

449 Victoria Street, Wetherill Park (NSW)

Traffic & Car Parking Assessment Report

Client: Wetherill Park APX Properties Pty Ltd

Prepared by

Evan Boloutis
Director

EB Traffic Solutions Pty Ltd
B.Eng (Civil), MEng Sc (Traffic), MBA

Email: evan@ebtraffic.com.au
Web: www.ebtraffic.com.au
Mobile: 0408 395 729

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1. INTRODUCTION

1.1 Purpose of this report

This report sets out an assessment of the traffic and parking implications of the proposed development, with specific consideration of the following:

- the existing conditions;
- a description of the proposal;
- an assessment of the development's car parking requirements;
- adequacy of the on-site car parking supply to accommodate both the proposal's car parking requirements and the car parking demands anticipated to be generated by the proposal;
- an assessment of the adequacy of the car park layout; and
- the traffic impact of the proposal.

1.2 Referenced documents

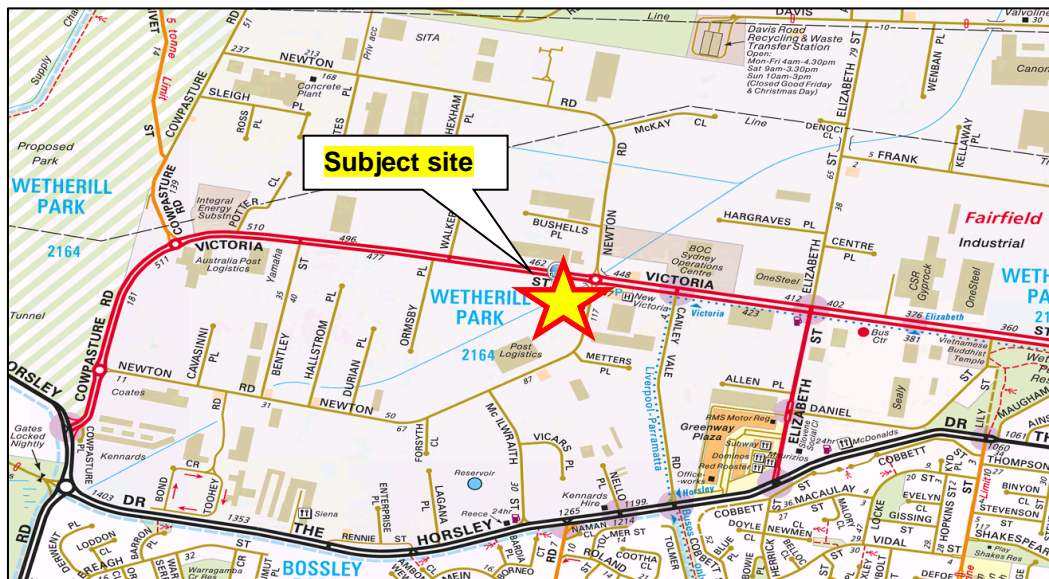
This report has been based upon a number of sources and references. These include:

- Discussions with the applicant and town planning officers at the City of Fairfield;
- Nearmap, Google maps and Melways online;
- Fairfield Citywide DCP (2013) and Fairfield LEP (2013);
- www.transportnsw.info;
- Parking surveys undertaken on Thursday 8 September 2016 and on Saturday 10 September 2016 between 9 am and 9 pm;
- State Environmental Planning Policy (Infrastructure), 2007;
- Australian Standards AS 2890.1 (2004), AS 2890.2 (2002), AS 2890.5:1993 and AS 2890.6 (2009);
- Traffic Authority of NSW, Guide to Traffic Generating Developments, Oct 2002; and
- Layout plans prepared by JS Architects Pty Ltd, project no. 042-15-16, Dwgs 1-15, Issue H, dated 18 April 2018.

2. EXISTING CONDITIONS

2.1 Location and Land use

The subject site is located on the south side of Victoria Street approximately 120 m west of Newton Road. The location of the subject site is shown in **Figure 2.1**.



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Figure 2.1: Location of the subject site

The subject site is currently vacant. The surrounding area is typically comprised of industrial land uses.

The nature of the subject site and surrounds is shown in **Figure 2.2**.



Source: nearmap (image taken 3 November 2016)

Figure 2.2: Nature of the subject site and surrounding area

2.2 Road Network

Victoria Street, adjacent to the site, contains a divided cross section with two traffic lanes and a kerbside parking lane in each direction. Unrestricted parking occurs along the street adjacent to and in close proximity to the site.

Images showing the cross section of Victoria Street looking to the east and west are shown in **Figures 2.3** and **2.4**, respectively.



