

Proposed Residential Development

680, 682, 684, & 688 East Street & 165 Alexandra Street, East Albury

Traffic and Parking Assessment

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Issue: B

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1.0 Introduction

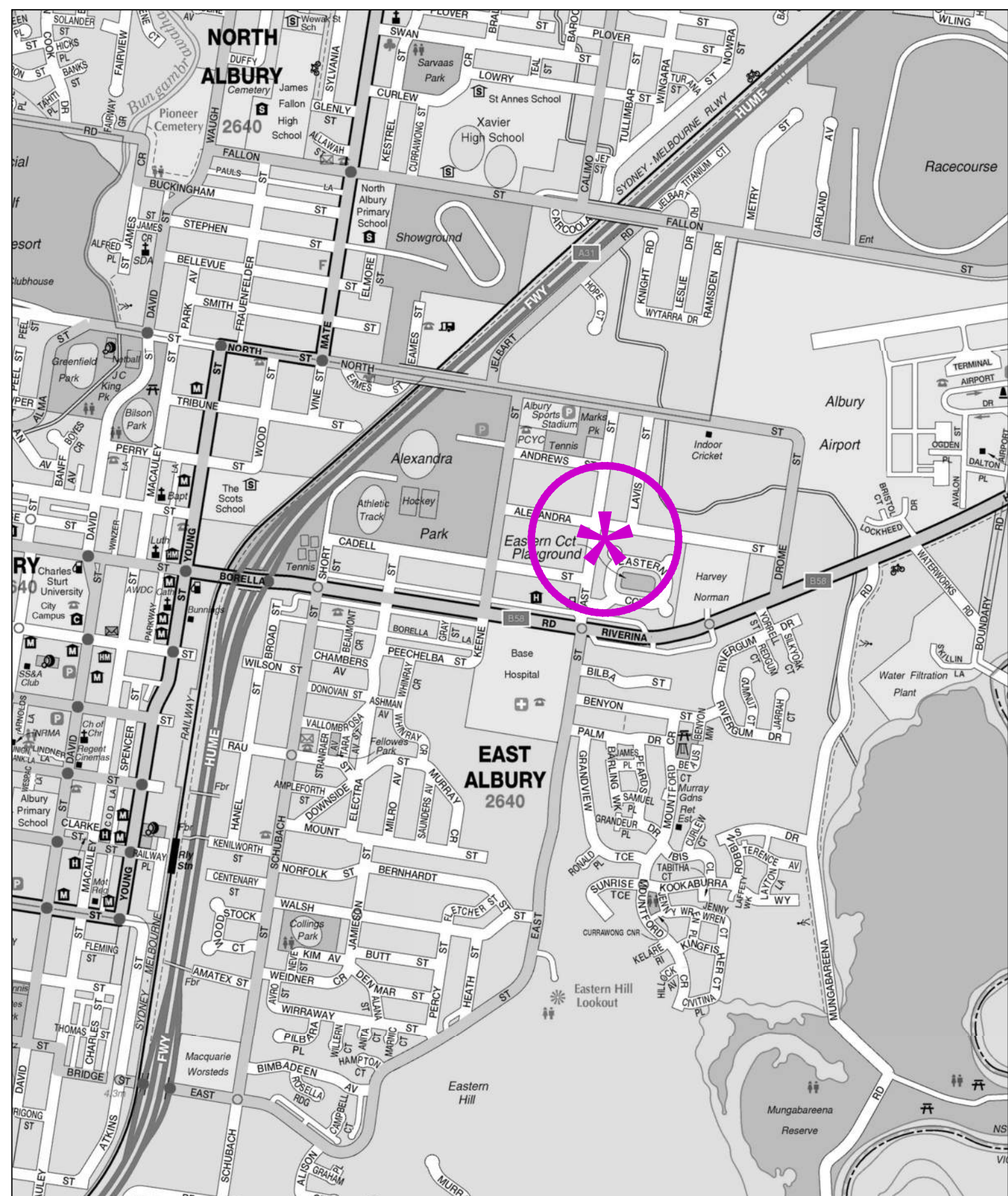
This report has been prepared for Land and Housing Corporation (LAHC) to accompany a submission concerning a proposed development scheme of 24 dwellings on a consolidated site at 680, 682, 684, & 688 East Street & 165 Alexandra Street, East Albury.

The purpose of this report is to:

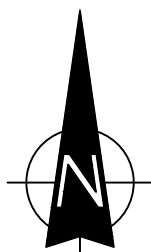
- ❖ describe the site, its context, and the proposed development scheme
- ❖ describe the road network serving the site and the prevailing traffic conditions
- ❖ assess the adequacy of the proposed parking provision
- ❖ assess the potential traffic implications
- ❖ assess the suitability of the proposed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

The assessment has regard to and refers to the following technical guides:

- ❖ Housing State Environmental Planning Policy (2021)
- ❖ RMS Guide to Traffic Generating Developments (2002)
- ❖ AS2890.1:2004 - Off Street Parking Facilities



LEGEND



LOCATION

FIG 1

2.0 Proposed Development

2.1 Site and Existing Circumstances

The site (Figure 2) is a consolidation of Lots 11, 12, 13, 14, and 15 in DP 243192, located at 680, 682, 684, & 688 East Street & 165 Alexandra Street, East Albury. It occupies a rectangular shape area of some 3,388 m² and is bounded by East Street to the west and Alexandra Street to the north.

The site is currently occupied by five individual residential dwellings and is surrounded by broadly similar residential developments. Other notable land uses in the vicinity include the Albury Base Hospital to the southwest, Albury Airport to the northeast, Albury North Public School and Xavier High School to the northwest.

2.2 Proposed Development

It is proposed to demolish the existing buildings on the site, undertake minor earthworks to provide a level building platform, and construct a two-storey residential complex comprising 24 dwellings in the following makeup:

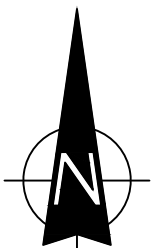
- 10 x two-bedroom dwellings
- 14 x one-bedroom dwellings

Vehicle accesses are to be provided at Alexandra Street to an at-grade car park accommodating 16 parking spaces, including 2 accessible spaces, plus one adaptable car space accessed via East Street.

Architectural details of the proposed development are provided on the plans prepared by Brewster Murray Architects and are reproduced in part in Appendix A.



