

Attachment A2(d)(i)

**Urban Design Study – 3 Site Analysis – Part
1 – Botany Road Precinct**



3.0

Site Analysis



Figure 55: Historical oblique aerial photo looking east to west over Redfern and Waterloo down Haglan Street and Phillip Street and the Waterloo Housing estate towards Eveleigh Railway Workshops. Redfern Oval visible on right. Date between 1st January 1980 and 31st December 1989
Source: City of Sydney Archives and Resources. ID: A-0009921

3.1 Regional Context

3.1.1 Regional Strategic Plan

The Botany Road Corridor Study area shown on Figure 22 is comprised of approximately 216,185m² or 21.6 ha.

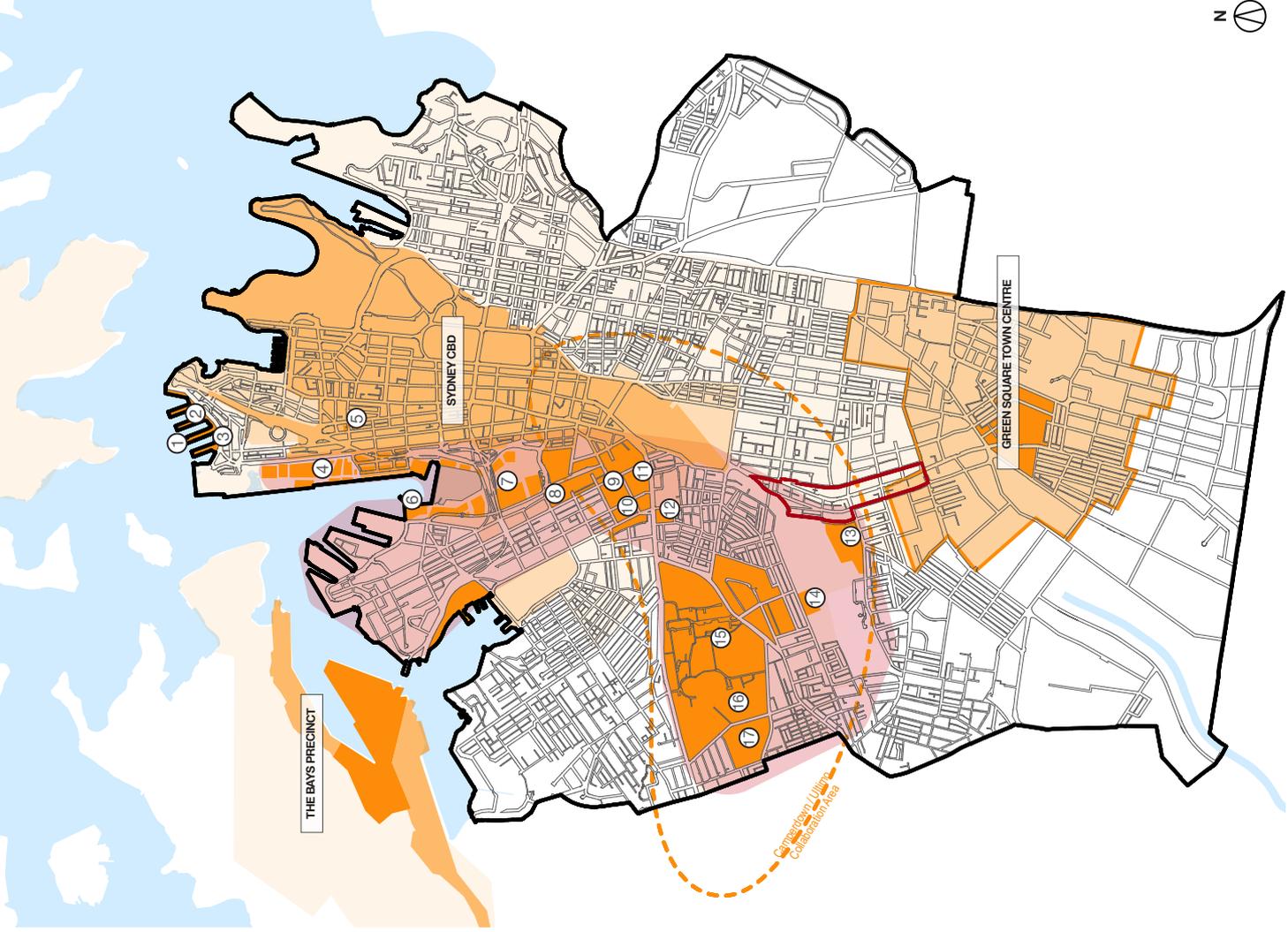
The study area is located within the EDCP's Innovation Corridor and is part of the Harbour CBD as defined by the EDCP. The northern portion in particular is located within the Camperdown-Ultimo Health and Education Precinct due to the number of creative businesses and adjacent Australian Technology Park.

The Corridor provides affordable commercial accommodation for very small, and medium businesses particularly in the creative and digital industries, especially within the Innovation Corridor Precincts adjacent in Figure 57.

LEGEND

- Existing Jobs and Services Centres
- Planned CBD Expansion
- Harbour CBD Extents
- Innovation Corridor Precincts
- Green Square Extents
- EDCP Innovation Corridor
- 01 Sydney Dance Company
- 02 Sydney Theatre Company
- 03 Roslyn Packer Theatre
- 04 Barangaroo
- 05 Sydney Startup Hub
- 06 Australian Maritime Museum
- 07 International Convention Centre Sydney
- 08 Powerhouse Museum
- 09 TAFE NSW Ultimo
- 10 Sydney School of Entrepreneurship
- 11 University of Technology Sydney
- 12 University of Notre Dame
- 13 Australian Technology Park
- 14 Carriageworks
- 15 University of Sydney
- 16 Royal Prince Alfred Hospital
- 17 King George V Memorial Hospital
- 18 Sydney Fish Market & Bays Market District
- 19 White Bay Power Station

Figure 56: Regional Strategic Context Plan
Sources: T23 overlay of EDCP mapping



3.1.2 Regional Centres

The Botany Road Corridor is majority located in the City of Sydney Redfern Street Village and has the southern portion as part of the "Green Square Village", set by the relationship to nearby centres.

