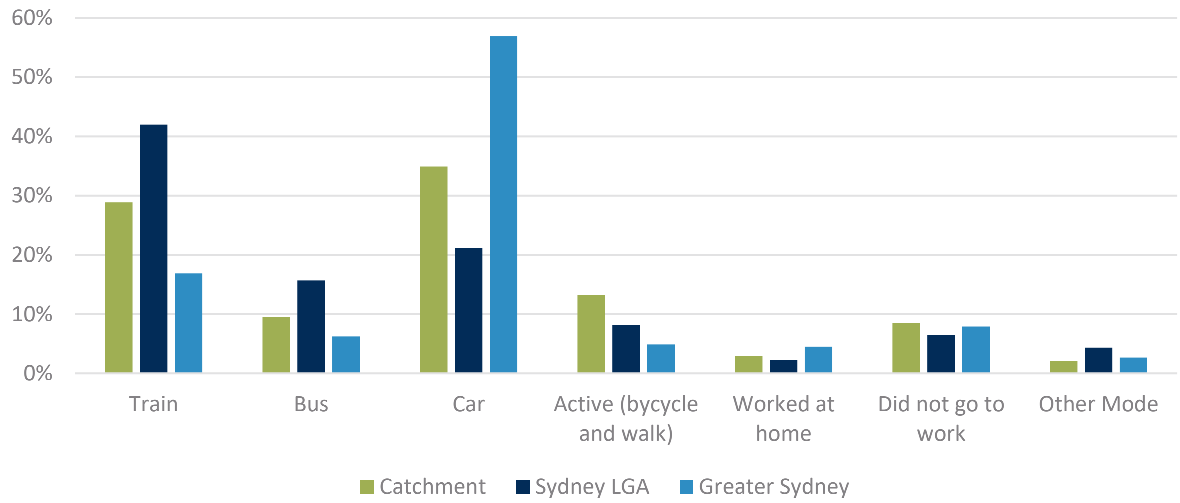
Mode of travel to work

Almost a third (29%) of workers in the Catchment travelled to work via train. This was lower than the 42% recorded for workers travelling to work in Sydney LGA but higher than Greater Sydney (17%).

Persons travelling to work by car (either as driver or passenger) was higher (35%) in the Catchment when compared to Sydney LGA (21%). Transit oriented developments, such as that proposed for the Site, would likely increase the attractiveness of accessing work via the rail network which would reduce pressure on the road network.

Active transport (bicycle and walking) as a travel method to work in the Catchment (13%) was higher than Sydney LGA (8%) and Greater Sydney (5%). This implies that a higher proportion of workers live within the surrounding locality.

Figure 42: Worker's mode of travel 2016



Source: ABS 2016

4.2 Industries contribution to local economy

Gross Value Add (GVA) of an industry refers to the value of outputs less the costs of inputs. It measures the contribution that the industry makes to a location's gross regional product (GRP).

It is estimated that the types of industries present in the Catchment, as of 2016, generated around $4.4 billion in GVA. This was almost 5% of the contribution that industries in Sydney LGA made to its GRP.

Although knowledge intensive industries were the second largest employment BIC in the Catchment, they contributed most to Sydney's GRP at around $1.7 billion GVA in 2016. This was followed by health and education with around $1.6 billion in GVA, and population serving industries with around $555 million in GVA.

Table 23: Industry Gross Value Added 2016

BIC	Catchment GVA ($m)	%	% contribution of Catchment's GVA to Sydney's GRP
Knowledge intensive	1,690	38%	2.4%
Health and education	1,589	36%	26.7%
Population serving	553	13%	5.6%
Industrial	333	8%	4.6%
Unknown/inadequately described	240	5%	6.2%
Total	**4,405**	**100%**	**4.6%**

Source: ABS 2016, Economy .id, HillPDA

4.3 Worker productivity rates by industry

Worker productivity by BIC is calculated by dividing the industry value add by the number of persons employed in that industry/BIC. It shows which industries or BICs generate the most value per employee.

Although the industrial BIC was the lowest employment generator in the Catchment on a per worker basis, it had the highest worker productivity rates ($189,870/worker).

The knowledge intensive BIC had the second highest worker productivity rate at around $188,995/worker. This was followed by health and education ($105,330/worker) and population serving industries with a rate of $92,925/worker.

The worker productivity rates implies that increased knowledge intensive industries, such as that proposed to be accommodated in the Site and Tech Central, would have a greater economic benefit to the local economy.

Table 24: Worker productivity by BIC 2016

BIC	$/worker
Industrial	$189,871
Knowledge intensive	$188,994
Health and education	$105,332
Population serving	$92,923
Average	**$131,249**

Source: ABS 2016, Economy .id, HillPDA – excludes Unknown/inadequately described employment

4.4 Industry specialisation – location quotient

The location quotient (LQ) is a simple way of seeing which are the main industries in an area, relative to the wider region – in this case Sydney LGA.

- Where LQ =1, that industry is exactly as prevalent as in the wider region.
- A LQ greater than 1.2 indicates a significant specialisation of the industry in the local area – possibly a key economic strength. Higher numbers mean greater specialisations. Anything over 2 is a major specialisation.
- A LQ between 0.8 and 1.2 means the industry is broadly similar in importance in the local area compared to the comparison region and could be seen as representative.
- An LQ under 0.8 indicates an industry which is more important in the region than the local area and may represent an economic weakness or opportunity for growth[5].

From this analysis it can determined that the Catchment had a specialisation in the following industries:

- Education and Training with a LQ of 5.0
- Other Services with a LQ of 1.5
- Manufacturing with a LQ of 1.4
- Health Care and Social Assistance with a LQ of 1.4
- Information Media and Telecommunications with a LQ of 1.4.

Analysis of BIC reveals that in 2016 the Catchment had a significant specialisation in health care and education with a LQ of 4. This is likely reflective of the presence of the two universities and RPA Hospital. Industrial and population serving industries were exactly as prevalent as in the wider Sydney LGA.

[5] Economy .id

Knowledge intensive industries had a LQ of 0.5 in 2016, this implies an opportunity to grow knowledge intensive industries in the Catchment, which is a key objective of Tech Central.

Table 25: Industry specialisation – location quotient 2016

Industry	Catchment %	Sydney %	LQ
Agriculture, Forestry and Fishing	0.1	0.1	0.6
Mining	0.0	0.2	0.0
Manufacturing	1.7	1.6	1.1
Electricity, Gas, Water and Waste Services	0.1	0.6	0.1
Construction	2.8	3.6	0.8
Wholesale Trade	1.2	1.8	0.7
Retail Trade	3.8	5.8	0.7
Accommodation and Food Services	7.1	7.4	1.0
Transport, Postal and Warehousing	2.5	2.7	0.9
Information Media and Telecommunications	6.4	5.8	1.1
Financial and Insurance Services	1.4	18.5	0.1
Rental, Hiring and Real Estate Services	1.2	2.6	0.5
Professional, Scientific and Technical Services	10.1	20.3	0.5
Administrative and Support Services	3.0	4.4	0.7
Public Administration and Safety	6.0	7.7	0.8
Education and Training	24.6	6.2	4.0
Health Care and Social Assistance	23.0	5.7	4.1
Arts and Recreation Services	2.0	2.6	0.8
Other Services	3.0	2.4	1.2
BIC	**Catchment %**	**Sydney %**	**LQ**
Health and education	47.6	11.8	4.0
Industrial	5.5	7.0	0.8
Knowledge intensive	28.2	59.3	0.5
Population serving	18.7	21.9	0.9

Source: ABS Census 2016, HillPDA

4.5 Aboriginal and Torres Strait Islander people

In 2016 there were around 465 Aboriginal and Torres Strait Islander's working (Indigenous workers) in the Catchment. The number of Indigenous workers in the Catchment represented almost half (49%) of the 925 Indigenous persons that worked in Sydney LGA, as of 2016.

The five top industries that Indigenous workers in the Catchment were employed within were:

- Health Care and Social Assistance employing 28% of the Catchments Indigenous workers
- Education and Training employing 20% of the Catchments Indigenous workers
- Public Administration and Safety employing 11% of the Catchments Indigenous workers
- Other Services employing 10% of the Catchments Indigenous workers
- Professional, Scientific and Technical Services employing 6% of the Catchments Indigenous workers.

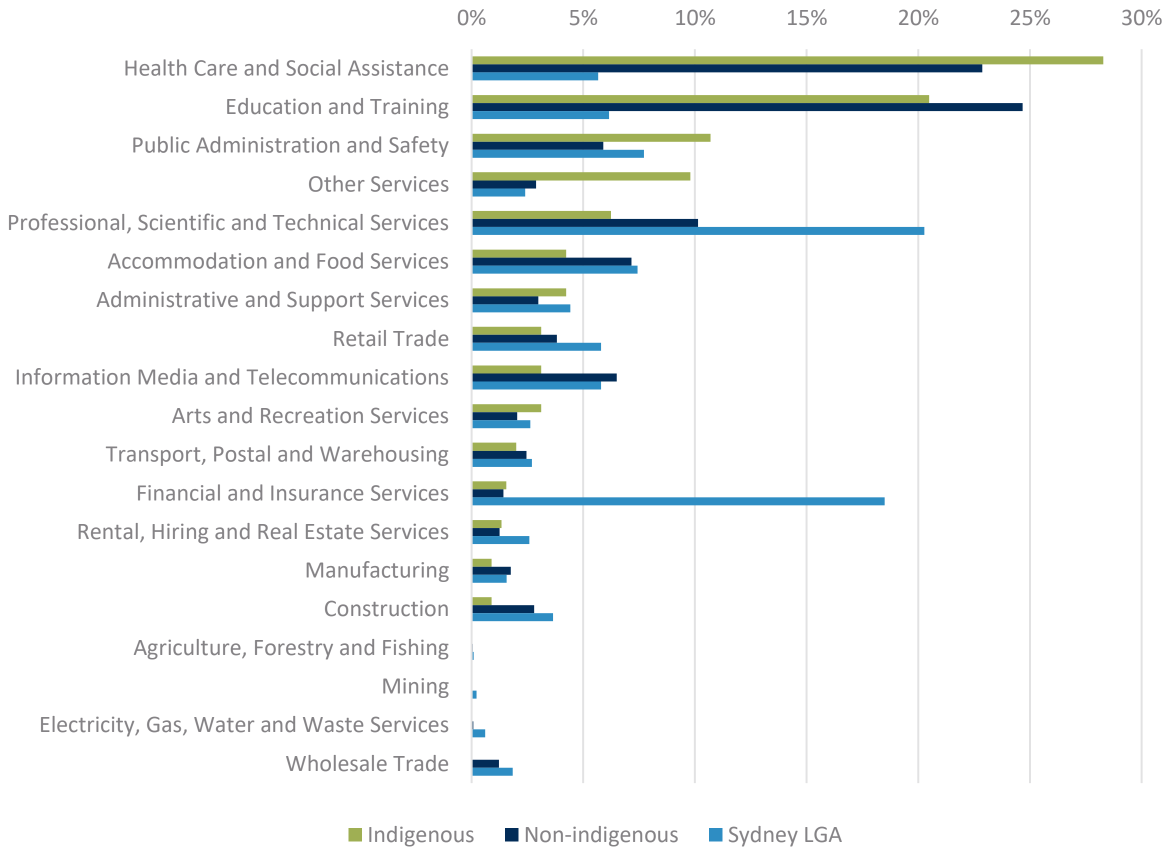
In comparison to non-indigenous workers, Indigenous workers in the Catchment had a comparatively higher representation in the industries of:

- Health Care and Social Assistance
- Public Administration and Safety
- Other Services.

While conversely, Indigenous workers in the Catchment had a comparatively lower representation in the industries of:

- Education and Training
- Professional, Scientific and Technical Services
- Accommodation and Food Services
- Information Media and Telecommunications.

Figure 43: Indigenous and non-Indigenous worker profile 2016



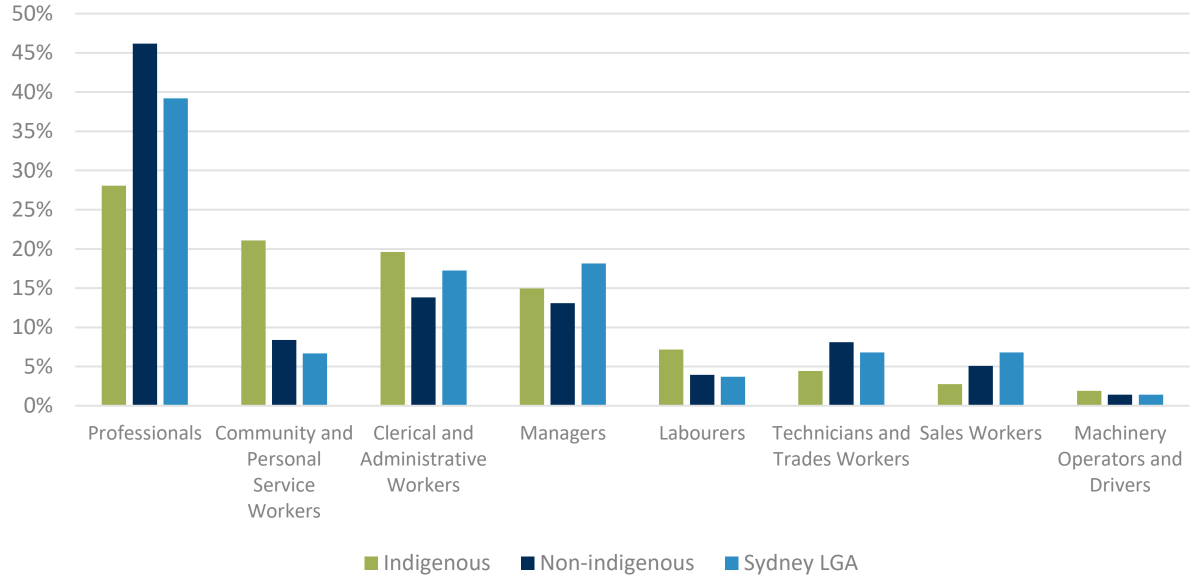
Source: ABS Census 2016, HillPDA

Occupation

In 2016, the most common occupation for Indigenous workers in the Catchment was professionals (28%). This proportion was lower for non-Indigenous workers (46%) and Sydney LGA (39%).

Indigenous workers had a higher propensity to have either a community and personal service workers occupation or clerical and administrative workers occupation (21% and 20%, respectively) when compared to non-Indigenous workers (8% and 14%, respectively) and the wider Sydney LGA (7% and 17%, respectively).

Figure 44: Indigenous and non-Indigenous occupation 2016



Source: ABS Census 2016, HillPDA

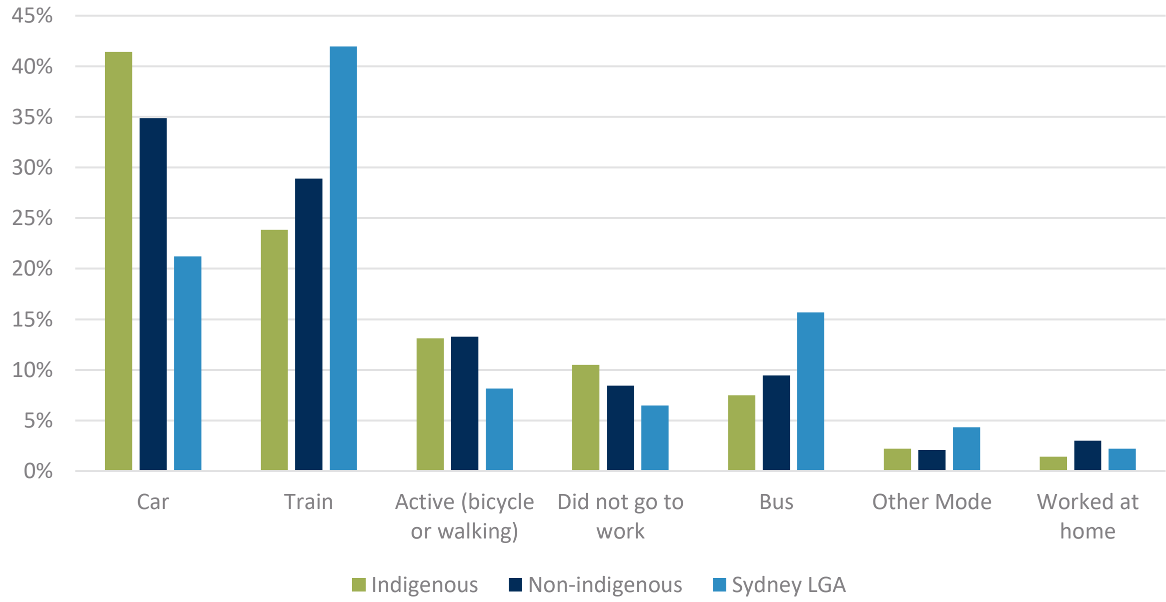
Travel method to work

In 2016, most Indigenous workers (41%) travelled to work in the Catchment by car. Travel to work by car was lower for non-Indigenous workers in the Catchment (35%) and Sydney LGA (21%).

