

Lippmann  
**4-22 Wentworth Avenue**  
Traffic Report

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This report takes into account the particular instructions and requirements of our client

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party

Job number 243612

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**ARUP**

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# 1 Introduction

Arup was commissioned by Lippman to undertake a transport and parking assessment for the proposed hotel redevelopment at 4-22 Wentworth Avenue, Sydney.

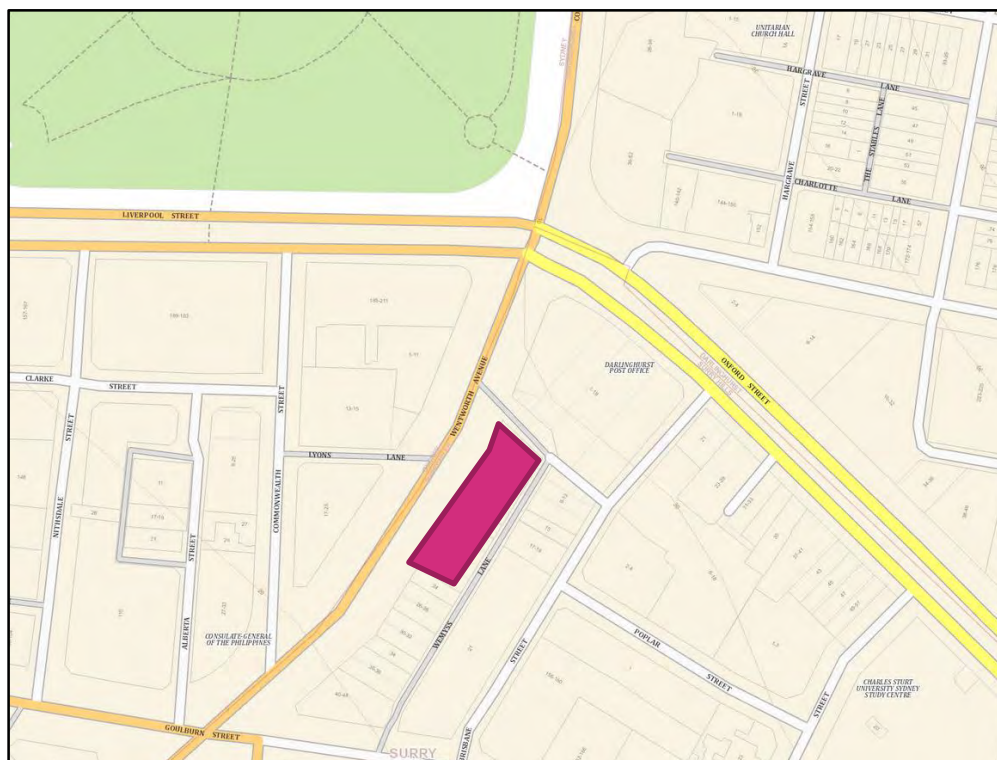
This report details the assessment which involved:

- Review of the existing site activity as a commercial building
- Review of car parking and public transport in the vicinity of the site
- Assessment of servicing arrangements
- Assessment of the impact of the site on the surrounding area

## 1.1 Site location

The proposed development is to be located at 4-22 Wentworth Avenue, Sydney and is presented in Figure 1. The site is currently occupied by a number of mixed uses including commercial, hotel and retail which will be expanded in association with this development.

The site is located on an urban block surrounded by Wentworth Avenue and Wemyss Lane, south of the Oxford Street / Liverpool Street / College Street / Wentworth Avenue intersection.



