

Attachment A2(h)(i)

**Urban Design Study – 7 Appendices – Part
1 – Botany Road Precinct**



7.0

Appendices

This section of the report aims to give a consolidated, concise recap on research, background analysis and relevant planning policies related to the Botany Road Corridor Study Area.

The summaries provided are comprised of all briefing information provided by the City of Sydney for the Botany Road Corridor Urban Design Study.

The aim of these summaries was to provide the TZG team with a strong basis to commence the Urban Design Study. These background summaries have been used by TZG to inform the urban design study, site analysis, recommendations, undertake a gaps analysis and prepare opportunities and constraints, design principles and vision.

The summaries uses wording and information prepared by other parties, unless otherwise noted as prepared by TZG.

The adjacent listed documents were provided by the City of Sydney at project inception for the Urban Design team to review and summarise. Some documents have been received in draft format and therefore may not contain all available information or and may not be complete information. All information in this Report by TZG is taken from these Background Information documents unless otherwise noted.

City of Sydney Strategic Planning Documents:

- A Plan for Growing Sydney / Draft Greater Sydney Region Plan (Greater Sydney Commission - 2017)
- Revised Draft Eastern City Plan (Greater Sydney Commission - 2017)
- Sustainable Sydney 2030 (City of Sydney - 2014)
- Open Space, Sports and Recreation Needs Study - Volumes 1-5 (City of Sydney -2016)
- Draft Local Strategic Planning Statement (City of Sydney - 2019)
- Redfern Waterloo Strategic Employment Study (BIS Oxford Economics - 2018)
- Planning: Cultural Creation and Production in Sydney: A venue and infrastructure needs analysis (City of Sydney - 2018)
- An Open and Creative City: Planning for Culture and the night time economy (City of Sydney - 2017)
- Draft Redfern Street Village Baseline Report (City of Sydney - 2019)
- Infrastructure Baseline Assessment (Mccone, for the City of Sydney - 2019)

Department of Planning Industry and Environment, Land Use Infrastructure and Implementation Plan: Stage 1 draft reports

- Draft Master-planning, Urban Design Heritage and Landscape Design reports (Hassell - 2018)
- Draft Social Infrastructure and Open Space Strategy (Arup - 2018)
- Traffic and Transport Context Report (Jacobs - 2018)
- Economic Feasibility Analysis and Affordable Housing (SGS Economics - 2018)
- Engineering Services, Contamination, Utilities, Flooding and Infrastructure reports (Mott Macdonald - 2018)

7.1 Background Information Summaries

7.1.1 A Metropolis of Three Cities

Greater Sydney Commission (GSC)

In March 2018, the Greater Sydney Commission (GSC) released the finalised Greater Sydney Region Plan. The Plan presents a strategy for managing growth and change, and intends to guide infrastructure delivery over the next 40 years.

The plan seeks to reposition Sydney as a 'Metropolis of Three Cities' – the Western Parkland, the Central River and the Eastern Harbour cities.

To support the vision of boosting Greater Sydney's liveability, productivity and sustainability, the GSC has established Ten Directions which establish the aspirations for Greater Sydney over the next 40 years.

These Directions will be used to guide future planning policy and infrastructure decisions within Greater Sydney to 2056.

The identified Directions include:

1. A city supported by infrastructure
2. A collaborative city
3. A city for people
4. Housing the city
5. A city of great places
6. A well-connected city
7. Jobs and skills for the city
8. A city in its landscape
9. An efficient city
10. A resilient city

The Hassell Urban Design Report 2018 summarises the Botany Road Corridor's context within this planning document:

"The Botany Road Corridor is located within the 'Eastern Harbour City' with the existing Sydney CBD providing the critical mass of existing employment, housing and infrastructure of the 'Harbour CBD' and supported by the existing North Sydney CBD and future Bays West employment area.

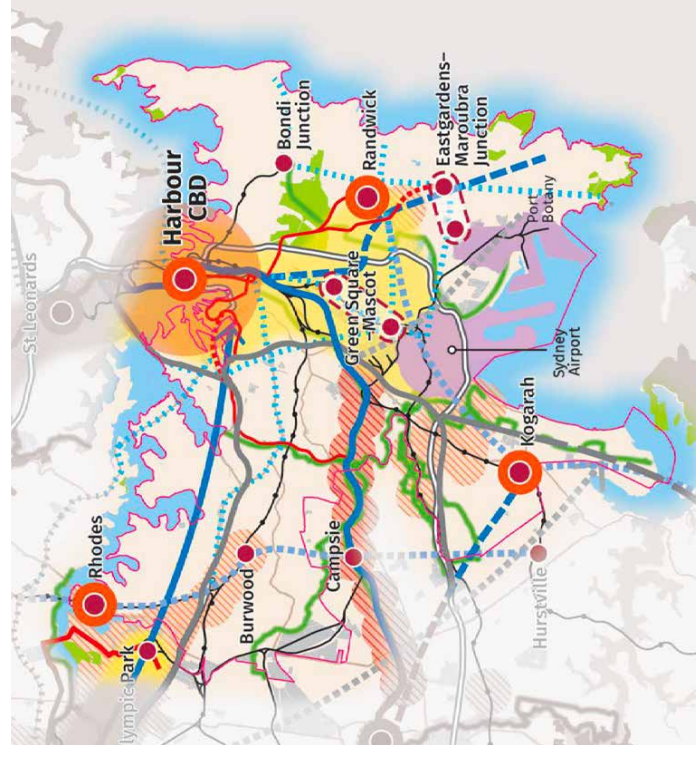
The Eastern Harbour City, noted as the most densely populated city, will continue to be the focus for the majority of development with a projected increase in population of 900,000 people, which comprises 54% of the total Sydney population and growth to 2036, and the primary employment city for knowledge industries.

In addition to the general directions and requirements of the plan, the Central to Eveleigh (C2E) area is specifically referenced under Objective 18 Harbour CBD is stronger and more competitive as part of the Harbour CBD innovation corridor comprised of The Bays Precinct, Pymont/Ultimo, University of Technology

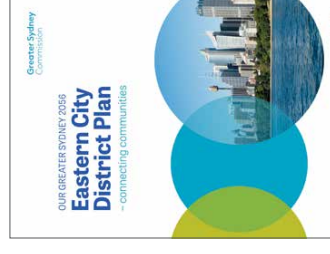
Sydney, University of Notre Dame, University of Sydney, Royal Prince Alfred Hospital and Australian Technology Park.

As a result of existing constraints within the Harbour CBD the plan notes that opportunities for increased height and outward extensions are required to provide for employment growth.

In this context, the Redfern to Eveleigh Corridor is specifically identified as an example of where this could be achieved."



Directions	A city supported by infrastructure	A collaborative city	A city for people	Housing the city	A city of great places	A well connected city	Jobs and skills for the city	A city in its landscape	An efficient city	A resilient city
	Infrastructure supporting new developments 	Working together to grow a Greater Sydney 	Celebrating diversity and putting people at the heart of planning 	Giving people housing choices 	Designing places for people 	Developing a more accessible and walkable city 	Creating the conditions for a stronger economy 	Valuing green spaces and landscape 	Using resources wisely 	Adapting to a changing world



7.1.2 Draft Eastern City Plan

Greater Sydney Commission (GSC)

The Eastern City Plan is a guide for implementing the GSC's 'A Metropolis of Three Cities at a District Level'. It is 20 year plan to manage growth and achieve the 40 year vision, structured around strategies for infrastructure, collaboration, liveability, productivity, sustainability and implementation.

The EDCP sets out planning priorities and actions for growth and development within the District.

These planning directions are summarised adjacent.

Key achievements for Eastern City District:

- Strengthen the Harbour CBD – supported by corridors, health and education, strategic centres;
- Knowledge intensive jobs growth (relates to current sector jobs);
- Night time economy;
- Protect international trade and freight routes;
- Retain industrial and urban services land;
- Well designed houses near transport and other infrastructure;
- Vibrant public places;
- Align growth with infrastructure;
- Provide recreational and open space areas;
- Transition to low carbon, high efficiency district through precinct scale initiatives;
- Build responses to climate change and natural / urban hazards;

The Hassell Urban Design Report 2018 efficiently summarises the Botany Road Corridor's context within this planning document:

The Redfern to Eveleigh Corridor, is located in the Eastern City District and is part of the innovation corridor of the Harbour CBD. The northern portion in particular is located within the Camperdown-Ultimo health and education precinct due to the number of creative business and adjacent Australian Technology Park. It provides affordable commercial accommodation for very small, small and medium business particularly in the creative and digital industries.

Botany Road Corridor is recognised by the Eastern City district plan as:

- A Strategic Centre within the Innovation Economic Corridor that comprises the southern portion of Sydney CBD;
- Containing a City Serving Corridor Transport Corridor with the new Metro line;
- Adjacent to 'Central to Eveleigh Urban transformation Strategy' future collaboration area (TNSW and NSW Dept. Family Services, Urban Growth). Housing is expected near Redfern Station and across North Eveleigh, as well as the Waterloo Estate Precinct (bounding Waterloo station);
- Communities Plus (LAHC) initiatives – Waterloo;
- Straddles housing market areas City-Harbourside and Eastern Shore;
- Identified as adjacent to an Urban Renewal Area under EDCP housing supply map;
- Not a 'Centre' under liveability map – adjacent to Green Square and Newtown;
- Not a city-serving corridor (rail) – but is rather adjacent to the Harbour City CBD metropolitan centre hub.

The LSPS to be provided by Council will put into action economic, social, environmental matters identified in the EDCP

“The vision for Greater Sydney as a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City and a 30 minute city – will see the Eastern City District become more innovative and globally competitive, carving out a greater portion of knowledge-intensive jobs from the Asia Pacific Region. The vision will improve the District's lifestyle and environmental assets.”

DIRECTIONS FOR INFRASTRUCTURE AND COLLABORATION

Planning Priority E1 – Planning for a city supported by infrastructure

- State and Local Government planning decisions support new transport planning, new facilities such as libraries, community hubs etc and allowing for city shaping infrastructure;
- There is room to better align growth with infrastructure by identifying place-based infrastructure priorities. This would take into account the capacity of existing infrastructure and existing infrastructure commitments and programs such as Special Infrastructure Contributions, affordable housing initiatives, social housing programs and augmentation of utilities.

Planning Priority E2 - Working through collaboration

- Botany Road corridor is not identified as a Collaboration Precinct.
- It is adjacent to Central to Eveleigh Urban Transformation Strategy Precinct.

Key actions for this planning priority that are stated within the EDCP relevant to Botany Road Corridor are:

- E1 – Sequence infrastructure provision using a place based approach.
- E2 – be aware of adjacent collaboration precincts and any initiatives that they bring.

DIRECTIONS FOR LIVEABILITY

Planning Priority E3 - Providing services and social infrastructure to meet people's changing needs

- The City of Sydney will accommodate 32 per cent of the District's total growth over the 20 years to 2036, an increase of 102,600 people due to the anticipated urban renewal across the local government area.
- Safety and Accessibility - Improving safety, accessibility and inclusion by co-locating activities benefits all residents and visitors. When supported by a fine grain urban form and land use mix which provides a greater diversity of uses and users, liveability can be improved.

- Aging population - Sydney LGA will experience significant proportional increase in people over 65. More diverse housing types and medium density housing, as well as the design of walk-able neighbourhoods, will create opportunities for older people to continue living in their communities.
- Disability - More diverse housing types and medium density housing, as well as the design of walk-able neighbourhoods, will create opportunities people to continue living in their communities.
- Joint and shared use – opportunities for shared use of spaces and greater connectivity with residents – shared facilities, sportsgrounds etc.

Planning Priority E4 - Fostering healthy, creative, culturally rich and socially connected communities

- The design and management of streets, places and neighbourhoods are essential to improve mental and physical health outcomes.
- Walk-able street, safe pedestrian and cycling connections.
- Delivering fine grain urban form and local mixed-use places can provide better access to local retailers of fresh food, together with opportunities for people to participate in arts, recreation and cultural activities.
- Diverse neighbourhoods – Redfern identified – unique cultural history.
- Diverse neighbourhoods – Integration of Waterloo Social Housing and integration into the urban fabric in the short term. Targeted local responses are required to address spatial variations in socio-economic disadvantage across the Eastern City District are required. This includes creating communities where social housing is part of the same urban fabric as private and affordable housing; good access to transport and employment; and

community facilities and open spaces which can therefore provide a better social housing experience.

- Aboriginal People - Supporting Aboriginal self-determination, economic participation and contemporary cultural expression through initiatives such as the development of culturally-appropriate social infrastructure.
- Cultural Expression and Social Connection – 'eat streets' and 'high streets' are emphasised as place based planning mechanisms that can enhance and strengthen existing or new social connectors.

Planning Priority E5 - Providing housing supply, choice and affordability with access to jobs, services and public transport

- Residents of the EDCP don't prefer to leave and prefer to stay in the area.
- Housing supply increase in one area may not satisfy demand in other areas.
- The BRC Area may contain locational criteria for selection as urban renewal housing in location.
- Urban renewal alongside Sydney Metro West creates opportunities by enhancing existing infrastructure, i.e. open space, sport facilities, transport etc.
- Local infill – Middle Density – best in transition areas between urban renewal precincts and existing neighbourhoods.

Planning Priority E6 - renewing great places, local centres and respecting districts heritage

- Streets are the most common places in any city. They connect and unite communities. The way streets meet people's different needs is fundamental to the way the city is experienced.
- Movement corridors provide safe movement between centres, neighbourhoods whilst balancing the needs of the places and communities they pass through.
- Direct routes to local destinations, sufficient road space for safe walking.
- Permeable and well connected urban form that has human scale.
- Local centre high streets - Provide essential day to day services to where people live.
- Transit-oriented development co located with facilities and social infrastructure.
- Improve walking and cycling.
- Protect or expand employment opportunities or commercial floor space.

DIRECTIONS FOR PRODUCTIVITY

This Direction focuses on delivering well connected city – a ‘30 minute city’ – by improving efficiency of supply chains, business cost access to markets etc.

The EDCP has the highest proportion of knowledge and professional services of all three Cities.

Planning Priority E7 – A Stronger and more competitive Harbour CBD

- North Eveleigh and AXP are in the fringe of this area – so the Botany Road Corridor is adjacent to this stronger precinct.
- Botany Road Corridor is NOT on the Eastern economic corridor.

Planning Priority E8 – Growing and investing in health and education precincts and the innovation corridor

- Digital innovation and start-ups rely on physical location to maximise success and ultimate profitability. Digital and cultural industries require events spaces, and affordable and scalable office spaces. They seek out space in character buildings in suburbs like Sydney CBD, Pyrmont, Surry Hills and Ultimo and are attracted to a diverse pool of talent and expertise, research facilities, customers and investors.

- Planning controls to allow a sufficient supply of workspaces and provide flexibility for these enterprises include providing for a range of permissible uses and activities and allowing for suitable night-time operations.

- Urban Regeneration projects should capitalise on opportunities to deliver cultural infrastructure, and walking and cycling connections, alongside these spaces.

- Competitive innovation precincts depend on high levels of amenity and walk-ability, with good transport connections spurring the rapid exchange of ideas and the establishment of networks.

Planning Priority E9 – Growing international trade gateways

- Sydney Airport is a trade gateway to the CBD.
- Transport Corridors must be safe guarded whilst also given required support for growth.

Key Actions for E9:

- Preventing uses that generate additional private vehicle traffic on roads that service Port Botany and Sydney Airport such as large-scale car-based retail

and high density residential, to reduce conflicts with large dangerous goods vehicles.

- Protecting current and future freight corridors and shared freight corridors.

- Limiting incompatible uses in areas expected to have intense freight activity.

Planning Priority E10 – Delivering integrated land use and transport

- Land Use and Transport planning should guide new transport, housing, jobs, education, etc – to plan for strategic centre with more people and public transport.

- Botany Road Corridor is NOT a ‘city-serving’ metropolitan centre.

- Plan for urban development, new centres, better places and employment uses that are integrated with, and optimise opportunities of, the public value and use of Sydney Metro City & South West, CBD and South East Light Rail, and Westconnex as well as other city shaping projects.

Planning Priority E11 – growing investment business opportunities and jobs

- Botany Road Corridor is not a strategic corridor so this priority doesn’t apply to the study area.

- Botany Road Corridor does however lead to the Green Square – Mascot regional centre which is to be strengthened through this priority.

Planning Priority E12 – Retaining and managing industrial and urban services land

- Industrial and urban lands should be safe guarded.

Planning Priority E13 – Supporting growth of targeted industry sectors

- Focuses on the visitor economy, new industry and new technologies.

DIRECTIONS FOR SUSTAINABILITY

Planning Priority E14 – protecting health of Sydney harbour

- Corridor is in the Cooks River catchment.

Planning Priority E15 – Protecting bushland and biodiversity

- No bushland corridors, or urban bushland appear to exist in the corridor.

Planning Priority E16 – Protecting cultural and scenic landscapes

- Identify and protect cultural and scenic landscapes.
- This priority relates to Aboriginal Heritage, landscape and cultural heritage strongly.

Planning Priority E17 – Increasing Urban tree canopy cover and green grid connections

- Increase urban tree canopy cover.

- Increase Green Grid to link parks, open space, bushland, walking and cycling paths.

- Botany Road Corridor is next to the green grid priority corridor running through Eveleigh.

Planning Priority E18 – Providing quality open space

- Short fall of open space requires better use of existing sportsgrounds, converting existing space in fields, partnering with schools for out of hours use.
- High density dwellings – should be within 200m of open space, all dwellings within 400m of open space.
- Residents should be able to walk to open space.
- High density neighbourhoods need open space to be robust and resilient.

- Active open space is in high demand.

Planning Priority E19 – Reduce carbon emissions

- Energy and water should be recaptured.

- Reuse of waste is essential.

- Low carbon net zero emissions is set as a goal.

- Improved walking and cycling reduces emissions.

- Auto vehicles can be considered in planning.

Planning Priority E20 – adapting to the impacts of urban hazards and climate change

- Past and present urban development and activities can also create urban hazards such as noise, air pollution and soil contamination.

Key actions that are stated within the EDCP relevant to Botany Road Corridor are:

- E3 – Optimise available public land for social infrastructure.
- E4 – Incorporate cultural diversity in planning (part of the process).
- E4 – Deliver healthy safe and inclusive places for all people of all ages.
- E4 – Strengthen economic self determination of aboriginal communities by engagement and consultation.
- E4 – Facilitate creative and artistic expression, or participation wherever feasible.
- E4 – Strengthen social connection within and between communities through understanding social networks.
- E5 – Housing should support the role of centres, and create capacity for more housing in right locations.
- E6 – Streets as place, improving walk-ability, safe cycling and social interaction.
- E7 – Providing fine grain urban form, diverse land use mix, high amenity and walk-ability, in and within a 10-minute walk of centres.
- E7 – Recognising and celebrating the character of a place and its people.
- E7 – Prioritising a people-friendly public realm and open spaces as a central organising design principle.
- E7 – Recognising and balancing the dual function of streets as places for people and movement.
- E7 – Conserve and enhance environmental heritage – adaptive reuse, interpret heritage, engagement of community early, managing cumulative impact of development.
- E7 – Use place base planning to support the role of centres as a focus for connected neighbourhoods.
- E7 – Use flexible and innovative approaches to revitalise high streets in decline.
- E8 – Facilitating the Innovation Corridor.
- E9 – Protecting the freight corridor and limiting incompatible uses in areas expect to have intense freight activity.
- E10 – Deliver land use adjacent to rail corridor.
- E16 – Protect and identify cultural landscape as relating to aboriginal heritage.
- E17 – Green Grid connections - provide opportunities that form the long term vision of the network.
- E17 – Walking and cycling links for transport and leisure / recreational trips.
- E17 – Deliver the green grid.
- E18 – Maximise the use of existing open space and protect and enhance public open space.
- E18 – Network of diverse and equitable open space, Investigate opportunities for new open space, Demonstrate access to high quality open space, Deliver shared and col located ground.
- E20 – Design new buildings and public space with respect the noise and air pollution around transport corridors.

7.1.3 Sustainable Sydney 2030

City of Sydney (CoS)

Adopted in 2008, Sustainable Sydney 2030 expresses the City's community vision and the City's commitment to sustainable development. The Plan sets the City's aspiration to be a 'green, global and connected city' by 2030. The document defines the overall direction and goals for the community and is the Council's long term Community Strategic Plan. It is the city's highest level strategic plan and is updated every four years, in consultation with the Community and exhibited for public feedback.

The evolving nature of the plan takes stock of the achievements of the City of the past four years, and accounts for changes in federal, NSW Government policies and commitments. The plan also provides high level strategy for more detailed City Social, Environmental, Economic and Cultural Strategies.

The 2030 VISION summarised is:

Green

- Outstanding environmental and economic performance;
- Reduce greenhouse emissions;
- Connected city with green links, thriving biodiversity and resilient urban economy;
- Resilient to climate change;
- Be a more contained city, opportunities close to jobs, with integrated transport;

Global

- The City will remain Australia's most significant global city;
- Will contain premium spaces for business, activity, social, cultural, childcare;
- With support creativity and innovation;
- Will celebrate multicultural community;
- Will be part of global networks;

Connected

- The City will be easily accessed by walking and cycling, upgraded regional transit;
- The City's distinctive villages will continue to be strong focal points for community and a sense of belonging;

- The city will be diverse, welcoming and inclusive;
- Relative equality will be improved with affordable housing, equitable access, community facilities and programs;
- Cultural vitality will flow from high rates of participation;
- The City will commit to partnerships and cooperation with governments;
- The document sets out 10 targets for a more sustainable city.

This includes 10 strategic directions for Sustainable Sydney with a 'frameworks for action' and 48 objectives for the guidance of development.

The plan also lists the existing City's Supporting strategies for each Directive and various Case Studies showing previous implementation of each Directive across the City's LGA.

The Sustainable 2030 document also provides a matrix of NSW State Government priorities and how each of the City's priorities align.

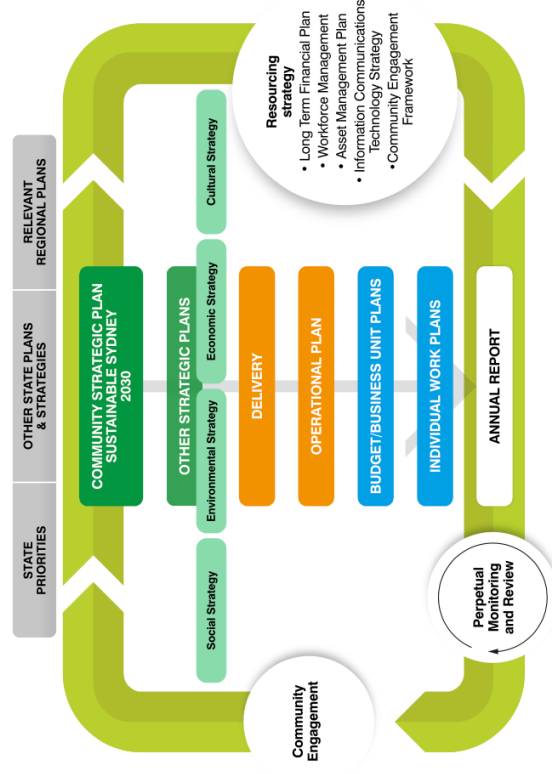
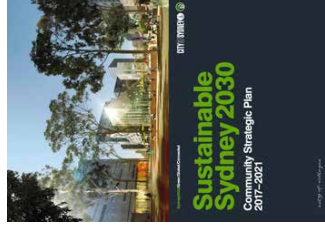
The Redfern Street Village and Green Square and South City Village is identified as part of the Sustainable City 2030. The Botany Road Corridor straddles both these character Villages.

The Redfern Street Village character is broken down into sub-parts into 2012 CoS DCP.

Whilst the Botany Road Corridor is not specifically mentioned in the Directions, the summaries on the next page indicate the key points from each Direction applicable to the Botany Road Corridor.



Icons UN Sustainable Development Goals



10 Strategic Directions:

- 1 - **A globally competitive and innovative city**
 - Focuses on ensuring all aspects of the economy are robust and have diversity, show leadership in a global context, are attractive to all people and continues to position the City of Sydney as globally prominent and competitive.
- 2 - **A leading Environmental Performer**
 - A focus on tackling Climate Change - the 'biggest challenge we face today and into the future'.
 - Encourages fast taking up of green and sustainable initiatives to meet various global and local targets.
 - Recognises key areas for ongoing improvement to reach net zero targets including tree canopy, potable water, energy, reduction in greenhouse gases, stormwater etc.
- 3 - **Integrated transport for a connected City**
 - Focuses on the idea that a well-connected city is a successful city.
 - As the city grows, the movement of people will change within the city centre.
 - This section advocates for well planned, efficient public transport, well-designed streets to support the sustainable development and growth of the city.
- 4 - **A city for walking and cycling**
 - This Direction Acknowledges that cost effective, sustainable and enjoyable modes of transport such as walking as cycling require special focus from the city to be delivered.
 - The City's aim is to have comfortable, convenient, interesting, safe and easy walking and cycling as a choice for all.
 - Acknowledges that there are increased opportunities to travel short distances, allowing for connections between the City's villages, parks and place.
- 5 - **A lively and engaging City centre**
 - A successful city is alive, inviting both day and night, offering art, design culture, entertainment attractive public space and workplaces.
 - A 'transformative move' devised by Jan Gehl, positioned George Street as the 'central spine' of the city, connecting three central squares, with the aim to revitalise the centre of the city.
 - This section acknowledges the city's commitment to Aboriginal and Torres Strait Islander history becoming visible and celebrated.