The City's villages within the Redfern Street Village and adjacent areas will provide an expansion zone for adjacent Sydney CBD

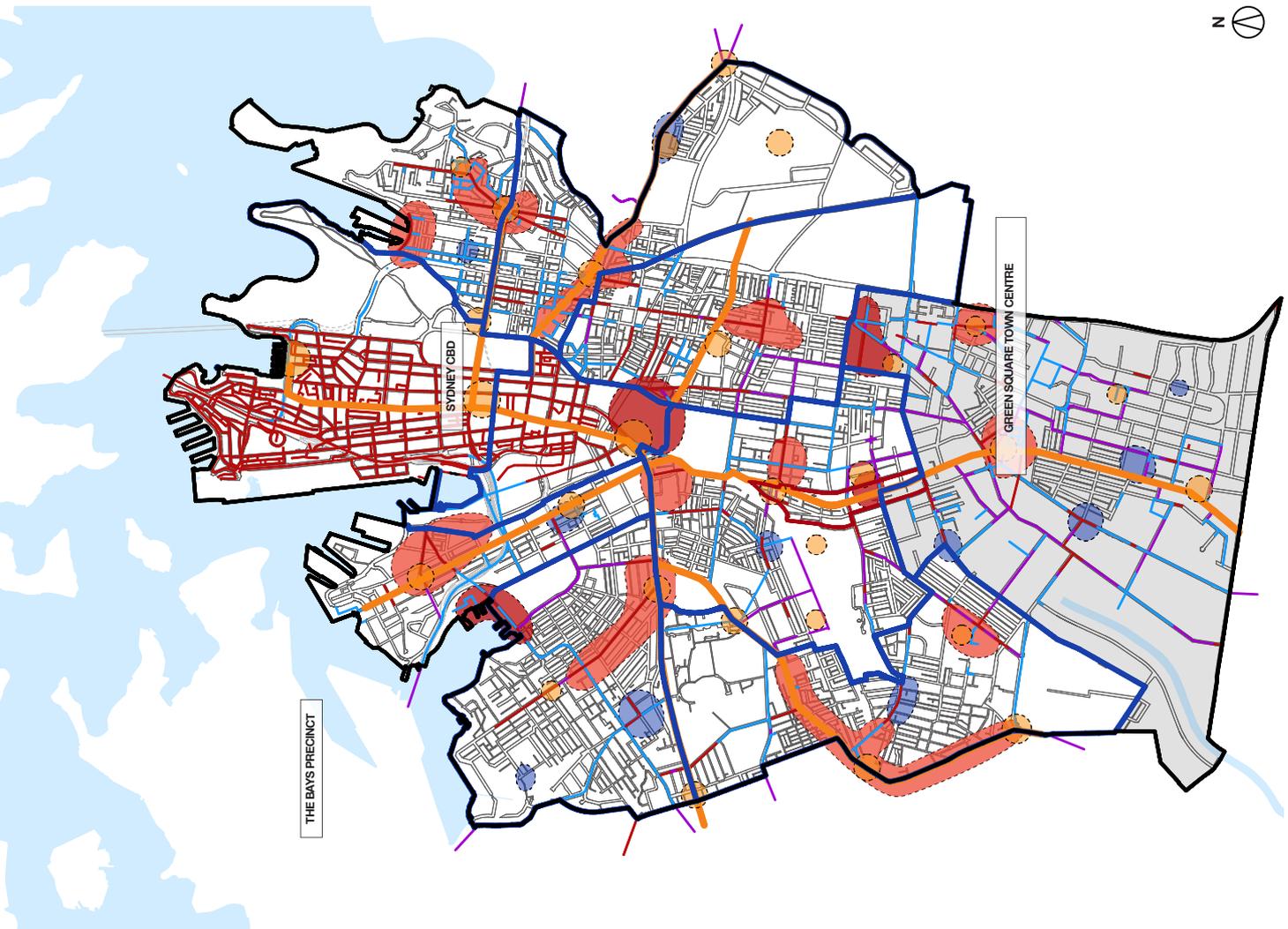
The success of existing and proposed villages will strengthen the EDCP's Innovation and Collaboration Corridor.

Redfern Street Village is a mixed use area with residential, educational and industrial development. Residential uses are scattered evenly throughout the Village. Residential development is characterised by medium density terrace housing in Darlington, Alexandria, Redfern and eastern Waterloo, with higher density housing in north-western Waterloo and Chippendale. Business uses tend to dominate in the west with the Darlington Campus of Sydney University, and the centre with Australian Technology Park, with light industrial uses to the south. All main metropolitan and regional train lines run through the centre of the Village, essentially splitting it in half.

- LEGEND**
- City of Sydney Villages
 - Redfern Street Village
 - Green Square Village
 - Existing Centre
 - Squares
 - Planned Centre
 - Neighbourhood Centre
 - Active Streets - Existing
 - Active Frontages - Planned Exter
 - Active Frontages - Planned
 - Main Activity Streets

1: Redfern Street Village Community Profile, https://www.cityofsydney.nsw.gov.au/_data/assets/pdf_file/0006/204486/CP12-Redfern-Street-Community-Profile-2011.pdf, p2

Figure 57: Regional Connectivity Plan
Source: T2G overlay of City of Sydney LSPS Mapping



3.1.3 Regional Transport and Roads Network

The City of Sydney's LSPS has the Botany Road Corridor as a Primary Local Pedestrian Network.

Future Transport 2056

Future Transport 2056 is a strategic document with plans to achieve a 40 year vision for NSW's transport future. It aligns transport planning with long term population and employment growth in addition to providing a framework for future infrastructure investment by the NSW Government. The document provides six high level outcomes for the network, a transport overlay to the GSC's three cities and allocates a hierarchy to the network according to whether it connects the metropolitan centres or serves a metropolitan centre providing three categories of transport corridor being City Shaping, City Serving and Centre Serving. The Botany Road Corridor is located on an existing and future 'city shaping corridor' as defined by Future Transport 2056. The following initiatives are relevant to the study area:

- Sydney Metro City and South West (0-10 Years Committed with a new station at Waterloo adjacent to the site area)
- Green Square to Inner West Rapid Bus Link (0-10 years investigation)
- Harbour CBD to Green Square Mass transit Link (0-10 years investigation)
- Eastern Suburbs to Inner West Rapid Bus Link (0-10 years investigation)
- Mass transit / train link to South East (10-20 years investigation)

These transport investments will connect the identified health and education precincts to each other and Sydney Airport, reinforcing their importance as higher density employment areas. In supporting the city shaping corridors, the strategy emphasises the importance of integrating and encouraging use of local walking and cycling networks around transport nodes with personal mobility devices being used within 2km of a major centre. This is intended to address congestion and under use of heavy infrastructure in a way that provides comparable or quicker travel times than private car based transport².

