

**PROPOSED MIXED USE DEVELOPMENT
17-23 MERRIWA STREET, GORDON**

***Assessment of Traffic and
Parking Implications***

November 2013
(Rev A)

Reference 13164

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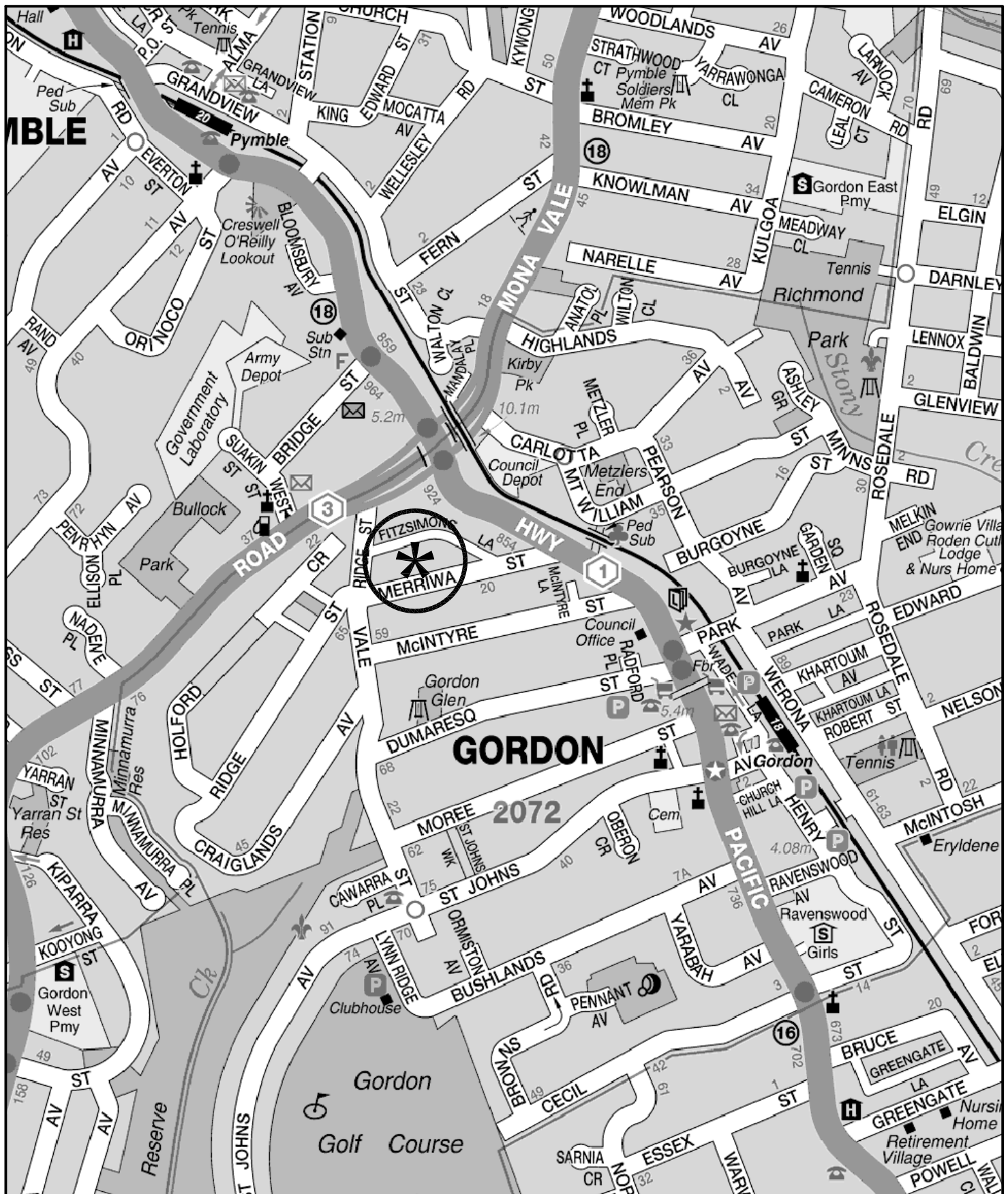
1. INTRODUCTION

This report has been prepared to accompany a Development Application to Ku-Ring-Gai Council for a proposed mixed use development at 17-23 Merriwa Street in Gordon (Figure 1).

The development site is located on the western side of the Pacific Highway to the south of the Gordon commercial centre. The site currently comprises a three-storey commercial complex while the proposed mixed use development involves 100m² of commercial floorspace and 117 unit over 7 storeys with associated basement car parking.

