CARPARK CERTIFICATION OF A PROPOSED MIXED-USE DEVELOPMENT

608-612 High Street in Penrith

Prepared for: Arvi Rannaste Architect

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1. INTRODUCTION

Motion Traffic Engineers was commissioned by Arvi Rannaste Architect to prepare a car parking certification report of a proposed Mixed-Use development at 608-612 High Street in Penrith.

Vehicle access and egress to the car parking areas is via Union Lane.

Parking is provided on the basement level.

A truck loading bay is provided on the basement level with truck access and egress via Union Lane.

Reference is made to AS2890.1 (2004), AS2890.2 (2002) and AS2890.6 (2009) and Council's Development Control Plan for compliance.

2. DRIVEWAY AND RAMPS

The details of the driveway/ramp from Union Lane to the basement level are as follows from the perspective of the inbound movement for descriptive purposes only:

- The width of the driveway is 6 metres at the property line and remains constant throughout the length of the ramp.
- The gradients along the centre line are as follows:
    - 8.3 percent for 4 metres
    - 8.3 percent for 4 meters
    - 12.9 percent for 12.9 metres
    - 8.3 percent for 4 meters

A convex safety mirror should be placed at the bottom of the ramp

3. CAR SPACES AND TRUCK LOADING BAY

The details of the car parking areas are as follows:

- The parking aisle has flat gradient
- The car parking aisle is 6 metres wide minimum
- The general 90-degree car spaces are 2.5 metres wide minimum and 5.4 metres long minimum
- Spaces adjacent to walls have an additional 300mm width
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- The disabled car space is 3.8 metres wide with a length of 6 metres
- Another disabled car space is 2.5 metres wide with a length of 5.4 metres
    - A shared zone with same dimension has been provided

- The columns length complies. The column setback is a minimum 540mm rather than 750mm required.
    - The wider parking aisle of 6.385m (0.585 metre long than the minimum standard of 5.8 metres) compensates for the 210mm shorter in column setback
- Blind aisle extensions of 1 metre minimum have been provided
- A truck loading zone of 4.9 meters width and 11.6 meters length has been provided.

4. SWEPT PATHS

A swept turning path analysis is performed using a B85 car with a length of 4.9 metres and waste truck with a length of 8.8 metres, as set in the Australian Standards to confirm that vehicle movements are adequate.

The following Swept Paths have been performed:

- B85 car forward inbound and reverse outbound to car spaces C2 and C3
- Waste truck reverse inbound and forward outbound to waste vehicle parking bay

All swept paths show adequate manoeuvrability.

The swept paths are presented in the Appendix A.

5. CAR SIGHT DISTANCE

The car driver's sight distance requirement to enter the external road is stated in Figure 3.2 of AS2890.1.

The sight distance varies according to the speed of the external road. Union Lane has a speed limit of 50km/hr.

The minimum sight distance required is 45 metres. The minimum vehicle sight distance is met.

The pedestrian sight distance triangle is met as set out in Figure 3.3 of AS2890.1.

6. TRUCK SIGHT DISTANCE

The car driver's sight distance requirement to enter the external road is stated in Figure 3.3 of AS2890.2.

The sight distance varies according to the speed of the external road. Union Lane has a speed limit of 50km/hr.

The minimum sight distance required is 69 metres. Site measurements showed that the minimum sight distance looking left or right is met without permanent obstructions.

The pedestrian sight triangle (as set out in Figure 3.4 of AS2890.2) is met as well.

7. CONCLUSIONS AND RECOMMENDATIONS

The car parking area and driveway is overall compliant with Australian Standards and Council's DCP.

APPENDIX A – SWEPT PATHS