Conversely, accessing work via public transport, such as bus and train combined, was lower for Indigenous workers (31%) when compared to non-Indigenous workers (38%) and Sydney LGA (58%).

Active transport (bicycle and walking) was recorded at equivalent rates for Indigenous and non-Indigenous workers in the Catchment (13% and 13%, respectively).

Figure 45: Indigenous and non-indigenous method to travel to work 2016



Source: ABS Census 2016, HillPDA

4.6 Number of businesses by industry

As of July 2021, there were around 4,920businesses registered in the Catchment, this represented around 6% of all businesses registered in Sydney LGA.

A quarter (25%) of businesses in the Catchment were related to professional, scientific and technical services. While almost half (47%) were knowledge intensive businesses, this concentration was lower than that recorded for Sydney LGA at 61%.

The five largest industries represented in the Catchment by number of businesses were:

- Professional, Scientific and Technical Services – 25.1% of businesses
- Health Care and Social Assistance – 8.1% of businesses
- Accommodation and Food Services – 7.5% of businesses
- Construction – 7.3% of businesses
- Rental, Hiring and Real Estate Services – 6.8% of businesses.

Table 26: Business counts by industry – October 2021

Industry	Catchment	Sydney LGA
Agriculture, Forestry and Fishing	0.2%	0.6%
Mining	0.0%	0.7%
Manufacturing	2.6%	1.8%
Electricity, Gas, Water and Waste Services	0.2%	0.6%
Construction	7.3%	6.9%
Wholesale Trade	3.0%	3.5%
Retail Trade	6.4%	5.2%
Accommodation and Food Services	7.5%	4.8%
Transport, Postal and Warehousing	5.2%	3.1%
Information Media and Telecommunications	5.9%	2.7%
Financial and Insurance Services	3.9%	17.4%
Rental, Hiring and Real Estate Services	6.8%	12.8%
Professional, Scientific and Technical Services	25.1%	22.7%
Administrative and Support Services	5.3%	5.1%
Public Administration and Safety	0.3%	0.3%
Education and Training	3.1%	2.0%
Health Care and Social Assistance	8.1%	4.5%
Arts and Recreation Services	3.6%	1.8%
Other Services	5.5%	3.6%
BIC		
Health and education	11.2%	6.4%
Industrial	11.2%	10.3%
Knowledge intensive	47.3%	61.0%
Population serving	30.2%	22.3%

Source: Economy .id, Business as of 4th of October 2021

4.7 Employment projections

The City of Sydney's LSPS sets a target for an additional 200,000 jobs to be accommodated in the LGA between 2016-36. Transport projects a similar increase in jobs over the period (+194,555 jobs). Analysis of the BIC that comprises these additional jobs reveals that the majority (61%) are related to commercial/knowledge intensive industries followed by health and education (17%), population serving (17%) and finally industrial with 5% of jobs.

As seen in Figure 37, the City of Sydney's LSPS sets a target of 14,500 additional jobs within the Redfern Street small area.

It is also noted that an employment target of 25,000 additional technology and innovation jobs is identified for Tech Central.

Development of the Site would contribute to Sydney LGA, Tech Central and the Catchment attaining their employment targets.

Table 27: Sydney LGA employments projection 2016-36

BIC	2016	2036	Net change	% of change
Knowledge intensive	343,377	461,482	118,105	61%
Population serving	129,804	163,098	33,294	17%
Health and education	64,586	97,727	33,140	17%
Industrial	41,255	51,271	10,016	5%
Total	**579,022**	**773,578**	**194,556**	**100%**

Source: TRANSPORT 2019 employment projections

4.8 Key worker baseline findings

- In 2016, there were an estimated 32,975 jobs generated in the Catchment, represented around 7% of employment in Sydney LGA.
- The top five employment industries in the Catchment were: Education and Training generating 7,800 jobs or 25% of employment; Health Care and Social Assistance generating 7,290 jobs or 23% of employment; Professional, Scientific and Technical Services generating 3,195 jobs or 10% of employment; Accommodation and Food Services generating 2,255 jobs or 7% of employment; and Information Media and Telecommunications generating 2,040 jobs or 6% of employment.
- Analysis of BIC shows the highest employment BIC was health and education (48%) followed by knowledge intensive (28%), population serving (19%) and lastly industrial (8%).
- The knowledge intensive BIC had the second highest worker productivity rate at around $188,995/worker. This implies that increased knowledge intensive employment would have a comparably greater economic benefit to the local economy.
- Knowledge intensive industries had a location quotation of 0.5 in 2016, implying an opportunity to grow such industries in the Catchment.

4.9 Worker characteristics review key considerations and opportunities for the Site

From the above analysis, the following considerations and opportunities for the Site have been identified.

Table 28: Worker characteristics review key considerations and opportunities for the Site

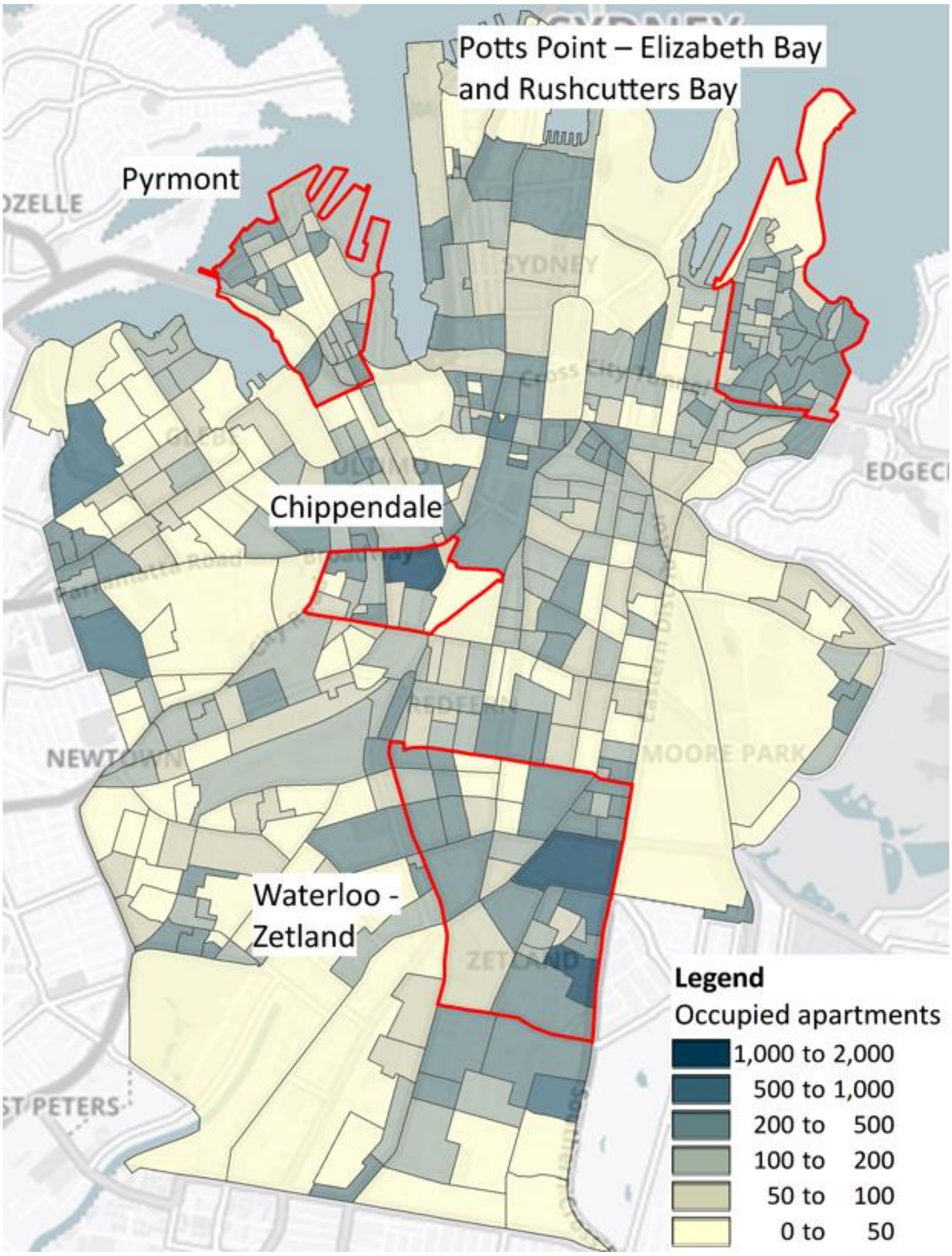
Key trend, issue and or constraint	Description/reasoning	Opportunity for Site
Strong employment growth	Over the five years to 2016, employment in the Catchment increased proportionally by 34%. This was around double the rate experienced across the LGA over the period (17%). Sydney LGA has an employment target of 200,000 additional jobs over the 20 years to 2036. Of these 14,500 are expected to be provided in the Redfern location.	The Site could provide increased employment opportunities to support the LGA's targets in a location that has experienced high growth.
Opportunity to grow knowledge intensive industries and jobs	Knowledge intensive industries in the Catchment had a location quotation of 0.5 in 2016. That is, they were less prevalent in the Catchment when compared to the wider LGA. This implies an opportunity to grow knowledge intensive industries in the Catchment. In 2021, almost half (47%) of businesses in the Catchment were related to knowledge intensive industries. This concentration was lower than that recorded for Sydney LGA at 61%. this further highlights the opportunity for growth for in knowledge intensive industries in the Catchment. This capacity for growth in knowledge intensive industries is also evident in the City of Sydney's LSPS's job target of 200,000 additional jobs by 2036. Of these, it is estimated that 118,105 or 61% would be related to knowledge intensive jobs. It is also noted that an employment target of 25,000 additional technology and innovation jobs is also identified for Tech Central.	The Site could increase the amount and type of knowledge intensive businesses and jobs in the Catchment, Tech Central and the Sydney LGA. This additional provision would contribute to Sydney LGA and Tech Central attaining their employment targets.
Increased economic contribution	Knowledge intensive industries combined had the second highest worker productivity rate at around $188,995/worker. That is, the average amount a worker in these industries contributed to the local, regional domestic product.	Increased knowledge intensive industries on the Site would have a comparatively greater economic benefit to the local economy than other industry types (population serving, industrial and or health/education).
Leverage of the proximity of education and health facilities	The Catchment had a location quotation of 4.0 for health and education industries, highlighting the locations major specialisation in these industries.	The Site could provide space which leverages and supports surrounding education and health businesses/facilities. Increased provision of these industries in the Site also could increase the productivity benefits from agglomeration.

5.0 CASE STUDY ANALYSIS

Given the current underdeveloped nature of the Site, this section identifies other "high density" residential locations within Sydney LGA to reflect the possible demographic outcomes of the Site, such as, age composition, household types and average household size.

Utilising ABS 2016 data, the number of occupied apartments at the Statistical Area Level 1 was assessed and mapped to identify high density locations in Sydney LGA. Using this method, three locations were selected these being the suburb of Chippendale, Potts Point – Elizabeth Bay and Rushcutters Bay, Waterloo – Zetland and Pyrmont.

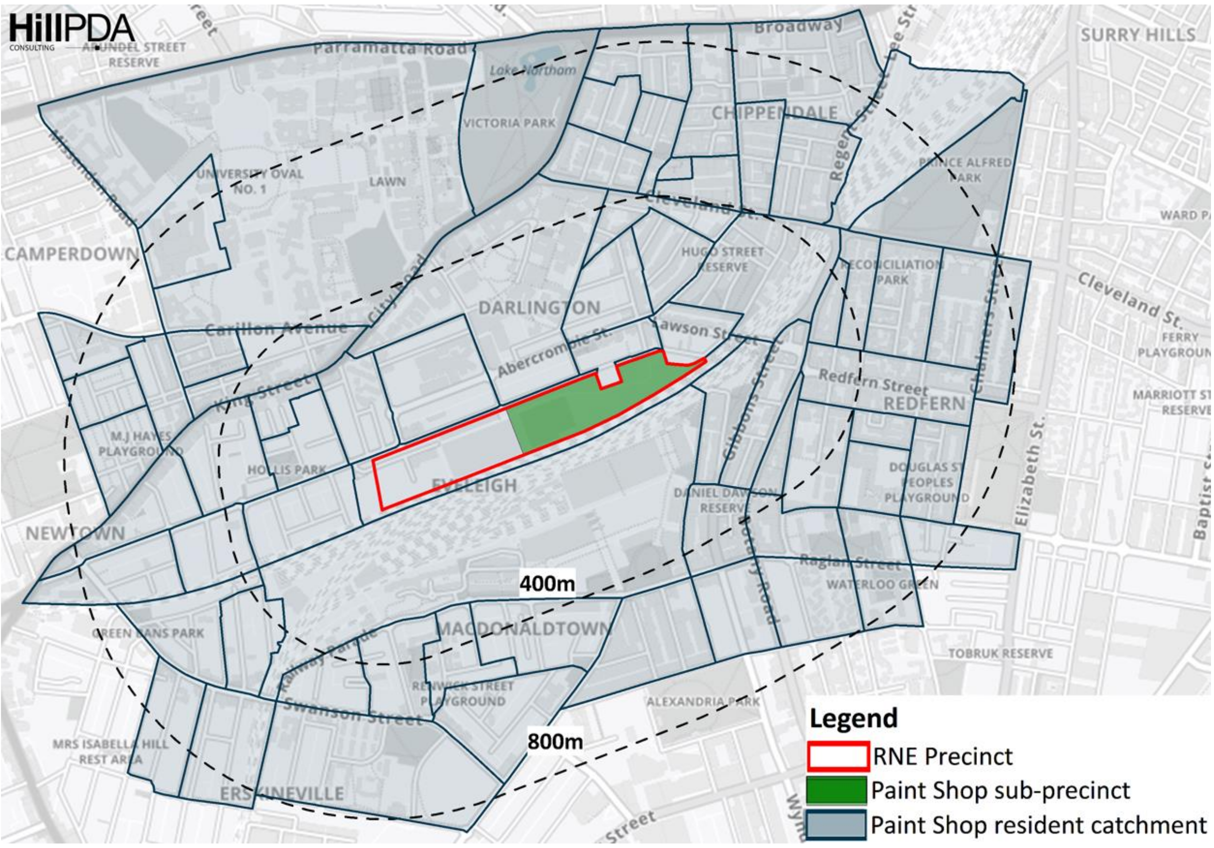
Figure 46: Sydney LGA number of occupied apartments (2016)



Source: HillPDA, ABS 2016

In this section socio-demographic characteristics of the benchmark areas are compared to those of the RNE Precinct's residential catchment (refer to figure below).

Figure 47: Resident catchment for the Site



Source: HillPDA

5.1 Benchmark area 1 – Chippendale

In 2016, Benchmark area 1 - Chippendale (Chippendale) encompasses around 46 hectares and contained a resident population of around 8,620 persons. This represented a density of around 186 persons per hectare.

