

# **Attachment G**

**Traffic and Parking Impact Assessment  
Prepared by Barker Ryan Stewart**



# ETHOS URBAN

## Traffic and Parking Impact Assessment Report

30-62 Barcom Avenue, Darlinghurst

August 2021

Project No.	SY180003
Author	AT
Checked	RD
Approved	RD

Rev No.	Status	Date	Comments
1	Draft	12/02/2018	
2	Draft	9/03/2018	Client Amendments
3	Final	18/04/2018	FSR & GFA Update
4	Draft	7/06/2021	Amended as per Council comments
5	Draft	5/08/2021	Amended as per Client Comments
6	Final	5/08/2021	

**COPYRIGHT**

Barker Ryan Stewart reserves all copyright of intellectual property in any or all of Barker Ryan Stewart's documents. No permission, licence or authority is granted by Barker Ryan Stewart to any person or organisation to use any of Barker Ryan Stewart's documents for any purpose without the written consent of Barker Ryan Stewart.

**REPORT DISCLAIMER**

This report has been prepared for the client identified in section 1.0 only and cannot be relied on or used by any third party. Any representation, statement, opinion or advice, expressed or implied in this report is made in good faith but on the basis that Barker Ryan Stewart are not liable (whether by reason of negligence, lack of care or otherwise) to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in any respect of any representation, statement, or advice referred to above.

**SYDNEY**

Suite 603, Level 6, 12 Century Circuit  
Norwest Business Park NSW 2153  
P (02) 9659 0005 F (02) 9659 0006  
E sydney@brs.com.au

**CENTRAL COAST**

Studio 5, 78 York Street  
East Gosford NSW 2250  
P (02) 4325 5255  
E coast@brs.com.au

**HUNTER**

Unit 1, 17 Babilla Close  
Beresfield NSW 2322  
P (02) 4966 8388 F (02) 4966 1399  
E hunter@brs.com.au

## TABLE OF CONTENTS

1	Executive Summary.....	5
2	Introduction .....	7
3	Existing Conditions.....	8
3.1	Site Location.....	8
3.2	Existing Development .....	9
3.3	Existing Road Conditions .....	9
3.4	Existing Sustainable Travel Options .....	10
3.4.1	Sustainable Transport Overview .....	10
3.4.2	Potential Travel Routes .....	10
3.4.3	Impacts.....	10
3.5	Pedestrians .....	10
3.6	Cyclists .....	11
3.7	Car Share.....	12
4	Proposed Development .....	13
4.1	Development Description .....	13
4.2	Access.....	13
4.3	Service Vehicles .....	13
5	Car Parking Assessment.....	14
5.1	Parking Provision and Requirements .....	14
5.2	Loading Requirements .....	15
6	Traffic Assessment .....	16
7	City of Sydney Transport Strategy - <i>Connecting our City</i> .....	17
8	City of Sydney Cycling Strategy and Action Plan .....	18
9	Travel Model Share .....	19
9.1	Australian Bureau of Statistics – Darlinghurst Census Data .....	19
10	Sustainable Travel Initiatives.....	21
10.1	Introduction.....	21
10.2	Develop Green Travel Plan .....	21
10.3	Potential Initiatives .....	21
10.3.1	Transport Access Guide .....	21
10.3.2	Wayfinding and Public Transport Options.....	22
10.3.3	Opal Card Initiative .....	23
10.3.4	Car Pool System .....	23
10.3.5	Car Share Schemes .....	23
10.3.6	Walking and Cycling .....	24
11	Implementing and Monitoring.....	26
12	Conclusion.....	27
13	References.....	28

Appendix A – Public Transport

Appendix B – City of Sydney Cycling Map

**List of Abbreviations, Figures and Tables**

Abbreviations

DCP ..... Development Control Plan  
 AS/NZS2890.1 ..... Australian Standards, 'AS/NZS 2890.1:2004 Off-Street Car Parking'  
 AS2890.2..... Australian Standards, 'AS 2890.2:2002 Off-Street Commercial Vehicle Facilities'  
 AS2890.3..... Australian Standards, 'AS 2890.3:2015 Bicycle Parking'  
 AS/NZS2890.6..... Australian Standards, 'AS/NZS 2890.6:2002 Off-Street Parking for People with Disabilities'  
 TfNSW ..... Transport for New South Wales

Figures

Figure 1: Site Location (source: NSW Land & Property Information SIX Maps 2017) .....8  
 Figure 2: Aerial Photo of Site (source: NSW Land & Property Information SIX Maps 2017) .....9

Tables

Table 1: Car parking requirements and provision ..... 14  
 Table 2: Bicycle parking requirements and provision ..... 15  
 Table 3: Bicycle parking ancillary facilities ..... 15

## 1 Executive Summary

This Traffic and Parking Impact Assessment has been prepared in accordance with the requirements of the City of Sydney DCP & LEP 2012, the TfNSW 'Guide to Traffic Generating Developments' to accompany a Planning Proposal to City of Sydney Council to provide a commercial office space above the existing self-storage commercial facility.

The site is currently developed and is occupied by an existing self-storage facility and has access via two driveways off Barcom Avenue, which services two loading bays. There is currently one on-site parking space used for loading and unloading. The proposal involves providing an additional two floors above the existing self-storage facility. These additional floors would be used as short-term office space. The proposal would add 1161m<sup>2</sup> of floor area to the existing floor area of 2347m<sup>2</sup>. In accordance with City of Sydney DCP this requires additional 6 car parking spaces as stated in section 5.1. Furthermore, no change is proposed to the existing on-site and on-street loading facilities which will be sufficient to cater to both the requirements of the existing and proposed developments.

In accordance with the objectives of the City of Sydney DCP and as described in Section 3.4 of this report the site is well serviced by public transport, as it is within 10 minutes' walk (800m walking distance) of King's Cross Station and is within 250m walking distance from bus stops on Bayswater Road and New South Head Road. The site's location within the inner-city region means the proposed offices are likely to attract tenants whose businesses and employees are not heavily reliant upon personal vehicles. A similar development in North Sydney, known as Work Inc, has been successfully operating for over a year with no on-site parking, as the demographics attracted by short-term office spaces is not heavily reliant on motor vehicles. The concept behind Work Inc type development is to create a coworking space made for the people. Since the proposed development is similar in nature of this concept it is considered that no onsite parking spaces are required due to easy access to and from site to public transport.

According to 2016 Darlinghurst census data only 17% of people from surrounding suburbs travelled to work in the Darlinghurst area by car compared to an average of 57.8% for NSW and 61.5% for Australia. A high proportion of people travelled to work via train (15%), compared to 7.5% on average for NSW and 4.6% on average for Australia. Bus travel to work was also higher in Darlinghurst (11.4%) when compared with NSW (4.0%) and Australia 3.0%). A significantly higher proportion of respondents indicated that they walked to work (35.6%), compared to the NSW average of 3.9% and the Australian average of 3.5%. This seems to indicate that majority of people who travel to work to Darlinghurst live in the surrounding suburbs and are most likely to use Public transport and / or Active transport to commute.

To promote sustainable travel, it is proposed that 13 bike spaces will be provided to meet the requirements of the new offices as set out in the Sydney DCP 2012. Nine (9) spaces provided for employee use and 4 spaces provided for visitor use in accordance with Clause 3.11.3(3) of the Sydney DCP 2012. The provision of easily accessible visitor bike parking also represents an opportunity for shared use of these spaces between customers of the self-storage facility and visitors to the proposed offices. In addition, to on-site bike parking spaces end of journey facilities will also be provided that included 13 lockers, two showers and change cubicles. Section 5.1 outlines the proposed bicycle parking spaces and related facilities which comply with the DCP rates.

Given this proposal is in a relatively early stage, no detailed design of the proposed on-site bicycle parking facilities is available. These facilities are to be designed in accordance with AS2890.3-2015 and Council DCP requirements.

Several sustainable travel initiatives and/ or strategies would be incorporated into the design and management of the building to complement the existing transport options and provide a holistic strategy to positively influence occupant behaviour. This include development of green travel plan which will be prepared with the future development application to encourage sustainable and active modes of transfer. The overall site strategy would be based around two main 'streams', reducing car ownership

with public transport as primary mode for distance trips and pedestrian/cyclist provisions for shorter trips. These initiatives would monitor and reviewed regularly to reconsider and improve objectives or targets.

The expected traffic generation is 18 vehicles per hour in AM peak (@1.6 trips / 100m<sup>2</sup>) and 14 vehicles per hour in PM peak (@1.2 trips/100m<sup>2</sup>). A minor increase in delivery vehicles and couriers attending the site is anticipated outside peak hours. The low traffic generation, delivery vehicles and couriers attending the site is unlikely to have any significant impact on the surrounding road network.

Considering the proximity of the site to various public transport services, cycleways, the Traffic and Parking Impact Assessment concludes that the subject site is suitable for the proposed changes to the existing use of the site. The development is considered to have negligible impact on the safety and efficiency of the surrounding road network and parking availability in the area.

## 2 Introduction

Barker Ryan Stewart has been engaged by Ethos Urban to prepare a Traffic and Parking Impact Assessment to accompany a Planning Proposal to provide a commercial office space above the existing commercial facility. This report is done in accordance with the requirements of the City of Sydney DCP 2012 (DCP) and LEP 2012 and the Road and Maritime Service's (RMS's) 'Guide to Traffic Generating Developments'. The proposal involves increasing the number of floors on-site from 2 to 4, resulting in an increased floor area in of 1,161m<sup>2</sup>, to accommodate a commercial office above the existing self-storage warehouse.

