

# **ATTACHMENT C**

**VOLUME 3 DRAFT BACKGROUND  
RESEARCH AND ANALYSIS**





Sydney2030/Green/Global/Connected

CITY OF SYDNEY  

# Draft Open Space, Sports and Recreation Needs Study 2016

**Volume 3**  
**Research and Analysis**

*city of villages*

Draft - April 2016

# Open Space, Sports and Recreation Needs Study 2016

**Volume 1 - The Strategy**

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**Volume 2 - Open Space Delivery Plan**

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**Volume 3 - Research and Analysis**

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**Volume 4 - Sports Facilities Demand Study 2016**

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**Volume 5 - Appendices**

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## Volume 3 - Research and Analysis

<b>1.0/ Open Space Network Classifications</b>	<b>1</b>
<b>2.0/ Key Drivers For The Future Planning of Open Space and Recreation Facilities</b>	<b>7</b>
<b>3.0/ Open Space Network Needs Assessment</b>	<b>17</b>
<b>4.0/ Recreation Facilities Needs Assessment</b>	<b>43</b>
<b>5.0/ Sub Regional Provision and Planning</b>	<b>79</b>



# 1.0

# Open Space Network Classifications

## 1.1 Open Space Hierarchy

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

Providing hierarchy classifications will determine planning and development factors such as:

- Levels of development and infrastructure expected by the community;
- Service level standards, particularly relating to maintenance;
- Carrying capacity and ability to accommodate various uses;
- Flexibility to meet changing demands;
- Funding priorities.

Proposed hierarchy classifications are outlined in the table below:

Catchment		Description	Typical Scale	Catchment Distance from Home
Regional	REG	Any large or unique area with good links to public transport that attract visitations from the whole of the City of Sydney or broader than the City, including tourists.	Unlimited	Unlimited
District	DIST	Serving more than one Village Area. Are generally large or significant areas that attract visitors from surrounding suburbs and offer a more diverse range of activities. Can cater for a wide cross section of community interests, including informal recreation and sporting opportunities. Provides a diverse range of facilities to encourage longer stays.	1 - 5ha	2-3km
Local	LA	Serving residents within a Village Area. Open space that provides facilities for visitors within walking distance for 30-60 minute stays. Open space areas that are positioned and designed to attract residents living within a 0.5km radius. Cater for informal recreation, relaxation and children's play, and should be within walking distance of all households.	0.3 - 1ha	500m
Neighbourhood	N	Serving residents within immediate locality. Open space in easy walking distance from home to provide for short stay activities, usually children's play.	Less than 0.3ha	400m

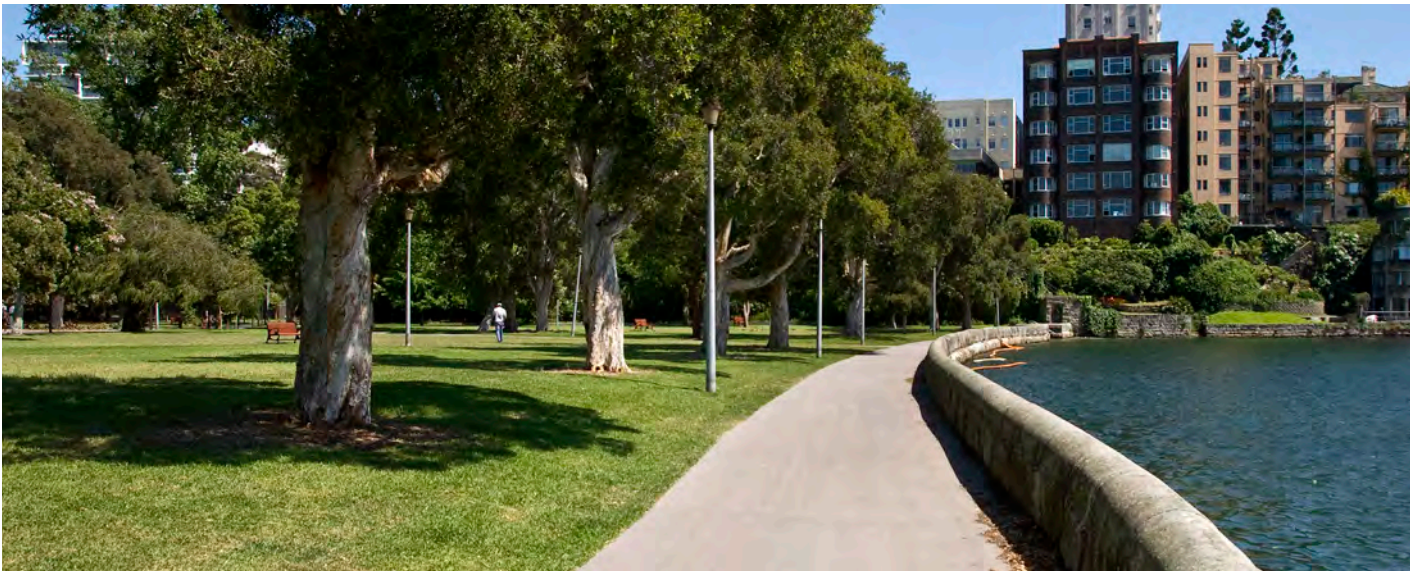
Table 1



### Catchment Classification Examples



*Regional - Sydney Park*



*District - Rushcutters Bay Park*



*Local - Foley Park*



*Neighbourhood - Janet Bierre Reserve*



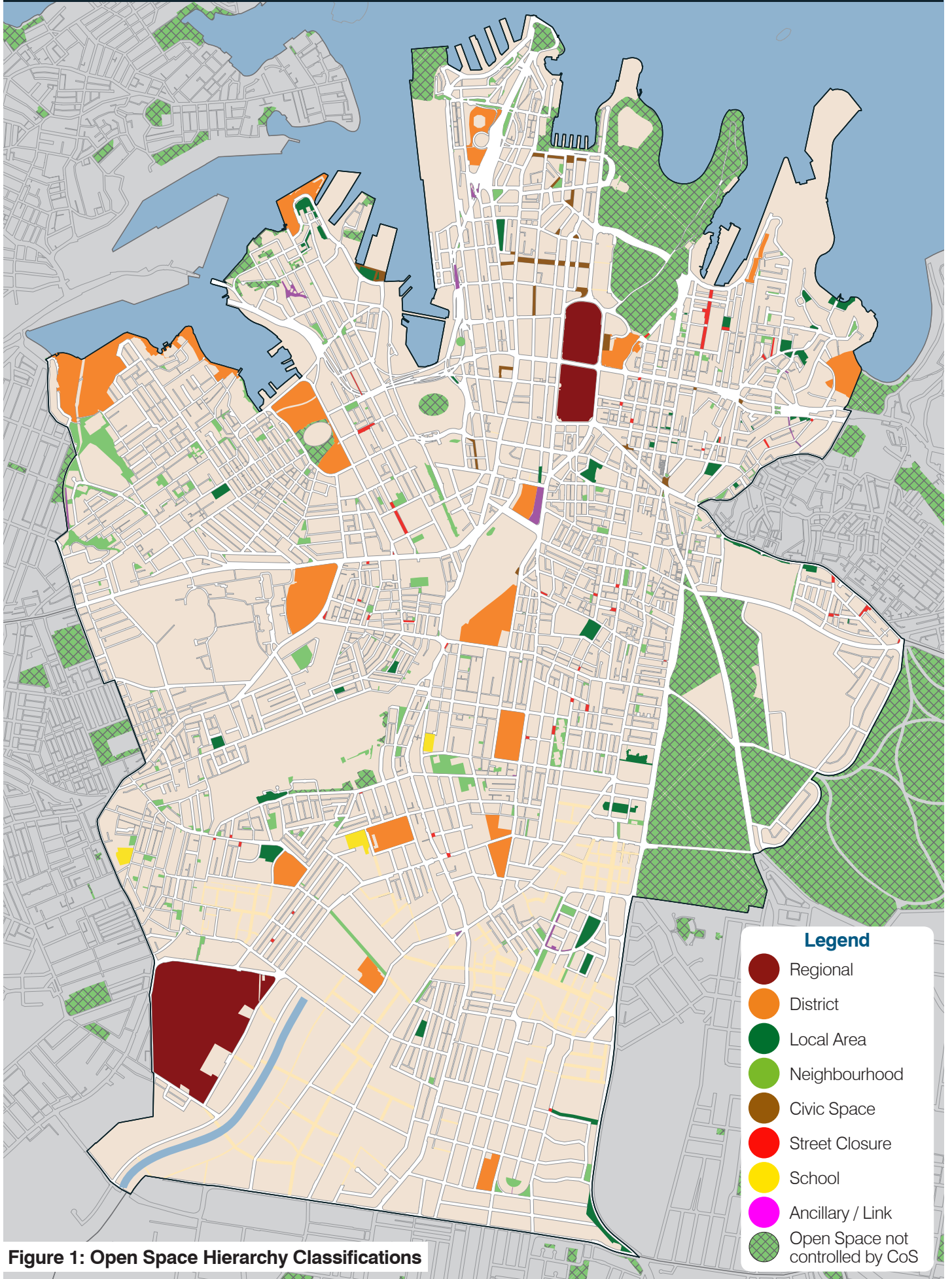


Figure 1: Open Space Hierarchy Classifications



## 1.2 Open Space Settings

Broad landscape setting types have been applied to describe the visual character or “look” of the various open space to be found across the City. The open space landscape settings are as set out below.

### Park

Covers the traditional image of open space consisting of areas of turf, trees and garden beds. Depending on size, can support a variety of functions, including unstructured recreation and organised sport. The character of parks can range from Victorian heritage landscapes to parks that have a more contemporary design.

### Pocket Park

Covers smaller parks and reserves <2,000m<sup>2</sup> commonly called pocket parks. Usually only accommodates a single function, such as playground use.

### Foreshore Park / Open Space

Parks and open space providing physical access, views or amenity to Sydney Harbour.

### Civic / Urban

Formal public space usually in an urban setting, including squares, plazas and malls, or spaces associated with the forecourt of a building. Usually hard surfaced and may accommodate passive recreation, depending on size.

### Street Closures

Open space created by the closure of streets to vehicle access. Usually very small in size and may accommodate limited facilities such as seating.

### Ancillary / Link

Describes small or lineal open space areas that primarily serve as visual amenity or means of access rather than as a destination for recreation.

## City of Sydney Open Space Setting Classifications

Figure 2 shows the settings classification of parks and open space areas within the City.

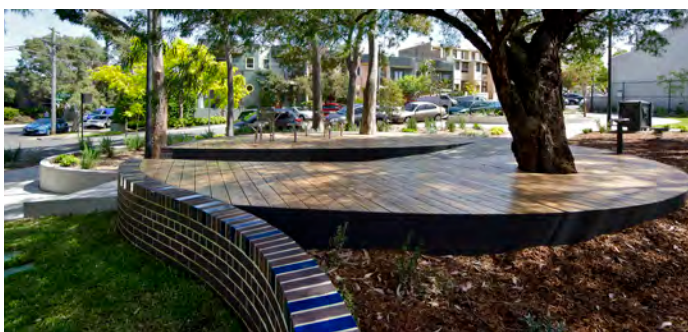
Section 4 provides detail on particular recreation and sporting facilities contained in the open space setting classifications.



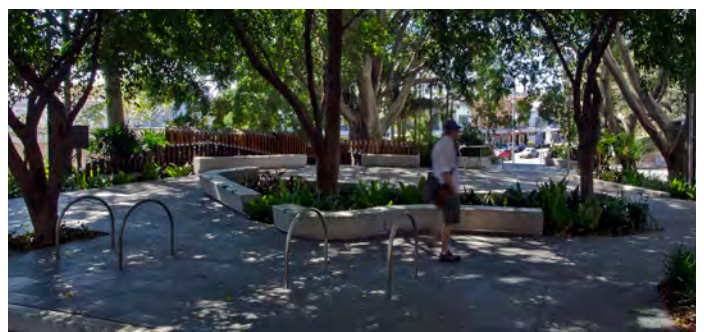
Park



Civic / Urban



Pocket Park



Street Closures



Foreshore Park



Ancillary / Link



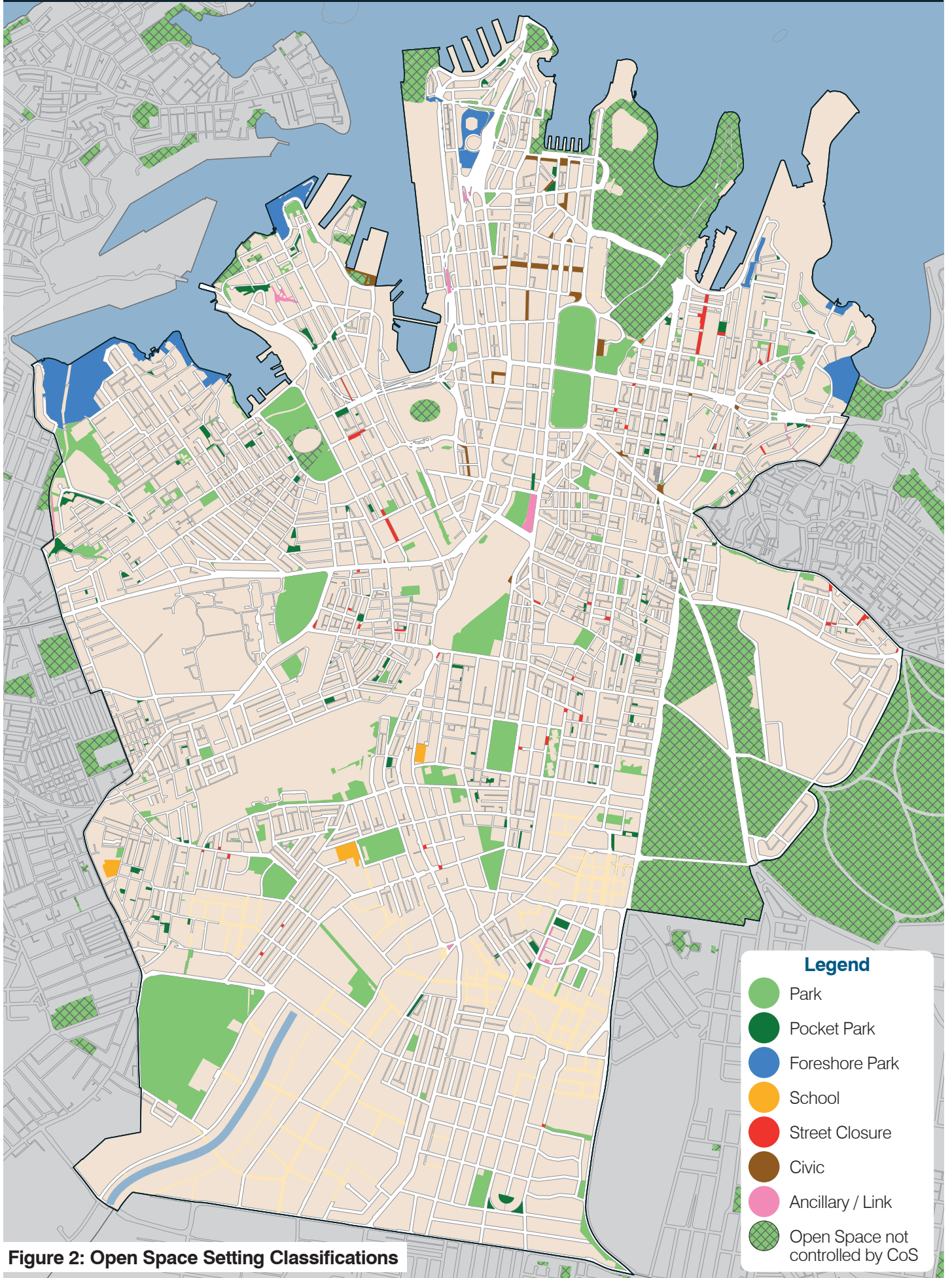


Figure 2: Open Space Setting Classifications





Chippendale Green



# 2.0

## Key Drivers For The Future Planning of Open Space and Recreation Facilities

To determine the degree to which provision of public open space and recreation facilities is serving the City of Sydney, it is essential to understand the strategic context, current and future status of the City's population, demographic trends, recreation trends and other influencing factors to ensure targeted future planning.