The purpose of this report is to:

- * describe the site and the proposed development scheme
- * describe the road network serving the site and the prevailing traffic conditions
- * assess the adequacy of the proposed parking provision
- * assess the potential traffic implications
- * assess the suitability of the proposed vehicle access, internal circulation and servicing arrangements.



| | | |
|----------------------|--|--|
| <p>LEGEND</p> | | <p>LOCATION</p> <p>FIG 1</p> |
|----------------------|--|--|

2. PROPOSED DEVELOPMENT SCHEME

2.1 SITE AND CONTEXT

The development site (Figure 2) is known as Lot 40 DP 803006 and located on the low side of Fitzsimons Lane and the high side of Merriwa Street just to the south of the Gordon commercial centre. The generally rectangular shaped site occupies a total area of 4,320 m² with frontages to Merriwa Street and Fitzsimons Lane.

The site is currently occupied by a three-storey commercial building with vehicle accesses gained via the western boundaries of Merriwa Street and Fitzsimons Lane.

Surrounding land uses comprise:

- * the numerous commercial buildings adjoining to the north, east and west
- * the mix of low-medium residential properties on the southern side of Merriwa Street

2.2 DEVELOPMENT PROPOSAL

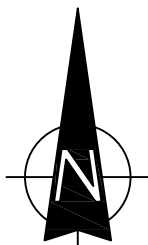
It is proposed to construct a 6-storey residential apartment building comprising:

100 m² commercial floorspace
69 x one-bedroom apartments
44 x two-bedroom apartments
4 x three-bedroom apartments
Total 117 apartments

A total of 153 parking spaces will be provided in the basement levels with vehicle accesses generally similar to the existing arrangements.



LEGEND



SITE

FIG 2

Details of the proposed development scheme are provided on the architectural plans prepared by Brewster Murray, which accompany the Development Application and are reproduced in part in Appendix A.

3. ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

The existing road network serving the development site (Figure 3) comprises:

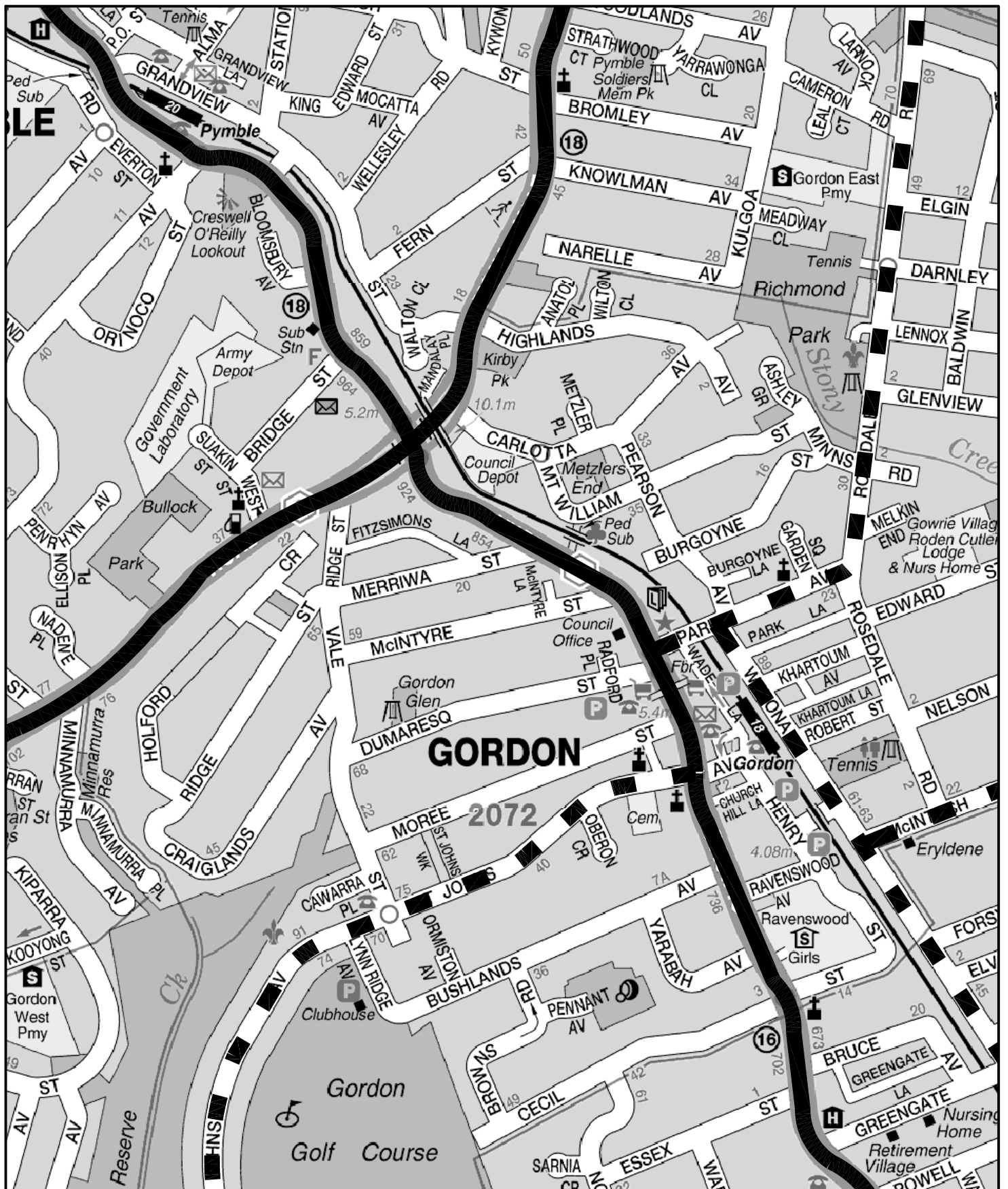
- * *Pacific Highway* – a State Highway and arterial route providing major north/south connection from Sydney to the north coast
- * *Ryde Road – Mona Vale Road* - a classified State Road and arterial route being part of the Metroad 3 route
- * the minor collector roads serving the Gordon area to the east and west of the Highway which includes St John's Avenue, Werona Avenue and Park Avenue.