The population density of Chippendale was over two times that of this study's Catchment (98 persons per hectare). This implies that increased densities within the Catchment could be achieved in the RNE Precinct

Table 29: Chippendale population density

	Chippendale	Catchment
Population	8,621	34,328
Area (ha)	46.4	351
Density (pop/ha)	186	98

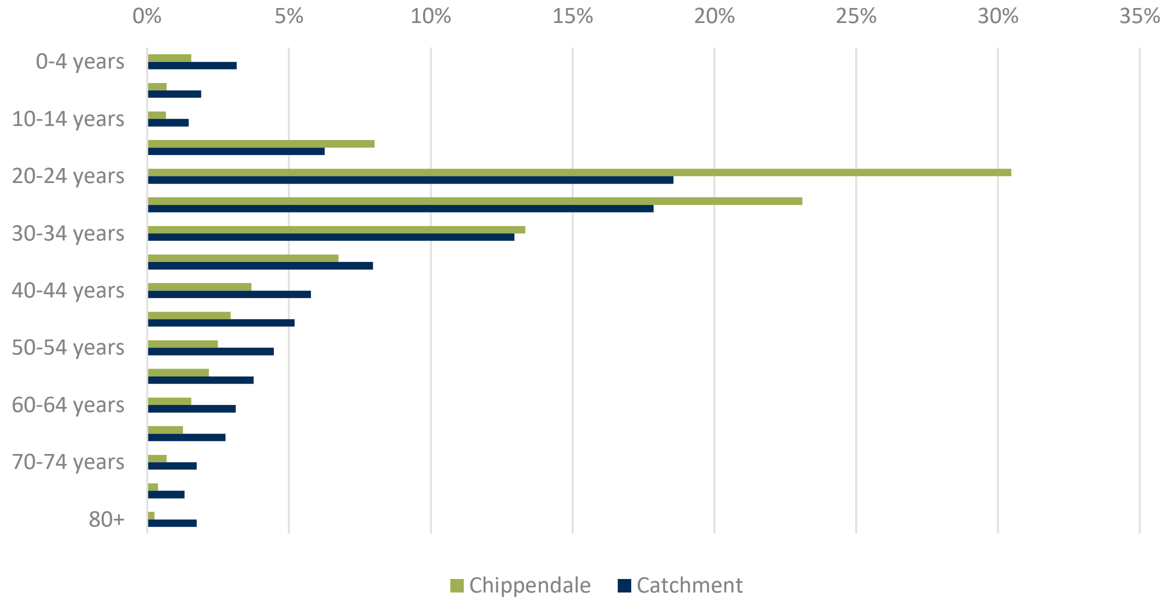
Source: ABS 2016, HillPDA

Age composition

The age profile of Chippendale was indicative of a younger population, with a median age of 26 years in 2016. This is compared to a median age of 32 years for this study's Catchment. The younger population of Chippendale is likely a result of its proximity to Sydney University and UTS and its attractiveness for student accommodation. This is reflected in Chippendale having around 40% of its population (over 15 years) attending a university/TAFE institution, compared to 27% for the Catchment.

Chippendale contained a higher proportion of residents aged 15-34 years (75%) compared to the Catchment (56%). Conversely, the Catchment contained a higher proportion of persons in the age groups over 34 years (38% combined) compared to Chippendale (22%).

Figure 48: Chippendale age composition

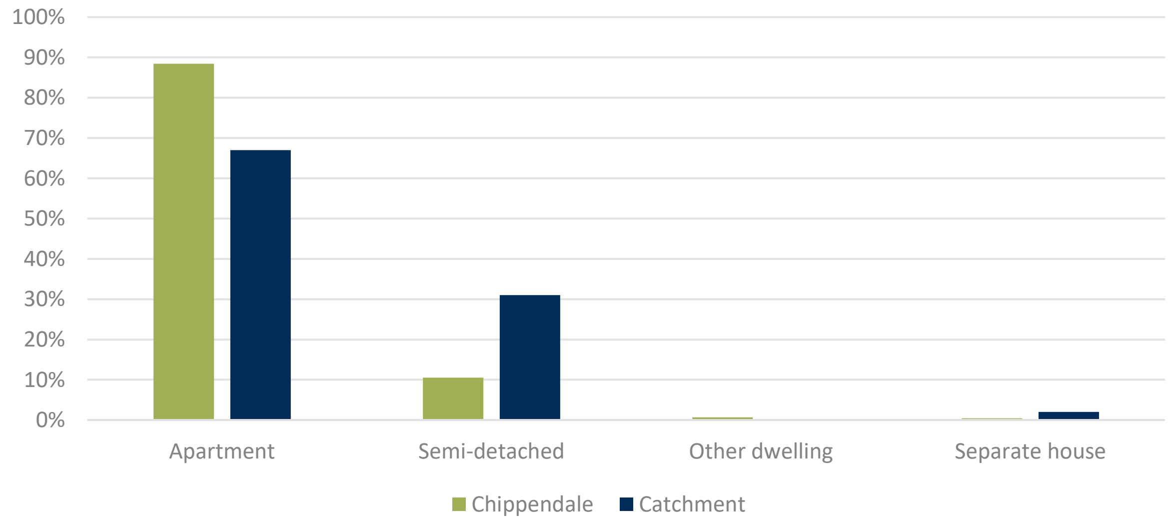


Source: ABS 2016

Dwelling typology

The composition of occupied dwellings in Chippendale was comparable to the Catchment, in that, apartment style dwelling was the dominant dwelling type. The proportion of apartment style dwellings was significantly higher in Chippendale (88%) when compared to the Catchment (67%). The proportion of apartment style dwellings is expected to increase overtime in the Catchment as redevelopment occurs and the area becomes denser and more reflective of the other inner-city benchmark locations.

Figure 49: Chippendale occupied dwelling composition

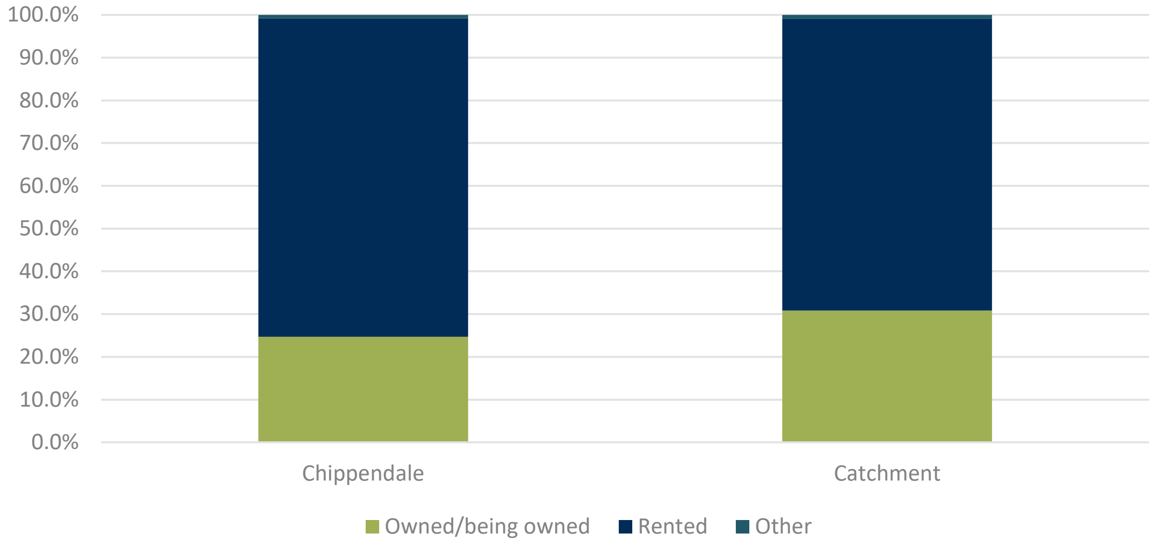


Source: ABS 2016

Dwelling tenure

Rented dwellings was the dominant tenure type (75%) within Chippendale. This proportion was higher than that recorded in the Catchment (68%). Conversely, dwellings stated as being owned or in the process of being owned was lower in Chippendale (25%) when compared to the Catchment (31%).

Figure 50: Chippendale occupied dwelling tenure



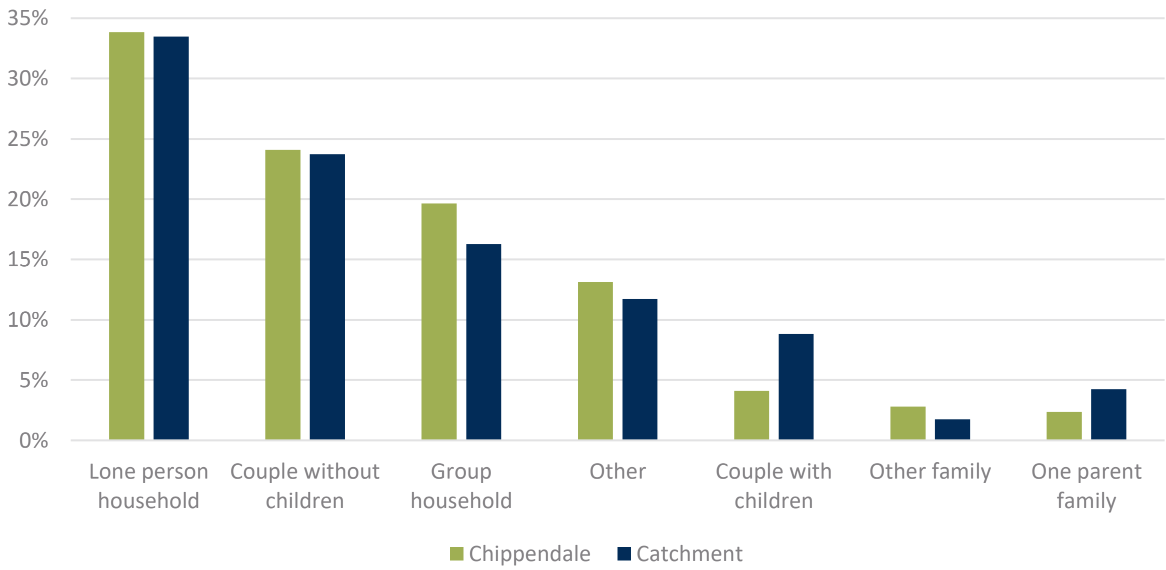
Source: ABS 2016

Household structure

In 2016, household structure was comparable across the two locations with smaller households (lone person, couples without children and group households) being the dominant type (78% of households in Chippendale and 73% in the Catchment).

The Catchment had a higher proportion of couples with children (9%) than Chippendale (4%). This is likely reflective of the higher number of students in Chippendale.

Figure 51: Chippendale household structure

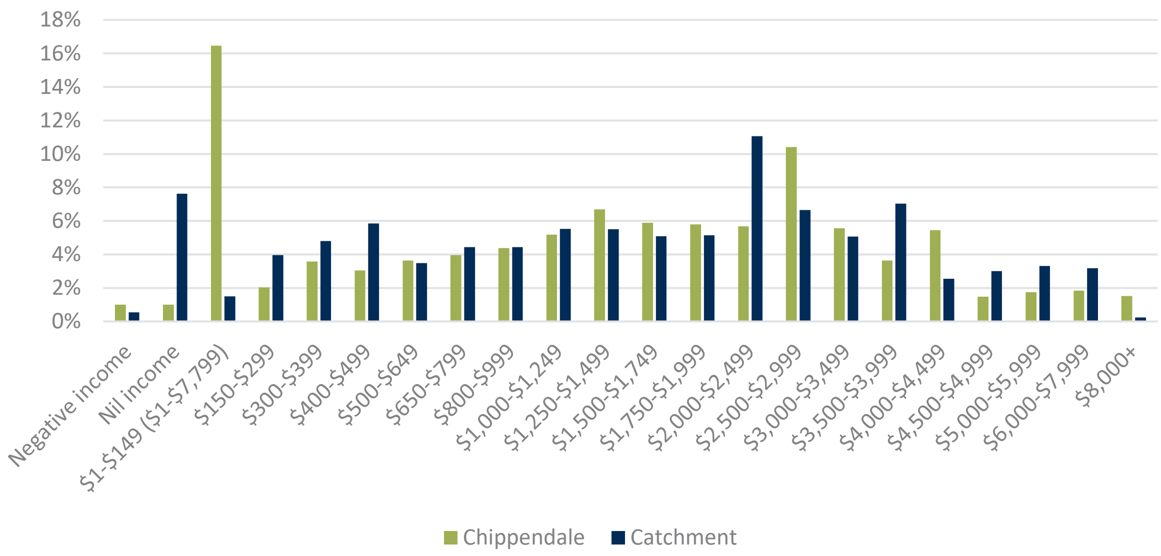


Source: ABS 2016

Household incomes

In 2016, the median household income in Chippendale was $1,250 per week. This was lower than that recorded for the Catchment ($1,583). This lower, median household income is likely reflective of the younger population with a higher proportion of students.

Figure 52: Chippendale household incomes

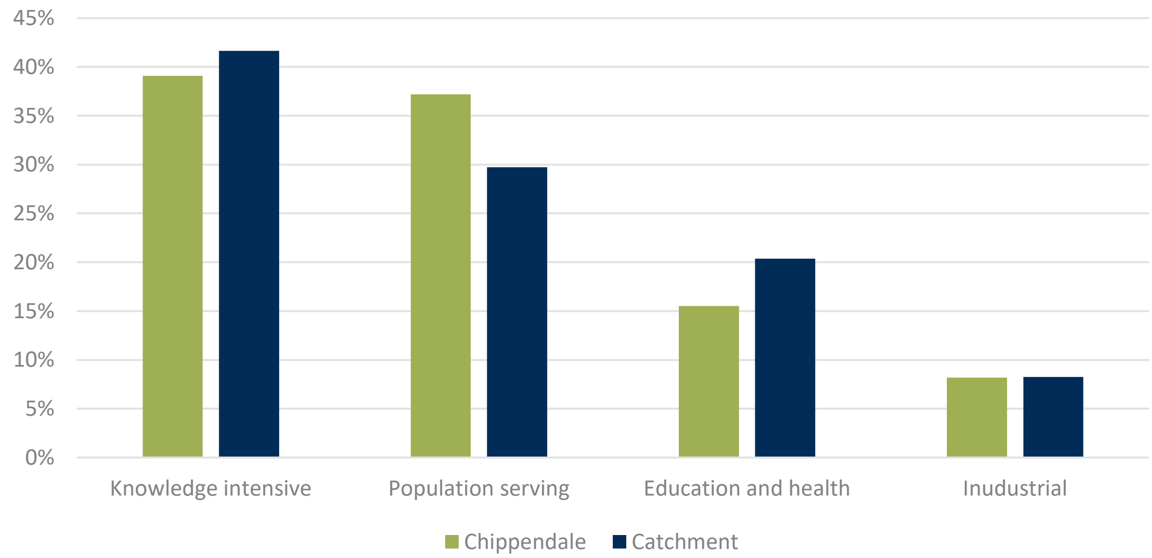


Source: ABS 2016

Resident employment profile

Most employed residents in Chippendale worked within knowledge intensive industries (39%). This proportion was lower than that recorded in the Catchment (42%). Chippendale had a higher proportion of residents working in population serving industries when compared to the Catchment (37% and 30%, respectively) and conversely a lower proportion employed within education and health industries (16% and 20%, respectively).

Figure 53: Chippendale resident employment profile



Source: ABS 2016

5.2 Benchmark area 2 – Potts Point – Elizabeth Bay and Rushcutters Bay

In 2016, Benchmark area 2 – Potts Point – Elizabeth Bay and Rushcutters Bay (Potts Point – Elizabeth Bay and Rushcutters Bay) encompasses around 80 hectares and contained a resident population of around 17,190 persons. This represented a density of around 214 persons per hectare.

The population density of Potts Point – Elizabeth Bay and Rushcutters Bay was over two and a half times that of this study's Catchment (98 persons per hectare). This implies that increased densities within the Catchment could be achieved in the RNE Precinct.