- The City has previously acted on this direction by revitalising laneways, plazas, public footpaths etc to create a high standard of public places. Public domain, diverse built form, cultural activity and infrastructure planning are seen to strengthen to resilience of the City Centre.
- 6 - **Resilient and inclusive local communities**
 - This section addresses Social cohesion which the City acknowledges as requiring nurturing in a fast growing city.
 - Deliberate strategies will be ongoing developed to enhance well-being, including housing, fresh food, access to health and social services, education, employment and a healthy environment.
 - There is a focus on addressing issues such as poverty, disadvantage, vulnerability, climate change impacts, social isolation, and people's sense of well-being and belonging.
 - The City's role is to deliver, maintain, manage community facilities, open space, recreation, community centres and cultural facilities and is exemplified by identifying ten village areas – of which Redfern Street Village is one.
 - 7 - **A Cultural and Creative City**
 - This Direction focuses on providing suitable places for creative enterprises and affordable housing for creative workers, and acknowledges the role policy areas such as planning, building, transport, housing have in this area.
 - The plan wants to make cultural more visible, and allow for developing the next generation of creative talent.
 - Relevant to Botany Road precinct are the City's role in recording, sharing and promoting the history of the city, planning for public cultural infrastructure and ensuring public space allows for a diverse range of cultural activities and individual expression.
 - 8 - **Housing for a diverse community**
 - This Directive acknowledges that more than half the residents in the City of Sydney LGA rent their home, and access to safe, secure and affordable housing and shelter is a growing pressure.
 - The direction acknowledges that increasing housing supply is part of the solution in improving housing affordability – as good housing design and well-planned location also promotes quality within people's lives.
 - The City's role in this Direction is generally

- coordinating across various levels of Government housing policy across various levels of government, focusing on the supply of more housing, affordable housing, diversity of housing, urban renewal schemes and high amenity housing types.
 - Previous efforts by the City to increase supply (including preferential zoning), direct delivery partnerships and Advocacy at NSW Government Level.
- 9 - **Sustainable development, renewal and design**
 - This directive acknowledges that increased urban density benefits the city by improving economic viability of services and infrastructure.
 - 'Density done well' is a key focus – this means achieving balance between density and development of the urban environment. Density provides social and economic opportunities but must be coupled with adequate shared space, social infrastructure, and opportunities for business innovation and productivity improvements.
 - The City's tools with this directive are outlined to provide public domain codes and strategies for coherent and great public places.
 - 10 - **Implementation through effective governance and partnerships**
 - This Directive sets out the City's goals for good Governance, defining transparency in decision making and community involvement or consultation as key approaches to achieving public trust and confidence in implementation of policy.
 - Using an 'evidence-based' approach, the City mentions it holds itself accountable for outcomes and commitments.
 - Generally, partnership, advocacy and collaboration is noted as key to achieve the delivery of strategic, operational and technical goals of Sustainable 2030.

A framework for action

Ten strategic directions for Sustainable Sydney



Right: Paddington Reserve Gardens, Paddington

7.1.4 Draft Local Strategic Planning Statement (LSPS)

City of Sydney (CoS)

The City of Sydney's Draft LSPS 2036 is:

- A draft planning statement that sets out a 20-year land use planning vision.
 - Aims to balance the need for housing and economic activities while protecting and enhancing local character, heritage, public places and spaces.
 - Links state and local strategic plans with the City's planning controls to guide development.
- Planning statement sets out:
- The basis or context for planning;
 - Planning priorities and actions needed to achieve the vision;
 - Governance and monitoring of the priorities
- The documents on key profile statistics for the City of Sydney LGA area are summarised below.

Demographic

Noted as distinctly different to eastern city profile, reflecting unique social and economic and cultural role of the city.

City Villages and City Centres

Botany Road Corridor is part of the 'Redfern Street village' Character area identified, but straddles smaller various character areas / local villages. Active streets within and between local centres connect communities and the wider village. One active street is identified at the Botany Road Corridor. LSPS acknowledges emerging centres are evolving.

City Culture

Creative industry space has been declining between 2007 – 2017, and research suggests this is due to no longer having adequate employment land to support them.

City Infrastructure

Development contributions over ten years to go to open space, community facilities, traffic and transport, stormwater, upgrades around light rail, parks and improvements, extension of cycleway network, additional infrastructure as community floor space scheme and planning agreements.

City economy

Between 2007 – 2017, employment in City of Sydney local area increased by 30 per cent, while employment floor space increased by 7.8 per cent. This is driven by significant investments in transport and our local

economy's continued move towards specialisation and clustering in knowledge-intensive services and industries and the contemporary workplace.

Botany Road Corridor Straddles the Green Square and CBD / Harbour City Strategic Centres (see map below) (source GSO). The Corridor is within the City Fringe area, which covers the areas within the Harbour CBD outside of Central Sydney, Areas within City Fringe accommodate approximately 127 000 workers and over 7,500 businesses. 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.

Night time economy

The City's commitment to continue to be both a liveable and productive city calls for us to balance priorities to enable the continued growth of the night time and visitor economy, while maintaining a high standard of facilities and services and a wide range of options for residents, businesses, workers and visitors.

City Renewal

Some notable potential State Significant Precincts in the city include the Waterloo Metro Quarter, Waterloo Estate, The Bays Precinct and Elizabeth Street, part of the Redfern Estate under state renewal.

Changing Climate

Air pollution noted as a trend requiring long term management.

Urban bushland and Biodiversity and Canopy Cover

Greening Sydney seeks to increase open space and canopy cover.

City Movement

The City has the Liveable Green networks which is a system of key walking routes, with high amenity. The Botany Road Corridor is on the liveable green network 'central spine', with key main green corridor 'Moore Park – East Redfern – Redfern station' and the 'harbour to bay' green corridor intersecting at Redfern station. The Metro station addition is expected foot and bicycle traffic to increase.

Draft LSPS Planning Priorities

The Vision from Sustainable 2030 is:

'Green, Global, and Connected'

The LSPS Planning Priorities are listed below:

Infrastructure

- 1. Movement for walk-able neighbourhoods and a connected city – 5-10 minute walk.
- 2. Align development and growth with infrastructure – collaborate and create delivery mechanisms.
- 3. Support community well-being with social infrastructure – collaborate and partner to deliver infrastructure, open space, community facilities.

Liveability

- 4. A creative and socially connected city – people focused approach to planning and place-making.
- 5. Creating great places – accessible local centres, high streets.
- 6. New homes for a diverse community – implement housing for all, range of types, support diverse community.

Productivity

- 7. Growing a stronger, more competitive central Sydney.
- 8. Developing innovative and diverse business clusters in city fringe.

- 9. Protecting industrial and urban services in southern enterprise areas.

Sustainability

- 10. Protecting and enhancing the natural environment.
- 11. Create better buildings and places to reduce emissions.
- 12. Increasing resilience of people and infrastructure.

Implementation

- 13. Open, accountable, collaborative planning. Each planning priority has a reference to the Metropolis of Three Cities planning priorities listed. Within the Draft LSPS there are specific actions and key moves shown, which can be referred to as 'tools' for the urban design process.

The City's Challenges

Affordable Housing

September 2018, a scheme was presented to the NSW government to allow 5% residential floor area and 1% commercial floor area as provided affordable rental or housing. The City also introduced preferential zoning for affordable rental housing on land zoned B7 – Business Park, where residential development is not otherwise permitted.

Affordable commercial and retail

A lack of affordable space threatens opportunities for creative and innovative start-ups, retail, tourist, cultural and leisure industries.

Land availability

The City's capacity is constrained by physical and environmental circumstances, in particular parks and open space, infrastructure corridors, strata-subdivided sites, industrial and business-zoned land, small sites and buildings less than 25 years old. It is noted that additional housing capacity is precluded from major redevelopment due to heritage protections and heritage conservations.

Community insights and aspirations:

- A city for people – green spaces, trees, quality public space.
- A city that moves – use of public transport, walking, bikes, reduction of cars.
- A environmental responsive city – response to climate change within the environment.
- A lively, cultural, creative city – vibrant city, with cultural, heritage, entertainment woven in, diversity of shopping and entertainment, gatherings for public event and spaces.
- A city with a future focussed economy – supported by digital infrastructure, allowing businesses to change, opportunities in education, jobs, innovation economy.

Growth to 2036

- For housing - 1.3 of growth will occur in green square. "The rest of the growth will be focused on Central Sydney and Redfern-Waterloo, with modest growth forecast for the City's historic residential villages.
- For the economy - As high-value office development expands outwards into the City Fringe area, this will displace the employment uses currently taking



advantage of these well-located but currently more affordable areas. This will present a challenge and opportunity for the City to support its creative, entertainment and research sectors, as well as emerging small businesses and start-ups.

- Managing growth - Noted that very little change is required in the city's current controls to accommodate housing growth.

Draft LSPS Key Moves

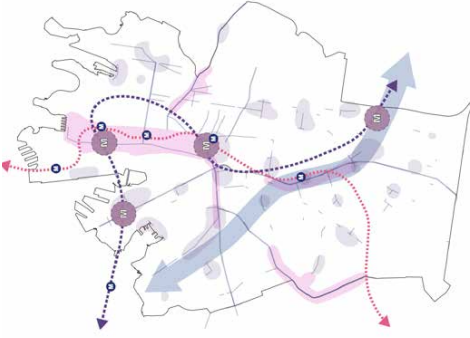
10 Key moves are outlined in the document.

- 1- Strengthen Central Sydney's economic role;
 - 2 - Build internationally competitive and knowledge-intensive business clusters in the Innovation Corridor;
 - 3 - Support creative and cultural industries in the Eastern Creative Precinct;
 - 4 - Protect and evolve business in the Southern Enterprise Area;
 - 5 - Make great places;
 - 6 - New and diverse housing;
 - 7 - Movement for walk-able neighbourhoods and a connected city;
 - 8 - Greening the city and pathways to net zero;
 - 9 - Aligning development with infrastructure;
 - 10 - Collaborate and plan for a shared vision;
- A summary of how do they apply to the Botany Road Corridor is below:

- 'Build a competitive knowledge intensive business cluster in the innovation corridor'.
- 'Make great places' – Redfern street high street adjacent.
- 'Movement for walk-able neighbourhoods' – intersection of Redfern St and metro station – 5-10 minute walk.

Draft LSPS Key Moves

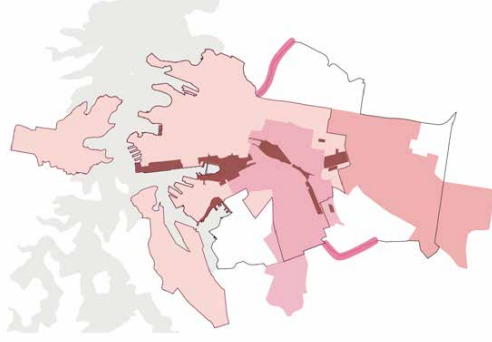
Movement for walkable neighbourhoods and a connected city



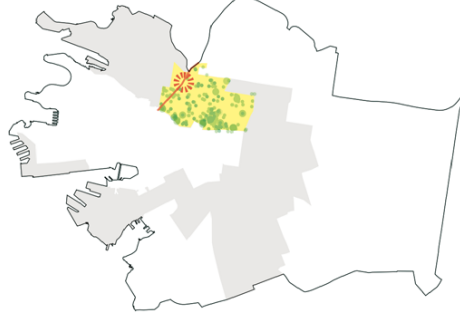
Greening the city and pathways to net zero



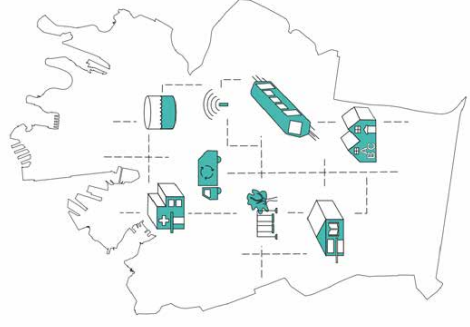
Collaborate and plan for a shared vision



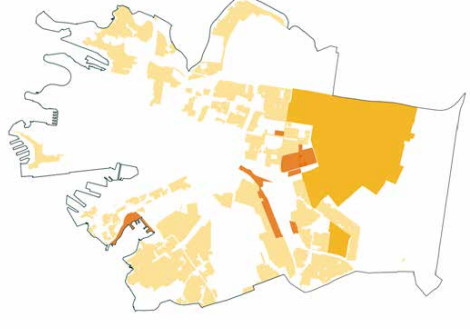
Support creative and cultural industries in the Eastern Creative Precinct



Aligning development with infrastructure



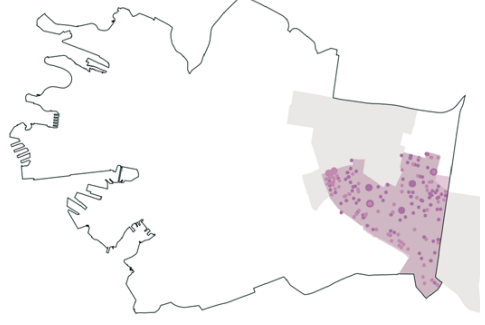
New and diverse housing



Make great places



Protect and evolve business in the Southern Enterprise Area



7.1.5 Open Space, Sports and Recreation Needs Study (OSR)

City of Sydney (CoS)

This Study was compiled by the City of Sydney to provide strategies and plans or delivery of various Open Space and Recreation needs in the City of Sydney LGA into the future. Across 5 Volumes, recommendations for future planning, provisions, development and management of open space. The Study is based on research and analysis undertaken by the City of Sydney, including a detailed Sports Facilities Demand Study.

The study is primarily focussed on public open space larger than 50m² in area for which the City of Sydney has either ownership, Trustee management, or care control and management responsibility.

The Study Report has defined using the City Villages from Sustainable 2030 Open Space needs.

The BRC sits majority within Redfern Street and partially within Green Square and City south (southern portions near McEvoy Street).

The document acknowledges the valuable of open space are threefold: social, economic and Environmental.

Strategic Directions and a Strategy Action plan have been outlined in Section 6 of Volume 1 and provide 9 strategic directions, a number of recommendations and actions to contribute to successful implementation.

A Summary of each of the 5 Volumes is provided adjacent. The Relevant Study Areas for the Botany Road Corridor within this Open Space, Sports and Recreation Needs Study are:

- Redfern Street Village
- Green Square and City South

Volume 1

Volume 2

Volume 3

Volume 4

Volume 5



Volume 1 - The Strategy

This volume outline Current Open Space, Sports and Recreation Provisions, Outlines Key Issues and Drivers, as well as providing Nine Strategic Directions for more Open Space, Sports and Recreation.

The Current Open Space, Sports and Recreation Network:

The City of Sydney covers an area of 26.15 square kilometres (or 2,615 hectares) with a population of approximately 200,000 people.

The City owns or manages approximately 189.5ha of public open space and when combined with the public open space which is managed by other authorities, there is a total of approximately 386ha.

This represents 14.8% of the City's total land area.

Parks with the BRC, such as Redfern Park and Alexandria Park, were born out of the Nineteenth Century Parks Movement.

This volume provides maps and data on Existing Open Space classifications to reflect the level of facilities / amenities, and population catchment. These facilities include broad categories of:

- Parks
- Foreshore Parks
- Local Neighbourhood Parks
- Civic / Urban Spaces
- Street Closures
- Ancillary / Links

Broad landscape setting type classifications have also been applied to describe the visual character or "look" of the various open space to be found across the City.

These classifications are detailed in Volume 3, Section 1.0 of the Study in more detail.

Diverse Types of City Managed Facilities have been identified to include:

- Aquatic Centres
- Playing Fields
- Court Spaces
- Indoor Recreation
- Playground
- Skate Parks

Other spaces by Other Government or Private providers within the City of Sydney LGA are:

Key Issues and Drivers Identified

Summarised, Future Challenges include:

- **Population and Density** - Generally, more residents, more workers and visitors means increasing density. The projected rate of population growth of 281,000 residents by 2036 will place increasing pressure on existing open space resources and facilities to meet demand. 74.5% of the city's population live in high density accommodation with city wide residential density projected to increase from 8,068 people/km² to 10,764 people/km² by 2036. In the Green Square urban renewal area, future density will be around 22,000 people/km².
- **More open space and recreation facilities will be required** - More open space is required through strategy in order to meet the growing demand.
- **Urban Development under Masterplanning by State Government** - There is a need and opportunity to dedicate open space provision in the urban development currently under master-planning.
- **District Planning** - Open space outside the city boundary and at a broader district level plays an important role in overall opportunities for people to access quality and diverse open space and recreation opportunities.
- **Small Park Sizes** - 72% of the city's parks are less than 3,000m² in area which limits the range and diversity of facilities able to be accommodated.
- **Recreation Trends**
- **Infrastructure Drivers** - major infrastructure projects planned within next 5-15 years will result in opportunities or have impact on the network.
- **Environmental Drivers** - the City's environmental targets.
- **Open Space provision** - Benchmarks, available provisions, land availability, District Provision, Open Space Access, Open Space quality.
- **Maintenance and Park Management**
- **Recreation Facilities and Public space use**

Since 2004, 18.3ha of City owned or managed additional open space has been added to the network.

The Current Open Space Provisions

This includes:

- 7.2ha added to City open space network
- 11.1ha by other Agencies

The State Government's Recreation and Open Space Planning Guidelines for Local Government (Department of Planning 2010), provide default standards for open space planning in NSW. These include 9% of site area for local and district level open space provision and 15% of site area including regional open space provision.

- The projected 36ha of open space to be added to the City's network by 2030 will increase open space site area to 16.2%.
- This does not include open space provision projected from State Government urban renewal areas.

The Current Recreation Facilities Provision

The City's open space network is the venue for many types of recreation for the City's residents, workers and visitors. Whether simply walking for exercise or playing a team sport the demands for recreation is many and varied.

Capital Works Improvements

The City of Sydney has undertaken a major capital works program, with over \$270 million spent across its open space network since 2004. This has resulted in substantial improvements and increase in the recreational capacity and quality of the parks, to better meet growing and changing community demand.

Open Space benchmarks

This Study has referenced the State Government's Recreation and Open Space Planning Guidelines for Local Government (Department of Planning 2010) which are considered default standards for open space planning in NSW.

These default standards include:

- 9% of site area for local and district level open space provision; and
- 15% of site area including regional open space provision.

The current open space provision of 386 hectares represents 14.8% of the total land area in the City LGA.

The projected 36ha of open space to be added to the City's network by 2030 will increase open space site area to 16.2%.

Strategic Directions

Nine Strategic Direction have been outlined in Section 1.0 and elaborated in Section 6.1 of this document to address the Open Space, Sports and Recreation needs of the LGA. The following text has been taken directly from the Strategic Directions:

1. More open space for a growing population

- Land Acquisition criteria
- Priority given to acquisition of open space large enough to accommodate field sports
- Targets acquisition to address shortages particularly in Alexandria to ensure 400m walk to a park
- Include new open space by other agencies to the open space network. This total includes 5.3 ha allocated in the City's Draft Contributions Plan for open space acquisition, 21.1 ha of open space under planning or clearly articulated in the City's planning controls for dedication and 9.9 ha of provision identified in various planning controls or strategic documents that will require certain development scenarios and financial assessment to provide certainty of delivery.

2. Better Parks, Sport and Recreation

- Limited opportunity to increase quantity of open space means qualitative improvements are central considerations
- Over \$400 million allocated to parks, sport and recreation facilities in the City's 10 Year Capital

- Works Program.
- Upgrades are planned to Alexandria Park and Waterloo Park / Oval.
- Ongoing rollout of small parks renewal program.
- Capacity improvements to sports fields through use of synthetic surfaces to increase available hours for use.
- Support facilities such as signage, park furniture and accessible toilet.

3. Improve the provision and Diversity of Sport and Recreation Facilities

- An appropriate range and distribution of recreation and sporting opportunities is critical to address identified needs and demand.
 - Flexibility and multi-purpose use need to be a key principle when planning sport and recreation facilities.
 - 5 new sports fields are estimated to the provided consisting of Gunyama Park, Green Square, Perry Park, Alexandria and 2-3 fields through s.94 open space acquisition plan funding.
 - Develop partnerships with schools and other agencies to increase public access to sport field facilities.
 - 2 indoor and 2 outdoor courts at Perry Park, Alexandria.
 - Provision of half / non-standard size courts in new and upgrade park projects when feasible.
 - Recommendation to assess feasibility to provide City Centre play space;
 - Increasing diversity of recreation facilities such as outdoor gyms, walking paths, chess boards and amenity to support companion animal exercise.
- ### 4. Access to Recreation in the City will be Inclusive and Accessible for All

- Inclusion and accessibility will be a priority through a focus on physical access, the provision of inclusive experiences and information in appropriate formats.
- Development of a network in accordance with draft Public Domain Access Policy that is currently under development.

5. Linking the Network

- The City's Liveable Green Network and at a wider sub regional level the State Governments Sydney Green Grid will make walking and cycling a viable option to access the open

- space, sport and recreation network as well as be part of a greater recreation fitness network.
- Improving access to open space, sport and recreation facilities will alleviate open space deficits by providing better connections and crossing points to create a large catchment area.

- Liveable Green Network Implementation Program to facilitate links along Alexandria Canal and Harbour Foreshore;
- Advocate for linkages in Central to Eveleigh;
- Support and collaboration to implement Sydney Green Grid linkages;
- Advocate for pedestrian link to Garden Island parkland.

6. Involving the Community

- Includes both the continuance of the City's extensive consultation processes when developing the open space
- Promoting and programming activities to encourage participation and use of the network.
- Ongoing support for community gardens network and bushcare volunteer programs
- Increased community involvement in the management of parks;
- Enhanced interpretation of parks and open space.
- Use of parks and open spaces for community run events;

7. Recreation will be Environmentally Sustainable

- Environmental performance and sustainability of the network will be an ongoing feature of the open space, sport and recreation facility improvements.

8. Looking After our Parks, Sport and Recreation facilities

- A consolidated capital works program with a commitment to ongoing maintenance and asset management will assist to maintain quality and amenity into the future.

9. Beyond the Boundary

- Working with the Greater Sydney Commission, strategically identify, plan, develop and manage open space, sport and recreation opportunities.
- Effective partnering with relevant stakeholders

including neighbouring councils to maximise the opportunities to provide facilities to meet a growing community need.

- Co-ordinated strategic Central District planning between local councils and relevant agencies
- Advocate and support the Sydney Green Grid

Strategy Action Plan

Strategy Action Plan has outlined under each 9 directions various performance criteria, with Actions / Project initiatives, timeframes and references. Various References to other City of Sydney Planning frameworks are made and should be referenced against each individual direction if implemented.

Timelines for implementation are defined as:

- 1. Underway / Ongoing
- 2. Short-term: 1-5 years
- 3. Medium term: 6-10 years
- 4. Long term: 11-15 years

Improving the Network

Improving the Network Section provides a snapshot of capital work since 2004 and include generally:

- Recreation facility improvements
- Facilities responding to recreation trends
- Improving capacity of sports field
- Open space linkages - Green street programs, Liveable Green Network, Better Linkages Between Parks, Improving Harbour Foreshore Access
- Better Information and Support Facilities
- New Open space provisions - since 2004, 7.2ha added, with 11.1ha added by other agencies
- Recognition in design excellence
- Open space accessibility improvements
- Environmental Initiatives
- Community Involvement

Recommendations and Directions Specific to BRC

Green network links have been identified from Central to Eveleigh as have Various Park improvements to Alexandria Park.

-Direction 1.7 - Investigate feasibility of extending the area of Alexandria Park through redesign of Park Street. (This would provide improved connection to Alexandria Park Community School, if access becomes available).

-Direction 1.6 - Urban Renewal Areas - Ensure urban renewal master plans provide quality open space and recreation facility provision to accommodate future population growth and recreation needs. - Central to Eveleigh;

-Direction 1.11 - Secure care and control of existing / potential open space owned by other State Government Authorities - Daniel Dawson Reserve, Alexandria (Rail Corporation NSW); Marion Street Park, Redfern (Rail Corporation NSW);

-Direction 2.7 - Better support facilities - Toilets to Alexandria Park

-Directions 3.1 - Existing capital works upgrades to be considered for Alexandria Park; and Waterloo Oval

-Directions 3.3 - Advocate to State Government for provision of open space to accommodate active recreation in Central to Eveleigh Corridor

-Direction 3.8 - Partnerships to Increase Sports Field provision, Potential school sites to approach include: - Alexandria Park Community School. Other Partnership opportunities National Centre of Indigenous Excellence, Redfern.

-Direction 3.20 - Planned Full Size Outdoor Court Provision - Alexandria Park – expand existing tennis courts to four court facility (option could be in partnership with School)

-Direction 3.21 - Planned Outdoor Half Court / Practice Court Provision - South Sydney Hospital Site

-Direction 3.22 - Improve the provision for people to participate in tennis across the City - Expand the number of courts at Alexandria Park to create a four court tennis/multi-use complex (retaining multi-use court). Upgrade the Alexandria Park tennis facility building.

-Direction 3.26 - Partnerships - Alexandria Community School,

-Direction 3.32 - Park Walking Loops in larger parks to be provided at Alexandria Park and Waterloo Park

-Direction 4.7 - Parks and recreational facilities need to be designed to be accessible and enjoyable for all ages.

- (a) Aboriginal and Torres Strait Islander Community - Provide acknowledgement of Country on park signage; Undertake consultation with the Aboriginal & Torres Strait Islander Advisory Panel and community on Recreation / Sport needs and issues; The open space network as a venue to celebrate Aboriginal culture and heritage.

- (e) Youth - Continue to maintain the existing youth facilities accommodating youth recreation at Redfern Community Centre (adjacent to the BRC)

-Direction 5.1 - Form open space links between areas of significant parkland - Central to Eveleigh Corridor

-Direction 5.4 - Sydney Green Grid - collaborate with Department of Planning on Green Grid Project to ensure co-ordination of open space connections

-Direction 6.1 - Effective public consultation processes on the development and use of open space, sport and recreation facilities

-Direction 6.2 - Enhance community enjoyment and appreciation of parks through interpretation - Continue parks interpretation strategy that addresses Aboriginal significance;

-Direction 7.1 - City parks and recreation operations will demonstrate Australian leadership in energy and water efficiency, recycled water, low carbon and renewable energy

-Direction 7.2 - Increase biodiversity by provision of and providing endemic species across the open space network for food habitat creation - Plant indigenous species in open space areas, where possible and practical, unless there is an established park / heritage landscape character, a particular functional need, or a specific design feature that requires another species.

-Direction 9.1 - Effective partnerships - Ensure regular liaison and cooperative planning with various non-CoS Agencies

-Direction 9.6 - Linkages - Sydney Green Grid Project - The Sydney Green Grid identifies important regional trails across Metropolitan Sydney, many linking to the City. Of particular relevance to the City of Sydney, Consideration of how the BRC links into these greater networks as sub linkages is important.