Source: SIX Maps©

Figure 1 Site Location

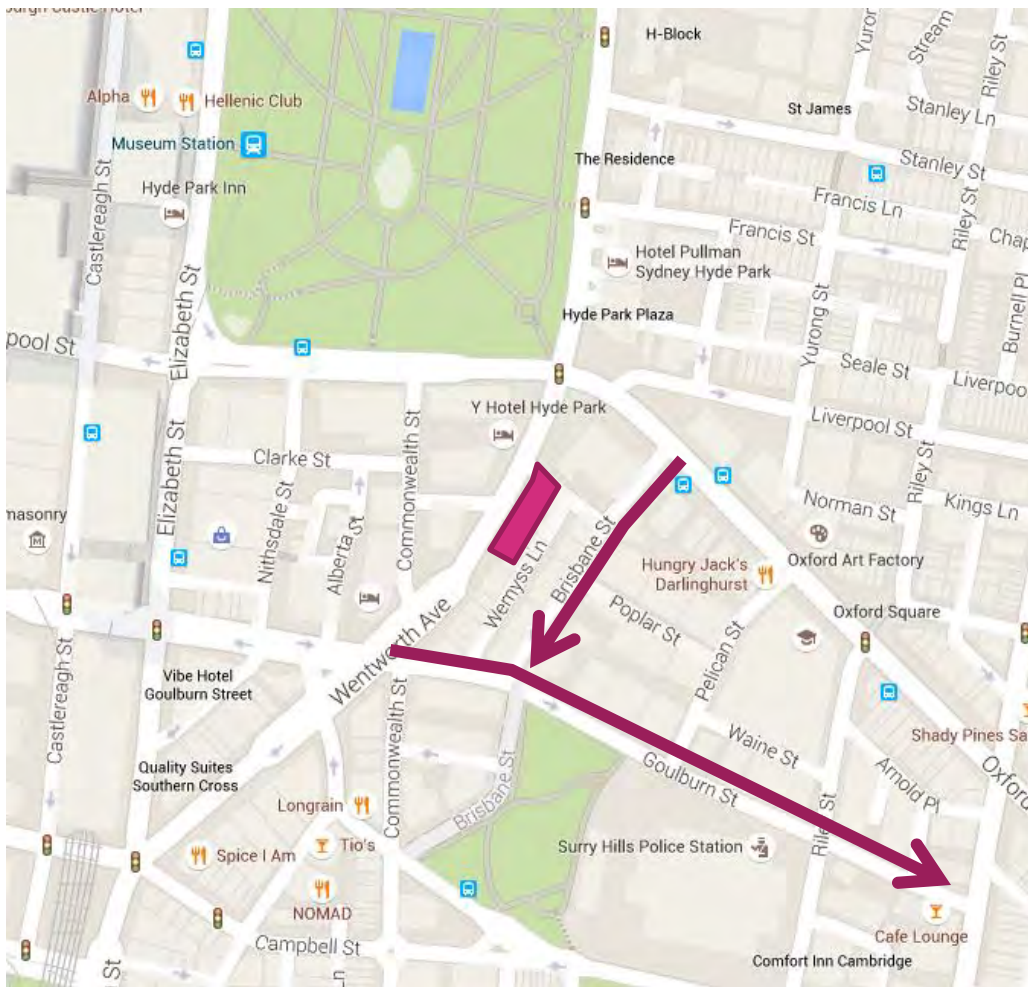
## 2 Existing Conditions

### 2.1 Existing Building Use

The existing building consists of a hotel and has commercial tenants with ground floor retail. No car parking or loading facilities occur on the site with all loading activity occurring on Wentworth Avenue. The existing tenants would travel predominantly using public transport with some use of nearby public car parking stations by car drivers.

### 2.2 Existing Road Network

The road system in the vicinity of the site has a number of one-way streets surrounding the site including Brisbane Street and Goulburn Street, as shown in Figure 2. Vehicle access to the site is via Wemyss Lane which is a narrow two-way laneway. The laneway may be accessed either by Goulburn Street or Wentworth Avenue. Brisbane Street and Wemyss Lane are joined by a private road easement.