Merriwa Street has a 7.5 metre wide roadway and is relatively straight and level along the site frontage while Fitzsimons Lane has a 10 metre roadway width and connects between Ridge Street and Merriwa Street.




3.2 TRAFFIC CONTROLS

The existing traffic and parking controls in the surrounding road network include:

- * the CLEARWAY and NO STOPPING restrictions along the Pacific Highway
- * the traffic signals along the Pacific Highway at the Park Avenue, Dumaresq Street, St John's Avenue and Cecil Street intersections
- * the 60 kph speed restriction on Pacific Highway and 50 kph speed restriction on the local road system
- * the STOP sign control at the Merriwa Street/Pacific Highway intersection



LEGEND

-  ARTERIAL
-  SUB-ARTERIAL
-  COLLECTOR



ROAD NETWORK

FIG 3

FIG 4

3.3 TRAFFIC CONDITIONS

An indication of the prevailing traffic conditions in the area is provided by data published by the RMS and surveys undertaken in the vicinity road network. The RMS data is expressed in terms of Annual Average Daily Traffic (AADT) and the latest recorded volumes in the vicinity of the site are:

| | | |
|------------------------------------|---|--------|
| Pacific Highway south of Ryde Road | - | 49,022 |
| Ryde Road south of Pacific Highway | - | 60,364 |

Details of the daily traffic flows along the Highway are provided by data from the 'permanent' counting station, which is summarised in the following:

| | | Peak Traffic Flows | |
|-----------------|------------|---------------------------|----------------|
| | | AM Peak | PM Peak |
| Pacific Highway | Northbound | 1,490 | 2,610 |
| | Southbound | 3,800 | 1,950 |

The traffic flows along Merriwa Street and Fitzsimons Lane are generally minor while access to/from and across the highway is available at the sign controlled Merriwa Street and Pacific Highway intersection.

Traffic conditions are generally satisfactory in the area despite significant arterial flows on the Pacific Highway, although some queuing occurs at the major Mona Vale Road/Ryde Road intersection.

3.4 PUBLIC TRANSPORT

The development site is located some 800 metres north of Gordon Railway Station which is serviced by trains operating on the North Shore Line. Services operate on a 15 minute frequency on weekends in both directions up to 12.30am. Weekday evening services from Hornsby to the City stop at Gordon every 10 minutes up to 7.00pm and every 15 minutes until 12.30am. In the reverse direction trains stop at Gordon on a similar frequency.

Shorelink provides bus services which run along the Highway connecting between Gordon and Chatswood and it is evident that the site is well served by public transport.

4. TRAFFIC

The Roads and Maritime Services development guidelines¹ specify a peak hour traffic generation rate for high density residential development of 0.19 vtpd per unit and the existing commercial use at 1.6 vt per 100 m² (GFA).