The purpose of this report is to assess and address traffic, access, car parking and pedestrian impacts generated by the proposed development. This can be briefly outlined as follows:

- The expected traffic generation to/from the proposed development.
- The impact of the proposed development on the road network.
- Vehicle parking provisions.
- Vehicular requirements for delivery and waste collection.
- Provision for pedestrians.
- Availability of public transport.



### 3 Existing Conditions

#### 3.1 Site Location

The site is located within a B4 Mixed-Use zone at 30-62 Barcom Avenue, Darlinghurst B/-/DP111138. For the purposes of the Sydney LEP 2012 Land Use Transport Integration Map, it falls within land under category 'B'. As Per the Public Transport Accessibility Level map, the subject land falls under category 'F'.

The site is located at the intersection of Womerah Lane and Barcom Avenue, with frontage to Barcom Avenue. It is bound by existing residential development to its South, an existing car dealership to the East and an approved car dealership to the north.

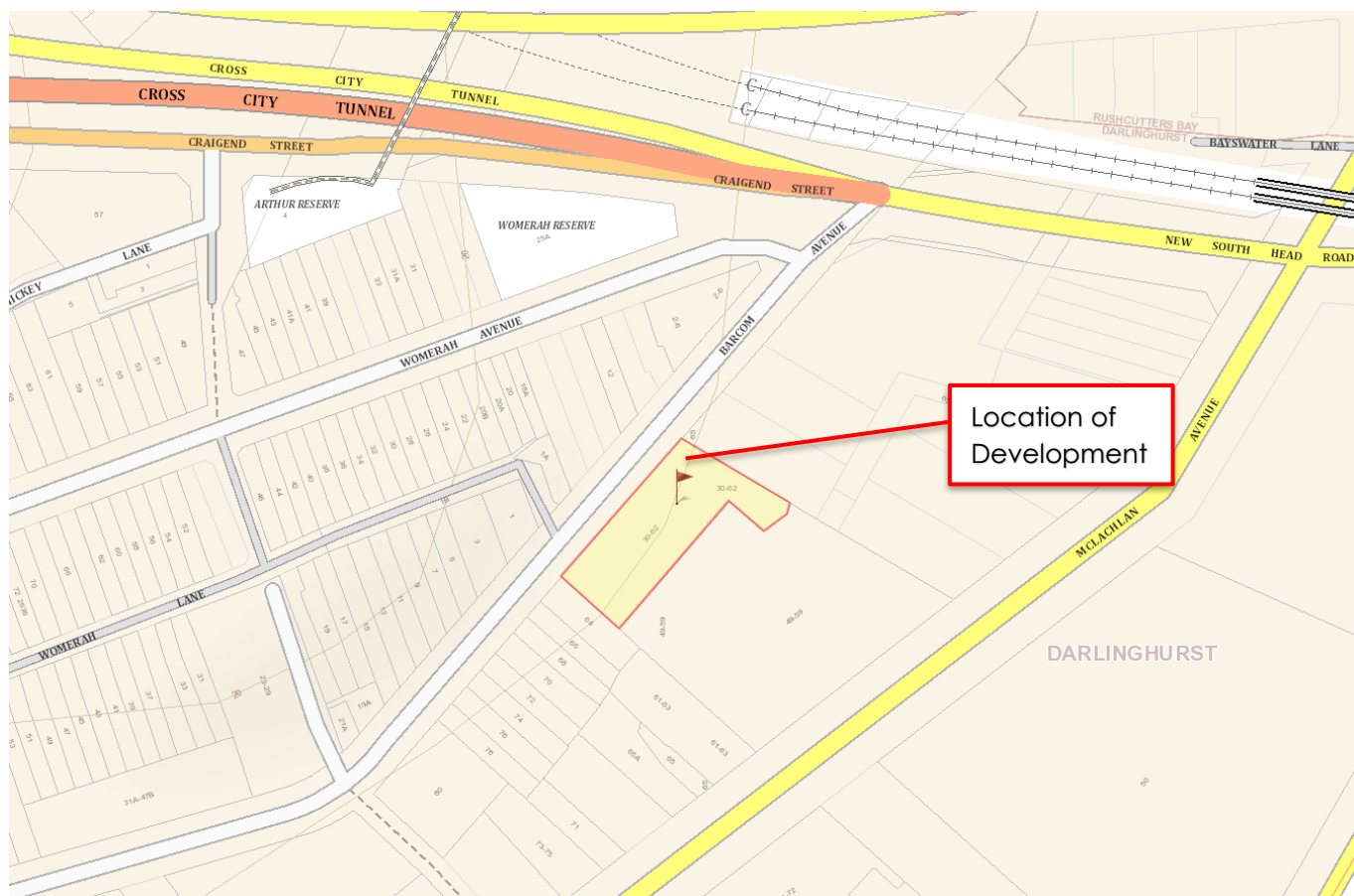
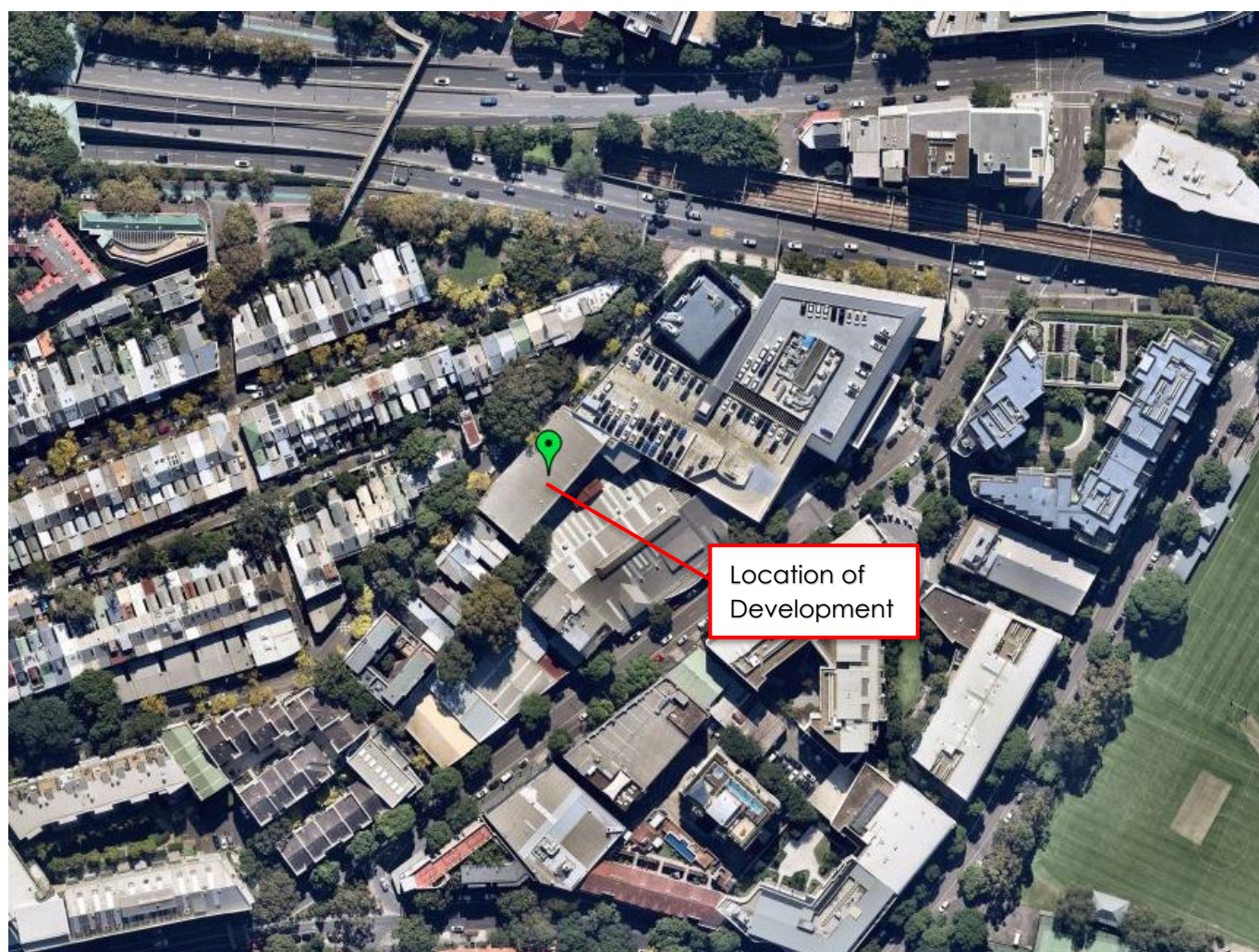


Figure 1: Site Location (source: NSW Land & Property Information SIX Maps 2017)

### 3.2 Existing Site

The site is currently developed and is occupied by an existing self-storage facility. The site has an area of 1001m<sup>2</sup> and has two driveways accessing Barcom Avenue, which service two loading bays. There is currently one on-site parking space used for loading and unloading in addition to 20m on-street loading zone outside the frontage which is active between the hours of 8:30am – 5:30pm Monday – Friday and 8:30am – 12:30pm Saturday. Operating hours of the self-storage facility are also 8:30am – 5:30pm Monday – Friday and 8:30am – 12:30pm Saturday. Vehicular access to the existing site is via two vehicular driveways on Barcom Avenue.



**Figure 2:** Aerial Photo of Site (source: NSW Land & Property Information SIX Maps 2017)

### 3.3 Existing Road Network

#### Barcom Avenue

Is a one-way, low-speed local road with ~7m width and on-street parking on both sides. Footpath has been provided on both sides of the street for pedestrians. A 40km/h speed limit has been set for the road and traffic is restricted to moving in a westerly direction only. As such vehicles seeking to access the site will need to enter Barcom Avenue via its intersections with New South Head Road or Womerah Avenue.