Table 30: Potts Point – Elizabeth Bay and Rushcutters Bay population density

	Potts Point – Elizabeth Bay and Rushcutters Bay	Catchment
Population	17,188	34,328
Area (ha)	80.35	351
Density (pop/ha)	214	98

Source: ABS 2016, HillPDA

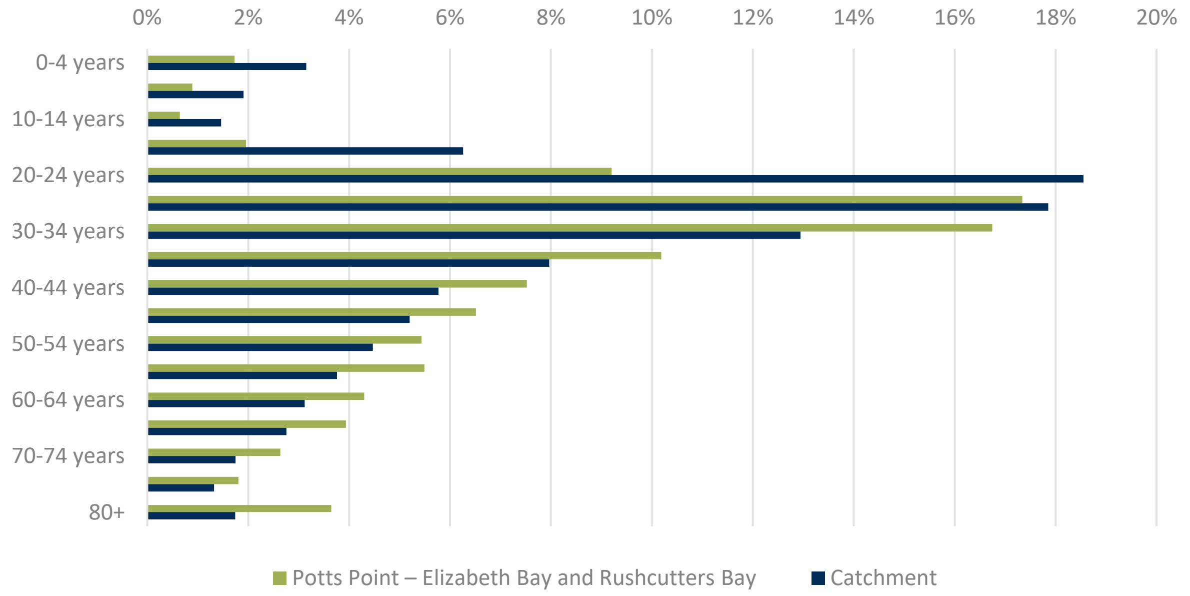
Age composition

The age profile of Potts Point – Elizabeth Bay and Rushcutters Bay was indicative of a maturing working population, with a median age of 36 years in 2016. This is compared to a median age of 32 years for this study's Catchment. The older population profile in Potts Point – Elizabeth Bay and Rushcutters Bay is likely a result of the location being an established residential area with older residents choosing to age in place while it is also attractive to younger families and persons for its proximity to the city and presence of a night-time economy.

Compared to this study's Catchment, the population of Potts Point – Elizabeth Bay and Rushcutters Bay had a:

- A lower proportion of residents in the 20-24 years age group (9% and 19%, respectively)
- Lower proportion of residents aged 15-34 years (45% and 56%, respectively)
- Higher proportion of residents in the older age cohorts with 51% of residents aged over 34 years – compared to 38% in the Catchment.

Figure 54: Potts Point – Elizabeth Bay and Rushcutters Bay age composition

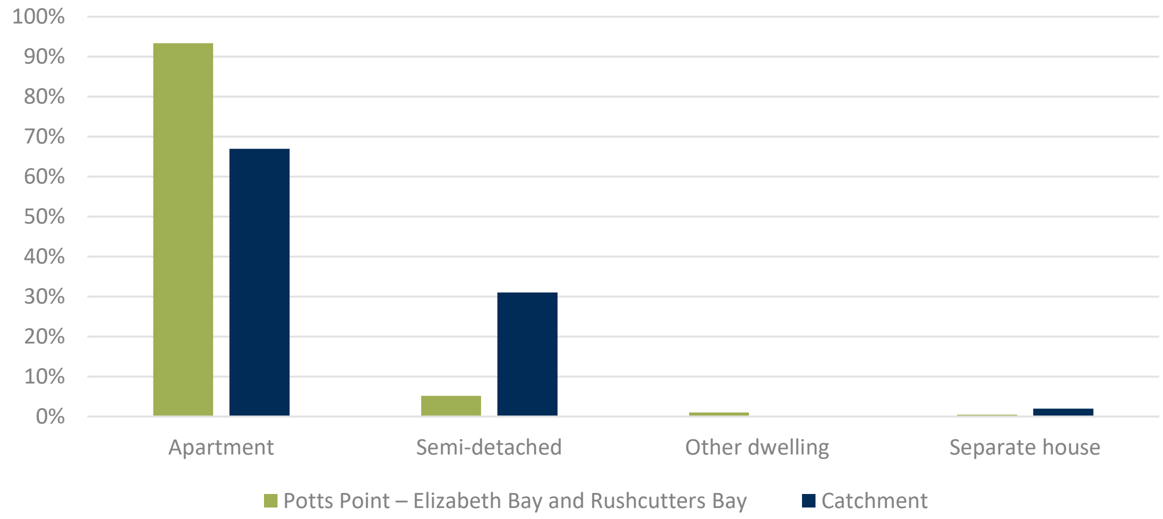


Source: ABS 2016

Dwelling typology

The composition of occupied dwellings in Potts Point – Elizabeth Bay and Rushcutters Bay was comparable to the Catchment, in that, apartment style dwellings were the dominant dwelling type. The proportion of apartment style dwellings was significantly higher in Potts Point – Elizabeth Bay and Rushcutters Bay (93%) when compared to the Catchment (67%). The proportion of apartment style dwellings is expected to increase over time in the Catchment as redevelopment occurs and the area becomes denser and more reflective of the other inner-city benchmark locations.

Figure 55: Potts Point – Elizabeth Bay and Rushcutters Bay occupied dwelling composition

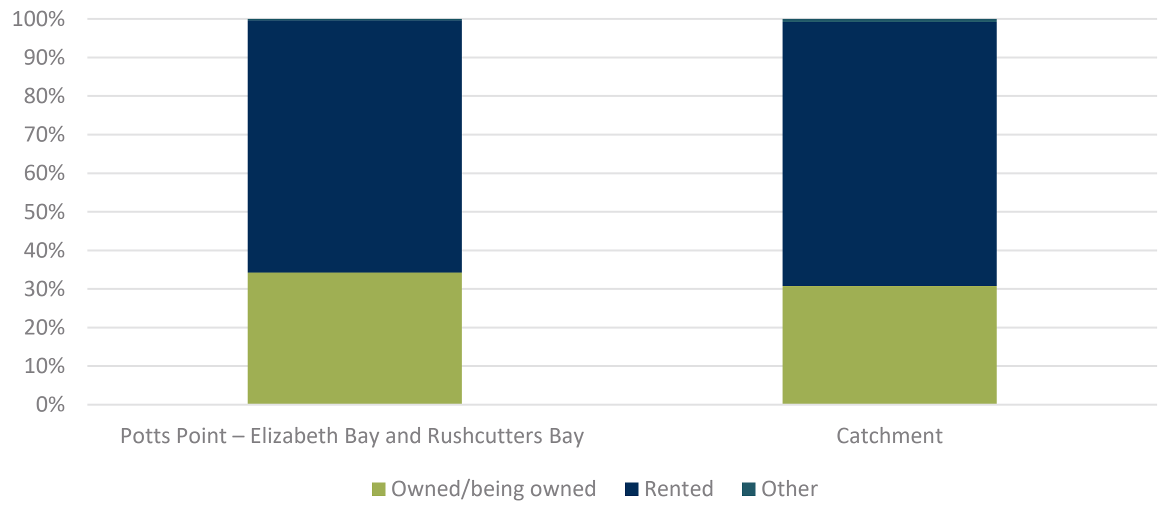


Source: ABS 2016

Dwelling tenure

Rented dwellings was the dominant tenure type (65%) within Potts Point – Elizabeth Bay and Rushcutters Bay. This proportion was lower than that recorded in the Catchment (68%). Conversely, the proportion of dwellings stated as being owned or in the process of being owned was higher in Potts Point – Elizabeth Bay and Rushcutters Bay (25%) when compared to the Catchment (31%). This is likely a result of the location containing a more comparatively mature established population with higher household incomes.

Figure 56: Potts Point – Elizabeth Bay and Rushcutters Bay occupied dwelling tenure



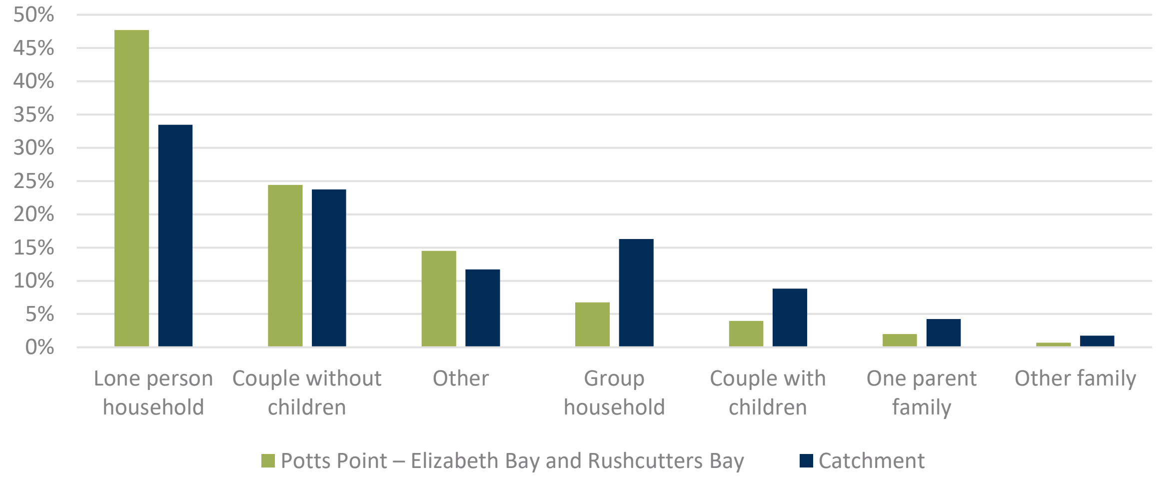
Source: ABS 2016

Household structure

Lone person households comprised almost half of households in Potts Point – Elizabeth Bay and Rushcutters Bay (48%). This is compared to just over a third of households in the Catchment being lone persons (33%).

Overall smaller households (lone person, couples without children and group households) were the dominant household type in Potts Point – Elizabeth Bay and Rushcutters Bay, comprising 87% of households. This was similar to the Catchment although at a lower proportion (73%).

Figure 57: Potts Point – Elizabeth Bay and Rushcutters Bay household structure



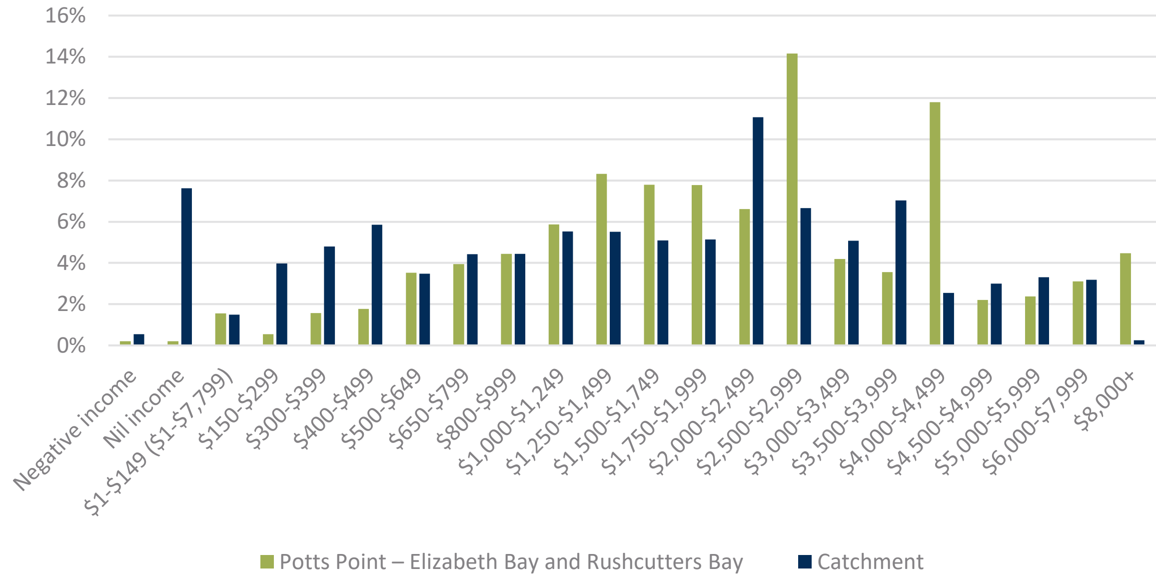
Source: ABS 2016

Household incomes

In 2016, the median household income in Potts Point – Elizabeth Bay and Rushcutters Bay was $1,875 per week. This was higher than that recorded for the Catchment ($1,583).

Over four fifths (82%) of households in the Potts Point – Elizabeth Bay and Rushcutters Bay has a weekly income over $999. This is compared to 63% for the Catchment, implying households in Potts Point – Elizabeth Bay and Rushcutters Bay were more affluent.

Figure 58: Potts Point – Elizabeth Bay and Rushcutters Bay household incomes

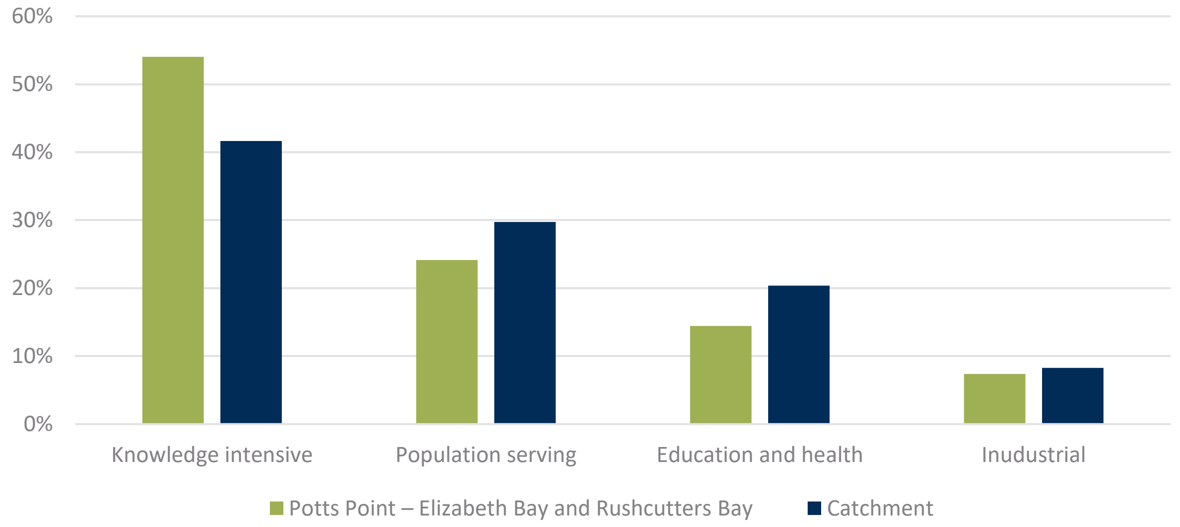


Source: ABS 2016

Resident employment profile

Most employed residents in Potts Point – Elizabeth Bay and Rushcutters Bay worked within knowledge intensive industries (54%). This proportion was higher than that recorded in the Catchment (42%). Potts Point – Elizabeth Bay and Rushcutters Bay had a lower proportion of residents working in population serving industries when compared to the Catchment (24% and 30%, respectively) and a lower proportion employed within education and health industries (14% and 20%, respectively).

Figure 59: Potts Point – Elizabeth Bay and Rushcutters Bay resident employment profile



Source: ABS 2016

5.3 Benchmark area 3 – Waterloo-Zetland

In 2016, Benchmark area 3 – Waterloo-Zetland (Waterloo-Zetland) encompassed around 194 hectares and contained a resident population of around 24,705 persons. This represented a density of around 127 persons per hectare.

The population density of Waterloo-Zetland was just over one and a half times that of this study's Catchment (98 persons per hectare). This implies that increased densities within the Catchment could be achieved in the RNE Precinct.

Table 31: Waterloo-Zetland population density

	Waterloo-Zetland	Catchment
Population	24,705	34,328
Area (ha)	193.91	351
Density (pop/ha)	127	98

Source: ABS 2016, HillPDA

Age composition

The age profile of Waterloo-Zetland was indicative a of a younger population, with a median age of 30 years in 2016. This is compared to a median age of 32 years for this studies Catchment.

The overall age distribution was comparable across the two locations. This is reflected in around half of the population being aged under 34 years across both locations.

However, a closer look indicates that Waterloo-Zetland had a lower proportion of residents aged 20-24 years (16% and 19%, respectively). While residents aged 30-39 years were more represented in Waterloo-Zetland when compared to the Catchment (24% and 21%, respectively).

