

## Traffic Impact Assessment Report

Proposed Section 75W Modification to Concept Plan  
23 Bennelong Parkway, Wentworth Point

Ref: 0749r01  
3/09/2018

# Document Control

**Project No:** 0749r01

**Project:** 23 Bennelong Parkway, Wentworth Point

**Client:** PietyTHP

**File Reference:** 0749r01v2 TIA 23 Bennelong Pkwy, Wentworth Point, Issue II

# Revision History

Revision	Date	Details	Author	Approved by
-	31/08/2018	Draft	R. Butler-Madden	P. Trethewey
I	31/08/2018	Issue	R. Butler-Madden	P. Trethewey
II	3/09/2018	Issue	R. Butler-Madden	P. Trethewey

This document has been prepared for the sole use of the Client and for a specific purpose, as expressly stated in the document. Ason Group does not accept any responsibility for any use of or reliance on the contents on this report by any third party. This document has been prepared based on the Client’s description of its requirements, information provided by the Client and other third parties.

## Table of Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	BACKGROUND .....	1
1.2	REFERENCE DOCUMENTS .....	2
1.3	STUDY OBJECTIVES.....	3
1.4	REPORT STRUCTURE .....	3
<b>2</b>	<b>OVERVIEW OF PROPOSAL .....</b>	<b>5</b>
2.1	SUMMARY OF PROPOSED DEVELOPMENT.....	5
2.2	ACCESS AND CAR PARKING.....	6
<b>3</b>	<b>PLANNING CONTEXT.....</b>	<b>7</b>
3.1	HOMEBUSH BAY WEST DEVELOPMENT CONTROL PLAN (2004) .....	7
3.2	CONCEPT PLAN MP09-0160 .....	9
3.3	CONCEPT PLAN MP09-0160 (MOD1).....	10
3.4	CONCEPT PLAN MP09-0160 (MOD2).....	10
3.5	CONCEPT PLAN MP09-0160 (MOD3).....	11
3.6	STAGE 1 DEVELOPMENT APPLICATION DA/667/2016.....	11
<b>4</b>	<b>EXISTING CONDITIONS .....</b>	<b>12</b>
4.1	SITE & LOCATION .....	12
4.2	ROAD HIERARCHY .....	12
4.3	ACTIVE TRANSPORT – CYCLING AND PEDESTRIAN ACCESS.....	14
4.4	PUBLIC TRANSPORT .....	15
<b>5</b>	<b>TRAFFIC AND TRANSPORT IMPACT ANALYSIS .....</b>	<b>17</b>
5.1	PRECINCT WIDE ASSESSMENT .....	17
5.2	SITE-SPECIFIC ASSESSMENT.....	17
<b>6</b>	<b>PARKING &amp; SERVICING REQUIREMENTS .....</b>	<b>20</b>
6.1	CAR PARKING.....	20
6.2	DISABLED AND ADAPTABLE PARKING .....	21
6.3	BICYCLE AND MOTORCYCLE PARKING.....	21
6.4	PARKING SUMMARY .....	22
<b>7</b>	<b>ACCESS &amp; INTERNAL DESIGN.....</b>	<b>23</b>
<b>8</b>	<b>CONCLUSIONS.....</b>	<b>24</b>

## Appendices

Appendix A: Reduced Plans

Appendix B: The Piazza Traffic Survey Data

# 1 Introduction

## 1.1 Background

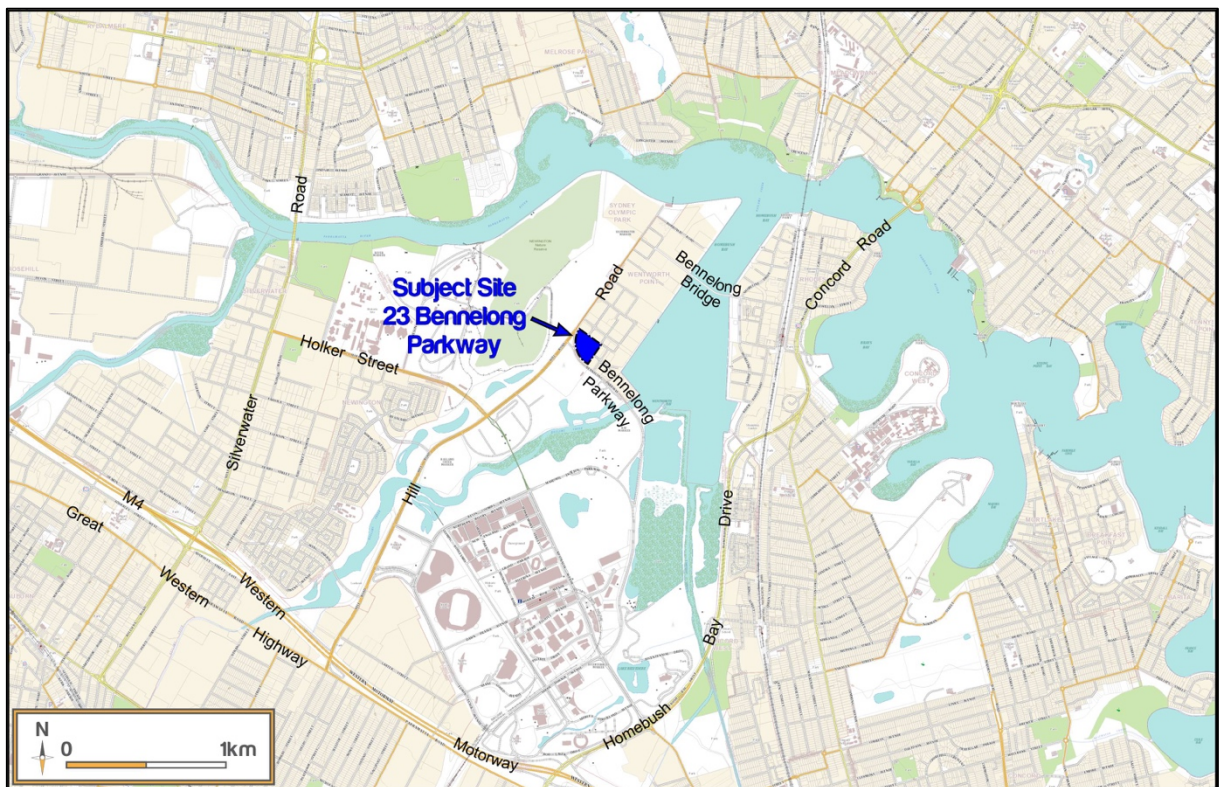
Ason Group has been engaged by PietyTHP to prepare a Traffic Impact Assessment (TIA) report to support the application to modify the approved Concept Plan for a proposed residential development (the Proposal) at 23 Bennelong Parkway, Wentworth Point (the Site). The Site is located within an area of Wentworth Point that is referred to as Precinct F under the Homebush West Development Control Plan, 2004. The application generally seeks approval for the construction of 9 residential (high-density) apartment buildings, providing a total of 904 units and 1,132 parking spaces.

It is noteworthy that the Site has been included in a number of Master Plan studies undertaken for the Wentworth Point area and has also been the subject of a Concept Plan application under the – now repealed – NSW Government Part 3A assessment system. In this regard, the Site currently has Concept Plan approval for the construction of a residential development comprising 641 units with 850 parking spaces (MP 09\_0160 MOD2).