Key Diagrams from Volume 1

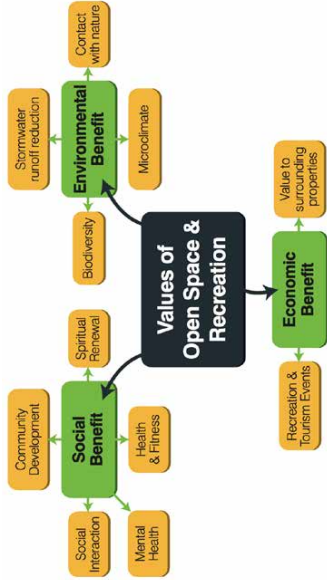
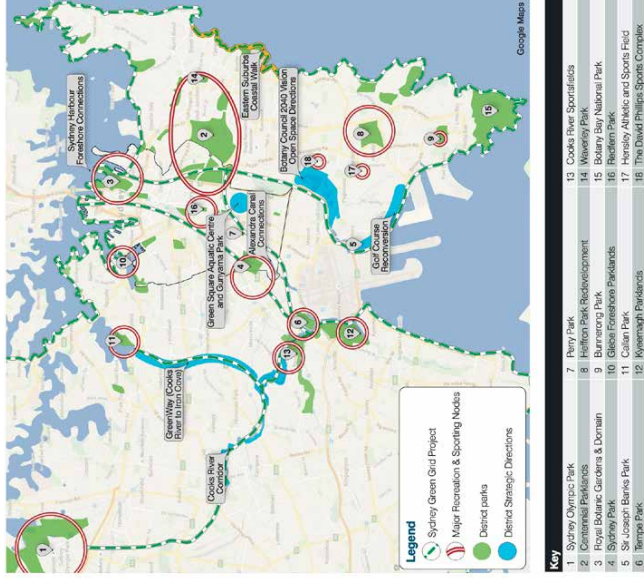
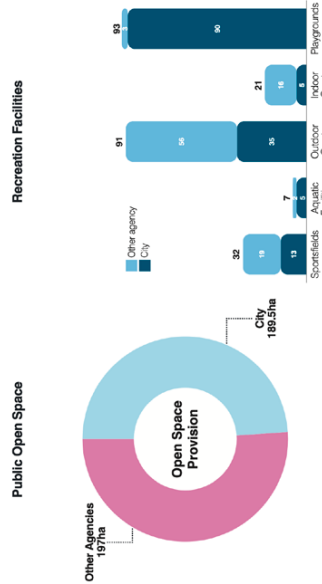
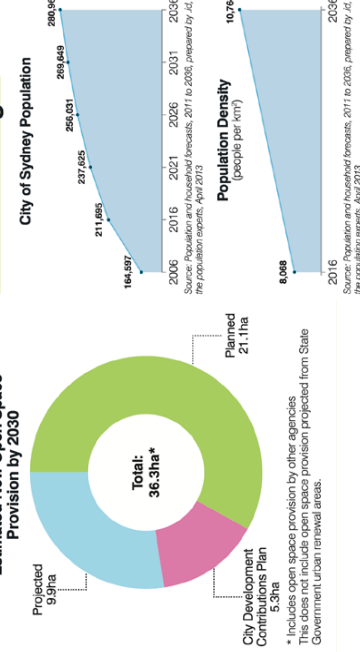


Figure 4
Source: Modified SUPER model

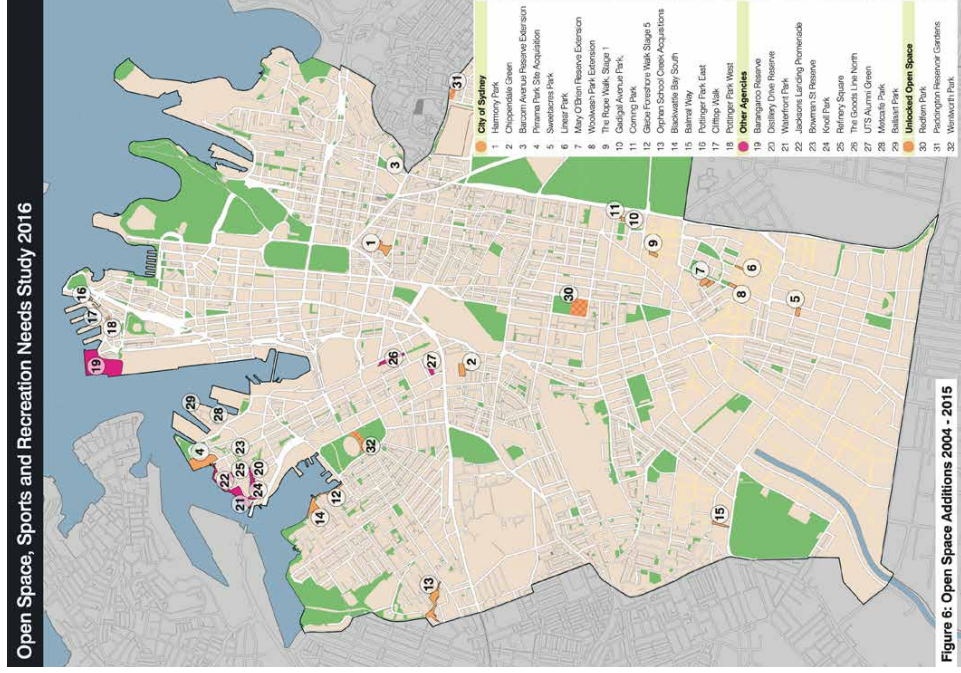
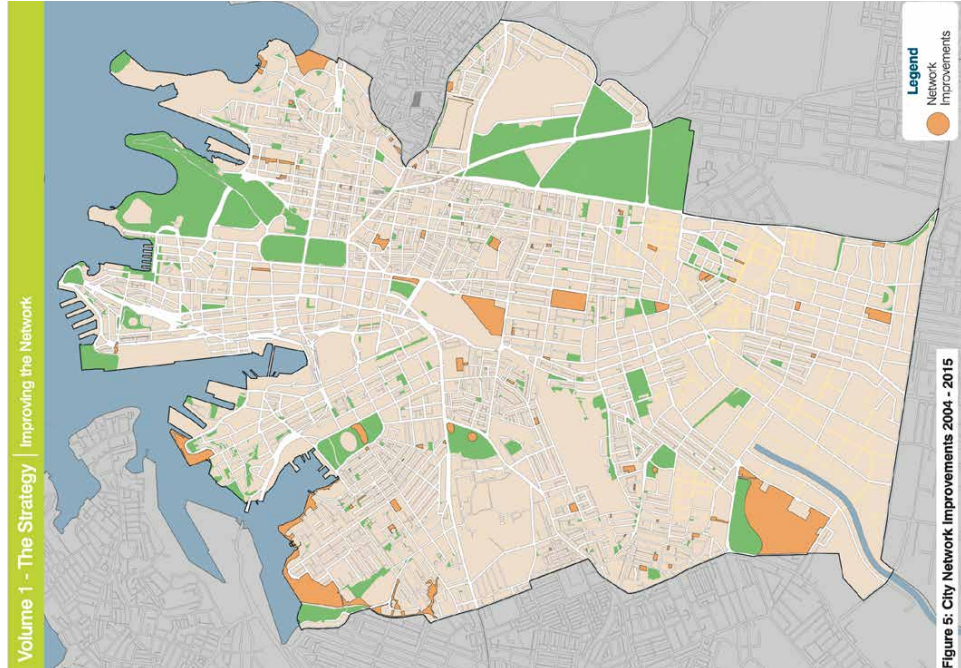
Current Situation



Future Challenges



Key Diagrams from Volume 1 cont.



Key Diagrams from Volume 1 cont.

Volume 1 - The Strategy | Strategy Plan Mapping

Redfern Street

	Now 2016	Future 2036
Population Residents	23,383	30,040
Density (people per km ²)	5,869 / km ²	11,678 / km ²
Open Space Provision (hectares)	24.58 ha	24.50 ha

Key Directions/Projects

Ref	Map Ref	Refer Section 6.2 Reference Number	Refer Section 6.4 Reference Number	Refer Section 6.4 Reference Number
1	Central to Livelight*	1.1, 1.6, 5.1, 3.3	5.6, 7	5.6, 7
2	Victoria Park	2.1	11	11
3	Victoria Park Pool	3.9	11	11
4	Small Parks Upgrade Program	2.3	27	27
5	Prince Alfred Park	3.16	-	-
6	Daniel Dawson Reserve	6.2	-	-
7	Redfern Community Centre Park	2.3	-	-
8	Partnership	3.8	-	-

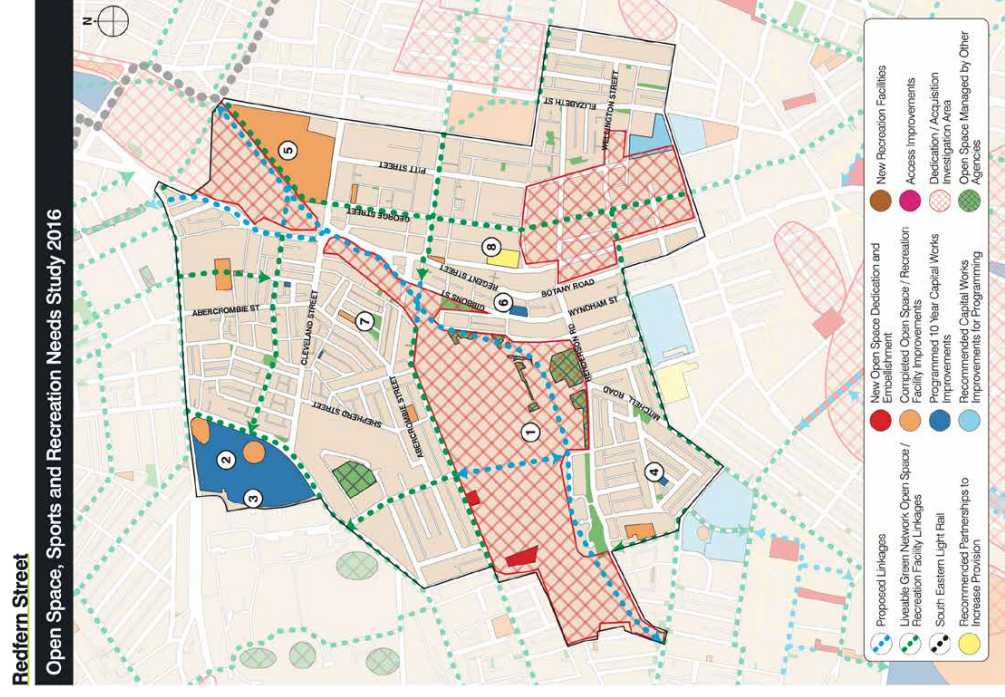
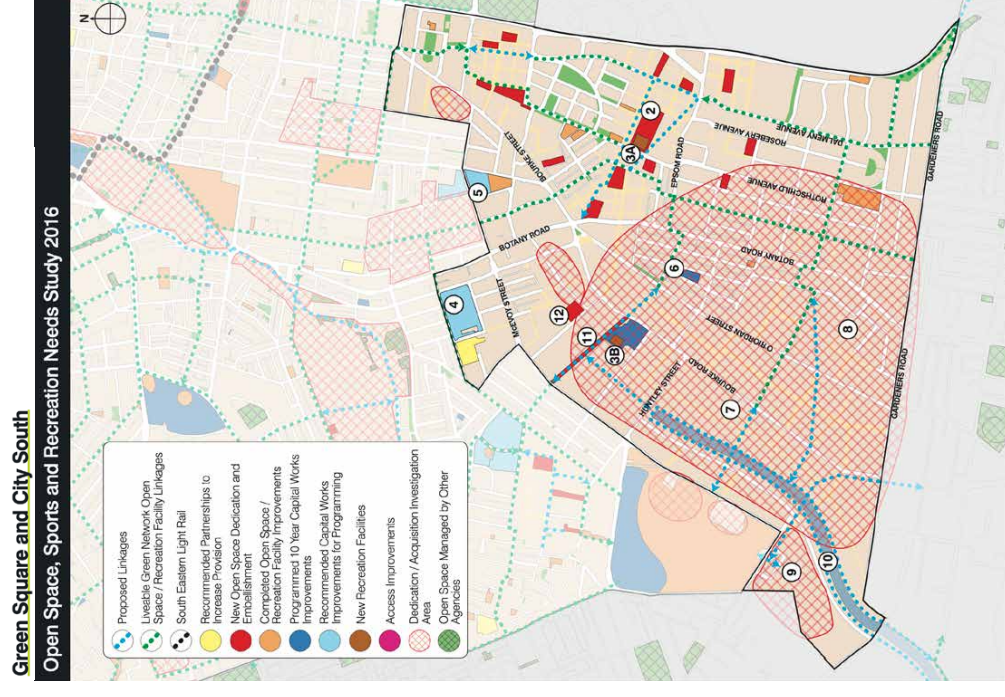
Volume 1 - The Strategy | Strategy Plan Mapping

Green Square and City South

	Now 2016	Future 2036
Population Residents	30,500	58,109
Density (people per km ²)	7,860 / km ²	14,889 / km ²
Open Space Provision (hectares)	20.04 ha	41.11 ha

Key Directions/Projects

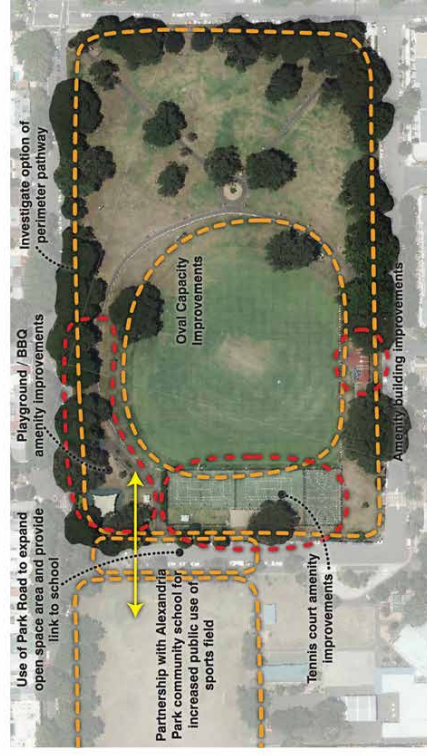
Map Ref	Refer Section 6.2 Reference Number	Refer Section 6.4 Reference Number
1	Green Square Urban Renewal New Public Space Provision	1.1
2	New District Park Provision	1.1, 3.11, 3.13, 7.1
3	New Recreation Facilities	3.9, 3.29
4	Alexandra Park	1.7, 1.10, 2.7
5	Waterloo Park	3.1, 3.22
6	Beaconsfield Park	3.1
7	Open Space Acquisition Investigation area - Sportsfields	2.3
8	Open Space Acquisition Investigation area - Local park	1.1, 1.3
9	Westconnex St Peters Interchange	1.1, 1.4
10	Alexandra Canal	1.1, 1.2
11	Sydney Water - Epam to Bourke Road Easement	1.5, 5.1
12	41 Mandible Street	1.5, 5.1



Key Diagrams from Volume 1 cont.

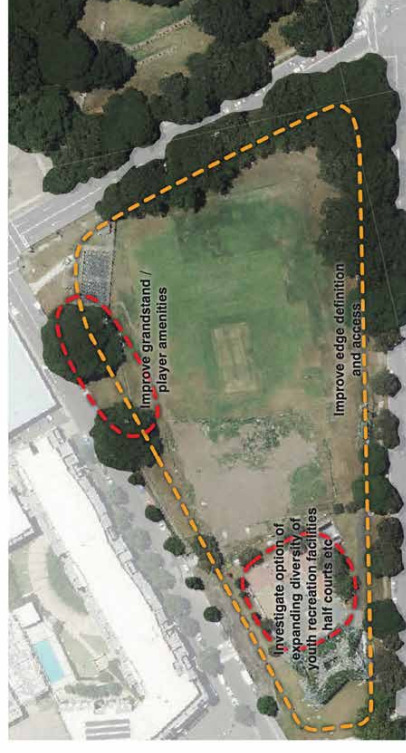
16. Alexandria Park

Background	Alexandria Park has a history that can be traced back to 1889 when an area of approximately 4 hectares was proclaimed under the Public Parks Act of 1884. The Park includes an enclosed active sports oval to one end of the open space and peripheral planting of fig trees.
Strategic Directions	- More Open Space for a Growing Population - Better Parks, Sport and Recreation facilities - Improve the Provision and Diversity of Sport and Recreation Facilities - Access to Recreation in the City will be Inclusive and Accessible for All - Linking the Network - Involving the Community - Recreation will be Environmentally Sustainable - Looking After Our Parks, Sport and Recreation Facilities - Beyond the Boundary
Project Status	- Future improvements to Alexandria Park should recognise its district and local significance both for active recreation as well as a place for social interaction and relaxation. - Key considerations: - Review of playground facilities; - Feasibility to upgrade court facilities from two courts to a four court facility; - Upgrade of amenities / toilet facilities; - Boundary walking path; - Habitat creation; - Expand usable public space at Park Road closure to provide direct link to school sports field; - Negotiate partnership with Alexandria Park Community School to allow after hours community use of school sports field to reinforce precinct as a place of active recreation. - Environmental performance initiatives to contribute to the City and LGA's environmental targets.
References	- Project to be considered for 10 year capital works program - Alexandria Park Plan of Management 1990



10. Waterloo Park and Oval

Background	Waterloo Park and Oval is an important green space in the southern part of the City. With increase in surrounding residential density the Park and Oval will need to function both as a community park as well as a venue for organised sport. Two distinct park areas are separated by McEvoy Street. The northern Park area distinctive landscape of Mt Carmel grass hill slopes with mature fig planting and a playground facility. Waterloo Oval features a sporting field used for cricket and rugby league, as well as an upgraded skateboard facilities and award winning South Sydney Youth Services building. Drainage to the Oval has been upgraded to improve capacity.
Strategic Directions	- More Open Space for a Growing Population - Better Parks, Sport and Recreation facilities - Improve the Provision and Diversity of Sport and Recreation Facilities - Access to Recreation in the City will be Inclusive and Accessible for All - Linking the Network - Involving the Community - Recreation will be Environmentally Sustainable - Looking After Our Parks, Sport and Recreation Facilities - Beyond the Boundary
Project Status	- Prepare a master plan for Waterloo Park and Oval that considers: - Provision of safe pedestrian crossing points at McEvoy St and Elizabeth St; - Upgrade boundary definition of Oval and Park that includes oval fencing, perimeter circuit pathway for walking and exercise; - Upgrade grandstand / toilet / change room facilities. Shade provision for grandstand spectators; - Tree management of existing mature fig trees; - Address any proposed edge impacts from RMS widening on McEvoy St; - Investigate option to co-locate additional youth recreational facilities next to skate park. - Environmental performance to contribute to the City and LGA's environmental targets. - Project to be considered for 10 year capital works program
References	



Volume 2 - Open Space Delivery Plan

This volume outlines the City's Plans to increase Open Space Provisions, through various mechanisms such as Dedications, Acquisitions, making the most of what is already within the LGA and looking at Urban Renewal and State Government collaboration.

Summary of Dedications and Acquisitions:

- Within Redfern Street Village there are no planned Dedications (in area m²).
- Within Green Square 70,900m² of dedications is planned.
- Of Open Space projected dedications, the vast majority are planned as either 'Parks or Ancillary space'.
- There are no Planned Open Space Acquisitions or Dedications within the BRC.
- There are two open space acquisitions planned directly south of the BRC:
 - 1) McEvoy East & East Alexandria - Draft Southern Employment Lands Infrastructure Plan, March 2015 One local park adjoining Balaclava Lane.
 - 2) McEvoy East & East Alexandria - Draft Southern Employment Lands Infrastructure Plan, March 2015.

Liveable green Network

The Liveable Green Network will operate as a Linear Park with an area of about 1,200 sqm being in the McEvoy East and East Alexandria locality.

State Government Masterplanning

The Central to Eveleigh Corridor is acknowledged as an urban renewal corridor under section 4.4 – "State Government Masterplanning". Various Linkages are acknowledged as opportunities to implement the Sustainable Sydney 2030, and the City's Liveable Green Network. Various Recommendations and general principles have been set up for this area including:

- Development should provide a minimum of 15% of the site as public open space, (applies to developable land only).
- All residents should be within 400 metres of local open space.

- Open spaces should be connected by green streets with pedestrian and cycle priority.
- Spaces should be large enough to be flexibly programmed, allowing for overlapping activities and responding to changes in demand over the life of the development.
- Public open spaces should be designed to provide a diversity of settings, activities and experiences.
- Public open space must be located and designed to be clearly recognised as public, with streets on all sides, and a high level of solar access to encourage plant growth and promote use.

The Following is taken directly from the Plan:

North Eveleigh Precinct:

There is an approved Concept Plan for development at North Eveleigh that includes the following areas of open space and linkages:

- a large area of open space at the western end of the site, adjacent to Ivery's Lane, of approximately 3,350m²;
- two smaller areas of open space, one of 446m², another of 280m²; and
- a public domain link connecting through the site to Golden Grove Street.

Development at North Eveleigh should at minimum implement the approved public open spaces in the Concept Plan. Should there be an increase in the expected number of residents, then there must be a proportional increase in the amount of open space.

South Eveleigh Precinct:

Renewal at South Eveleigh provides the opportunity to expand on the existing open space of Vice Chancellors Oval, South Sydney Hobart Park, and the tennis courts to create an active sports precinct with court spaces, half-size playing fields, and pathway loops with outdoor gym equipment.

Australian Technology Park

The Australian Technology Park contains a network of streets, plazas, recreation facilities and open spaces available for public use. This network should be maintained and added to where possible. To secure their availability as public spaces, they should be dedicated as public streets and public open space to the City of Sydney.

Waterloo Estate precinct

Renewal at the Waterloo Estate precinct will be driven by the location of the new Waterloo Metro station and is expected to see significant additional housing and employment, as well as the replacement of the existing 2,000 social housing units. The future of Waterloo will be as dense, mixed-use precinct with a public transport focus.

UrbanGrowth have proposed a new public plaza linking the new metro station to the new urban neighbourhood, and this is strongly supported. Planning for open space at Waterloo Estate Precinct should:

- Provide a 9 - 15% of the site as public open space predominately as parks with a minimum area of 5,000m² each fully surrounded by streets.
- With high density scenarios 15% of site area is required to provide an adequate amount of open space per resident.
- New public open spaces should be part of a public domain network linked by green streets with cycle and pedestrian priority.

Redfern Station precinct

Development at Redfern Station Precinct, including the railway land between Carriageworks and Redfern Station, will involve an improved Redfern Station, and new jobs, housing, and retail land uses. Part of the precinct has an approved Concept Plan, which includes the following areas of public open space:

- one at the eastern part of the site, of 2,668m², and
- one at the 'fan of tracks', of 2,637m².

Development should at minimum implement the approved public open spaces in the Concept Plan. Should there be an increase in the expected number of residents and workers, then there should be a proportional increase in the amount of open space. Improvements at Redfern Station could include airspace development over the rail corridor, which creates an opportunity to provide new open space or a large public plaza, connecting North Eveleigh, Lawson Square, and the Australian Technology Park.

Redfern Estate precinct

There are currently no details on proposed urban renewal at the Redfern Estate Precinct.

Public open space for this precinct should follow the general Principles for open space provision identified in this section.

Sustainable Sydney 2030

Sustainable Sydney 2030 identifies the importance of cycle and pedestrian links over the rail corridor, to better connect communities north and south of the corridor with district and regional open space and recreation facilities.

As part of the vision for the Central to Eveleigh project, UrbanGrowth NSW have committed to improving and creating crossings at the railway corridor to provide better walking, cycling and public transport connections between major local places and activities.

The City's Liveable Green network identifies a rail crossing at Codrington Street as an important pedestrian and regional cycling connection.

City Open Space Acquisition Program Section

The City has reviewed its Section 94 Contributions Plan 2006 which includes a review of open space delivery.

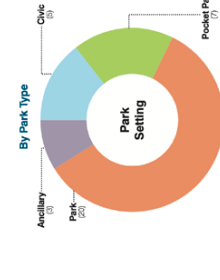
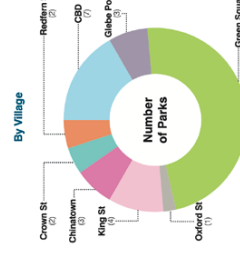
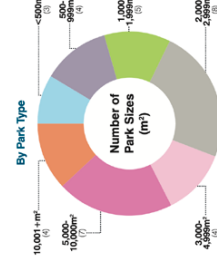
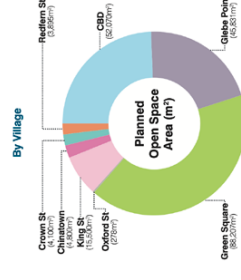
- Alexandria Park is also listed an urban renewal precinct for Alexandria Park.
- Australian Technology Park and the top portion of the BRC corridor is noted as part of the Redfern Waterloo Authority Contribution Plan 2006.