LEGEND



SITE

FIG 2

3.0 Existing Road Network and Traffic Circumstances

3.1 Road Network

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

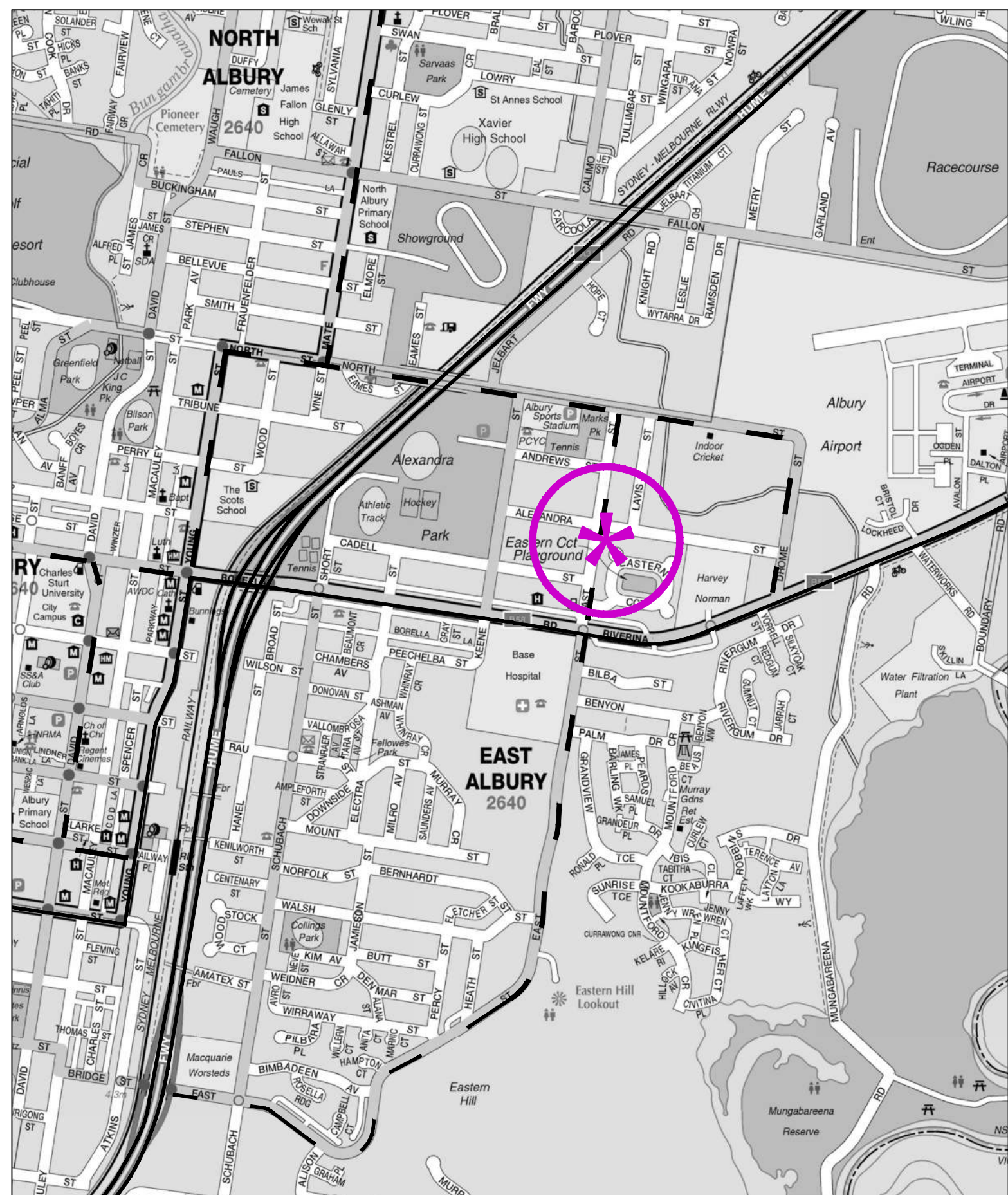
- ❖ *Hume Highway* – a State Road and arterial route running to the east of the Albury Centre
- ❖ *Riverina Highway* – a State Road and arterial route running along Bethanga Bridge via Albury, Howlong to Deniliquin
- ❖ *Young Street, North Street, Mate Street* – part of a collector road route through Albury linking to suburbs to the north
- ❖ *East Street* – a collector road feeding traffic into Riverina Highway and Hume Highway
- ❖ *Alexandra Street* – a local access road

3.2 Traffic & Parking Conditions

It is not practical to collect traffic data at the time of this assessment as present traffic circumstances are not reflective of the typical road network operation due to the pandemic lockdown/proximity to the pandemic lockdown effect.

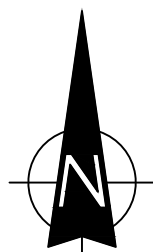
However, a desktop research¹ indicates local commuters' peak periods occur later in the morning, between 9am and 10am. Extracts collected from the Google Typical Traffic Profile for the morning period (7am to 10am) are provided below.