Of this approved MOD2 Concept Plan – and following a number of Development Application (DA) approvals, notably DA/667/2016 for Stage 1 (the Stage 1 DA) – 3 of the 9 buildings (A, B and G) have already been completed and a further 4 buildings (D, E, J and K) are currently being constructed. As part of the on-going works on the Site, a section of internal road is currently under construction, which will complete the existing Amalfi Drive. Subject to the outcome of this Proposal, a further DA will be lodged with Parramatta City Council for the final 2 buildings C and F, which will accommodate the additional development sought by this Proposal.

This report addresses the relevant traffic, parking and access implications of the proposed modified Concept Plan, having regard for the approved Concept Plan for the Site and compliance with relevant State and Local Government controls. A Location Plan is presented in **Figure 1** which provides an appreciation of the Site and its location. The Site is located within the City of Parramatta Council (Council) Local Government Area (LGA) and is subject to the controls of the Homebush Bay West Development Control Plan, Amendment No. 1, 2013.





**Figure 1: Location Plan**

## 1.2 Reference Documents

In preparing this TIA report, Ason Group has referenced key planning documents, these include:

- Homebush Bay West Development Control Plan, 2004 (HBW DCP 2004).
- Homebush Bay West Development Control Plan, Amendment No. 1, 2013 (HBW DCP).
- Varga Traffic Planning, *Proposed Residential Development Concept Plan – 23 Bennelong Parkway, Wentworth Point, Traffic and Parking Assessment Report*, dated 02 December 2009 (the Varga 2009 TIA Report).
- Varga Traffic Planning, *Development Application Number MP09-016, Proposed Residential Development 23 Bennelong Parkway, Wentworth Point: Traffic Assessment*, dated 05 May 2010 (the Varga 2010 Statement).

This TIA also references general access, traffic and parking guidelines, including:

- Roads and Maritime Services, *Guide to Traffic Generating Developments* (the RMS Guide).
- RMS Technical Direction TDT 2013/04a, *Guide to Traffic Generating Developments – Updated traffic surveys* (the RMS Guide Update).

- RMS, *Trip Generation Surveys – High Density Residential (Car Based) Analysis Report* prepared by Bitzios Consulting and dated 20 October 2017 (the RMS/Bitzios Guide).
- Australian Standard 2890.1: *Parking Facilities – Off Street Car Parking* (AS 2890.1).
- Australian Standard 2890.2: *Parking Facilities – Off Street Commercial Vehicle Facilities* (AS 2890.2).
- Australian Standard 2890.3 *Part 3: Bicycle parking facilities* (AS 2890.3).
- Australian Standard 2890.6: *Off-street parking for people with disabilities* (AS 2890.6).
- Australian Standard 4299: *Adaptable Housing* (AS 4299).

### 1.3 Study Objectives

The overall objective of this TIA study is to assess the ‘net’ impacts of the Proposal against relevant approved baselines. In terms of traffic and transport, there are 2 key study objectives as follows:

- Assess the impacts of the Proposal against the approved baseline for Precinct F under the provisions of the HBW DCP 2004.
- Assess the impacts of the Proposal against the approved baseline for the Site under the provisions of the MOD2 Concept Plan.

With regard to parking requirements and access provisions, the key study objectives are:

- Assess the adequacy of the proposed parking provisions (car, bicycle, accessible, etc) for the Proposal on the Site against relevant DCP requirements.
- Assess the compliance of the internal road network, access driveways, loading area and car parking with relevant DCP controls and Australian Standards, noting that many of these areas (such as the Ground Level plane and access driveways) will remain consistent with the arrangements approved for the Stage 1 DA.

### 1.4 Report Structure

The report is structured as follows:

- Section 2 provides a summary of the Proposal.
- Section 3 provides a background to the relevant planning context and history.
- Section 4 describes the existing site conditions and public transport / active transport links.

- Section 5 assesses the traffic and transport impacts of the Proposal including the projected traffic generation.
- Section 6 outlines the parking requirements applicable to the Proposal.
- Section 7 discusses the site access and internal design of the Proposal.
- Section 8 provides a summary of the key conclusions.

## 2 Overview of Proposal

### 2.1 Summary of Proposed Development

A detailed description of the Proposal is included in the Statement of Environmental Effects, prepared by Sutherland & Associates Planning. In summary, the application relates to the construction of nine new residential apartment buildings with associated parking. The key aspects of the Proposal relevant to this TIA assessment are summarised in **Table 1**.

**Table 1: Proposed Development Characteristics**

	Component	Number / Details
Site Details	Site Area	25,570m <sup>2</sup>
Residential	Units	904 units
	<i>One-bedroom units</i>	233
	<i>Two-bedroom units</i>	606
	<i>Three-bedroom units</i>	65
Community Room	Total GFA	945m <sup>2</sup>
Car Parking	Total	1,132 spaces
	<i>Residential (inc. Visitor)</i>	1,082 spaces
	<i>Community Use</i>	50 spaces

Reference is made to the architectural plans prepared by TURNER, of which relevant plans are appended at reduced scale at **Appendix A**.

As mentioned, the Site has been included in a number of Master Planning Assessments undertaken for the Wentworth Point area (formerly referred to as Homebush Bay West) and it is noted that the Site is located within the area of Wentworth Point defined as Precinct F of the HBW DCP 2004. In this regard, it is important to note that the current Concept Plan proposal would remain within the density controls 'approved' for Precinct F under the HBW DCP 2004; that is, the residential floor area to be delivered within Precinct F – subject to this Proposal – would not exceed the floor area assumptions for Precinct F that informed the relevant background master plan assessments.

## 2.2 Access and Car Parking

Access to the basement parking was approved as part of the Stage 1 DA and is currently being constructed, with the upper basement levels already completed. No changes are proposed to these access arrangements which include 2 access driveways on the west / north side of the Amalfi Drive extension which is also under construction and was also approved as part of the Stage 1 DA.

There is also an access to Building A (which is now complete and located to the south east corner of the Site) on the eastern side of the Amalfi Drive Extension.

The loading dock for the Site sits along the southern boundary of the Site, located on the western side of the Amalfi Drive Extension.

The proposed parking provisions are as follows:

- 1,132 car parking spaces located over 1 ground floor level and 6 basement levels. This provision includes 50 community spaces.
- Accessible parking provided in accordance with relevant controls.
- 369 cycle parking spaces.
- 46 motorcycle parking spaces.



### 3 Planning Context

#### 3.1 Homebush Bay West Development Control Plan (2004)

The Homebush Bay West DCP 2004 identifies the Homebush Bay West area as a series of development precincts. The floor space controls of the DCP were calculated on the basis of these precincts.

Part 3 of the HBW DCP 2004 outlines the controls which apply to all sites within the area and identifies each of the precincts which the specific controls apply. The precincts identified by the HBW DCP 2004 are replicated in **Figure 2** with the Site located within Precinct F.



**Figure 2: HBW DCP 2004 Precinct Plan**

The controls of Part 3 required the floor space to be provided in accordance with the areas identified in **Table 2**.

The approved level of residential Gross floor Area (GFA) for Precinct F is identified as 234,642m<sup>2</sup>. Based on information provided on behalf of PietyTBH, the average unit size within Wentworth Point is 75m<sup>2</sup>. Thus, having consideration for the approved level of residential GFA permissible under the HBW DCP 2004, it can be determined that Precinct F has an approved residential yield of 3,129 units.