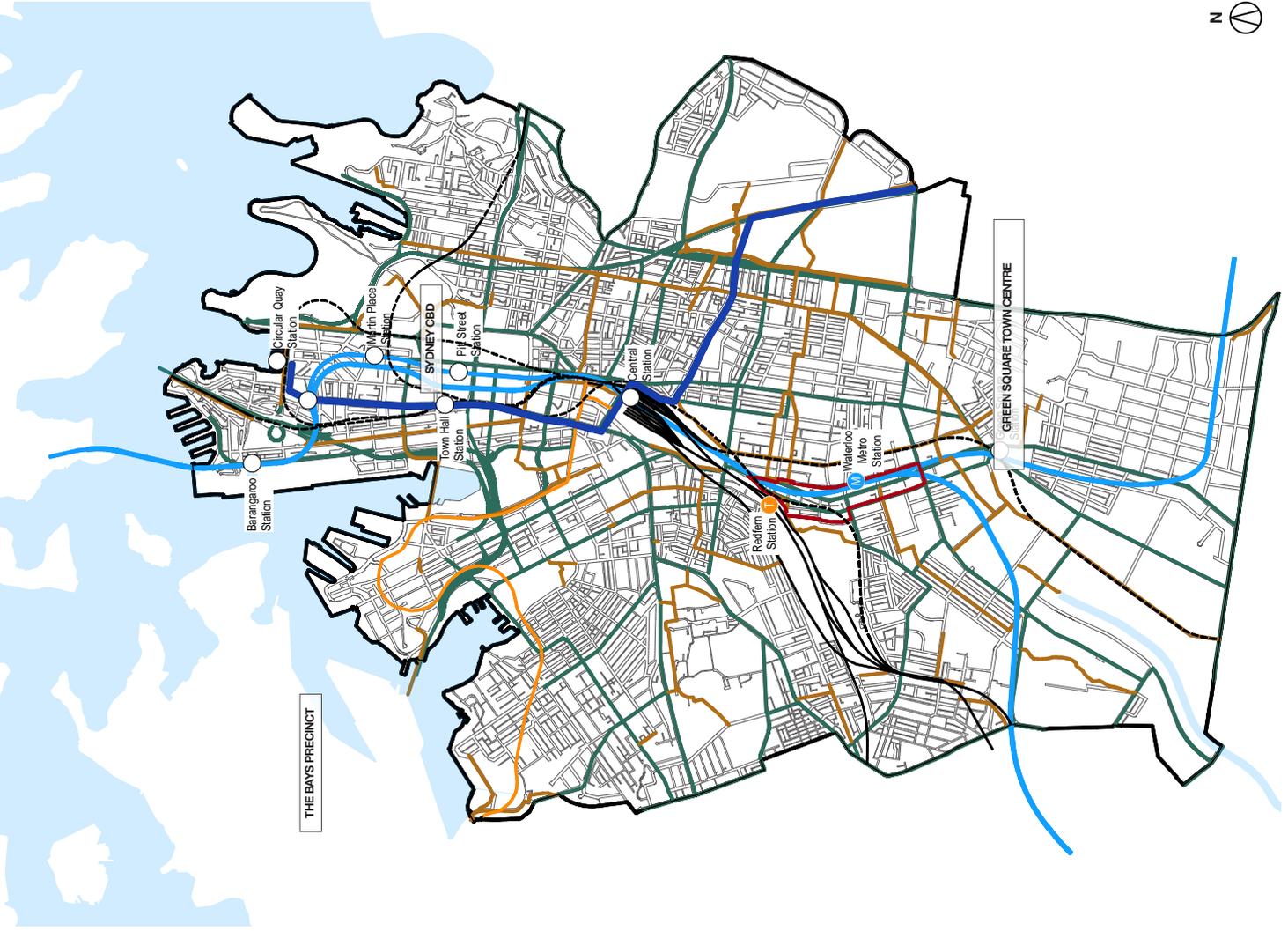
LEGEND

- LSPS Bicycle Network
- State Roads
- Inner West Light Rail line
- Sydney Metro and South West CBD and South East Light Rail
- Harbour CBD to Green Square Mass Transit Link
- Circular Quay to Randwick Light Rail
- Existing Heavy Rail Network
- Existing Heavy Rail Network (below ground)

2: Hassell Draft Urban Design Report, 2016, p21.

Figure 58: Regional Transport Network Plan

Source: T2G overlay of EDCP and City of Sydney LSPS mapping



3.1.4 Regional Active Connectivity

The Liveable Green Network (LGN) is part of the City of Sydney's plans to achieve a 'green, global and connected' LGA. Figure 60 maps a pedestrian and cycling network that connects people with the city and village centres. It also maps major transport and entertainment hubs, cultural precincts, parks and open spaces. Extensive cycling paths have already been put in place in the City of Sydney LGA. The following Liveable Green Network priorities apply adjacent to or within the LGN study area³:

- The City-Wide network - Redfern Street is a Village Centre to Village Centre route - These routes provide the most convenient and direct connections to major destinations across the City and Inner Sydney regional area.
- Rosebery - Green Square- Redfern Railway Square - a North south connection along Botany Road/ Regent Street to Railway Square.
- Rosebery - Green Square - Redfern Surry Hills - Haymarket - A North south cycle priority route to City Centre along Dunning Ave/ George Street will provide safe and convenient access for cyclists to use instead of nearby busy Botany Road/ Regent Street. Off street shared pathway links through Prince Alfred Park and Belmore Park. Pedestrian activity more significant from Redfern Street to Central/ Haymarket.
- Moore Park - East Redfern - Redfern Station - This connects Moore Park and adjacent urban renewal sites to Redfern Street and Redfern Station along Philip, Telopea, Redfern and Zarnia Streets.

Redfern Park provides convenient through site access to Redfern Street.