The In Your Village planning precincts as per Figure 3 are used for the purposes of additional analysis and breakdown beyond an overall LGA planning perspective.

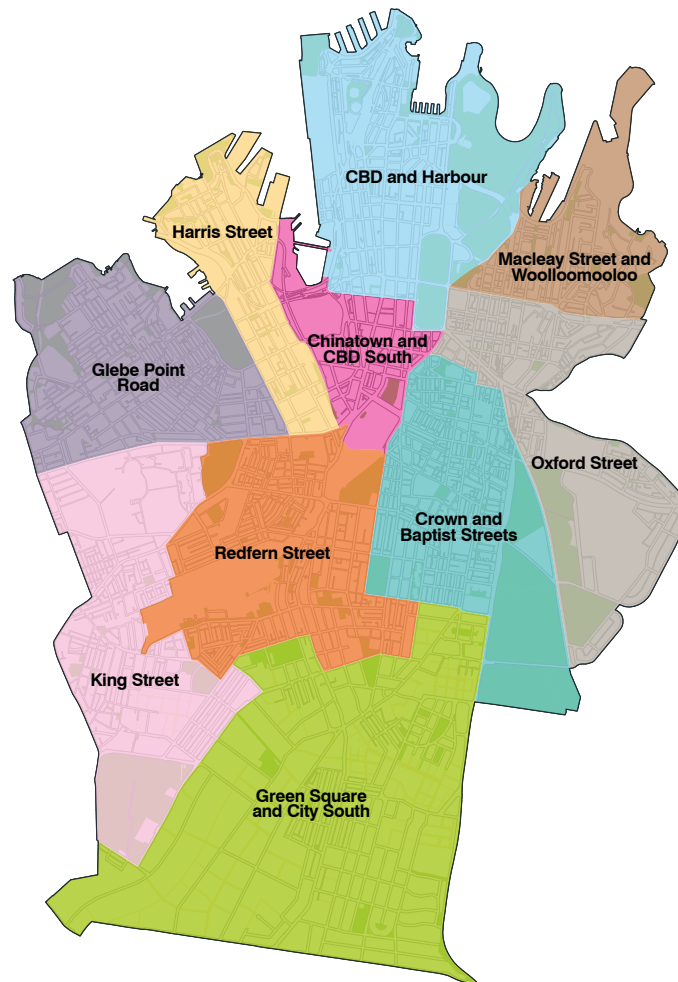
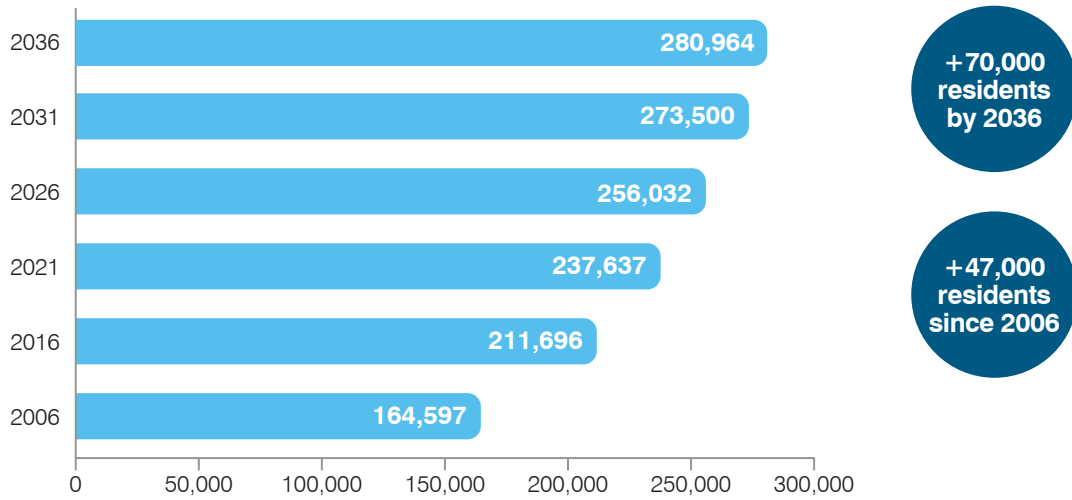


Figure 3

- CBD and Harbour**  
City Centre, Millers Point, Barangaroo
- Chinatown and CBD South**  
Haymarket, Darling Harbour
- Macleay St and Woolloomooloo**  
Potts Point, Elizabeth Bay, Rushcutters Bay, Woolloomooloo
- Oxford Street**  
Paddington, Darlinghurst, Centennial Park
- Crown and Baptist Streets**  
Surry Hills, East Redfern
- Redfern Street**  
Redfern, Chippendale, Darlington, Eveleigh, Alexandria (part), Waterloo (part)
- King Street**  
Newtown, Camperdown, Alexandria (part)
- Glebe Point Road**  
Glebe, Forest Lodge
- Harris Street**  
Pyrmont, Ultimo
- Green Square and City South**  
Zetland, Beaconsfield, Waterloo Rosebery, Alexandria (part)

## 2.1 More Residents



Source: Population and household forecasts, 2011 to 2036 .id the population experts, April 2013

## Population

The City’s residential population was **183,300** at time of the 2011 census and is estimated in 2015 to have recently passed **200,000** people.

The City of Sydney population is forecast to grow to **280,964** by **2036**.

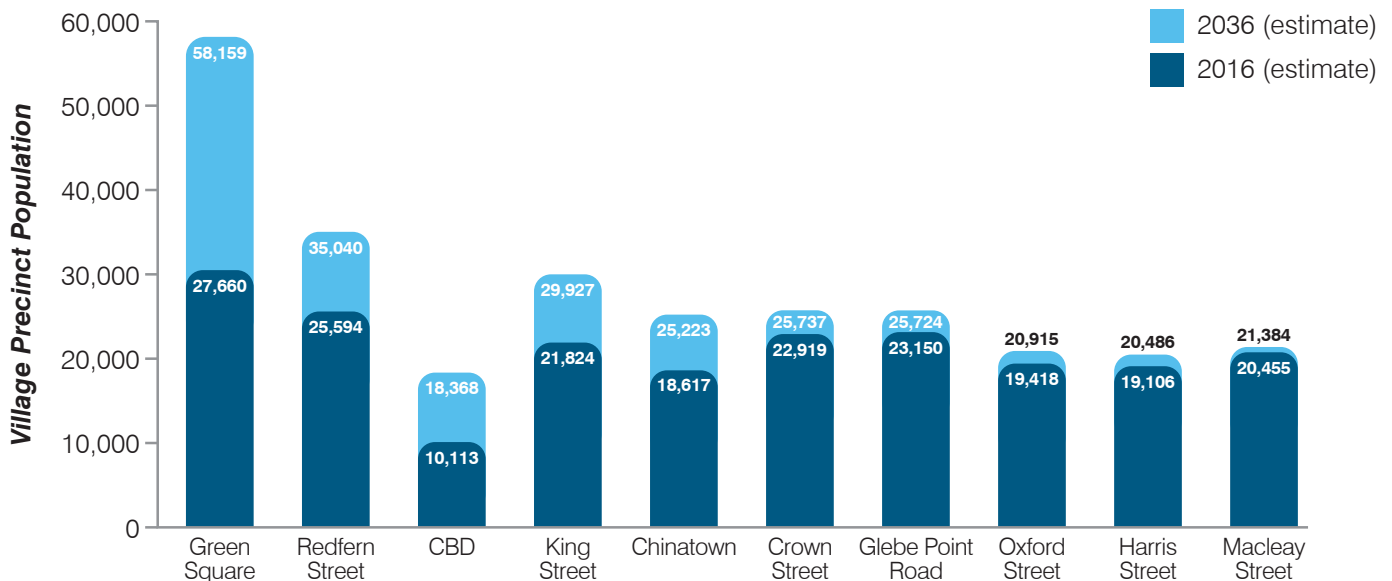
The State Government Plan for a Growing Sydney 2014 anticipates the population of the Sydney Metropolitan Region will increase by **1.6 million people**.

Although this Plan is not specific where this growth will occur it is expected that the urban renewal areas of Bays Precinct, Central to Eveleigh and Parramatta Road Corridor will be planned to accommodate significant residential populations.

This does not include anticipated population increases from urban renewal areas under masterplanning by State Government.

## Population Growth By Village

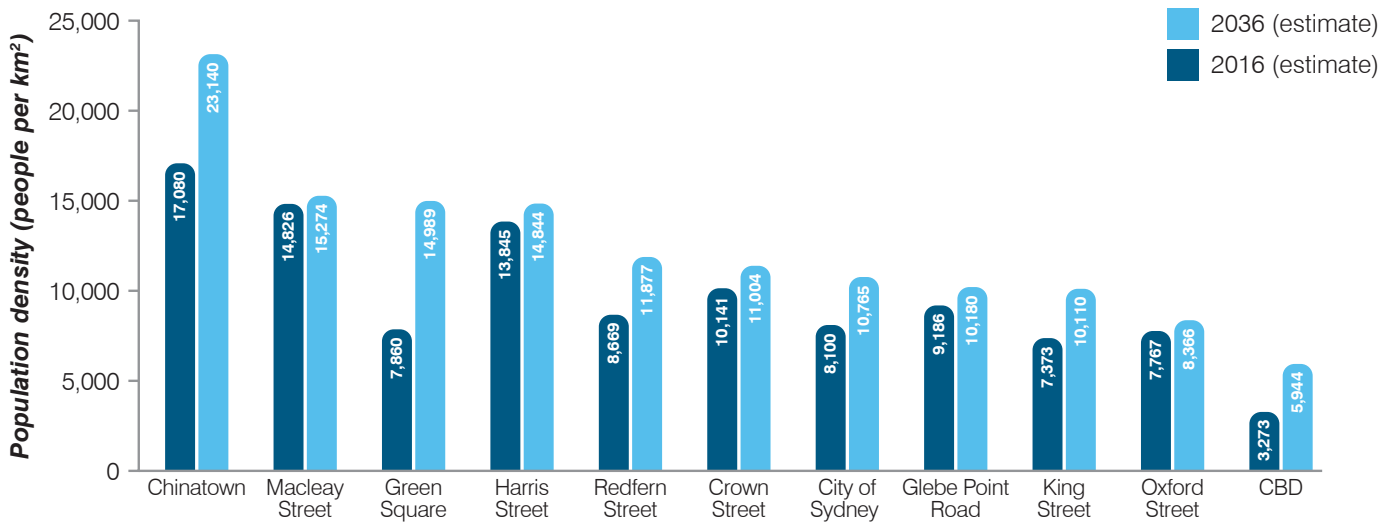
The graph below provides estimated breakdown population across the In Your Village precincts.



Source: Population and household forecasts, 2011 to 2036 .id the population experts, April 2013



# Draft Open Space, Sports and Recreation Needs Study 2016



Source: Population and household forecasts, 2011 to 2036 .id the population experts, April 2013

## Density

The overall city wide projected 2016 residential population density within the City will be 8,110 people/km<sup>2</sup>. Between June 2004 and June 2014, the population density of the City increased by 1,695 persons per square kilometre, or 29.7%.

This positioned the City as having the:

- Largest increase in population density in NSW
- Fourth fastest growing population density in metropolitan Sydney

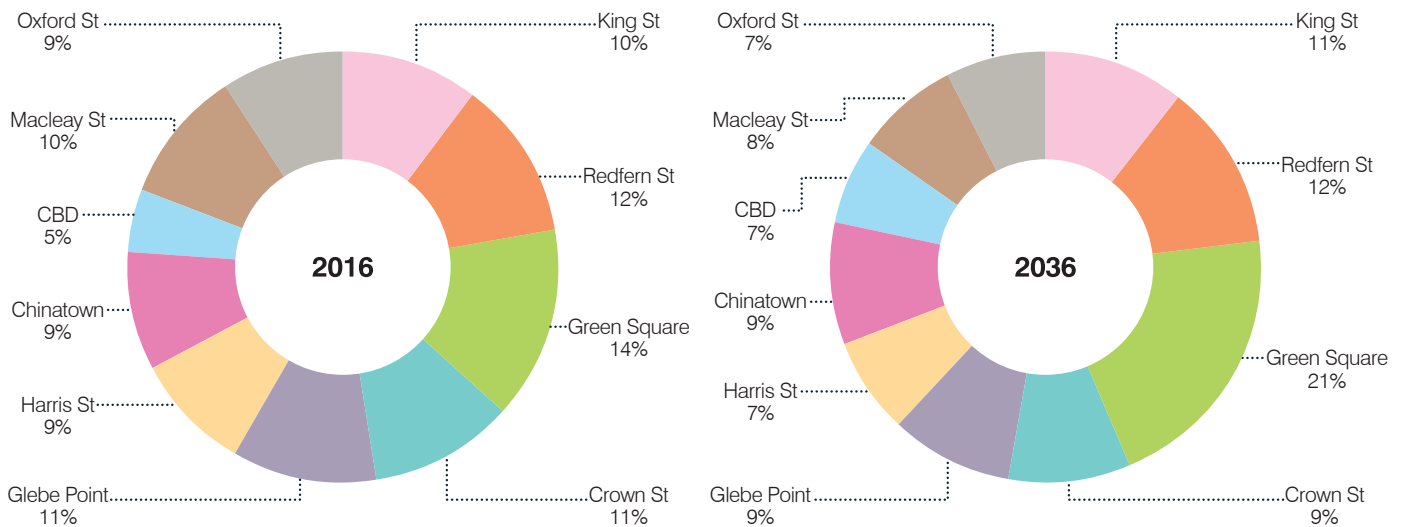
At present, the population is relatively evenly distributed, with nine of the ten Villages having between 9% and 12% of the population, with only the CBD and Harbour village outside this range at 5%.

By 2036 however, more than one-fifth (20.7%) of the residents in the City of Sydney will live in the Green Square Village, with Redfern Street the next most populous with 12%.

**Within Village Precinct areas, population density can vary significantly. The Green Square urban renewal area (278 Ha) is expected to reach a population density of over 22,000 people per km<sup>2</sup>.**

This does not include anticipated density increases from urban renewal areas under masterplanning by State Government.

## City Residential Population Per Village (%)



This does not include anticipated population increases from urban renewal areas under masterplanning by State Government.

## Urban Renewal Areas

The majority of population growth will be accommodated in various urban renewal areas. This trend will continue over the next 10-15 years. Key areas include:

### Green Square

The Green Square urban renewal area is 278 hectares and is the largest urban renewal project in southern hemisphere. With nearly 10,000 apartments due for completion over the next 4 years Green Square's population could increase by 19,000 by 2019. When fully completed after 2030, Green Square's total population may reach up to 61,000.