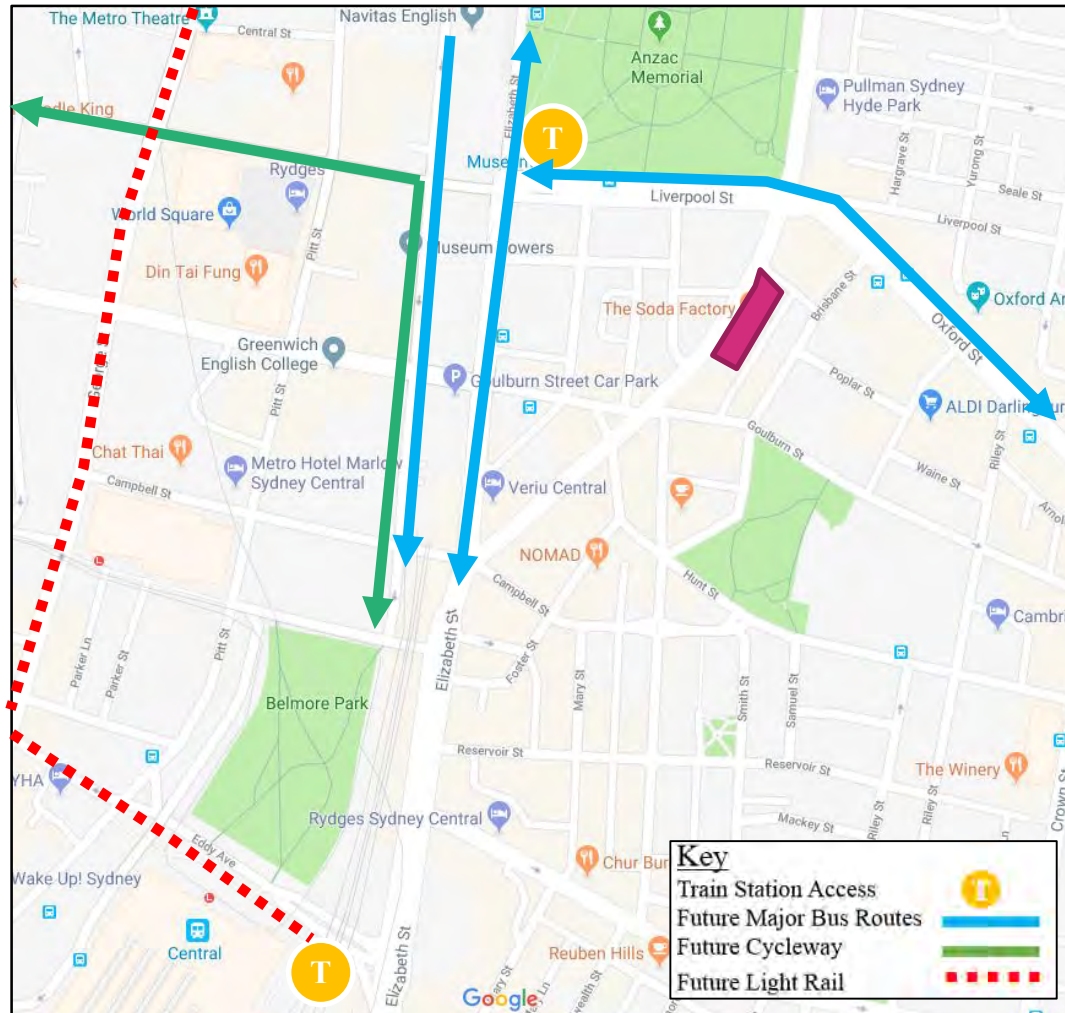


Source: Google Maps 2015, modified by ARUP

Figure 2 Directional Flow of Traffic

## 2.3 Public Transport

The site has access to two CBD train stations, the key north-south and east-west bus routes, the strategic cycleway network and the future light rail route on George Street as shown in Figure 3.



Source: Google Maps 2018, modified by ARUP

Figure 3 Major Public Transport routes

**Train:** Central Station is accessed on Eddy Avenue and Museum Station on Liverpool Street.

**Bicycle:** The strategic cycleway network proposes segregated bike ways on Castlereagh Street and Liverpool Street.

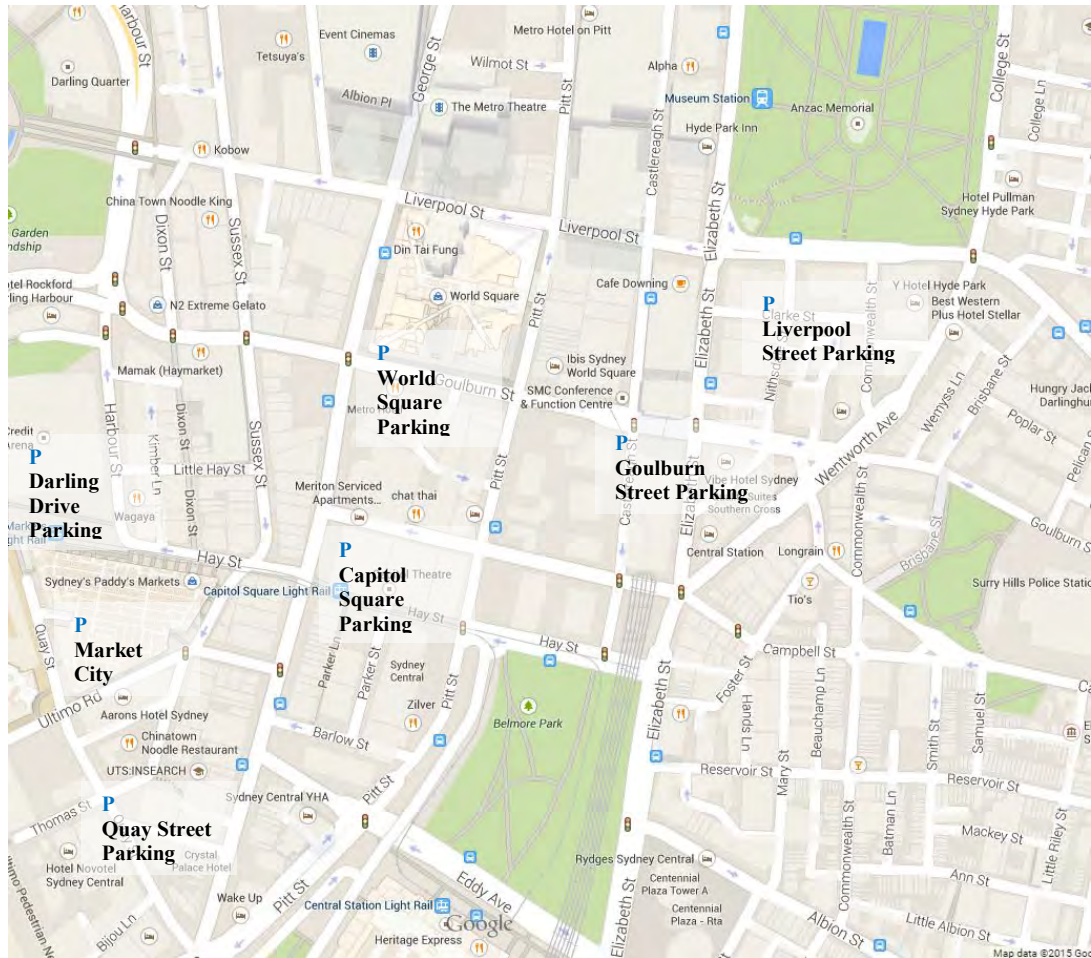
**Bus:** The future city centre bus network will concentrate north-south buses on Castlereagh Street and Elizabeth Street and the east-west buses on Oxford Street.