Table 2: HBW DCP 2004 Precinct Area Controls

Precinct	Site Area (m <sup>2</sup> )	Total Allowable Floor Space	Residential Floor Space	Other (Commercial / Retails / Open Space)
A	203,482	264,527	11,882	252,645
B	109,730	142,649	139,384	3,265
C	31,946	41,530	41,430	100
D	62,375	81,087	80,482	605
E	50,753	65,979	65,549	430
<b>F</b>	<b>182,186</b>	<b>236,842</b>	<b>234,642</b>	<b>2,200</b>
Total	640,473	832,615	573,369	259,246

Much of Precinct F has now been developed, with a total of 2,115 units completed on the remainder of the Precinct, excluding the subject Site. **Figure 3** illustrates the developments within Precinct F which are now complete with **Table 3** providing a breakdown of each of the completed buildings.



Figure 3: Completed Precinct F Developments

**Table 3: Precinct F Completed Developments**

Precinct F House	Unit Count
Bellagio	123
Capri	87
Corfu	54
Monaco	22
Monte Carlo	7
Mykonos	79
Napoli	76
Palermo	245
Paros	130
Portofino	21
Positano	72
Santorini	21
Sorrento	119
Torino	54
Valencia	173
Corsica	215
Messina	162
Catania	301
St Tropez	154
<b>Total</b>	<b>2,115</b>

In summary, having consideration for the approved residential yield of 3,129 units for Precinct F under the HBW DCP 2004 – and recognising that the Site (and this Proposal) represents the final stage of development within Precinct F – the Precinct has surplus capacity for 1,014 units, which is sufficient to accommodate the Proposal for 904 units.

### 3.2 Concept Plan MP09-0160

Approved on 22 June 2010 by the Planning Assessment Commission for 3 residential buildings and basement car parking for 829 cars with a GFA of 44,730m<sup>2</sup> and a notional yield of 573 residential units.



The application was supported by the Varga 2009 TIA Report which assessed the traffic and parking implications of the Part 3A proposal. The Varga 2009 TIA Report (and subsequent assessments such as the Varga 2010 Statement) adopted a high-density residential trip generation rate of 0.4 peak hour trips per unit during the morning and evening peak periods, which was based on the available NSW Roads and Maritime Services (RMS – formerly RTA) trip rate information in 2009.

### 3.3 Concept Plan MP09-0160 (MOD1)

The first modification to the Concept Plan was approved on 22 December 2010 pursuant to S75W of the Environmental Planning and Assessment Act 1979. The modification included decreasing the height of Building B from 7 to 5 storeys and the addition of a 4-storey infill extension containing 8 units. An increase in GFA by 770m<sup>2</sup> was approved to a total of 45,500m<sup>2</sup>. The modification resulted in a notional yield of 581 residential units. In terms of traffic and transport impacts, this moderate increase in GFA/unit yield relied on the findings of the Varga 2009 TIA Report and the Varga 2010 Statement (the Varga studies).

### 3.4 Concept Plan MP09-0160 (MOD2)

Approved on 22 July 2013, the Section 75W MOD2 application modified the approved MOD1 Concept Plan for an increase in height, density and car parking on the Site. As a result, the development yield increased to 641 units. A key point of the MOD2 scheme was that despite the increase in yield, the additional units were the result of improved efficiencies in the design of the scheme and therefore the development remained within the density controls of the original master plan assessments and therefore it again predominantly relied on the Varga studies for traffic and transport impacts.

Based on the approved concept plan development yield of 641 units and the trip rate adopted by the Varga studies, the approved Concept Plan could generate a peak hour traffic generation of 256 vehicle trips. As this level of MOD2 development was approved, the peak period volume therefore forms the permissible traffic generation ‘budget’ against which development on the Site should be validated.

The Response to Submissions Letter provided by RMS dated 15 April 2013 in regard to the MOD2 application stated that:

*“RMS has reviewed the proposed modifications and raises no objection, subject to the developer providing the relevant level of contribution towards the identified road network improvements and associated funding arrangements which are reflected in DCP 2004 and the Homebush Bay West Precinct Section 94 Development Contribution Plan 2004.”*

In summary, RMS raised no objection to the MOD2 application, subject to the Section 94 Contributions being received. Thus, it is clear that RMS concluded that the MOD2 proposal was consistent (in terms of traffic and transport impacts) with the vision of the HBW DCP 2004 and therefore the surrounding

road network – including upgrades proposed by the HBW DCP 2004 – would adequately accommodate the 256 vehicle trips during the peak hours forecast to be generated by the MOD2 proposal.

### 3.5 Concept Plan MP09-0160 (MOD3)

Approved on September 2014, MOD3 extended the lapsing date for the Concept Plan from 22 June 2015 until 22 June 2018.

### 3.6 Stage 1 Development Application DA/667/2016

As discussed, development on the Site has already begun. A staged approach has been taken to constructing the vision of the approved Concept Plan with a series of DAs submitted to Council since 2012. The first 2 DAs (reference DA-48/2012 and DA-201/2015) related to demolition and clearing the Site of existing structures.

On 21 July 2016, the Sydney West JRPP granted approval for the Stage 1 development (reference: DA/667/2016) which consisted of demolition and construction of 5 residential buildings (Buildings A, B, D, E and G) containing 273 apartments, above 3 levels of basement parking, a park and the extension to the existing Amalfi Drive (the Stage 1 DA).

Stage 1 was developed to achieve the visions of the HBW DCP and the overall Concept Plan for the Site. The DA considered the implications of the Site on the surrounding road network, including how it would effectively connect to it. The extension of Amalfi Drive, the access to the basement car parking and the car parking provided have been designed in accordance with the Australian Standards. Furthermore, measures have been undertaken as part of the design of Stage 1 to ensure that the basement can be expanded in scale to support the current MOD Proposal.

## 4 Existing Conditions

### 4.1 Site & Location

The Site is located within the inner west Sydney suburb of Wentworth Point within the LGA of City of Parramatta. It is approximately 1 kilometre north of Sydney Olympic Park (SOP), 1 kilometre west of Rhodes Town Centre (across Homebush Bay) and 13 kilometres west of Sydney CBD.

The Site is located to the east of the existing Give Way intersection of Hill Road with Bennelong Parkway. A Site Plan is presented in **Figure 4** which provides an appreciation of the Site and the existing conditions. In this regard, the Site is irregular in shape with three sides consisting of a north-eastern boundary of about 180 metres to neighbouring residential development, a south-eastern boundary of about 160 metres also to neighbouring residential development and a curved western boundary of about 280 metres to Bennelong Parkway.

The Site is approximately 25,570m<sup>2</sup> in area and Buildings A, B and G of the Concept Plan have already been completed. Buildings D, E, J and K of the Concept Plan are currently being constructed. As part of the on-going works on the Site, a section of internal road is currently under construction, which will complete the existing Amalfi Drive.

### 4.2 Road Hierarchy

The key roads in the vicinity of the Site are summarised below and presented in the Road Hierarchy plan on Figure 4:

- Hill Road – a collector road that generally runs in a north-south direction between The Great Western Highway in the south and Burroway Road in the north. Hill Road generally carries two lanes of traffic in each direction and is subject to a 60 km/h speed zoning. The local streets of Amalfi Drive and Stromboli Strait to the north of the Site provide access between the Site and Hill Road.
- Bennelong Parkway – a local road that generally runs in a north-south direction between Hill Road in the north and Australia Avenue in the south. Bennelong Parkway carries a single lane of traffic in each direction. Access between the Site and Bennelong Parkway is provided by the local streets of Amalfi Drive and The Piazza to the north of the Site.