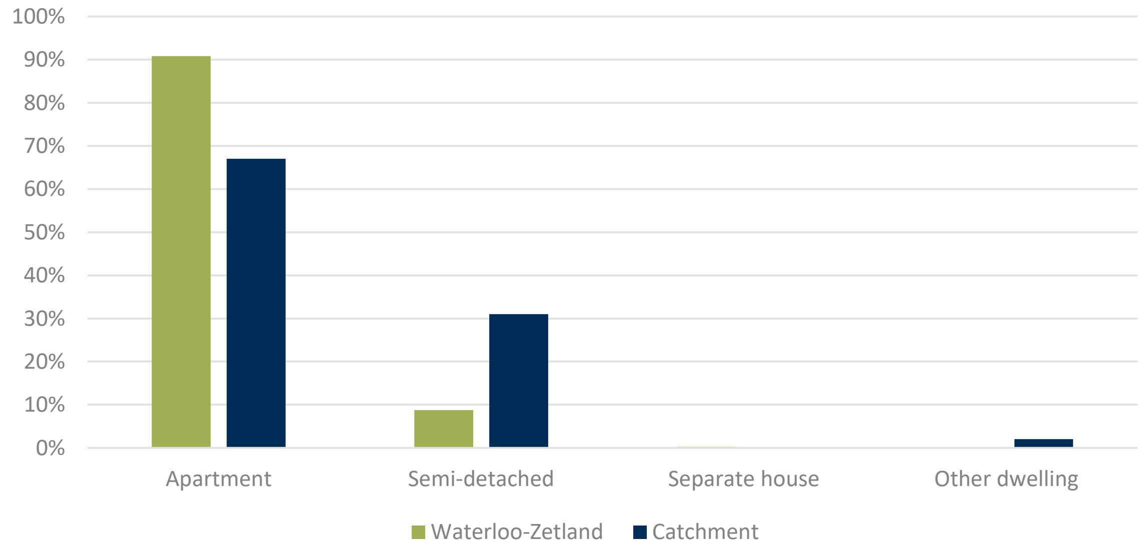
Figure 60: Waterloo-Zetland age composition

Source: ABS 2016

Dwelling typology

The composition of occupied dwellings in Waterloo-Zetland was comparable to the Catchment, in that, apartment style dwelling was the dominant dwelling type. The proportion of apartment style dwellings was significantly higher in Waterloo-Zetland (91%) when compared to the Catchment (67%). The proportion of apartment style dwellings is expected to increase overtime in the Catchment as redevelopment occurs and the area becomes denser and more reflective of the other inner-city benchmark locations.

Figure 61: Waterloo-Zetland occupied dwelling composition

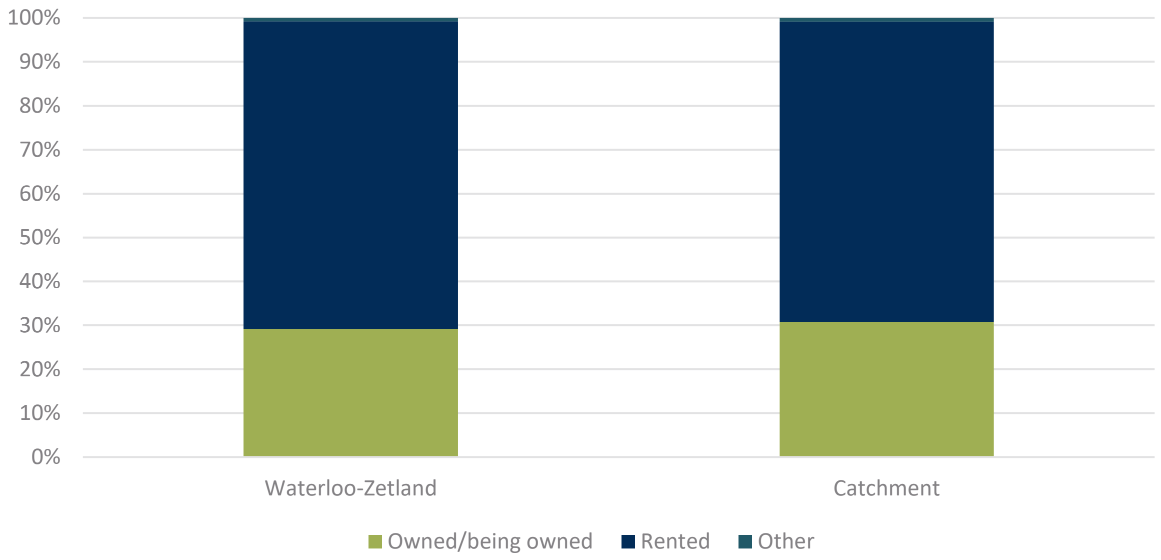


Source: ABS 2016

Dwelling tenure

Rented dwellings was the dominant tenure type (70%) within Waterloo-Zetland. This proportion was comparable to that recorded in the Catchment (68%). Dwellings stated as being owned or in the process of being owned was also comparable in Waterloo-Zetland and the wider catchment (29% and 31%, respectively).

Figure 62: Waterloo-Zetland occupied dwelling tenure



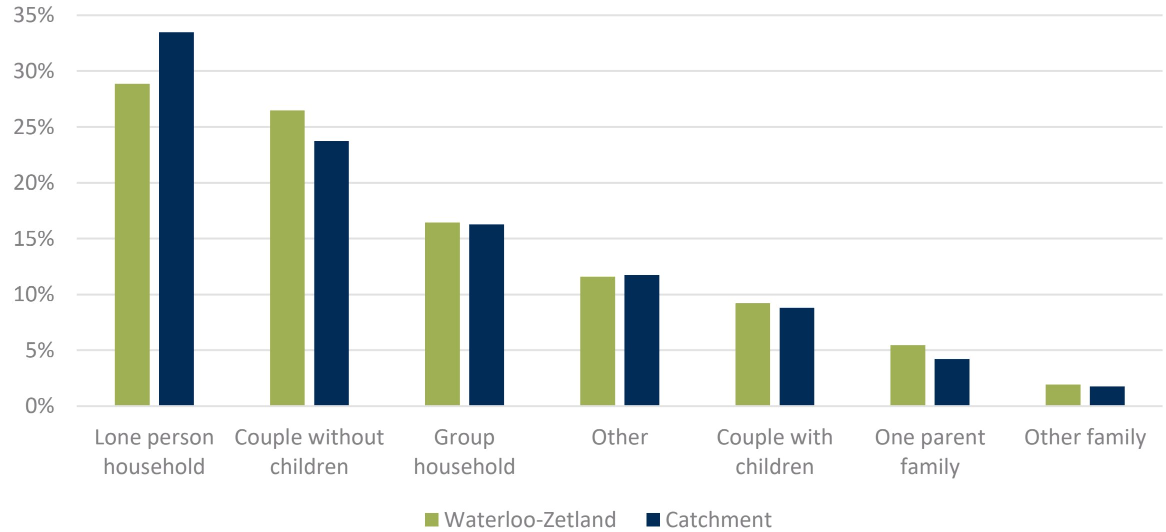
Source: ABS 2016

Household structure

Lone person households were the dominant household type in Waterloo-Zetland (29%). However, this proportion was less than that recorded in the Catchment in 2016 (33%).

Overall, smaller households (lone person, couples without children and group households) were the dominant household type in Waterloo-Zetland, comprising 72% of households. This was comparable to the Catchment (73%).

Figure 63: Waterloo-Zetland household structure



Source: ABS 2016

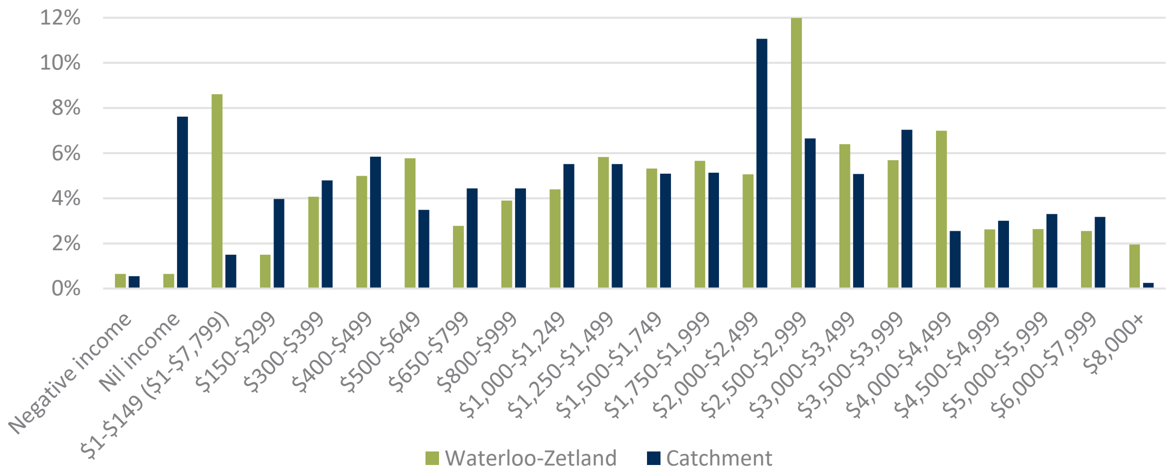
Household incomes

In 2016, the median household income in Waterloo-Zetland was $1,605 per week. This was comparable to that recorded for the Catchment ($1,583).

The distribution of household incomes was comparable across the two locations however, the Catchment had notably higher proportions of households in the income brackets of nil, $650-$799 and $2,000-$2,499.

Conversely, the Catchment had notably lower proportion of households in the $1-$149, $500-$649, $2,500-$2,999 and $4,000-$4,499 income brackets.

Figure 64: Waterloo-Zetland household incomes

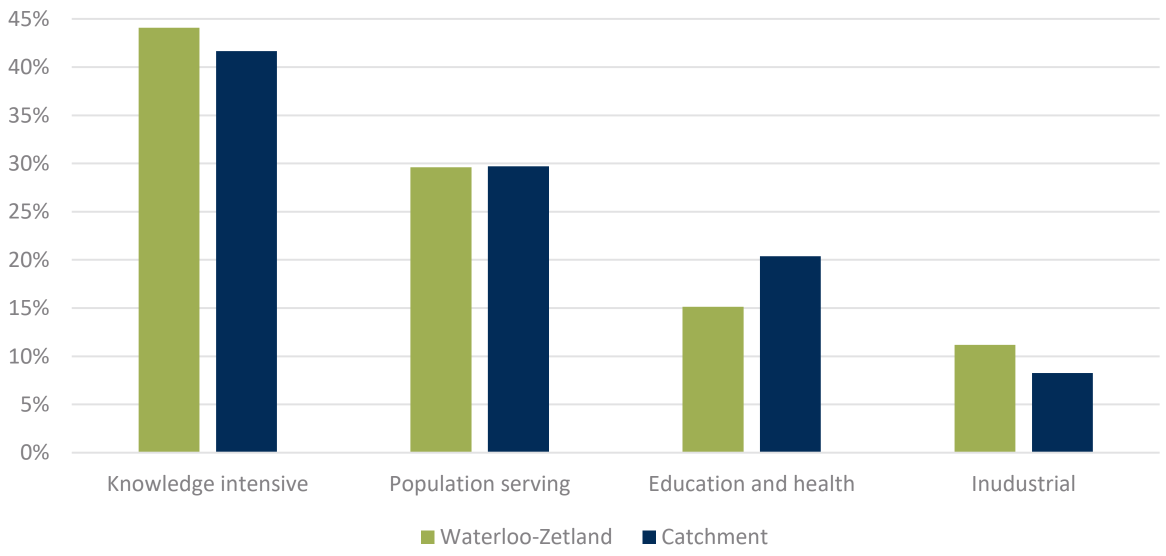


Source: ABS 2016

Resident employment profile

Most employed residents in Waterloo-Zetland worked within knowledge intensive industries (44%). This proportion was higher than that recorded in the Catchment (42%). Waterloo-Zetland had a comparable proportion of residents working in population serving industries when compared to the Catchment (30%, respectively). Waterloo-Zetland residents had a lower proportion employed within education and health industries (15% and 20%, respectively).

Figure 65: Waterloo-Zetland resident employment profile



Source: ABS 2016

5.4 Benchmark area 4 – Pyrmont

In 2016, Benchmark area 4 – Pyrmont (Pyrmont) encompasses around 93 hectares and contained a resident population of around 12,800 persons. This represented a density of around 137 persons per hectare.

The population density of Pyrmont was just over one and a half times that of this study's Catchment (98 persons per hectare). This implies that increased densities within the Catchment could be achieved in the RNE Precinct.

Table 32: Waterloo-Zetland population density

	Pyrmont	Catchment
Population	12,802	34,328
Area (ha)	93.3	351
Density (pop/ha)	137	98

Source: ABS 2016, HillPDA

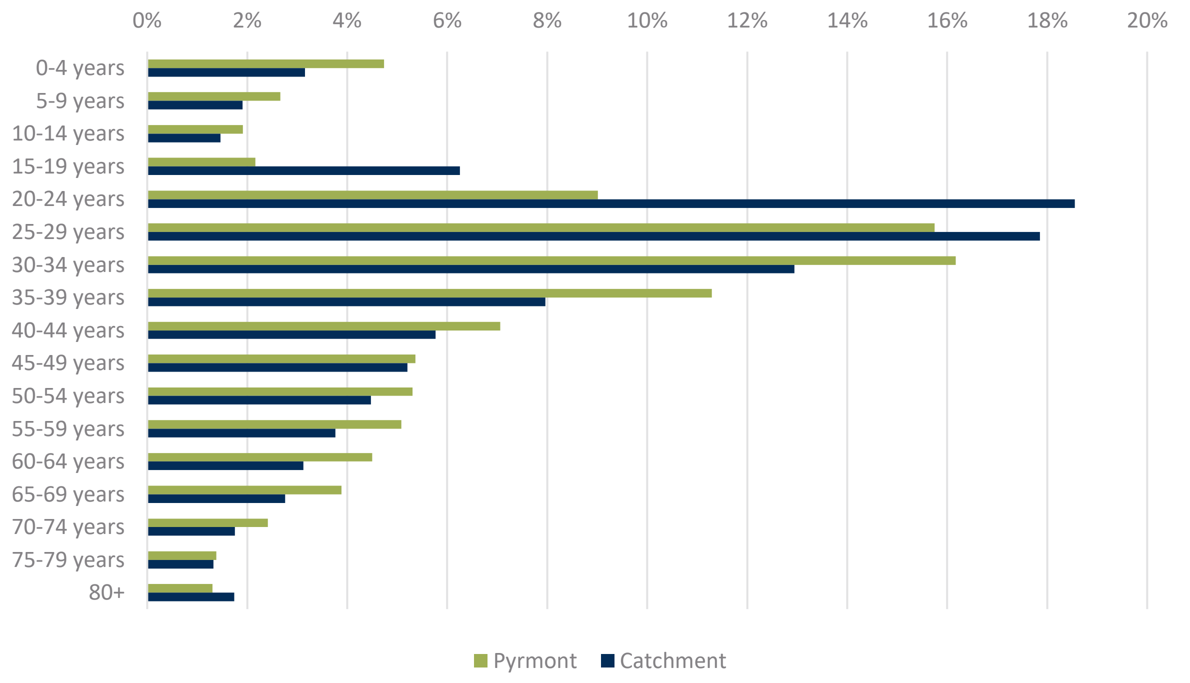
Age composition

The age profile of Pyrmont was indicative a of a slightly older population when compared to the Catchment. This is reflected in Pyrmont having a median age of 34 years in 2016, compared to 32 years for the Catchment.

Pyrmont contained a lower proportion of residents aged 15-34 years (43%) when compared to the Catchment (56%). Conversely, Pyrmont contained a higher proportion of residents aged over 34 years when compared to the catchment (48% and 38%, respectively).

Specifically, Pyrmont contained a notably lower proportion of residents in the 15-19 years and 20-24 years age brackets (9% and 9%, respectively) when compared to the Catchment (6% and 19%, respectively). The higher representation of these age groups in the Catchment is likely reflective of its proximity to the universities and its higher student population.