¹ Google Typical Traffic Profile



LEGEND

- ARTERIAL
- COLLECTOR



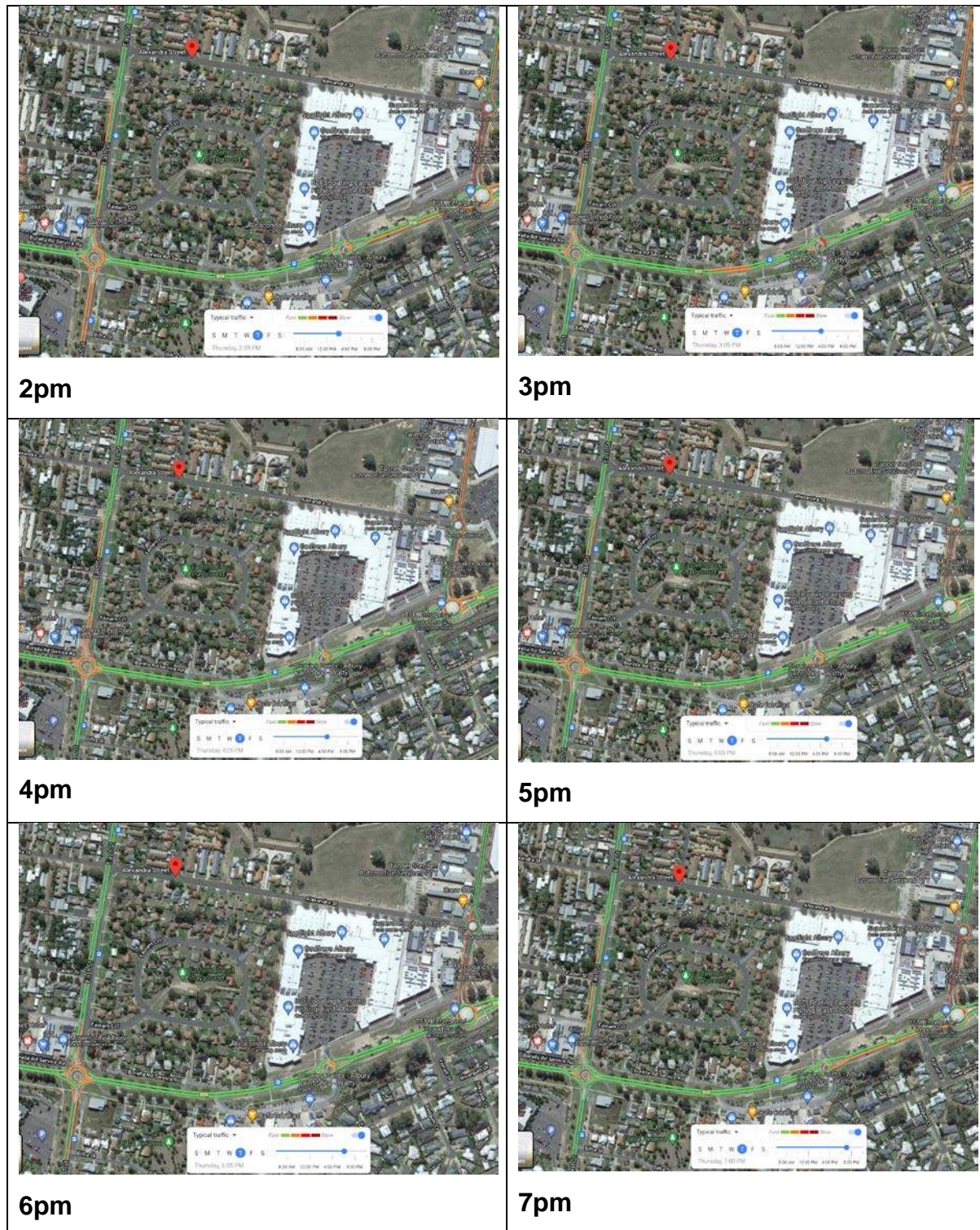
ROAD NETWORK

FIG 3

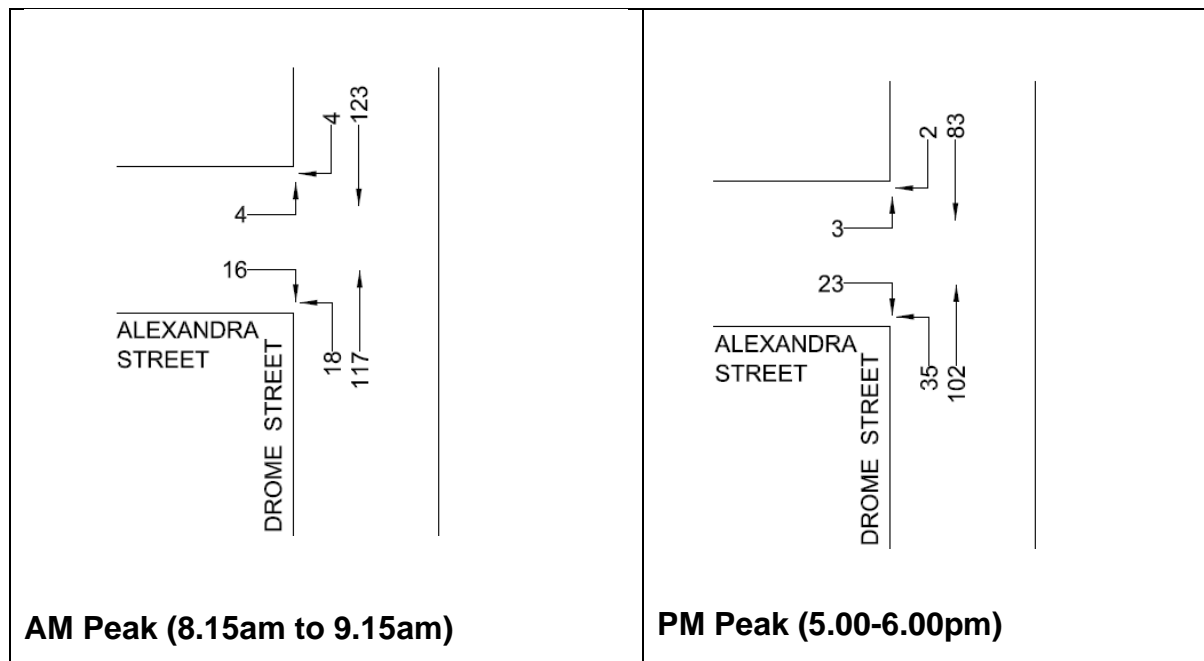


This is consistent with typical regional centres' travel characteristics – where due to a less congested road network affords residents shorter commuting times between home and workplaces.

In the afternoon, peak traffic movements generally occur between 5pm and 6pm as indicated in the following extracts (which cover an extensive period between 2pm to 7pm). It is also recorded in the Google Traffic profile that East Street is subject to some delays between 2pm and 3pm. The period coincides with typical school pick up period and it can be reasonably expected that these are as a result of local traffic movements between the local residential areas and schools.



There are no notable delays on Alexandria Street. A pre-pandemic survey (2018) undertaken at the intersection of Alexandria Street/Drome Street indicated low AM and PM peak traffic movements at Alexandria Street. The associated traffic volumes are indicated below:



It is apparent that Alexandria Street were only subject to 42 and 63 two-way traffic movements in the AM and PM peaks in the pre-COVID period. If it is assumed conservatively that the background traffic has grown at a rate of 3% per annum since that time, then the traffic flows on Alexandria Street would be 46 and 69 movements in the AM and PM peaks, respectively. Traffic movements of this order of magnitude are well within the RMS-defined environmental capacity of 300 vehicle movements per hour.

There is ample on-street parking available in the site's vicinity. A desktop assessment² indicates that these spaces are unrestricted, and there is no apparent 'supply & demand' issue as the fronting residences have ample off-street parking.

3.3 Transport Services

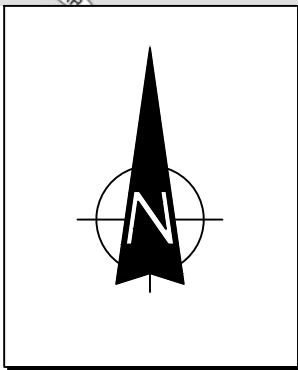
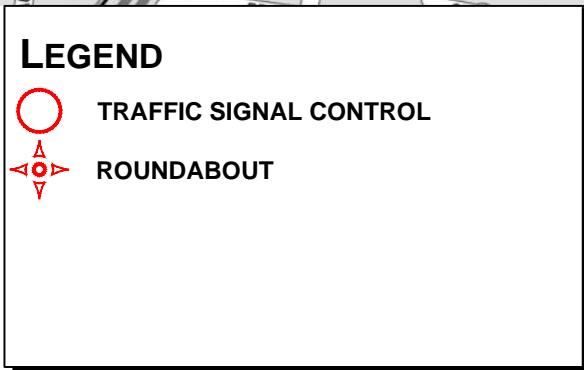
The Albury Railway Station some 2km to the southeast provides a connection between Sydney and Melbourne. The nearest bus stop is located on East Street (Stop ID: 264055 - East St opp Cadell St) some 60m south of the site. One bus route (no. 902) connects the site to Albury and East Albury via this bus stop.