Figure 4: Site and Road Hierarchy





Bennelong Bridge, which lands on Wentworth Point 800 metres north of the Site, was open in 2016 and provides a bus, pedestrian and cyclist connection between Wentworth Point and Rhodes, and thus Rhodes train station, as well as onward connections to suburbs in the north and south.

As well as the train station, Rhodes also offers numerous employment and retail opportunities, with Rhodes Waterside including major retail developments and the Rhodes Corporate Park, which houses a number of large employers such as National Australian Bank and Nestle Australia.

While Wentworth Point has limited employment opportunities, SOP to the south provides another employment area 1 kilometre from the Site. It is anticipated that the employment opportunities in SOP will continue to grow. The Site is currently well connected to SOP by bus, and the proposed Parramatta Light Rail Stage 2 (discussed in following Section 4.4.2) will further improve this connectivity.

## 4.4 Public Transport

### 4.4.1 Existing

The Site's proximity to public transport services are also shown in Figure 5, which illustrates 2 bus stops within 400 metres of the Site. These stops are serviced by:

- Route 526 – Sydney Olympic Park to Strathfield via Wentworth Point
- Route 533 – Sydney Olympic Park to Chatswood via Wentworth Point

These services operate at a frequency of approximately 15-20 minutes during the weekday peak hours. Furthermore, both bus routes directly connect the Site to Rhodes Train Station via Bennelong Bridge.

Rhodes Train Station is serviced by the T1 Line (North Shore, Northern and Western Line). The T1 Line services Rhodes train station at a 10-15 minute frequency during the weekday morning and afternoon peak commuter hours and connects the Site to major Sydney interchanges such as Strathfield train station and Sydney CBD train stations (Redfern, Central, Town Hall and Wynyard).

### 4.4.2 Stage 2 of the Parramatta Light Rail

Parramatta Light Rail is one of the NSW Government's major public transport projects currently underway. It will be built in 2 stages, with construction on Stage 1 to commence late in 2018, which will connect Westmead to Carlingford via Parramatta CBD and Camellia.

Stage 2 of the Parramatta Light Rail will connect to Stage 1 and run north of the Parramatta River through the rapidly developing suburbs of Ermington, Melrose Park and Wentworth Point to Sydney Olympic Park. **Figure 6** illustrates the Parramatta Light Rail route, including proposed Stage 2.



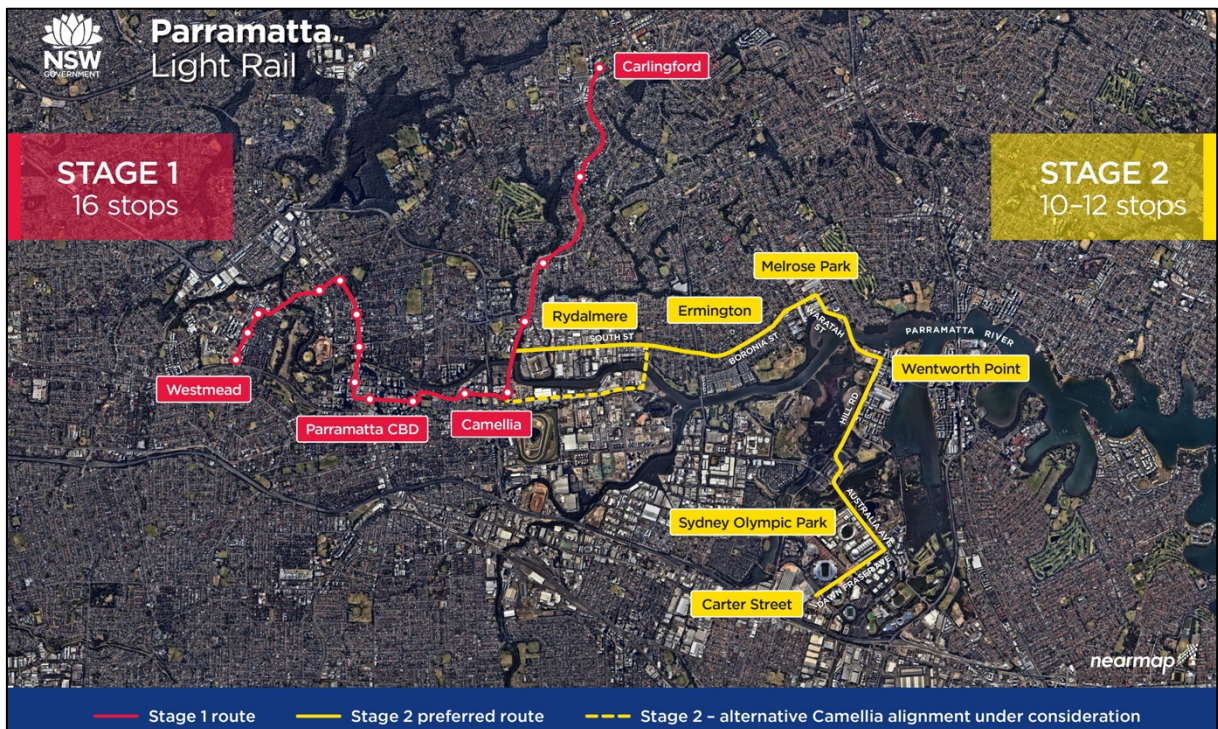


Figure 6: Parramatta Light Rail Route

#### 4.4.3 Sydney Metro West

Sydney Metro West will connect Parramatta and Sydney CBD, also linking with The Bays Precinct, with a new metro station provided under the existing suburban station on the T1 Northern Line east of Sydney Olympic Park. The route for Sydney Metro West being considered is shown by **Figure 7**.

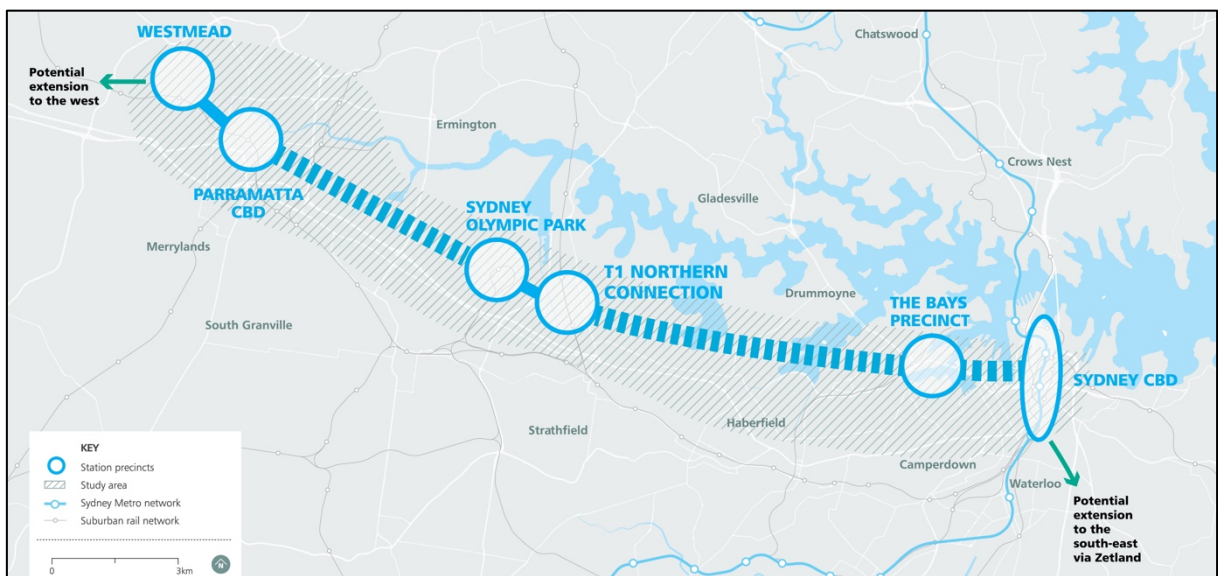


Figure 7: Proposed Sydney Metro West

## 5 Traffic and Transport Impact Analysis

### 5.1 Precinct Wide Assessment

The HBW DCP 2004 provides controls for the whole Wentworth Point precinct. At the time it was developed, this included the land bound by Bennelong Road, Hill Road, Homebush Bay and Parramatta River, as identified in Sydney Regional Environmental Plan No. 24 – Homebush Bay Area. The precinct covered an area of approximately 63.85 hectares excluding existing public roads. The HBW DCP 2004 was developed to provide controls which have guided the development of the area and would have considered the required transport infrastructure to accommodate this level of development.