**Light Rail:** the future CBD light rail will be on Eddy Avenue and continue north onto George Street and south to Randwick/Kingsford.



## 2.4 Off-Street Public Car Parking

There are at least five off-street public parking stations within walking distance of the site as shown in Figure 4. Overnight parking vary depending on the day of the week.

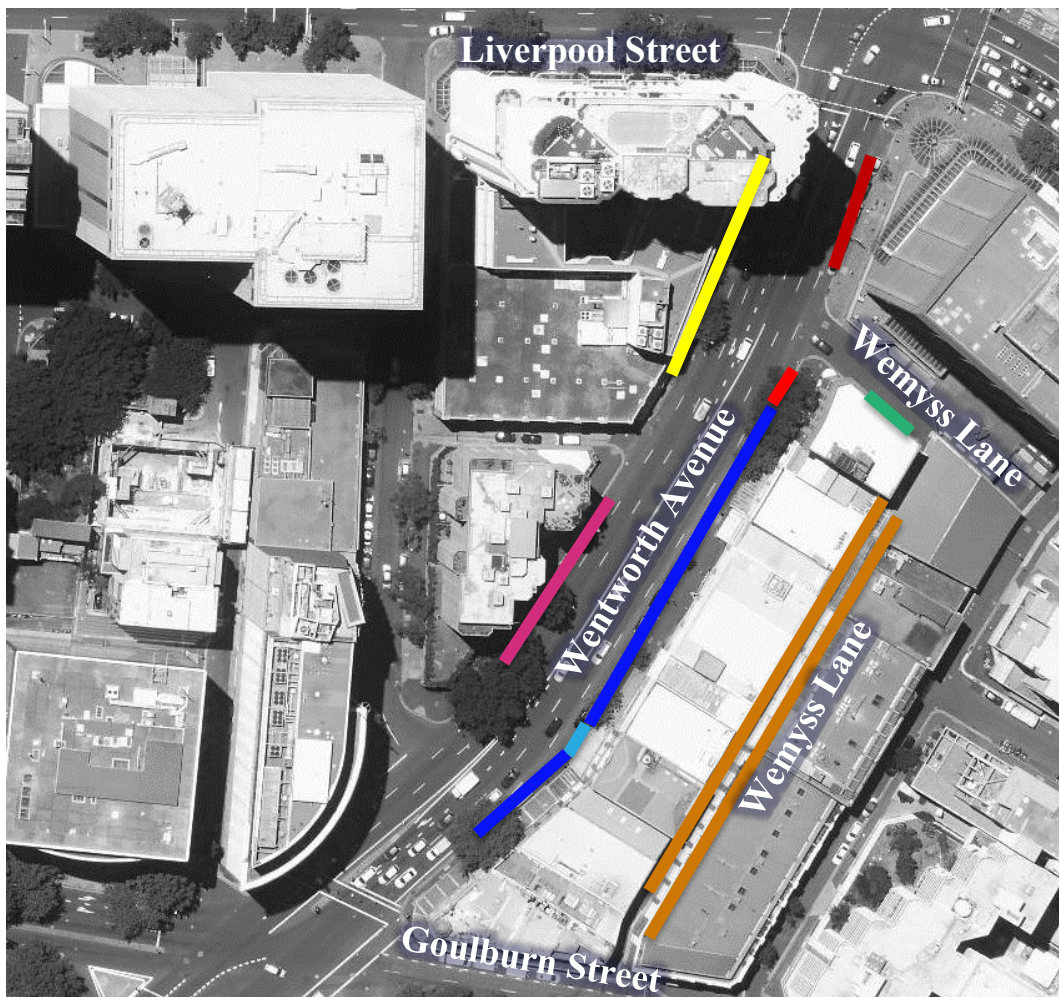


Source: Google Maps 2015, modified by ARUP

Figure 4 Off-Street Public Car Parking Stations

## 2.5 On-Street Car Parking

The existing on-street parking controls are shown in Figure 5.