The traffic generation circumstances relative to the proposed development in the morning and afternoon peak periods are as follows:

| | | |
|--|---|---------|
| Existing Commercial (estimated 4700 m ²) | - | 75 vtpd |
| Proposed development (117 units) | - | 23 vtpd |

As indicated by the rates above, it is apparent that the projected traffic generation represents a significant reduction from the existing use and therefore will not act to create any discernible traffic congestion or conflict either at the vehicle access point or at adjacent intersections.

¹ *Guide to Traffic Generating Development
Section 3 Landuse Traffic Generation
Roads and Traffic Authority*

5. PARKING

The criteria for car parking and access for the proposed development is specified in Kuring-gai Local Centres DCP 2012 as follows:

| | Minimum | Maximum |
|------------------------|-------------------------|-------------------------|
| Commercial | 1 per 33 m ² | 1 per 33 m ² |
| Residential Apartments | | |
| 1 Bed | 0.6 space | 1 space |
| 2 Bed | 1 space | 1.25 space |
| 3 Bed | 2 space | 2 spaces |
| Visitors | 1 space per 6 units | 1 space per 6 units |

Application of this criteria to the development scheme indicates the following provision:

| | Minimum | Maximum |
|---------------------------------|-------------------|-------------------|
| Commercial (100m ²) | 4 spaces | 4 spaces |
| Residential Apartments | | |
| 70 x 1 Bed | 42 spaces | 69 spaces |
| 44 x 2 Bed | 44 spaces | 55 spaces |
| 4 x 3 Bed | 8 spaces | 8 spaces |
| Visitors (117 units) | 20 spaces | 20 spaces |
| Total permissible | 118 spaces | 156 spaces |

In accordance with these requirements, it is proposed to provide a total of 153 spaces including 14 disable driver spaces. In addition it is proposed to provide for 36 bicycle spaces within the car parking area. Based on the above the proposed parking provision will be in accordance with the appropriate DCP criteria.

6. ACCESS, INTERNAL CIRCULATION AND SERVICING

6.1 ACCESS

The access and parking arrangements have been designed with reference to Australian Standard AS2890 Part 1-2004. According to the standard, the carpark will be classified as a Class 1A facility, which is relevant to the type of driveway required. The access classification is defined in Table 3.1 of the standard and refers to the carpark classification, the frontage road type and the provision of parking spaces being served.

The accesses will be located on relatively straight sections of Merriwa Street and Fitzsimons Lane where suitable sight distances are available. The sight distance requirements are described in Section 3.2 of the standard and are prescribed on the basis of the sign posted speed limit or 85th percentile vehicle speeds along the fronting roads. Both Merriwa Street and Fitzsimons Lane have posted speed limits of 50kph and this requires a desirable visibility distance of 69 metres and minimum distance of 45 metres. Unobstructed visibility in excess of this requirement is available from the proposed driveways locations.

In relation to pedestrian visibility, the areas adjacent to the driveways will be unobstructed, providing a 2.0 x 2.5 metre visibility splays as described in Figure 3.3 of the standard.

6.2 INTERNAL CIRCULATION

The internal circulation and parking arrangements have been designed in accordance with the requirements of Section 2 of the standard.

According to Table 1.1 of the standard, the proposed carpark will be classified as a Class 1A facility, which requires parking space dimensions of 2.4 x 5.4 metres with an access aisle width of 5.8 metres. In all areas of the carpark these requirements have been met.

6.3 SERVICING

The proposed development has been designed to accommodate the turning movements of the Ku-ring-gai Council refuse vehicle with a height clearance requirement of 2.6m. The swept paths of the refuse vehicle are provided in Appendix A confirming adequate provision for the access and 'turnaround' of a waste vehicle.

The infrequent servicing of the site by larger delivery vehicles (e.g. furniture pantechnicons and/or furniture delivery vehicles) will be satisfied through the available on-street parking as is normal for developments of this nature.

7. PRELIMINARY CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Program (approx.)

Demolition – 8 week

Excavation – 16 weeks

Construction – 80 weeks

Truck Routes

See Plan Figure 5

Truck Movements (approximation)