### Ashmore

Located in Erskineville, Ashmore Estate will eventually be home to approximately 6,000 residents in a development scenario staged over the next 10 years.

### Central Park Broadway

Central Park occupies nearly 6 hectares on the site of the former Carlton and United Brewery on Broadway. It is an urban development project that will be a residential area, with some offices, shops and cafés.

A local population of 3,500 residents and 5,000 workers is expected within Central Park over the next 5 years.

### Harold Park

The redevelopment of the former Harold Park Paceway at Glebe / Forest Lodge includes 1,250 new residences that will be home to around 2,500 people.

### Barangaroo

The 22 hectare Barangaroo precinct will provide space for over 24,000 workers and 2,000 residents.

### Darling Harbour Live

Redevelopment of the southern end of the precinct will accommodate 4,000 residents and 1,000 students.

### Mascot Station Town Centre Precinct

Located in Botany City Council near the south boundary of the LGA the Mascot Station Town Centre Precinct will have an estimated resident population of between 9,800 and 11,000.

The precinct masterplan indicates minimal provision of additional open space and public recreation provision which could result in additional use of City facilities given the Airport railway line will provide convenient access to recreational facilities to be provided at Green Square.

## Future Renewal Areas

Urban Growth NSW is charged by the State Government with the responsibility of delivering significant urban renewal. Over the next 10 – 20 years the Urban Growth will develop the following areas located within or adjacent to the City of Sydney (Figure 4).

### Bays Precinct

The Bays Precinct consists of 80 hectares of government owned land and 94 hectares of harbour waterways, and sits within 2km of the Sydney CBD. It includes White Bay Power Station, Glebe Island Rozelle Rail Yards, Sydney Fish Market and Bank Street Pyrmont foreshore.

### Central to Eveleigh

The Central to Eveleigh Transformation Program is a 30-year project that aims to gradually transform 80 hectares of largely under-used government owned land in and around the rail corridor from Central to Macdonaldtown and Erskineville stations.

Growth scenarios range from 28,000 new dwellings and 25,000 new jobs with up to 56,000 residents.

### Parramatta Road Urban Transformation Renewal Corridor

The corridor extends along Parramatta Road from the CBD to the City of Parramatta and runs through 10 local government areas. The NSW Government is aiming for 50,000 new dwellings and 50,000 jobs in the Parramatta Road corridor. The Camperdown precinct of the corridor lies within the City of Sydney, Leichhardt and Marrickville local government areas. The Camperdown Precinct's long term evolution (2050+) would accommodate 1,500 to 2,100 new dwellings.

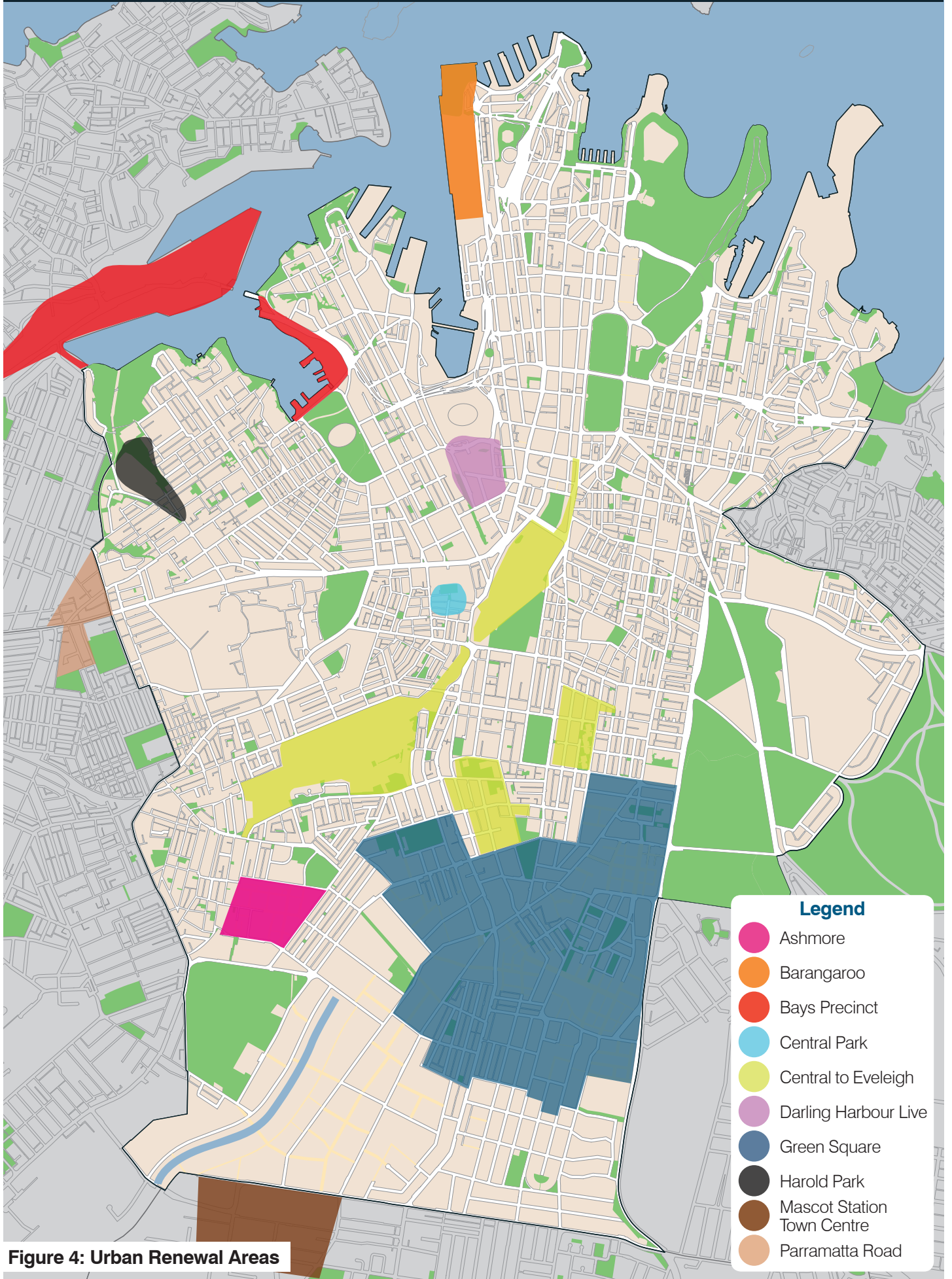


Figure 4: Urban Renewal Areas

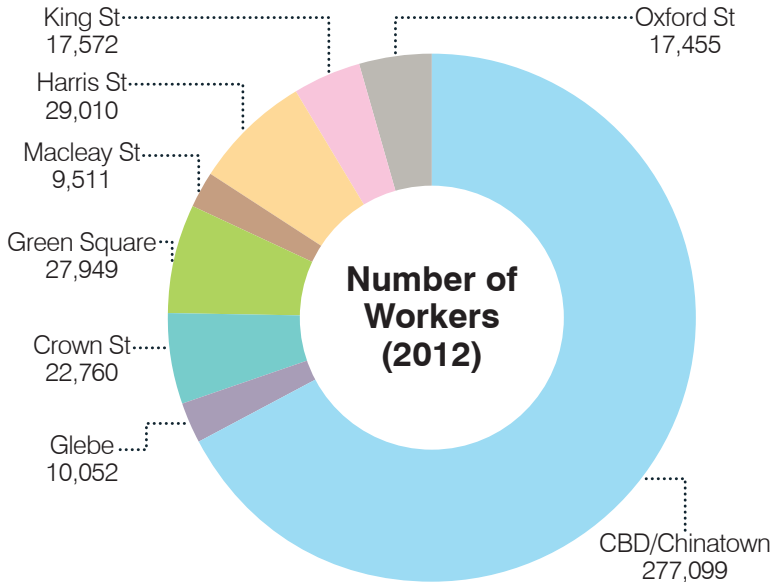


## 2.2 More Workers, Visitors and Students

The 2012 City of Sydney Floor Space and Employment Survey revealed a total of **437,727 workers** in LGA. It is estimated that by 2030 an additional 80,000 workers will be located in The City.

On any given day, an estimated **480,000 day visitors** also access the City on a daily basis and it is expected that these groups would use our parks, particularly those located in the City Centre and Harbour foreshore areas. This includes many overseas and interstate visitors with over 60% of metropolitan hotel rooms located in City LGA.

Figure 5 shows the distribution of the workforce population across the LGA. For this graph the CBD and Haymarket Village precincts are combined.



The main concentrations of workers are: **CBD / Chinatown, Harris Street, Crown St and Green Square** Village Precincts.

Open space that provides amenity to **socialise, eat lunch and play lunch time sport** needs to be a key consideration.

Figure 5

Source: City of Sydney Floor Space and Employment Survey 2012





## 2.3 Demographics

Key demographic trends evident within the City of Sydney that will influence open space and recreation facility provision are:

### Young Adults

Almost half of the City's residents are between 18 and 34 years of age. The median age of City residents is 32 years in contrast to 36 years for Greater Sydney.

This age group has high participation rates in active sports and recreation and many reside in new high density urban renewal areas which suggests higher density communities could potentially be very active communities and will require opportunities for physical activity and social interaction.

### Families with young children

Remaining in the City as children grow up, play / recreation facilities catering for young children through to youth need to continue as a feature of the network.

### Cosmopolitan

Overall, 42.4% of the population was born overseas, and 30.0% were from a non-English speaking background, compared with 34.2% and 26.3% respectively for Greater Sydney.

The largest non-English speaking country of birth in the City of Sydney was China, where 5.4% of the population, or 9,113 people, were born. Further diversity of the network with facilities attractive to various ethnic groups need to be considered.

### Growing older population

Expectations many residents continue to live in the area and will age in place. In addition based on national and international trends it is expected more older people "empty nesters" will relocate to the city to enjoy convenient access to City amenities and services.

## 2.4 Open Space and Recreation Needs Trends

The below table provides an overview of open space and recreation trends that need to be considered when planning the City's open space network. In summary these include:

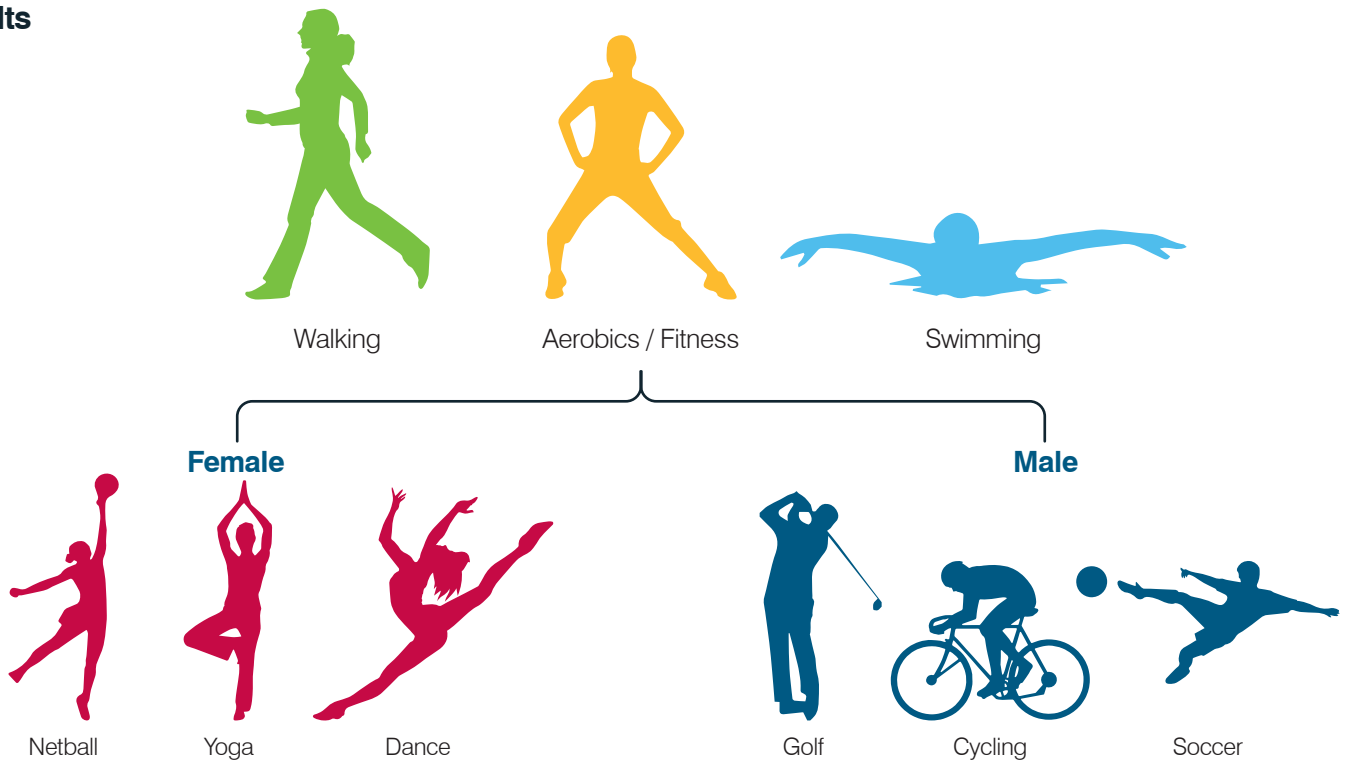
Trend	Implications for City's Open Space and Recreation Facility Provision	Reference Document
<b>1 Individualised Sport and Fitness Activities</b> People are increasingly time poor and fit personal health goals with non organised sport and physical activity rather than commit to structured sporting activities.	Non organised physical activity has a much higher participation particularly walking, outdoor training, swimming, running, cycling and gym memberships. Pathway and cycle network and linkages important part of recreation provision. Consider the street as part of the recreation resource. Personal trainers more prevalent in park network.	The Future of Australian Sport – Australian Sports Commission CSIRO April 2013
<b>2 Rise of Alternative Sports Cultures</b> Lifestyle and adventure sports are particularly popular with younger generations that obtain cultural self identity and self expression through these sports. In particular skateboarding has surge in popularity	Skateboard and court facilities important recreation need for young people. Spaces for young people to hang out and socialise need to be provided. Passive boating also growing in population as lifestyle recreation	The Future of Australian Sport – Australian Sports Commission CSIRO April 2013
<b>3 Preventative Health Benefits of sport and recreation recognised by governments, employers and communities</b> Sport and recreation to achieve physical and mental health outcomes particularly reducing rates of childhood obesity/ diabetes, crime prevention, promote social development.	Sport and recreation key to preventative health strategies require venues and facilities to host these programs. Increasing demand for sport without adequate sportsfield provision could result in potential overuse of existing facilities.	Premiers Council Active Living
<b>4 Broader Participation in Sport and Recreation</b> Highest participation among young people however there is increasing participation amongst older people, multicultural groups and people with disability.	Need to provide sport and recreation opportunities for diverse cultural, age groups and all levels of ability.	The Future of Australian Sport – Australian Sports Commission CSIRO April 2013