² Google and Nearmap Imageries

3.4 Traffic Controls

The existing traffic controls on the road system (Figure 4) include:

- ❖ the 110kmph speed limit on Hume Highway
- ❖ the 60kmph speed limit on Riverina Highway
- ❖ the traffic signals along Young Street at the intersections of :
 - Wilson Street
 - Dean Street
 - Smollett Street.
- ❖ the roundabout controls at the intersections of
 - East Street and Riverina Highway / Borella Road
 - Alexandra Street and Drome Street
 - Drome Street and Riverina Highway.
- ❖ the GIVEWAY control at Alexandra Street and East Street Intersection.



**TRAFFIC
CONTROLS**

4.0 Parking

The relevant parking criteria are specified in the Housing SEPP (2021), which indicates the following ‘non-refusal basis’ parking rate for non-accessible areas (i.e., an area with limited access to high-frequency public transport services):

0.5 spaces per one-bedroom dwelling
1 space per two-bedroom dwelling

Application of the above criteria to the proposed development of 14 units would indicate a requirement of:

14 x one-bedroom	7 spaces
10 x two-bedroom	10 spaces
Total	17 spaces

Accordingly, it is proposed to provide 17 car spaces in the carpark. The proposal satisfies the SEPP’s minimum requirement. These spaces are designed to the geometrical requirements of User Class 1 (residential) in the AS2890.1:2004.

5.0 Traffic

The RMS Guide to Traffic Generating Developments specifies peak traffic generation rates of 0.85 vtpd per dwelling and 0.4-0.5 vtpd per unit for smaller, medium-density residential apartments.

Application of the above criteria to the five existing dwellings on the site and the proposed development would indicate the following peak traffic generation outcome:

	Peak Traffic
Existing (5)	- 5 vtpd
Proposed (24)	+ 12 vtpd
Net addition	+ 7 vtpd

The assessed development traffic 'impact' being the addition of 7 vtpd to the road network will not be significant in this context. The currently projected peak hours traffic 'load' on Alexandria Street is well below 100 vtpd and the development will only add to it the order of less than 10%. As a result, it is apparent that the local traffic movements will continue to remain within the threshold of 300 vtpd post development. On this basis, the assessment reveals the proposal will not impose an undue traffic impact on the local road network.

6.0 Access, Internal Circulation, and Servicing

6.1 Access

Two new accesses are proposed to serve the development:

- ❖ *Alexandria Street* - a 5.8m wide combined driveway (Category 1) with provision for opposing vehicles to pass as per the requirements of AS2890.1 Part 3.2.2
- ❖ *East Street* - a 3m wide driveway (Category 1 - domestic) serving one dwelling (Unit 12) consistent with a domestic driveway design (passing bay not required for a domestic driveway)

Both the driveways will be located with suitable sightlines (i.e., no fencing/structure/landscape obstructions) and comply with the relevant AS2890.1 design requirements.

6.2 Internal Circulation

Provisions made in the car park in relation to the car space geometry, aisle widths, and circulation aisle have regard to the AS2890.1 design criteria. All vehicles requiring access to the car park will be able to enter and exit the site in a forward manner. The single dwelling's driveway will involve one reverse manoeuvre when entering/exiting the garaged car park. This is an acceptable arrangement that is commonplace with low order usage driveway i.e., domestic dwellings (developments of four dwellings or less). Details of a swept path assessment that confirms an appropriate internal circulation arrangement are provided in Appendix B.

There will be three accessible/adaptable spaces provided as part of this proposal. These spaces are not designed to AS2890.6:2009, and their suitability is subject to the assessment of a suitably qualified Access Consultant.

6.2 Site Servicing

The refuse bins will be 'wheeled out' to the kerb frontage on the nominated collection days. Council's refuse vehicles will undertake its waste collection via East Street, as is normal for residential developments in the local area.

7.0 Conclusion

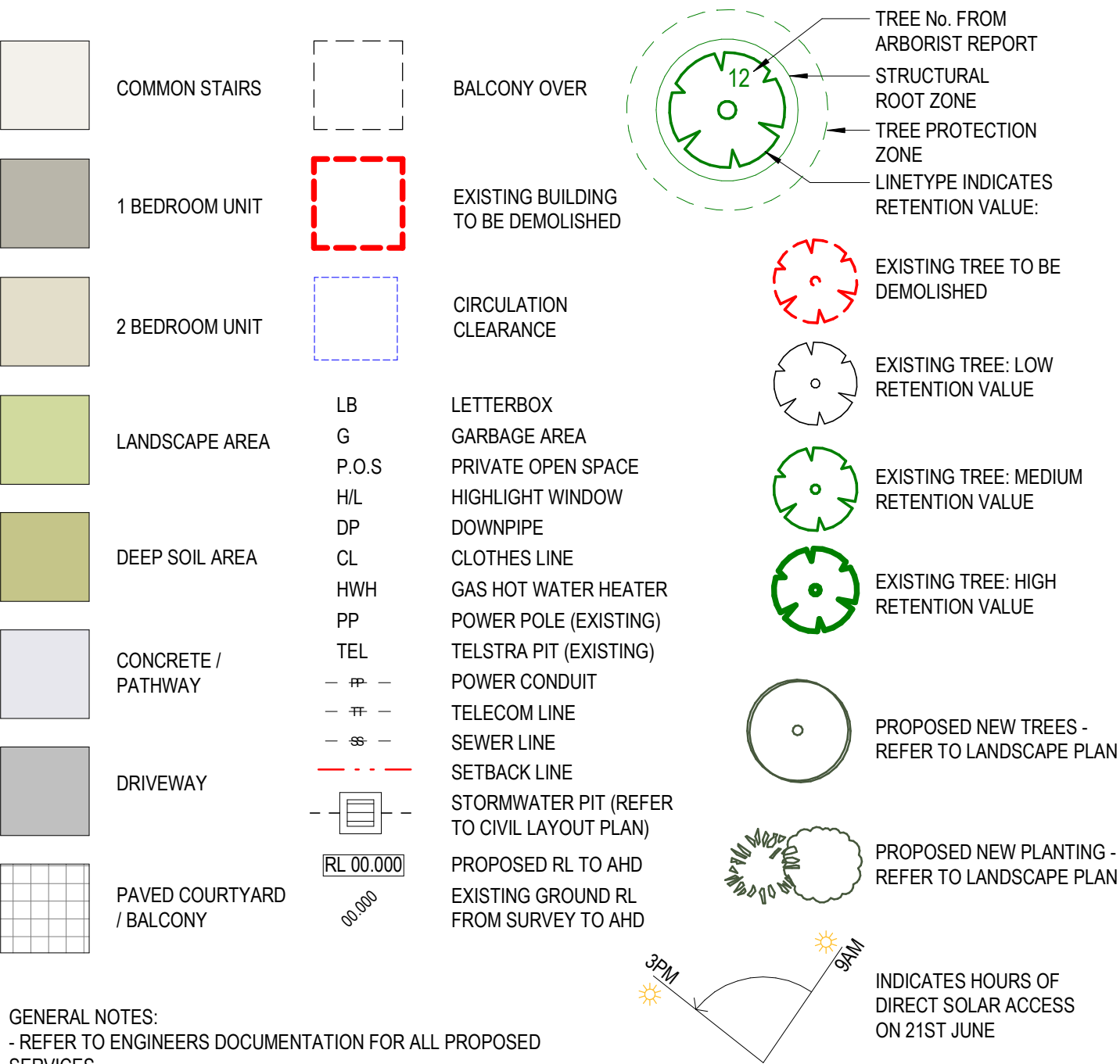
This assessment of the proposed LAHC Housing Development on a site at 680, 682, 684, & 688 East Street & 165 Alexandra Street, East Albury has established that:

- ❖ the proposed parking provision will be adequate, appropriate, and comply with the Housing SEPP 2021 provisions;
- ❖ the design of vehicle access, car park, and internal circulation arrangement will accord with the Australian Standards AS2890.1:2004; and
- ❖ the projected development's traffic generation will be minor and has no adverse effect on the existing road network.

Appendix A

Development Plans

LEGEND:



GENERAL NOTES:

- REFER TO ENGINEERS DOCUMENTATION FOR ALL PROPOSED SERVICES.
- REFER SURVEY DOCUMENTATION FOR ALL EXISTING SERVICES.
- ALL SLOPE ARROWS SHOW SLOPE UP UNLESS ANNOTATED 'FALL'.
- FEN-1 TYPICAL HEIGHT 1.8m
- FEN-2 TYPICAL HEIGHT 1.2m
- FEN-3 TYPICAL HEIGHT 1.2m

DEEP SOIL ZONES CALCULATION:
 DSZ1 - 344m² (AT REAR, 10% OF SITE AREA)
 DSZ2 - 33m²
 DSZ3 - 51m²
 DSZ3 - 185m²
 DSZ5 - 58m²
 TOTAL = 671m²

TREE SPECIES NAMES:

TREE 1	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 2	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 3	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 4	CALLISTEMON SPECIOS (BOTTLE BRUSH)
TREE 5	EUCALYPTUS MANNIFFERA (BRITTLE GUM)
TREE 6	LIGUSTRUM LUCIDUM (PRIVET)
TREE 7	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 8	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 9	LIGUSTRUM LUCIDUM (PRIVET)
TREE 10	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 11	ACER NEGUNDO (BOX ELDER)
TREE 12	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 13	EUCALYPTUS BAKELKY REDGUM
TREE 14	CUPRESSUS ARIZONICA (ARIZONA CYPRESS)
TREE 15	FRAXINUS RAYWOOD CLARET ASH
TREE 16	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)
TREE 17	FRAXINUS EXCELSIOR (DESERT/ EUROPEAN ASH)

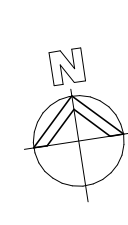


1 SITE PLAN
SCALE 1 : 200 MM



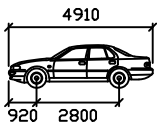
LOCKED BAG 5022
PARRAMATTA NSW 2124
Ph 1800 738 718
www.dpie.nsw.gov.au/land-and-housing-corporation

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MICHAEL BULLEN		9	05-11-21	REVISED FOR PART 5	BREWSTER MURRAY PTY LTD	GREENVIEW CONSULTING PTY LTD	NSW PLANNING & ENVIRONMENT LAND & HOUSING CORPORATION	DEVELOPMENT OF 24 UNITS UNDER SEPP HOUSING 2021	SITE PLAN	DATE	SCALE	PROJ	PROJECT NO
		8	29-10-21	REVISED FOR PART 5						07-03-22	1:200	MB	BGXPC
		7	15-09-21	ISSUE FOR PART 5						STAGE	SHEET SIZE	DESIGNER	CHECKED
		6	03-09-21	FOR CO-ORDINATION	BCA CONSULTANT	LANDSCAPE CONSULTANT				SK	A1	AG	MB
	REV	DATE	NOTATION/AMENDMENT		CODE CONDUIT	PRECINCT LANDSCAPES		680, 682, 684 & 688 East Street & 165 Alexandra Street, East Albury, NSW	FILE	PLOTTED	TYPE	SHEET	REV
			DO NOT SCALE DRAWINGS. CHECK ALL DIMENSIONS ON SITE. FIGURED DIMENSIONS TAKE PRECEDENCE.					LOTS 11, 12, 13, 14 & 15 in DP 243192				DA04	10