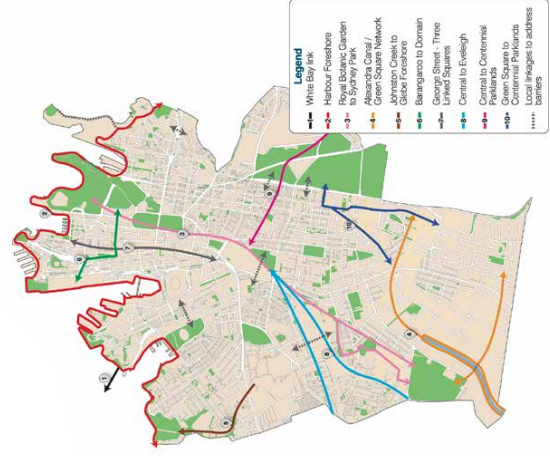
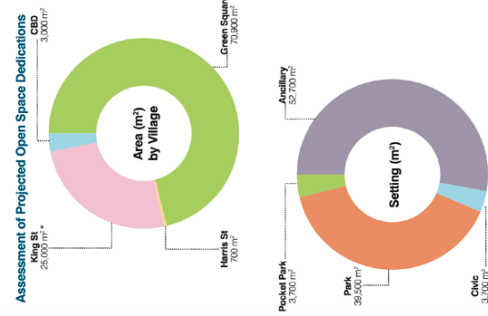
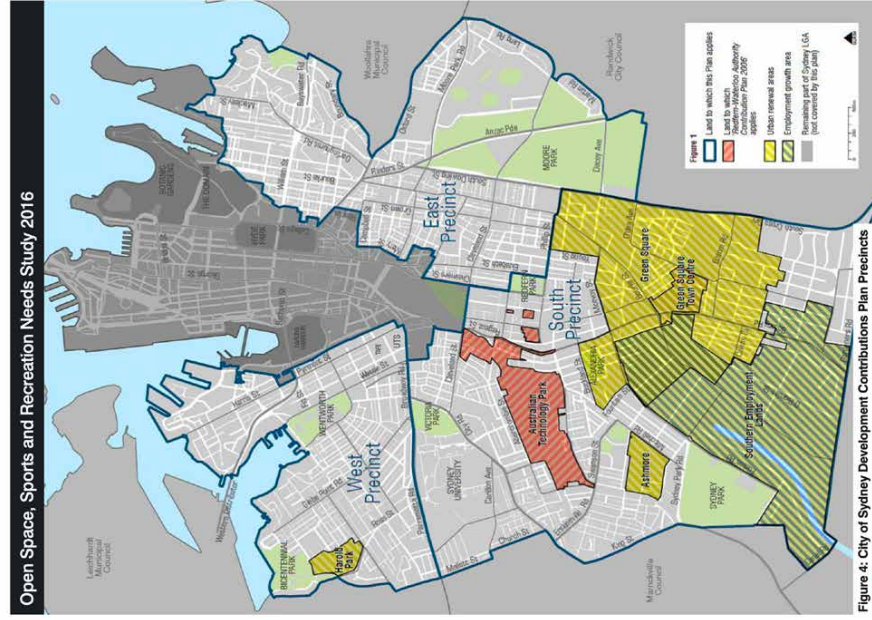
"Making more of what we have"

Under Partnerships:

- Alexandria Park Community School - 10,000m² available to allow opportunity for additional reduced sized field adjacent to Alexandria Park.

Key Diagrams from Volume 2.





Volume 3 - Research and Analysis

In this Volume, Open Space hierarchy classifications have been assigned to reflect the level of facilities/amenities, and population catchment.

The Open Space Hierarchy classifications are:

- Regional
- District
- Local
- Neighbourhood

Open Space Hierarchy Data relevant to the BRC:

- Number of Open Space within Redfern Street is:

- Ancillary – 4
 - Park – 9
 - Pocket Park – 26
 - Street Closures – 12
- Between 2004 – 2015 no open space additions were made within or directly adjacent to the BRC corridor.
- Open space provision in Redfern Street is majority owned by the City – 22.59 ha (CoS) and 1.99 (other agencies).

- Open space provision in Green Square is majority owned by the City 20.64 ha (CoS) and negligible by other agencies.

- Vast Majority of Parks are 50-499 m2 in Redfern Street Area.

- The Railway Corridor is identified as a physical open space barrier on "Open Space Barriers" Map on page 33. This corridor limits access between Surry Hills - Chippendale and Alexandra - Darlington/ Newtown.

- An Open Space linkage has been identified from Royal Botanic Garden to Sydney Park along the northern edge of the BRC, adjacent to the Railway and running approximately along or adjacent to Gibbons Street / Wyndham Street.

- Various Corridors are identified as part of the Liveable Green Network. Botany Road is identified as a Citywide Pedestrian Priority Network, Cornwallis and Garden Street are identified as LGN Pedestrian and Cycle Networks.

- A Sydney Green Grid Primary Link crosses the Botany Road Corridor in the south, near McEvoy Street.

- Improvements to Alexandria Park are classified for 10-year capital Works.

Volume 4 - Sports Facilities Demand

This volume acknowledges the important benefits that participation in sport has to a community including physical, mental health, increased self-esteem, personal development, social inclusion, connectedness and general opportunities for community building.

The City is acknowledged as experiencing significant competing demands for space with urban development and other land uses and therefore the City needs to look at new and innovative ways to meet demand for sporting facilities.

This section provides further research and detail to support Volumes 1-3 and the recommendations made in those sections regarding sporting facilities.

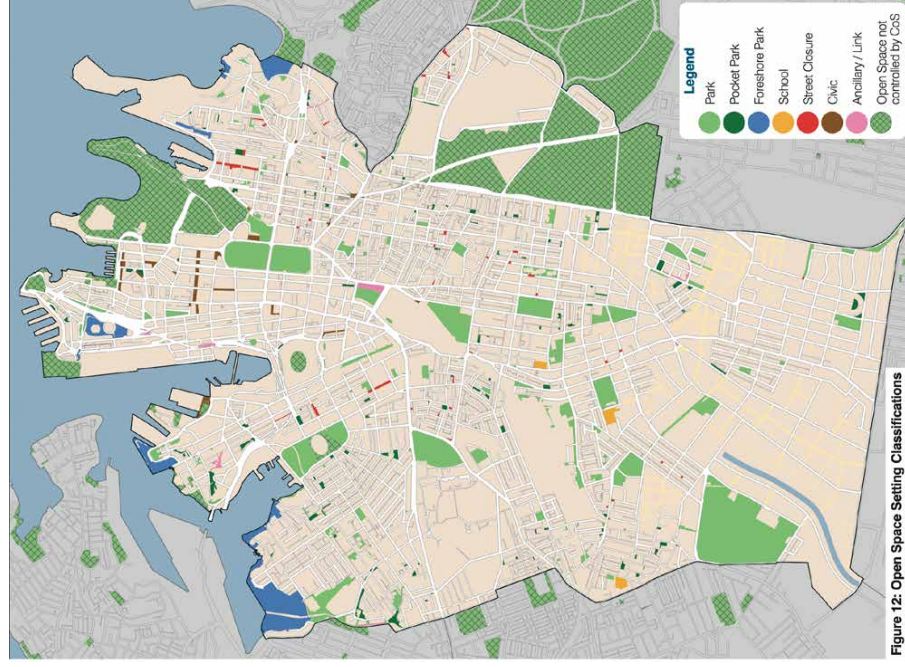
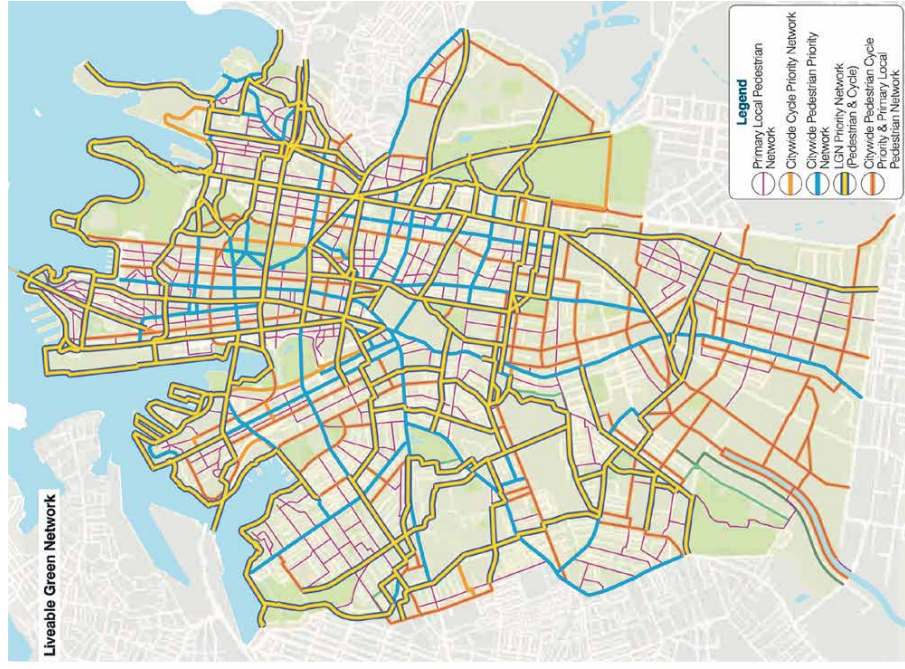
This Volume provides City of Sydney with an up-to-date and evidence-based understanding of current and future participation and demand for sporting facilities in the City. The volume's main role will be to inform Council's decisions on provision of sporting facilities for sports clubs and associations, and active recreational use in the City.

Volume 5 - Appendices

Includes:

- 1 City of Sydney created Open Space list with suburb, name, number address, area (m2), district, setting classification, functional classification, hierarchy classification and ownership noted
- 2 A list of estimated number of people participating in sport and the associated participation rate (5) per person for the City of Sydney LGA
- 3 Information from the Australian Government – Australian Sports Commission ‘Participation in Exercise, Recreation and Sport Annual Report 2010’
- 4 Information from the Australian Government – Australian Sports Commission ‘Participation in Exercise, Recreation and Sport Childrens Report 2010’

Key Diagrams from Volume 3





7.1.6 Redfern-Waterloo Strategic Employment Study

BIS Oxford Economics, July 2018

The report is a Strategic Employment study of the Redfern/Waterloo area. The report looks at past and forecast growth in Metropolitan Sydney and the Botany Road Corridor Study Area and provides Recommended policy inclusions, forecast scenarios further population and employment growth in the decades ahead.

Current Redfern Waterloo Context

Historical growth across the study area is due to adhoc or incremental growth across a range of industry sectors.

The Eastern City District Plan sets out requirements for jobs that informs this study, and the study straddles the Harbour CBD and Innovation corridor economic zones.

The report uses the Redfern Street precinct as boundaries for it's study area.

In 2017, Large scale employers in the zone are Australia Post, The NQIE, and the ATP.

In 2012, 'Food and drink' and retail accounted for over one third of total number of businesses.

The study acknowledges that the study area is constrained in terms of employment growth by planning controls and built form that favour residential over commercial uses

The study area is well located for 'overflow demand' from the Sydney CBD and surrounds, including Surry Hills and Chippendale where availability and cost mean businesses may be unable to secure suitable spaces.

In 10 years to 2017, additional workers were accommodated in existing buildings, and a small numbers of new developments.

Current zoning and existing built form reduces the study area's stock and therefore demand is limited.

The study notes that with Mixed Use zoning, residential development is the more financially attractive. To accommodate future business land, the best prospects are to protect from further residential development in mixed use zoned areas.

The study recommends careful management of zoning, sites and property ownership, particularly in conjunction with the State Government.

Constraints and Opportunities

Key attractions of the area for businesses are:

- Proximity to the CBD,
- Proximity to workforce,
- Close Proximity to ATP,
- Development of Waterloo station and Sydney Metro,
- Proximity to Universities,
- Office rental differential to the Sydney CBD,
- and Transport links. Transport links were noted as key in the area to capture future employment as Redfern Station 500m walking radius captures only a portion of the study areas. Waterloo Station is expected to alleviate bottlenecks at Redfern Station, however existing bottlenecks are expected to weight heavily on potential in the area until Waterloo station is completed in 2024.

Barriers in the area for businesses are seen as:

- Lack of identifiable office precincts, (outside of ATP),
- shortage of available office and industrial space,
- rising office and industrial property occupancy costs,
- absence of passing traffic for retailers in some parts of the area,
- safety concerns,
- fragmented private property ownership preventing development,
- land scarcity and competing uses,
- transport bottle necks, and
- the absence of a retail hub for amenity.

Forecast growth in the Study Area

The study area's employment growth rate is forecast to outpace the metropolitan area between 2017 and 2036 at 1.9% growth, with 14,400 employee population.

The strong sectors anticipated to grow are health, education, professional and scientific, technical, accommodation, food services and retail. Some existing services are expected to contract including industrial, manufacturing, wholesale as they are displaced by growth in the area. Based on ANZSIC industry classifications, fastest growing industries are white collar sectors (admin, support services, professional, etc), whilst the shrinking sectors were wholesaling, manufacturing and transport.

In 2017, floorspace in the study area was a little under 2 million sqm, with the largest as 75% residential,

second largest as vacant space (89,000sqm) and then other at 64,000 sqm. The highest use non residential floor space is office space at 145,000 sqm (7.3% share). Australian technology park accounts for roughly one third the size of the Study Area (comprising around 30% non household floorspace and 36% of employment.

Demand for office space:

Vacancy rates have fallen in 2017 to between 5.5% and 3%, potentially due to the withdrawal of office spaces to conversions as Residential. The ATP makes up most of office space within the area. Real Estate Agents in the study area have commented that significant increase in occupancy costs act as a barrier to business looking to move or expand within the study area.

Demand for industrial Space:

Industrial space makes up 3% or around 70,000 sqm, most of which is along young street and Botany Road. Reduction in industrial space has meant a decline in industrial businesses in the area.

Demand for retail space:

According to City of Sydney FES Retail / restaurant / eating space is around 4% of the Area (73,000sqm. The significant retail areas are along Redfern Street, interspersed on Botany Road and Regent Street, and Cleveland street (outside the study area).

Space Use ratios:

In a Base case scenario prepared by the study, a total of 400,000 sqm of employment uses will be needed by 2036 for the study area.

Alternate scenarios developed to accommodate for the Waterloo Metro Station's commercial floorspace require additional 123,000 and 138,000 sqm to the base case scenario.

Capacity Study noted as required to be undertaken by the City of Sydney, to understand if there is sufficient permissible floorspace to meet future demand.

Key influences on Future demand:

- Land use zoning dictates what is permissible within precincts and can be an opportunity or constraint on supply side. Noting that once land is developed for residential, it is hard to convert back to employment land.
- Industry growth will be dependant on availability of accommodation, cost constraints and the presence of major employers.

- Employment allocation – location near key existing employment hubs combined with restricted space within the CBD may favour locating in the study area.

- The ATP - whilst located outside the park, currently captures overflow demand and provide amenity / services. However when this is completed in 2020, the overflow demand will be needed to be accommodated elsewhere.

- USYD – May look into channelling locations outside the campus in the future, as student population increases.

- RPA Hospital – Whilst outside the study area, this major employer will also be constrained by it's footprint in camperdown however it is noted that few staff frequent the area as it is too far away.

Scenarios

Four scenarios were developed for additional commercial uses, with two additional scenarios (5a and 5b) allowing for the Metro Quarter retail development to be completed at 2025.

Recommended Policy responses:

- Protect mixed use business zones from residential encroachment, particularly along Regent St, Botany Rd and Young St.
- Advocate delivery of significant employment spaces in urban renewal areas. Prospect lies in the Metro Quarter site, and the study area.
- Ensure coordinated approach with Local and State Government.
- Consider development capacity under FSR and height controls by considering transport links, retail amenity, existing clusters of related industry and buildings of sufficient and similar floor-plates – raising FSR and height is unlikely to succeed alone in attracting users.
- Investigate retail space design – modern ground floor retail premises within mixed use have been suggested to 'have design shortcomings (low ceiling heights etc) that limit the type of retailer.
- Ensure accessible infrastructure with employment growth – i.e.: Sydney Metro – is taken advantage of – and that Redfern Station railway bottleneck can be amended in the short term before the Waterloo Station is completed.
- Ensure that plans are developed with consideration of the Redfern to Eveleigh corridor, public housing estates and potential land on the southern side of the corridor.
- Docklands in Melbourne.
- Barangaroo in Sydney.
- King's Cross and Elephant and Castle in London.
- Brooklyn Navy Yards NY, USA.
- Hafencity in Hamburg, Germany.
- These projects are characterised by powerful delivery authority and land that was in public hands.
- Fine grain models:
- Surry Hills – noted as providing an example of how the Botany Road corridor may develop if left to it's own devices.
- Carrington Road, Marrickville – contrasting to Surry Hills, serves an example of successful cluster of creative industries developing with an older style inner west industrial precinct. It is noted that this is unlikely to suit Waterloo due to the lack of suitable industrial premises.
- These examples are characterised by being largely left to their own devices, with minimal intervention with planning instruments or infrastructure investment and could be considered 'urban renewal'.
- Brisbane's Fortitude Valley – revitalisation of industrial areas, with a now major commercial, retail and entertainment precinct growing.
- Fishermans Bend, Melbourne – may serve as a guide for future development of the Eveleigh to Central corridor and more closely resembles Green Square / Zetland.

Note: This study is done on a larger study area (Redfern-Waterloo) than the Botany Road Corridor.

Key diagrams are shown on the page over.

Fig. 6. Share of Gross Value Added by industry over time (%), Study Area

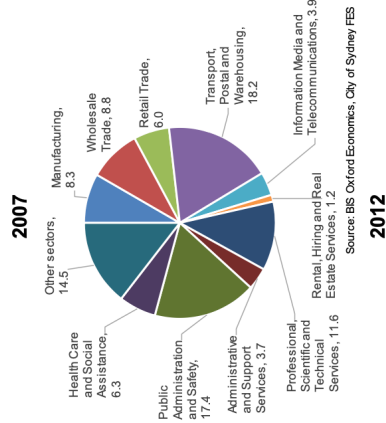


Fig. 5. Change in employment by industry, 2007–2017, Study Area

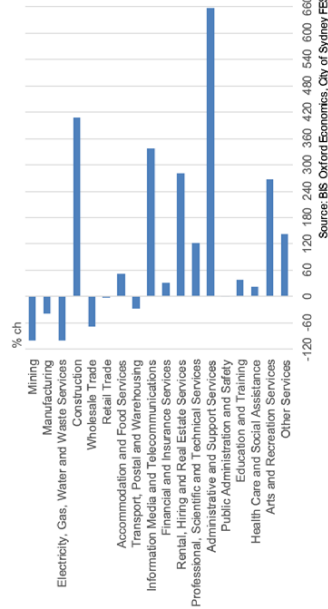


Fig. 10. Share of floorspace by industry, 2017, Study Area

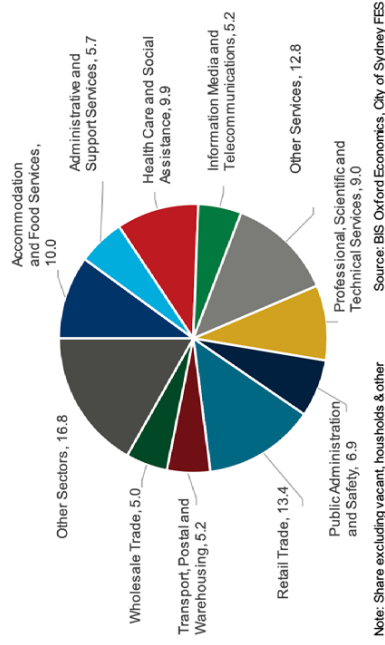


Fig. 11. Share of floorspace by space use, 2017 Study Area

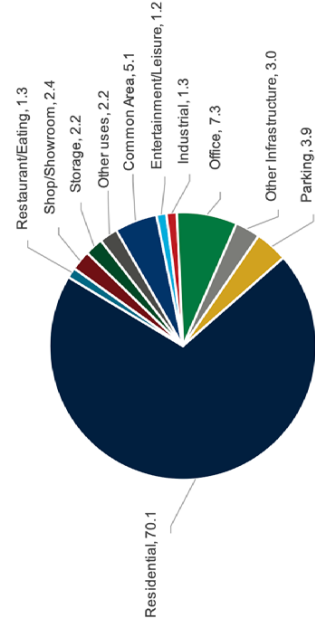


Fig. 20. Study Area total floorspace requirements by employment scenario

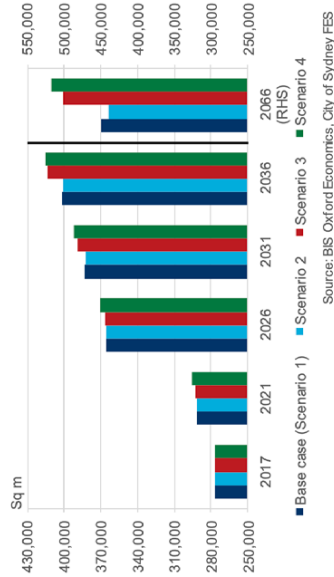
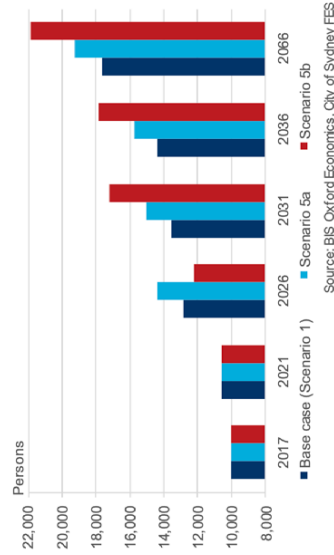


Fig. 3. Study Area total employment forecast scenarios





7.1.7 Planning Cultural Creation and Production - A Venue and Infrastructure Needs Analysis

Western Sydney University, 2018

The report establishes the nature and extent of future needs for creative space in the city – particularly cultural creation and production by conducting research and informed analysis of venues and infrastructure needs of the cultural and creative sectors in the City of Sydney.

Based on a research project conducted by the University of Western Sydney, the report details how creative spaces conduct their work in the City of Sydney, and also provides understanding of the social and economic environments within which the cultural and creative sector agents operate (particularly venues and sites).

The aim of the research and paper is to help to City of Sydney to identify appropriate and necessary policy response in areas such as strategic planning, use of property portfolios and advocacy to state government. The report research consists of quantitative analysis, interviews with Council, building experts, urban planners and key stakeholders as well as case studies of 18 cultural venues is provided with a focus on Redfern Village and Green Square area.

The report concludes that a 'place-keeping approach to urban cultural planning' would provide a framework for immediate and longer term demands. The report also advocates for a multi-layered approach to problem solving, to nurture cultural creation within the City.

Key facts about the Redfern Street Village area:

- 40% of creative businesses that existed in the areas had ceased operation of moved away in the 5 years after a Creative business boom.
- The creative sector accounts for 171 businesses, and a workforce of 2501 – accounting for 15% of all businesses, 14.5% of employment in the Village area.
- The area is experiencing rapid change, with a 67% surge in high density dwellings in 5 years (2011-2016) and growing pressure on limited warehouse and industrial buildings used for creative communities.
- Historical importance of Redfern Street Village is reflected in adoption of significant heritage buildings being adapted for creative use i.e.: Carriageworks, ATP.

- The Village is a vital hub for Aboriginal and Torres Strait Islander culture and heritage, with many organisation and projects located in Redfern street village such as the Eora Journey, Koori Radio, Moogahlin Performing Arts, Eora College and the Barani Black Theatre.

Overview of common issues arising in the Case Studies were:

- Having suitable and affordable creative space in proximity to the city centre was no longer suitable to be left to the market only.
- Governments at all levels have a role to play in subsidising spaces for cultural production, particularly those needed for creative practices that fall outside commercial and creative spheres.
- Spaces for creative pursuit come in a range of requirements – intimate, to quasi industrial to an entire neighbourhood - and it is often unclear how these spaces should be provided, funded and managed.
- Spaces must be 'affordable' as creative tenants often earn little from their work.
- Partnerships between developers, facility owners, local authorities are common and important – and should be supplemented by targeted grant funding from other government bodies. Government bodies or authorities need to underwrite provision for large scale cultural workshops.
- Rental spaces are often run by not-for-profit organisations, who currently take on the role once done by publicly owned entities.
- Creative Activities are often clustered with cognate activities, a range of business activities and Community Activities to establish a hub or 'incubator'.
- Security of tenure is important – Whilst short leases, negotiable leases and spaces to be rented by the hour are important for short term projects and 'Anchor' tenants are common and will attract ongoing business and interest.

Global and Regional Case Studies:

- Artists Studios London.
- Artscape Wychood barn – Toronto.
- Arts Precincts Melbourne – Abbotsford Convent and Collingwood Art Precinct.

Case Studies within the BRC Study Area

- **FBI Radio** – 44-54 Botany Road – a major free-to-air, community based broadcast studio with an

emphasis on youth and emerging culture works on a volunteer run basis. The Station features a community space, managing office, music library, broadcasting and recording studios. Pressure points in the area for FBI Radio are the increasing gentrification which appears to widen the gap between low income and wealthier residents, and the availability of venues which present problems such as rent, expensive relocation and Government restrictions around night time economy.

- **Studio Damien Butler** – 11 Gibbons Street Redfern – A contemporary art studio used by Sydney based artists, is on a City of Sydney lease. An advantage of this studios location is the proximity to transport, the city and airport due to the International showcase opportunities.

- **Grumpy Sailor** – 44-45 Botany Road – a multi-disciplinary technology creative company, on a 5 year lease to a private owner, needed a space with separate workshop and office spaces.

- **Ambush gallery** – 4 James Street Waterloo (just outside the study area) – a non profit gallery that provides a physical venue for street artists.

Case Studies outside the BRC Study Area

- **107 projects** – 107 Redfern Street, Redfern - A not-for-profit artist run creative space located in a decommissioned garage. Exhibition, gallery space, performance space, artist studio and co-working space. It is an important cultural hub for Redfern. It is a recipient of an accommodation grant and provides subsidised rent for artists. Advantages are that it is 'accessible to all kinds of stuff', but pressures are that there are tight budgets and staff are overworked. It's biggest challenge during set up was DA approval as the 107 Projects 'does not fit in a box' for approvals.

- **The Clothing Store** – 7 Carriageworks Way, Eveleigh – A community focused temporary arts and creative facility is partnered with Carriageworks allowing creative activation of the building on a temporary basis. Urban Growth is in partnership to leave 8 studios to emerging contemporary artists for subsidised, low rent within the historic warehouse. An advantage is the location which is in close proximity to Carriageworks, but resident artist face uncertainty with the temporary nature of the residence. Working in a heritage listed building also has limitations for their work practice.

- **Performance Space** – Carriageworks, Eveleigh – A resident company at the Carriageworks, the organisation features concept led festivals and

programs including a year round artist residency program. Leasing agreements with the NSW State Government are seen as a pressure point, and residents wish for cultural policy that focuses on 'making sure that independent organisation who champion artists work be well equipped with spaces and money for creative development'.

- **Moogahlin Performing Arts Inc** – Carriageworks, Eveleigh – produces cross-cultural and multidisciplinary performance work, is a 'First People's Theatre' and is within an historic building within the Eveleigh Rail Yards. The informer to the study believes that a more visible representation and ownership of indigenous culture will help balance some of the changes in the area. A pressure point is the lack of performance and rehearsal space for Aboriginal performers.

- **DuckRabbit** – 138 Little Eveleigh Street, Redfern – The space is within a former shirt factory, leased for the last 15 years and contains a co-working artist space as well as an experimental art gallery. An advantage of the space is direct access to the street from the Gallery. A pressure point for the gallery is the real estate boom, which may put future pressure on rent, if his not-for-profit landlord were to change.