Table 2

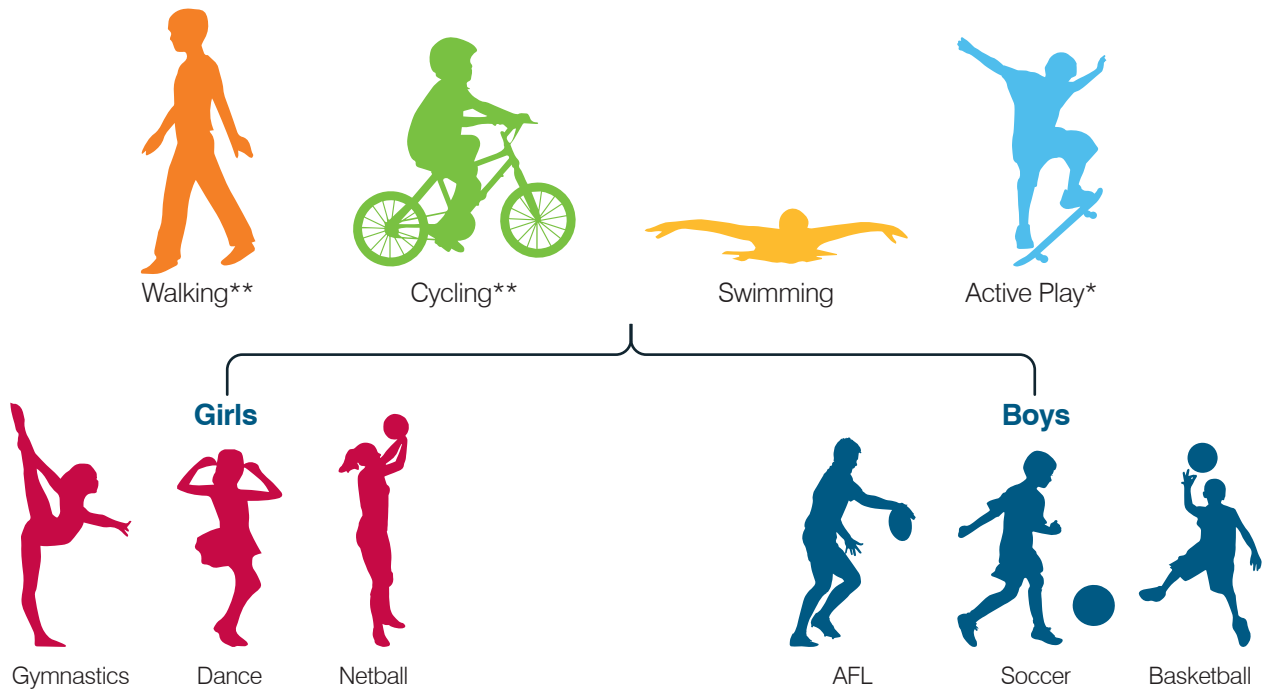
### High Participation Sport and Recreation Activities

Appendix 2, 3 & 4 (Volume 5) details participation rates derived from ABS and Australian Sports Commission survey reports.

#### Adults



#### Children



\*Besides organised sport and dancing, the 2012 CPCLA (ABS 2012c) also asked about participation in bike riding and skateboarding, rollerblading or riding a scooter. A higher percentage of boys participated in these activities (70% in bike riding and 60% in skateboarding, rollerblading or riding a scooter) than girls (57% and 47% respectively).

\*\* Includes Walking and Cycling to school.

Source: ABS - Participation in Sport and Physical Recreation 2013-14; Participation in Exercise, Recreation and Sport Survey Childrens Report 2010; Participation in Exercise, Recreation and Sport Report 2010

## 2.5 Infrastructure Drivers

Major infrastructure projects planned for delivery over the next 5-15 years will provide potential opportunities or impacts on the open space network.

These include:

### WestConnex

The Euston Road frontage adjoining Sydney Park will be widened to cater for the WestConnex St Peters Road Interchange. Increased traffic may present barriers to access Sydney Park unless grade separated facilities are provided. The visual impact of the interchange ramps on views from the park is yet to be determined.

Pedestrian and cycle links are proposed across Alexandra Canal at Campbell St / Euston road that accommodate walking and cycling which could improve east west access to Sydney Park, however the quality and amenity of these connections need to be determined.

It is also anticipated that the St Peters Interchange area may result in open space dedicated after the completion of the project although the quality and usability of any land dedication is yet to be assessed. Connectivity of any open space dedication to Sydney Park is critical to assure any meaningful usage, but the quality of this open space is questionable given potential noise and air quality impacts. (Refer Figure 6)

### South Eastern Light Rail

This project will be the catalyst for the public domain transformation of the city centre with sections of George Street being pedestrianised and being connected to upgraded public spaces and laneways. The 2030 and Gehl Public Space Public Life 2007 vision of a central spine connected by three significant public spaces will also have more impetus and merit to be realised as an outcome of this project.

The light rail route along Devonshire Street will result in the expansion of parkland at Wimbo Reserve, and create additional street closures as well as a pedestrian / cycle connection to Moore Park.

### Sydney Metro City and Southwest

The proposed new rapid transit line that will run under Sydney Harbour, through the city centre and to Bankstown may create opportunities for new or reconfigured public spaces to accommodate new station entrances such as at **Martin Place**.

A station at **Town Hall** could be the catalyst to achieve new public space connected to George Street.

A potential new station at **Waterloo** will generate requirement increased density to support transport infrastructure.



Figure 6

Source: [www.westconnex.com.au](http://www.westconnex.com.au)

## 2.6 Environmental Drivers

The role of open space network now extends beyond the traditional recreation and amenity provision to also supporting essential green infrastructure such as flood mitigation, renewable energy production, stormwater management, water recycling and active transport links.

### The City's Environmental Targets

Sustainable Sydney 2030, Environmental Masterplans and Strategies provide an overarching framework to establish the City's environmental vision, goals, targets and actions for the next ten years and beyond. It addresses the themes of energy and emissions, water, waste, plants and animals.

The City has adopted ambitious environmental targets for greenhouse gas emission energy and mains water use reduction for its operations and across the local area.

These include:

#### City of Sydney Operations

Emissions
26% reduction of 2006 emissions by 2016*
70% reduction of 2006 emissions by 2030
Energy
5% of electricity by renewables by 2016*
70% electricity produced by trigeneration by 2030
30% electricity by renewables by 2030
100% local energy generation by 2030
No reliance on coal-fired electricity by 2030
Water
Zero increase in 2006 mains water by 2016*
Mains water consumption reduction to 10% below 2006 levels by 2030
Water usage in City parks of 180L per square metre of irrigated space by 2016*
Waste
54% resource recovery of facilities waste by 2016*
98% resource recovery of maintenance, construction, demolition waste by 2016*
Fleet
Zero increase in emissions from the City's fleet of vehicles based on 2014 levels*

#### Local Government Area

Emissions
70% reduction of 2006 emissions by 2030
Energy
70% electricity produced by trigeneration by 2030
30% electricity by renewables by 2030
100% local energy generation by 2030
No reliance on coal-fired electricity by 2030
Water
10% mains water consumption reduction of 2006 levels by 2030
30% of water demand through recycling using local sources by 2030
50% reduction in stormwater pollutants (total suspended solids) and 15% reduction in nutrients by 2030
Waste
66% resource recovery of municipal waste by 2014
76% recovery of construction waste by 2014
63% resource recovery of commercial waste by 2014
Greening Sydney
50% increase in current canopy cover by 2030 and 70% by 2050

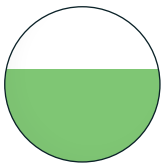
**The City's open space network will need to provide appropriate infrastructure and management regimes in order to contribute to the City's environmental targets.**



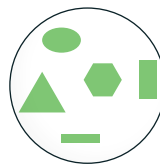
# 3.0

# Open Space Network Needs Assessment

The criteria used to assess the open space network is as follows:



Open Space Area Provision



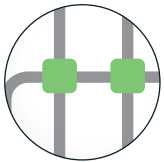
Diversity



Open Space Distribution



Size and shape



Accessibility and Connectivity



Quality of Visitor Experience

For the purposes of this study, the assessment of the open space network has also been based on a range of other factors including population analysis by Village area, as per Figure 3 on page 07.

### 3.1 Open Space Provision Assessment

#### (a) Public Open Space within City of Sydney

Public open space used by the residents of the City of Sydney are owned, managed and controlled by three broad categories of landholders and managers:

- City of Sydney owned or under care control and management
- Managed by other authorities, agencies, Trusts or institutions
- Located in adjoining local government areas accessed by City of Sydney residents

#### (b) Open Space Included in Assessment.

Generally all publically accessible open space over 50m<sup>2</sup> in size is included in the open space calculation. The sports ovals within Sydney University and the Wentworth Park greyhound track / sports oval are not included in the calculation as there is limited public access for casual use.

The 2007 Open Space Study included approx. 190ha open space provided by other agencies. This included an area of 115ha for the Moore Park precinct which incorporates sportsfields / parkland, E S Marks Athletic field, childcare facility (approx. 6ha) and Entertainment Quarter. For the purposes of this Study only the parkland and golf course area has been included. Moore Park Golf Course has been included on the premise is zoned and gazetted as public open space albeit dedicated to golf which restricts general wider recreation use

#### (c) 2016 Open Space Provision and Distribution

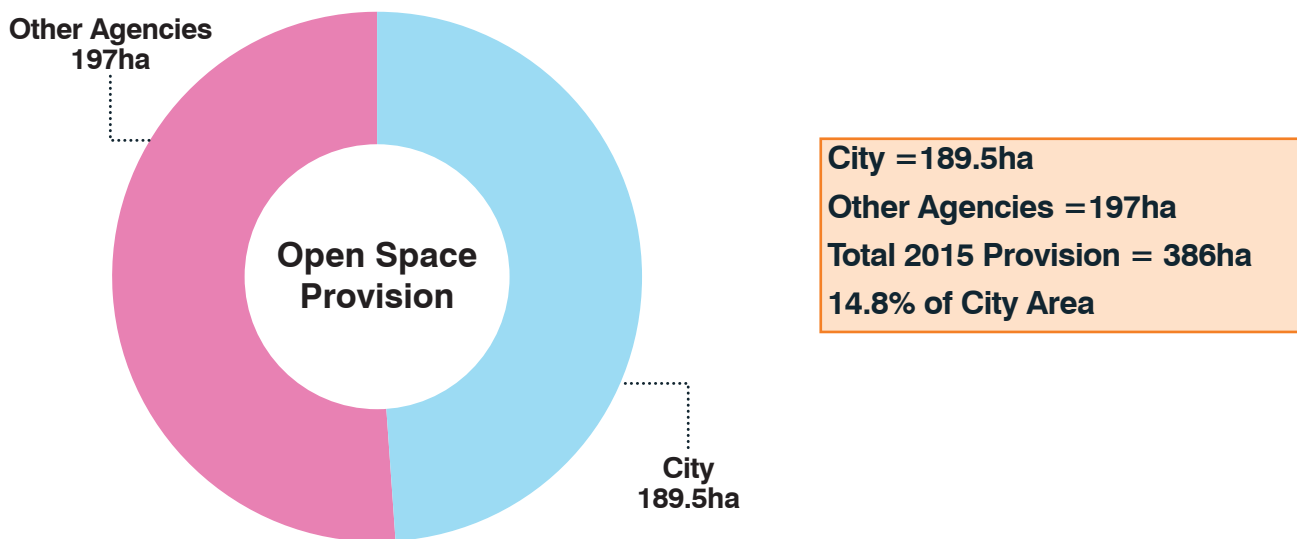


Figure 7

## (d) Open Space Additions

Since 2004, 18.3ha additional open space has been added to the network.

This includes:

- **7.2ha** added to City open space network\*
- \* includes parks developed by SHFA but now under management of The City
- **11.1ha** by other Agencies

Figure 8 on page 21 shows the distribution of new open space additions since 2004.

## New Park Examples



Harmony Park, Surry Hills



Pirrama Park, Pyrmont



Barangaroo Headland Reserve, Millers Point  
(Developed and Managed by Barangaroo Delivery Authority)



Sweetacres Park, Roseberry

## 2004 – 2016 Additional Open Space Provision

	Park	Classification	City Village	Suburb	Open Space Provision (m <sup>2</sup> )
1	Harmony Park	Park	Crown Street	Surry Hills	9,020.6
2	Chippendale Green	Park	Redfern Street	Chippendale	5,000
3	Barcom Avenue Reserve Extension	Pocket Park	Oxford Street	Darlinghurst	1,850
4	Pirrama Park Site Acquisition	Foreshore Park	Harris Street	Pymont	18,000
5	Sweetacres Park	Park	Green Square	Rosebery	5,000
6	Linear Park	Ancillary	Green Square	Zetland	867
7	Mary O'Brien Reserve Extension	Park	Green Square	Zetland	4,268
8	Woolwash Park Extension	Pocket Park	Green Square	Zetland	1,800
9	The Rope Walk, Stage 1	Park	Green Square	Waterloo	2,863.4
10	Gadigal Avenue Park,	Pocket Park	Green Square	Waterloo	1,741.4
11	Corning Park	Pocket Park	Green Square	Waterloo	1,321.4
12	Glebe Foreshore Walk Stage 5	Park	Glebe Point	Glebe	5,200
13	Orphan School Creek Acquisitions	Park	Glebe Point	Forest Lodge	5,000
14	Blackwattle Bay South	Park	Glebe Point	Glebe	5,706
15	Balmal Way	Ancillary Link	King Street	Alexandria	2,350
16	Pottinger Park East	Pocket Park	CBD and Harbour	Millers Point	1,091
17	Clifftop Walk (Parbury Lane Park)	Ancillary	CBD and Harbour	Millers Point	800
18	Pottinger Park West	Pocket Park	CBD and Harbour	Millers Point	912
<b>Total:</b>					<b>72,790 m<sup>2</sup> (7.2ha)</b>
<b>Other Agencies</b>					
19	Barangaroo Reserve	Foreshore Park	CBD North	Barangaroo	60,000
20	Distillery Drive Reserve	Pocket Park	Harris Street	Pymont	1,006.5
21	Waterfront Park	Foreshore Park	Harris Street	Pymont	12,320
22	Jacksons Landing Promenade	Foreshore Park	Harris Street	Pymont	5,580
23	Bowman St Reserve	Park	Harris Street	Pymont	2,960
24	Knoll Park	Park	Harris Street	Pymont	4,680
25	Refinery Square	Civic	Harris Street	Pymont	3,800
26	The Goods Line North	Civic	CBD South	Ultimo	3,500
27	UTS Alumni Green	Civic	CBD South	Ultimo	5,400
28	Metcalfe Park	Park	Harris Street	Pymont	8,000
29	Ballaart Park	Park	Harris Street	Pymont	4,000
<b>Total:</b>					<b>111,246.5 m<sup>2</sup> (11.1ha)</b>
<b>Unlocked Open Space</b>					
30	Redfern Park	Park	Crown Street	Redfern	22,000
31	Paddington Reservoir Gardens	Park	Oxford Street	Paddington	3,000
32	Wentworth Park	Park	Glebe Point	Glebe	5,000
<b>Total:</b>					<b>30,000 m<sup>2</sup> (3.0ha)</b>



