75-87 Dunheved Circuit, St Marys (NSW)

Traffic & Car Parking Assessment Report

Client: Concrete Estates Pty Ltd

Prepared by

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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 and a description of the proposal;
- assessment of the development's car parking requirements;
- adequacy of the on-site car parking supply to accommodate the proposal's car and bicycle parking requirements;
- assessment of the adequacy of the car park layout; and
- traffic impact of the proposal.

1.2 Referenced documents

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

- Nearmap, Google maps and Melways online;
- Penrith Council's web site and www.transportnsw.info;
- Discussions with and information provided by the applicant;
- Penrith Local Environmental Plan (2010) and Penrith Development Control Plan (2014);
- NSW Government Planning Guidelines for Walking and Cycling, Dec 2004;
- Australian Standards AS 2890.1 (2004), AS 2890.6 (2009), AS 2890.2 (2018) and AutoTURN computer software for the swept path analysis;
- Traffic Authority of NSW, Guide to Traffic Generating Developments (Oct 2002); and
- Layout plan prepared by EMKC, Job 100285, Dwg SM DA01, Rev F, dated 14 May 2021.

2. EXISTING CONDITIONS

2.1 Location and Land use

The subject site is located on the west side of Dunheved Circuit approximately 250 m south of Dunheved Circuit (west).

The location of the subject site is shown in **Figure 2.1**.