Appendix B

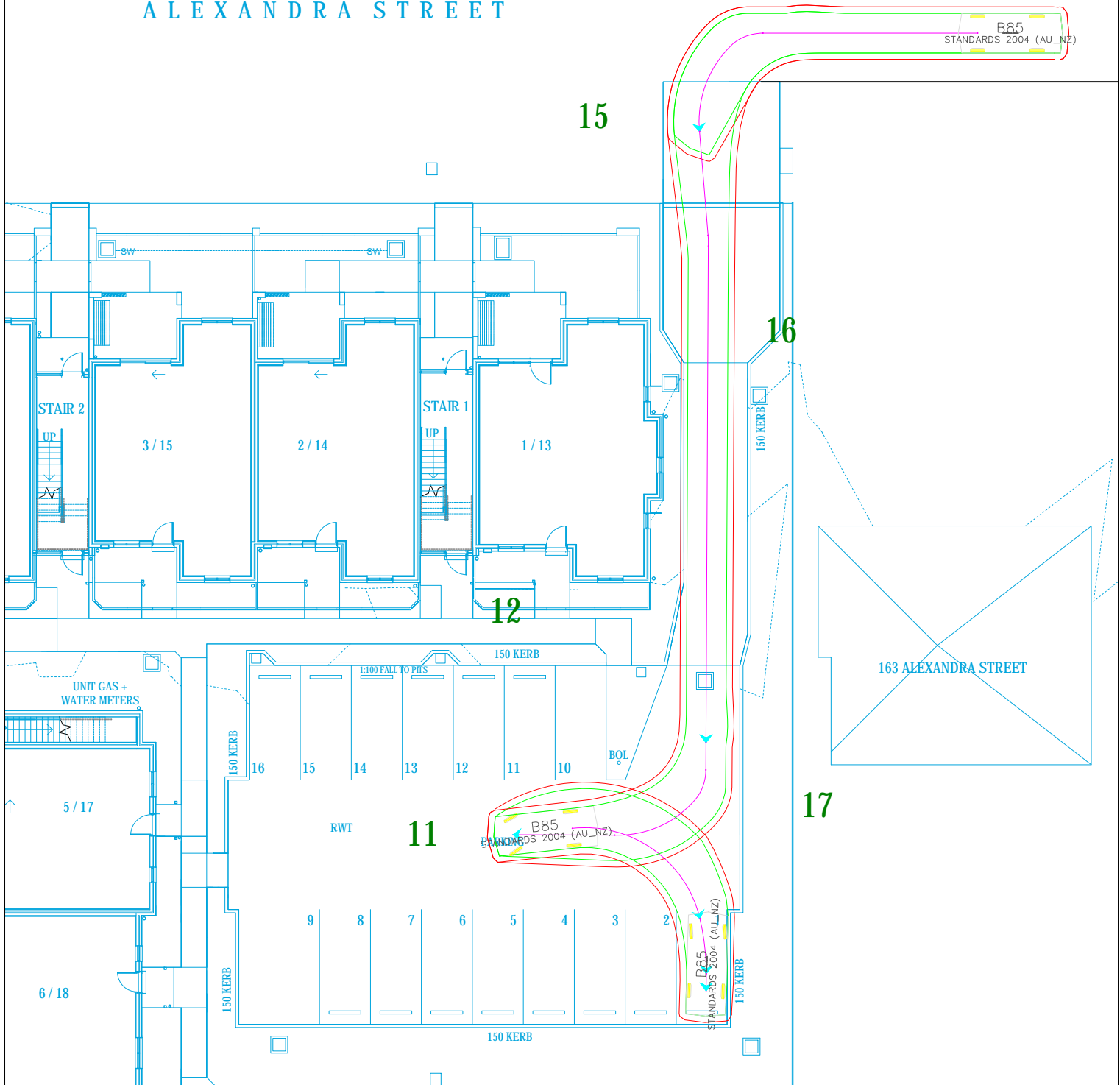
Turning Path Assessment



B85

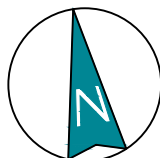
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Steering Angle : 34.1

ALEXANDRA STREET



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. 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
A B85 VEHICLE ENTERING
THE CAR PARK**

SP 1

ALEXANDRA STREET

B85
STANDARDS 2004 (AU_NZ)

15

16

12

163 ALEXANDRA STREET

17

STAIR 2

UP

3 / 15

2 / 14

STAIR 1

UP

1 / 13

UNIT GAS +
WATER METERS

5 / 17

6 / 18

RWT

11

PARKING

16

15

14

13

12

11

10

BOL

9

8

7

6

5

4

3

2

1

B85
STANDARDS 2004 (AU_NZ)

LEGEND

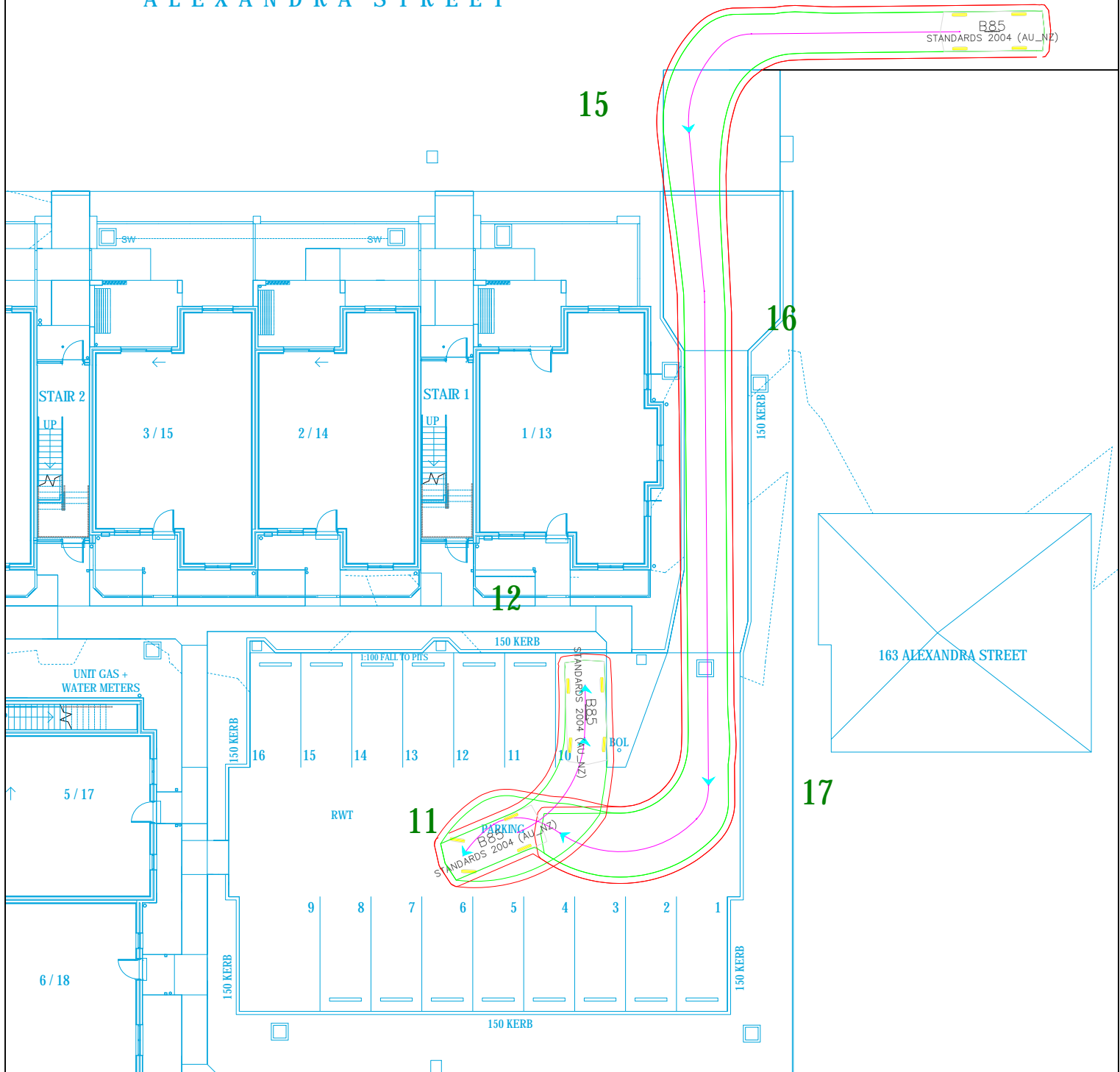
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**SWEPT PATH ANALYSIS OF
A B85 VEHICLE EXITING
THE CAR PARK**