- Redfern - Darlington - Chippendale Ultimo - Links from Redfern Station to Sydney University and Chippendale / Broadway along Lawson Street, Wilson Street, Abercrombie, Shepherd Street, and Bartley Street which includes through the future CUB site, Myrtle Street/ Meagher Street provide major east- west link across Chippendale.
 - Sydney Park - Erskineville- Alexandra ATP site - Redfern Station - Henderson Road and Mitchell Road provide links into the off street network through ATP site which links to Redfern Station and Redfern Street.
 - Rosebery - Green Square - East Redfern / Waterloo - This route will form a north south connection from Rosebery to Green Square Town Centre and adjacent urban renewal areas. The route also directly connects into Bourke Street LGN route that provides access to the City Centre and Harbour Foreshore.
- Current barriers to walking and cycling in the city, relevant to the study area are:
- Regent Street and Botany Road - The City is crossed by busy arterial roads that limit the frequency of safe crossing opportunities.

LEGEND

- City Wide Cycle Priority
- LGN Sydney Green Grid Alignment
- LGN Priority Network (Pedestrian and Cycle)
- City Pedestrian Priority Network
- City Wide Cycle Priority Primary
- City Pedestrian Priority Primary
- Citywide Cycle Priority Network
- City Centre LGN laneways

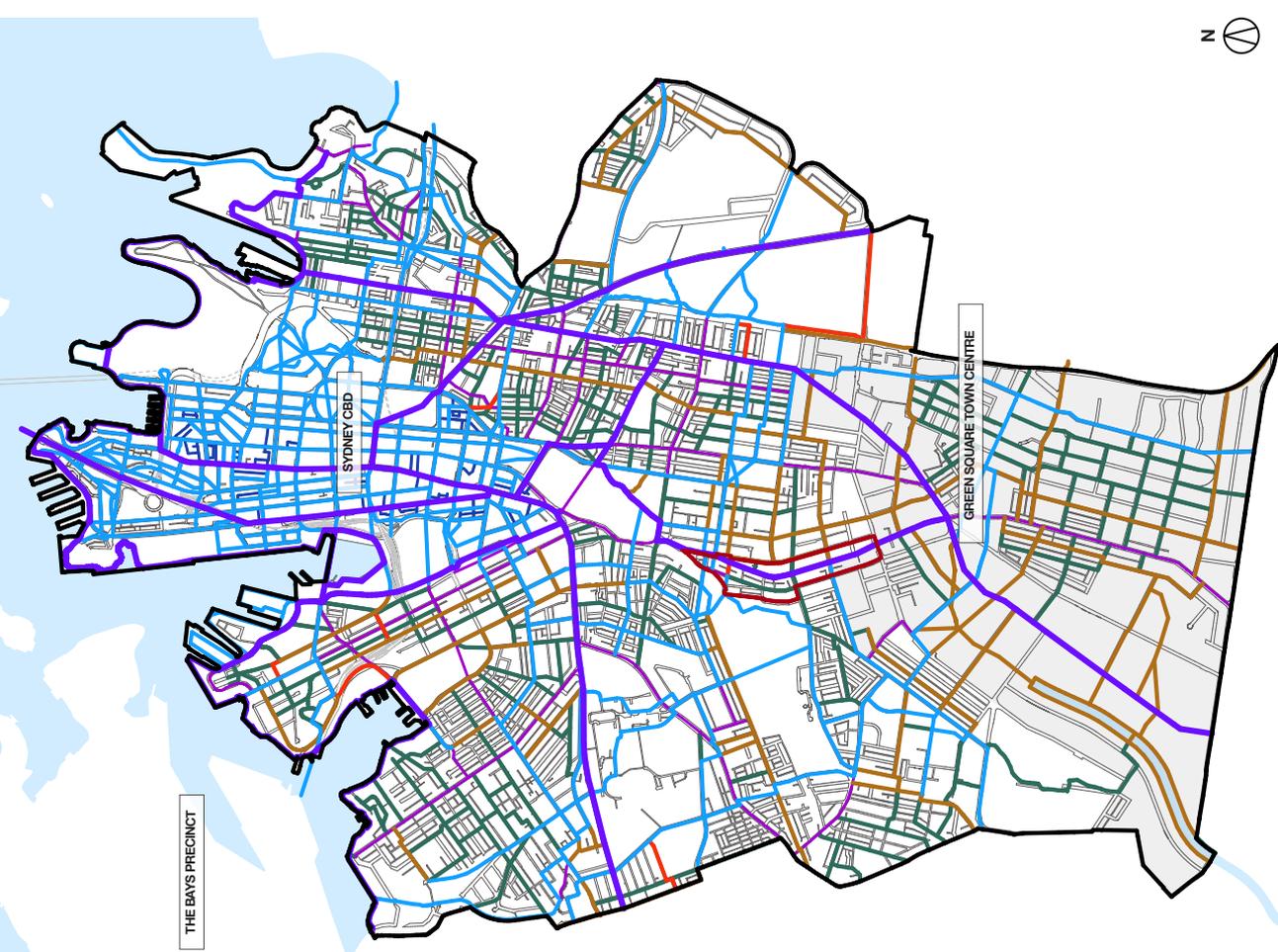


Figure 59: Regional Connectivity Plan
Source: TZG overlay of City of Sydney LSPS Mapping

3. City of Sydney Liveable Green Network, <https://www.cityofsydney.nsw.gov.au/raion/sustainable-sydney/2030/transport-and-access/liveable-green-network-various-pages>.

3.1.5 Regional Open Space Network

The Sydney LGA and the Botany Road Corridor are located within the Sydney Green Grid Central district. The Central District is located at the epicentre of the Sydney metropolitan area and contains some of the most densely settled suburbs in Sydney. It contains some of Sydney's earliest designated open space assets such as Hyde Park, The Royal Botanic Gardens and Centennial Parklands. Major urban transformation projects adjacent to the BRC such as the Redfern to Eveleigh precinct is expected to create opportunities to provide additional open space and improve connections to the existing open space network.⁴ The Green Grid document list a 'project opportunity cluster' in its strategic framework relevant to the BRC: CD.1.2 REDFERN-WATERLOO, GREEN SQUARE, ALEXANDRIA

Projects within this cluster will be driven by changes in land use and the needs of a diverse and growing population. Former industrial areas and existing large scale infrastructure will be adapted to accommodate these changes and support new populations. Connections and access to existing major regional open spaces such as Moore Park, Centennial Parklands and Sydney Park will be essential to support the recreational needs and enhance the livability of these areas. With significant transformations underway opportunity to provide additional high quality open space as well as a connected network to support future growth.