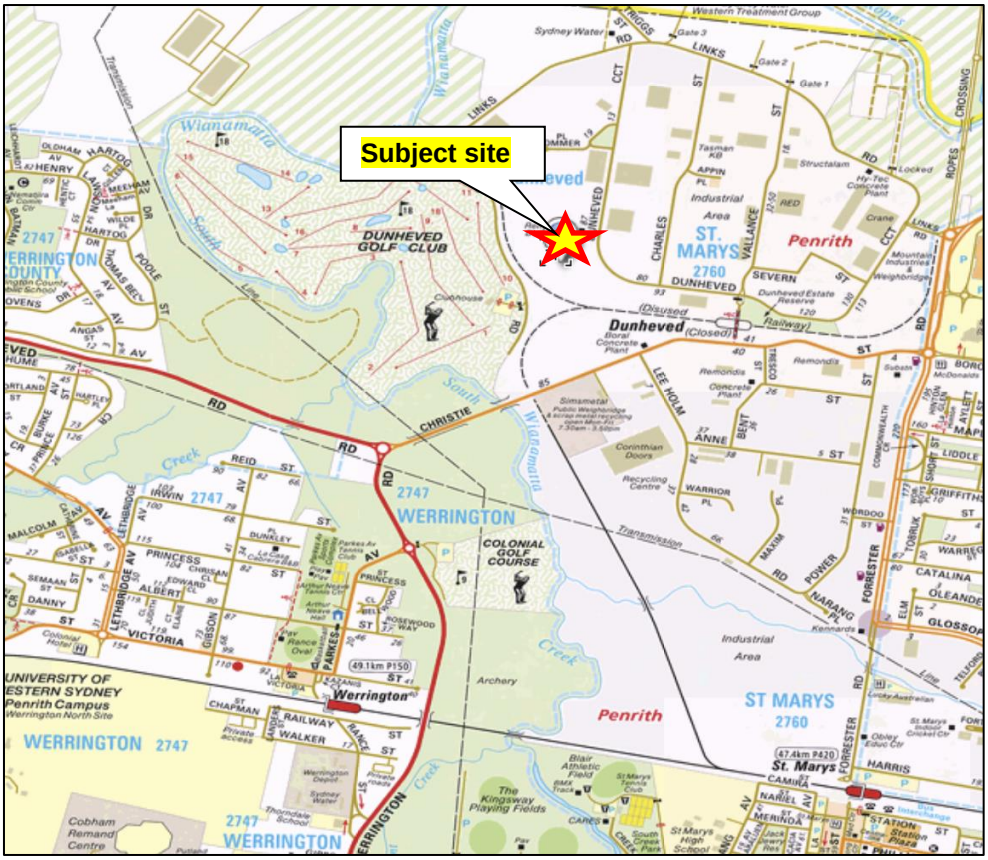

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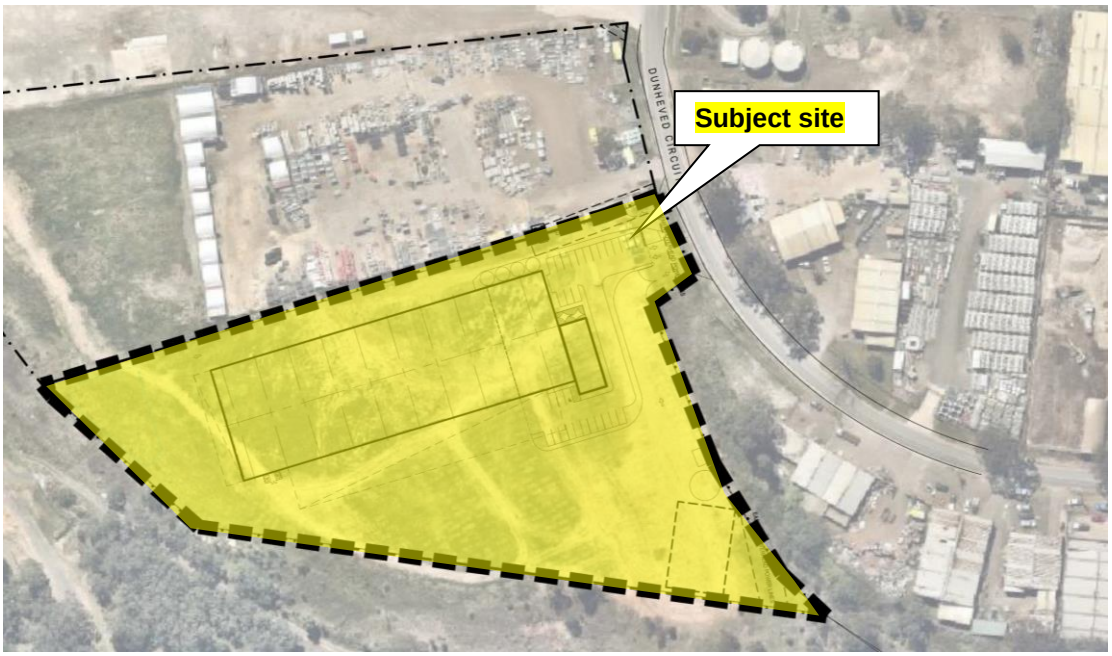
Figure 2.1: Location of the subject site

The site is currently vacant land with the surrounding area predominantly comprised of light industrial uses. The nature of the site and surrounds is shown in **Figure 2.2.**



Source: EMKC

Figure 2.2: Nature of the subject site and surrounds

2.2 Road Network

Dunheved Circuit is a local road with an undivided cross section containing a shared traffic and parking lane in each direction. Unrestricted parking restrictions generally apply along the roadway, however 'no parking' restrictions apply along the roadway around the bend in the immediate vicinity of the site.

Photos showing the cross section of Dunheved Circuit looking to the north and south are shown in **Figure 2.3** and **Figure 2.4**, respectively.

Source: google maps

Figure 2.3: Dunheved Circuit looking north

Source: google maps

Figure 2.4: Dunheved Circuit looking south

3. THE PROPOSAL

It is proposed to construct a warehouse with a gross floor area of 5,300 sqm including ancillary offices. A total of 53 spaces, inclusive of an accessible space will be provided on the site.

Access to/from the on-site car parking spaces will be provided via a central two-way access located approximately midway along the site's frontage.

Access for commercial vehicles will be provided via a separate entry access located adjacent to the site's northern boundary and a separate exit access located adjacent to the site's southern boundary.

The proposed warehouse will operate on weekdays between 6 am and 6 pm and on Saturdays between 7 am and 12 noon. The warehouse will be closed on Sundays.

The layout of the proposed development is shown in **Attachment A**.

4. CAR PARKING CONSIDERATIONS

4.1 Car Parking Requirements

The car parking requirements for the proposed development are set out in the *Penrith DCP (2014),* specifically Table C10.2 which states, amongst other things, the car parking requirement for a warehouse including ancillary offices is *1 space per 100 sqm Gross Floor Area*.

Further, reference to the Building Code of Australia indicates that there is a requirement for one of the parking spaces to be an accessible parking bay.