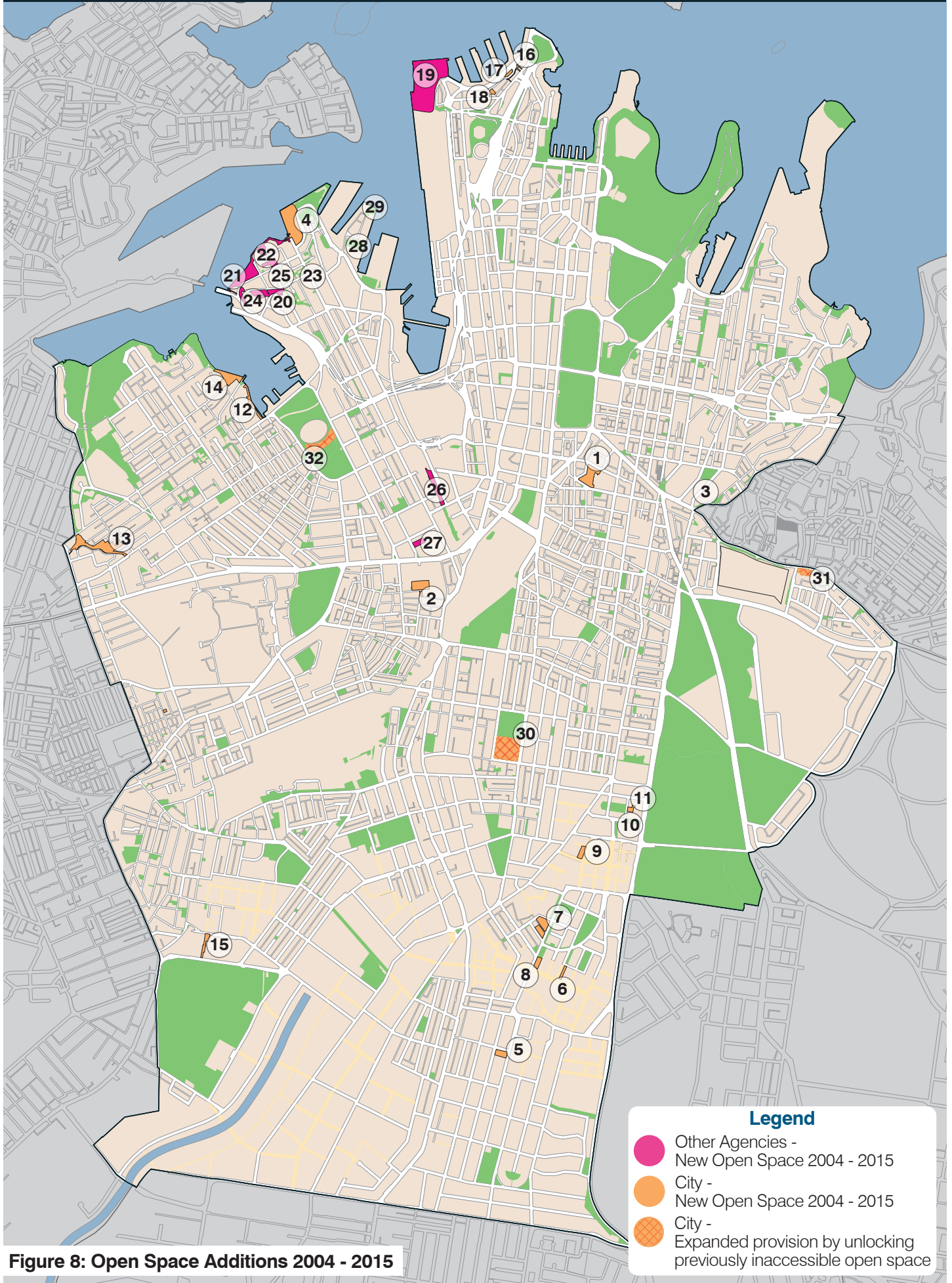
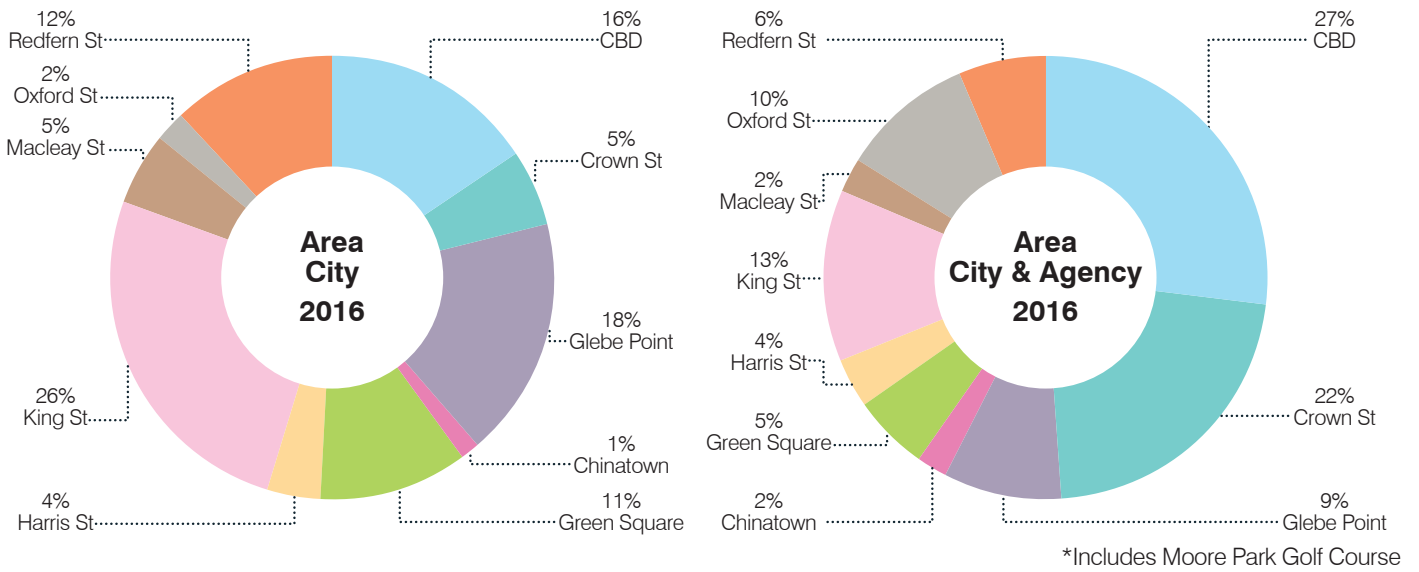


Figure 8: Open Space Additions 2004 - 2015



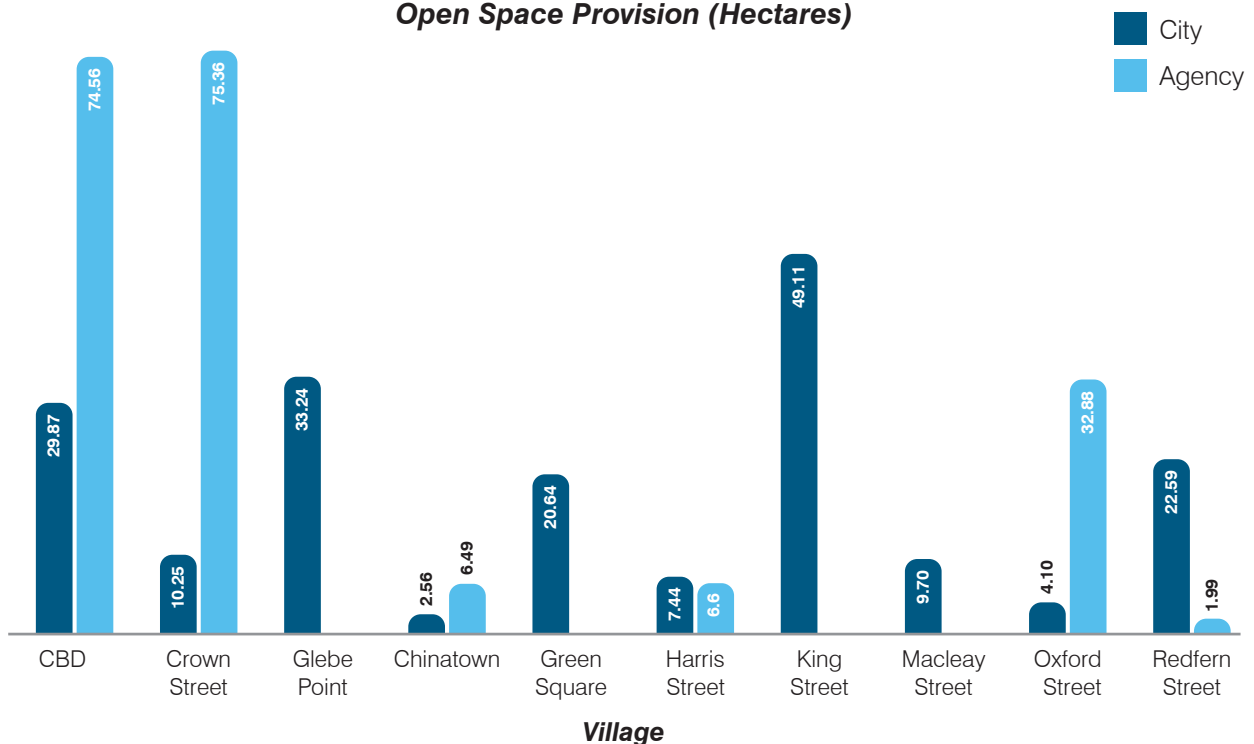


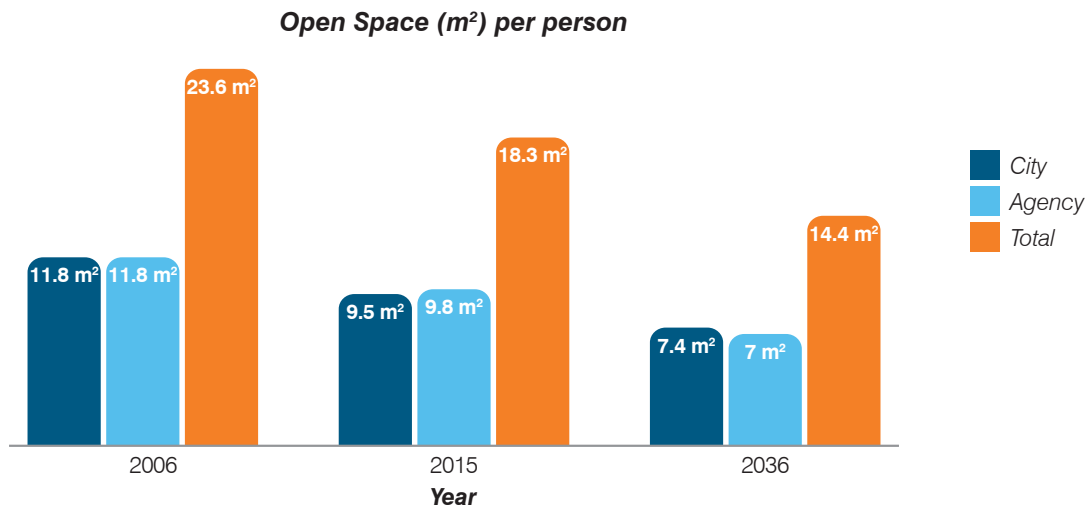
### 3.2 Open Space Distribution

The geographic distribution of public open space within the LGA is a key access and equity issue for the community. The ability of residents to gain access to public open space within an easy walk or cycle from home or work is an important factor to quality of life.

The following graphs set out the distribution of open space in the LGA within each *In Your Village* precinct areas and which is divided on the basis of open space managed by the city and other agencies.

Open Space Provision (Hectares)





### 3.3 Resident Open Space Provision

The amount of open space relative to population density is an important measure of open space provision and in high density environments it is an important factor in ascertaining park needs given less allocation of private open space.

When the City's projected population for the coming years is compared with the level of current provision, and an allowance is made for the projected planned open space provision that Council is currently undertaking or planning, the ratios of population to open space appear as set out above.

#### Village Precinct - Open Space Per Resident

Table 3 on page 24 illustrates the quantity of open space per resident in different villages. This measure gives an indication of variations of open space quantity relative to population density to 2031 based on planned open space provision as set out in Volume 2 Open Space Delivery Plan.

Table 3

Village	Gross Village Area km <sup>2</sup>	Residential Population		Residential Population Density Persons / km <sup>2</sup>		Open Space Per person (City & Agency)	
		2016	2036	2016	2036	2016	2036
<b>City of Sydney</b>	<b>26.10km<sup>2</sup></b>	<b>211,696</b>	<b>280,964</b>	<b>8,110 / km<sup>2</sup></b>	<b>10,764 / km<sup>2</sup></b>	<b>18.3 m<sup>2</sup></b>	<b>14.4 m<sup>2</sup></b>
CBD	3.09 km <sup>2</sup>	10,113	18,368	3,273 / km <sup>2</sup>	5,944 / km <sup>2</sup>	103.3 m <sup>2</sup>	59.8 m <sup>2</sup>
Chinatown	1.09 km <sup>2</sup>	18,617	25,223	17,080 / km <sup>2</sup>	23,140 / km <sup>2</sup>	4.9 m <sup>2</sup>	3.78 m <sup>2</sup>
King Street	2.96 km <sup>2</sup>	21,824	29,927	7,373 / km <sup>2</sup>	10,110 / km <sup>2</sup>	22.5 m <sup>2</sup>	16.9 m <sup>2</sup>
Redfern Street	2.95 km <sup>2</sup>	25,593	35,040	8,669 / km <sup>2</sup>	11,877 / km <sup>2</sup>	9.7 m <sup>2</sup>	7.12 m <sup>2</sup>
Green Square	3.88 km <sup>2</sup> *	30,499	58,159	7,860 / km <sup>2</sup>	14,989 / km <sup>2</sup>	6.7 m <sup>2</sup>	6.9 m <sup>2</sup>
Crown Street	1.75 km <sup>2</sup> †	22,919	25,737	10,141 / km <sup>2</sup>	11,004 / km <sup>2</sup>	37.3 m <sup>2</sup> **	34.5 m <sup>2</sup> **
Glebe Point	2.52 km <sup>2</sup>	23,150	25,724	9,186 / km <sup>2</sup>	10,180 / km <sup>2</sup>	14.4 m <sup>2</sup>	14.7 m <sup>2</sup>
Harris Street	1.38 km <sup>2</sup>	19,106	20,486	13,845 / km <sup>2</sup>	14,844 / km <sup>2</sup>	7.4 m <sup>2</sup>	6.9 m <sup>2</sup>
Macleay Street	1.40 km <sup>2</sup>	20,455	21,384	14,826 / km <sup>2</sup>	15,274 / km <sup>2</sup>	4.7 m <sup>2</sup>	4.5 m <sup>2</sup>
Oxford Street	2.5 km <sup>2</sup>	19,418	20,915	7,767 / km <sup>2</sup>	8,366 / km <sup>2</sup>	19.04 m <sup>2</sup>	17.9 m <sup>2</sup>

\* Does not include Southern Industrial area

† Does not include Moore Park

\*\* Includes Moore Park Golf Course

The amount of open space in each planning district bears little relationship to the population in village districts; Chinatown / City South has highest population density and the second lowest amount of open space per 1,000 persons.

Over the coming years even with planned open space dedications and acquisitions the ratio of population to open space will lessen progressively given the anticipated population growth.

Should this trend continue the use pressures will become evident for particularly larger parks that can cater for both casual and organised active recreation uses.

- **Most research recommends a good provision of public open space in high density areas due to less private open space, and to contribute to the social and health benefits and liveability of a neighbourhood.**
- **More open space is required through planned dedications and an open space acquisition strategy in order to meet the growing demand.**
- **Qualitative improvements also become central considerations with significant increases in capacity able to be achieved through efficiencies in better planning and design of the existing network.**
- **Multi-purpose use of the network to accommodate diverse recreational demands with a limited amount of space.**
- **Improving access to open space could address open space deficits better connections and crossing points to create a large catchment area.**



### 3.4 Considering Workers, Visitors and Students

**The worker population has an influence on open space provision also increase pressure on the network for lunch time sport and recreation particularly in areas of high worker population density such as the City Centre and Pyrmont.**

The City's Contributions Plan has assumed one worker generates demand equivalent to 0.2 residents and converted workers into equivalent residents. This Study has based assessment on resident population only however worker and visitor population is significant and will increase demand and pressure on the network.