The City of Sydney LSPS Priority 1 Movement for walkable neighbourhoods and a connected city is closely connected to objectives of the Sydney Green Grid as these provide important connections to link green infrastructure:

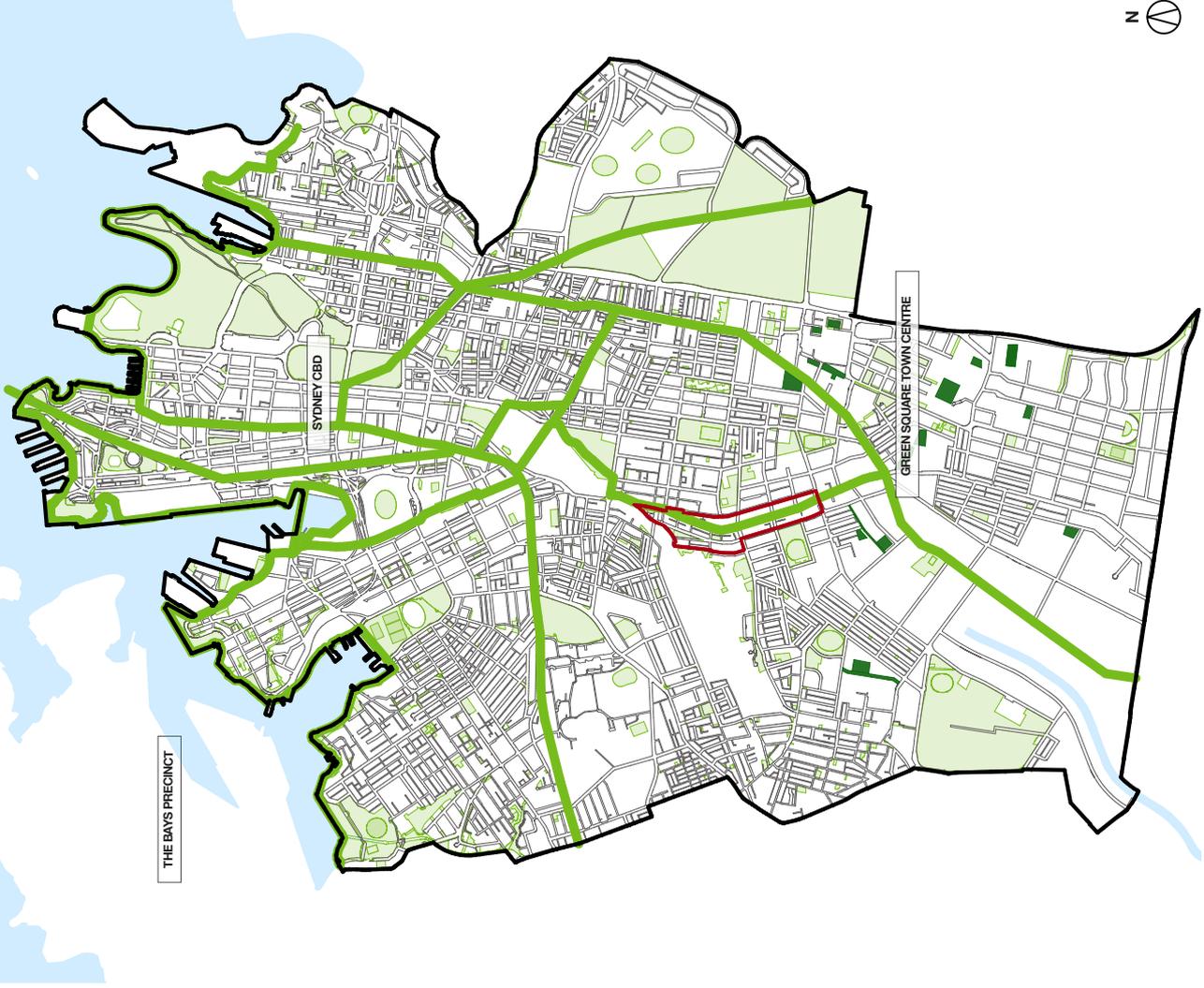
Walkable neighbourhoods are connected so that they are efficient, logical and practical to get around. They are intuitive and seamless, where walking and cycling are easy options and switching between transport modes is fast and straightforward. They are effective, meaning that residents, workers and visitors can easily and successfully conduct their daily lives.

Botany Road – The corridor is a hostile environment with significant air and noise pollution. Transport improvements, road pricing and, to a lesser extent, the Sydney Southwest Metro, present the opportunity for Botany Road to transition from a movement corridor to a better place supporting business land uses. This may require rethinking how and when heavy vehicles and vehicles carrying dangerous goods are moved between Sydney Airport and Port Botany and Sydney's northern suburbs⁵.



Figure 60: Regional Open Space Network Plan
Sources: T2G overlay of City of Sydney LSPS Mapping

4: Sydney Green Grid Central District, <https://www.government.nsw.gov.au/files/ggplans/sydney-green-grid-plan-4-central-district-2017.pdf>, p.114
5: Draft City of Sydney LSPS



3.1.6 Economic Context - Overview

Sydney is Australia's 'global city' and the leading knowledge-based economy in the nation. The City of Sydney LGA generated more than \$130 billion of economic activity (GRP) in 2017/18, representing over 7 per cent of Australia's economy; one third of metropolitan Sydney's and over 22 per cent of the NSW economy.⁶

The City of Sydney LGA accommodates over 500,000 jobs across skills and industries. The Botany Road Corridor is located within the City Fringe Area, which sees continued emergence of specialised industry clusters that enables continued economic and employment growth through clustering and agglomeration. This area supports approximately 127,000 workers and over 7,500 businesses.⁷

This is largely driven by knowledge-intensive industries including professional services, education and training, health services and information media in the Innovation Corridor and the Camperdown-Ultimo health and education precinct and creative industries and arts clusters in the Eastern Creative Precinct.