Demolition – 4-5 HRV's per day

Excavation – 4-5 HRV's per day

Construction – 2-3 MRV's-HRV's per day plus occasional concrete pours

Fencing

A Class around site

Traffic Control

For reversing or movement of materials across footway

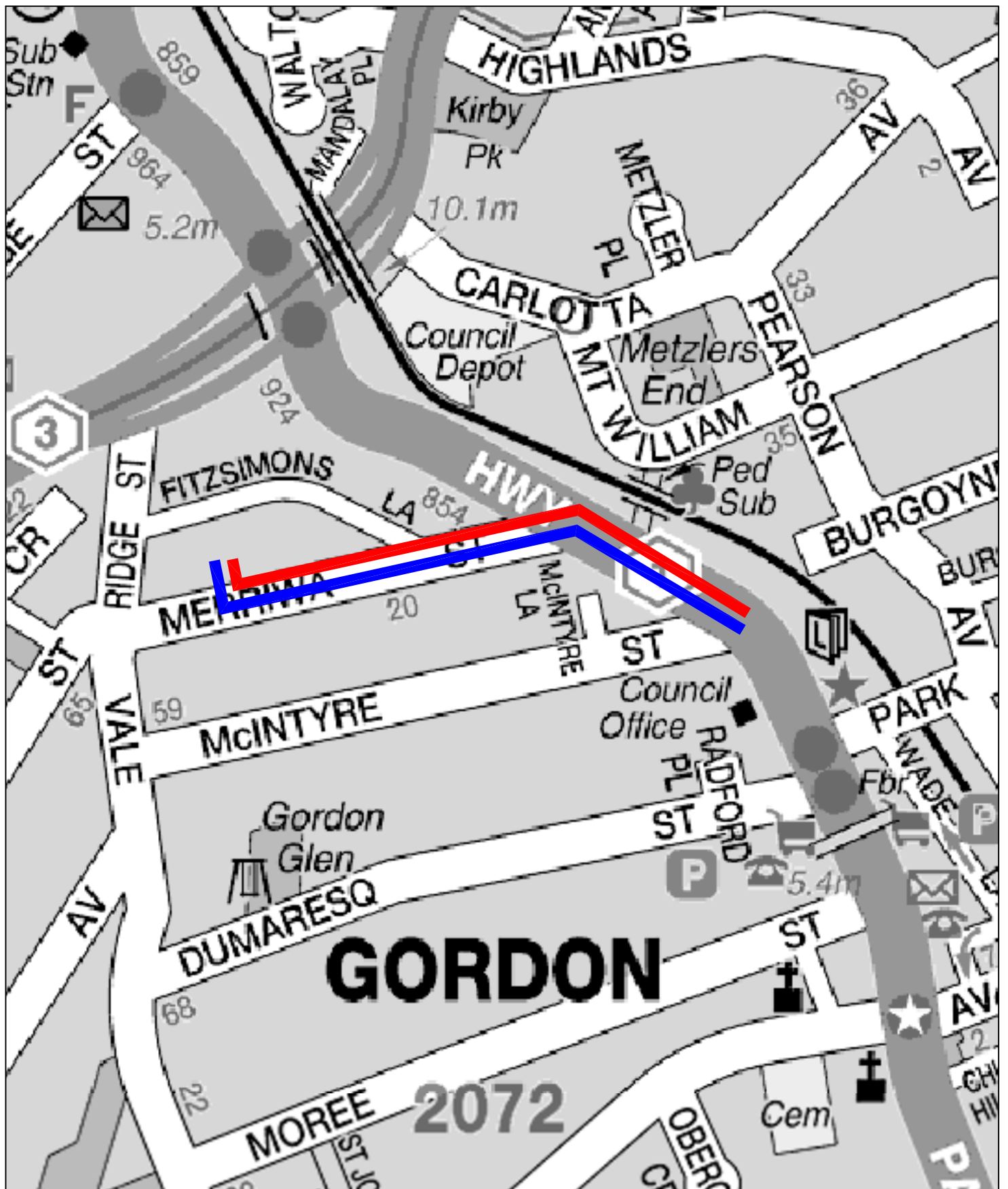
Works Zone

Subject to builders determination and application

Materials Handling and Storage

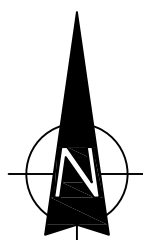
All on site. Temporary mobile crane use subject to builder's application

Final CTMP and any Traffic Control Plans will be subject to subsequent applications responding to Consent Condition requirements



LEGEND

- ARRIVAL
- DEPARTURE



TRUCK ROUTES

FIG 5

8. CONCLUSION

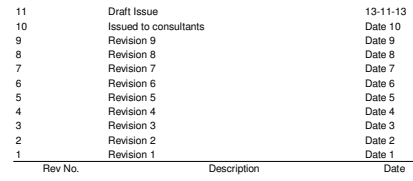
The traffic and parking assessment undertaken for the proposed development has concluded that:

- * the traffic generation of the proposed development will be consistent with other existing developments in the area
- * the traffic generation of the proposed development will not present any unacceptable traffic and road safety implications
- * the proposed parking provision will adequately serve the demand associated with the development
- * the proposed access, internal circulation and parking arrangements will be appropriate to current design standards.

