

CARPARK, RAMP AND DRIVEWAY CERTIFICATION OF A PROPOSED BOARDING HOUSE DEVELOPMENT

16 Wyatt Avenue in Belrose

Prepared for: NORTHERN BEACHES ESSENTIAL
ACCOMMODATION

N216473A (Version 2a)

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Motion Traffic Engineers Pty Ltd
Telephone:
940 33588
sydney@motiontraffic.com.au

ACN 600201583

1. INTRODUCTION

Motion Traffic Engineers was commissioned by NORTHERN BEACHES ESSENTIAL ACCOMMODATION to prepare a car parking certification report of the proposed boarding house development at 16 Wyatt Avenue in Belrose.

Vehicle access and egress to the parking areas are via Wyatt Avenue. The car park is provided on the two different basement levels and are physically separate (such as no ramp between two parking areas).

Three passing bays are provided.

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

2. DRIVEWAY

The details of the driveway from Wyatt Avenue into the ground level parking area are as follows from the perspective of the inbound movement for descriptive purposes only:

- The width of the driveway is 5.5 metres at the property line and reduces to 4.4 metres

The gradients are as follows and comply for a Heavy rigid vehicle.

Main Ramp		
Distance (m)	Grade (%)	Grade Change (%)
7	-5	
14	-8.24	3.24
13	-12.5	-4.26
33.24	-14.7	-2.2
7	-8.7	6
7	-2.5	6.2
7	-8.7	-6.2
29.4	-10	-1.3
7	-5	5
7	-6.3	-1.3
31.55	-7.4	-1.1

Ramp to Upper Building		
Distance (m)	Grade (%)	Rate of Change of Grade (%)
12	-2.5	0

Ramp to Lower Building		
Distance (m)	Grade (%)	Rate of Change of Grade (%)
7	-6.3	0
6.3	-11.1	-4.8
7	-6.3	4.8

The maximum roadway and ramp grades, and rates of change of grades for a heavy rigid vehicle are stated in Table 3.2 of AS2890.2. The rate of change of grade along the main ramp complies with the maximum permissible rate of change of grade.

3. CAR SPACES

The details of the car parking areas are as follows:

Southern Parking Area

- The car parking aisle is 5.8 metres wide
- The 90-degree car spaces are 2.5 metres wide and 5.5 metres long
 - Columns with appropriate setbacks are provided
- The disabled car space is 2.5 metres wide and 5.5 metres long
 - A shared zone of same dimensions has been provided.
 - Bollard with appropriate setback should be provided in the shared zone
- The motorcycle spaces are 1.2 metres wide and 2.5 metres long
- Bicycle spaces are provided
- Blind aisle extensions are provided
- A turn bay is provided

Northern Parking Area

- The car parking aisle is 5.8 metres wide
- The 90-degree car spaces are 2.5 metres wide minimum and 5.5 metres long
- The motorcycle spaces are 1.2 metres wide and 2.5 metres long
- Bicycle spaces are provided
- Blind aisle extensions are provided
- A turn bay is provided

4. 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. Wyatt Avenue 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 as set out in Figure 3.3 of AS2890.1 and is met as well.

5. TRUCK SIGHT DISTANCE

The truck 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. Wyatt Avenue has a default 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 and is met as well.

6. CONCLUSIONS AND RECOMMENDATIONS

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

The rate of change of grade for the driveway/ramp is compliant with Australian Standards for a Heavy Rigid Vehicle.