- **WORKSHOP** – 175 – 177 Cleveland Street Redfern
- **Galerie PomPom** – 39 Abercrombie Street Chippendale.

- **Semi-Permanent**, 15 Woodburn Street, Redfern.

Emerging trends from analysis were:

- Commercialisation of cultural and production space – diminishing job opportunities coupled with forced moves to different accommodation due to increased rents.
- Gentrification of the Inner City – rapid gentrification in inner city suburbs shows a resurgence of Sydney's CBD however in the process reduces availability of creative space.
- Privatisation of cultural infrastructure – which have impact on cultural creation and could benefit from more private-public partnerships.
- Casualisation of cultural workers and 'flexibilisation' or workspace.
- Diversification of creative space needs.

Major issues arising from analysis were:

- Lack of availability of affordable creative space.
- Suitability of creative space and suitability of tenure.

- Gentrification and disappearance of industrial buildings.
- Diminishing creative clusters in the City.
- The need for targeted support and funding programs.
- Unsuitability of 'one-size-fits-all' approach.

Recommendations include:

- Increased support via public funding was believed to be necessary.
- Promote better use and visibility of existing space.
- Explore the potential of more expansive initiatives.
- Pooling between creative clusters, combining resources and advocacy efforts.
- Advocate for alternative policies.
- Map and save industrial buildings for cultural investment as well as activate more general space for suitable creative enterprise and affordable housing.
- Better Processes – Innovative Planning, administrative and communicative barriers, procedures.
- Protecting / initiating more resident programs.
- Support from multi-levels of government required – increased investment.

Key diagrams are shown on the page over.

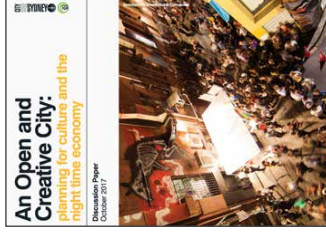


*Cultural Venues in Redfern Village from Ang et al., 2016 (• Performance and Exhibition Spaces
• Festival, Event and Public Spaces • Commercial and Enterprise Spaces • Practice, Education
and Development Spaces • Community and Participation Spaces)*



CASE STUDIES

1. 107 Projects
2. The Clothing Store
3. Performance Space
4. Moogahlin Performing Arts
5. Duckrabbitt
6. Work-Shop
7. Semi-Permanent
8. FBI Radio
9. Studio Damien Butler
10. Galerie pompom
11. Grumpy Sailor



7.1.8 An Open and Creative City: Planning for Culture and the Night Time Economy

City of Sydney Discussion Paper, October 2017

This document is a discussion paper emerging from the City's research and consultation on night-time economies, and compiles various cultural and performance action policies and plans. The document sets out reforms and regulations to achieve the vision of those documents.

Key actions are included that the City proposes to provide a more diverse evening economy are summarised under three key heading and include:

A diverse evening economy

1. Longer operating hours without consent
2. Providing grants

More small scale cultural uses

3. Minimal impact cultural uses without consent
4. Establishing specific cultural planning controls
5. Reducing notification periods for consent

Fair Management of entertainment noise

6. Fair management of noise by agent of change principles
7. Planning control for new venues and development
8. New noise guidelines

New planning controls will be drafted from feedback on this document. Council will formally adopt planning controls, and the GSC will put them into force.

A diverse evening economy

Key targets by 2030:

- 40% of business are 6pm are retail businesses.
- 40% of people using the city at night are over 40.

To reach these targets, the City proposing extending opening hours and the Paper looks to other areas with established retail, business and other services, and Redfern and Waterloo are mentioned in this as having higher impact uses, (i.e.: pubs, bar, cafés, restaurants) without having impact on local character or amenity. The City notes that these changes will increase street activity, a sense of safety, will attract greater diversity of people and give businesses flexibility.

The changes proposed would however apply only to land zoned as B2 Local Centre, B3 Commercial Centre and B8 Metropolitan Centre. Most land in the Botany Road Corridor study area is zoned B4 Mixed Use, R1 general residential or SP2 Special Infrastructure.

More small scale cultural uses

This section summarises the aims for Creative City strategy which aims to increase cultural activity in the city, and fulfil the community's need for new energy and emerging trends in the city, whilst protecting health, safety and amenity. Small businesses wanting to hold events such as exhibitions, galleries, opening, performances, community events are currently concerned that the right approvals aren't available to them, are costly or it is not clear what approvals would be required. It is also mentioned that many retail, office and warehouse buildings are underused and could provide opportunity to host events however need approvals to ensure compliance with regulations.

The City proposes to address these barriers by providing for three types of cultural activities:

- Existing businesses can host temporary activities.
- Creative entrepreneurs can utilise existing buildings for short periods of time.
- New cultural or community spaces can seek approval for ongoing activity in existing buildings.

The paper also sets out a list of criteria for individuals wishing to tick off their small scale event as exempt from development application including activity definition, capacity, frequency, hours of operations, amplified music, alcohol service etc. Small scale cultural uses would not be allowed in residential zoning R1 and R2. The City mentions it proposes new planning controls to be developed for cultural uses to provide simple solutions to common issues.

Except where zoned R1, the Botany Road Corridor is within the areas proposed to allow exempt small-scale cultural events, however is not within an area identified for small-scale cultural uses with amplified music.

Fair Management of entertainment noise

This section discusses planning reforms to reduce operational uncertainty and complexity for new and existing live music venues, and to manage entertainment sound levels to protect the broader community. The 'agent of change' principle is introduced to ask new development to manage noise impacts through design and construction, and distributes responsibility across all land owners. To apply the 'agent of change principle', planning controls will be needed to fairly allocate responsibility for limiting noise impacts.

Key diagrams are shown on the page over.

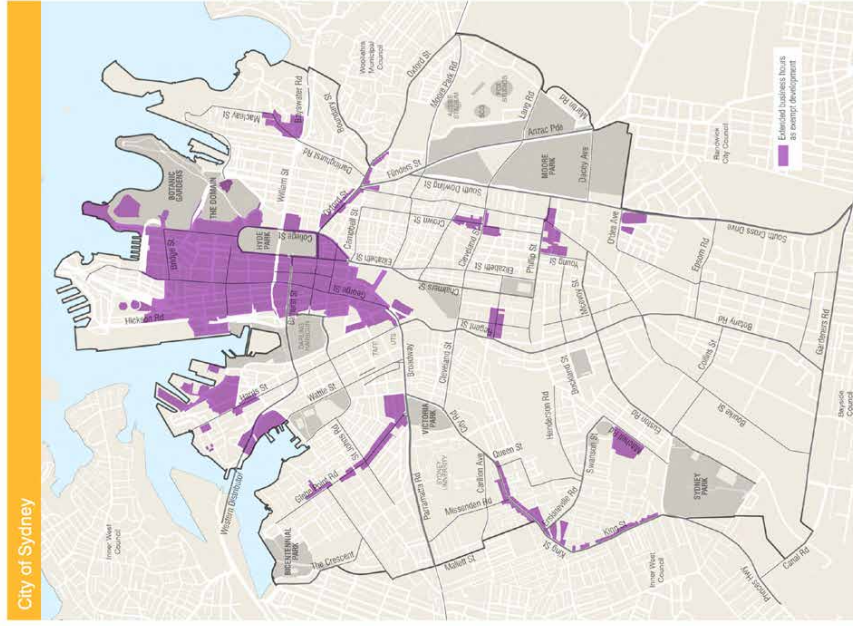


Figure 3 – Areas where shops could open all day without additional approval from Council

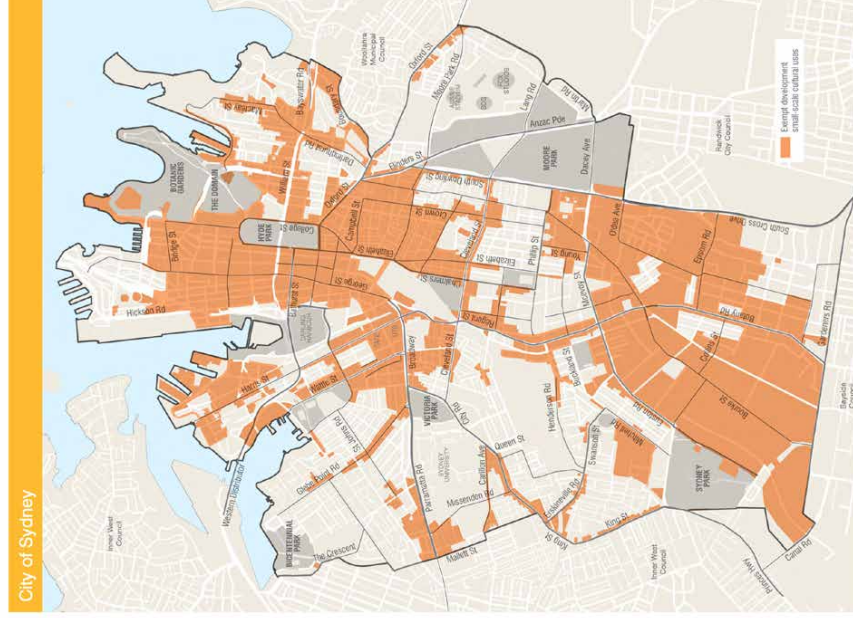


Figure 4 – Areas where small-scale cultural uses could happen without Council approval

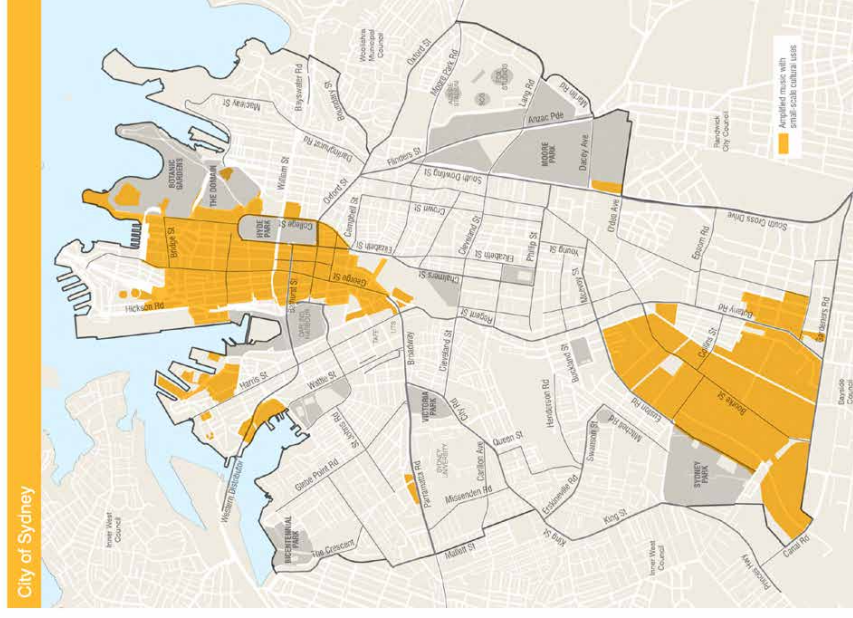


Figure 5 – Areas where small-scale cultural uses that do not need approval from Council, can use amplified music

City of Sydney

Current population characteristics

Characteristic	Redfern Street Village	City of Sydney
Population	31,172 (2016)	240,229
Median age	30	32
Aboriginal and Torres Strait Islander	2.5%	1.2%
Couples with children	7%	9%
Lone person households	34%	33%
Medium and high density housing	97%	96%
Median weekly household income	\$1,376	\$1,915
Households renting	62%	56%
Overseas born	49%	48%
Language at home other than English	39%	36%
University attendance	22%	14%
University qualification	42%	44%
Unemployment rate	8.2%	6.0%
SEIFA index of disadvantage	970	1027
Enumerated Population density (persons per ha)	94.99	84.7

- Unemployment rate is higher than the Sydney LGA at 8.2%
- The dominant household type is lone person household

The adjacent indices have been calculated using data from a number of sources, including the Well-being Survey, Floor Employment Survey (FES), and the ABS Census. The indices provide a snapshot of the social,

Characteristic	Redfern Street Village	City of Sydney
Population	31,172 (2016)	240,229
Median age	30	32
Aboriginal and Torres Strait Islander	2.5%	1.2%
Couples with children	7%	9%
Lone person households	34%	33%
Medium and high density housing	97%	96%
Median weekly household income	\$1,376	\$1,915
Households renting	62%	56%
Overseas born	49%	48%
Language at home other than English	39%	36%
University attendance	22%	14%
University qualification	42%	44%
Unemployment rate	8.2%	6.0%
SEIFA index of disadvantage	970	1027
Enumerated Population density (persons per ha)	94.99	84.7

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

3 / Redfern Street Village – Community Infrastructure Baseline Data Report

[illegible]

Pillar	# AGPs within Village Area
Cultural	3
Community	7
Childcare	2

Facility/Space category	# Facility/Space and type
Libraries	• 1 x branch library
Community facilities	• 2 x town halls, 1 x integrated multipurpose facility, 5 x local community facilities, 1 x neighbourhood service centre, 5 x subsidised office spaces
Early Education and Care	• 10 x Long day care, preschool, occasional cars (1 operated by the City)
Health	• Redfern Community Health Care • Redfern Integrated Service
Education	• 3 x Primary schools • 3 x Secondary schools • 3 x Tertiary • 1 x Other.

Pillar	# AGPs within Village Area
Cultural	3
Community	7
Childcare	2

7.1.10 Infrastructure Baseline Assessment

Mecone

This report was drafted to inform the City of Sydney's LSPS being drafted at the time of its publication (June 2019). The report reviews the benchmark provision and demand for Council delivered infrastructure within each Village such as libraries, community facilities, indoor and outdoor recreation and open space, as well as State delivered facilities such as Health, education, emergency services and early childhood education.

Various scales of the City's Infrastructure assets are summarised as Metropolitan, Eastern City District Level, LGA Level. The report takes into account age, demographic, population growth and socio-economic standing in order to most effectively look at how to meet needs and provide broader community and social benefits.

This Report has used the Redfern Street Village and Green Square and City South areas as their study area outline.

Generally, Key findings are:

- There is current unmet demand for Council and State infrastructure – further analysis is required to determine demand.
- The City's program of infrastructure investments will meet some demand.
- The City has a key role in achieving GSC outcomes for Infrastructure.
- Establishing new and continuing existing partnerships between State Government and the City of Sydney Council is required.
- Land availability, cost and funding are key constraint to providing new infrastructure.
- Several innovative measures exist for Council to address unmet demand, land constraints and delivery services efficiently.
- An infrastructure delivery framework is required by the City to assess and plan for future infrastructure.
- Agreements and partnerships should be made with Council, NSW Government and private sector.
- New infrastructure will need to be delivered through innovative design, planning and funding models.

Recommended Short, medium term (2026) and long term (2036) actions are identified for Council relevant to Botany Road Corridor are:

Short Term

- Undertake a full assessment of infrastructure.
- Review capacity.
- Undertake capacity / user analysis.
- Continue implementation of the green grid network.
- Research walk-ability to open space.
- Identify appropriate benchmarks for infrastructure.

Medium Term

- Work with state agencies to secure sites.
- Continue collaboration.

- In the City South area, identify potential areas to accommodate floor space infrastructure and seek opportunities to secure funding.

Long Term

- Consider place-making of new arts and culture precincts in the City South, or, provide additional cultural or creative facilities in Redfern Street Village to accommodate city area demand.

Constraints to delivery:

- Land availability – finding sites large enough to accommodate facilities.
- Heritage and development controls may limit floor space potential.
- Delay in development contributions being identified to delivered.

Innovations and leading practice identified are:

- Collation and shared use – service providers can create efficiencies and synergies by creating one precinct or venue.
- Multi purpose or adaptable spaces – use and function can chance over time.
- Temporary, pop up and adaptive re-use.
- Communal rooms with high density developments – shared facilities, communal spaces.
- Make facilities work harder.
- Opportunistic infrastructure.
- Proximity to transport and other services.
- The report suggests specific innovation trends by type of facility.

The following page contains a summary table of infrastructure needs for the Botany Road Corridor and surrounding areas.

Summary of Key Needs:

- Libraries - The greatest identified need to 2036 will occur in the City South, in particular Green Square & City South (966m2) and Redfern Street (803 m2) as well as Harris Street (815m2). This is driven by a high growth forecast in the areas led by Green Square Town Centre and Redfern Waterloo.
- With the highest population growth particularly in Green Square & City South, this area will see the greatest demand across most infrastructure categories including community facilities, arts and culture, indoor recreation and open space.
- Approximately three branch libraries will be required by 2036.

- Community Centres - However the greatest identified need to 2026 and 2036 will occur in the City South, in particular the City South area and its villages. This is due to the forecast volume of growth in population in Green Square Town Centre and Redfern Waterloo.

- Childcare - Green Square & City South will see a rapid increase in demand for early education and care places. This is attributed to the significant population growth in the area. Every facility is within 400 metres of a bus stop, with approximately half within close proximity to a train station (800 metres). For the City South area, More than 2,500 additional early education and care spaces will be required by 2036.

- Arts and Facilities - Redfern Post Office has recently been acquired. It is intended that this will be used as an central hub for Aboriginal and Torres Strait Islanders. It has not been counted in the benchmarking as it is not currently in use in 2019. Redfern Street Village Area is relatively well-served for cultural facilities, though these are predominantly non-Council facilities. This suggests potential to focus delivery of new cultural facilities in the other Village Groups, particularly Green Square and City South. An alternative approach would be to provide additional cultural or creative facilities in Redfern Street Village which can cater for the demand across the city area.
- Indoor Recreation and aquatic facilities – none specific to Redfern.

- Emergency Services - The 2018-19 NSW Budget has allocated \$2.7 million to the refurbishment of the City of Sydney Fire Station. There are ongoing projects involving the renewal of stations at Redfern and Alexandria in particular that will improve the capacity for FRNSW to service the future growth in the LGA.

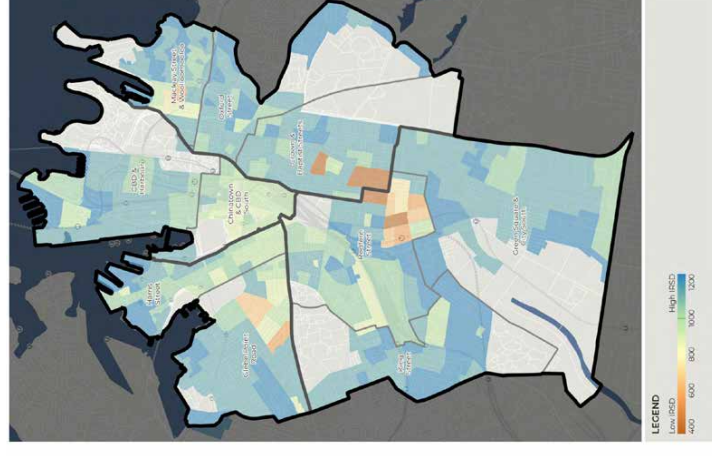
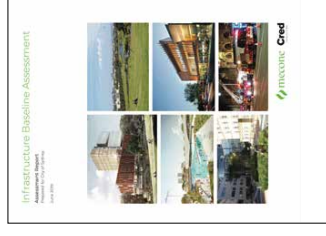


Figure 2 - Index of Relative Socio-Economic Disadvantage Scores in the City of Sydney LGA

Source: Socio Economic Indexnet for Areas, ABS Census 2016

Facility / Infrastructure Item	City South Area Current provision	Benchmark (City South Area)	Current Forecast Deficit		
			2019 (Redfern Street Village Area)	2026 (Redfern Street Village Area)	2036 (Redfern Street Village Area)
Libraries	Waterloo Branch 1130m2	Minimum provision - 1,400m2 39m2 per 1,000 (20,000 to 35,000 people) 39m2 per 1,000 (20,000 to 35,000 people) 35m2 per 1,000 (35,000 to 65,000 people) 31m2 per 1,000 (65,000 to 100,000 people) 1 per Village Area - 20,000 to 35,000 people		0.7 libraries 466 m2 GFA	1 library 719 m2 GFA
Community Facilities	2 town hall, 1 integrated multi-purpose facility, 5 local community facilities, 1 neighbourhood service centre, 3 subsidised office space	80m2 of community facility floor space per 1,000 people Multi-purpose - 1 per 20,000 to 30,000 people Local Community Facility - Between 3 and 4 local community facilities per village group of approximately 20,000 to 30,000 people Neighbourhood Service Centre - Between 3 and 4 local community spaces per village group of approximately 20,000 to 30,000 people	0.3 local community facilities 3.5 neighbourhood service centres	0.7 integrated multi-purpose facilities 0.8 local community facilities 4.8 neighbourhood service centres	1.0 integrated multi-purpose facilities 1.9 local community facilities 5.9 neighbourhood service centres
Provision of Community facility floor space per 1,000 people	Community Facility Building Gross Floor Area		272 m2	226 m2	200 m2
	Community Facility Creative Use Area		185 m2	154 m2	136 m2
Early Childhood Education and Care	Number of centres - 10 Number of Licensed Places - 580	1 place per 2 children aged 0 to 5 years 1 place per 75 workers (non CBD)	247 places	569 places	839 places
Arts and Cultural Facilities	1 community and participatory spaces, 6 performance and exhibitions spaces, 2 performance and exhibitions spaces, 3 practice, education and development spaces	Major civic/performance space - 1 per 100,000 to 150,000 people Village arts and cultural facility - 1 per village of approximately 20,000 to 30,000 people Local arts and cultural facility - Between 3 and 4 local arts and cultural spaces per village of approximately 20,000 to 30,000 people.	0.3 Village arts and cultural facility	0.7 Village arts and cultural facility 0.8 Local arts and cultural facility	1.0 Village arts and cultural facility 1.9 Local arts and cultural facility
Indoor Recreation and aquatic facilities	3 Indoor recreation centres, 3 aquatic facilities, 6 indoor courts,	Indoor leisure centre (dry) - 1 per 50,000 to 100,000 people Indoor leisure centre (wet) - 1 per 50,000 to 100,000 people Indoor sports courts - 1 per 10,000 residents plus 10% of non-resident population Total open space - Maintain the quantum open space per resident in each village post growth Total open space within State-led precincts - 15% of total land in the precinct Parks and open space 0.3 ha or larger - Within 200 metres of all future high density dwellings and within 400 metres of all dwellings Sporting Fields - 1 per 5,600 residents plus 1 additional multi use field per 120,000 workers Tennis Courts - 1 tennis court per 1,000 to 1,500 people Multi-purpose Outdoor Courts - 1 court per 2,179 people	Sufficient Provision	Sufficient Provision	Sufficient Provision
Open Space	Number of Parks - 2 regional, 2 district, 8 local 18 neighbourhood, 12 small neighbourhood,		m2 of open space per resident = 15.5 Additional open space required to maintain provision of 15.5 m2 per person (2019 rate)	12.9	11.4
	Outdoor recreation - 2 sports fields, 11 tennis courts, 2 multi-purpose outdoor court		4 sports fields 15 tennis courts 13 multi-purpose courts	6 sports fields 36 tennis courts 17 multi-purpose courts	7 sports fields 32 tennis courts 20 multi-purpose courts

Health Services	Primary Care Clinics - Redfern Community Health Centre and Redlink Integrated Service	Primary Care Clinics - 1 clinic per 15,000 to 18,000 people Hospital - 2.3 bed per 1000 people	Sufficient provision	0.5 primary care clinics	1.0 primary care clinics
Education	Primary - 3	Government Primary School - 1 primary school per 500 students (4 to 11 years old)	Gov. Primary School (with capacity) Sufficient provision	Sufficient provision	
			Gov. Primary School (without capacity) Sufficient provision	3.3 schools	5.3 schools
	Secondary - 3	1 high school per 1,200 student (12 to 17 years old)	Gov. High school (with Capacity) Sufficient provision	0.1 schools	1 schools
Emergency services	Tertiary - 3	1 TAFE campus per 300,000 people	TAFE Sufficient provision	Sufficient provision	Sufficient provision
	University / Other - 1	1 University per 150,000 people	Sufficient provision	Sufficient provision	Sufficient provision
	Police Station - 1	Police stations - 1 police station for per 108,000 people			
	Fire Station - 1	Fire Services - 1 fire station per 60,000 people			
	Ambulance Station - 1	Ambulance Station - 1 ambulance service for per 105,000 people			
	SES and Rescue - 0				

7.1.11 Social Infrastructure and Open Space Strategy

Arup, May 2018

This draft format presentation looks at social infrastructure and open space gaps and needs within the Redfern to Eveleigh Area in contrast with the adjacent Urban Renewal sites.

Various maps show the urban renewal sites with walking catchment and looking at the future demographic of Redfern St Village, Crown and Baptist St Village and King Street Village.

A methodology for determining the needs of the area is set out to be defined by three key areas – a Stage 1 Audit, Stage 2 Demand study and Stage 3 Needs Assessment.

Development Site Growth assumptions are listed including additional dwellings and additional jobs.

Some proposed projects are listed for within (or directly adjacent) the Botany Road Corridor:

- 5 – expansion of Alexandria Park Community School (adjacent at Alexandria Park).
- 11 – Creation of Daniel Dawson Reserve (within the corridor).

Improvements to Daniel Dawson Reserve were exhibited on the City of Sydney Website (<https://www.cityofsydney.nsw.gov.au/council/your-say/>)

[park-playground-upgrades/improving-daniel-dawson-reserve-alexandria](https://www.cityofsydney.nsw.gov.au/council/your-say/park-playground-upgrades/improving-daniel-dawson-reserve-alexandria)) and an approved design for the improvements were resolved by Council on 19.08.2019. (<https://meetings.cityofsydney.nsw.gov.au/leDecisionDetails.aspx?ID=1415>)

From the City of Sydney Website, The proposal for Daniel Dawson Reserve will:

- maintain the open grass and mature trees;
- provide new trees and plantings;
- create a new internal loop path within the park;
- provide new play equipment including a nest swing, play tower, a spinner, scooter track and a play mound with slides, climbing nets and hand grips;
- include planting in the playspace to provide a sensory play experience; and
- provide a new shade structure, fence, sitting wall and seating.