Growing business and enterprise is a key outcome for the Eastern City District's Innovation Corridor as well as the City of Sydney Council, as summarised below:

The Eastern Economic Corridor is Greater Sydney's most productive economic asset, which covers strategic areas including Macquarie Park, Chatswood and St. Leonards through the Harbour CBD to Green Square-Mascot, Randwick and Sydney Airport.

Central Sydney is an integral part of the Harbour CBD and Eastern Economic Corridor. It supports highly productive sectors that interact globally and across Australia and economic activity

that serves and is supported by other economically important areas within the city and the rest of the Eastern Economic Corridor. It is therefore important for the City to consider employment clusters and commercial market dynamics in areas beyond Central Sydney and our local area.

It is also critical for us to continue contributing and collaborating with the rest of the Eastern Economic Corridor to ensure economic and employment growth in all centres. The Eastern Economic Corridor is Greater Sydney's most productive economic asset, which covers strategic areas including Macquarie Park, Chatswood and St. Leonards through the Harbour CBD to Green Square-Mascot, Randwick and Sydney Airport.

The economic opportunities of the City Fringe relies in part on the capacity for clusters to grow. Our capacity study shows that 52 per cent of the remaining floor space capacity available within current planning controls in City Fringe is likely to be for uses other than residential. However, 70 per cent of this available capacity is within business zones that allow residential development.

BRC contains part of the Green Square-Mascot Strategic Centre. Businesses within this area currently deliver both direct and indirect support services to facilitate the development and operation of the critical international trade gateways of Sydney Airport and Port Botany as well as Central Sydney and business and community needs throughout the District.

North Alexandria, located near Green Square station, is a strong area for potential business transformation from the

former industrial activities towards a range of higher-density, more knowledge-intensive and creative industry employment sectors. High rental costs in the Harbour CBD have resulted in a mix of businesses moving south, drawn by good public transport provision at the station. These are supported by a high amenity environment within the Green Square Town Centre.

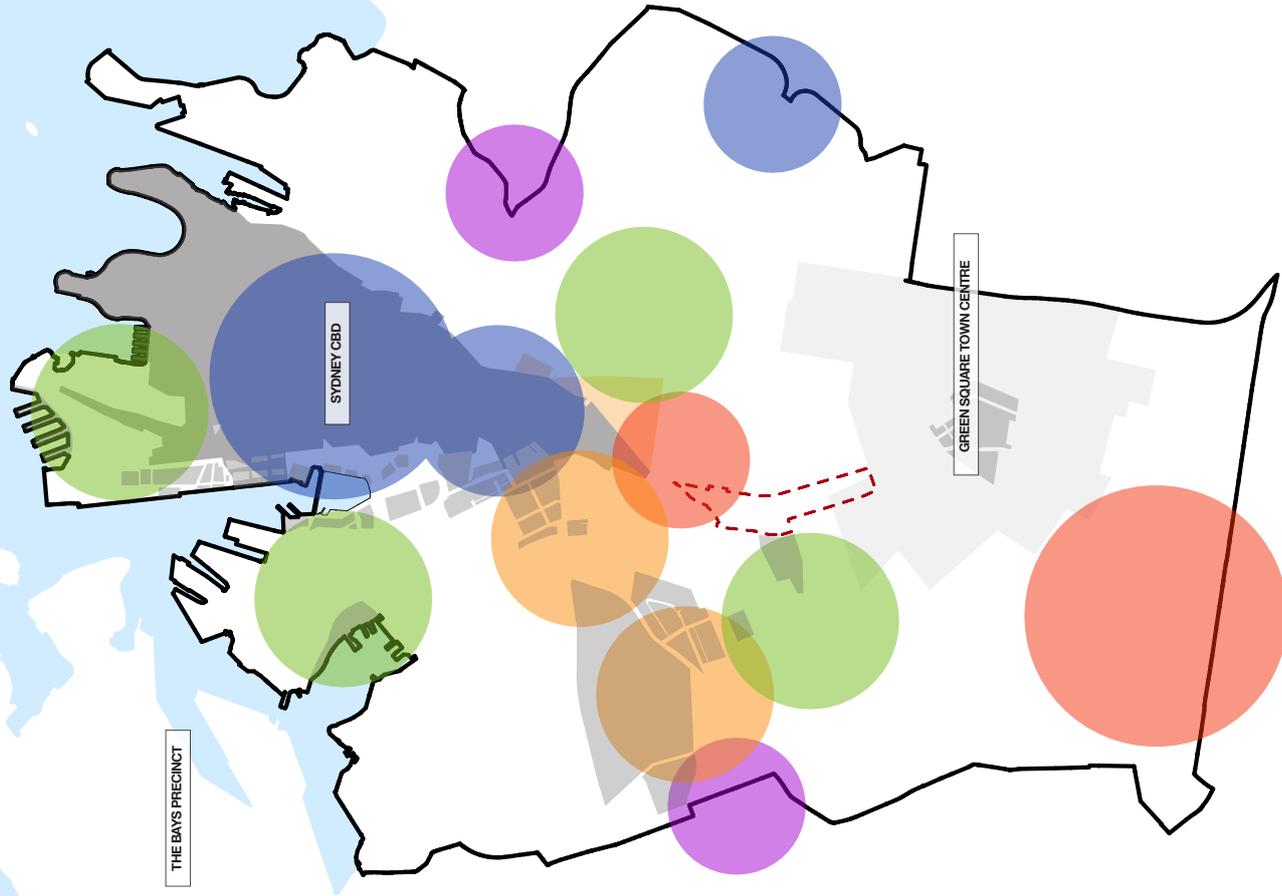


Figure 61: Economic Context Overview
Source: TZG overlay of City of Sydney LSPS Mapping

6. City of Sydney Dept LSPS, p.28.
7. City of Sydney Dept LSPS, p.28.

3.1.7 Regional Demographic

Sydney LGA Population and Employment Projections

Population Projections

Adjacent to the BRC Study Area are various developments and Urban Renewal projects will see a significant increase in population in the next 20 years.

Anticipated Population Projections have been mapped adjacent.

Housing Targets and Projections

The area will see a significant increase in housing supply in the next 20 years.

Green Square Urban Renewal project underway, Waterloo Precinct and the North Eveleigh Master-plan will contribute to the growth.