As discussed in Section 3.1, the Site forms part of Precinct F. The DCP provides a total GFA of 234,642m<sup>2</sup> as an approved level of residential development for Precinct F, which corresponds to an approved Precinct F development yield of 3,129 units, based on an average unit size of 75m<sup>2</sup>. A total of 2,115 apartments have now been developed within Precinct F; therefore, the precinct has a surplus of 1,014 units under the HBW DCP 2004.

The Proposal – which consists of 904 units – would therefore deliver a scale of residential development (both in terms of GFA and unit yield) that is within the residual balance of residential development permitted within Precinct F.

In summary, the precinct wide assessment above demonstrates that the Proposal – at a Precinct F level – would have lower traffic and transport impacts than was envisaged by the HBW DCP 2004 and these impacts would therefore be covered by the improvements that are to be delivered by the Section 94 contributions associated with it. Thus, the transport (i.e. public and active transport) and traffic demand generated by the Proposal would be accommodated by the proposed / existing network.

### 5.2 Site-Specific Assessment

#### 5.2.1 Methodology

The precinct wide assessment effectively presents a high-level ‘planning’ argument that (rightly) determines the Proposal to be supportable on the basis that the development does not propose additional residential development yield above historically approved baseline permissions for Precinct F, within which the Site is located. However, it is acknowledged that at a Site level, the residential yield now proposed does exceed recent approved baselines for the Site. Accordingly, this site-specific assessment considers the Proposal within the context of the historic approved traffic generation threshold or budget of 256 peak hour trips established by the Varga studies that have supported development approvals on the Site, in particular the approved MOD2 Concept Plan (refer Section 3.4).



## 5.2.2 Site-Specific Trip Generation Rates

The Varga studies adopted a peak hour traffic generation rate of 0.4 vehicles per hour. However, this was based on what is now classed as 'outdated' RMS information. Therefore, this assessment has had consideration for site-specific trip rate survey data, recognising that on similar applications within Wentworth Point, RMS and Council has consistently requested traffic generation based on actual surveys of similar nearby development.

To obtain a suitable traffic generation rate for assessing the Proposal, traffic count surveys were undertaken of 1 The Piazza (formerly 21 Bennelong Parkway), which is adjacent to the south east corner of the Site and consists of 87 units. The surveys were undertaken over 2 days, 28-29 August 2018. Entry and exit movements were recorded between 6.00-9.00AM to assess the morning peak hour and 4.00-7.00PM to assess the evening peak hour. The raw survey results are attached at **Appendix B**.

**Table 4** provides a summary of the peak trips generated by The Piazza and the resulting trip generation rate.

**Table 4: Survey Results and Calculated Trip Rates**

Day	AM Peak Hour			PM Peak Hour		
	Time	Trips	Trip Rate	Time	Trips	Trip Rate
Average	08.15-09.15	24	0.28	17.30-18.30	56	0.27

The results indicate that the average surveyed peak hour trip rates per unit are:

- 0.28 trips per unit for the morning peak hour.
- 0.27 trips per unit for the evening peak hour.

## 5.2.3 Forecast Traffic Generation

Based on the surveyed trip generation rates shown in Table 4, the Proposal is forecast to generate the following vehicle trips:

- 253 vehicle trips during the morning peak hour
- 244 vehicle trips during the evening peak hour

#### 5.2.4 Comparative Assessment

As discussed in Section 3.4, the approved traffic generation threshold established for the approved MOD2 Proposal – against which the current Proposal should be assessed – is 256 vehicles per peak hour. **Table 5** provides a comparison of the identified permissible site traffic generation budget and the forecast traffic for the Proposal.

**Table 5: Traffic Generation Comparison**

Peak Hour	Permissible Traffic Budget	Forecast Traffic Generation	Net Difference
AM	256 trips	253 trips	(-) 3 trips
PM	256 trips	244 trips	(-) 12 trips

The results demonstrate that the Proposal is anticipated to generate:

- 3 fewer trips than the permissible traffic budget during the morning peak hour.
- 12 fewer trips than the permissible traffic budget during the evening peak hour.

In summary, the site-specific assessment above – based on actual site-specific trip rates – demonstrates that the forecast traffic impacts are within the permissible approved MOD2 Concept Plan baseline for the Site as established by the Varga studies and therefore the Proposal would have acceptable traffic impacts that are consistent with the impacts that were accepted for the approved MOD2 Concept Plan.

## 6 Parking & Servicing Requirements

### 6.1 Car Parking

The Site lies within the Wentworth Point area of Parramatta within which off-street car parking requirements are specified in the HBW DCP 2004. **Table 6** presents the applicable maximum residential car parking rates specified in the HBW DCP 2004.

**Table 6: Residential Car Parking Provisions**

Apartment Type / Use	Number	Maximum Parking Rate	Maximum Permissible Parking Provision	Proposed Parking Allocation
1 Bedroom unit	233	1.0 space / unit	233	233
2 Bedroom unit	606	1.5 spaces / unit	909	606
3 Bedroom unit	65	2 spaces / unit	130	130
Visitor	904	0.2 spaces / unit	181	113
Community Centre	945m <sup>2</sup>	NA	-	50
<b>TOTAL</b>			<b>1,453</b>	<b>1,132</b>

Table 6 demonstrates that the Site is permitted a maximum provision of 1,453 residential (including visitor) parking spaces. In response, the development provides 1,082 parking spaces, thereby complying with the DCP controls. A further objective of the HBW DCP 2004 is to, “provide a minimum of 1 space per dwelling”. The proposed resident car parking provision of 969 spaces therefore achieves compliance with this requirement.

It is noteworthy that approximately 12% of the car parking is to be provided in tandem pair arrangements. The use of tandem parking is considered acceptable provided each tandem or stacked parking arrangement is limited to a maximum of 2 spaces and the spaces are attached to the same strata title.

An additional 50 parking spaces (that is in addition to the residential provision) are provided for the Community Room. The HBW DCP 2004 does not provide any guidance for parking provisions for community facilities. The community centre is to service the local community and residents of the development and as such a high proportion of non-car travel is expected. Notwithstanding, a provision of 50 spaces is proposed, which will ensure that sufficient parking is provided to accommodate any

future demands off-street. This will enable flexible use of the facility without compromising the availability of on-street parking for use by residents and visitors.

The parking provision for both the residential and community centre will ensure parking for all uses is accommodated off-street and compliant with the objectives of the HBW DCP 2004. Accordingly, the provision of the 1,132 spaces is supportable.