Within Botany Road Corridor there are:

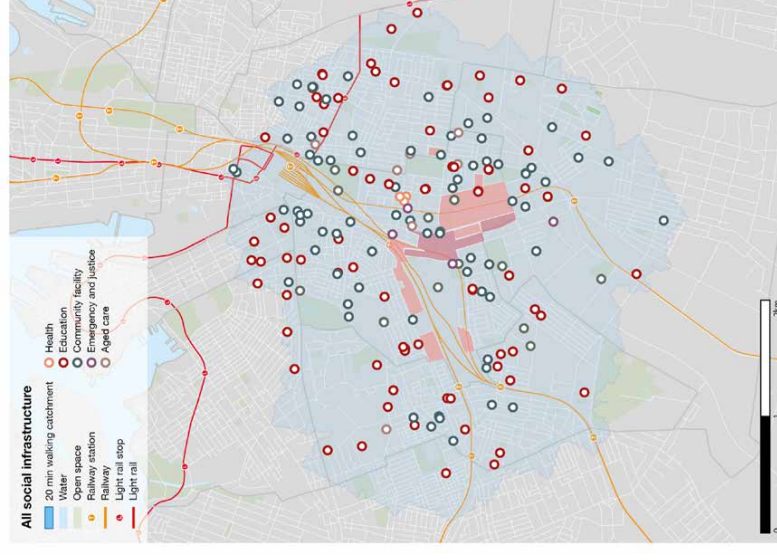
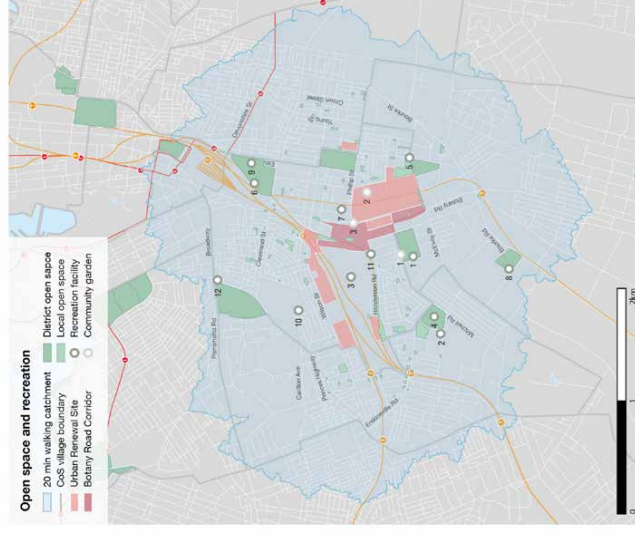
- no education facilities in the study area.
- no aged care facilities in the study area – however an aged care facility is adjacent, near Redfern Street.

- 2 cultural facilities on the NE edge of the corridor study boundary, and 3 community centres within walking distance of the study corridor.
- 1 emergency and justice facility on the NW edge of the study area boundary.

The draft presentation misses some information including:

- CoS definitions of infrastructure.
- Timeframes for delivery on proposed infrastructure identified on maps.
- Capacity of existing social infrastructure is TBC with childcare identified as having spare capacity.
- Capacity of existing open space is generally identified as TBC, with District and Local Parks identified as total area of local parks – 9.4ha.
- Some social infrastructure benchmarks have been set, with Youth services, Aged Care and Disability care as TBC.
- Open Space and recreation benchmarks have generally been set and should be compared to the CoS Open Space documentation with the exception of Community Gardens which are listed at TBC.

Key diagrams are shown adjacent.



7.1.12 Traffic and Transport Context Report

Jacobs, June 2018

Purpose of this document is identified opportunities and constraints, establish relevant transport infrastructure base line, do strategic network analysis and capacity assessment in support of future land use.

The report took into account R2E 'Central to Eveleigh' Corridor which was identified in the Jacobs report as being part of wider network of planned transport and infrastructure changes being undertaken as a Key component of Sydney' Global Economic Corridor.

The Central to Eveleigh Urban Transformation Strategy was finalised in Nov 2016, and categorises a vision for the R2E corridor into four key areas (summarised below) with 10 key moves to underpin the overall vision for the R2E Corridor.

Living

- For 14,000 new dwellings, provide an expanded cycleway and well-connected neighbourhoods.

Community

- Planned redevelopment of Redfern Station, New Sydney Metro Waterloo Station, enhanced connectivity and access and a 400m walk to public open space.

Working

- For 21,000 new jobs, provide new links improving connectivity between work and education hubs, world class infrastructure, a creative hub promoting distributed workplaces.

Environment

- A 25% uptake in car share space, higher public and active transport mode shares.

Future Transport Strategic Plan 2056

Future Transport 2056 Principles and objectives will inform the Redfern to Eveleigh Corridor with a set of guiding principles:

- Provide multiple transport options.
- Encourage the use of sustainable modes of transport.
- Support liveable communities and successful places
- Provide safe and accessible services.
- Protect productive transport corridor that support a strong economy.

Key analysis from the report:

- Future transport networks will need to consider options for connecting the hierarchy of centres within the region.

Connections to key centres – Green Sq, Redfern, Sydney Airport, Mascot will need to be considered through alternative public and active transport options.

Heavy Rail connections

- Access to Redfern Station is a key part of the public transport network, provides frequent services to the Sydney heavy rail network.

Average spare car capacity graphs and analysis shows city bound loadings morning peak on the T1 Western line at 135% exceedance factor and also on T1, T2, T3, T4.

- Redfern Station has 60,000 entries and exists through the station daily.

There is also significant rail transfer function, currently constrained by a single concourse change over.

- There are planned amendments to Redfern Station.

Waterloo Metro Station

- The future Waterloo Metro station is located along Botany Rd south of Raglan St and north of Wellington St.

The new metro railway will extend from Rouse Hill to Bankstown via the CBD. The Chatswood to Bankstown line is expected to open in 2024 and will bring around 40,000 people per hour with capacity for trains every 2 minutes.

- Forecasts for the 2036 AM peak indicate around 37,000 customers entering, and 2,350 customers exiting Waterloo station when completed.

Bus

There is a heavy focus on north south with key routes providing access between inner fringe suburbs. Botany Road is a key corridor for services connecting the CBD with southern suburbs.

- These routes have a key cross regional function but tend to be lengthy and indirect.

Public transport accessibility

Majority of urban renewal sites are located within 800m walk of existing or under construction transit. The density of public transport coverage provides significant opportunity for residents in the BRC.

- Whilst accessibility is high, major connections are primarily north south and scope for east west trips is currently limited.

Road Network

- Major roads are mainly north south in the BRC, with east west corridors less prevalent and less direct.

Botany Road is a key link to Cleveland Street and the Sydney CBD in the north, and to Sydney Airport in the South.

- The corridor will be upgraded to provide increased capacity as part of RMS' Alexandria to Moore Park project.

WestConnex Stage 2 will increase the importance of McEvoy Street, with direct access to St Peter's Interchange.

- Vehicle Counts on McEvoy Street indicates its important role as a freight corridor.

Walking

- Pedestrian access is currently provided to key destination adjacent to the precinct.

East west movement is constrained by existing heavy rail corridor to the west and narrow footpaths, with limited and sparsely located crossing opportunities at Lawson Street and Gibbons Street.

- The Jacobs Traffic report includes high AM Peak Hour pedestrian counts at Redfern Station, and low (100-300) pedestrian counts elsewhere in the corridor.

Existing medium and high-density land use, plus permeability of the street network results in an 800m walking catchment to Redfern Station.

Cycling

A range of destinations are accessible from the BRC, but east west movement is constrained by the heavy rail corridor and the indirect rail network.

City of Sydney Council has identified as part of its cycleway network, 10 priority cycle routes, including the following relevant to the BRC:

- City north to Green Square.
- Sydney Park to Central Park.
- Newtown to Bondi Junction.
- Broadway Link.
- USyd to UNSW.
- Sydney Harbour to Botany Bay.

Travel Behaviour

The existing travel patterns of residents, including their willingness to use other forms of transport have been considered in the report.

Highest number of people commuting for work to Redfern Chippendale is Sydney CBD Haymarket, rocks jobs, then Surry Hills and Pyrmont.

Highest number of trips were by public transport (41%), followed by vehicle (20%) and active transport (26%).

Strategic Opportunities

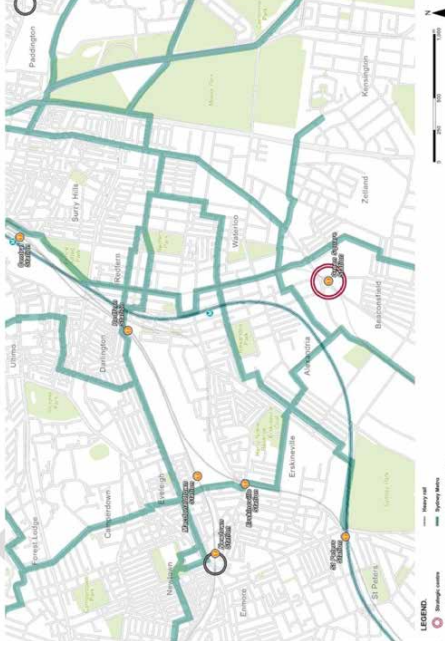
- Sydney Metro will result in functional redesign of Sydney's metropolitan transport network.
- Bus network modifications will also result of development and the Metro Station.
- An opportunity exists to reorient journey away from the CBD, which is heavily serviced.
- Short term opportunity to enhance east-west bus routes in conjunction with urban renewal projects.
- Supporting low private vehicle dependency and demand.
- Generally, walk-ability is strong, but major barriers (arterial roads) are an opportunity to improve permeability east west with wider footpaths, way-finding, safer crossing.
- Provision of high-quality infrastructure to support medium distance trips, to adjacent centres such as Newtown, Erskineville or Green Square.
- New commercial retail and hospitality enterprises will allow for renewal, greater level of activity resulting in enhanced safety, place and connectivity outcomes.
- Improving east-west connections.
- Existing one-way pair arrangement at Botany Road and Wyndham Street has negative impacts on the corridor – increased turning movement, operational impacts at intersections, significant traffic volume along Wyndham Street, splitting traffic across Gibbon Street and Regent Street to significant pedestrian delays or customers using the station.
- Removal of one-way pairs and extension of one-way pairs have been suggested.



Figure 9: Walking catchments to existing and future rail stations



Figure 11 Figure of existing cycling links connecting within Redfern to Eveleigh Corridor



Source: City of Sydney, Proposed Regional Bike Network Map (2016), RMS Cycleway Finder (2018)

Figure 10: AM peak hour pedestrian counts

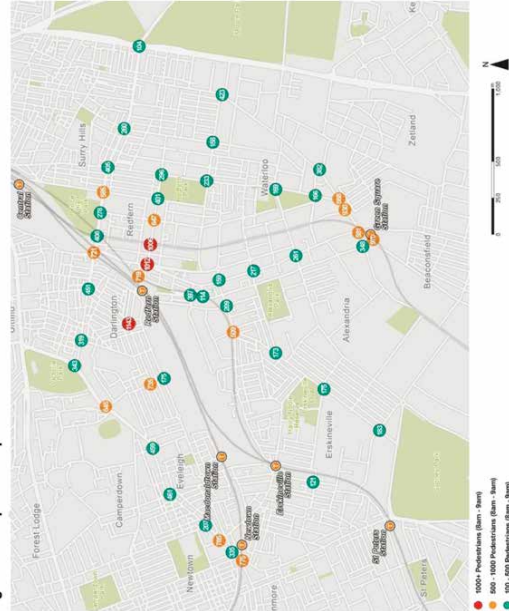


Figure 24: Existing distances between Botany Road pedestrian crossings



Figure 25: Botany Road/Wyndham Street - Existing



Figure 26: Possible Botany Road/Wyndham Street configurations (Jacobs)



7.1.13 Economic Feasibility Analysis and Affordable Housing

SGS Economics and Planning, July 2018

This report is a Stage 1 economic feasibility and affordable housing study for the Botany Road Corridor, containing a broad review of the existing market and opportunities for the BRC based on a site visit and desktop review undertaken by SGS.

The report aims to provide balanced consideration of state and local planning priorities, understand existing and future market opportunities, ensure that proposed development in the BRC is financially viable and delivers public benefits including infrastructure upgrade and affordable housing and ensures an equitable portion of land value uplift results from proposed planning control changes.

BRC Current position

The corridor is noted as B4 mixed use, with objectives of the zone being to integrate commercial, retail and residential development. It is noted that a strong residential property market has resulted in a high proportion of residential floorspace within new developments and only a small amount of non-residential floorspace as part of ground floor retail. Land values are driven by the permissible land uses and density of development which can be achieved on the site.

Strata residential units are the most common type of property within the Botany Road Corridor, making up 64 per cent of the total count of properties. Terraced residential properties account for 13 per cent. Strata business/industrial units account for 5 per cent and business/industrial properties account for 4 per cent.

BRC Strategic position

Regionally, The BRC is noted as at the heart of the GSC Eastern Harbour City's Ultimo-Camperdown Collaboration Area – a large health and education precinct. The following GSC outcomes are noted as significant for innovation and productivity potential such as:

- Investing in public transport infrastructure and urban renewal projects;
- Making planning controls more flexible to allow for the needs of an innovation economy;
- Maintaining long-term office supply and ensuring it is not compromised by residential development; and

- Where necessary, establishing collaboration processes between local government, community and business to overcome impediments to development.

The Botany Road Corridor plays an important economic role in the Eastern Harbour City and development should support this.

City-shaping transport projects will increase accessibility in the Botany Road corridor and stimulate additional housing supply and economic activity.

Development should be informed by an understanding of the Corridor's characteristics and potential, and the surrounding local centres hierarchy.

Affordable Housing Targets:

GSC intends to set a 5-10 per cent Affordable Rental Housing Target for all new development in Greater Sydney.

The City of Sydney (Council) set a target that 7.5 per cent of all housing in the LGA would be social housing provided by government and community providers, and 7.5 per cent would be affordable housing delivered by not-for-profit or other providers by 2030.

Council has sought amendments to the Sydney Local Environment Plan 2012 (Sydney LEP) including the introduction of the City of Sydney Affordable Housing Program which seek to:

- Expand the operation of current affordable housing contribution schemes to where it does not currently apply.
 - Provide a framework to identify sites that will benefit from increased development capacity and land value through a planning proposal to change the planning controls and require a supplementary affordable housing contribution.
 - Clarify what development is excluded from a requirement to make an affordable housing contribution.
 - Reduce the minimum size of any affordable housing dwelling to be dedicated to Council to 35 sqm and introduce a maximum dwelling size of 90 sqm.
 - Clarify how land in the B7 Business Park zone that is also identified at Schedule 1 of the SLEP 2012 can be developed.
- These amendments apply to a portion of land within the site.

Redevelopment Opportunities and Constraints:

The development potential of the BRC precinct will be determined by a mix of factors including land use, floorspace and height of building zoning, land ownership, and available land.

Redevelopment opportunity sites are:

- larger sites in single ownership (or smaller sites in consolidated ownership);
- sites which are not strata (or strata with 75 per cent in single ownership);
- sites which have not been recently developed; and
- larger single-owned commercial sites in the north of the Corridor.

Redevelopment constrained sites are:

- smaller sites where amalgamation will depend on the current land values and density of controls; and
 - strata owned sites due to the number of owners
- Redevelopment of a strata scheme requires the support of 75 per cent the units' owners.

The report notes that these constraints and opportunities could be tested through feasibility analysis.

Employment Opportunities and Constraints

At the time of the report the vision for intended future employment role and desired land use mix was not confirmed.

Limited demand for large scale commercial floorspace within the Corridor given the proximity of the site to major employment areas including the Sydney CBD. An opportunity exists to provide for the future expansion of the Australian Technology Park and small-scale commercial floorspace to cater for small to medium enterprises.

Two potential employment roles are identified to exist for the BRC:

- North – strategic employment with close links to ATP and Redfern.
- South – local population employment and a new local centre for Waterloo estate residents.

FIGURE 9: LAND TO WHICH THE PLANNED AMENDMENTS APPLY

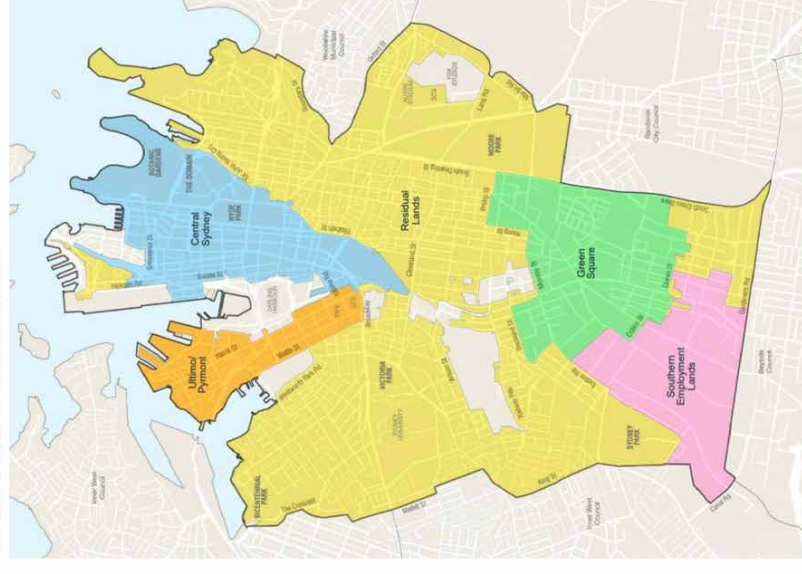
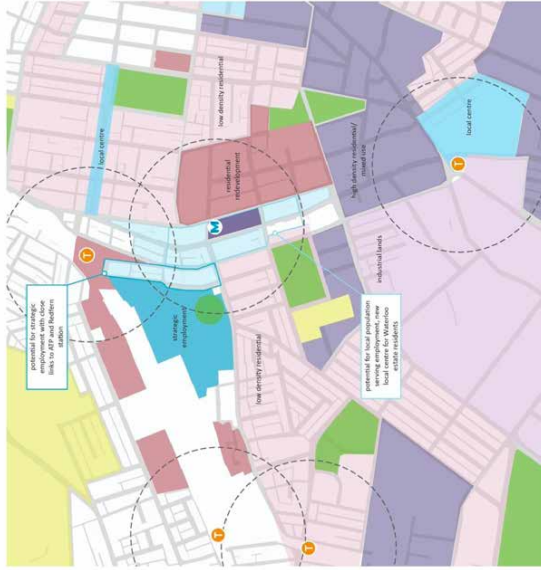


FIGURE 1: EMPLOYMENT OPPORTUNITIES ACROSS BOTANY ROAD CORRIDOR



Source: SGS Economics and Planning, 2018

FIGURE 34: PRECINCT USES



Source: SGS Economics and Planning, 2018, based on City of Sydney and Corridor Connect data

FIGURE 15: SINGLE OWNER SITES



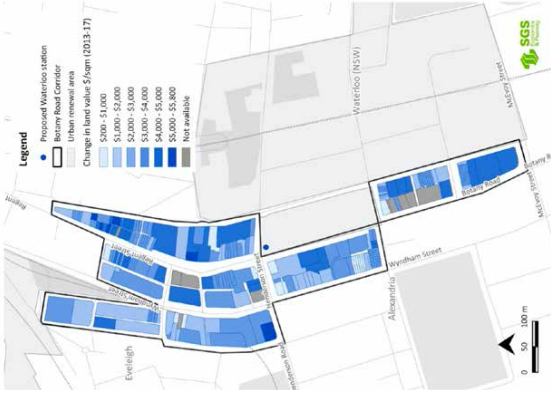
Source: SGS Economics and Planning, 2018

FIGURE 27: LAND VALUES, 2017



Source: SGS Economics and Planning, 2018 using Valuer General, 2017

FIGURE 18: CHANGE IN LAND VALUES, 2013-2017



Source: SGS Economics and Planning, 2018 using Valuer General, 2017

FIGURE 21: OPPORTUNITIES AND CONSTRAINTS



Source: SGS Economics and Planning, 2018
* Consolidated ownership has been defined as one owner holding more than 75% of units in a strata plan. Due to consolidated ownership has been defined as owning between 50% - 75% of units within a strata plan or a number of strata units in a block (one example in the south of the precinct).

7.1.14 Engineering Services Analysis Reports

Mott MacDonald

Flooding and Drainage

This report is a desktop flooding and drainage assessment study prepared by Mott MacDonald to assess opportunities, constraints and risks as part of delivery of an Land Use and Infrastructure Implementation Plan (LUIP). The aim of the investigation was to review planning controls and investigated state infrastructure needs within the broader catchment, to ensure cumulative infrastructure requirements are adequately considered and that comprehensive planning was in place to support long term housing and productivity. The study was subject to limitations in that it reviewed existing flood models, completed by various parties, which may not contain up to date information.

Flood mitigation measures and updates to planning controls are recommended.

Topography

Four broad catchments exist in the BRC:

- Northern catchment draining to Sydney Harbour (the BRC is not expected to drain to this catchment),
 - Western, Central, Eastern Catchments – all grade south and meet Alexandria Canal or Sheas Creek.
 - Elevation of lots vary from approx. RL 13m AHD (south) to RL 29m AHD (north).
- The report looks at the various LAHC, TINSW and RMS infrastructure projects planned for the area including:

- Waterloo State Significant Precinct (SSP);
 - North Eveleigh West SSP;
 - Elizabeth Street Redfern SSP;
 - South Eveleigh;
 - Redfern Station renewal;
 - Central Station renewal; and
 - Alexandria to Moore Park Connectivity Upgrade.
- Section 3.7 of City of Sydney Council DCP contains specific flood studies, drainage, stormwater management and quality.

Historical Studies

Historical studies were also reviewed for regional catchments in proximity to the BRC. Historic Study catchments are shown in a map attached. The BRC is within the Alexandria Canal Study Flood Catchment area and within the Sheas Creek sub-catchment area.

It was identified that:

- The existing stormwater network is under capacity;
- Low points causing ponding and flooding are present, with those in close proximity to the BRC being at Cope Street near Wellington Street (within the BRC), and at corner Buckland Street / Gerard St and Park Road at Alexandria Park (outside BRC, but directly adjacent).

- Waterloo station redevelopment may have an impact on the flooding considerations at the area, and flooding studies for this development have not been looked at by Mott MacDonald.

No existing Flood mitigation works have been proposed by Council within the BRC, however Flood mitigation works were proposed for Alexandria Park (adjacent to the corridor) as a detention basin and drainage upgrade from Wellington Street to Alexandria Park.

Flood Mitigation

The study identifies some high priority mitigation works for re-zoning in the BRC:

- Drainage upgrade from Wellington Street to Alexandria Park and detention basin in Alexandria Park (FM8);
- Detention basin in Waterloo Park (FM19);
- Detention basin in Redfern Park (FM7); and
- Additional pipes and detention storage at Erskineville Park and Oval (FM5).

Climate Change Impacts

Climate change impact for the Alexandria Canal catchment were noted as:

- 1% AEP storm event plus 10% increase in rainfall
- 1% AEP storm event plus 20% increase in rainfall
- 1% AEP storm event plus 30% increase in rainfall
- 1% AEP storm event plus 0.4m Sea Level Rise (SLR)
- 1% AEP storm event plus 0.9m SLR

Locations noted in the report as impacted by climate change within proximity of the BRC are listed below. These afflux areas were noted a mostly small and inconsequential and will not be largely affected by climate change flooding:

- Alexandria Park;
- Wyndham Street;
- Cope Street;
- Residential properties east of Cope Street;

- Australian Technology Park Sydney, and
- Alexandria Childcare Centre.

Flooding Constraints

- Suitability of land for re-zoning – impervious area is increased from the existing development when land is re-zoned, resulting in additional run-off, and can affect downstream properties. It is noted in the study that the existing site contains industrial and commercial sites with a high impervious areas and therefore re-zoning is unlikely to cause negative downstream impacts.

- FPL levels – Councils current FPL level is 1% AEP level plus 0.5m freeboard. Development in the corridor should consider the PMF flood risk as well as FPL. AN FPL level map is available in the study document.

- Finished floor levels – without flood mitigation in place, FPL levels will require all new developments to have their floor levels at 1.5m above the road.
- Restrictions on developable area – flood affected lots will be subject to stringent controls including not being able to disrupt the flood path, and not being able to fill in the floodplain.

- Underground parking entrance / lift shaft entrances – these must be FPL plus 0.5m freeboard or the PMF (whichever is higher). This will limit where car-park entrances can be placed.

- On-Site Detention- will be required for future developments, even if impervious surfaces are reduced in the proposed development. This will avoid the need to upgrade the existing pipework.

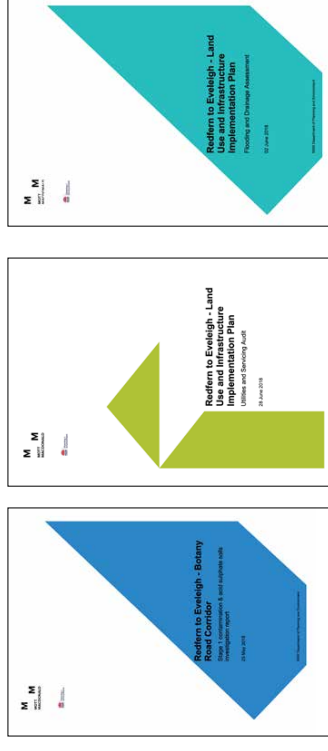
Flooding Opportunities:

- Drainage upgrades – to alleviate existing ponding and to reduce the extents of the low trap points surrounding the BRC.

- Raise building footprints – raising footprints to FPL will be less costly than upgrading existing drainage.
- Review of surrounding development – the Waterloo station development should be investigated to see if overcompensation occurred which may alleviate some constraints.

- Over Compensation of Local OSD – reduction of impervious areas is possible to allow for greater OSD than Council's requirements.

- Provide Regional Detention – within parks and other public spaces, these can have a multi functional use by providing stormwater detention, WSD and amenity.



- Rainwater harvesting and Reuse – an extension of WSD measures, these could capture and reuse further stormwater, reducing flood extents.

- Green Roof / Green Cover / Low impact design – green roofs as a future DCP control, could reduce overall stormwater volume, improve water runoff quality, provide other benefits such as reduced heat island effect.

- Integrated water cycle management scheme – minimisation of waste water wastage by treating and purifying for reuse.

Flooding Recommendations:

Flood mitigation measures:

- Further mitigation measures are taken up within the BRC as shown in a map (following page).
- Detailed assessment was not completed of these measures.
- Some updates to planning controls as recommended in detail in the report.