Source: google maps street view

Figure 2.3: Victoria Street looking east



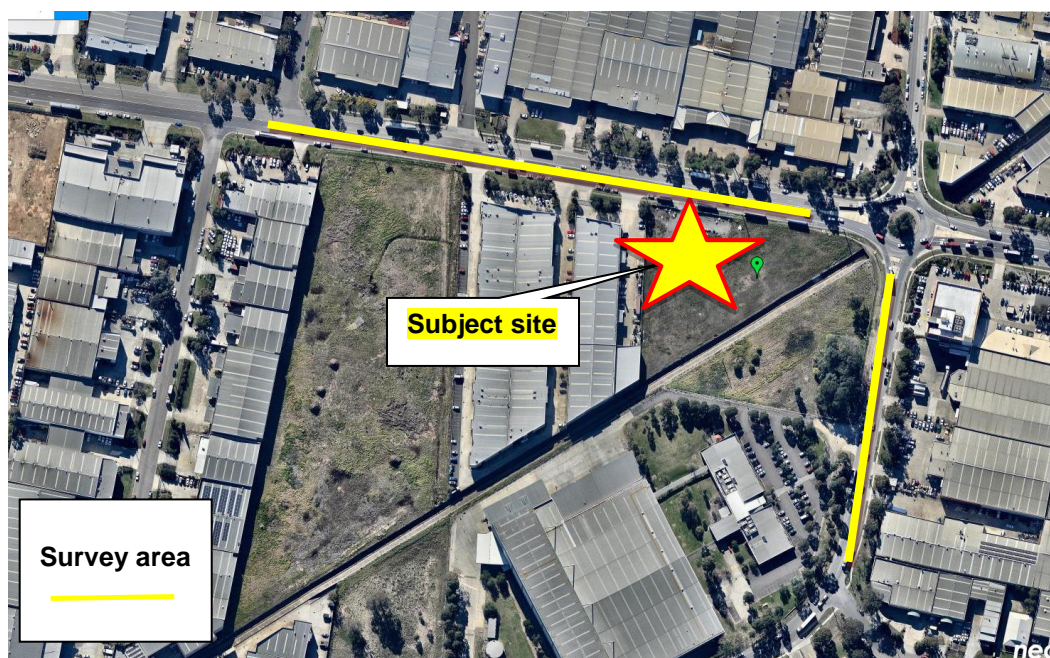
Source: google maps street view

Figure 2.4: Victoria Street looking west

2.3 Existing Parking Supply and Demand

There are around 148 available on-street parking spaces located within close proximity to the site.

The area adopted for the parking surveys corresponds to a distance of up to around 300 m from the subject site, as shown in **Figure 2.5**.



Source: www.nearmap.com

Figure 2.5: Survey area adopted for the parking survey

To establish the existing parking demands in the nearby on-street car parking areas, parking surveys were undertaken within this defined study area on Thursday 8 September 2016 and on Saturday 10 September 2016 between 9 am and 9 pm.

The key findings from the parking surveys are summarised in **Attachment A** and indicate that:

- During the Thursday daytime survey period, the peak car parking demand occurred at 11 am and corresponded to 67 cars or 45 % of the available parking supply;
- During the Thursday evening survey period, the peak car parking demand at 8 pm corresponded to 49 cars or 33 % of the available parking supply;
- During the Saturday daytime survey period, the peak car parking demand occurred at 5 pm and corresponded to 42 cars or 28 % of the available parking supply; and
- During the Saturday evening survey period, the peak car parking demand at 8 pm corresponded to 46 cars or 31 % of the available parking supply.

2.4 Sustainable Transport Modes

2.4.1 Public Transport

The site has a good provision of conveniently located public transport services. This comprises of six bus routes operating along Victoria Street along the Liverpool-Parramatta Transit Way to the immediate east of the site.

The bus routes operating in close proximity to the site are listed below and shown in **Figure 2.6**.

- 814 - Fairfield to Smithfield (Loop Service) service;
- 835 - Prairiewood to UWS service;
- 800 - Blacktown to Fairfield via Wetherill Park service;
- 812 - Blacktown to Fairfield service;
- T80 - Parramatta to Liverpool via T-way service; and
- 806 - Parramatta to Liverpool via Abbotsbury service.