Refer to section 2.2 for more information.



### 3.4 Adjacent Open Space Provision

Figure 9 depicts open space provision that is outside the LGA but within convenient access to City of Sydney residents.

Located immediately adjacent to the City of Sydney LGA boundary and provide readily available open space for residents living at the periphery of the City. Whilst not include within the actual provision of the City these open space areas play an important role to overall opportunities for people to access quality park space.

Map Ref.	Park Name	LGA	Adjacent Village	Area (m <sup>2</sup> )
1	Centennial Park	Randwick and Woollahra	Oxford Street	1,890,000
2	Paddington Womens Hospital Park	Woollahra	Oxford Street	5,000
3	Rushcutters Bay Park (Woollahra Council side)	Woollahra	Macleay Street	64,000
4	Trumper Park	Woollahra	Macleay Street Oxford Street	68,000
5	Camperdown Rest Memorial Park	Marrickville	King Street	59,000
6	Camperdown Park	Marrickville	King Street	49,000
7	Johnstone Creek Canal	Leichhardt	Glebe Point	14,100

Assessing open space context outside the LGA boundary is relevant to ascertain that for some sections of the City the neighbouring council LGA may offer the most convenient access to a park.

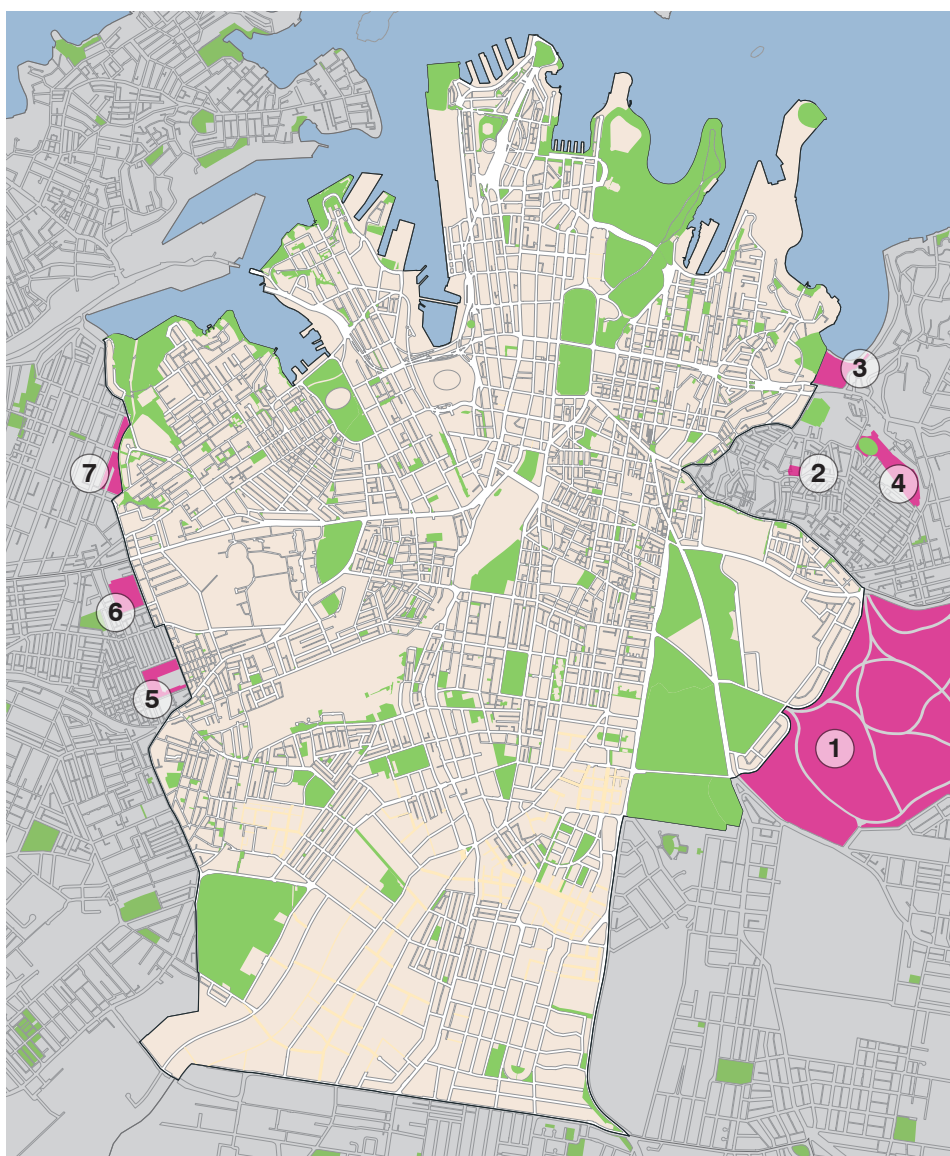


Figure 9





Aerial view to Centennial Parklands from Waterloo

### 3.5 Open Space Diversity and Distribution

The range of open space setting types within a local government area will determine the diversity of recreation available for people to use.

The City's open space network has been assessed in terms of the landscape setting types (Figure 12) which are defined in Section 1.2. This assessment provides a means to ascertain the relative diversity of open space types and subsequent recreation opportunities or deficiencies provided throughout the open space network.

The following graphs show the overall LGA wide and Village distribution of open space settings:

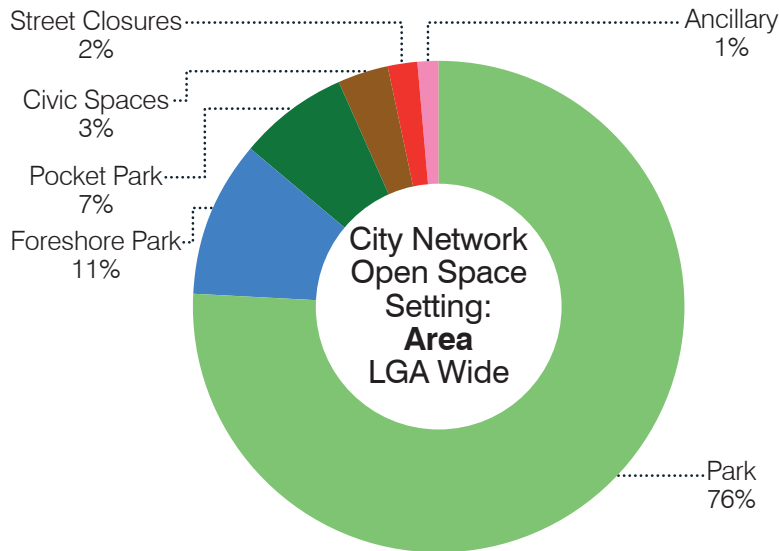


Figure 10

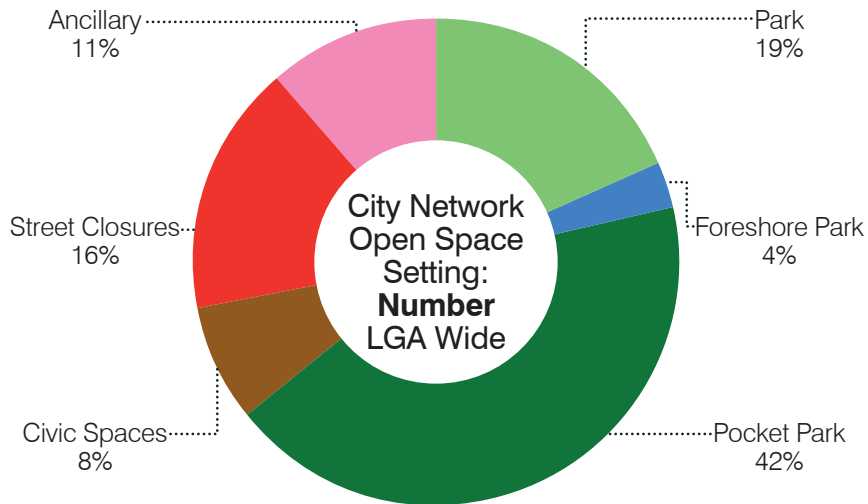


Figure 11



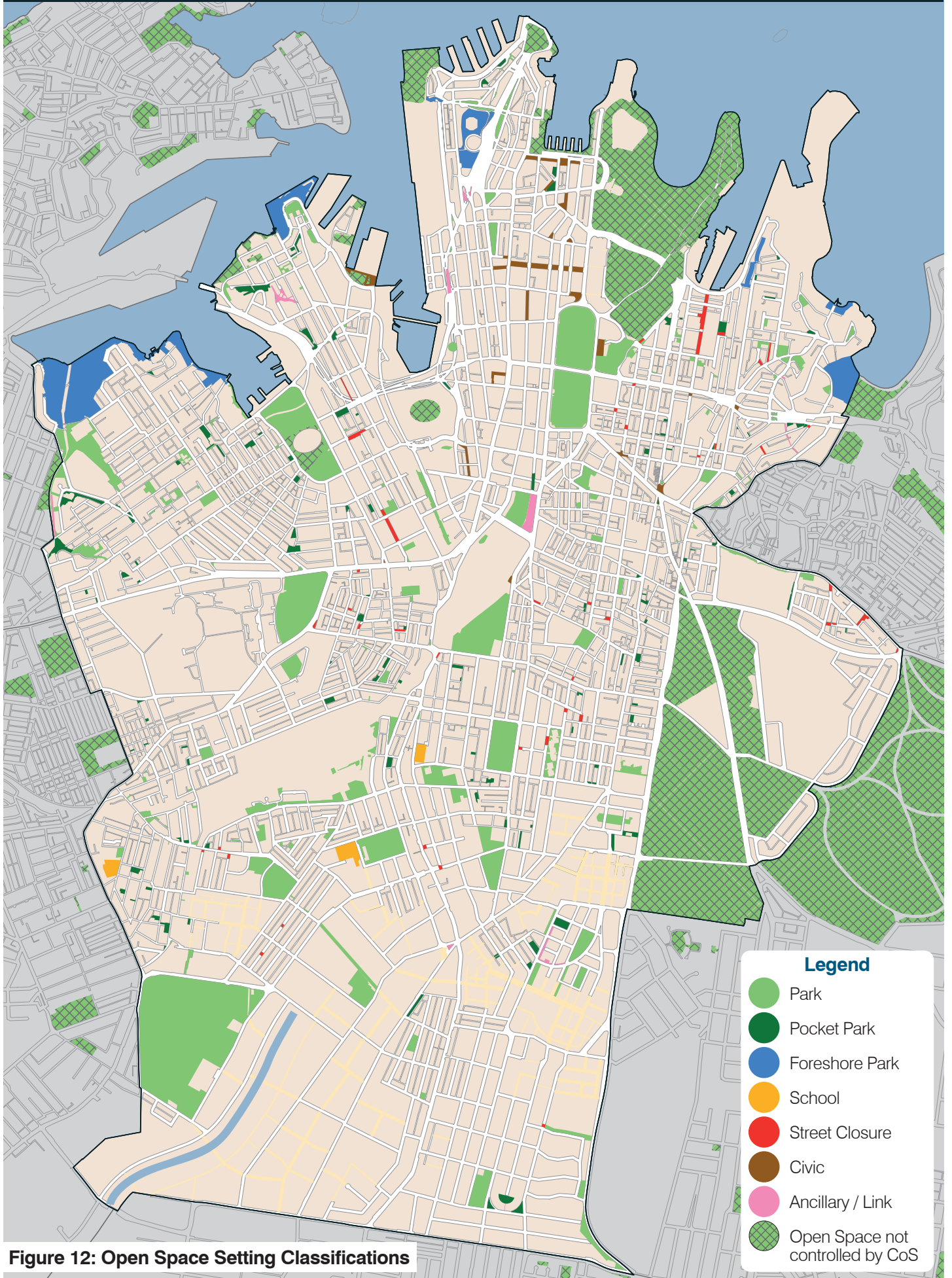
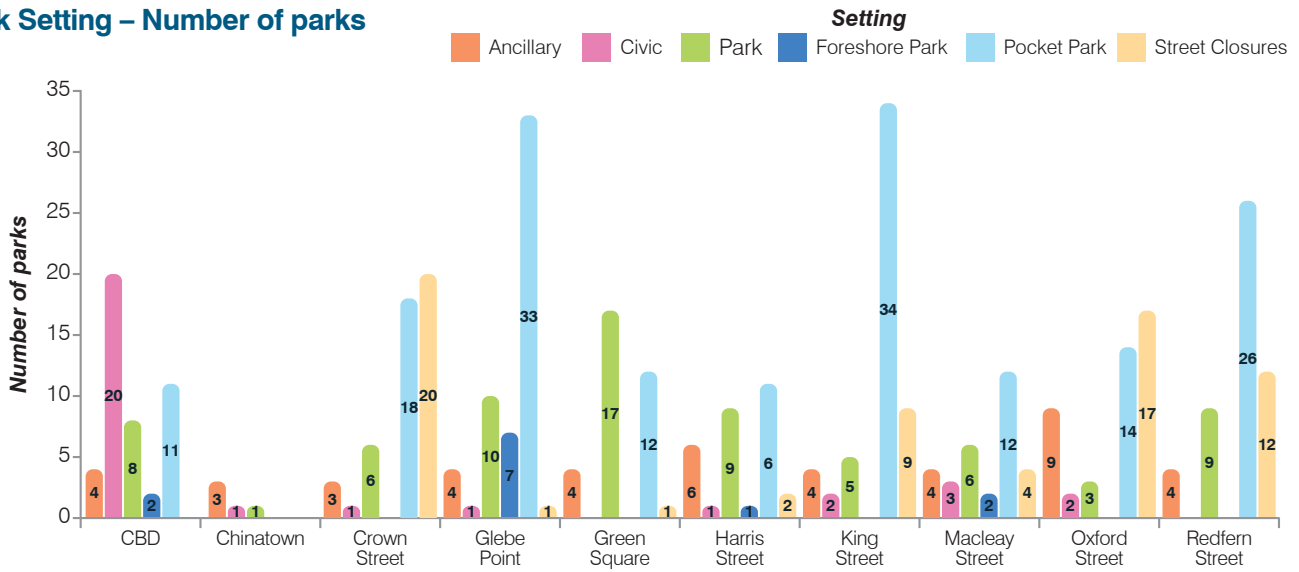