With regards to access to the broader Sydney road network, access to and from the site is restricted by the one-way flow on Barcom Avenue. Therefore, most of the traffic exiting the site will utilise the intersection of Barcom Avenue and Liverpool Street. Drivers will then use Boundary Street / McLachlan

Avenue to travel to the east and Liverpool Street westbound to travel to the North, West and South. Those travelling to the site will likely use the intersection of New South Head Road and Barcom Avenue for almost all circumstances except when travelling from a southwest direction.

### 3.4 Existing Sustainable Travel Options

#### 3.4.1 Sustainable Transport Overview

##### Train and Bus:

The area is well serviced by public transport, with bus connections and King's Cross train station located in close proximity to the site. King's Cross station is 700m away (10 minutes' walk) and provides frequent train services to the CBD and Sydney's east and south on the T4 South Coast Line, with a frequency of ~15 minutes during off-peak times and ~8 minutes during peak times.

Similarly buses between the Sydney CBD and nearby bus stops on New South Head Road operate with a 15-minute frequency during off-peak times and a 10-minute frequency during peak hours.

#### 3.4.2 Potential Travel Routes

##### To/From West and South

Commuters travelling to the site from Sydney's west and south would be able to utilise various train lines such as the T1/T2/T3/T4 lines to travel to Central Station, changing to the T4 line (if necessary) and then travelling to King's Cross before walking 10 minutes to the site.

Alternatively, if commuters wish to minimise walking, they can alight from their trains at Town Hall Station before catching either the 324 or 325 buses, which would bring them within 200m of the site.

The routes can be reversed to facilitate workers' return trips.

##### To/From East

Commuters residing east of the site can utilise the T4 line from Bondi Junction to reach King's Cross Station or can catch buses to Central before making their way to the site.

#### 3.4.3 Impacts

The proposed offices would result in a relatively minor increase in pedestrian traffic and public transport usage in the local area.

Overall, the existing site has excellent access to pedestrian and cycling infrastructure and public transport, which can accommodate the requirements of the proposed development.

The site is also located within the established Sydney cycle network, close to several shared paths. See Appendix B for more information. Pedestrian infrastructure in the area is also consistent with the high standard generally provided throughout the Sydney CBD.

### 3.5 Pedestrians

The site is well located to capitalise on existing pedestrian infrastructure within the surrounding road network.

Most movements from the site are expected to be foot traffic. The estimated walking distance from the corner of Eveleigh Street and Caroline Street to main destinations are outlined below:

- Less than 800m to Kings Cross Railway Station (10 min Walk).
- Less than 250m to number of bus stops.
- Less than 200m to cafes etc

These walking routes are expected to be well trafficked by pedestrians that will maintain a level of passive security for residents, staff, and visitors to the site.

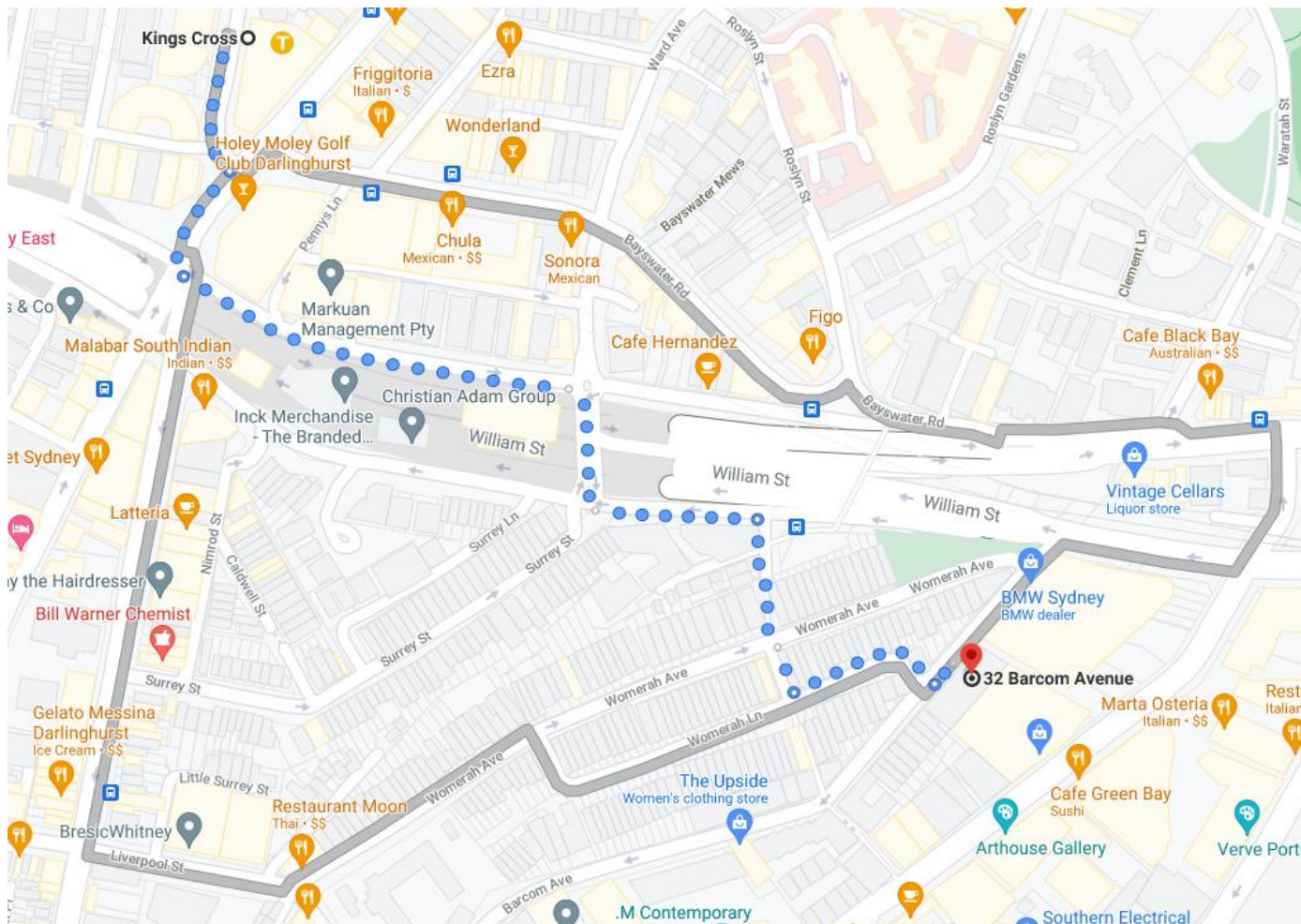


Figure 3: Existing walking route to the Site (source: Google Maps)

### 3.6 Cyclists

As shown in below in Figure 4 below the site is located on Barcom Avenue on what is classified as a 'low traffic, on-road, quiet route' by cycling map (Published by City of Sydney). The Barcom Avenue route connects to Liverpool Street which provides access to the Bourke Street 'separated off-road cycleway' which provides a safe dedicated link to both the north and south of Sydney's CBD. This major cycleway also provides off-road share paths to the east via Moore Park and west via low traffic on-road routes. These links to the west also provide access to train stations in Sydney's CBD. Therefore, the cycle network provides safe access to the site for experienced riders, riders who live locally and novice riders who can initially travel to the city CBD via public transit.

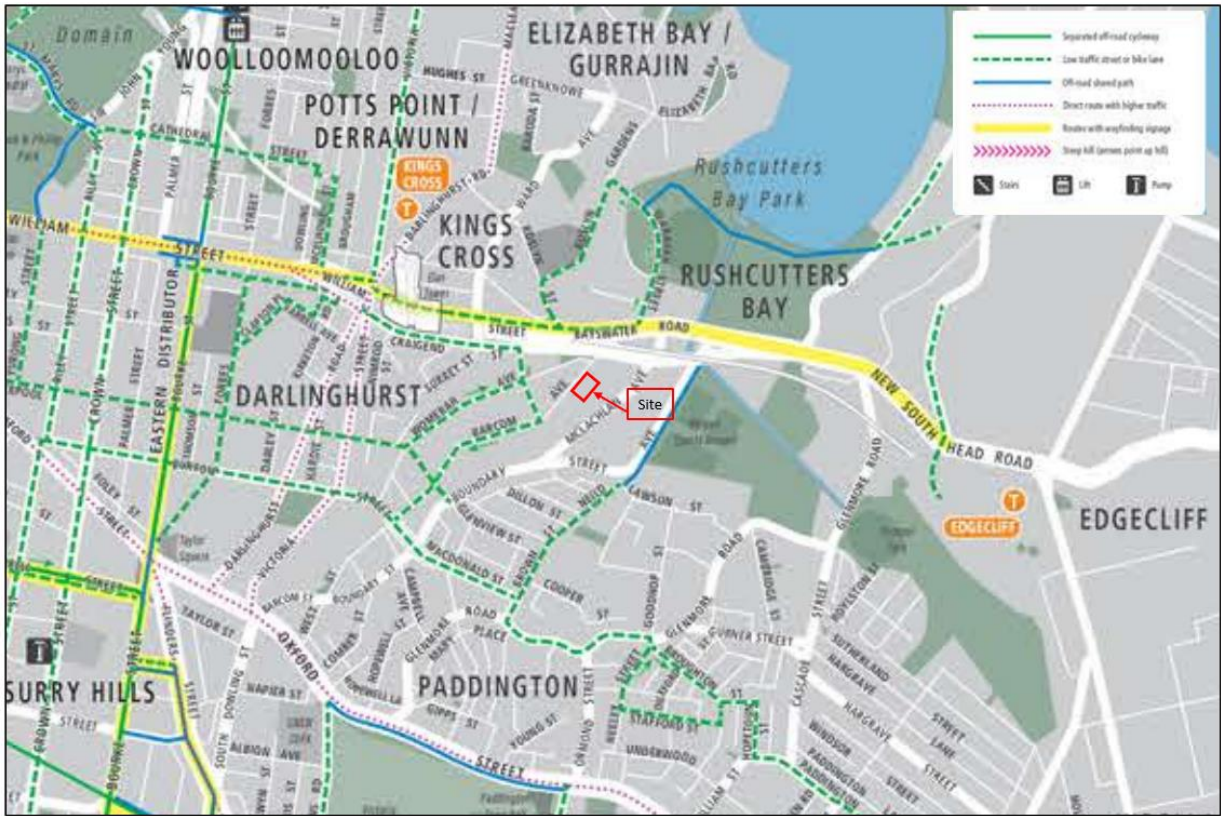


Figure 3: Barcom Avenue Cycling Classification

### 3.7 Car Share

Currently, there are available car share pods (GoGet) at number of locations in close proximity of the Site. Notwithstanding, there is potential for additional car share spaces by GoGet and/or other service providers to be provided within the locality in the future, following further development of the area.