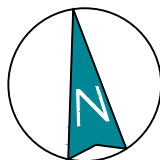
SP 2

ALEXANDRA STREET



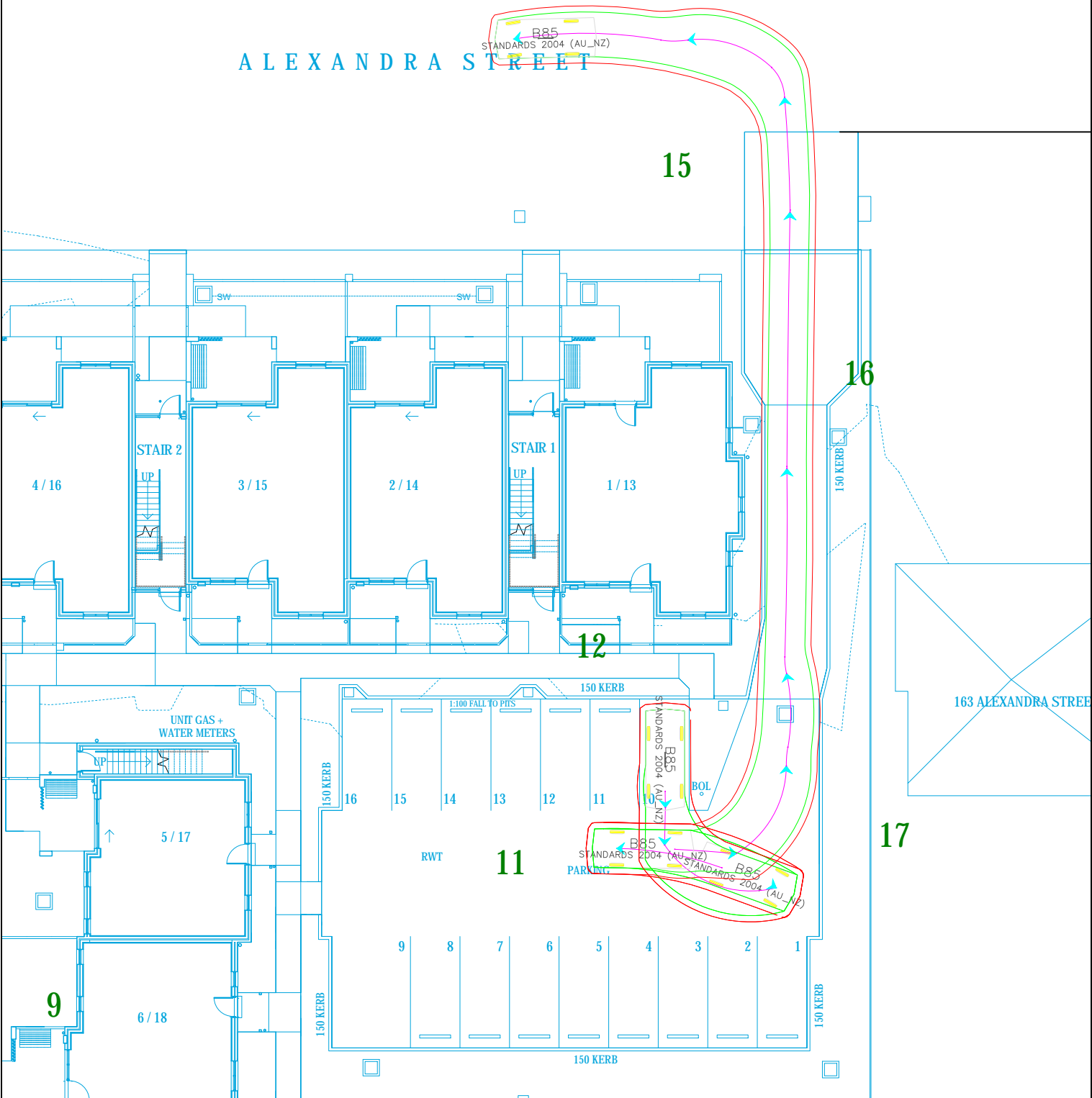
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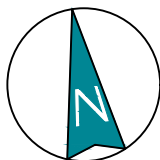
SWEPT PATH ANALYSIS OF A B85 VEHICLE ENTERING THE CAR PARK