- It was recommended that the following WSD studies are carried out:
 - Sensitivity testing of the regional flood studies;
 - A more detailed and localised TUFLOW model;
 - A drainage study on the feasibility of drainage upgrades between Wellington Street, Cope Street, Buckland Street, and Botany Road towards Alexandria Park; and
 - A review and understanding of the proposed Waterloo Station Development should be carried out prior to any finalised flood mitigation decisions in the BRC.

Figure 3: Redfern to Eveleigh Corridor Topography

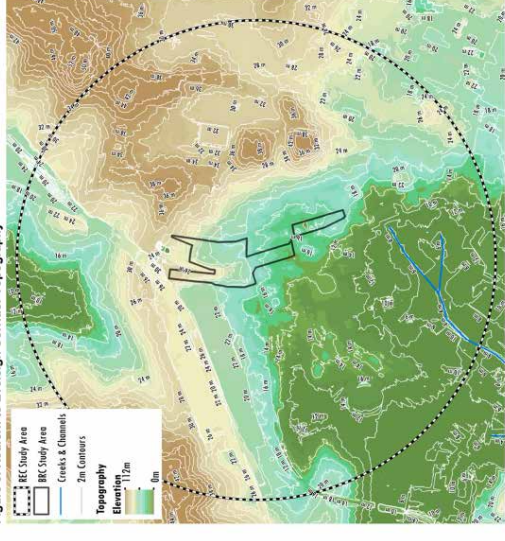
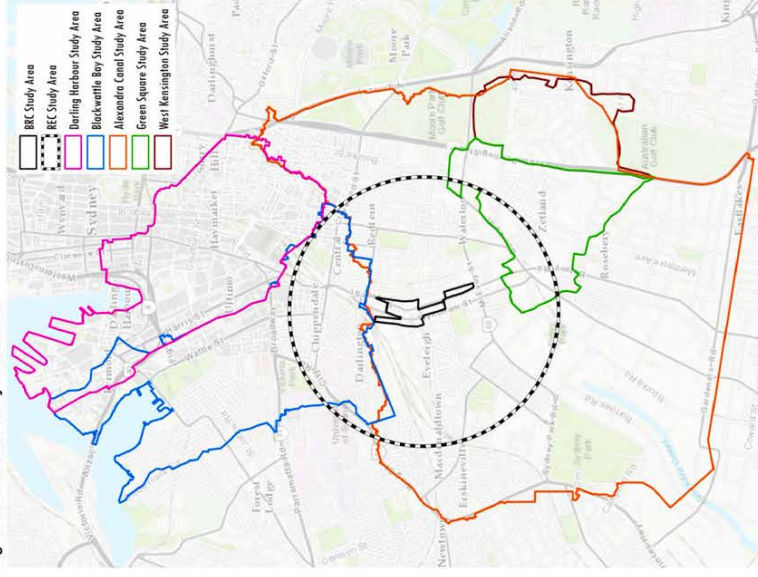
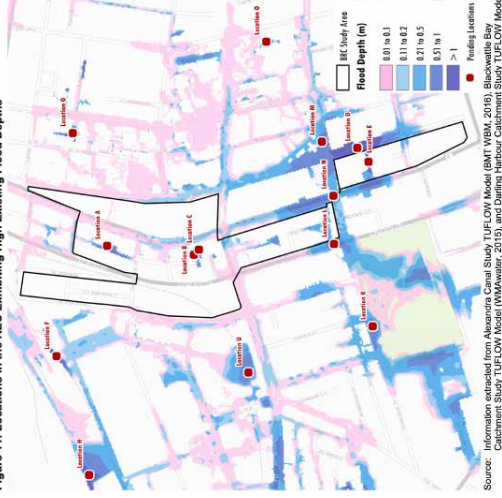


Figure 10: Historical Study Catchments



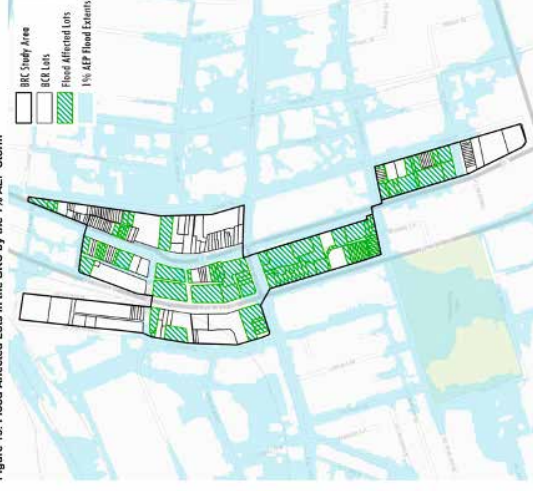
Source: Information extracted from Alexandra Canal Study TUFLOW Model (BMT WBM, 2016), Blackwattle Bay Catchment Study TUFLOW Model (WMAwater, 2015), and Darling Harbour Catchment Study TUFLOW Model (WMAwater, 2013). Green Square and West Kensington Extents approximated by Mott MacDonald from the Green Square Catchment FRMP (WMAwater, 2013) and collated by Mott MacDonald

Figure 11: Locations in the REC Exhibiting High Existing Flood Depths



Source: Information extracted from Alexandra Canal Study TUFLOW Model (BMT WBM, 2016), Blackwattle Bay Catchment Study TUFLOW Model (WMAwater, 2015), and Darling Harbour Catchment Study TUFLOW Model (WMAwater, 2013) and collated by Mott MacDonald

Figure 15: Flood Affected Lots in the BRC by the 1% AEP Storm



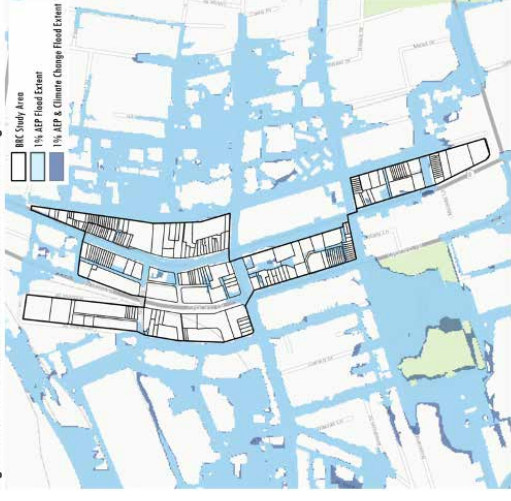
Source: Information extracted from Alexandria Canal Study TUFLOW Model (BMT WBM, 2016), Blackwattle Bay Catchment Study TUFLOW Model (WMAwater, 2015), and Darling Harbour Catchment Study TUFLOW Model (WMAwater, 2013) and collated by Matt MacDonald

Figure 12: Locations in the REC Exhibiting High Existing Flood Hazard



Source: Information extracted from Alexandra Canal FRMSP (Cardno, 2014), Blackwattle Bay Catchment FRMSP (WMAwater, 2015), Green Square Catchment FRMSP (WMAwater, 2013), Alexandra Canal Study TUFLOW Model (BMT WBM, 2016), Blackwattle Bay Catchment Study TUFLOW Model (WMAwater, 2015), and Darling Harbour Catchment Study TUFLOW Model (WMAwater, 2013) and collated by Matt McDonald.

Figure 14: 1% AEP Flood Extents with and without Climate Change



Source: Information extracted from Alexandra Canal Study TUFLOW Model (BMT WBM, 2016), Blackwattle Bay Catchment Study TUFLOW Model (WMAwater, 2015), and Darling Harbour Catchment Study TUFLOW Model (WMAwater, 2013) and collated by Mott MacDonald

Utilities and Servicing

The purpose of this draft report is to undertake a utilities infrastructure assessment in support of the LUJIP for the Redfern to Eveleigh Corridor (with a focus on the Botany Road Corridor), to provide an understanding of existing utilities infrastructure in the area and to identify opportunities and constraints that may impact development. The summaries adjacent are directly from the draft report.

Water Servicing

- Sydney Water currently supplies water to existing developments in the BRC.
- The BRC lies in the Botany Gravity Zone (BGZ) (making up 85% of the BRC) and the Centennial Park Zone (CPZ) (making up 15% of the BRC).
- Both the BGZ and CPZ obtain their water from the Waterloo and Dowling Street Pumping Stations respectively, these pump stations are serviced by via two large water mains originating from the Potts Hill Reservoir.
- Remaining capacity was awaiting Sydney water advice at the time of the draft report.

Constraints

- The report notes it does not appear any dwelling growth in the BRC or Redfern Station precincts have been allowed for by Sydney Water prior to 2026.
- Stage 2 of the water utilities study would have informed growth in the BRC and therefore encourage Sydney Water to update their future GSP to include provisions for the growth, however this stage 2 was not undertaken.
- An historic water tunnel 16km long, 2475mm diameter concrete encased potable water pressure tunnel underlies several properties in the BRC. Sydney Water's website nominates a 3m cutillage. The report notes it is likely it lies a significant distance underground and may not limit foundations of possible built forms however any future development would need to give consideration to this main and coordinate with Sydney Water.
- The existing minor water reticulation currently servicing the BRC is not suitable to accommodate for high rise residential developments – upgrades would likely be required along Gibbons Street (northern catchment) and on Botany Road (southern catchment).

Opportunities

- Recycled water could be supplied to the BRC site by the Green Square recycled water network and facility. Feasibility would need to be discussed with Green square.
- If an Alexandria Reserve retention basin was developed, a recycled water scheme could be developed similar to that at Green Square.

Sewer Servicing

- The BRC is located within the Malabar Wastewater Treatment Plant (WWTP) catchment.
- The study area falls into two key sewer catchments, separated by a North South running crest along Wyndham Street.
- Both catchments then ultimately meet up and drain into the 1650mm Southern Division Submain (SDS).
- Whether any SSP or neighbouring development have any impact on the upgrades required with future development was awaiting advice and subject to further conversation at the time of draft report.

Constraints

- The existing catchments in the BRC are within flat low-lying areas, where sewer pipes are at very shallow depths and grades often making it difficult to service.
- A risk exists as Sydney Water's assets that (if there is a capacity shortfall) have the potential to delay or prohibit development in a Precinct.
- Review of impact of neighbouring developments to the BRC on the sewer corridors was incomplete at the time of the draft report being completed.
- The report noted that dependant on growth in the BRC it is likely that the 300mm and 225mm pipes will require upgrading/duplication.
- Constraints around large trunk carrier upgrades still needed to be confirmed with Sydney Water at the time of this draft report being completed.

Opportunities

- All Sewer mains in the vicinity of the BRC are located within main corridors, and are not expected to limit development footprints.
- There is an opportunity to co-develop infrastructure with the Waterloo JV to service the needs of both the Waterloo and BRC precincts.

Electricity Servicing

- The study area is serviced by the Ausgrid electrical network.
- At the time of the report, forecasts for growth from developments was to be confirmed with Ausgrid.

Constraints

- Ausgrid's forecast demand at the time of the report does not assume any development in the BRC region but appears to include the SSP in the Waterloo Precinct.
- As there is forecast to be more remaining capacity in the Beaconsfield BSP to Zelstead ZS feeder it is not expected that the feeder will limit the ability for Zelstead ZS to provide power to the BRC.
- It is not expected that the Surry Hills ZS feeder will limit the ability for Surry Hills ZS to provide power to the REC.
- Pyrmont to Camperdown could limit the ability for Surry Hills ZS to provide power to the REC and may need upgrading.
- Green Square and St Peters were being clarified with Ausgrid at the time of the draft report.

- Aging Ausgrid asset conditions may constrain the development (refer to the table for more detail in the draft report).
- Review of impact of neighbouring developments to the BRC on the planned Ausgrid network was incomplete at the time of the draft report being completed.
- Mass electrification of vehicles if implemented may increase demand.

Opportunities:

- There appears to be sufficient residual capacity in the REC and BRC to service future developments without significant augmentation or new Zone Substations.
- There is a possible relocation of Substations closer to the BRC.

Gas Servicing

- Gas is supplied to the study area by Jemena.
- Two 1050kPa high pressure secondary mains are located within the vicinity of the BRC.
- A secondary main traverses Redfern Street, bisecting the Redfern SSP site.
- Gas is present within the majority of streets within the BRC and surrounding areas.
- 210kPa network mains supply the existing properties and are expected to support future growth.

Constraints:

Existing available capacity is unknown at this stage and is determined by Jemena at each application for connection.

Two secondary gas mains located within vicinity of the BRC would not preclude development, but relocation of these should be avoided where possible particularly as it may prove difficult should road alignments change.

Opportunities:

The draft report note that the availability of gas is not expected to pose a constraint to development as there is already gas infrastructure in the vicinity of the study area, it is therefore likely that Jemena will be able to facilitate the upgrade of infrastructure.

Telecommunications Servicing

- Telstra, Optus, AAPT, Nextgen, TPG and several others own assets within the Botany Road Corridor and surrounding area. The rollout of the NBN has commenced across the BRC located within most residential streets.
- There are also several underground optic fibre cables located within or adjacent to the BRC - along parts of Garden and Regent Streets (north of the BRC), and along Botany Road between Buckland and McEvoy Streets (south) and within Australian Technology Park (east of the BRC), via cabling along Henderson Road and Garden Street. Relocation of fibre optic cabling can be challenging and add additional costs to the project. Relocation of these assets should be avoided where possible.

Constraints:

- Relocation of fibre optics should be avoided where possible.

- Several mobile towers are located across the study area. Before these towers can be decommissioned, a suitable alternative location will need to be selected approved by the respective owner.
- Mobile towers are required to be placed atop new buildings if consistent coverage is required.

Opportunities:

- The draft report notes that the provision of telecommunications infrastructure is not expected to limit or constrain development.
- Most telecommunications infrastructure in the study area is located within the road reserve and therefore providing road alignments stay, minimal relocation works are required.

Future Surrounding Development - Proposed Yields

A summary of proposed yields was TBC at the time of the draft report.

Sustainability Opportunities

The report note that currently sustainable initiatives can be expensive and may be less commercially viable.

Development in the BRC provides opportunity for private landowners and developers to include sustainable improvements within building design to reduce demand for services.

The City of Sydney Environmental Action Plan 2016 – 2021 has key strategies and sustainable targets. The Report has relevant CoS Environmental Initiatives in the report including recommendations as to whether they could be implemented in the BRC.

These are summarised as the following key interventions:

- Retrofitting buildings
- Replacing public domain lighting with LEDs
- Solar power and solar hot water
- Advocating for Ausgrid lights to be LED
- Connecting CoS parks and building to alternate water supplies
- Having precinct scaled stormwater harvesting
- Wastewater recycling run by private water utilities

Stage 1 Acid Sulfate Soils and Contamination

This Report summarises findings from a Stage 1 report which reviewed current or previous land uses and resulting contamination and acid sulphate soils within the Corridor. The report also identifies opportunities, constraints and risks to be considered as part of any land use and infrastructure implementation plan (LUIP).

The report summarises current or previous land uses and contamination:

- Land use is Mixed use B4 or General Residential R1 or SP2 Classified Road.
- Regional Lithology is medium to fine grain marine sand, which is porous and therefore may allow easy distribution of contamination.
- Soil landscape characteristics – Aeolian, would allow easy distribution of contamination due to porous and unconsolidated nature.
- The NSW OEH shows BRC has not been assessed for acid sulfate soils.
- The Sydney LEP 2012 classifies the BRC as Class 5 the 'least onerous designation' and requires DA consent for works below 5m within 400m of adjacent class 1-4.
- A development consent would likely require an acid sulfate soil management plan being identified.

- Topography – the BRC runs along a falling ridge line, drops steeply in elevation at the rail corridor, then flattens out in the hills to the east. General slope goes north to south.
- Surface water – no surface water bodies are within the BRC.
- Groundwater – no boreholes taken in the BRC have information on groundwater.
- Various sites have had S149 Certificates with and without audit undertaken.

- Extensive discussion in the report determines that the S149 certificates available from council would not necessarily determine if a site has elevated risk of contamination due to differences in rationale.
- The following sites have a land management clause associated with them:

- 27-41 Wyndham St.
- 62-72 Botany Road Alexandria
- 32 Rosehill Street Redfern
- 30-44 Garden St Alexandria

- 20-34 Wyndham St Alexandria
 - 31-41 Cornwallis Street Redfern
 - 43 Wyndham St Alexandria
 - 143-159 Botany Road Waterloo
 - 1-3 Botany Road Waterloo
 - 10-20 Garden St Alexandria
- NSW EPA contaminated land public record database search revealed:

- 8 Boundary Street (10-20 Botany Road) – formerly Gas N Go (developed into Residential use) – to contain contamination.
- Site Visit and desktop review did not identify properties on the hazardous chemicals database (SafeWork NSW).

A historic title deeds search was undertaken, with only low risk properties being identified.

Summary of findings:

- BRC considered not an area at risk of Acid sulfate soils. Development below Raglan Street should consider acid sulfate soils are compliant with Sydney LEP 2012.
- BRC should be considered as having low potential for ground/ groundwater contamination.
- Historic contamination cannot be ascertained from information available to the study.
- Traditional terraces and churches could be considered low risk.
- 10-20 Botany Road could contain contamination due to being registered on the EPA site.
- Other than properties identified, the investigation has not revealed any major widespread contamination of significant areas of concern.

Recommendations for further risks:

- Adhere to SEPP 55 Remediation of Land.
- Site specific studies should be carried out due to uncertainty of the status of contamination.
- Intrusive land and groundwater contamination sampling should be undertaken across the BRC.

For BRC, Risks include:

- Potential impact to workers during redevelopment works.
- Potential impact to residents from residual contamination.
- Potential impact to the public including contact with soil in public reserves or other public open spaces.



Figure 14: Historic Water Pressure Tunnel



Source: Sydney Water Hydra 9th May 2018

7.2 Urban Design Options - Built Form Typology Precedents

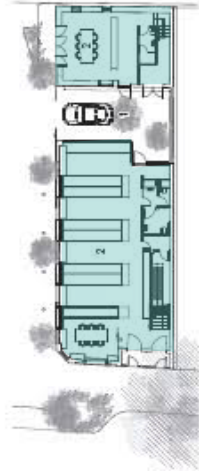
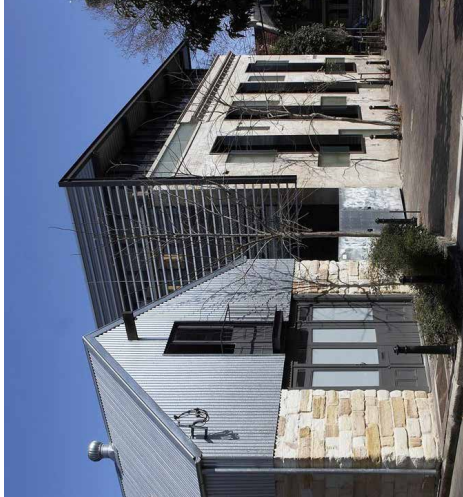
Extra Small Sites - 100-500 sqm - Commercial

Applicable to 'Fine Grain' sites, Heritage or Conservation Area Properties

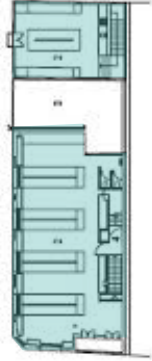
- LEGEND
- Retail / Showroom
 - Entertainment / Dining / Leisure
 - Commercial / Office

BOURKE 632, SURRY HILLS
Smart Design Studio

Type:	Adaptive re-use
Primary Use:	Office
Ground Floor:	Office
Lot size:	240 sqm
Site:	27 x 8.8m
Max. Height:	3 storeys
Av. Storey:	unknown
No. of Cores:	1
Total GFA:	500 sqm approx.
Typical Floor:	130 sqm approx.



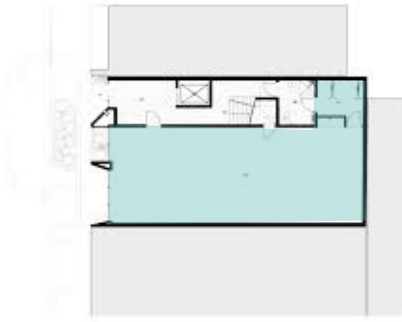
Ground Floor Plan



First Floor Plan

THE 'BEEHIVE'
Luigi Roselli Architects

Type:	In-fill
Primary Use:	Offices
Ground Floor:	Offices
Lot size:	550 sqm
Site:	32m x 17m
Max. Height:	3 storeys
Av. Storey:	unknown
No. of Cores:	1
Total GFA:	1,000 sqm
Typical Floor:	420 sqm



Ground Floor Plan



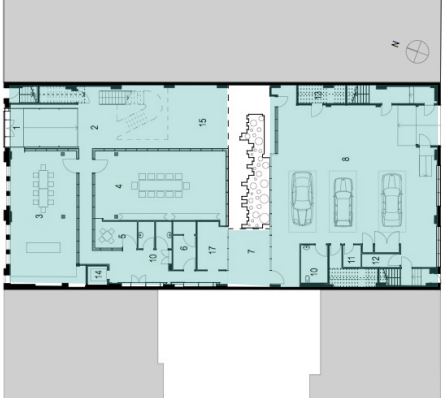
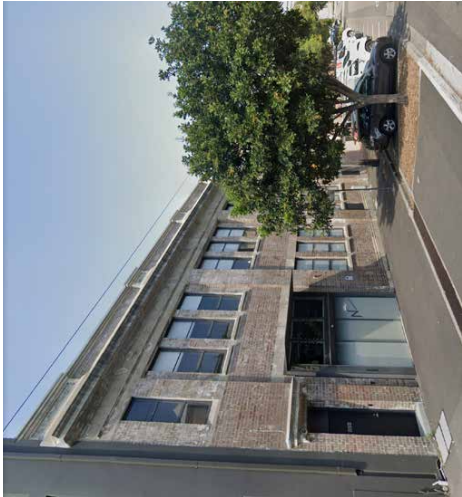
First Floor Plan

Small Sites - 500-900 sqm - Commercial

Applicable to Heritage or Conservation Area Properties, Existing Warehouses, Properties on Wyndham Street

75 MYRTLE STREET, CHIPPENDALE
Tonkin Zulaikha Greer

Type:	Advocative Re-use
Primary Use:	Office
Ground Floor:	Office
Lot size:	824 sqm
Site:	20m x 41m
Max. Height:	2 storeys
Av. Storey:	4.0m
No. of Cores:	3
Total GFA:	1,500 sqm
Typical Floor:	763 sqm



Ground Floor Plan



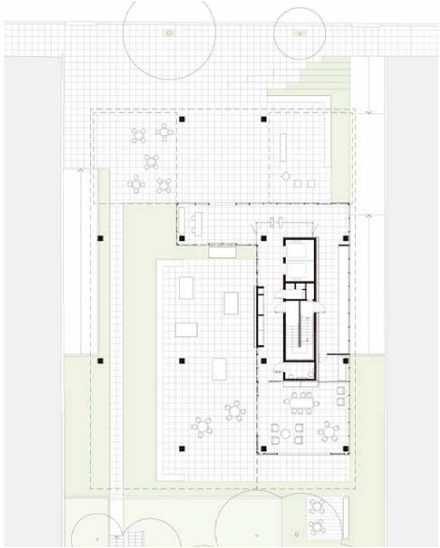
Typical Floor Plan

LEGEND

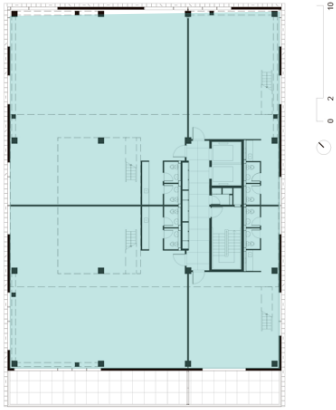
	Retail / Showroom
	Entertainment / Dining / Leisure
	Commercial / Office

POP-BUILDING, SAO PAULO, BRAZIL
Andrade Moretin Arquitetos Associados

Type:	Free-standing / 4-sided
Primary Use:	Offices
Ground Floor:	Breakout
Lot size:	1000 sqm
Site:	49m x 29m
Max. Height:	5 storeys
Av. Storey:	unknown
No. of Cores:	1
Total GFA:	4,235sqm
Typical Floor:	847 sqm



Ground Floor Plan



Typical Floor Plan

Small Sites - 500-900 sqm - Commercial

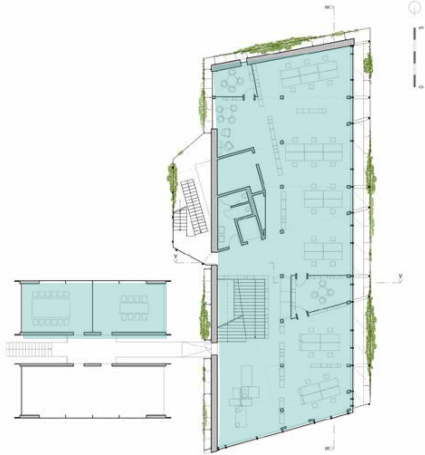
Applicable to Heritage or Conservation Area Properties, Existing Warehouses, Properties on Wyndham Street

- LEGEND
- Retail / Showroom
 - Entertainment / Dining / Leisure
 - Commercial / Office

ASI REISEN OFFICES, AUSTRIA

Snohetta

Type:	Free-standing
Primary Use:	Office
Ground Floor:	Office
Lot size:	900 sqm
Site:	35m x 28m
Max. Height:	4 storeys
Av. Storey:	unknown
No. of Cores:	1
Total GFA:	1,500 sqm
Typical Floor:	350 sqm

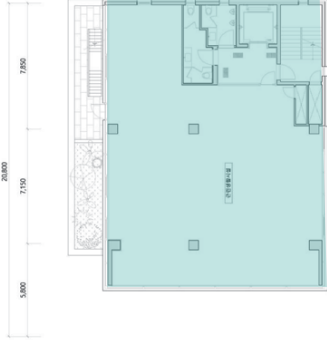


First Floor Plan

FINEMAN AND KRASSEN HEADQUARTERS, SEOUL, KOREA

JYA-ARCHITECTS

Type:	Single Frontage
Primary Use:	Offices
Ground Floor:	Retail
Lot size:	464 sqm
Site:	32m x 14.5m
Max. Height:	5-6 storeys
Av. Storey:	4.0m (G-1), 3.8m (upper)
No. of Cores:	1
Total GFA:	1,500 sqm approximately
Typical Floor:	301 sqm