## 6.2 Disabled and Adaptable Parking

Adaptable car parking policy for residential parking requires that all adaptable units be provided with a minimum of 1 adaptable parking space. These spaces are to be designed in accordance with requirements of AS 4299 or AS 2890.6.

The HBW DCP 2004 does not stipulate a parking rate for disabled parking within the visitor parking provision or the community use parking. It is therefore recommended that a minimum of 3 of the 113 residential visitor car parking spaces and 2 of the 50 community use parking spaces be designed for people with disabilities in accordance with the provision requirements of Table B1 of AS2890.6. These spaces would also be designed in accordance with AS2890.6.

## 6.3 Bicycle and Motorcycle Parking

**Table 7** presents the applicable minimum bicycle parking rates specified in the HBW DCP 2004.

**Table 7: Bicycle Parking Provisions**

Apartment Type / Use	Number	Minimum Bike Parking Rate	Minimum Bike Parking Provision
1 Bedroom unit	309	0 spaces / unit	0
2 Bedroom unit	606	0.5 spaces / unit	303
3 Bedroom unit	65	0.5 spaces / unit	33
Visitor	904	1.0 space / 15 units	60
<b>TOTAL</b>			<b>396</b>

Table 7 demonstrates that the Site is required to provide a minimum of 396 parking spaces to comply with the HBW DCP 2004. This volume of bicycle parking will be provided and would be designed in accordance with the requirements of AS2890.3.

The HBW DCP 2004 also requires that motorcycle parking be provided at a ratio of 1 motorcycle space to 25 car parking spaces. Application of this rate to the proposed car parking provision indicates that the Site is required to provide a minimum of 46 motorcycle spaces to comply with the HBW DCP 2004. These spaces are to be provided within the proposed development car park.

## 6.4 Parking Summary

In summary, the Concept Plan proposal demonstrates that the development would comply with the necessary HBW DCP 2004 and Australian Standard controls. The 1,132 parking spaces proposed is less than the maximum permissible provision of 1,453 parking spaces; therefore, the provision accords with the DCP objective of minimising car dependency and promoting alternative transport modes. Furthermore, the 969 parking spaces for residents (excluding visitors) accords with the DCP control of providing a minimum of 1 space per unit; therefore, the provision also accords with the DCP objective of providing adequate car parking for the building's users. The 50 community parking spaces would also accommodate the range of future parking demands that the community facility would generate. Disabled, adaptable, bicycle and motorcycle parking would also be provided in accordance with the requirements of the HBW DCP 2004 and relevant Australian Standards. Accordingly, the parking provision of the Proposal is supportable on traffic planning grounds.

## 7 Access & Internal Design

The access and internal basement car park would comply with the requirements of the HBW DCP 2004 and relevant Australian Standard requirements. Importantly, the Proposal retains many of the design features of the approved Stage 1 DA proposal, construction of which is well underway. Indeed, it should be noted that at the Ground level, first basement level and lowest basement level, the current Proposal is completely consistent with the approved Stage 1 DA. Therefore, traffic design elements such as the Amalfi Drive connection, access driveways to basement parking and the loading dock are consistent with the approved Stage 1 DA proposal.

The only change in terms of traffic design is an increase in the 'central' typical basement levels from 2 typical levels to 4 typical levels, thereby providing the additional car parking required by the Proposal. Again, it is important to note that these new typical basements are wholly consistent with the approved Stage 1 DA typical basement levels.

In summary, the design of the internal road network, access driveways, loading area and car parking are deemed to be consistent with relevant DCP controls and Australian Standards, noting that all the traffic design elements remain consistent with the arrangements approved for the Stage 1 DA.

## 8 Conclusions

The key findings of this Traffic Impact Assessment are:

- The application generally seeks approval for a modification to the approved MOD2 Concept Plan that would deliver 9 residential apartment buildings, varying in height from 4 to 25 levels and providing a total of 904 units. Located within an area referred to as Precinct F, the development retains the section of internal road, which is being constructed to complete the existing Amalfi Drive. Amalfi Drive will provide a number of access points to the basement car park, which provides a total of 1,132 parking spaces.
- The overall objective of this TIA study is to assess the 'net' impacts of the Proposal against relevant approved baselines.
- A precinct wide assessment demonstrates that the Proposal – at a Precinct F level – would have lower traffic and transport impacts than was envisaged by the HBW DCP 2004 and these impacts would therefore be covered by the improvements that are to be delivered by the Section 94 contributions associated with it. Thus, the transport and traffic demand generated by the Proposal would be accommodated by the proposed / existing network.
- A site-specific assessment – based on actual site-specific trip rates – demonstrates that the forecast traffic impacts are within the permissible approved MOD2 Concept Plan baseline for the Site as established by the Varga studies and therefore the Proposal would have acceptable traffic impacts that are consistent with the impacts that were accepted for the approved MOD2 Concept Plan.
- The Concept Plan proposal demonstrates that the development would comply with the necessary HBW DCP 2004 and Australian Standard controls. The 1,132 parking spaces proposed is less than the maximum permissible provision of 1,453 parking spaces; therefore, the provision accords with the DCP objective of minimising car dependency and promoting alternative transport modes. Furthermore, the 969 parking spaces for residents (excluding visitors) accords with the DCP control of providing a minimum of 1 space per unit; therefore, the provision also accords with the DCP objective of providing adequate car parking for the building's users. The 50 community parking spaces would also accommodate the range of future parking demands that the community facility would generate. Disabled, adaptable, bicycle and motorcycle parking would also be provided in accordance with the requirements of the HBW DCP 2004 and relevant Australian Standards.
- The design of the internal road network, access driveways, loading area and car parking are deemed to be consistent with relevant DCP controls and Australian Standards, noting that all the traffic design elements remain consistent with the arrangements approved for the Stage 1 DA.

It is therefore concluded that in terms of traffic generation, future network performance, cumulative impacts, parking, vehicular access and internal design, the proposed S75W modification for 23 Bennelong Parkway is supportable on traffic planning grounds as it would perform similar to the approved MOD2 Concept Plan and would therefore operate satisfactorily.