Figure 66: Pyrmont age composition

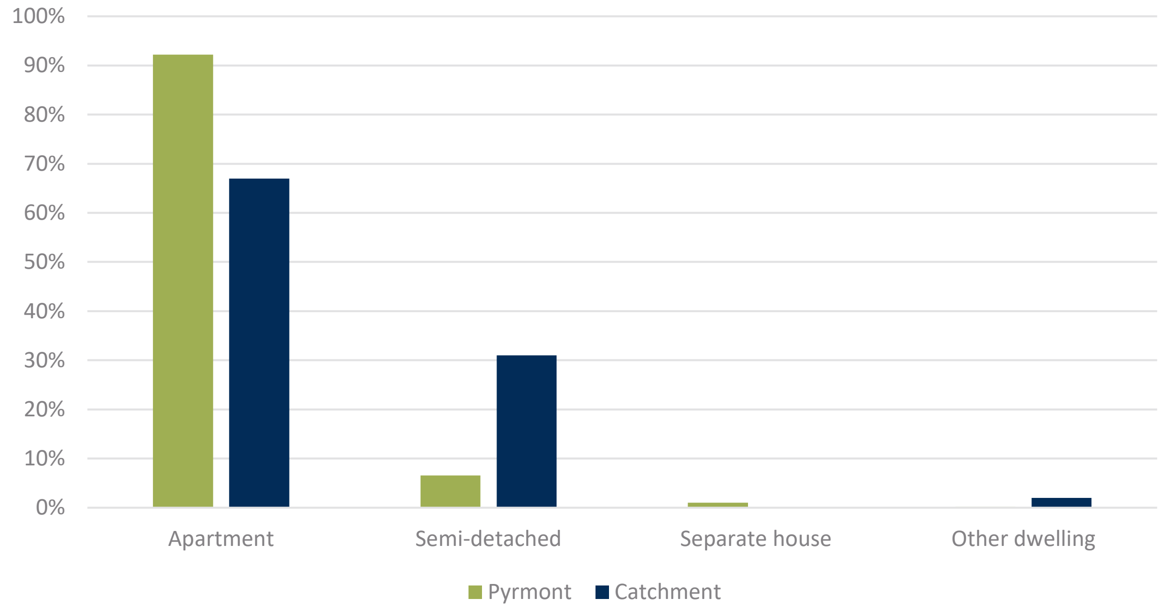


Source: ABS 2016

Dwelling typology

The composition of occupied dwellings in Pyrmont was comparable to the Catchment, in that, apartment style dwelling was the dominant dwelling type. The proportion of apartment style dwellings was significantly higher in Pyrmont (92%) when compared to the Catchment (67%). The proportion of apartment style dwellings is expected to increase overtime in the Catchment as redevelopment occurs and the area becomes denser and more reflective of the other inner-city benchmark locations.

Figure 67: Pyrmont occupied dwelling composition

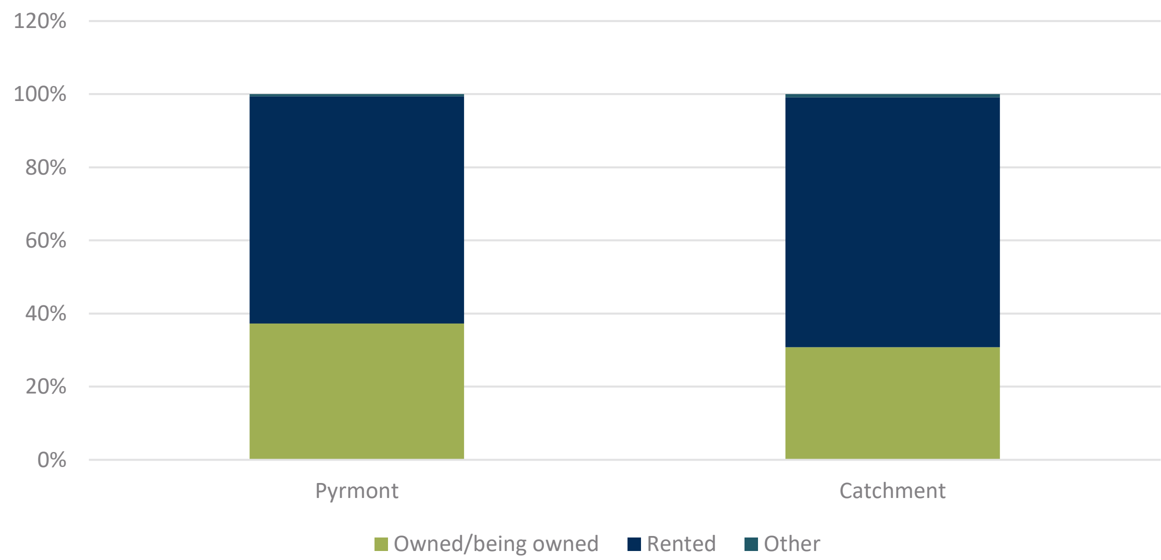


Source: ABS 2016

Dwelling tenure

Rented dwellings was the dominant tenure type (62%) within Pyrmont. This proportion was lower than that recorded in the Catchment (68%). Conversely, dwellings stated as being owned or in the process of being owned was higher in Pyrmont (37%) when compared to the Catchment (31%).

Figure 68: Pyrmont occupied dwelling tenure



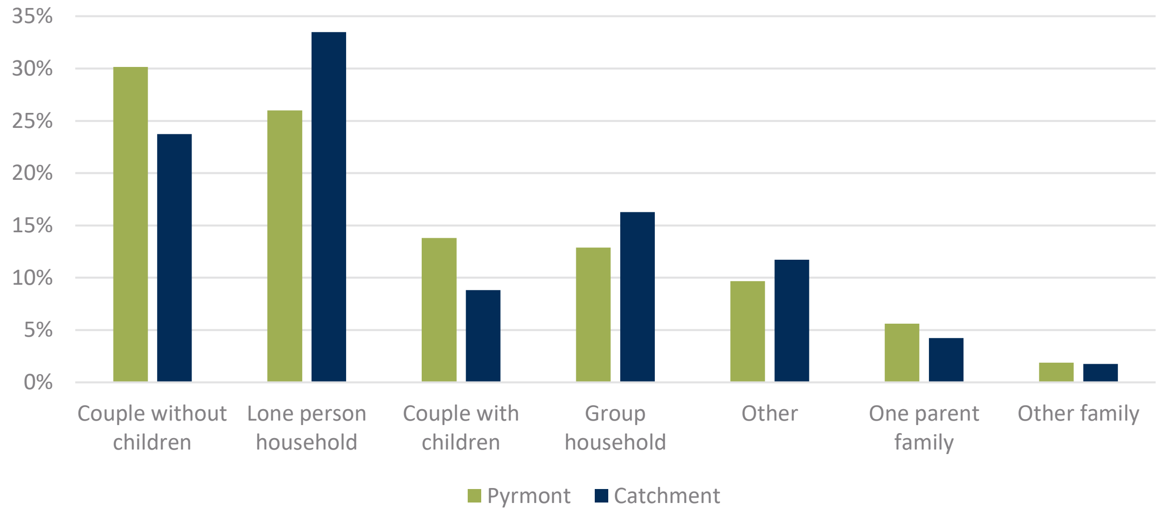
Source: ABS 2016

Household structure

Lone person households were the dominant household type in Pyrmont (26%). However, this proportion was less than that recorded in the Catchment in 2016 (33%). Pyrmont contained a higher representation of couples with children (14%) when compared to the Catchment (9%).

Overall, smaller households (lone person, couples without children and group households) were the dominant household type in Pyrmont, comprising 69% of households. This was lower than that recorded in the Catchment (73%).

Figure 69: Pyrmont household structure

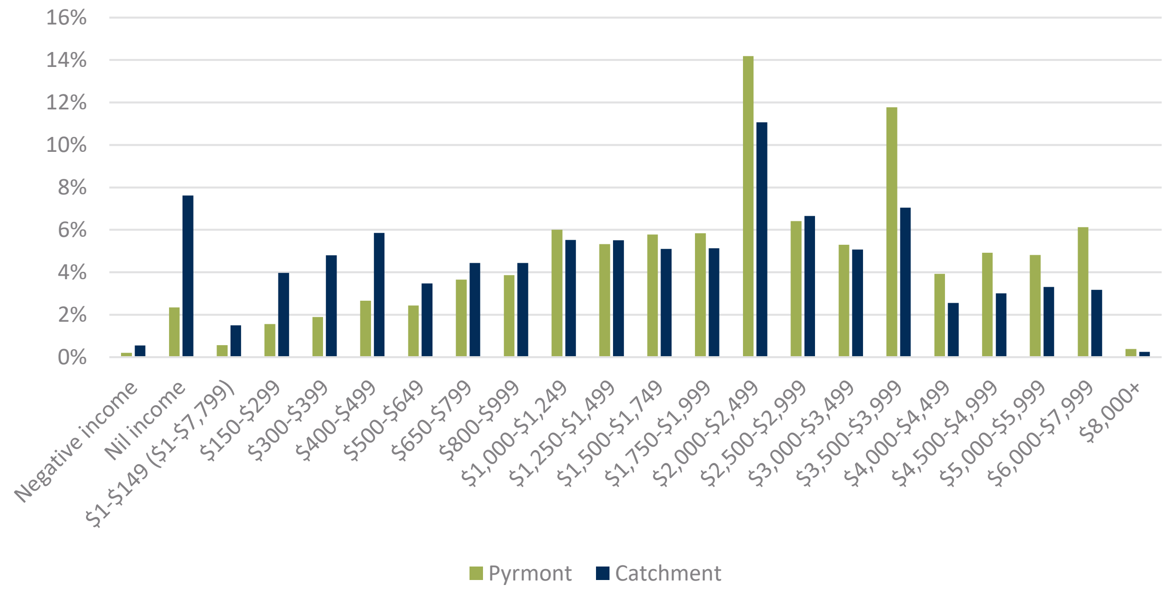


Source: ABS 2016

Household incomes

In 2016, the median household income in Waterloo-Zetland was $2,280 per week. This was higher than that recorded for the Catchment ($1,583). Over four fifths (81%) of households in Pyrmont had a weekly income over $999. This is compared to 63% for the Catchment, further implying households in Pyrmont were more affluent.

Figure 70: Pyrmont household incomes

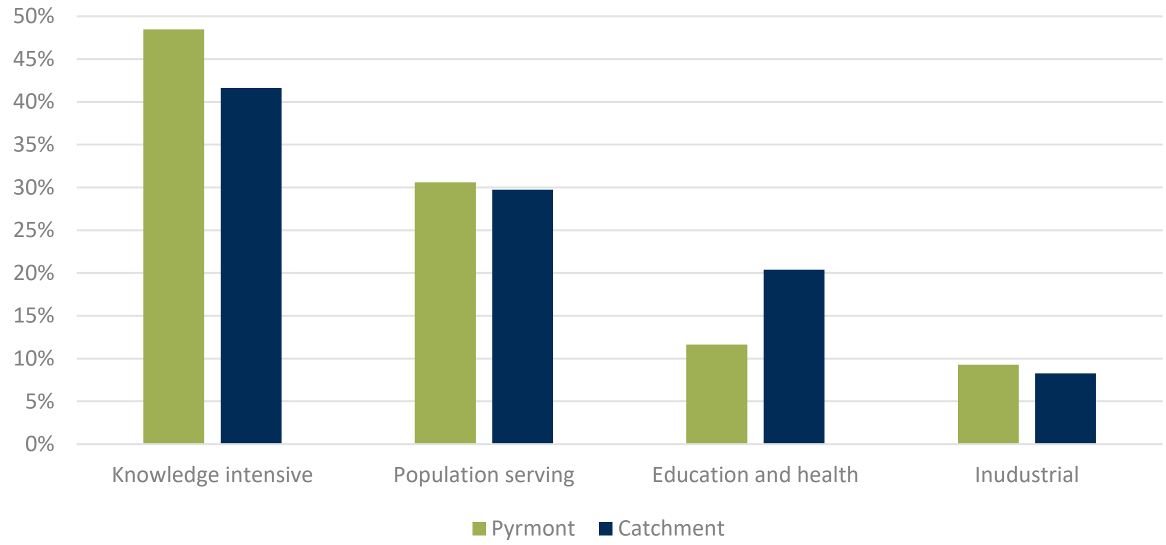


Source: ABS 2016

Resident employment profile

Most employed residents in Pyrmont worked within knowledge intensive industries (48%). This proportion was higher than that recorded in the Catchment (42%). Pyrmont had a comparable proportion of residents working in population serving industries when compared to the Catchment (31% and 30%, respectively). Pyrmont residents had a lower proportion employed within education and health industries (12% and 20%, respectively).

Figure 71: Pyrmont resident employment profile



Source: ABS 2016

5.5 Benchmark summary

The following table provides an overview of the key demographic differences between the benchmark locations. Although Chippendale is located within the Catchment, its socio-demographic characteristics are most representative of what the Catchment is likely to continue to transition into without intervention. The other benchmark locations have demographic profiles which differ from the Catchment. They represent what the Catchment could transition into with market intervention.

Table 33: Summary of key socio-demographic benchmark data

	Catchment	Chippendale	Potts Point – Elizabeth Bay and Rushcutters Bay	Waterloo-Zetland	Pyrmont
Density (pop/ha)	98	186	214	127	137
Age composition					
0-14	6.5%	2.9%	3.3%	7.4%	9.3%
15-34	55.6%	74.9%	45.3%	56.4%	43.1%
34-59	27.2%	18.0%	35.2%	25.5%	34.1%
60+	10.7%	4.1%	16.3%	10.7%	13.5%
Dwelling type					
Separate house	2.0%	0.4%	0.4%	0.3%	1.0%
Semi-detached	31.0%	10.5%	5.2%	8.7%	6.6%
Apartment	67.0%	88.4%	93.4%	90.8%	92.2%
Other dwelling	0.0%	0.6%	1.0%	0.2%	0.2%
Household income					
$0-$649	27.2%	29.8%	9.2%	25.6%	11.5%
$649-$1,499	19.9%	20.2%	22.6%	16.9%	18.9%
$1,500+	52.3%	49.0%	68.1%	56.8%	69.5%

	Catchment	Chippendale	Potts Point – Elizabeth Bay and Rushcutters Bay	Waterloo-Zetland	Pyrmont
Household type					
Couple with children	8.8%	4.1%	4.0%	9.2%	13.8%
Couple without children	23.7%	24.1%	24.4%	26.5%	30.1%
One parent family	4.2%	2.4%	2.0%	5.5%	5.6%
Other family	1.8%	2.8%	0.7%	1.9%	1.9%
Lone person household	33.5%	33.9%	47.7%	28.8%	26.0%
Group household	16.3%	19.6%	6.7%	16.5%	12.9%
Other	11.7%	13.1%	14.5%	11.6%	9.7%
Employment by BIC					
Industrial	8.3%	8.2%	7.4%	11.2%	9.3%
Population serving	29.7%	37.2%	24.1%	29.6%	30.6%
Knowledge intensive	41.6%	39.1%	54.1%	44.1%	48.5%
Education and health	20.4%	15.5%	14.5%	15.1%	11.6%

5.6 Bedroom mix in apartment buildings of four or more stories

The table below shows the bedroom mix for apartment building of four stories and over across the four benchmark areas, the Catchment and Sydney LGA.

This shows that on average, the catchment had a higher proportion of studios and one-bedroom apartments and a correspondingly a lower proportion of two or more bedroom apartments.

The higher number of studios and one-bedroom apartments in the catchment is likely reflective of the younger populations, higher number of migrants and students. However, the types of households attracted to the Site will likely be reflective of the wider LGA/benchmark locations. This would likely increase the demand for two bedroom and three-bedroom apartments.

Table 34: Apartment bedroom mixture 2016 - buildings four stories and above

Number of bedrooms	Chippendale	Potts Point – Elizabeth Bay and Rushcutters Bay	Waterloo-Zetland	Pyrmont	Benchmark average	Catchment	Sydney LGA
None (includes bedsitters)	10.5%	14.2%	2.3%	1.2%	6.2%	10.2%	5.7%
One bedroom	54.3%	47.1%	28.4%	23.7%	35.5%	45.4%	39.6%
Two bedrooms	28.0%	31.4%	59.6%	53.3%	47.0%	35.9%	44.0%
Three bedrooms	6.4%	6.7%	9.4%	21.1%	10.8%	6.6%	9.8%
Four bedrooms	0.6%	0.5%	0.3%	0.6%	0.4%	0.8%	0.7%
Five bedrooms	0.2%	0.1%	0.0%	0.1%	0.0%	0.4%	0.1%
Six bedrooms or more	0.1%	0.0%	0.0%	0.2%	0.1%	0.8%	0.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: ABS 2016

5.8 Proportion of households in apartment buildings four or more stories

In 2016, across all benchmark areas, around 80% of households lived within apartment buildings of four storeys and over. This proportion was higher than that recorded for Sydney LGA (64%) and the Catchment (47%). This is likely a result of the higher proportion of apartments within the benchmark locations.

On average in the benchmark areas 81% of smaller households (couples without children, lone person and group households) lived within apartment building four stories and over. This is compared to just 66% of smaller households across the LGA and 50% for the Catchment.