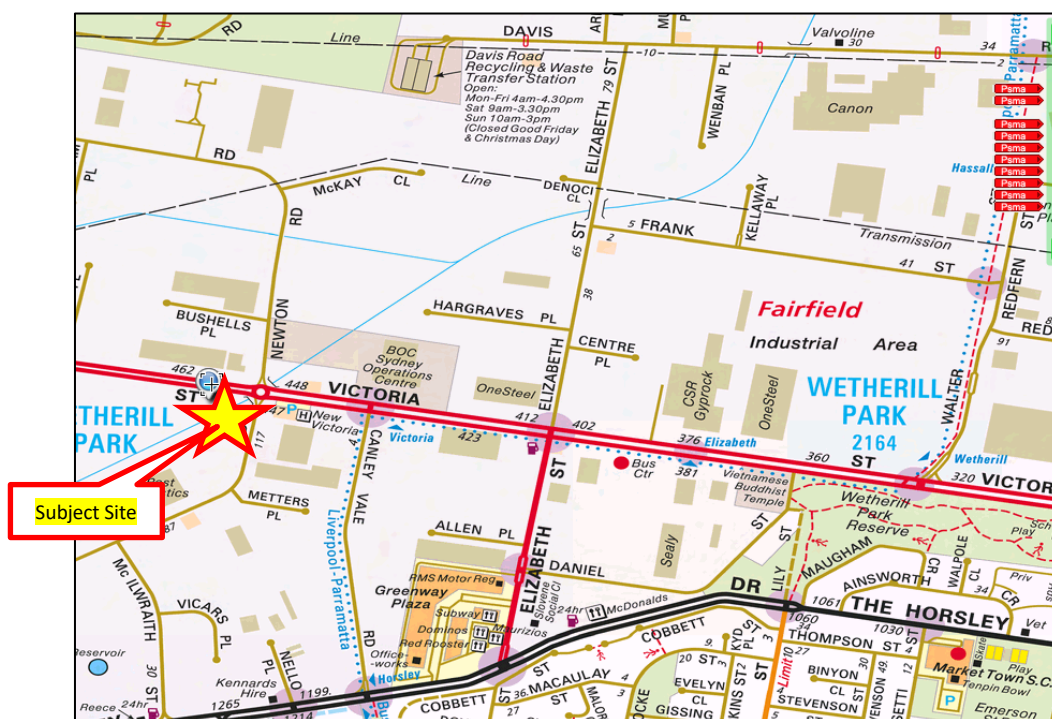


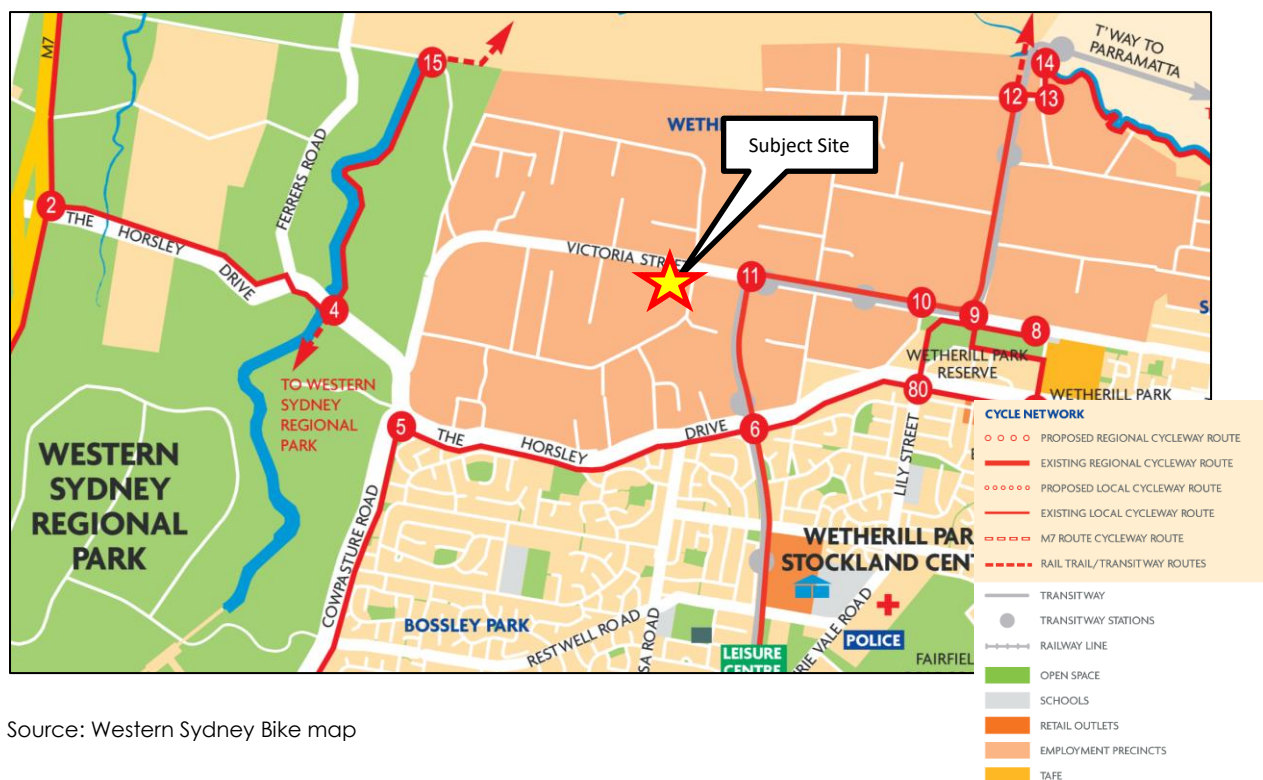
Figure 2.6: Public transport services adjacent to the site