Jobs and Employment Targets and Projections

The Harbour CBD (excluding North Sydney) will see an increase of jobs in the area between 662,000 to 732,000 in the next 20 years resulting in an increase of over 200,000 jobs.

Australian Technology Park will see 3,000 new jobs with redevelopment.

Waterloo Precinct forecast an increase of 1,360 jobs by 2036.

Green Square Urban Renewal area will have an increase of 4,000 jobs by 2036.

Affordable Housing targets

The GSC sets out a target of 5-10%.

The City of Sydney sets a target of 7.5%.

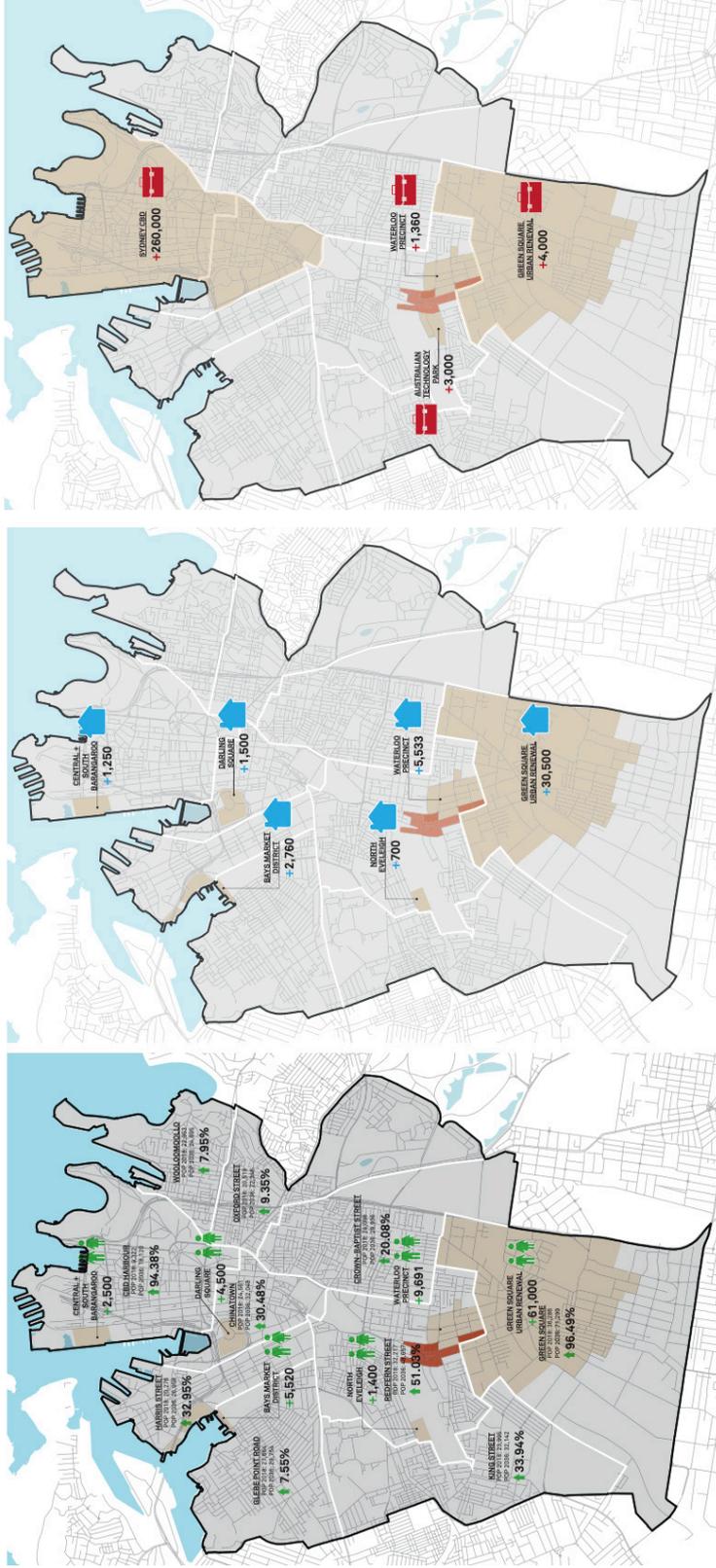


Figure 62: Regional Demographic Plans
Source: Hassell, 2018.

3.1.8 Demographic- Existing

The City of Sydney LSPS notes the City's demographic as distinctly different to the overall Eastern City profile, reflecting the unique social, economic and cultural role of the Sydney LGA area in the Sydney Metropolitan area.

Key Statistics for the Redfern Street Village:

- 13% of the City of Sydney population is located in Redfern Street Village centre (31,722 people on 240,229 in 2018)
- The median age of the area is 30, which is similar to the median LGA age of 32.
- The median household income is 39%, which is lower than the City of Sydney LGA median household income.
- Unemployment rate is higher than the Sydney LGA unemployment rate at 8.2%.
- The dominant household type is lone person household.

The existing Redfern Street Village Centre has a 2.5% Aboriginal and Torres Strait Islander population, compared with 1.2% in the City of Sydney LGA.