APPENDIX A

Architectural Plans

MERRIWA STREET



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FITZSIMONS LANE



MERRIWA STREET

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|----|-----------------------|----------|
| 11 | Draft Issue | 13/11/13 |
| 10 | Issued to consultants | Date 10 |
| 9 | Revision 9 | Date 9 |
| 8 | Revision 8 | Date 8 |
| 7 | Revision 7 | Date 7 |
| 6 | Revision 6 | Date 6 |
| 5 | Revision 5 | Date 5 |
| 4 | Revision 4 | Date 4 |
| 3 | Revision 3 | Date 3 |
| 2 | Revision 2 | Date 2 |
| 1 | Revision 1 | Date 1 |

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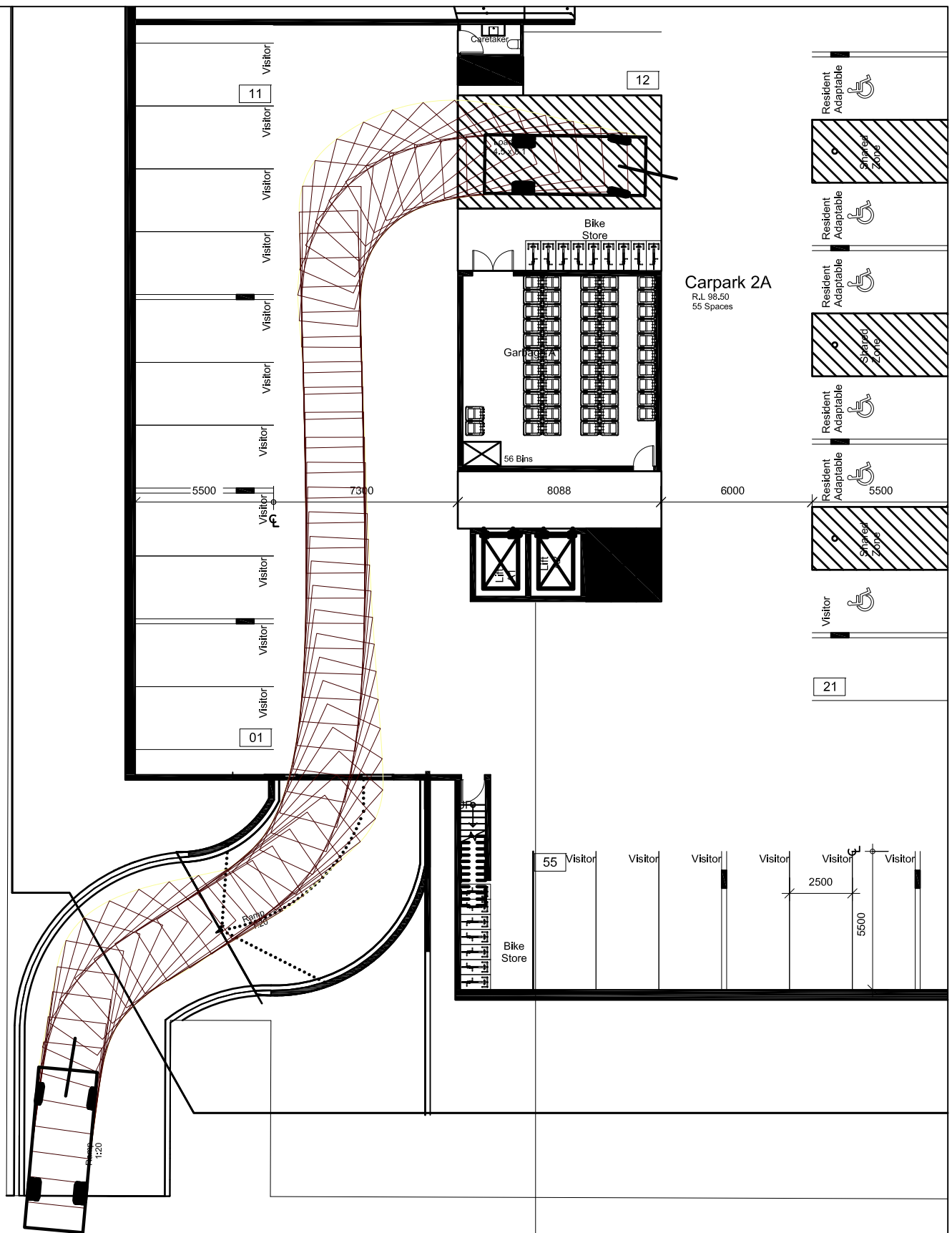
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MERRIWA STREET