Application of the car parking requirements to the proposed development results in a requirement of 53 spaces, one of which is required to be an accessible parking bay, which is satisfied by the development's proposed parking provision of 53 spaces, inclusive of an accessible space.

4.2 Bicycle Parking Requirements

The *Penrith Development Control Plan (2014)* states that the bicycle parking requirements are to be provided in accordance with the NSW Government Planning Guidelines for Walking and Cycling (Dec 2004).

Reference to the guidelines indicate that in Chapter 7.6, Table 1, that, bicycle parking for Industrial/Warehouses uses be provided at a rate of 3-5 % for staff and 5-10% of the parking supply for visitors.

Having regard to the above and given the location of the proposed development, it is recommended that a bicycle rack containing eight spaces be provided on the site.

4.3 Car Park Layout

4.3.1 Dimensions of spaces

The parking spaces have been provided with the dimensions of 2.6 m in width and 5.5 m in length with a minimum aisle width of 6.5 m, which complies with the requirements stipulated in AS 2890.1:2004.

An accessible space has been provided at a width of 2.6 m and a length of 5.5 m with an adjacent shared space provided at a width of 2.6 m with a bollard located centrally within the shared space offset by 800 mm from the edge of the accessway. Which complies with AS 2890.6:2009.

Blind aisle extensions of at least 1 m have been provided within the car parking areas which accords with the requirements stipulated in AS 2890.1:2004.

4.3.2 Width of access

To determine the width of the accessway, reference is made to Clause 3.2.1 of AS 2890.1:2004 which states that, for Class 3/3a developments (with a local road frontage) which contain between 25 and 100 on-site spaces, a minimum accessway width of 6 m is required to be provided.

Reference to the layout plan indicates that a width of 6.4 m has been provided along the central car park accessway which accords with AS 2890.1:2004.

Further, to comply with Clause 3.2.2 of AS 2890.1:2004, 300 mm wide kerbs are required to be provided on either side of the accessways.

4.3.3 Access to/from car accommodation spaces

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

The swept path analysis undertaken on the layout plan shows that the staff and visitors are able to safely enter the car park, access all spaces to then exit from the car park in a forward manner.

4.3.4 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 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 of the frontage road (and vice versa).

Reference to the layout plans indicate that sight line triangles are able to be provided on either side of the accessway at the title boundary which accords with Figure 3.3 of the Australian Standard for off-street car parking, AS 2890.1:2004.

It is further noted that there is no footpath along the west side of Dunheved Circuit adjacent to the development site and therefore pedestrians are unlikely to be walking along the edge of the roadway.

5. COMMERCIAL VEHICLES

Information provided by the applicant indicates that the largest truck accessing the warehouse will be a 26 m B-double articulated vehicle.

5.1 Headroom clearance

Information provided by the applicant indicates that there is a height clearance of 6 m beneath the rear awning which satisfies the headroom clearance requirements stipulated in Australian Standard AS 2890.2:2018, for an articulated vehicle.

It is further recommended that the height clearance beneath the roller shutter doors along the south side of the warehouse and within the warehouse be provided at a minimum of 4.5 m to accord with that specified in Australian Standard AS 2890.2:2018.

5.2 Width of accessways

The width of the entry access is 6.5 m and the width of the exit access is a minimum of 7.08 m which accords with that specified in Australian Standard AS 2890.2:2018.

5.3 Accessibility

The swept paths of a vehicle entering and exiting the proposed development site have been assessed with the use of the AutoTURN swept path computer software for a 26 m B-Double articulated vehicle.

Reference to the swept path analysis indicates that a 26 m B-Double articulated vehicle can safely enter the entry access, circulate around the warehouse to then exit from the development site in a forward manner to Dunheved Circuit, as shown in **Attachment B**.

6. TRAFFIC IMPACT

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

7. CONCLUSIONS AND RECOMMENDATIONS

Having regard to the above, it is concluded that:

- the development's car parking requirements correspond to 53 spaces, inclusive of an accessible space, which is satisfied by the development's provision of 53 spaces, inclusive of an accessible space; 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:

- a bicycle rack containing eight spaces be provided on the site;
- 300 mm wide kerbs are required to be provided on either side of the accessways;
- The height clearance beneath the roller shutter doors along the south side of the warehoused and within the warehouse is a minimum of 4.5 m; and
- Any vegetation within the sight line triangles be provided at a maximum height of 900 mm.