With smaller households in the Catchment comprising most of the forecast growth in households across Sydney LGA and the Catchment location (refer to Section 3.7), it can be presumed that over the coming decades, more households within the Catchment will reside within apartment buildings four stores and over.

Figure 72: Proportion of households in apartment buildings of four or more stories

Household type	Chippendale	Potts Point – Elizabeth Bay and Rushcutters Bay	Waterloo-Zetland	Pyrmont	Benchmark average	Catchment	Sydney LGA
Couple with children	53%	74%	78%	86%	79%	21%	49%
Couple w/o children	73%	78%	88%	89%	84%	45%	67%
One parent family	68%	74%	56%	84%	68%	32%	47%
Other family	85%	62%	81%	80%	78%	52%	68%
Lone person household	77%	77%	79%	89%	79%	58%	67%
Group household	69%	73%	89%	85%	82%	42%	63%
Other	74%	74%	76%	88%	77%	54%	65%
Total	**73%**	**76%**	**81%**	**87%**	**80%**	**47%**	**64%**

Source: ABS 2016

5.9 Average household size - apartments

In 2011, the average household size for apartments (buildings four storeys and over) across the benchmark areas, on average was 1.72 persons per apartment. This was lower than the Catchment (1.78 persons) and Sydney LGA (1.81 persons).

By 2016, the average household size for apartments across the benchmark areas had risen to 2.00 persons per apartment. This was comparable to Sydney LGA (2.00 persons) although higher than the Catchment which only increased to 1.83 persons per apartment. The lower rate for the Catchment was likely reflective of its higher number of studio and one-bedroom dwellings and higher student population.

It is reasonable that in the future, the average household size for apartments in the Site would be more reflective of the benchmark locations and Sydney LGA.

Table 35: average household size for apartments - buildings four storeys & over

Area	2011	2016	Change
Chippendale	1.84	1.97	0.13
Potts Point – Elizabeth Bay and Rushcutters Bay	1.48	1.57	0.09
Waterloo-Zetland	1.95	2.09	0.14
Pyrmont	1.98	2.19	0.21
Average	**1.72**	**2.00**	**0.28**
Catchment	1.78	1.83	0.05
Sydney LGA	1.81	2.00	0.19

Source: ABS 2011, 2016

5.10 High density occupation rates

Between 2011-16, occupancy rates for high density living, that is apartment buildings four storeys and above, for the benchmark areas increased by an average of around 0.1% per annum to 90%. If this trend continues occupancy rates, on average, could increase to around 92% by 2036.

Table 36: High-density apartment occupancy rates 2011-16 - buildings four storeys & over

Year	Chippendale	Potts Point – Elizabeth Bay and Rushcutters Bay	Waterloo-Zetland	Pyrmont	Combined average	Sydney LGA
Occupancy rate - 2011	92%	86%	93%	91%	89.5%	97%
Occupancy rate - 2016	92%	86%	92%	92%	90.0%	89%

Source: ABS 2011, 2016

5.11 Employment densities

Employment densities are the average amount of space a particular of job occupies. These are used to estimate the number of jobs that an amount of proposed floorspace would generate. To better understand employment densities that could be achieved on the Site we have analysis the City of Sydney's 2017 Floor Space and Employment Survey (FES).

The FES is a detailed floorspace survey the City of Sydney undertakes every few years. The latest survey was undertaken in 2017 and provides detailed information on the number of employees and the amount of floorspace they occupy by various land uses.

From the FES it can be determined that the average employment density for food and drink uses across Sydney LGA and Redfern Street village, which the Site is located in (please refer to Figure 73), is around 1 worker per 27sqm; retail and personal services range between 49sqm to 50sqm per worker; community ranges between 48sqm to 75sqm per worker while commercial has a combined average of between 17sqm to 19sqm per worker.

A summary of employment densities for the type of land uses that could be accommodated in the Site are provided below.

Table 37: Sydney LGA employment densities by broad land use

#	City-based industry sector	Sydney LGA			Redfern street village		
		Workers	NLA	Employment density/NLA	Workers	NLA	Employment density/NLA
1	Community	5,686	426,146	75	519	24,814	48
2	Creative Industries	33,027	1,262,710	38	2,305	104,959	46
3	Finance and Financial Services	115,693	1,718,028	15	98	1,804	18
4	Food and Drink	26,586	713,811	27	1,278	34,701	27
5	Professional and Business Services	99,404	1,749,067	18	3,371	59,635	18
6	ICT	34157	828,053	24	1,108	30,635	28
7	Life Science (Bio-tech)	2,777	77,238	28	41	1,850	45
8	Professional and Business Services	99,404	1,749,067	18	3,371	59,635	18
9	Retail and Personal Services	20,702	1,030,569	50	668	32,981	49
	Retail general (No: 3 and 9)	47,288	1,744,380	37	1,946	67,682	35
	Commercial combined (No: 3,5,6 & 7)	351,435	6,121,454	17	7,989	153,559	19

Source: City of Sydney Floor Space and Employment Survey 2017 (FES2017)

The FES 2017 also provides a breakdown of employment densities for partitioned and open-plan office space use for Sydney LGA and Redfern Street village. These densities are far more efficient (10-12sqm per worker) than the previous combined commercial average range of 17sqm to 19sqm per worker.

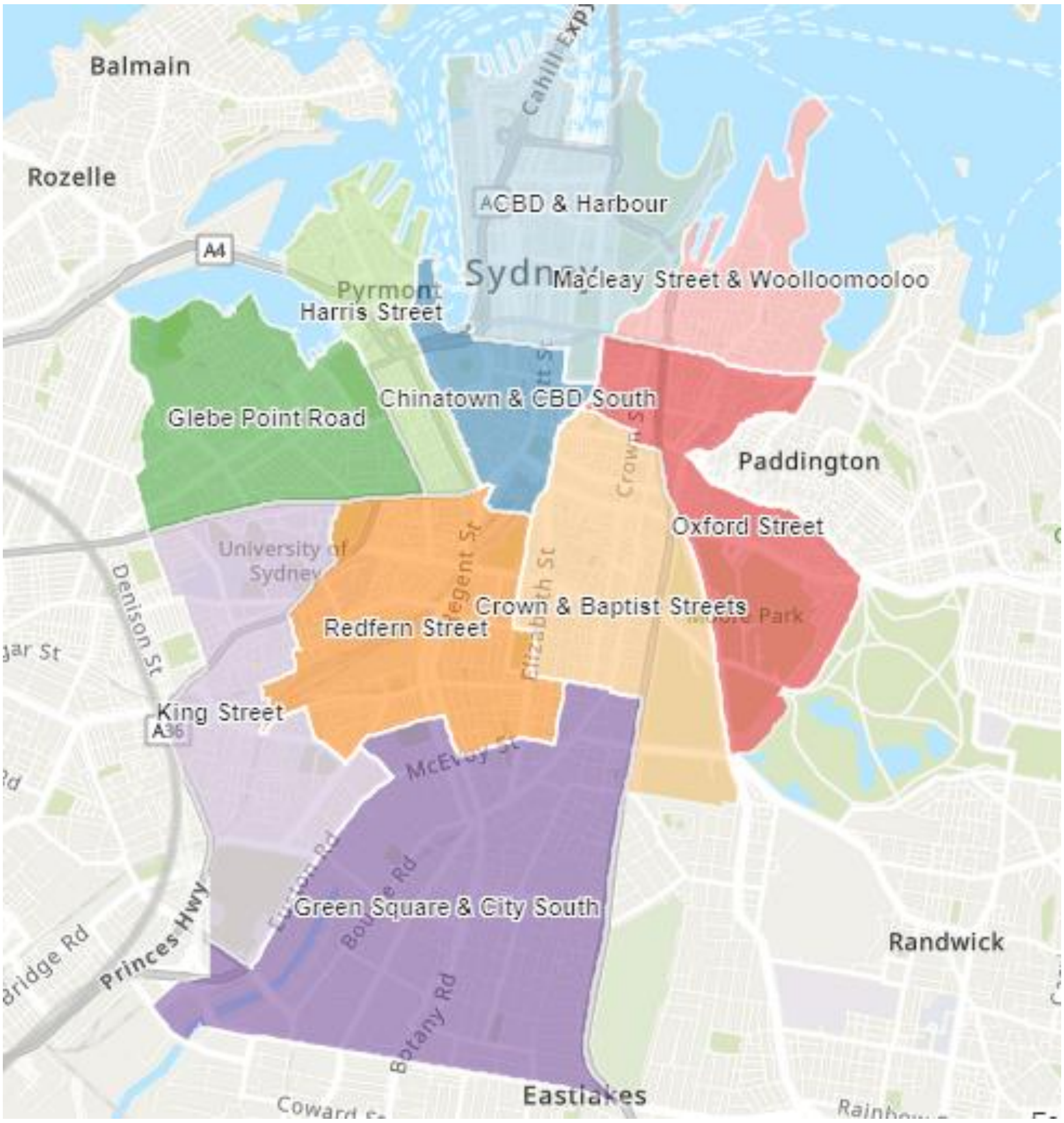
Table 38: Employment densities for partitioned and open-plan office space use

Commercial office type	LGA	Redfern street village
Partitioned office (NLA sqm/worker)	14.8	15.8
Open-plan office (NLA sqm/worker)	9.2	10.9
Total	**10.1**	**12.0**

Source: City of Sydney Floor Space and Employment Survey 2017 (FES2017)

The above employment densities will be applied to estimate the number of jobs that could be generated in the Site and across the Precinct (see Section 6.5).

Figure 73: City of Sydney floorspace survey village groups



Source: City of Sydney

5.13 Key considerations for the Site

From the above analysis, the following characteristics are likely to be reflective of the future population in the Site:

Table 39: Possible future characteristics for the Site and wider Catchment from the Benchmark analysis

Likely future characteristic	Description	Reasoning
Increased density	Increased density is likely to occur across the Catchment as increased further apartment development occurs. The development of the Site is in accordance with this trend and its inner-city location.	The Sites resident Catchment had a density of around 98 persons per hectares. This is compared to the benchmark areas, which ranged from 127 to 214 persons per hectare.
Increased apartment provision	Increased apartment provision, such as that proposed on the Site, is likely to increasingly occur in the Catchment.	Apartment dwellings across the Sites resident Catchment comprised 67% of dwelling stocks in 2016. This is compared to the benchmark areas where the proportion of apartments ranged from 88% to 93% of dwelling stocks.
Smaller households	Smaller households will remain the dominant household type. Apartment style dwellings, such as that proposed on the Site, provide a more suitable and affordable dwelling option for smaller household types.	Smaller households (households (lone person, couples without children and group households) were the dominant household type in the Catchment (73% of households) and benchmark locations (72% to 88% of households).
Work within knowledge intensive industries	Further residents are likely to seek employment within knowledge intensive industries. The Site could provide this type of employment for the Site, Catchments and LGA's residents.	The majority (42%) of the Catchments residents worked within knowledge intensive industries. This preference was reflected across the benchmark areas where 39%-54% of residents were employed in knowledge intensive industries.
Increased number of persons per apartment	The average number of persons per apartment will likely increase in the Catchment and Site.	In 2016, the Catchment had an average of 1.83 persons per apartment. This is compared to an average of 2 per apartment for the benchmark areas combined and Sydney LGA. This rate had also increased over the five years to 2016.
Increased two- and three-bedroom apartments	There would likely be a higher demand for two- and three-bedroom apartments.	In 2016, 36% of the Catchment's apartments in buildings four stories and above were two bedrooms, while 7% were three bedrooms. This is compared to the average across the benchmark areas and Sydney LGA were 47% and 44%, respectively were two bedroom and 11% and 10%, respectively were three bedrooms.
Increased occupancy rates	Apartment occupancy rates will increase in the Catchment and Site.	Between 2011-16, occupancy rates for apartment buildings four storeys and above, increased by an average of around 0.1% per annum to 90% for the benchmark areas. If this trend continues, occupancy rates, on average, could increase to about 92% by 2036.
Increased employment	Increased technology, innovation and other knowledge intensive space has a comparatively higher employment generating potential than retail, community and creative industries.	Analysis of CoS FES 2017 data reveals that the average employment density (that is, the average amount of space one employee occupies) for knowledge intensive industries across Sydney LGA and Redfern Village (which the Site is in) was around 17sqm to 19sqm per worker. This decreases to around 10sqm to 12sqm per worker for partitioned and open-plan office space. This is compared to food and drink uses which had an employment density of 1 worker per 27sqm; retail and personal services which ranged between 49sqm to 50sqm per worker; community which ranged between 48sqm to 75sqm per worker and creative industries, which ranged between 38sqm to 46sqm per worker.

6.0 LIKELY IMPACTS OF THE PROPOSAL

This section provides population, household and employment forecasts for the Precinct by its various sub-precincts components as proposed under the revised concept. The forecasts have been developed using our detailed understanding of the key drivers of demographic change in high density inner-city locations as well as specific input provided by stakeholders during the consultation phase of this study.

6.1 Preferred Precinct concept

A revised concept has been developed for the Precinct. This forms the basis for this section's estimate of the likely impact of the Site and Precinct.

The development yields by sub-precinct are provided in the table below.

Table 40: Proposed scheme and indicative development timeframes

Component	Clothing Store	Carriageworks	Paint Shop	Total
Residential space (GFA)	50,689	0	33,060	83,749
Apartments (#)	710	0	381	1,091
Non-residential space (GFA)	0	34,588	109,547	144,175
Total space (GFA)	**50,689**	**34,588**	**142,647**	**227,924**
Indicative completion year	2028	Developed	2031	

Source: Transport for NSW

6.2 Population projections

To estimate the resident population in the Precinct as of 2036, firstly, an average occupancy rate is applied to the number of proposed dwellings. Secondly, an average household size for apartments is applied to the number of occupied dwellings.

Average dwelling occupancy rate

As described in Section 5.10, over the five years to 2016, occupancy rates for high density living for the benchmark areas combined increased by an average of around 0.1% per annum to 90%. If this trend continues, occupancy rates, on average, could increase to around 92% by 2036.

For this assessment an average occupancy rate of 92% has been applied to the proposed apartments in the Site and wider Precinct.

Average household size for apartments

As described in Section 5.9, in 2016, the average household size for apartments in buildings four storeys and over in the Precinct's Catchment was 1.83 persons. This was compared to an average of 2.0 for the comparable areas and Sydney LGA, respectively.

Over the coming years, it is likely that the Precinct will have a higher rate of persons per apartment than that currently provided in the wider Catchment. For this reason, this assessment applies an average of 2 persons per apartment for the Site and wider Precinct.

Resident population estimate

Based on the above assumptions, it is estimated that by 2036 the Site could house a resident population of around 700 persons. The Clothing Store sub-precinct could house a population of around 1,306 persons.

In total, the resident population across the Precinct could reach just over 2,000 persons by 2036.

The breakdown of this population by sub-precinct is provided in the below table.

Table 41: Estimate residential population by sub-precinct

Sub-precinct	Total units	Occupied units	Population
Clothing Store	710	653	1,306
Paint Shop	381	351	702
Total	**1,091**	**1,004**	**2,008**

6.3 Age composition

To estimate the likely age composition of the Site's and Precinct's resident population, the following methodology was applied. Please note that the data used, assumptions and outcomes of this analysis were presented to CoS and NSW DPE's demographics team in October of 2021 for their input and agreement.

Proposal build form

Review proposed build form.

Dwelling type, mixture, sizes and timeframes

Catchment socio-demographics

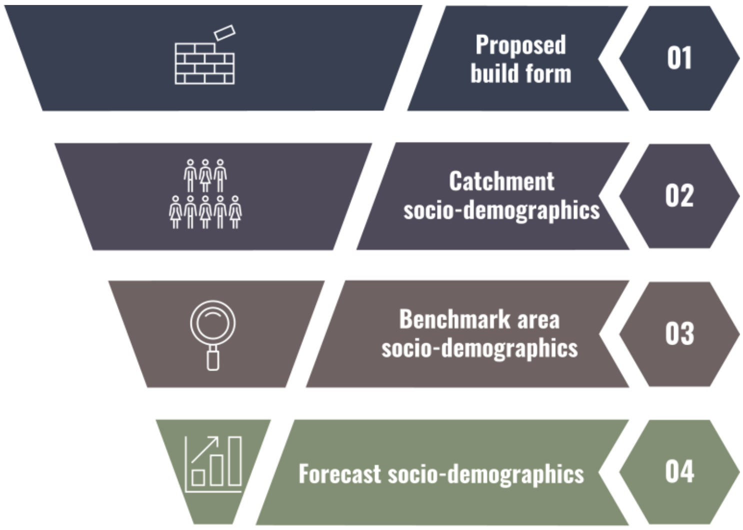
Review current socio-demographic characteristics of the Catchment and how these have changed over time.