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| 9 | Revision 9 | Date 9 |
| 8 | Revision 8 | Date 8 |
| 7 | Revision 7 | Date 7 |
| 6 | Revision 6 | Date 6 |
| 5 | Revision 5 | Date 5 |
| 4 | Revision 4 | Date 4 |
| 3 | Revision 3 | Date 3 |
| 2 | Revision 2 | Date 2 |
| 1 | Revision 1 | Date 1 |

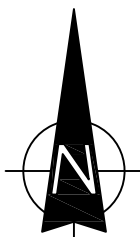
APPENDIX B

Swept Path Analysis



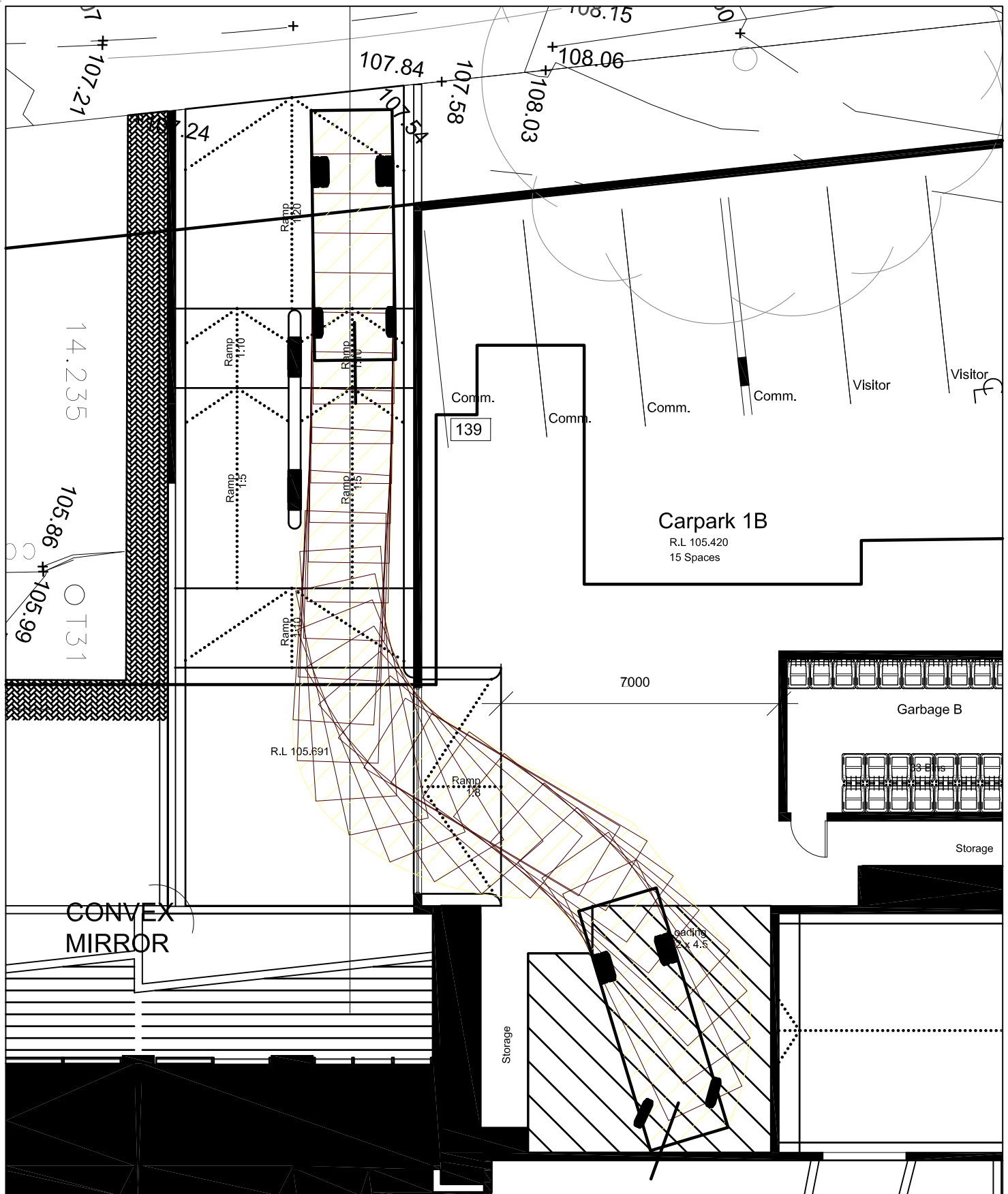
LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