2.4.2 Bicycle Facilities

The City of Fairfield is well serviced by an extensive on- and off-road bicycle network linking the municipality with the surrounding municipalities.

The sustainable transport modes include on-road bicycle route along Victoria Street and Horsley Drive. Shared pathways exist within the Western Sydney Regional Park to the immediate west of the site.

The various bicycle routes in the vicinity of the site are shown in **Figure 2.7**.



Source: Western Sydney Bike map

Figure 2.7: Bicycle routes in the vicinity of the site

3. THE PROPOSAL

It is proposed to construct a six level development containing the following land use components:

- 4 star hotel (141 rooms) with an ancillary function/meeting room (58 sqm) and an office/reception area (20 sqm); and a
- Neighbourhood shop (50 sqm).

It is proposed to provide a porte cochere (drop off/pick up facility) at the front of the hotel and the following parking facilities in a ground level/under croft car park:

- 91 parking bays (including 2 small car spaces);
- One retail shop space;
- Two accessible parking bays;
- Four motor cycle bays;
- Four bicycle spaces; and
- A loading bay capable of accommodating an 8.8 m long medium rigid vehicle.

Of the total parking provision, the following breakdown of parking spaces are proposed to be allocated to the respective land use components:

- Hotel: 91 spaces (including two small car spaces);
- Retail: one staff space; and
- Two accessible spaces.

Entry access to the on-site parking areas is provided via a crossover located adjacent to the site's eastern boundary and a one-way (clockwise) circulating roadway around the site with egress from the site provided via a crossover located adjacent to the site's western boundary.

Further, the hotel is proposed to have a four star rating and will be geared to tourists travelling from the CBD/airport to the Blue Mountains and corporate travellers associated with the surrounding businesses.

The layout plan of the development's access points and car parking areas is shown in **Attachment B**.

4. CAR PARKING CONSIDERATIONS

4.1 Car Parking Requirements

The car parking requirements for the proposed development are set out in Chapter 12 (Table 1) of the City of Fairfield's DCP (2013). Reference to the City of Fairfield's DCP indicates that the car parking requirements for residential dwellings are:

Hotel

- 1 space per 5 sqm gross leasable area bar/lounge/dining area/restaurant/function room, plus
- 1 space per 40 sqm gross leasable area office/administration area, plus
- 1 space per 3 bedrooms accommodation.

Retail

- One space per 50 sqm gross floor area.

Application of the land use components to the car parking requirements listed above results in the following car parking requirements:

Hotel

- Meeting/Function room (58 sqm/5 sqm = 11.6 spaces or 12 spaces) It is noted that this facility is ancillary to the hotel and is only able to be used by hotel guests, that is, not able to be used by non-hotel guests.
- Office/administration area: $20/40 = 0.5$ space or 1 space.
- $141 \text{ rooms}/3 = 47$ spaces (assuming that the proposed rooms correspond to bedrooms).

Retail

$50 \text{ sqm}/50 \text{ sqm} = 1$ space

(Note: Parking calculations have been rounded to the nearest whole number in accordance with that stipulated in the City of Fairfield's DCP (2013)).

Further, reference to the Building Code of Australia indicates that the development is required to provide two accessible parking spaces which are proposed to be provided.

Having regard to the above, the proposed development has a car parking requirement of 61 parking spaces, inclusive of two accessible spaces, which is satisfied by the proposed on-site provision of 94 parking spaces.

Notwithstanding the above, the following assessment has been undertaken to illustrate the likely demand for parking spaces, and whether it is appropriate to allow the supply of fewer spaces on the proposed development site.

These considerations and the respective factors considered relevant to this application are listed as:

4.1.1 The car parking demand likely to be generated by the use

(a) Short-stay and long-stay parking demand

The derivation of short and long stay parking demands can be examined through empirical case study survey data.