	<b>No Stopping</b>	-
	<b>No Stopping Taxis Excepted (Limit 1 minute)</b>	<b>No Stopping</b> 6am-10am, 3pm-8pm M-F
	<b>No Parking (all day)</b>	-
	<b>P 5 minute (all day)</b>	-
	<b>Loading Zone</b> 10am-3pm M-F, 6am-10am Sat 1P other times CBD Permit holders excepted	<b>No Stopping</b> 6am-10am, 3pm-8pm M-F
	<b>Loading Zone</b> 10am-3pm M-F, 6am-10am Sat 4P 8am-12am M-F, 10am-12am Sat, 8am-12am Sun	<b>No Stopping</b> 6am-10am, 3pm-8pm M-F
	<b>Loading Zone</b> 10am-3pm M-F, 6am-10am Sat 4P 8pm-12am M-F, 10am-10pm Sat, 8am-10pm Sun	<b>No Stopping</b> 6am-10am, 3pm-8pm M-F
	<b>Motorcycle Parking 15 minute</b> 10am-3pm Mon-Fri	<b>No Stopping</b> 6am-10am, 3pm-8pm M-F

Figure 5 On-Street Parking Controls

### 3 Proposed development

The Planning Proposal seeks approval for:

- Retention of existing buildings and partial demolition of ground floor and basement structures;
- Construction of a new 17 storey mixed use tower, including:
  - Upper levels hotel rooms;
  - Lower levels restaurant and hotel facilities;
- Reconstruction of basement levels to include car parking, loading, plant, storage and end-of-trip facilities;
- Provision of building identification signage zones; and
- Extension/augmentation of infrastructure and services as required.

A more detailed and comprehensive description of the proposal is contained in the Urban Planning Proposal.

The car park access is proposed to be located on Wemyss Lane. It is proposed to provide up to 202 hotel rooms on the site, including an existing 36 within the existing Stellar Hotel envelope and the remaining 166 in a new high rise tower above the existing envelope and as infill to the existing buildings.

It is proposed that Basement level 1 will provide for loading dock, plant, storage and bicycle end of trip facilities, as shown in Figure 6. A fully automated car park with up to 48 spaces is proposed at Basement level 2, as shown in Figure 6 and Figure 7, with access from Basement level 1.