Figure 12: Open Space Setting Classifications

### Open Space Setting Assessment - City Network

#### Park Setting – Number of parks

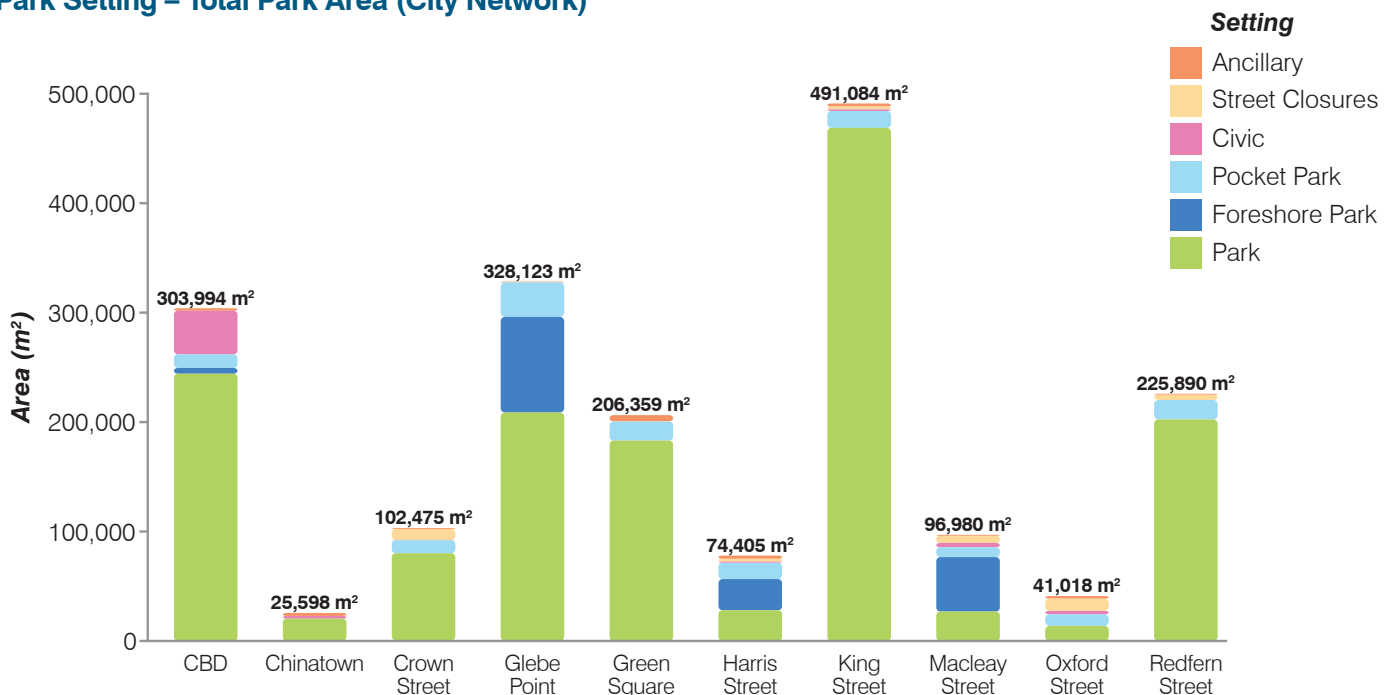


- **Pocket Parks are still the major park type by number (41%) but account for only 7% of the total park area in the City.**
- **Parks comprise only 19% of the park types by numbers but account for 76% of the City’s open space area.**
- **Street Closures are a significant setting type by numbers although overall area is only 2% of total open space provision.**

Given the extensive foreshore access enjoyed by the City this setting type comprises a relatively small proportion of the City’s parks by numbers 4% and area (11%). However there are 5 foreshore parks in Pymont not managed by the City as well as the recently completed Barangaroo Reserve.

**In summary, the network shortfall is larger parks to accommodate sport and allow a co-location of recreation facilities.**

#### Park Setting – Total Park Area (City Network)





## 3.6 Open Space Size Provision and Distribution

### Number of Parks

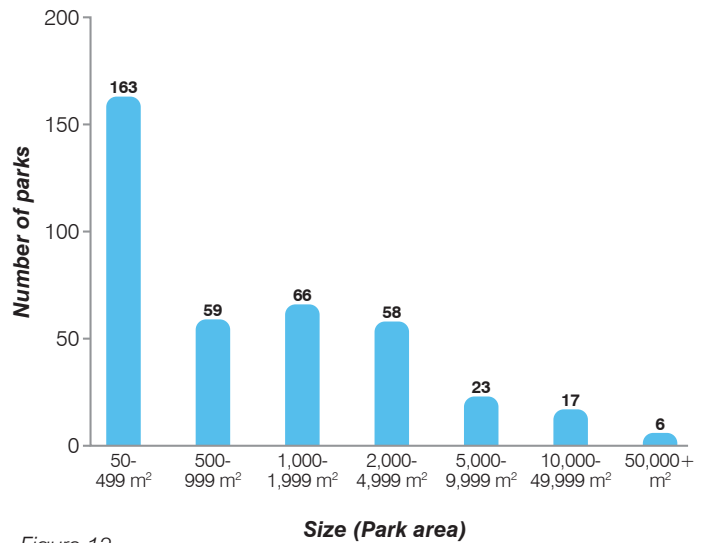
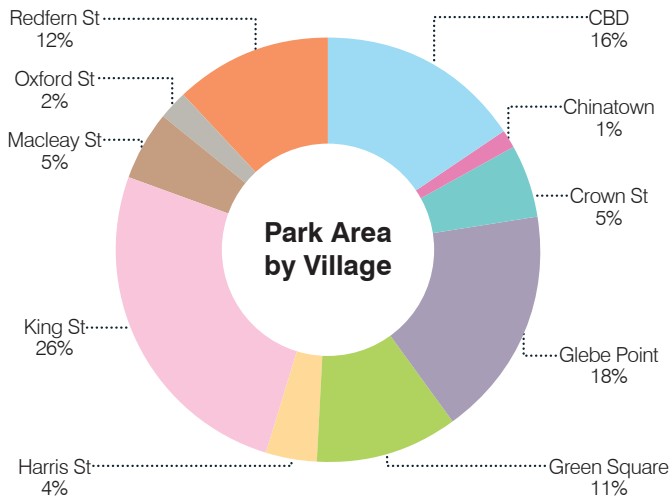


Figure 13

Related to open space setting types the size of open space across a local government area has a direct bearing on a community's access to open space and the capacity of that open space to meet a range of recreation activities and needs.

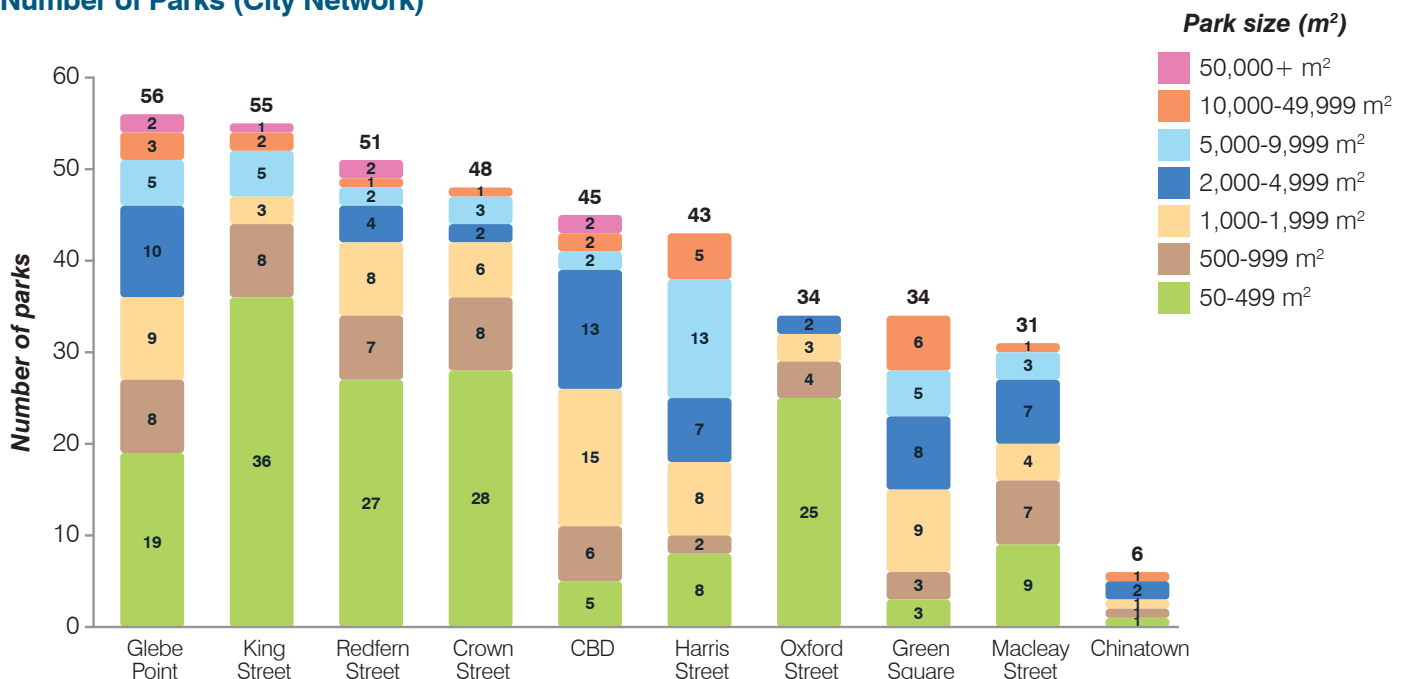
Assessment of the size of individual open spaces is important because typically larger parks can offer greater diversity of facilities and therefore recreation opportunities - whereas small open spaces are inevitably limited in the facilities and types of uses that they can offer.

There is also a strong relationship between size of parks and user catchment. Apart from small reserves on the Harbour Foreshore, larger parks generally attract patronage from a wider area due to the diversity of recreation opportunities that are available.

**The City's network is typified by parks with a small site area 72% of the City's network consist of parks less than 3,000m² in area. This restricts the capability of the parks to accommodate a variety of recreational needs, particularly active sport.**

The following tables and graphs summarise the number of individual open spaces in the City's open space network described within various size ranges (excludes open space not controlled by City).

### Number of Parks (City Network)



### 3.7 Open Space Accessibility and Barriers

Critical to the widest opportunities for the community to enjoy and use our public open space and recreation facilities is the ease of access. The *Trust for Public Land* in the United States considers accessibility as a better measurement of park system excellence than total park area.

Two factors that most strongly affect access to open space at a local level are **distance to walk** and **access barriers**.

#### 3.7.1 Pedestrian Open Space Distribution Gaps and Barriers

Analysis was undertaken to assess distribution of open space and identify areas not within reasonable walking distance of residents and workers.

Although a park may be geographically close, topography, street layouts and lack of safe crossing points can be significant barriers to pedestrian / cycle movement that often define peoples' sense of boundaries of their neighbourhoods.

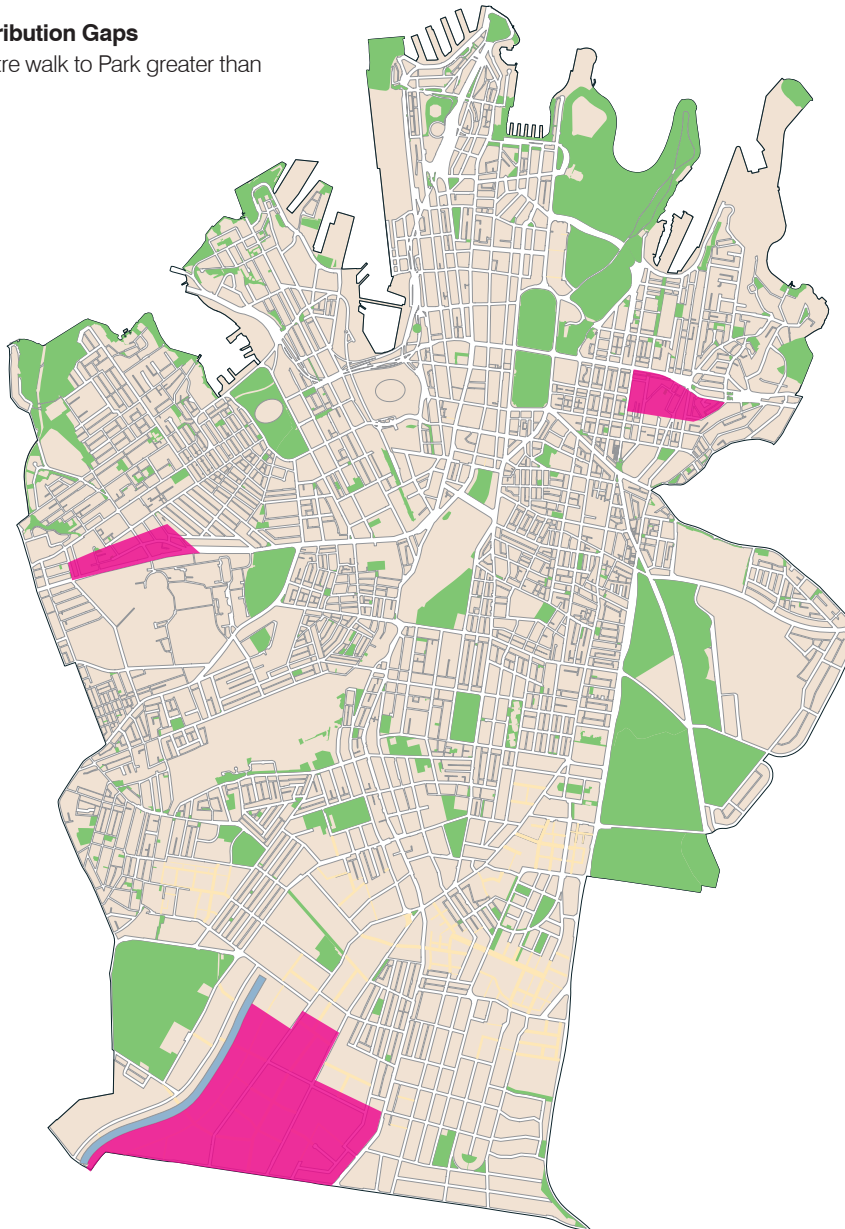
The following mapping determines gaps and barriers in distribution for local and district level parks.

##### Local / Neighbourhood Open Space Distribution Gaps

The below figure depicts open space catchment of 400m distance to walk to a local / neighbourhood park greater than 1,000-1,500m<sup>2</sup>. This includes open space planned to be delivered in urban renewal areas and public open space not under the control of the City. The mapping type provides the basis for broadly identifying which areas are not adequately served in terms of safe and convenient pedestrian access to local open space for short stay and recreation experiences.

##### Local Neighbourhood Distribution Gaps

- Areas deficient in 400 metre walk to Park greater than 1,000 - 1,500 m<sup>2</sup>



## Open Space Barriers





**Key distribution gaps are:**

Village	Distribution Gaps
Green Square	Area west of Botany Road Botany Road / Ralph/ Birmingham Street is accommodating additional residential that provision of local open space or better links and access to Turruwul Park in Rosebery.
Glebe Point	Area of Camperdown defined by Pyrmont Bride Road, Booth Street, Ross Street and Parramatta Road comprises extensive residential development – one new small park provided at 1-3 Larkin Street, however with anticipated expansion of residential density additional local open space is required.
Harris Street	
Chinatown	Chinatown area bounded by King Street, George Street, Sussex Street and Day Street and Liverpool Street has limited open space and relies on connections to Darling Harbour or through to Hyde Park.  Belmore park important open space needs to increase amenity provision to become a local park destination as well as City Park
Macleay Street	
Oxford Street	The distribution of open space is limited in the area south of William Street, particularly east of Victoria Street – connections to Green Park important.  Darlinghurst – low provision of Local / Neighbourhood space so connections to Hyde Park and Cook and Phillip Park important. Recent capital works for O’Briens Reserve and Albert Sloss Reserve will contribute to provision of neighbourhood open space.