Hotel

Reference to the *TANSW Guide for Traffic Generating Developments (2002)* indicates that, for a tourist hotel, the recommended level of parking provision is 1 space per 4 bedrooms in 3 and 4 star hotels.

Application of the recommended parking rate to the proposed 141 room hotel indicates a parking requirement of 36 spaces which is less than the proposed parking provision of 91 parking spaces allocated to the hotel.

Retail

The neighbourhood shop is located within the hotel with an entrance located adjacent to the hotel foyer and, given its location, is expected to be geared to hotel guests.

Given the location of the shop within a light industrial area, it is not expected that there will be any external (non-hotel guests) who will arrive as customers to the shop.

Further, reference to the *TANSW Guide for Traffic Generating Developments (2002)* indicates that no data is provided for specialty shops similar to that provided within the proposed hotel.

Notwithstanding the above, case study survey data collected by consultants indicates that, typically, conventional shops within strip shopping centres can be expected to generate around 1 to 2 staff members per 100 sqm shop.

Given the nature of the proposed shop and its location, it is expected that the proposed shop will generate a staff parking demand at the lower end of this range, that is, of up to one parking space at any one time.

The total peak parking demand anticipated to be generated by the proposed development corresponds to 37 spaces which is less than the proposed on-site provision of 94 spaces.

(b) Likelihood of multi-purpose trips

The neighbourhood shop is expected to be geared to hotel guests and, as a result, is not expected to generate any additional customer parking demands.

(c) Public Transport Availability

As detailed in section 2.4, the site has an excellent provision of conveniently located public transport facilities with the six bus routes operating in close proximity to the proposal.

(d) The provision of bicycle and end of trip facilities for cyclists

Reference to the City of Fairfield's, 'Development Control Plan, (2013)', specifically, section 12.3.3, indicates that *'to encourage the use of bicycle, new developments should incorporate appropriate bicycle parking/storage facilities.'*

Reference to the layout plan indicates that it is proposed to provide four bicycle spaces immediately south of the loading dock area.

The provision of this facility is anticipated to encourage staff and visitors to cycle to and from the proposed development.

(e) The convenience of pedestrian and cyclist access to the site

The site benefits from the provision of pedestrian paths along both sides of Victoria Street and in the streets surrounding the proposal. In addition, the provision of on-road bicycle lanes, walking tracks and shared pathways in the area provides convenient access for staff and visitors to walk or cycle to the proposal.

In addition, the provision of four bicycle racks are likely to encourage staff and visitors to cycle to and from the proposal and the surrounding area.

4.1.2 Assessing whether fewer spaces should be provided

(a) Car Parking Availability

The results of the car parking surveys, which are summarised in Section 2.3, indicate that the peak on-street car parking demands in the vicinity of the proposal equate to:

- During the Thursday daytime survey period, an occupancy rate of 45 % (81 vacancies) at 11 am;
- During the Thursday evening survey period, an occupancy rate of 33 % (99 vacancies) at 8 pm;
- During the Saturday daytime survey period, an occupancy rate of 28 % (106

vacancies) at 5 pm; and

- During the Saturday evening survey period, an occupancy rate of 31 % (102 vacancies) at 8 pm.

The assessment undertaken in Sections 4.1 and 4.1.1 (a) indicates that the proposed car parking provision satisfies the development's car parking requirements, therefore there is not likely to be any overspill parking demands into Victoria Street. Further, it is considered unlikely that external (non-hotel) customers will arrive to the shop.

Notwithstanding the above, in the unlikely event that there are overspill parking demands generated by the proposed shop, the results of the parking surveys indicate that there is an adequate supply of available on-site parking spaces to accommodate any overspill peak parking demands.

As a result, the development is not anticipated to adversely impact upon the amenity of the surrounding area.

(b) The impact of fewer spaces on local amenity

The surrounding area is a predominantly industrial in nature.

The proposed on-site parking supply is anticipated to accommodate the development's total staff and visitor parking demands.

As a result, there will not be any adverse impact upon the amenity of the nearby area.

4.2 Adequacy of Parking Provision

The assessment indicates that the parking requirements correspond to 60 spaces inclusive of two accessible parking spaces, which is satisfied by the proposed on-site parking provision of 94 spaces.