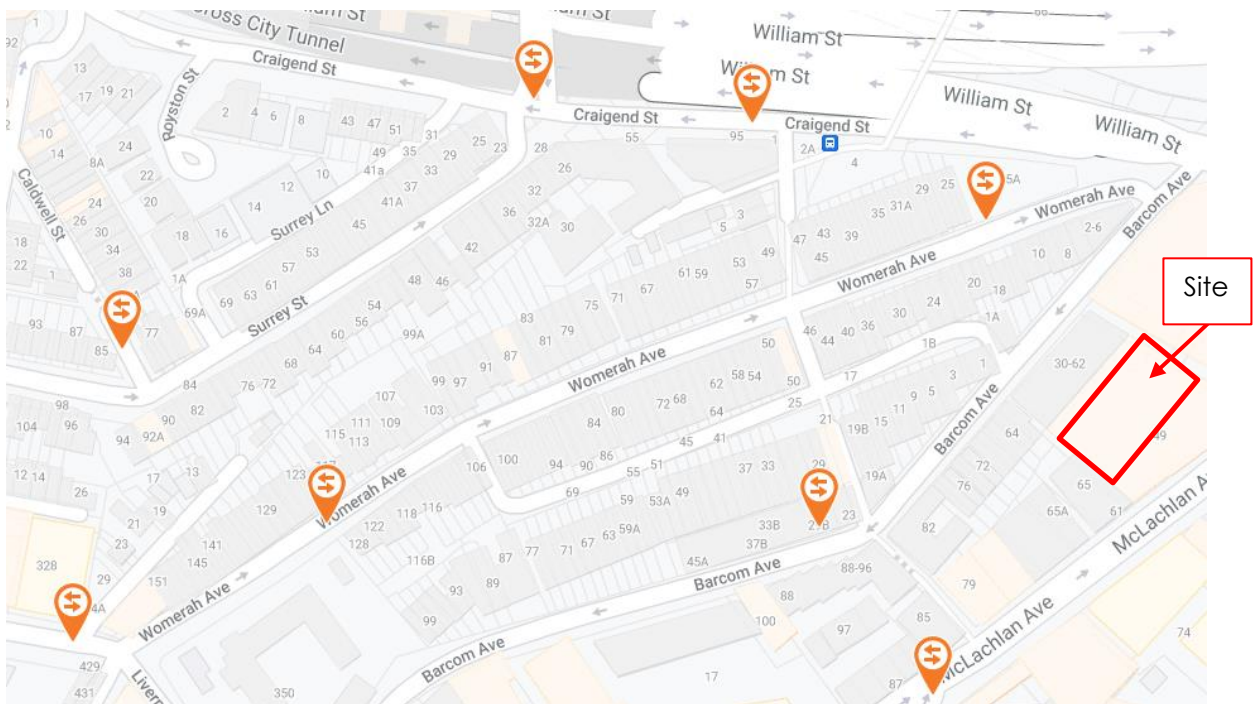


Figure 4: GoGet Car Share Pods (source: goget.com.au)

## 4 Proposed Development

### 4.1 Development Description

The proposal involves providing an additional two floors above the existing self-storage facility. This will result in an increase in gross internal area from 2,374m<sup>2</sup> to 3,535m<sup>2</sup> and a corresponding approximate increase in FSR from 2.39:1 to 3.56:1. These additional floors will be used as short-term office space. A similar proposal (Work Inc) that has been successfully operating over a year in North Sydney.

No additional on-site parking spaces are proposed however, one on-street shared car parking space will be available adjacent the site and on-site bicycle parking will be provided.

### 4.2 Access

Two existing vehicular accesses to the site will continue to be used for their current function servicing the self-storage facility. Bicycle and pedestrian access to the site will be facilitated by a separate entrance on Barcom Avenue.

### 4.3 Service Vehicles

Waste collection will take place on-street as will the loading and unloading of vehicles associated with the office building.

## 5 Car Parking Assessment

### 5.1 Parking Provision and Requirements

The proposed car parking and bicycle parking provisions have been assessed against the City of Sydney LEP 2012 parking rates contained in Clause 7.6 for Office and Business Premises in a B4 zone. For the purposes of the Sydney LEP 2012 Land Use Transport Integration Map, it falls within land under category 'B'. Per the Public Transport Accessibility Level map, the land is category 'F'. A summary of these requirements and the proposed parking provisions are included in tables 2 & 3 below:

**Table 1:** Car parking requirements and provision

Existing Land Use	City of Sydney DCP	Existing Parking Provision
<u>Office and Business Premises</u> <ul style="list-style-type: none"> <li>A = 992.5m<sup>2</sup> Site Area</li> <li>G = 2,374m<sup>2</sup> Floor Area</li> <li>T = 2,374m<sup>2</sup> Floor Area of all buildings on site</li> </ul> <p>(Note that since the FSR will exceed 1.5:1, the rate in Clause 7.6(e) is adopted)</p>	<u>Maximum Rates</u> $M = (G \times A) \div (50 \times T)$ Maximum rates (M) = $(2374 \times 992.5) / (50 \times 2374)$ = 19.85 (20) spaces	0 on-site parking spaces (compliant)
Proposed Land Use	City of Sydney DCP	Proposed Parking Provision
<u>Additional Office and Business Premises (3<sup>rd</sup> and 4<sup>th</sup> floors)</u> <ul style="list-style-type: none"> <li>A = 992.5m<sup>2</sup> Site Area</li> <li>G = 1,161m<sup>2</sup> Floor Area</li> <li>T = 3535m<sup>2</sup> Floor Area of all buildings on site</li> </ul> <p>(Note that since the FSR will exceed 1.5:1, the rate in Clause 7.6(e) is adopted)</p>	<u>Maximum Rates</u> $M = (G \times A) \div (50 \times T)$ Maximum rates (M) = $(1161 \times 992.5) / (50 \times 3535)$ = <b>6.5 (6) spaces</b>	0 on-site parking spaces (compliant)  1 on-street Go-get car share space

The proposal to provide no additional parking spaces is consistent with the objectives of the City of Sydney DCP Division 7 (b) "to minimise the amount of vehicular traffic generated because of proposed development". As described in Section 3.4 of this report the site is well serviced by public transport, as it is within 10 minutes' walk (700m walking distance) of King's Cross Station and is within 250m walking distance from bus stops on Bayswater Road and New South Head Road. This and the site's location within the inner-city region mean the proposed offices are likely to attract tenants whose businesses and employees are not heavily reliant upon personal vehicles. A similar development in North Sydney (Work Inc), has been successfully operating for over a year with no on-site parking, as the demographics attracted by short-term office spaces is not heavily reliant on motor vehicles. Provision of a go-get car share pod on Barcom Avenue is also proposed, providing a more sustainable alternative to private vehicle use for tenants of the proposed development and the local neighbourhood. Bicycle parking facilities will be provided on-site as outlined in the section below will provide another alternative means of transportation.

For these reasons, the proposal is not anticipated to have a significant negative impact on parking in the local area. As the site is in close proximity of the major public transport facilities such as King's Cross station and buses on Williams Street/New South Head Road as outlined in Section 3.4.

**Table 2:** Bicycle parking requirements and provision

Existing Land Use	City of Sydney DCP	Existing Parking Provision
<u>Self-Storage – (Bulky Goods)</u>  2,374m <sup>2</sup> Floor Area	<u>Minimum Rates (Employee)</u> = 1 space /600m <sup>2</sup> GFA = $2374/600 = 3.9$ (4) spaces  <u>Minimum Rates (Customer)</u> = 1 space /1000m <sup>2</sup> GFA = $2374/1000 = 2.4$ (3) spaces	0 on-site parking spaces
Proposed Land Use	City of Sydney DCP	Proposed Parking Provision
<u>Employment Hub - Additional Office and Business Premises (3<sup>rd</sup> and 4<sup>th</sup> floors)</u>  G = 1161m <sup>2</sup> Floor Area	<u>Minimum Rates (Employee)</u> = 1 space /150m <sup>2</sup> GFA = $1161/150 = 7.7$ (8) spaces  <u>Minimum Rates (Customer)</u> = 1 space /400m <sup>2</sup> GFA = $1161/400 = 2.9$ (3) spaces	<b>13 on-site parking spaces (compliant)</b>

It is proposed that 13 bike spaces will be provided to meet the requirements of the new offices set out in the Sydney DCP 2012. The facilities that contain these bikes will function as Class B and Class C facilities as described in Table 3.3 of AS2890.3-2015, with 9 spaces provided as Class B for employee use and 4 spaces provided as Class C for visitor use in accordance with Clause 3.11.3(3) of the Sydney DCP 2012. As the proposed offices are isolated from the existing self-storage facility, the proposal is unlikely to negatively impact the existing operation of the self-storage facility regarding bicycle parking. The provision of easily accessible visitor bike parking also represents an opportunity for shared use of these spaces between customers of the self-storage facility and visitors to the proposed offices.