**Key barriers are:**

Village	Barriers
CBD	Observatory Hill Park is disconnected from city centre. Inclusive pedestrian access from Kent Street should be considered.
King St	Sydney Park – bounded by busy roads so consideration of opportunities to ensure access north to residential developments.  The Westconnex proposal could present significant access barriers along Euston Road and Campbell Street unless appropriate measures put in place.
Redfern	Railway corridor limits access between Surry Hills - Chippendale and Alexandra – Darlington/Newtown.  Chippendale - bounded by busy roads – needs safe accessible links to Victoria Park and Prince Alfred Park.  Future urban renewal Central to Eveleigh may address: <ul style="list-style-type: none"> <li>• Connections from Henderson road to Codrington street link north Eveleigh to ATP</li> <li>• Connection from Meagher street link between Chippendale and Prince Alfred Park</li> </ul>
Green Square	Alexandra Canal significant barrier to access Sydney park from Alexandria and Rosebery.  Urban Renewal will provide a network of new streets that will increase permeability and access across the present. Connections along Alexandra Canal and stormwater tributaries will improve connections from Southern Sydney to Green Square town centre.
Glebe Point	Sandstone Escarpment requires consideration of access links from Harold Park to Glebe.
Harris Street	Topography limits access to Wentworth Park for Central Pyrmont residents.
Macleay Street	Foreshore access around Domain near Cowper Wharf Road should be assessed for improvements.  Pedestrian access currently not provided to Garden Island Reserve.

## 3.7.2 Inclusive Access

At the individual park level, park layout, design and maintenance practices may determine the accessibility and inclusive enjoyment of the park by people with disabilities, older people and families with prams. As the population of the City ages, such considerations take on even greater weight.

Australian Standard suite 1428 check is intended to ensure equity of access in both the public and private domain and provides physical expression to the objectives of the Disability and Discrimination Act. All park upgrades carried out over the last 10 years in the City have been mindful of the need to address universal access through use of ramps, rails and seats as well as the provision of at least one on-grade access into a park (wherever gradients permit make this practically possible).

**The City's Inclusion (Disability) Action Plan 2014 - 2017 includes the following objectives relevant to open space and recreation:**

- **People with disability be able to participate in leisure, recreation, sports and cultural activities as they choose.**
- **Parks and other public areas are accessible to everyone. Green spaces are designed with access and inclusion in mind.**

Decisions as to whether to visit a park for either the disabled or their carers can often depend on the availability and quality of toilets, seating, shade and other accessible amenity. Importantly these access improvements are of equal benefit to able-bodied users, including those with prams, cyclists and walkers.

Access to and within parks for everyone has been improved in recent years but requires ongoing attention as does the street access to parks.

The City is currently preparing a Public Domain Access Policy that will provide guidance on the design, maintenance and management of parks and other recreation facilities to ensure access and inclusion are key considerations.

### 3.8 Open Space Linkages

The degree to which open space is linked is a crucial dimension of future planning for improved park use in the City and access to a diversity of recreational experiences.

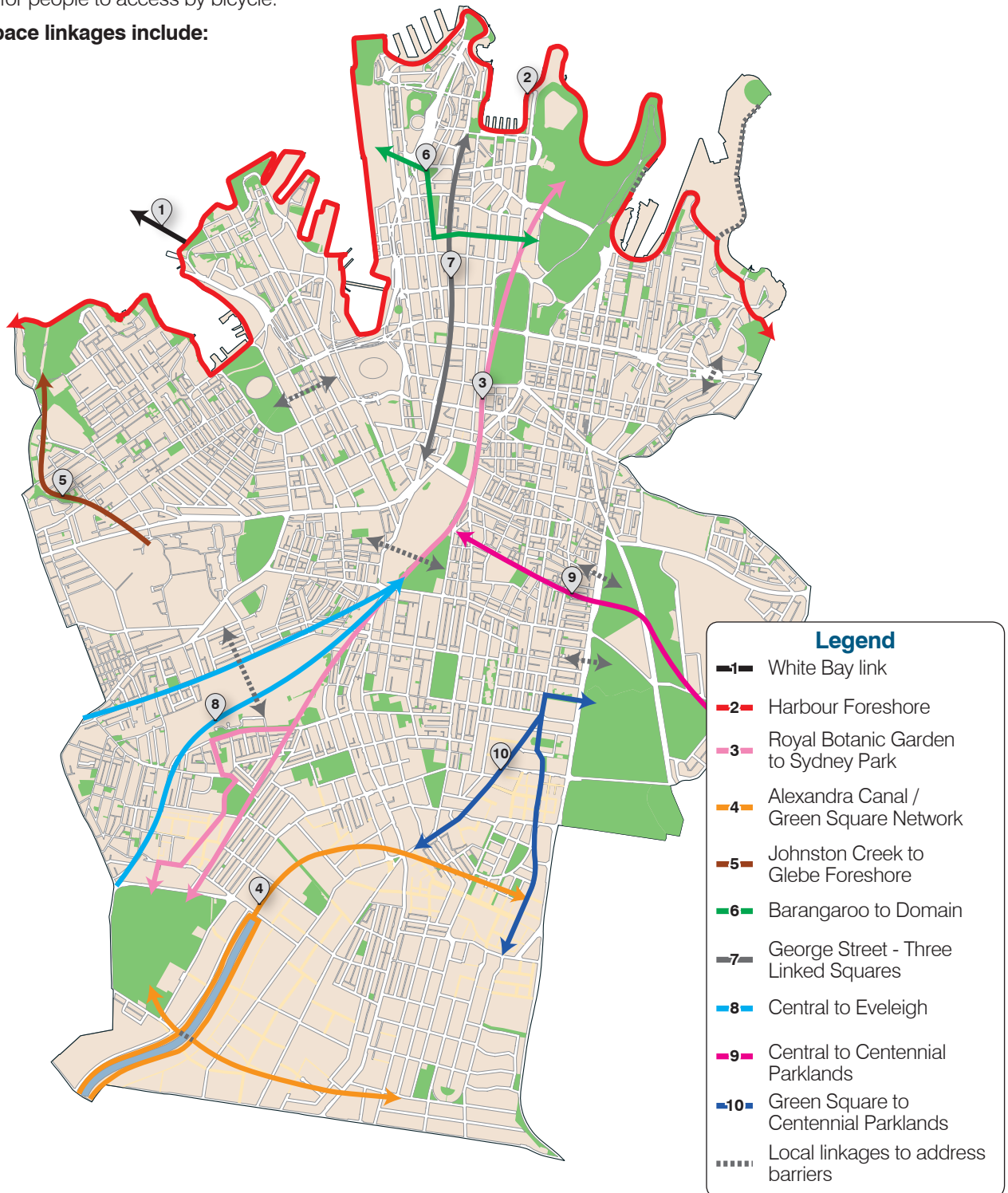
While proximity is a key driver of use, where proximity is poor then actual access through adjoining streets and linkages becomes crucial, especially for those people without cars or in areas of poor public transport.

The promotion of open space networks across the City provide greater opportunity for recreation, promote physical activity, enhance access to other parks and community facilities, improve visual amenity and create wildlife corridors.

Key to creating open space linkages is the City's **Liveable Green Network** and at a wider regional level the State Governments **Sydney Green Grid project**.

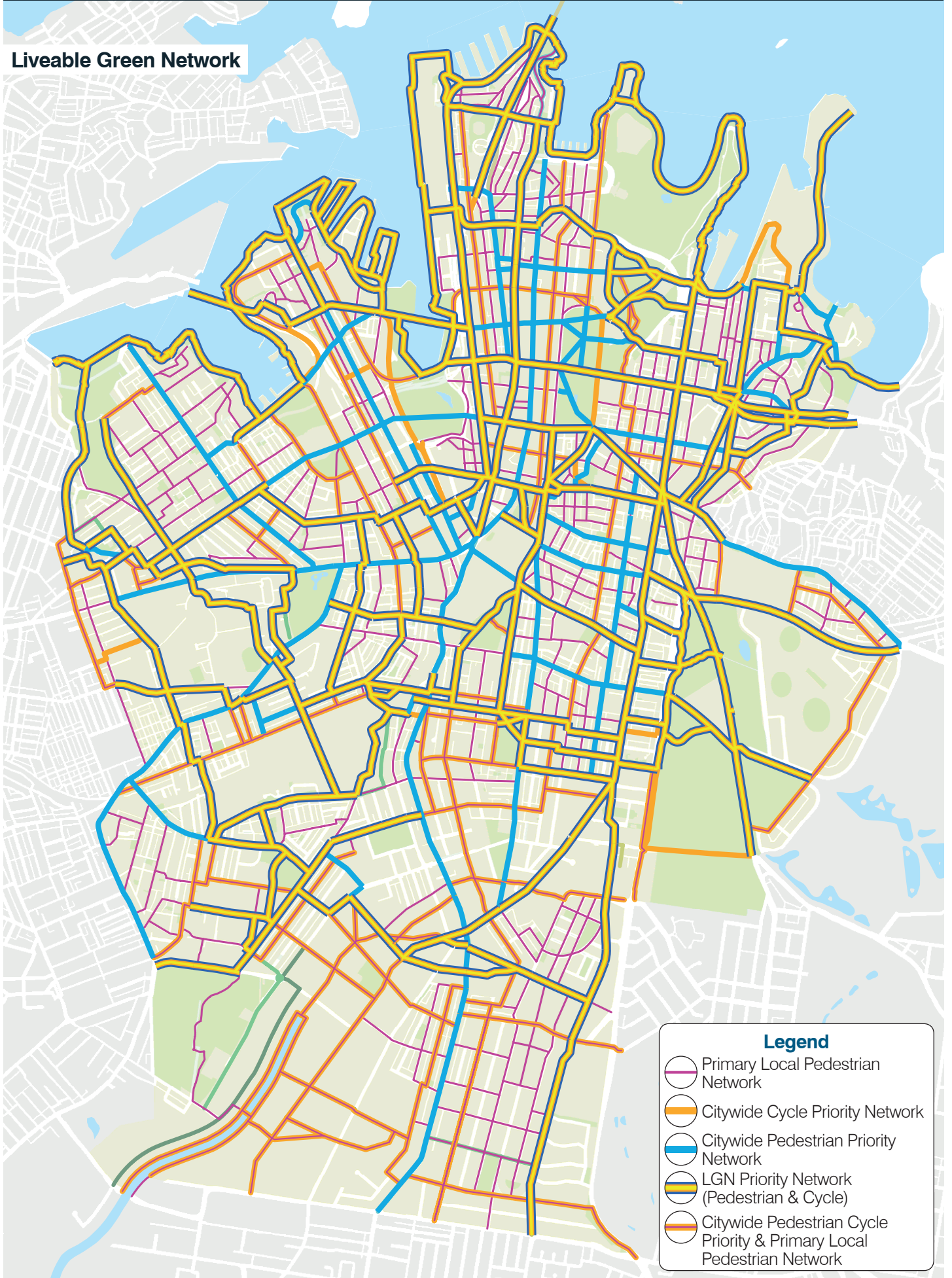
Liveable Green Network proposes new cycleways and pedestrian links across the study area makes walking and cycling a viable option to access the open space and recreation network. Cycle connections network provide a safe wider catchment for district parks for people to access by bicycle.

**Key open space linkages include:**





Liveable Green Network

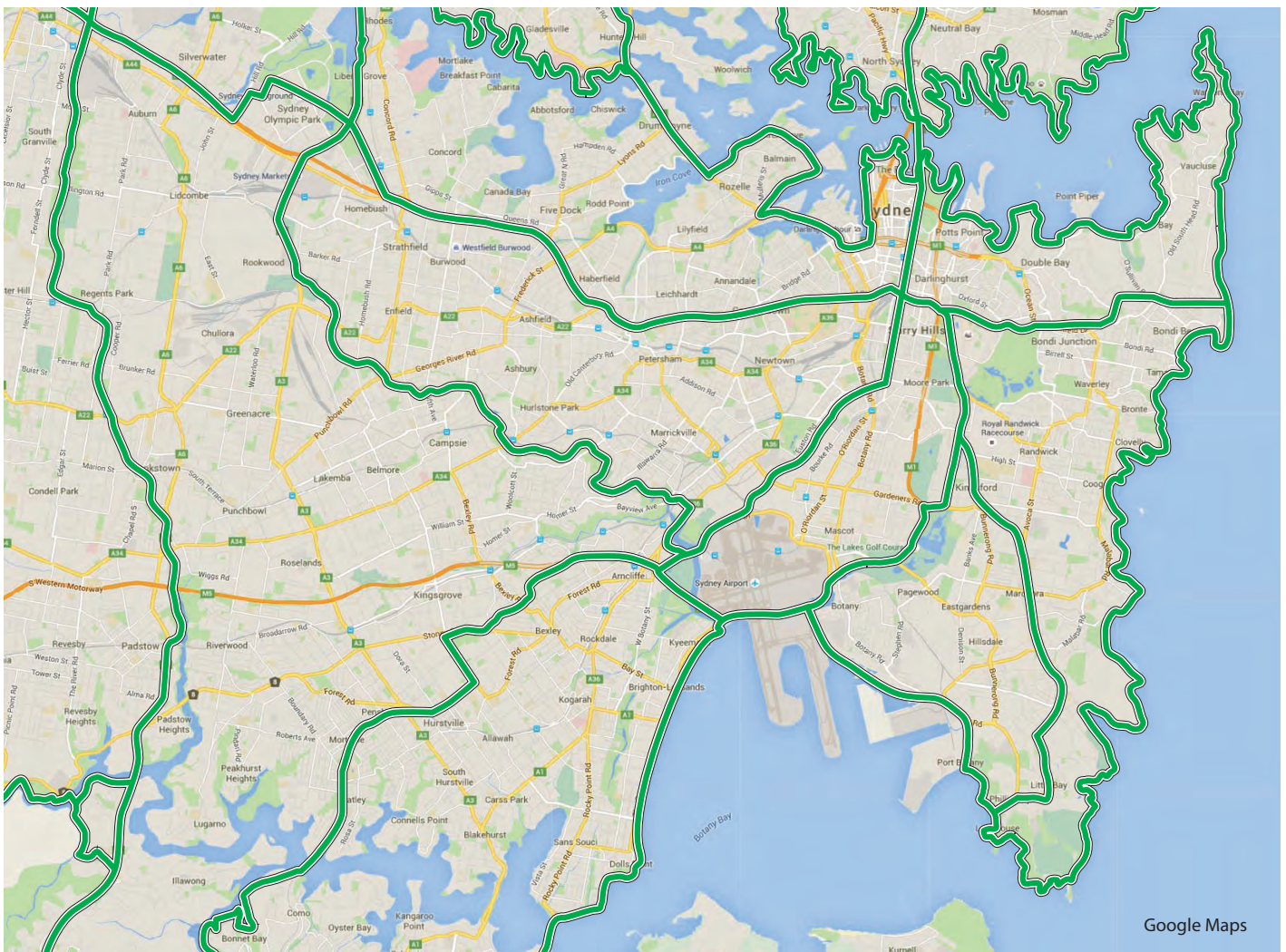




The opportunity to link parks is not confined to the City alone. The **Sydney Green Grid** identifies important regional trails across Metropolitan Sydney, many linking to the City.

Of particular relevance to the City of Sydney would be:

- Harbour Foreshore walk
- Botany Bay to Homebush Bay and Kurnell to La Perouse Trails (linked to the City via the Alexandra Canal)
- Coastal Walk (linked to the City via Centennial Parklands)
- Perry Park south along Alexandra Canal to Marrickville LGA
- City to Botany Bay



**Sydney Green Grid - Primary Corridors**