Figure 6 Basement level 1



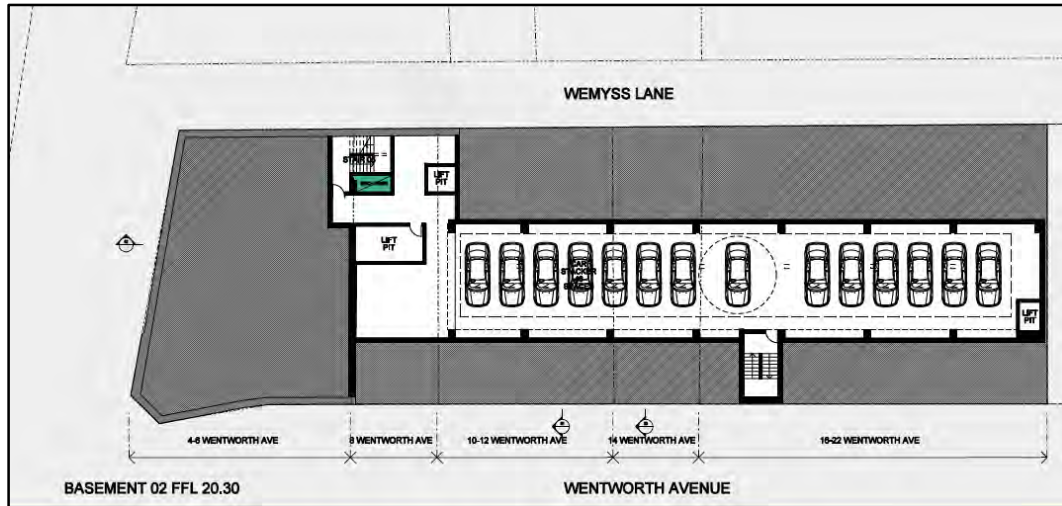


Figure 7 Basement level 2 automatic parking system

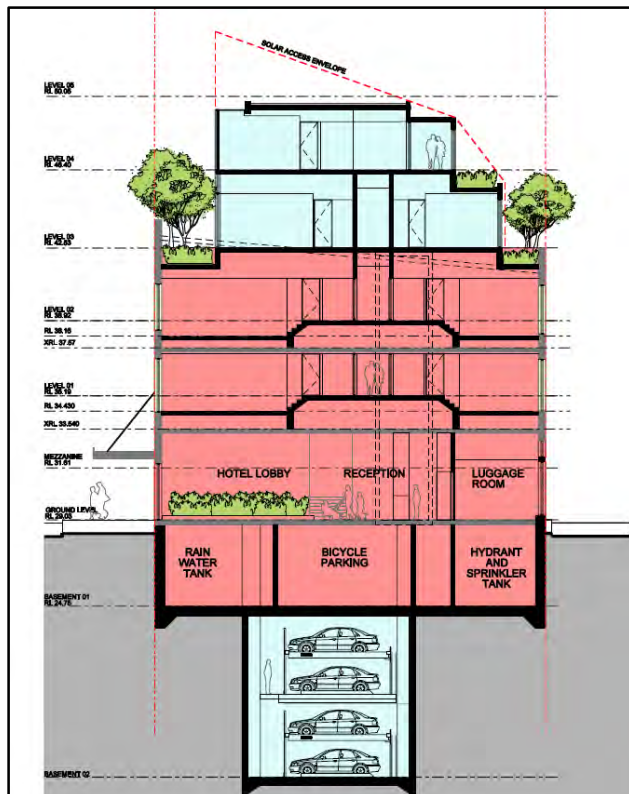


Figure 8 Section through basements showing car parking

### 3.1 Parking assessment

The Sydney Local Environment Plan 2012 designates a maximum number of car parking spaces for a building used for the purposes of hotel/motel accommodation and retail uses.

For **hotel/motel accommodation**, the maximum number of spaces that may be provided for a building used for the purposes of serviced apartments or hotel or motel accommodation is:

- (a) 1 space for every 4 bedrooms up to 100 bedrooms, and
- (b) 1 space for every 5 bedrooms more than 100 bedrooms.

For **retail**, given the site is located within Category D area of the Public Transport Accessibility Level Map, and the FSR is greater than 3.5:1 then the following formula applies:

$$M = (G \times A) \div (50 \times T)$$

where:

**M** is the maximum number of parking spaces,

**G** is the gross floor area of all retail premises in the building in square metres, (870m<sup>2</sup>)

**A** is the site area in square metres, (1,219m<sup>2</sup>) and

**T** is the total gross floor area of all buildings on the site in square metres. (7,607m<sup>2</sup>)

Therefore, the maximum allowable parking for the site is the total of the permitted uses above and is shown below in Table 1 to be compliant with the LEP requirements as outlined above.

Table 1: Allowable parking for the site

Use	Number	Maximum allowed
Hotel	202 rooms	45.4
Retail (Bar, Restaurant Coffee Shop)	870m <sup>2</sup> GFA	2.8
<b>Total</b>		<b>48</b>

The DCP requires 1 motorcycle parking space per 12 car spaces. This results in 4 motor cycle spaces. These are provided at Basement level 1.

### 3.2 Bicycle parking and end-of-trip

Sydney Development Control Plan 2012 stipulates the required bicycle parking and associated facilities in Section 3.11.3. All development is to provide on-site bike parking designed in accordance with AS2890.3.

The hotel may have up to 30 staff on site at peak times covering hotel and food and beverage. The required bicycle parking is shown in Table 2.

Table 2: Tower B Bicycle parking provision

Use	Employees / Residents		Customers / Visitors	
Hotel	1 per 4 staff	7.5	1 per 20 rooms	10
Retail	1 per 250m <sup>2</sup>	3.5	2 + 1 per 100 m <sup>2</sup>	11
<b>Total</b>		<b>11</b>		<b>21</b>

Staff facilities are to be provided in a secure room at Basement level 1 (Class B facility) with adjacent end of trip facilities.

Visitor and customer spaces are to be provided in an easily accessible area for the public as bicycle racks (Class C).

End of trip facilities for the retail and hotel uses will include:

- A locker to be provided for each bike space (employees); and
- Two showers and change cubicles for first 20 bike spaces + 2 additional showers/cubicles per 20 thereafter

These may occur as part of the staff facilities on site.

### 3.3 Loading Facilities

Basement level 1 contains 2 loading bays as shown in Figure 10. The bays have been sized to accommodate vans and cars. An entry clearance of 2.7m is being targeted to allow larger vans, similar to Figure 9, access to the site. Turning paths for the SRV/Van entry and exit to Wemyss Lane are shown in Figure 11. Garbage collection will occur within the lane with the waste and recycle room being located adjacent to the vehicle entry with a separate door to the lane.