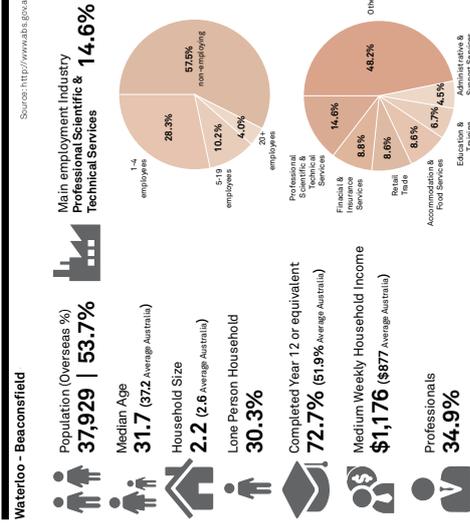
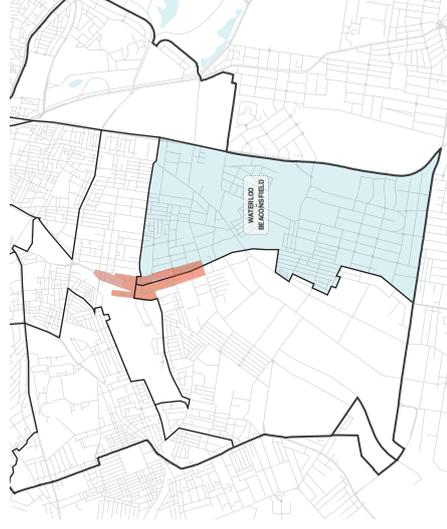
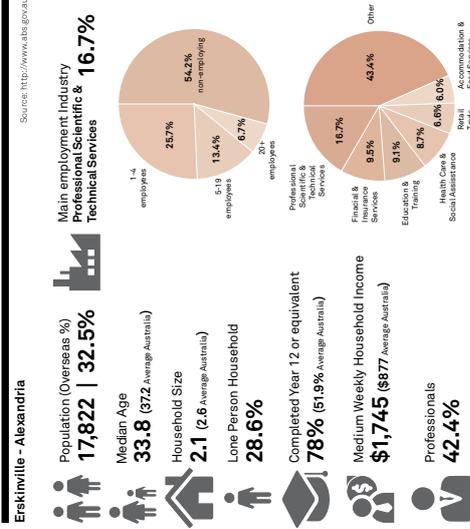
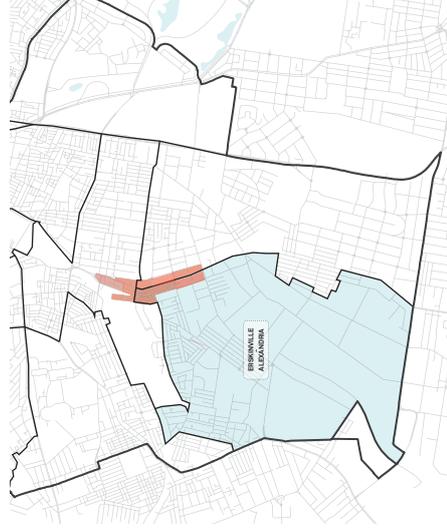
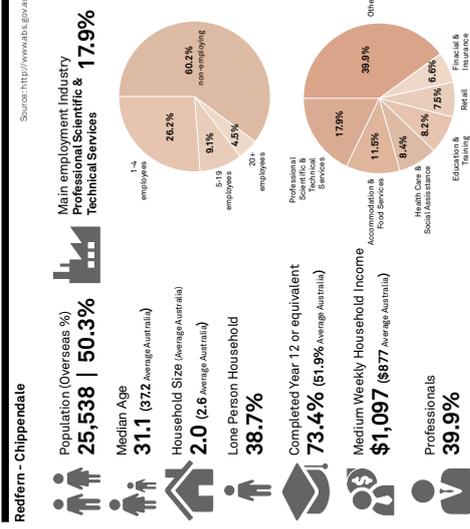
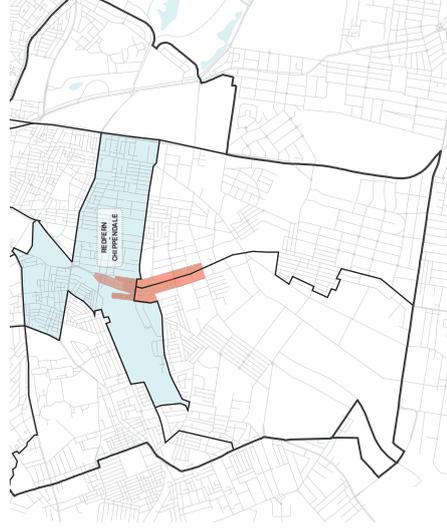


Figure 63: Existing Population
Source: Hassell, statistic generated from the ABS - Updated Study Area overlay by TZG.

3.1.9 Demographic- Projected

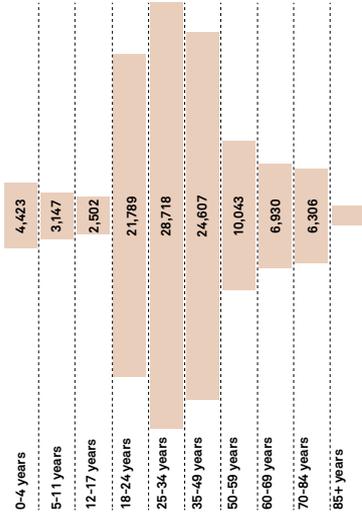
The Redfern Street Village population to 2041 is projected to increase by +62.4% by 2041 compared with projected increase of the City of Sydney Population by +41.89% by 2041.

The largest forecast population increase between 2019 and 2026 is in ages 20 to 24, expected to increase by 2,069 and account for 18.8% of the total persons.

The largest 5 year age group in 2026 will be people aged 20 to 24 years, with a total of 7,830 persons.

The dominant household type will continue to be lone person households (37.6% of all households by 2026).

Projected Population 2036



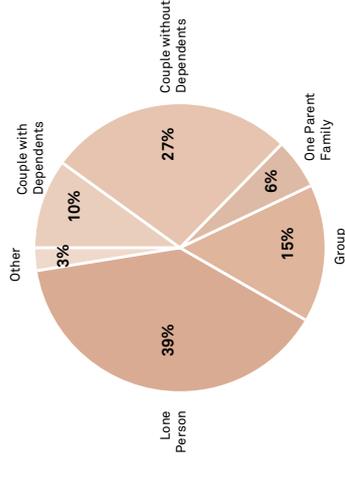
Population increase (since 2017)
+35,432

The total population of the villages is forecast to increase by 35,432 persons to a total population of 109,735. The three villages are forecast to have similar patterns of age structure with 18-49 years being the dominant growth group.
The largest increase in age groups Kings St Village is expected to be tertiary education aged 18-24 year old.
In both Redfern St and Crown & Baptist St Villages the most significant increase is expected to be parent and home builder 35-49 year old.

Source: Arup/Audits and analysis

Figure 64; Projected Population
Source: Hassell

Projected Household Types 2036



Lone person remains the dominant household type.

Source: Arup/Audits and analysis

Projected dwellings 2036 (Not including Urban Renewal Sites)



Forecasts suggest that King Street Village will increase by an average of 179 dwellings per year to 13,848. Redfern Street Village will increase by an average of 459 dwellings per year to 23,563. Crown and Baptist Streets Village will increase by an average of 129 dwellings per year to 14,491 in 2036.

Source: Arup/Audits and analysis