**Table 3:** Bicycle parking ancillary facilities

Proposed Land Use	City of Sydney DCP	Proposed Parking Provision
<u>Employment Hub - Additional Office and Business Premises (3<sup>rd</sup> and 4<sup>th</sup> floors)</u>  9 employee spaces  4 customer spaces	<u>Minimum Rates</u> 1 bicycle locker per space x 13 = 13 lockers  2 shower and change cubicles for 11-20 bike spaces	<b>13 lockers</b>  <b>2 shower and change cubicles (compliant)</b>

These bicycle spaces and facilities are to be designed in accordance with AS2890.3-2015 and Council DCP requirements.

## 5.2 Loading Requirements

The City of Sydney DCP 2012 does not contain specific loading rates for a commercial development, it is proposed that the site will continue to be serviced by the existing loading space on-site and the 20m on-street loading zone.



## 6 Traffic Assessment

The expected traffic generation is **18 veh/hr in AM peak** (@1.6 trips / 100m<sup>2</sup>) and **14 veh/hr in PM peak** (@1.2 trips/100m<sup>2</sup>). A minor increase in delivery vehicles and couriers attending the site is anticipated outside peak hours. The low traffic generation, delivery vehicles and couriers attending the site is unlikely to have any significant impact on the surrounding road network.

## 7 City of Sydney Transport Strategy - Connecting our City

Connecting our City was prepared by City of Sydney in 2012 in a bid to review and implement more sustainable travel options to mitigate the impact of vehicle congestion on livelihoods and the environment.

The strategy identified primary shifts needed to facilitate effective functioning of Sydney’s transport system:

- Encouraged use of walking, cycling and public transport;
- Introduction of car share;
- Use of community transport; and
- Better traffic management.

The study also provided key mode share statistics associated with transport trips to and within Central Sydney, see Figure 6 below. Noting that the subject site is located outside of Central Sydney, statistics indicate that around 400,000 weekday trips are made to Central Sydney by residents of the Sydney region. 60% of these trips are associated with public transport via train, bus, or ferry, 13,000 by taxi, 111,000 by car and 39,000 via walking or cycling.

These statistics indicate that residents of Sydney already utilise alternative modes of transport far greater than NSW average and provision of additional cycleways identified in the City of Sydney Cycling Strategy and Action Plan (refer to section 2.6 for further information), will generate more opportunities for future residents of the site to access the City Centre via bicycle.

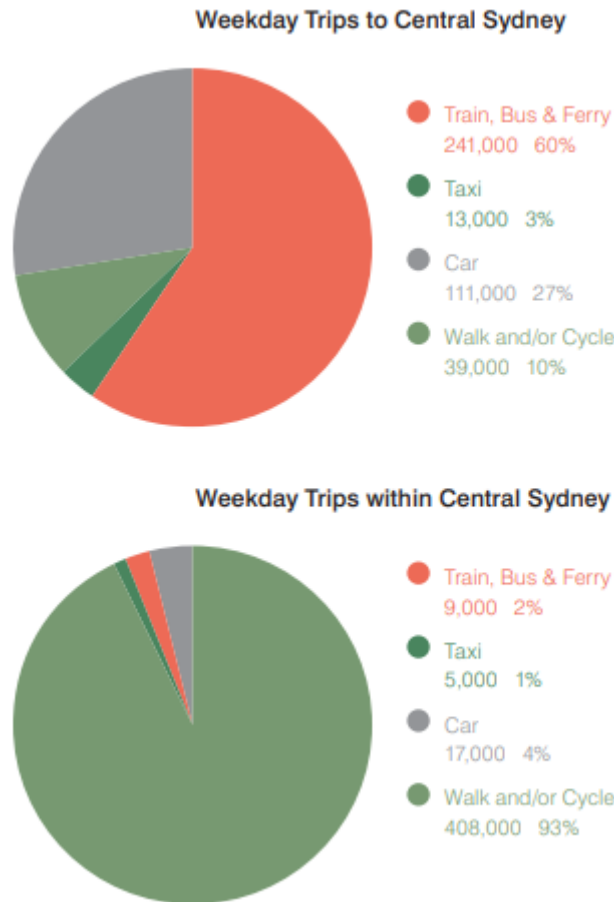


Figure 5: Extract from City of Sydney Transport Strategy (Transport Data Centre 2010b)

### 8 City of Sydney Cycling Strategy and Action Plan

The City of Sydney Cycling Strategy and Action Plan provides a dedicated plan that will achieve 200km of cycleways, of which 55km will be separated from other traffic.

An extract of the proposed Sydney Bike network is provided in Figure 6 with the site identified by a red star. It is evident that the site is well located to capitalise on completed and planned bike networks that will provide direct access to number of commercial and industrial employment hubs in the City of Sydney LGA.

Of note, the site will have access to planned cycleway on William Street north of the site. This route will connect residents to Bays & Rozelle to the west, the University of Sydney, Leichhardt and Stanmore to the south, Edgecliff, Bondi, UNSW, Moore Park and Centennial Park to the east and Barangaroo, The Rocks to the north east where direct access to the City is provided via completed cycleway infrastructure.



Figure 6: Extract from City of Sydney Cycling Strategy and Action Plan

## 9 Travel Model Share

### 9.1 Australian Bureau of Statistics – Darlinghurst Census Data

Existing travel patterns of the employees within the surrounding locality were surveyed as part of the 2016 Census and presented in the Journey to Work (JTW) data sourced from the Australian Bureau of Statistics. The following extract (Figure 8 & 9) is provided from the Australian Bureau of Statistics for Darlinghurst which outlines the various travel to work methods as indicated by respondents in the 2016 census data.

According to 2016 Darlinghurst census data only 17% of people from surrounding suburbs travelled to work in the area by car compared to an average of 57.8% for NSW and 61.5% for Australia. A high proportion of people travelled to work via train (15%), compared to 7.5% on average for NSW and 4.6% on average for Australia. Bus travel to work was also higher in Darlinghurst (11.4%) when compared with NSW (4.0%) and Australia 3.0%).

A significantly higher proportion of respondents indicated that they walked to work (35.6%), compared to the NSW average of 3.9% and the Australian average of 3.5%.

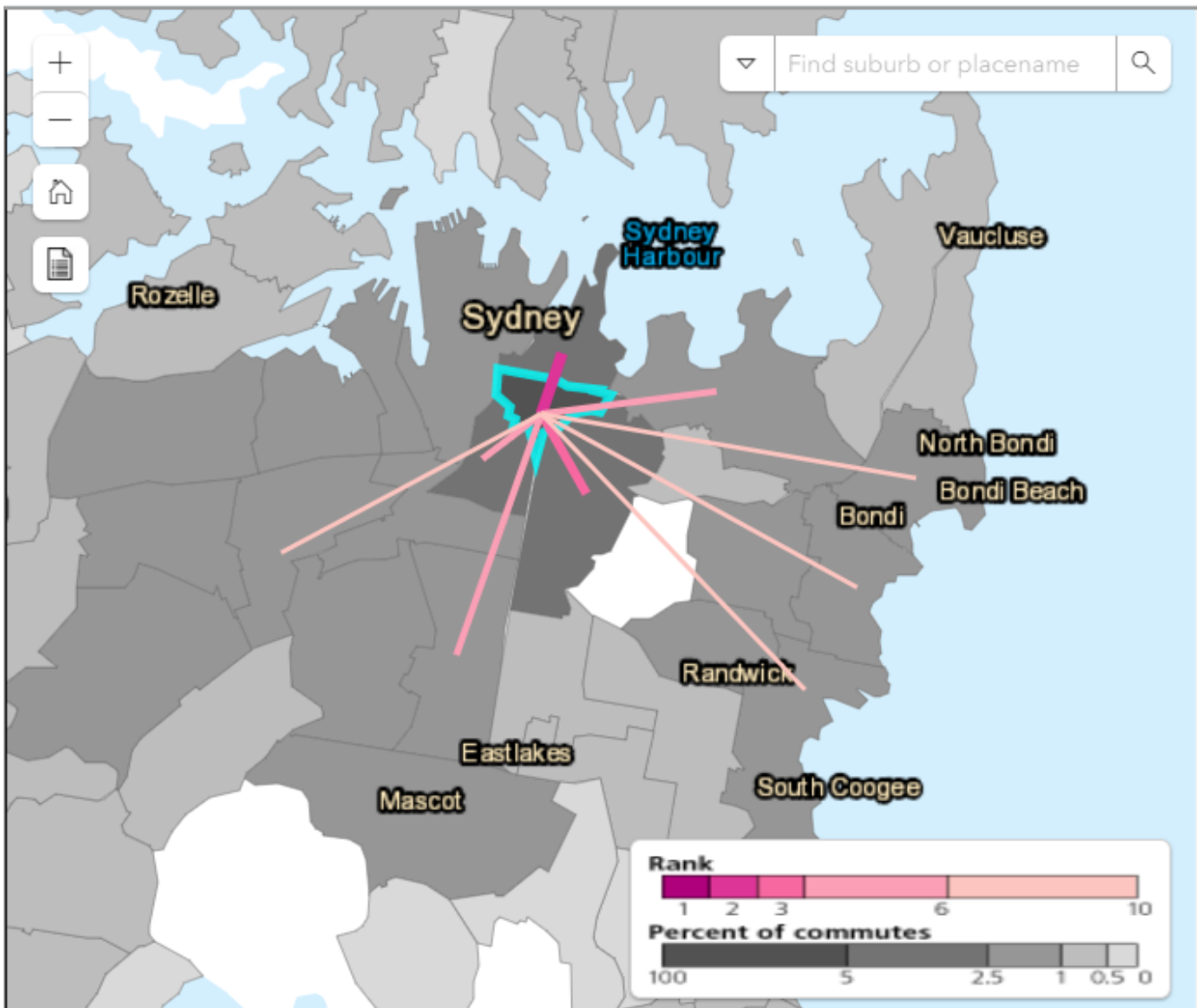


Figure 7: persons commuting to Darlinghurst from surrounding area

Travel to work, top responses <i>Employed people aged 15 years and over</i>	Darlinghurst	%	New South Wales	%	Australia	%
Walked only	2,520	35.6	130,957	3.9	370,427	3.5
Car, as driver	1,179	16.7	1,953,399	57.8	6,574,571	61.5
Train	1,076	15.2	252,786	7.5	488,012	4.6
Bus	806	11.4	133,903	4.0	323,201	3.0
Worked at home	345	4.9	163,026	4.8	503,582	4.7
People who travelled to work by public transport	2,146	30.2	540,215	16.0	1,225,668	11.5
People who travelled to work by car as driver or passenger	1,345	18.9	2,182,854	64.6	7,305,271	68.4