The proposed development is considered to represent a minimal impact on the surrounding road network having regard to the following characteristics:

- The peak parking demands anticipated to be generated by the proposed development corresponds to 37 spaces which is less than the proposed on-site provision of 94 spaces;
- If any parking overspill does occur from time to time, then the results of the parking surveys indicate that there is an adequate supply of available on-site parking to accommodate any potential overspill parking demands;
- The availability of public transport in the immediate area, namely its proximity to six bus routes operating in close proximity to the proposal;
- The trips likely to be undertaken to the neighbourhood shop will be generated by hotel guests;

- Access to the provision of alternative transport modes in the area namely the provision of an extensive on- and off-road bicycle network in the immediate area (as well as four proposed bicycle spaces) which encourages cyclist access to the proposal; and
- The convenience of pedestrian access to the site.

4.3 Park Layout

4.3.1 Dimensions of car accommodation

Reference to the layout plans show that the perpendicular parking bays located along the eastern and southern sides of the development have been provided at the dimensions of 2.5 m in width, 5.5 m in length and an adjacent aisle at or in excess of 5.8 m in width, which accords with the requirements of AS 2890.1:2004.

Further, the parking bays provided along the western side of the hotel, as parallel parking spaces, have been provided at the dimensions of 2.5 m in width. The length of the bays, with the 'gaps' located between the intermediate bays, allow for an overall length of the bay of 6 m, which complies with AS 2890.5:1993.

The parallel parking bays also have sufficient clearance for door opening either adjacent to the landscaped areas or areas beneath the stairs.

Two small car bays have been provided at the dimensions of 2.3 m wide and 5 m long which accords with the requirements of A 2890.1:2004.

Further, reference to Table 1.1 in AS 2890.1:2004 indicates that, based upon the respective land use components, the proposed user classes correspond to user class 1 (shop staff), user class 2 (hotel staff and guests).

Reference to Figure 2.2 in AS 2890.1:2004 indicates that the following bays are required for the respective user classes:

- User class 1: 2.4 m (shop staff)
- User class 2: 2.5 m (hotel staff and guests)

Reference to the layout plans indicate that the width of the on-site parking bays complies with the requirements stipulated in Figure 2.2 of AS 2890.1:2004.

The two accessible parking bays have been provided at widths of 2.5 m with a length of 5.5 m and an aisle width of 5.8 m with a centrally located column within the shared space at an off-set distance of 800 mm of the accessway which accords with Clause 2.4 of the Australian Standards, AS 2890.6 (2009).

Four motor cycle bays have been provided at the dimensions of 1.4 m wide and 2.5 m long immediately to the south of the loading dock area which accord with the requirements of AS 2890.5:1993.

To delineate the staff and visitor parking spaces associated with the hotel and retail land use components, it is recommended that parking signage be installed for the allocated parking bays.

4.3.2 Access to/from car accommodation spaces

The swept paths of a vehicle entering and exiting the proposed on-site car spaces on the development site have been assessed with the use of the AutoTURN swept path computer software for a B85 motor car.

Reference to the swept path analysis indicates that motorists can safely enter and exit the on-site parking bays and exit from the development site in a forward manner.

A further assessment has been undertaken to assess the ability for a B99 car to circulate around the site's accessways. The analysis, which makes use of the AutoTURN computer software is shown in **Attachment C** and indicates that a B99 car can safely circulate around the site's accessways.

4.3.3 Width of accessway

Reference to the layout plans indicate that the width of the entry and exit access points have been provided at widths varying between 8.13 m and 6.24 m with 300 mm kerbs on either side of the accesses which accords with Clause 3.2 of AS 2890.1:2004.

4.3.4 Columns

The columns within the under-croft car parking areas are required to be located between 0.75 m and 1.75 m from the edge of the access aisle, which accords with the requirements of Figure 5.2 of AS 2890.1:2004.

4.3.5 Headroom clearance

To accord with the relevant Australian Standards, the headroom clearance above the under-croft parking bays, to the rear of the hotel, is required to be a minimum of 2.2 m.

Reference to the layout plans indicate that the minimum headroom clearance within the porte cochere area is 4.9 m and in the under-croft parking area is 4.9 m which satisfies the minimum headroom requirements for a loading bay accommodating a 14 m long coach and an 8.8 m truck.

4.3.6 Sight lines for exiting motorists

Figure 3.3 of the Australian Standard for off-street car parking, AS 2890.1:2004 specifies that the minimum sight lines for pedestrian safety along a circulation driveway or domestic driveway.

The minimum sight lines are specified as clear sight line triangles which extend for 2 m along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage.

The sight line triangles are required to be clear of visual obstructions to provide the exiting motorist with a clear view of pedestrians on the footpath along the south side of Victoria Street (and vice versa).

Reference to the layout plans indicate that the required sight line triangles have been provided at the exit access.