# Appendix A

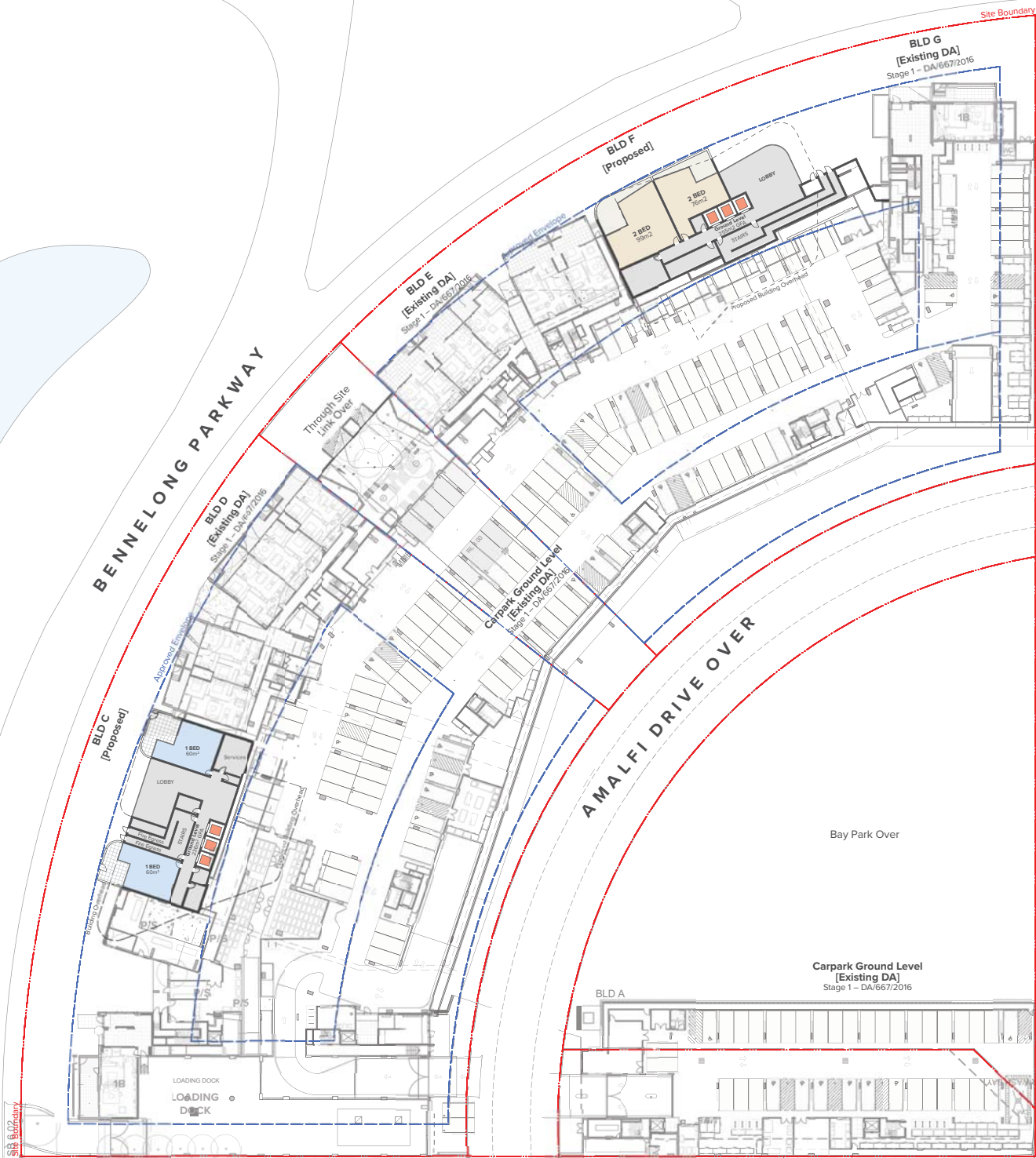
## Reduced Plans

HILL ROAD

AMALFI DRIVE

CORNICHE DRIVE

STROMBOLI STREET



NOTES  
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. INFORM TURNER OF ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION.

CLIENT  
**PAYCE**  
Level 37, Chifley Tower 2, Chifley Square  
Sydney NSW 2000 Australia

Rev	Date	Approved by	Revision Notes
01	28.05.18	JM	For Coordination

Project Title  
**ONE THE WATERFRONT**  
23 Bennelong Parkway, Wentworth Point NSW 2127

Drawing Title  
**Indicative GA Plans**  
Ground Level

PLANNING DETAIL INDICATIVE ONLY

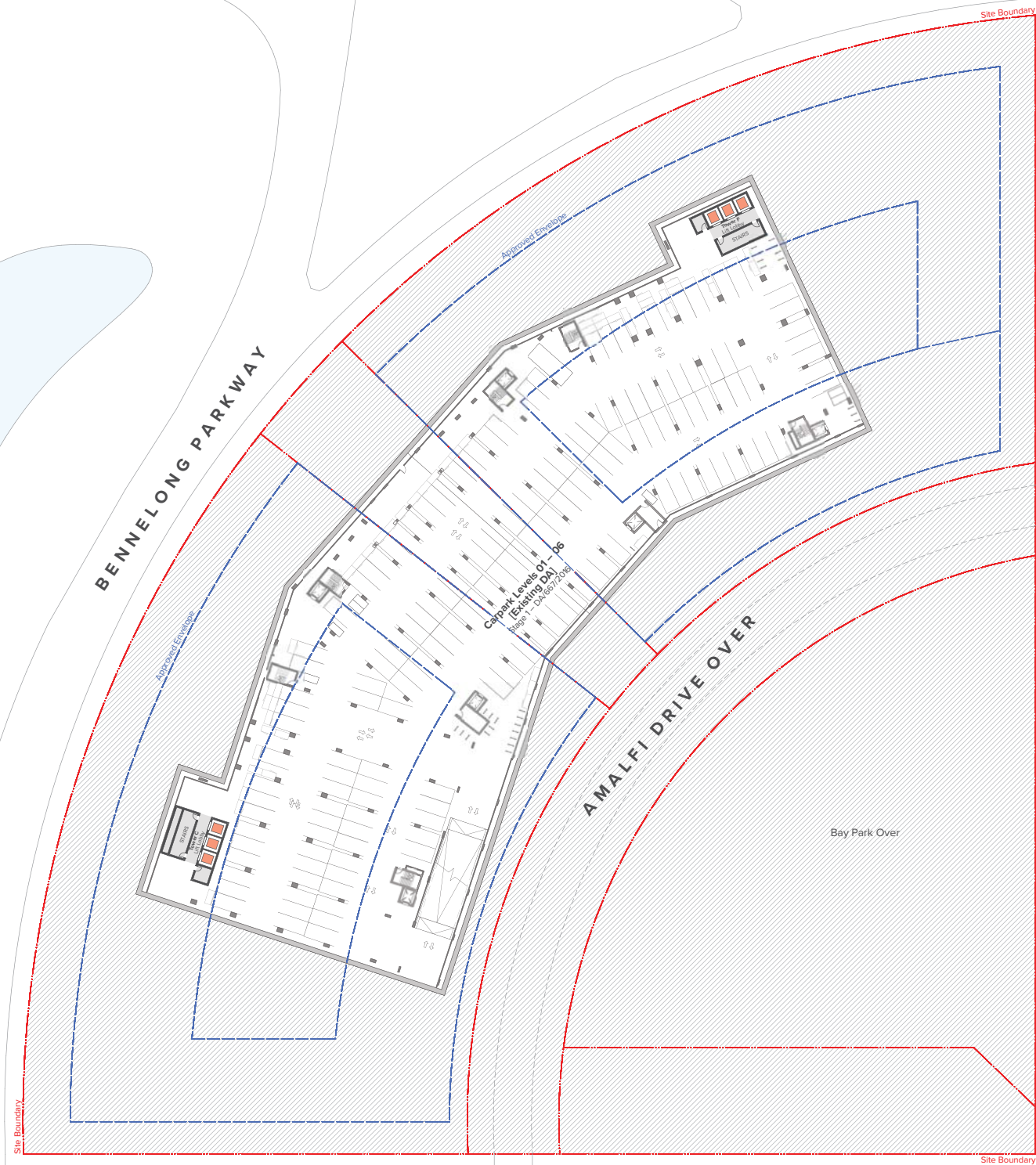
Scale <b>1:500 @A1, 50% @A3</b>	Project No. <b>18039</b>	Drawn by <b>JC KH DB</b>	North →
Status <b>For Information</b>	Dwg No. <b>FE-110-101</b>	Rev <b>01</b>	

**TURNER**

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA

T +61 2 8558 0000  
F +61 2 8558 0060  
turnerstudio.com.au

HILL ROAD



Sorrento

Paros

Corsica

AMALFI DRIVE

Torino

Napoli

Messina

CORNICHE DRIVE

Bay Park Over

STROMBOLI STREET

Tennis

Confu

Catania

Capri

Portofino

NOTES  
THIS DRAWING IS COPYRIGHT © OF TURNER. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK. BEFORE TURNING UP ANY DISCREPANCIES FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DRAWINGS ARE NOT TO BE SCALED. USE ONLY FIGURED DIMENSIONS. REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION.