Figure 9 Van 2.5m high x 6.4m long

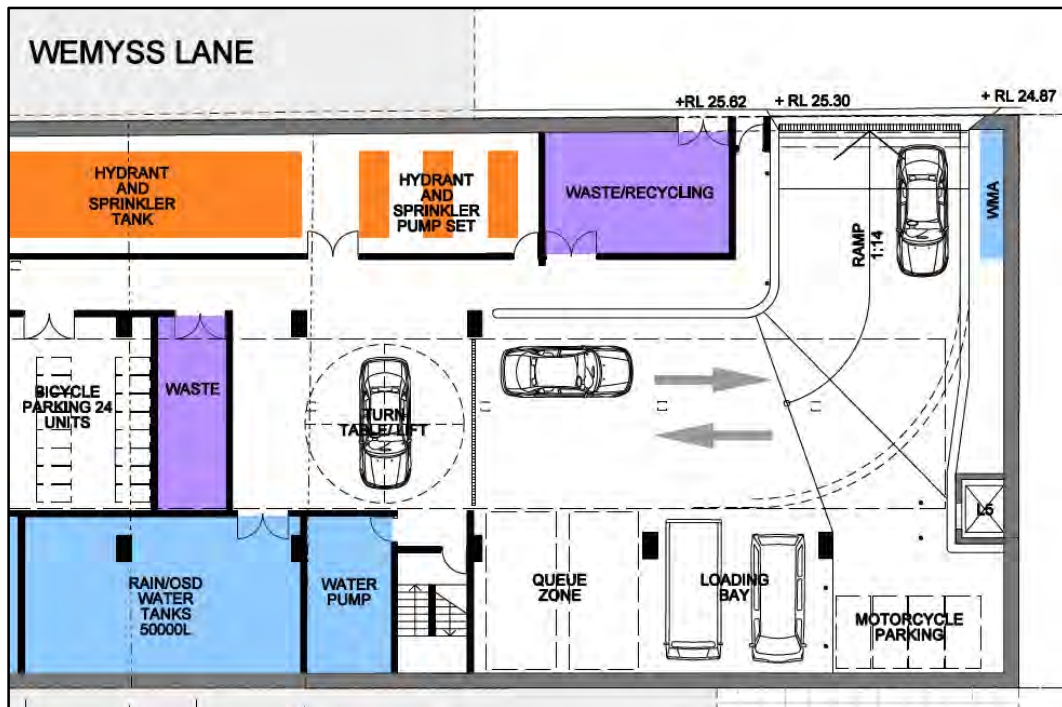


Figure 10 Loading Dock and associated vehicle area



Figure 11 SRV/Van turning paths



### 3.4 Garbage/recycle collection

Due to the constraints imposed by the width of Wemyss Lane, garbage/recycle collection vehicles will not be able to enter the site. A waste/recycle room has been located adjacent to Wemyss Lane with door access to enable bins to be moved and collected directly in Wemyss Lane as shown in Figure 12 and Figure 13. This activity will be scheduled to occur by private contractor during the night.