Typical Floor Plan

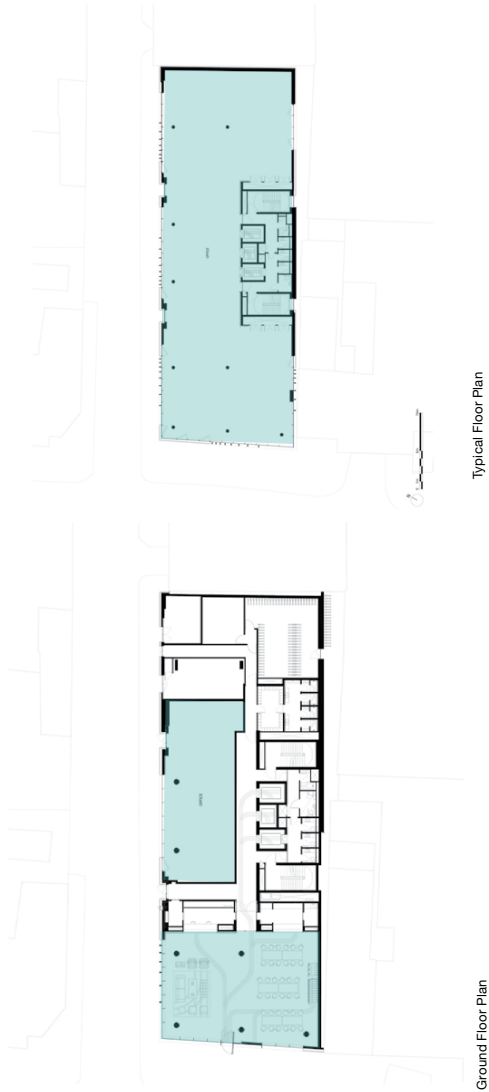
Medium Scale Sites - 900-1500+ sqm - Commercial

Applicable to Waterloo Metro Quarter Sites, Precinct 3

- LEGEND
- Retail / Showroom
 - Entertainment / Dining / Leisure
 - Commercial / Office

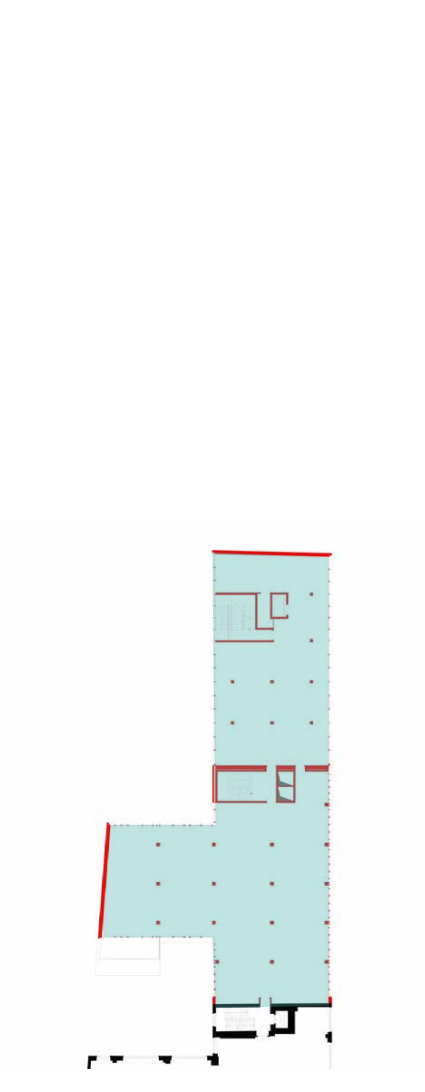
ROLLING STOCK YARD OFFICE, LONDON, UK
Squire and Partners Architects

Type:	Corner Block, 2 sided frontage
Primary Use:	Offices
Ground Floor:	Reception, Services, Arrival Amenities
Lot size:	900 sqm
Site:	49m x 17m
Max. Height:	9 storeys
Av. Storey:	3.2 -6 (G), 3.5m (1-8)
No. of Cores:	6
Total GFA:	8154 sqm
Typical Floor:	769 sqm



NIKE CENTRAL EUROPE HQ, BERLIN
GERMANY
Studio Julian Breinersdorfer + RIMPAU BAUER
DERVEAUX Architekten

Type:	2 Sided form, street edge
Primary Use:	Offices
Ground Floor:	Reception / Office
Lot size:	1,750 sqm
Site:	30m x 32m (x2)
Max. Height:	6 storeys
Av. Storey:	unknown
No. of Cores:	1
Total GFA:	6,500 sqm
Typical Floor:	719 sqm

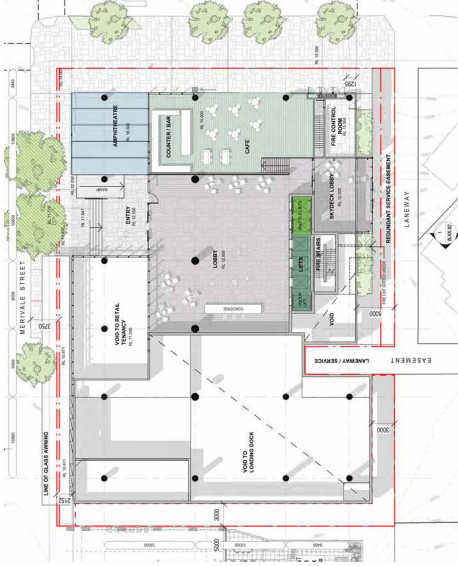
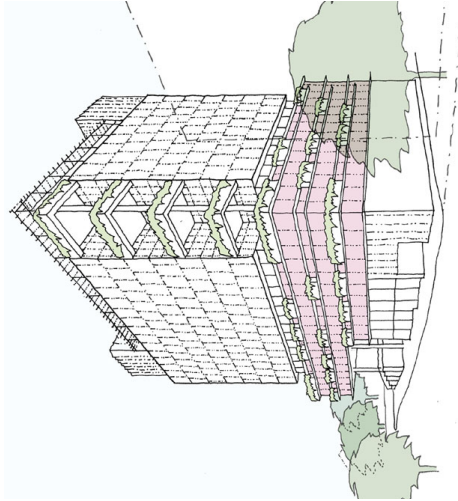


Medium Scale Sites - 900-1500+ sqm - Commercial

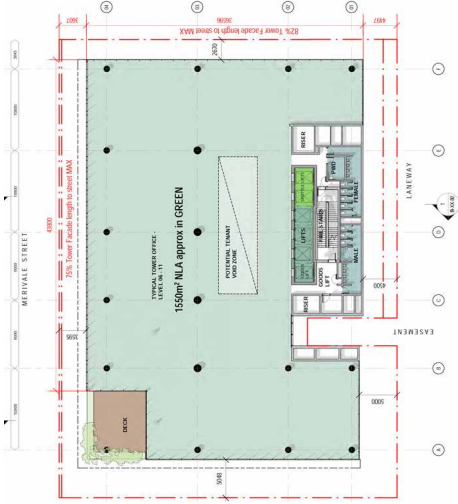
Applicable to Waterloo Metro Quarter Sites, Precinct 3

'MOBO' OFFICES, BRISBANE
BVN ARCHITECTS

Type:	4 Sided
Primary Use:	Offices
Ground Floor:	Reception, Services, Arrival Amenities
Lot size:	1,500 sqm (approx.)
Site:	36m x 49m
Max. Height:	14 storeys
Av. Storey:	4.5 - 5.5m (G-1), 4.0m (upper)
No. of Cores:	1
Total GFA:	19,840 sqm
Typical Floor:	1665 sqm



Ground Floor Plan



Typical Floor Plan

- LEGEND
- Retail / Showroom
 - Entertainment / Dining / Leisure
 - Commercial / Office

MAKERS QUARTER BLOCK D OFFICE, SAN
DIEGO, USA

BNIM

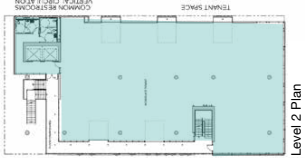
Type:	3 Sided form, rear lane 'frontage'
Primary Use:	Offices
Ground Floor:	Reception / Retail
Lot size:	53 sqm
Site:	34m x 17m
Max. Height:	6 storeys
Av. Storey:	unknown
No. of Cores:	2
Total GFA:	3,298 sqm
Typical Floor:	593 sqm



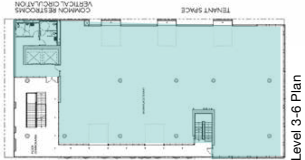
Site Plan



Ground Floor Plan



Level 2 Plan



Level 3-6 Plan

Large Scale Sites - 2000+-2500 sqm - Commercial

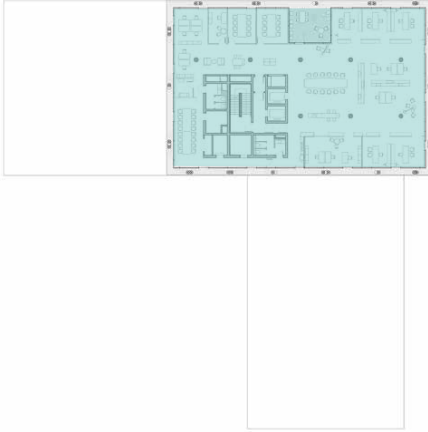
Applicable to McEvoy Street Precinct 4

- Retail / Showroom
- Entertainment / Dining / Leisure
- Commercial / Office

50 HERTZ HEADQUARTERS, BERLIN, GERMANY

LOVE Architecture and Urbanism

Type:	Corner Block, L-shape
Primary Use:	Offices
Ground Floor:	Conference, Dining, Kindergarten
Lot size:	3,500 sqm
Site:	72m x 67m
Max. Height:	9 storeys
Av. Storey:	5.0m (G), 4.6m (1-12)
No. of Cores:	3
Total GFA:	24,822 sqm
Typical Floor:	2,760 sqm



'NOVE' OFFICES, MUNICH, GERMANY
Antonio Citterio Patricia Viel Architects

Type:	Whole City Block / 4 Sided form
Primary Use:	Offices (levels 1 -7)
Ground Floor:	Restaurant, shops/showrooms
Lot size:	5,000 sqm
Site:	79m x 80m
Max. Height:	9 storeys
Av. Storey:	4.3m (G), 3.8m (1-8)
No. of Cores:	6
Total GFA:	27,500 sqm
Typical Floor:	4,500 sqm

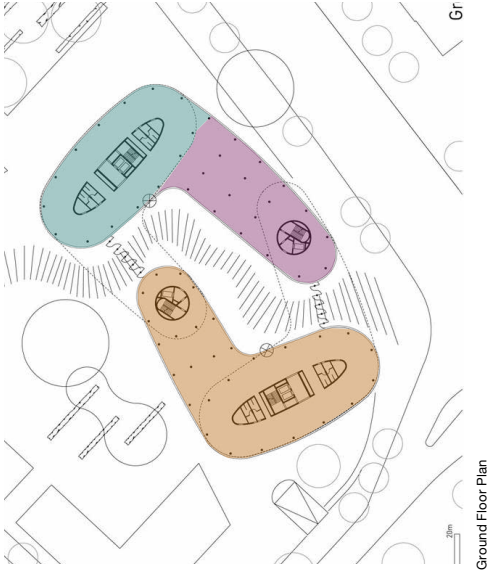


Large Scale Sites - 2000-2500 sqm - Commercial

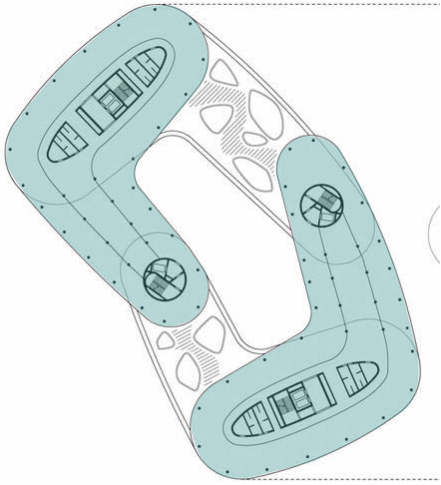
Applicable to McEvoy Street Precinct 4

LTD 1 OFFICES, HAMBURG, GERMANY
Peter Ruge Architekten

Type:	Free-standing Curved, Courtyard
Primary Use:	Offices / Administration
Ground Floor:	Conferences, Dining, Retail
Lot size:	5,000 sqm
Site:	100m x 50m
Max. Height:	7 storeys
Av. Storey:	unknown
No. of Cores:	2 per floor plate
Total GFA:	26,643 sqm
Typical Floor:	1,300-1,500 sqm



Ground Floor Plan



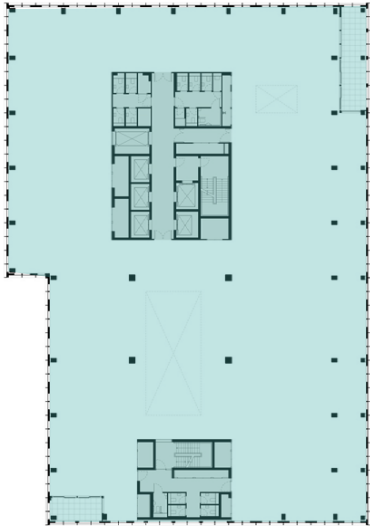
Typical Floor Plan

LEGEND

- Retail / Showroom
- Entertainment / Dining / Leisure
- Commercial / Office



Ground Floor Plan



Typical Floor Plan

Type:	Whole City Block / Stepped form
Primary Use:	Mixed-Use / Office
Ground Floor:	lobby, cinema, restaurant, bar
Lot size:	2,600 sqm
Site:	62m x 43m
Max. Height:	13 storeys
Av. Storey:	4.2m (G-1), 3.9m (upper)
No. of Cores:	2
Total GFA:	22,000 sqm
Typical Floor:	2,600 sqm

R7 KINGS CROSS, LAZENBY UK
Duggan Morris Architects

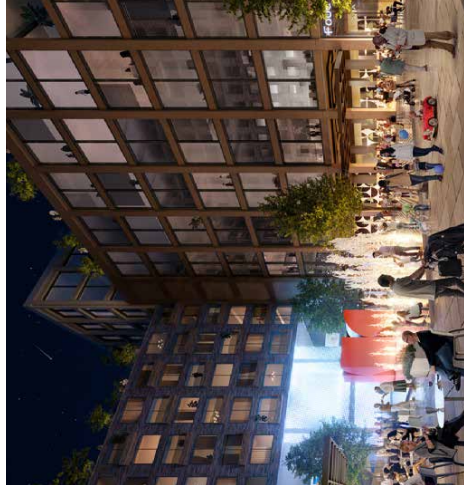
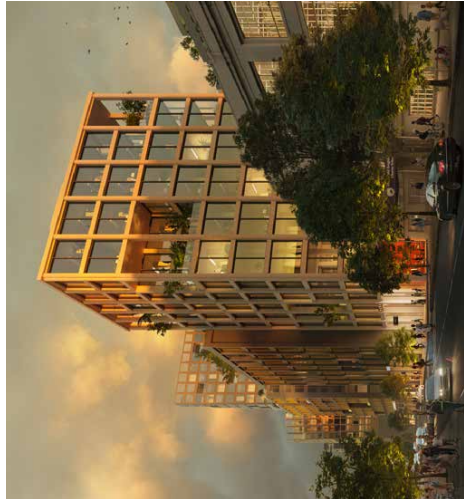
Large Scale Sites - 1500-2500+ sqm - Mixed Use

Applicable to McEvoy Street Precinct 4

- Retail / Showroom
- Entertainment / Dining / Leisure
- Commercial / Office
- Residential

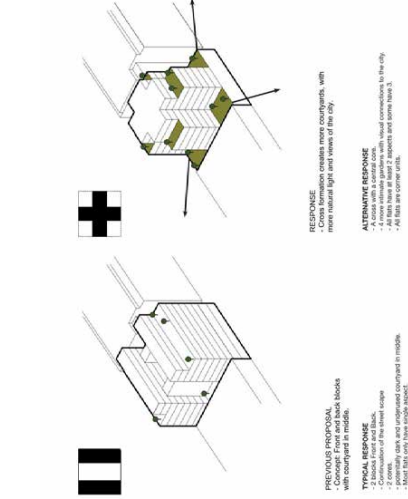
ASTORIA MIXED-USE DISTRICT, NY, USA ODA / Innovation QNS

Type:	Free-standing / Courtyard
Design Approach:	Precinct-based / Site Specific
Primary Use:	Mixed Use / Residential
Ground Floor:	Open space, community, retail
Lot size:	250,000 sqm
Max. Height:	12 storeys
Total GFA:	250,000 sqm
Total Community:	18,880 sqm
Total Commercial:	23,000 sqm



WENLOCK ROAD, HACKNEY, UK Hawkins/Brown Architects

Type:	2 Sided form
Design Approach:	Respond to a Conservation Area
Primary Use:	Residential
Ground Floor:	Restaurant, shops/showrooms
Lot size:	1,500 sqm approximately
Site:	47m x 30m
Max. Height:	10 storeys
Av. Storey:	unknown
No. of Cores:	2
Total GFA:	6,750 sqm
Total Resi:	4,650 sqm
Total Commercial:	1,190 sqm



Large Scale Sites - 1500-2500+ sqm - Mixed Use

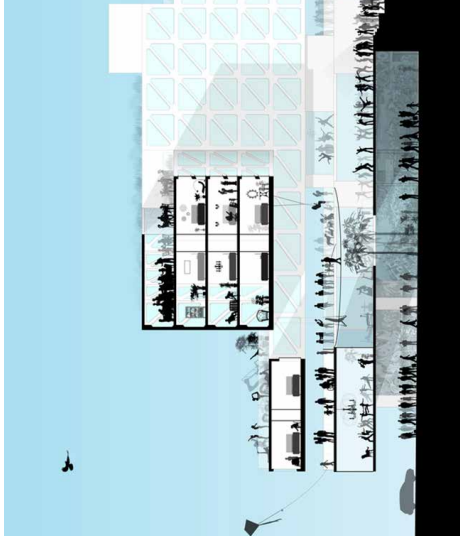
Applicable to McEvoy Street Precinct 4

- LEGEND
- Retail / Showroom
 - Entertainment / Dining / Leisure
 - Commercial / Office
 - Residential

71 WHITE, WILLIAMSBURG, USA

ODA Architects

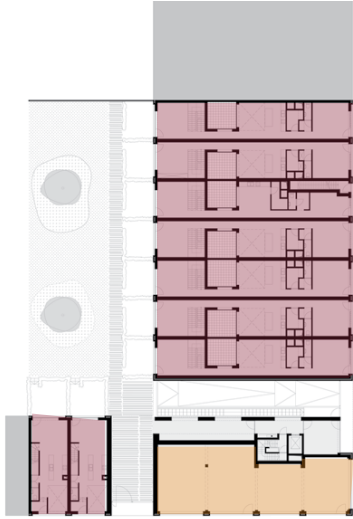
Type:	Corner Block / 2 Sided
Design Approach:	Adaptive Reuse / Community Hub
Primary Use:	Mixed Use
Lower Floors:	Hotel, Market, Retail, Dining
Lot size:	unknown
Max. Height:	8 storeys
Av. Storey:	unknown
Total GFA:	6,500 sqm



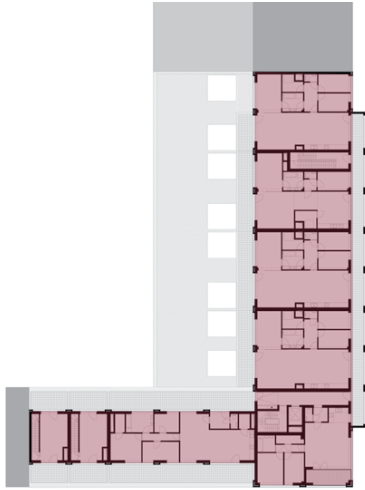
KADOX HOUSING COMPLEX, BELGIUM

HUB Architects

Type:	Courtyard / Dual-Aspect
Design Approach:	Low Scale residential
Primary Use:	Residential
Ground Floor:	Retail / lobby
Lot size:	3,050 sqm
Site:	62m x 48m
Max. Height:	4 storeys
Av. Storey:	unknown
No. of Cores:	1
Total GFA:	4,650 sqm
Total Resi:	4,365 sqm
Total Commercial:	285 sqm
Typical Floor:	1,400 sqm



Ground Floor Plan



Typical Floor Plan

Linear Sites - 1000-2500+ sqm - Commercial

Applicable to Rosehill Sites, Precinct 2

THE FOUNDRY, MELBOURNE
Bates Smart

Type:	Stepped Mass
Primary Use:	Offices
Ground Floor:	Retail, Supermarket, F&B
Lot size:	4,890 sqm
Site:	85m x 68m
Max. Height:	4,9,12 storeys
Av. Storey:	5.6 (G), 3.7m (1-12)
No. of Cores:	5
Total GFA:	23,000 sqm
Typical Floor:	3,290 sqm



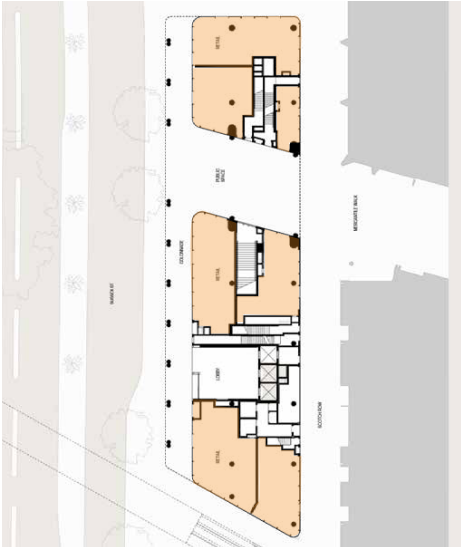
Ground Floor Plan



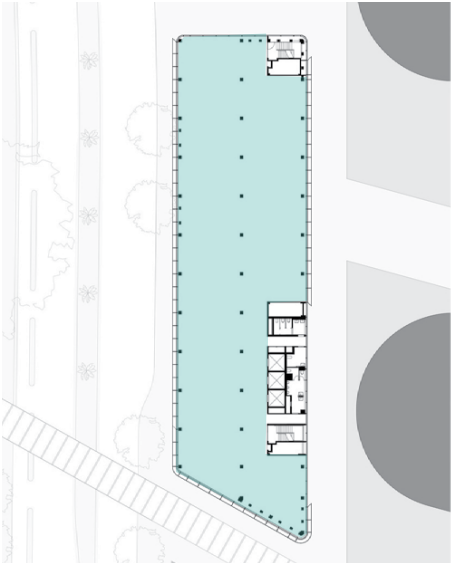
Typical Floor Plan

INTERNATIONAL HOUSE, SYDNEY CBD
Tzannes Architects

Type:	Rectangular
Primary Use:	Offices
Ground Floor:	Retail
Lot size:	1605 sqm
Site:	81m x 21m
Max. Height:	6 storeys
Av. Storey:	5.5m (G-1), 3.8m (upper)
No. of Cores:	2
Total GFA:	7,920 sqm
Typical Floor:	1,605 sqm



Ground Floor Plan



Typical Floor Plan

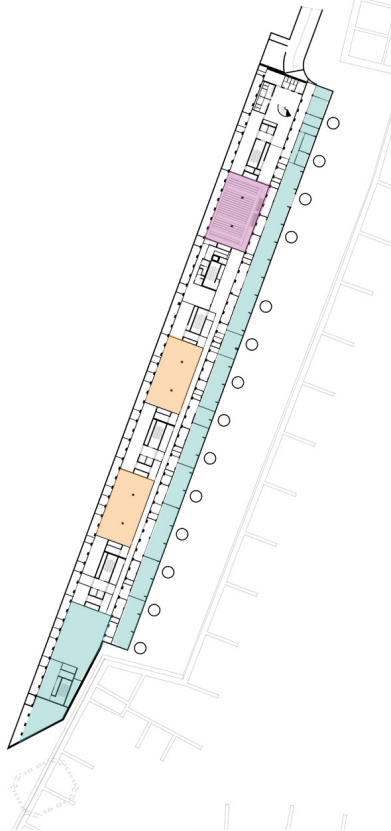
Linear Sites - 1000-2500+ sqm - Commercial

Applicable to Rosehill Sites, Precinct 2

- LEGEND
- Retail / Showroom
 - Entertainment / Dining / Leisure
 - Commercial / Office

PORTA VOLTA FONDAZIONE FELTRINELLI
Herzog and De Meuron

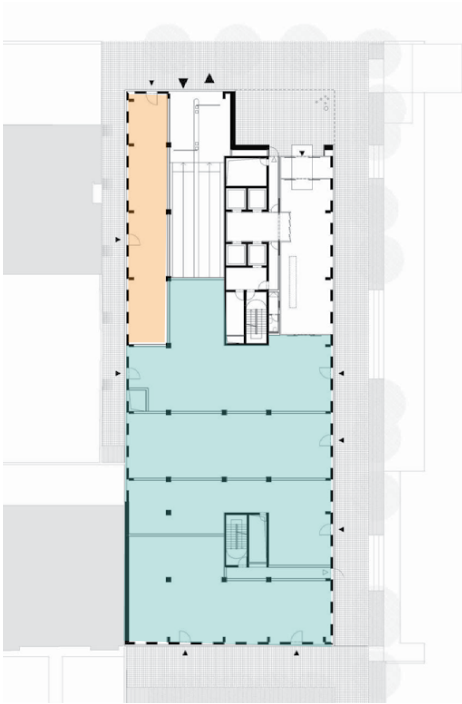
Type:	Sloped Height
Primary Use:	Offices / Institution
Ground Floor:	Offices / Retail
Lot size:	5,000 sqm
Site:	180 x 24m
Max. Height:	6-7 storeys
Av. Storey:	unknown
No. of Cores:	6
Total GFA:	30,000 sqm approximately
Typical Floor:	5,000 sqm approximately



Site Plan

'CRYSTAL', PRAGUE, CZECH REPUBLIC
ra15 a.s. Architects

Type:	Sloped Height
Primary Use:	Offices / Retail
Ground Floor:	Offices / Retail
Lot size:	1,500 sqm
Site:	19m x 52m
Max. Height:	14 storeys
Av. Storey:	unknown
No. of Cores:	2
Total GFA:	15,000 sqm
Typical Floor:	1,000 sqm



First Floor Plan