5 COMMERCIAL VEHICLES

5.1 Refuse

The refuse bins are proposed to be stored in a waste storage room located immediately adjacent to the loading dock facility. The waste in the loading dock area is proposed to be serviced by a private operator. The maximum sized truck anticipated to access the loading dock is an 8.8 m Medium Rigid Vehicle (MRV).

5.2 Accessibility

Coach

The porte cochere facility has been designed to accommodate a 14 m long coach. Reference to the TANSW indicates that, for a hotel, two coach bays are recommended to be provided.

It is considered that the porte cochere will facilitate coaches dropping off/picking up hotel guests, and, if a layover area is required for coaches arriving early for a tour pick up or a second coach arriving simultaneously, then use could be made of the on-street areas along Victoria Street which permit large vehicles to park for durations in excess of one hour.

The ability for a 14 m coach to enter and exit the site and porte cochere facility was undertaken with the use of the AutoTURN swept path computer software, the analysis of which is shown in **Attachment D**, and indicates that a coach can safely enter and exit the site and porte cochere area.

Refuse

Discussions with the applicant indicate that the loading dock will be restricted to an 8.8 m Medium Rigid Vehicle (MRV).

The ability for a truck to enter and exit the loading dock facility was undertaken with the use of the AutoTURN swept path computer software for an 8.8 m long Medium Rigid Vehicle (MRV), the analysis of which is shown in **Attachment E** and indicates that a refuse vehicle can safely enter and exit the on-site loading dock.

5.3 Headroom Clearance

Reference to the Australian Standard AS 2890.2 (2002), indicates that for an 8.8 m Medium Rigid Vehicle (MRV), the minimum headroom clearance is required to be 4.5 m.

Reference to the layout plans indicate that the headroom clearance along the circulating roadway to the rear of the hotel and within the loading dock is 4.9 m, which complies with the Australian Standard AS 2890.2 (2002).

Further, the headroom clearance of 4.9 m provided within the porte cochere is able to accommodate the height of a coach.

6 TRAFFIC IMPACT

The impact of the proposed development can be assessed having regard to the anticipated number of vehicle movements likely to be generated at the development accesses during the commuter peak periods.

The land use components within the proposed development are expected to generate the following traffic volumes during the commuter peak hours.

Hotel

Around 0.4 vehicle trips per room during the weekday evening peak hours), as set out in the RTA Guide for Traffic Generating Developments (Vers 2.2, 2002) (Note: no data exists for tourist hotels therefore, the rate for motel was adopted for the purpose of the analysis).

Having regard to the above, it is expected that the hotel will generate around 56 vehicle trips during the evening peak hour.

This is considered conservative given that the hotel will be geared to tourists, a proportion of which would be expected to arrive by coach, public transport or taxi/uber.

Retail

The staff member is expected to arrive during the morning commuter peak hour and depart during the afternoon commuter peak hour.

On this basis, it is anticipated that the proposed development will generate a total of up to 57 vehicle movements exiting from the development site during the late afternoon peak hour.

Given the presence of a centre median along Victoria Street, the exiting movements will be restricted to 'left out' only movements.

The level of traffic anticipated to be generated at the development access is considered minimal and will not represent any adverse impact upon the operation of the surrounding road network.

7 CONCLUSIONS AND RECOMMENDATIONS

Having regard to the above, it is concluded that the:

- proposed car parking supply accommodates the development's car parking requirements stipulated in the Fairfield DCP (2013);
- car park layout has generally been designed in accordance with the requirements of the Australian Standards AS 2890.2 (2002), AS 2890.1 (2004) and AS 2890.6 (2009); and
- traffic generated by the proposal will be minimal and is not expected to adversely impact upon the safety or operation of the surrounding road network.

Further, it is recommended that:

- the columns within the under-croft car parking areas are required to be located between 0.75 m and 1.75 m from the edge of the access aisle; and
- parking signage be installed for the allocated parking bays.