In Darlinghurst (Statistical Area Level 2), on the day of the Census, the most common methods of travel to work for employed people were: Walked only 35.6%, Car, as driver 16.7% and Train 15.2%. Other common responses were Bus 11.4% and Worked at home 4.9%. On the day, 30.2% of employed people used public transport (train, bus, ferry, tram/light rail) as at least one of their methods of travel to work and 18.9% used car (either as driver or as passenger).

Figure 8: Australian Bureau of Statistics – Darlinghurst Census Data

Of the employed people in Darlinghurst (Statistical Area Level 2), 5.2% worked in Cafes and Restaurants. Other major industries of employment included Legal Services 4.2%, Banking 3.8%, Hospitals (except Psychiatric Hospitals) 3.2% and Computer System Design and Related Services 3.2%. This seems to indicate that majority of people who travel to work to Darlinghurst live in the surrounding suburbs and are most likely to use Public transport and / or Active transport to commute.

## 10 Sustainable Travel Initiatives

### 10.1 Introduction

Number of sustainable travel initiatives would be incorporated into the design and management of the building to complement the existing transport options and to provide a holistic strategy to positively influence occupant behaviour.

The overall site strategy would be based around two main 'streams', reducing car ownership with public transport as primary mode for distance trips and pedestrian/cyclist provisions for shorter trips.

### 10.2 Develop Green Travel Plan

Green Travel Plan will be prepared with the submission of the Future development application for the site. The purpose of the Green Travel Plan is to encourage the occupants of the proposed building, through sustainable transport use initiatives, to make greater use of public transport, cycling walking and car sharing for commuting and work-related journeys. This can be briefly outlined as follows:

- Preparation of a Transport Access Guide by the Building Managers.
- Promotion and incentives to use public transport options to access the site.
- Promotion of carpool system for commercial users of the building.
- Use taxis and public transport work related trips for retail users of the building.
- Encourage walking and cycling.
- Implementing and monitoring of the plan

### 10.3 Potential Initiatives

Following are the potential Initiatives that could be considered and included in the Green Travel Plan (GTP)

#### 10.3.1 Transport Access Guide

As part of the implementation of the proposed sustainable travel measures, a Transport Access Guide would be developed using Green Travel Plan as a basis. The Transport Access Guide would be a short brochure approximately two pages long to provide information and recommendations on sustainable travel options to and from the development site. The Transport Access Guide would be readily available and structured in a manner that provides concise, relevant, and easily understood information for the targeted readers.

The purpose of the Transport Access Guide differs from that of the Green Travel Plan. The Green Travel Plan will be developed to demonstrate the sustainable transport initiatives being adopted in the proposal, whereas the Transport Access Guide is targeted directly at the building occupants and provides easy to understand information for the public.

The workplaces would look to review any relevant company policies to understand what incentives they can create. Building management would ensure that there are no future building regulations which impact on mode choice. For example, rules not allowing bicycles in lifts or storage of bicycles in common areas. Certain actions may unintentionally affect travel behaviour, such as poorly located or inadequately secured bicycle parking.

Topics to be covered in the Transport Access Guide may include;

- Access to public transport infrastructure, including
  - Directions

- Walking distances and times
- Services provided by local public transport, covering
  - Availability train and bus services
  - Routes covered by local services, including connections to other services
- Ticketing information for public transport, including:
  - Prices and coverage of zones
  - Locations of Opal Card top-up stations / machines
  - Overview of a potential free Opal card incentive scheme for the staff
- Location of local facilities and amenities within walking distance and cycling distance
- Overview of cyclist provisions (bicycle storage etc.)
- Details of car-pooling benefits and strategy as well as eligibility / value for fuel voucher and rewards scheme.
- Detail recommended company policies that should be implemented for the commercial use of the site.
- Detail recommended building regulations for the commercial use of the site.

### 10.3.2 Wayfinding and Public Transport Options

Transport for NSW is providing a new integrated approach to wayfinding and signage for the NSW transport network. The key benefits are to provide consistent, easy to follow messages and to make the using public transport easier for users particularly those travelling on unfamiliar routes and across different types of transport modes.

The wayfinding approach includes new consistent signage, electronic notice boards, timetables, real time smart apps and via Transport for NSW website and through social media.

The Sydney public transport ticketing system has transitioned to the Opal card. Since the start of 2016 paper tickets have been phased out. The Opal carding system has advantages such as the provision of off-peak discounts, and daily and weekly caps. This encourages the use of public transport for the likely demographic that will reside, use, or work in the precinct once constructed. Figure 9 below shows the opportunity to purchase opal cards at facilities in close proximity to the subject site.

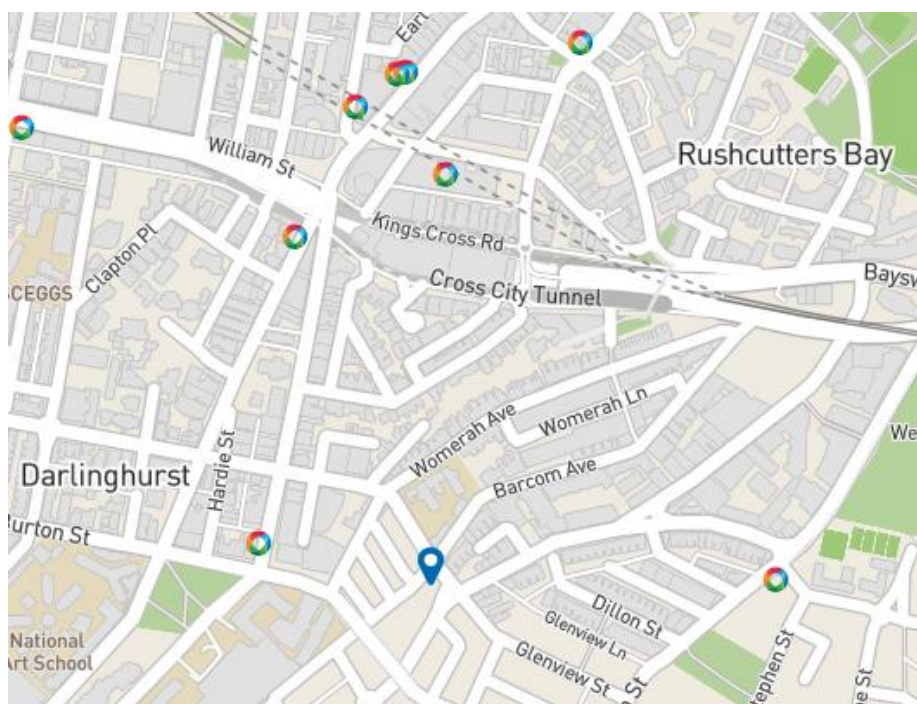


Figure 9 : Opal Card Retailers

Relevant addresses of five (5) Opal retailers that are located within 500m of the site are provided below:

- Green Park News Agency – 267 Victoria St, Darlinghurst 2010 (198 metres away)
- Chris's Corner Shop – 124 Lawson Street, Paddington 2021 (397 metres away)
- Fire Station News – 179 Darlinghurst Rd, Darlinghurst 2010 (407m away)
- AGL Food Store – shop 1, 17 Bayswater Road, Potts Point 2011 (449m away)
- Kings Cross Station – Entrance on Vitoria Street, Potts Point 2011 (500 metres away)

### 10.3.3 Opal Card Initiative

The site is located near public transport, walking distance to Kings Cross Station and in close proximity to local and main bus routes. As such building design management teams would focus on encouraging staff to avoid car use and adopt public transport as their primary mode.

To promote this behaviour, a commitment could be made by future businesses located in the commercial/retail component of the building to provide vouchers for their staff to top up the Opal card for the first 12 months of work.

By providing a voucher that staff use to personally top-up their cards (rather than automatically topping them up), the staff receive regular reminders of the available service and are personally engaged in the process.

This initiative aims to establish public transport as a viable option from the beginning for new staff, which discourages the adoption of personal vehicle usage from the outset. It is then anticipated that after the 12-month period of establishment, staff will continue to use public transport based on their knowledge of the system and travel habits that were developed during the first 12 months of occupancy/ employment.

### 10.3.4 Carpool System

Each business that is contracted to a commercial tenancy/ownership has an opportunity to encourage and implement a car-pooling strategy within its staff into its management operations. The main opportunities are:

- A committed and stable workforce for the businesses.
- The majority of staff will work the same or similar shifts.
- Staff are likely to be drawn from nearby or similar residential areas or along travel paths to the site.