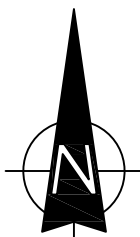
**SWEPT PATH ANALYSIS
OF AN 6.3m RIGID
VEHICLE ENTERING THE SITE
(BDG A)**

SP 1



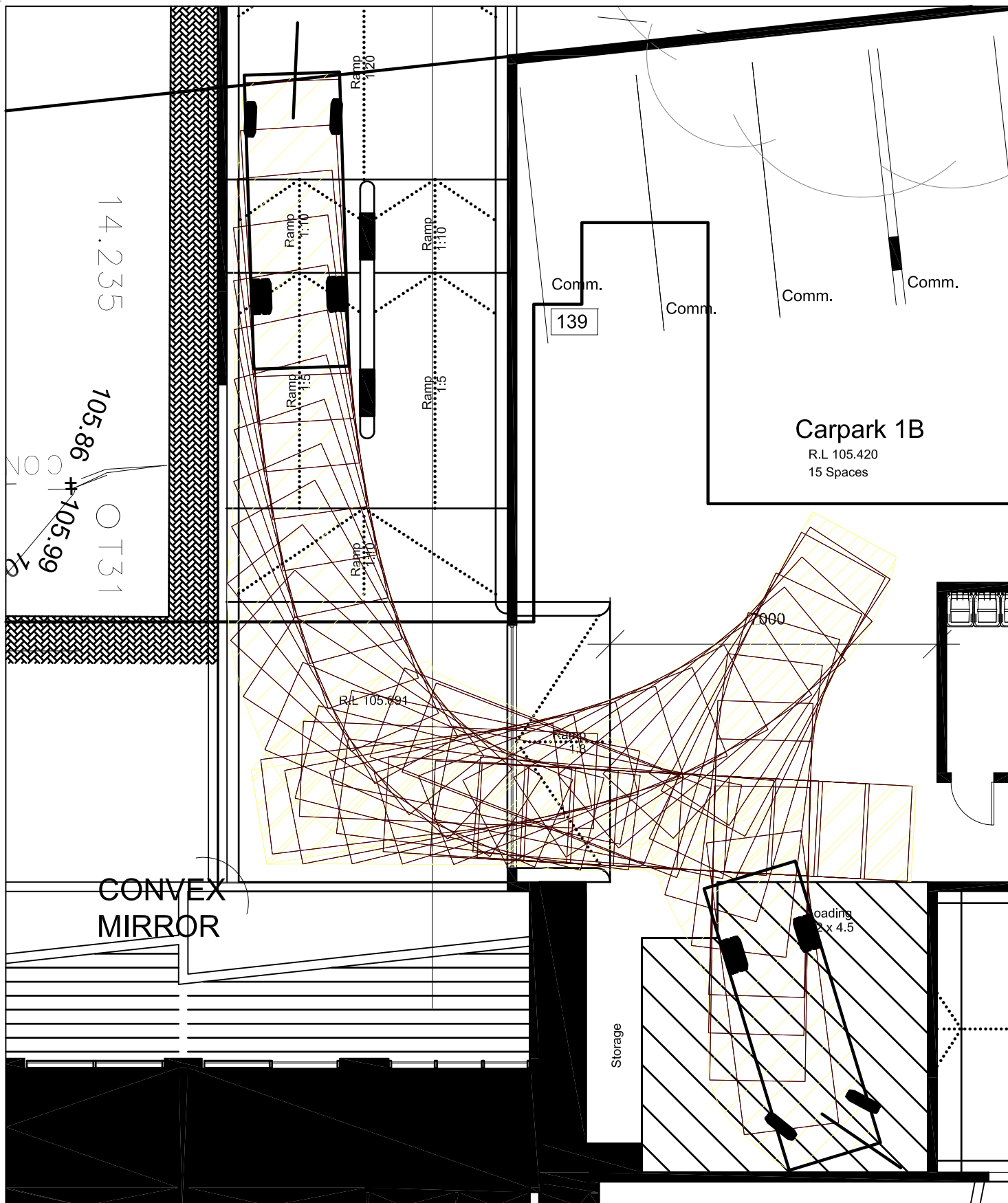
LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



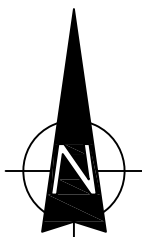
**SWEPT PATH ANALYSIS
OF AN 6.3m RIGID
VEHICLE ENTERING THE
SITE(BDG B)**

SP 3



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF AN 6.3m RIGID
VEHICLE EXITING THE
SITE(BDG B)**

SP 4