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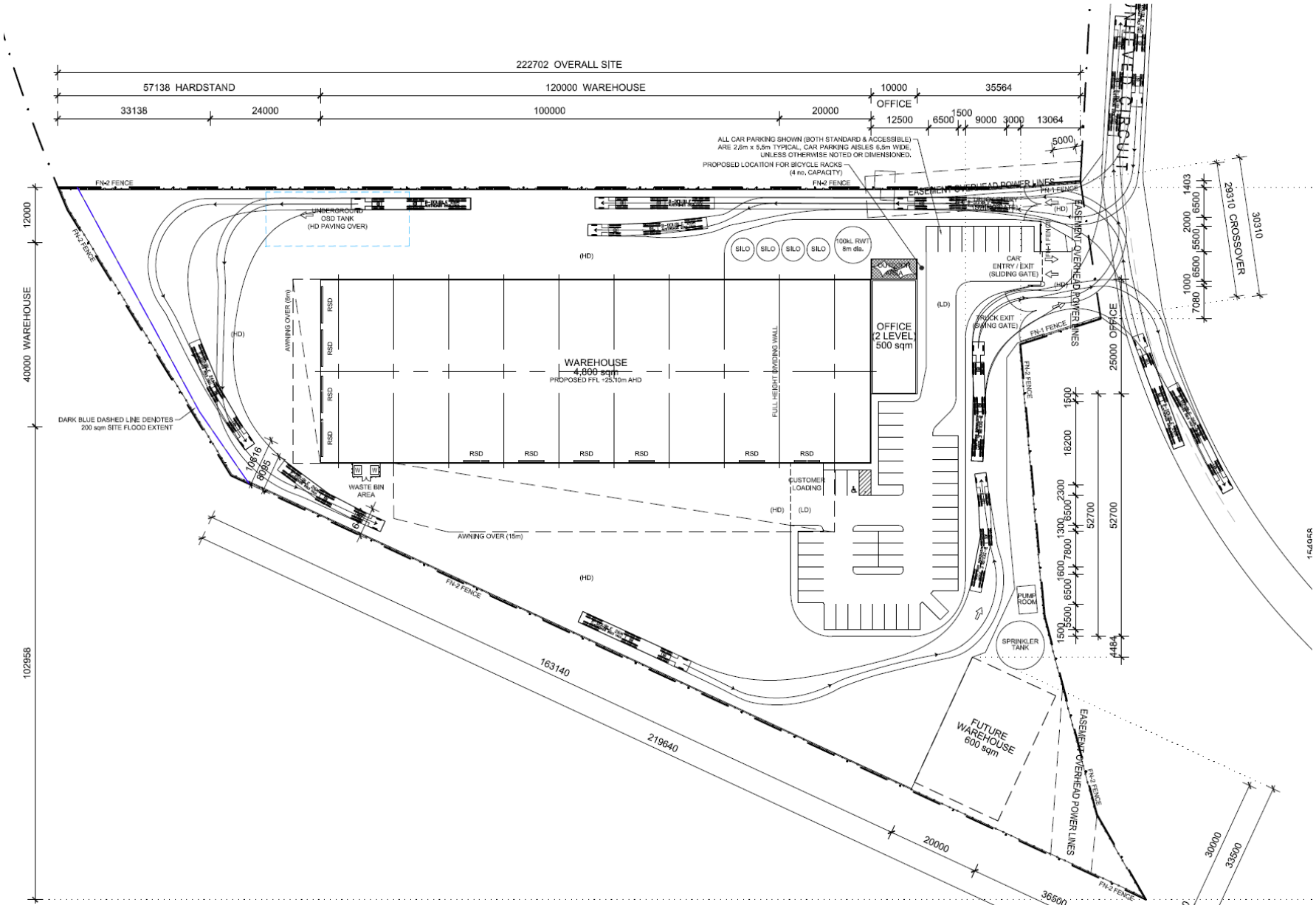
ATTACHMENT A

LAYOUT OF PROPOSED DEVELOPMENT



ATTACHMENT B

SWEPT PATH ANALYSIS