Therefore, the car-pooling initiative will involve the Management team of each business to consider undertaking the following:

- Encouragement for car-pooling by providing fuel vouchers to an agreed value to the drivers to help cover any additional travel costs associated with the car-pooling or bonus incentives in the form of discounting parking passes.
- Provide a reward scheme (monthly prizes) for those involved in the car-pooling scheme.

### 10.3.5 Car Share Schemes

Car sharing schemes provide a convenient, affordable, and sustainable transport option for residents and businesses. It enables sustainable travel habits, keeps people connected and provides an efficient use of parking space –a single car share vehicle can replace any number of private vehicles that would otherwise compete for local parking.

GoGet and Car Next Door currently operate approximately 900 vehicles throughout the city region for use by members. As outlined in Section 3.7 above there are number of shared vehicles available within easy walking distance of the subject site.



The concept of car share schemes is conducive to commercial, retail, and residential developments located in the vicinity of a CBD. The membership and car hire rates preclude the need to maintain and register a vehicle. Petrol is also included in the car hire, thus the only financial considerations that car share customers need to be mindful of, is the membership and car hire rate.

GoGet's membership rates are tailored for specific users. Considering the location of the development, this is likely to be an attractive travel option for the times when cycling or public transport are not viable options.

### 10.3.6 Walking and Cycling

#### Site Pedestrian Access

Extensive public pedestrian paths exist in Darlinghurst. The site is located in a well-developed locality that is undergoing further transition to support mixed use type developments.

The site's location has also been assessed using the "Walk Score" locational performance tool. This tool takes into account the number of facilities within close proximity and provides a numerical score between 0 and 100. A development with a score 0 would be heavily car dependant and 100 would indicate that numerous facilities are easily accessible.

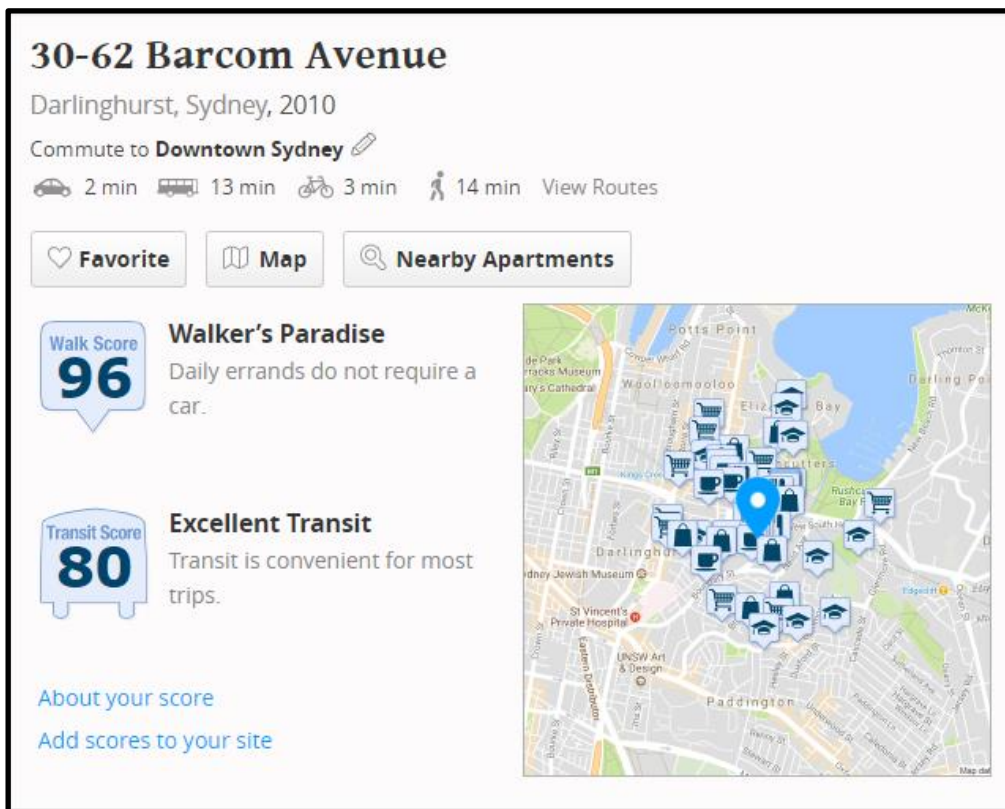


Figure 10 : Walk Score for the subject site

The proposed development site achieved a rating of 96 out of 100, which is defined on the Walk Score website as a "Walker's Paradise -Daily errands do not require a car."

#### Bicycle Facilities

To promote sustainable travel, it is proposed that 13 bike spaces will be provided to meet the requirements of the new offices as set out in the Sydney DCP 2012. The facilities that contain these bikes will function as Class B and Class C facilities as described in Table 3.3 of AS2890.3-2015, with 9 spaces

provided as Class B for employee use and 4 spaces provided as Class C for visitor use in accordance with Clause 3.11.3(3) of the Sydney DPC 2012. As the proposed offices are isolated from the existing self-storage facility, the proposal is unlikely to negatively impact the existing operation of the self-storage facility regarding bicycle parking. The provision of easily accessible visitor bike parking also represents an opportunity for shared use of these spaces between customers of the self-storage facility and visitors to the proposed offices. In addition, to on-site bike parking spaces end of journey facilities will also be provided that included 13 lockers, two showers and change cubicles.

Location of bicycle spaces will be designed to encourage sustainable travel with direct access to important cycle linkages and the city in the north.

## 11 Implementing and Monitoring

Ongoing implementation, review of Sustainable Travel Initiatives and improvement is an important process. The support and commitment of the management teams of the businesses that will occupy the proposed building is essential. Potential implementation and monitoring measures can be included in the future Green Travel plan (GTP) for the site.

It will be necessary to appoint a coordinator to oversee the process over time. This might be a single person who can act as Coordinator, or a committee of people who can work together to implement the sustainable travel initiatives. Attaching the responsibility of implementation to a particular person or position would be a necessary element of any sustainable travel initiatives and / or strategy.

For workplaces, the staff member who is appointed as a Coordinator is to be someone who has a good overview of the activities of the organisation. A suitable coordinator might be someone in HR, OH&S, sustainability, or facilities management.

Following implementation measures can be considered to implement sustainable travel Initiatives:

- New staff shall be provided with a 'welcome pack' as part of the on-site induction process, and other information in relation to sustainable transport choices. This pack will include general information regarding the health and social benefits of active transport. Advice on where to find further information should also be included, including links to City of Sydney's Walking and Cycling directories.
- In addition to these 'welcome packs', a Transport Access Guide (TAG) updated to reflect sub-precinct details – shall be provided to all staff. A copy of the TAG should also be displayed prominently in staff areas, such as lunch rooms and foyer areas. The TAG shall be presented in a form that is reflective of the commitment to achieving positive transport objectives.

### Monitor and reviewing

Monitoring and reviewing sustainable travel Initiatives is one of the most critical components of the travel planning process. It is crucial to understand whether and how the initiatives / strategies are having an impact on mode share. On-going monitoring would be conducted for a minimum of five years together with annual reviews.

A building or organisation would aim to collect new data on an annual (or bi-annual) basis to understand how mode share has changed over time. This will help in understanding whether progress is being made. Surveys can also help to identify which actions are having an impact on people's travel behaviour, and whether some are more effective than others. It might also help to identify ongoing or unresolved issues and barriers that are preventing greater improvement.

Once the data has been updated, the targets and actions would be reviewed. A review may reveal the need to reconsider objectives or targets, or to add new actions to create greater incentives for the uptake of sustainable transport choices.

## 12 Conclusion

The proposal involves providing an additional two floors above the existing self-storage facility. These additional floors would be used as short-term office space. The proposal would add 1161m<sup>2</sup> of floor area to the existing floor area of 2347m<sup>2</sup>. In accordance with City of Sydney DCP this requires additional 6 car parking spaces as stated in section 5.1. Furthermore, no change is proposed to the existing on-site and on-street loading facilities which will be sufficient to cater to both the requirements of the existing and proposed developments.

The expected traffic generation is 18 vehicles per hour in AM peak (@1.6 trips / 100m<sup>2</sup>) and 14 vehicles per hour in PM peak (@1.2 trips/100m<sup>2</sup>). A minor increase in delivery vehicles and couriers attending the site is anticipated outside peak hours. The low traffic generation, delivery vehicles and couriers attending the site is unlikely to have any significant impact on the surrounding road network.

The site is well serviced by public transport, as it is within 10 minutes' walk (500m walking distance) of King's Cross Station and is within 250m walking distance from bus stops on Bayswater Road and New South Head Road. The site's location within the inner-city region means the proposed offices are likely to attract tenants whose businesses and employees are not heavily reliant upon personal vehicles. A similar development in North Sydney, known as Work Inc, has been successfully operating for over a year with no on-site parking, as the demographics attracted by short-term office spaces is not heavily reliant on motor vehicles. The concept behind Work Inc type development is to create a coworking space made for the people. Since the proposed development is similar in nature of this concept it is considered that no onsite parking spaces are required due to easy access to and from site to public transport.

In Darlinghurst on the day of the Census, the most common methods of travel to work for employed people were walked only (35.6%), Car as driver (17%), Bus (11.4%) and worked at home (4.9%). On the day 30.2 % of employed people used public transport (train, bus, ferry, tram/light rail) as at least one of their methods of travel to work and 18% used car either as driver or as passenger. Darlinghurst census data seems to indicate that majority of people who travel to work to Darlinghurst live in the surrounding suburbs and are most likely to use Public transport and / or Active transport to commute.