Benchmark area(s) socio-demographics

Review current socio-demographic characteristics of benchmark area(s) and how these have changed over time.

Forecast socio-demographics

Review forecast socio-demographic data sets for the location and LGA.



Applying this methodology, the following likely age composition of the Site's and Precinct's future population is provided in the table below.

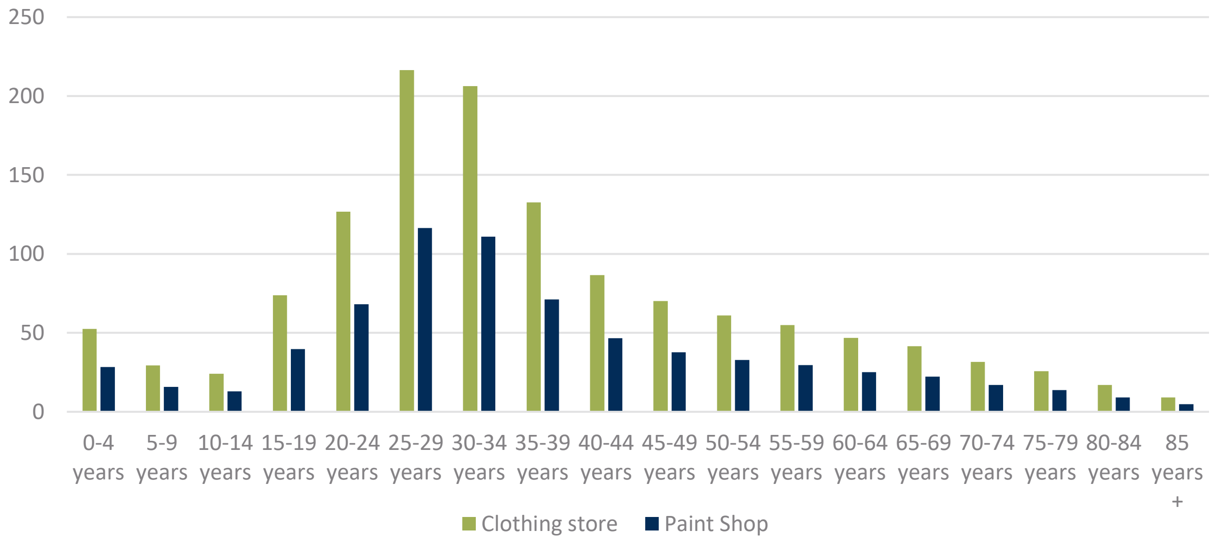
Table 42: Proposed age composition

Age group	2026			2031			2036		
	Clothing store	Paint Shop	Precinct	Clothing store	Paint Shop	Precinct	Clothing store	Paint Shop	Precinct
0-4 years	37	0	37	53	28	81	53	28	81
5-9 years	22	0	22	30	16	46	29	16	45
10-14 years	18	0	18	25	13	38	24	13	37
15-19 years	45	0	45	71	38	108	74	40	113
20-24 years	77	0	77	121	65	186	127	68	195
25-29 years	147	0	147	214	115	329	216	116	333
30-34 years	144	0	144	205	110	316	206	111	317
35-39 years	94	0	94	133	71	204	133	71	204
40-44 years	63	0	63	87	47	134	87	47	133
45-49 years	52	0	52	71	38	109	70	38	108
50-54 years	45	0	45	63	34	96	61	33	94
55-59 years	40	0	40	56	30	86	55	29	84
60-64 years	34	0	34	48	26	73	47	25	72
65-69 years	30	0	30	42	23	65	42	22	64
70-74 years	24	0	24	32	17	50	32	17	48
75-79 years	20	0	20	27	15	42	26	14	39
80-84 years	15	0	15	18	10	28	17	9	26
85 years +	9	0	9	11	6	17	9	5	14
Total	**914**	**0**	**914**	**1,306**	**702**	**2,008**	**1,306**	**702**	**2,008**

The Site and wider Precinct is expected to attract younger adult age groups, primarily to the private dwellings, as well as a broader range of older ages. By 2036, just over half of the Site's and Precinct's population is expected to be in the young working professional and homebuilders age group of 20-39 years.

The breakdown of the resident population age profile for each sub-precinct is visually provided in the following figure.

Figure 74: Age composition of the resident population by sub-precinct – 2036



6.4 Household structure

To estimate the likely household structure of the Site and Precinct, the following methodology was applied.

Please note that the data used, assumptions and outcomes of this analysis were presented to CoS and NSW DPE's demographics team in October of 2021 for their input and agreement.

Proposal build form

Review proposed build form.

Dwelling type, mixture, sizes and timeframes

Catchment socio-demographics

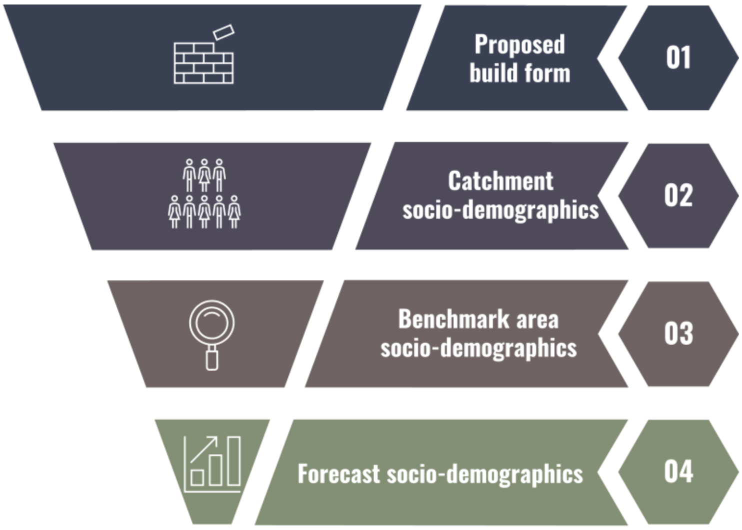
Review current socio-demographic characteristics of the Catchment and how these have changed over time.

Benchmark area(s) socio-demographics

Review current socio-demographic characteristics of benchmark area(s) and how these have changed over time.

Forecast socio-demographics

Review forecast socio-demographic data sets for the location and LGA.



Applying this methodology, the following likely structure of the Site's and Precinct's future households is provided in the table below.

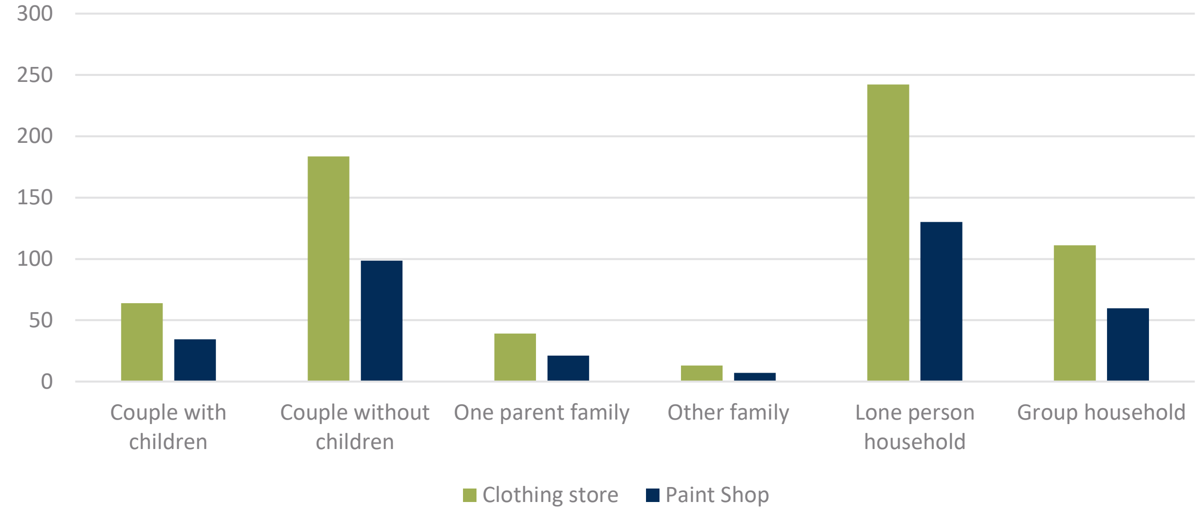
Table 43: Proposed household structure

Household structure	2021			2031			2036		
	Clothing store	Paint Shop	Precinct	Clothing store	Paint Shop	Precinct	Clothing store	Paint Shop	Precinct
Couple with children	46	0	46	64	35	99	64	34	98
Couple without children	127	0	127	182	98	280	183	99	282
One parent family	32	0	32	42	23	65	39	21	60
Other family	9	0	9	13	7	20	13	7	20
Lone person household	166	0	166	240	129	369	242	130	372
Group household	78	0	78	111	60	171	111	60	171
Total	**457**	**0**	**457**	**653**	**351**	**1,004**	**653**	**351**	**1,004**

Please note totals in the table above may not total due to rounding

The likely household structure in each sub-precinct by 2036 is provided in the following figure.

Figure 75: Proposed household structure by sub-precinct as of 2036



6.5 Employment generation

The Precinct would provide around 144,135qm GFA of non-residential floorspace. Of this, 34,588 is provided in the Carriageworks sub-precinct while the remaining 109,547sqm GFA is on the Site.

The Carriageworks sub-precinct is currently operating, providing space for performance, creative arts and a food market. It is understood that the uses currently operating in the Carriageworks will remain "as is." Carriageworks has provided employment of 170 jobs.

The 109,547sqm GFA of employment space in the Paint Shop is proposed to be occupied by a range of uses, including retail, commercial office (innovation and technology users) and community by 2031.

Employment estimate method

Floorspace is converted into employment by applying average employment densities, that is, the average amount of space occupied by one job. Employment densities vary across and within industry types and building layout.

Employment densities have been sourced from the City of Sydney's 2017 FES. This analysis is undertaken and described in Section 5.11.

From the FES data, we have applied a blended average of 1 worker per 15sqm for commercial office space, 50sqm per worker for community space, 27sqm per worker for food retail space and 35smq per worker for general retail space.

Employment estimate

The following applies average employment densities to the proposed non-residential floorspace mixture across the Precinct and each sub-precinct to estimate its likely employment potential.

HillPDA has been provided with an employment yield for the current uses in the Carriageworks sub-precinct at 170 workers. For the breakdown of the 109,547sqm GFA of employment space in the Site, the following was assumed or provided:

- Retail space was provided by project architects Bates Smart
- Community space was estimated from input provided by EthosUrban
- Remaining space is assumed to be a mix of commercial office space (finance, tech and innovation space).

It is estimated that upon completion and full occupation, the Precinct would generate a total of around 6,370 jobs. Of this, around 6,200 jobs would be provided on the Site.

Given that the Carriageworks sub-precinct already generates around 170 jobs, the total net increase in jobs by 2036 is around 6,200 by 2036. These are entirely provided in the Site.

The breakdown of this by sub-precinct and land use is provided in the following table.

Table 44: Precinct employment estimate by sub-precinct and land use

Broad land use	NLA*			Worker	Jobs		
	Carriageworks	Paint Shop	Precinct	/ NLA	Carriageworks	Paint Shop	Precinct
Commercial office		88,221	88,221	15		5,881	5,881
Community		2,140	2,140	50		43	43
Creative & performing arts	32,859	0	32,859	193	170		170
Food retail		5,944	5,944	27		220	220
General retail/shopfront		1,981	1,981	35		57	57
Total	**32,859**	**98,286**	**131,145**		**170**	**6,201**	**6,371**

*Assumes 90% efficiency from GFA for commercial space, 85% for community, 88% for food and non-food retail and 95% efficiency for creative/retail space**employment provided by the Carriageworks, numbers have been rounded

6.6 Impact with and without the Paint Shop proposal

The following section estimates and forecasts employment and population of the future Site and catchment that would eventuate with and without development of the Proposal.

To estimate the population without the project the following method was undertaken:

- Assessment of Transport population estimates as of 2016 for the 400m and 800m catchments around the Site.
- Assessment of recent residential developments within 400m and 800m between 2017-2023 using Cordell Connect[6]. Dwellings were converted into population based on 2016 average household sizes for apartments within their corresponding SA2.
- Population growth rates identified by Transport were applied to estimate population post 2023.

To estimate the worker population without the project the following was undertaken:

- Assessment of Transport employment estimates for the 400m and 800m catchments between 2016-36
- Adjusted employment for Travel Zones which transacted or extended beyond the catchment(s) boundary. This adjustment was based on the amount and type of employment zoning which was not located in the catchment.

The likely impact without and with development of the Site (Paint Shop sub-precinct) is provided at the 400m and 800m catchment.

[6] Cordell Connect is a database for residential, commercial, industrial, community, engineering and mining projects across Australia

Table 45: Population and employment impact with and without the Paint Shop proposal

Population	Area	2016	2021	2026	2031	2036	Change
Without Proposal	Site	0	0	0	0	0	0
	400m	7,574	8,666	9,753	10,278	10,413	2,839
	800m	29,578	34,519	36,489	38,882	40,994	11,416
With Proposal	Site	0	0	0	702	702	702
	400m	7,574	8,666	9,753	10,980	11,115	3,541
	800m	29,578	34,519	36,489	39,584	41,696	12,118
Impact	Site			0	702	702	702
	400m	0	0	0	702	702	702
	800m	0	0	0	702	702	702
Proportion of growth	400m	0%	0%	0%	6%	6%	20%
	800m	0%	0%	0%	2%	2%	6%
Employment	**Area**	**2016**	**2021**	**2026**	**2031**	**2036**	**Change**
Without Proposal	Site	0	0	0	0	0	0
	400m	11,879	25,943	29,372	30,917	32,903	21,024
	800m	27,938	44,068	50,622	55,173	59,046	31,108
With Proposal	Site	0	0	0	6,201	6,201	6,201
	400m	11,879	25,943	29,372	37,118	39,104	27,225
	800m	27,938	44,068	50,622	61,374	65,247	37,309
Impact	Site	0	0	0	6,201	6,201	6,201
	400m	0	0	0	6,201	6,201	6,201
	800m	0	0	0	6,201	6,201	6,201
Proportion of growth	400m	0%	0%	0%	17%	16%	23%
	800m	0%	0%	0%	10%	10%	17%

Source: HillPDA – 400m catchment includes Site and wider RNE Precinct while 800m incudes 400m Site and wider RNE Precinct, totals may not total due to rounding

6.7 Recommendations to support the planning framework

From the analysis undertaken in this report, this section provides some high-level recommendations to support the planning framework for the Site.

Please note, although this section provides high-level recommendations any specific planning recommendations would require consideration of a range of other factors which will be explored in other specialist studies being undertaken in the preparation Planning Proposal for the Site. Future detailed design would be informed by relevant planning instruments and policies.

Table 46: Recommendations to support the planning framework

Characteristic	Recommendation
Apartment mixture	The Proposal should provide a mixture of apartment configurations and sizes to suit the Catchment's current and future population and household needs. Please refer to sections 3.1, 3.2, 3.6 and 3.7 of this report.
Increased residential density	Increased densities could be achieved on the Site and wider Catchment. The Sites resident catchment had a density of around 98 persons per hectare. This is compared to the benchmark areas, which ranged from 127 to 214 persons per hectare. Floorspace ratios and building heights should allow for appropriate build form and residential density on site.
Parking provision	There are several factors that provide the opportunity for the Site to consider providing lower residential parking rates that are reflective of the local area. These factors include (1) the transit orientated nature of the development (2) the lower levels of vehicle ownership in the surrounding resident catchment and (3) the higher rates of public and active transport to and from work (Please refer to Section 3.2 of this report). It is recommended, however, that the proposed parking rates do not detract from the attractiveness and/or viability of the proposed uses.
Non-residential space	Appropriate provision and mixture of employment and open space should be provided. This employment space composition should align with the current and forecast employment requirements of the catchment and LGA, with a focus on knowledge intensive and technology and innovation businesses (refer to sections 3.3, 4.1 and 4.7) and support services such as hospitality and retail. While open space should be appropriate to provide for the local resident, worker and visitor community.

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