CLIENT  
**PAYCE**  
Level 37, Chifley Tower 2, Chifley Square  
Sydney NSW 2000 Australia

Rev	Date	Approved by	Revision Notes
01	28.05.18	JM	For Coordination

Project Title  
**ONE THE WATERFRONT**  
23 Bennelong Parkway, Wentworth Point NSW 2127

Drawing Title  
**Indicative GA Plans**  
**Basement Level 1-6**

PLANNING DETAIL INDICATIVE ONLY

Scale <b>1:500 @A1, 50% @A3</b>	Project No. <b>18039</b>	Drawn by <b>JC KH DB</b>	North 
Status <b>For Information</b>	Dwg No. <b>FE-110-201</b>	Rev <b>01</b>	

**TURNER**

DLCE Quality Extended Company ISO 9001:2015, Registration Number 25476  
Notified Address: Nicholas Turner, 88/90, A/11 St, NSW 1581

Level 7 ONE Oxford Street  
Darlinghurst NSW 2010  
AUSTRALIA  
T +61 2 8558 0000  
F +61 2 8558 0088  
turnerstudio.com.au

## Appendix B

### The Piazza Traffic Survey Data



R.O.A.R DATA

**Reliable, Original & Authentic Results**

Ph.88196847, Mob.0418-239019

Client : ASON Group

Job No/Name : 6895 WENTWORTH POINT 1 The Piazza

Day/Date : Tuesday 28th August 2018

**Combined Driveways**

<u>All Vehicles</u>	<u>1 The Piazza</u>		
	<u>Driveways</u>		
<u>Time Per</u>	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
0700 - 0715	0	4	4
0715 - 0730	0	1	1
0730 - 0745	0	2	2
0745 - 0800	0	2	2
0800 - 0815	0	6	6
0815 - 0830	0	8	8
0830 - 0845	2	4	6
0845 - 0900	1	4	5
0900 - 0915	2	4	6
0915 - 0930	1	3	4
0930 - 0945	0	1	1
0945 - 1000	0	0	0
<b>Period End</b>	<b>6</b>	<b>39</b>	<b>45</b>

**PEAK HOUR**  
**0800 - 0900**

	<u>1 The Piazza</u>		
	<u>Driveways</u>		
<u>Peak Per</u>	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
0700 - 0800	0	9	9
0715 - 0815	0	11	11
0730 - 0830	0	18	18
0745 - 0845	2	20	22
<b>0800 - 0900</b>	3	22	25
0815 - 0915	5	20	25
0830 - 0930	6	15	21
0845 - 0945	4	12	16
0900 - 1000	3	8	11

<b>PEAK HR</b>	<b>3</b>	<b>22</b>	<b>25</b>
----------------	----------	-----------	-----------



R.O.A.R DATA

**Reliable, Original & Authentic Results**

Ph.88196847, Mob.0418-239019

Client : ASON Group

Job No/Name : 6895 WENTWORTH POINT 1 The Piazza

Day/Date : Tuesday 28th August 2018

**Combined Driveways**

**All Vehicles**

**1 The Piazza  
Driveways**

Time Per	IN	OUT	TOTAL
1600 - 1615	0	0	0
1615 - 1630	2	2	4
1630 - 1645	0	0	0
1645 - 1700	4	3	7
1700 - 1715	3	0	3
1715 - 1730	1	2	3
1730 - 1745	8	2	10
1745 - 1800	3	0	3
1800 - 1815	10	2	12
1815 - 1830	5	1	6
1830 - 1845	4	1	5
1845 - 1900	2	0	2
Period End	42	13	55

**PEAK HOUR**  
**1730 - 1830**

**1 The Piazza  
Driveways**

Peak Per	IN	OUT	TOTAL
1600 - 1700	6	5	11
1615 - 1715	9	5	14
1630 - 1730	8	5	13
1645 - 1745	16	7	23
1700 - 1800	15	4	19
1715 - 1815	22	6	28
1730 - 1830	26	5	31
1745 - 1845	22	4	26
1800 - 1900	21	4	25

PEAK HR	26	5	31
---------	----	---	----



R.O.A.R DATA

**Reliable, Original & Authentic Results**

Ph.88196847, Mob.0418-239019

Client : ASON Group

Job No/Name : 6895 WENTWORTH POINT 1 The Piazza

Day/Date : Wednesday 29th August 2018

**Combined Driveways**

All Vehicles

**1 The Piazza  
Driveways**

Time Per	IN	OUT	TOTAL
0700 - 0715	0	2	2
0715 - 0730	0	2	2
0730 - 0745	0	2	2
0745 - 0800	1	9	10
0800 - 0815	0	6	6
0815 - 0830	0	7	7
0830 - 0845	0	4	4
0845 - 0900	0	3	3
0900 - 0915	5	4	9
0915 - 0930	2	1	3
0930 - 0945	3	0	3
0945 - 1000	1	2	3
<b>Period End</b>	<b>12</b>	<b>42</b>	<b>54</b>

PEAK HOUR  
**0745 - 0845**

**1 The Piazza  
Driveways**

Peak Per	IN	OUT	TOTAL
0700 - 0800	1	15	16
0715 - 0815	1	19	20
0730 - 0830	1	24	25
<b>0745 - 0845</b>	1	26	27
0800 - 0900	0	20	20
0815 - 0915	5	18	23
0830 - 0930	7	12	19
0845 - 0945	10	8	18
0900 - 1000	11	7	18

**PEAK HR**    **1**    **26**    **27**



R.O.A.R DATA

**Reliable, Original & Authentic Results**

Ph.88196847, Mob.0418-239019

Client : ASON Group

Job No/Name : 6895 WENTWORTH POINT 1 The Piazza

Day/Date : Tuesday 28th August 2018

**Combined Driveways**

<u>All Vehicles</u>	<u>1 The Piazza</u>		
	<u>Driveways</u>		
<u>Time Per</u>	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
1600 - 1615	2	1	3
1615 - 1630	4	0	4
1630 - 1645	4	2	6
1645 - 1700	1	0	1
1700 - 1715	1	1	2
1715 - 1730	5	1	6
1730 - 1745	3	0	3
1745 - 1800	0	4	4
1800 - 1815	6	0	6
1815 - 1830	2	1	3
1830 - 1845	3	1	4
1845 - 1900	4	0	4
<b>Period End</b>	<b>35</b>	<b>11</b>	<b>46</b>

**PEAK HOUR**  
**1715 - 1815**

	<u>1 The Piazza</u>		
	<u>Driveways</u>		
<u>Peak Per</u>	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
1600 - 1700	11	3	14
1615 - 1715	10	3	13
1630 - 1730	11	4	15
1645 - 1745	10	2	12
1700 - 1800	9	6	15
<b>1715 - 1815</b>	14	5	19
1730 - 1830	11	5	16
1745 - 1845	11	6	17
1800 - 1900	15	2	17

<b>PEAK HR</b>	<b>14</b>	<b>5</b>	<b>19</b>
----------------	-----------	----------	-----------