Evan Boloutis
Director
EB Traffic Solutions Pty Ltd

B.Eng (Civil), MEng Sc (Traffic), MBA

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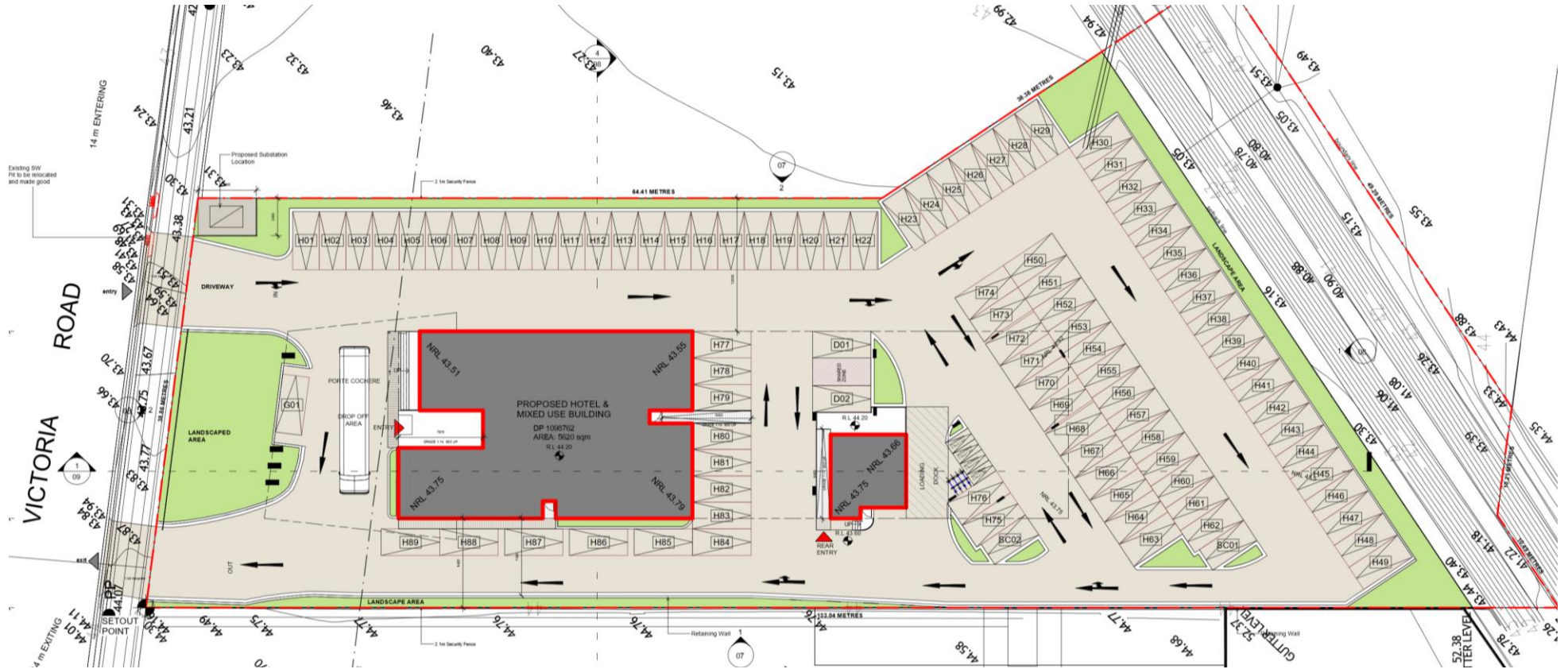
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ATTACHMENT A
RESULTS OF PARKING SURVEYS

ROAD LENGTH	Max. Spots	Thursday 8 September 16						Saturday 10 September 16				
		9 am	11 am	1 pm	3 pm	5 pm	8 pm	9 am	11 am	3 pm	5 pm	8 pm
VICTORIA STREET (Between Newton Rd and Ormsby Pl)												
North side												
<i>Unrestricted</i>	50	15	18	16	14	14	13	8	10	11	11	10
South Side												
<i>long/heavy vehs can stop >1hr 6 pm - 6 am all times</i>	60	27	36	33	30	23	18	13	16	16	17	20
NEWTON ROAD (Between Victoria St and bend)												
East side												
<i>unrestricted</i>	10	3	7	7	8	5	2	0	1	0	2	3
West side												
<i>unrestricted</i>	28	4	6	7	7	11	16	9	11	11	12	13
TOTAL	148	49	67	63	59	53	49	30	38	38	42	46

ATTACHMENT B
PROPOSED ACCESS POINTS AND CAR PARKING AREAS

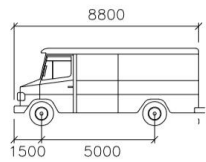


ATTACHMENT C
SWEPT PATH ANALYSIS (B99 CAR)

ATTACHMENT D
SWEPT PATH ANALYSIS (14 M COACH)

ATTACHMENT E
SWEPT PATH ANALYSIS (8.8 M MRV)

Design Vehicle



MRV : mm
 Width : 2500
 Track : 2500
 Lock to Lock Time : 6.0
 Steering Angle : 38.7



449 Victoria Street, Wetherill Park
 Swept Path Diagram
 8.8m Rigid Truck

Scale 1:200 @ A3
 Plan prepared by EB Traffic Solutions Pty Ltd
 Date: 17/04/2018

Sheet 02