Figure 12 Garbage collection in Wemyss Lane

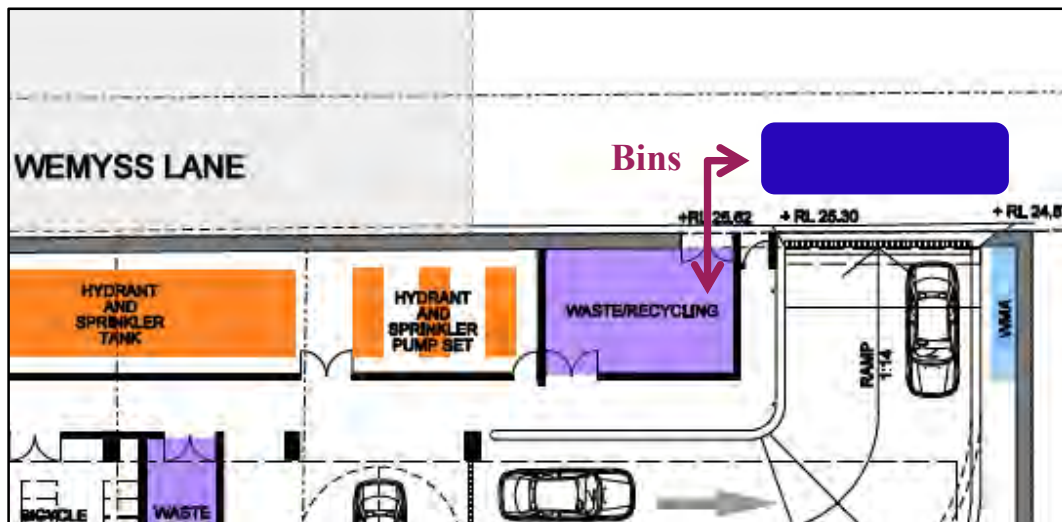


Figure 13 Garbage/recycle bin movement

## 4 Traffic and transport assessment

### 4.1 Traffic

The hotel will generate a small number of private vehicle movements associated with drop-off of passengers and luggage prior to parking in a basement parking level. Taxi drop-off and pick-up activity can be accommodated in the 5 minute parking zone in Wemyss Lane. As shown in Figure 14, there are 3 car spaces currently designated for P5 minute parking in Wemyss Lane.



Figure 14 Wentworth Avenue kerbside activity

As described in the previous chapter, vehicle access to the site is on the north-south section of Wemyss Lane. The laneway may be accessed either by Goulburn Street or Wentworth Avenue. The Meta Apartments on Goulburn Street also use the lane for access to basement parking. The 77 apartments are likely to generate up to 14 vehicle movements in a peak hour based on RMS traffic generation rates. There are also a number of other vehicle access points to minor parking and storage areas.

The short section of lane connecting Brisbane Street with Wemyss Lane is privately owned and provides access to 1 Oxford Street commercial building.

Guests vehicles will be parked in the waiting bays at Basement level 1 and then valet parked into the automated car park.

The small number of vehicle movements associated with the basement car park in any one hour will be easily accommodated at the nearby intersections connecting Wentworth Avenue to the wider network.

## 4.2 Car parking

With up to 48 car parking spaces able to be accommodated on the site, it is anticipated that all demand will be met on site associated with hotel guests and staff.



Figure 15 Wemyss Lane

## 4.3 Public transport

The Sydney City Centre Access Strategy released in December 2013 identifies a fully integrated transport network for the city centre. There will be a greater focus on public transport access and pedestrian and cycle connectivity. The anticipated levels of public transport and active transport mode utilisation by the development will be well catered for under the new strategy.



## 4.4 Car share vehicles

There are many on-street car share vehicles provided by GoGet within easy walking distance of the site as shown in Figure 16. Other car share providers are also in the area. Hotel guest may choose to make use of these vehicles during their stay.

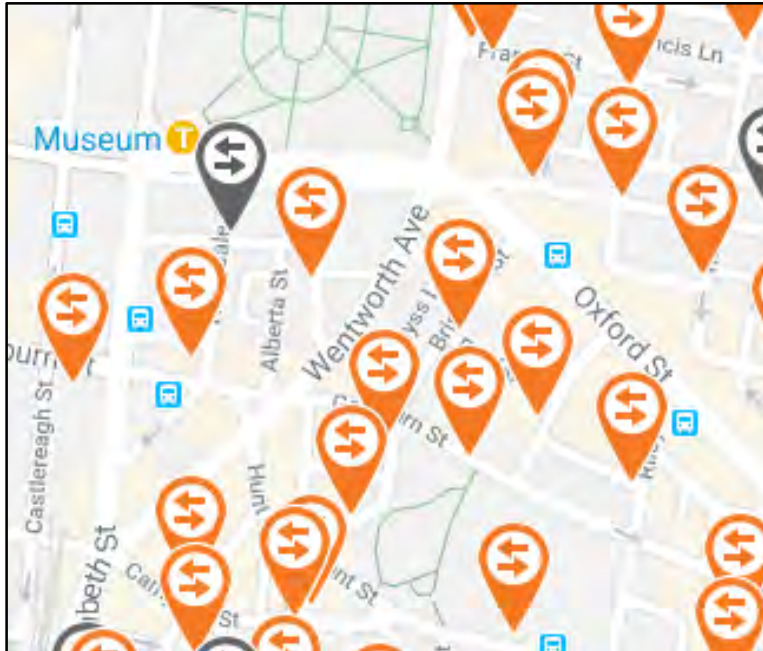


Figure 16 Car Share Pods - GoGet



## 5 Conclusions

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The proposed redevelopment of the site at 4-22 Wentworth Avenue will accommodate 202 hotel rooms with associated restaurant and hotel facilities. The increase in hotel rooms will result in a minor increase in car drop-off and pick-up activity in Wemyss Lane utilising the 5 minute parking zone. Car parking in accordance with the DCP can be accommodated on site and there are existing public parking stations nearby for any overflow. Loading is proposed to occur on site with refuse collection occurring in Wemyss Lane.

It is therefore considered the transport impacts of the proposal can be appropriately managed.