Number of sustainable travel initiatives and/ or strategies would be incorporated into the design and management of the building to complement the existing transport options and provide a holistic strategy to positively influence occupant behaviour. This include develop of green travel plan, transport access guide, Opal card initiative, Car pool system, car share scheme and walking and cycling. The overall site strategy would be based around two main 'streams', reducing car ownership with public transport as primary mode for distance trips and pedestrian/cyclist provisions for shorter trips. These initiatives would monitor and reviewed regularly to reconsider and improve objectives or targets.

To promote sustainable travel, it is proposed that 13 bike spaces will be provided to meet the requirements of the new offices as set out in the Sydney DCP 2012. Nine (9) spaces provided for employee use and 4 spaces provided for visitor use in accordance with Clause 3.11.3(3) of the Sydney DPC 2012. The provision of easily accessible visitor bike parking also represents an opportunity for shared use of these spaces between customers of the self-storage facility and visitors to the proposed offices. In addition, to on-site bike parking spaces end of journey facilities will also be provided that included 13 lockers, two showers and change cubicles.

The Traffic and Parking Impact Assessment concludes that the subject site is suitable for the proposed changes to the existing use of the site in relation to the impact of traffic, vehicle access, parking, and safety considerations. The development is considered to have negligible effect on the safety and operating outcome of the surrounding transport network.

## 13 References

City of Sydney Council's DCP and LEP 2012.

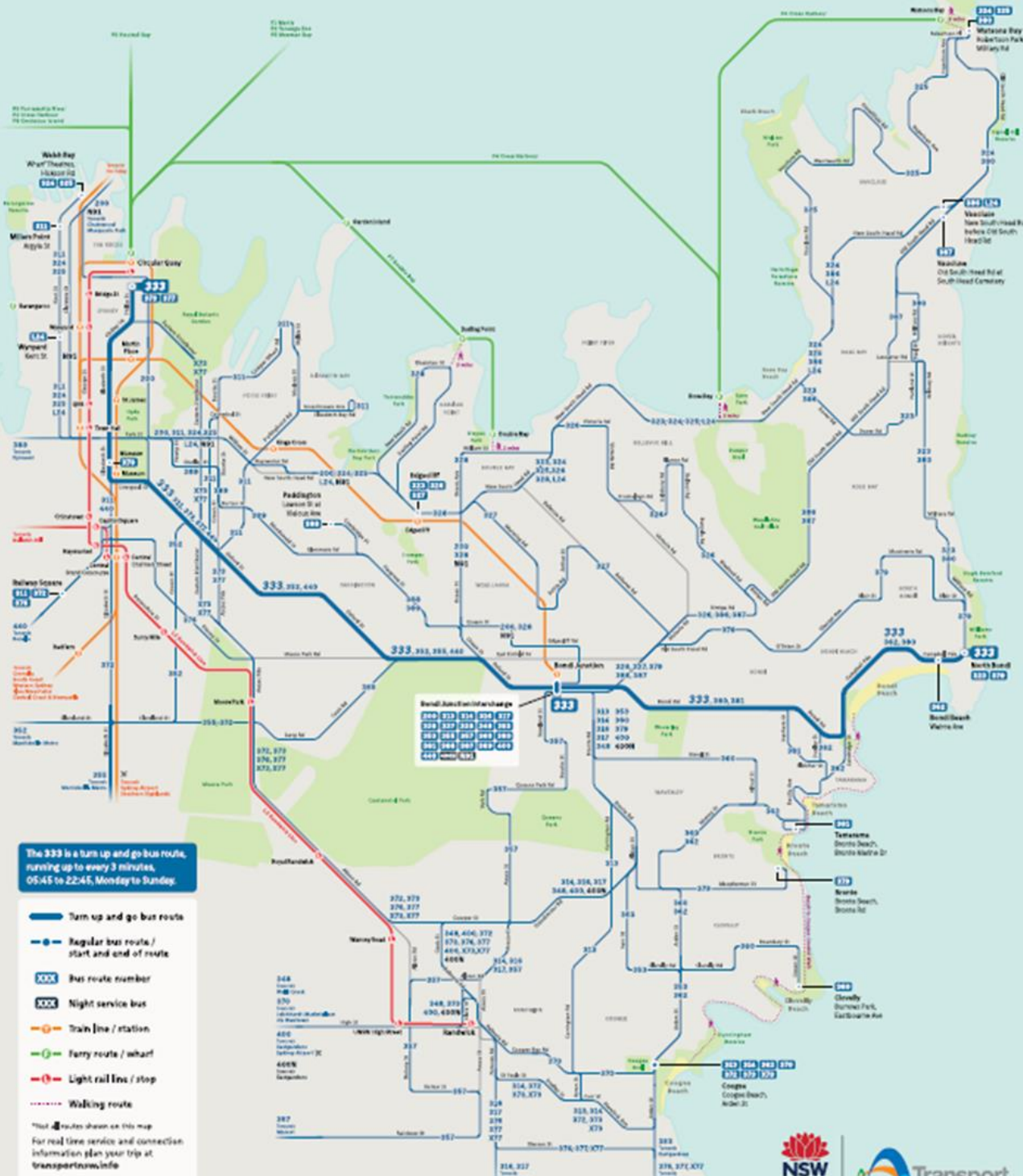
NSW Department of Planning, '*SEPP (Infrastructure) 2007*'.

TfNSW, '*Guide to Traffic Generating Developments*' Version 2.2 dated October 2002.

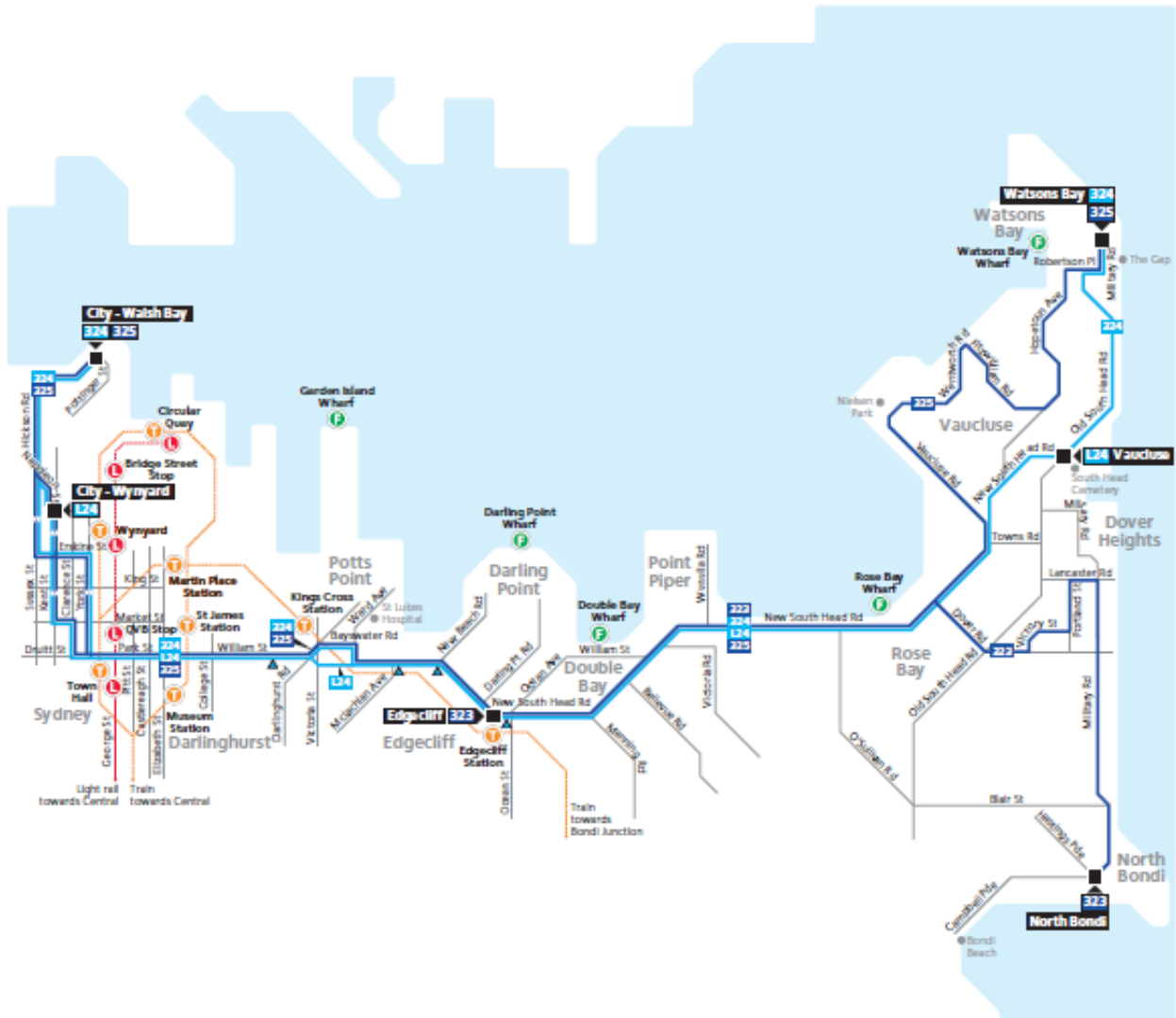
## Appendix A

### Public Transport Information

# Buses around the Eastern Suburbs



# Routes 323, 324, L24, 325



- Legend**
- Bus route
  - 324 Bus route number
  - Bus route start/finish
  - ▶ Stops for limited stops services
  - Train line/station
  - Ferry wharf
  - Light rail line/stop

Diagrammatic Map Not To Scale

## Route L24 to City

Takes up and sets down at all stops to Edgcliff Station, then only at New Beach Rd, Neild Ave Rushcutters Bay, William St at Forbes St, then all Route 324 stops to City - Wynyard (Kent St).



[transportnsw.info](http://transportnsw.info)



## Appendix B

### City of Sydney Cycling Map

# Priority 1 | Connecting the network