SP 3



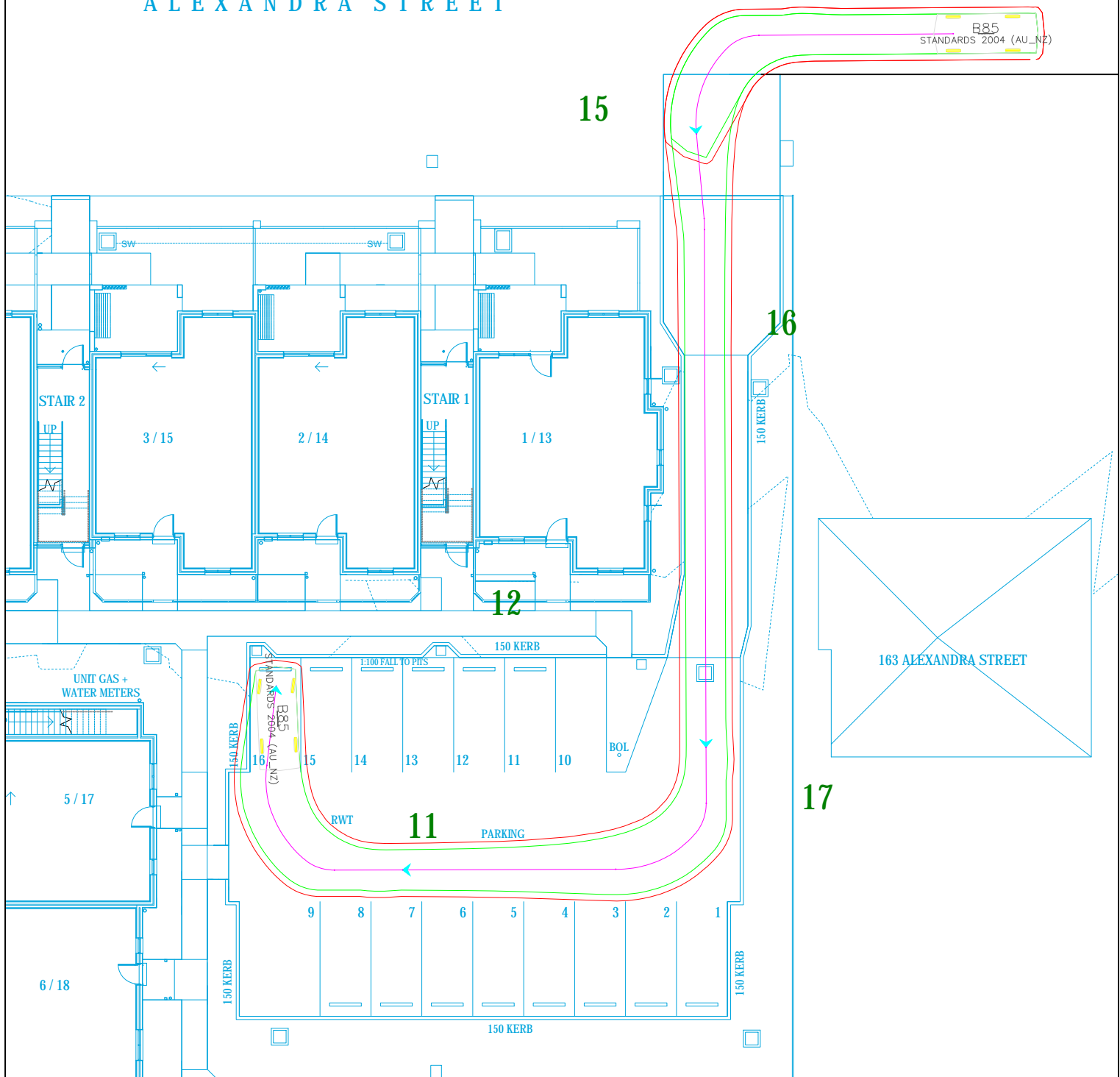
LEGEND

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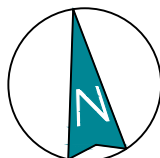
SWEPT PATH ANALYSIS OF A B85 VEHICLE EXITING THE CAR PARK

ALEXANDRA STREET



LEGEND

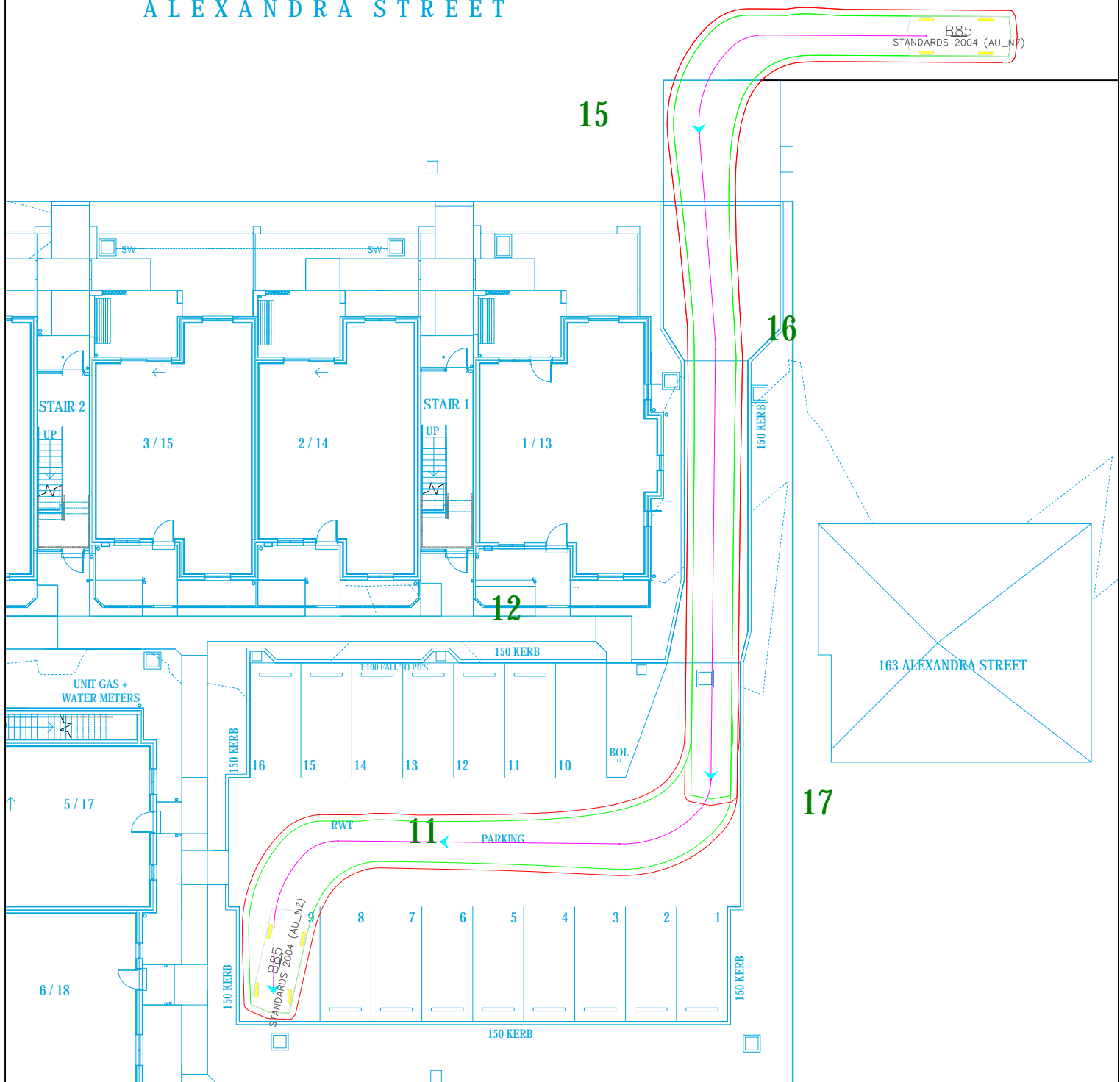
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SWEPT PATH ANALYSIS OF A B85 VEHICLE ENTERING THE CAR PARK

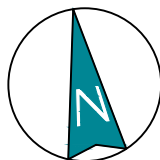
SP 5

ALEXANDRA STREET



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. 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 A B85 VEHICLE ENTERING THE CAR PARK

SP 7

ALEXANDRA STREET

B85
STANDARDS 2004 (AU_NZ)

15

16

12

17

9

STAIR 2

STAIR 1

4 / 16

3 / 15

2 / 14

1 / 13

UNIT GAS +
WATER METERS

5 / 17

6 / 18

150 KERB

16

15

14

13

12

11

10

BOL

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

150 KERB

16

15

14

13

12

11

10

9

8

7

6

5

4

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150 KERB

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15

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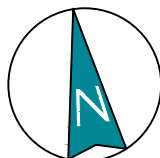
2

1

150 KERB

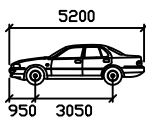
LEGEND

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**SWEPT PATH ANALYSIS OF
A B85 VEHICLE EXITING
THE CAR PARK**

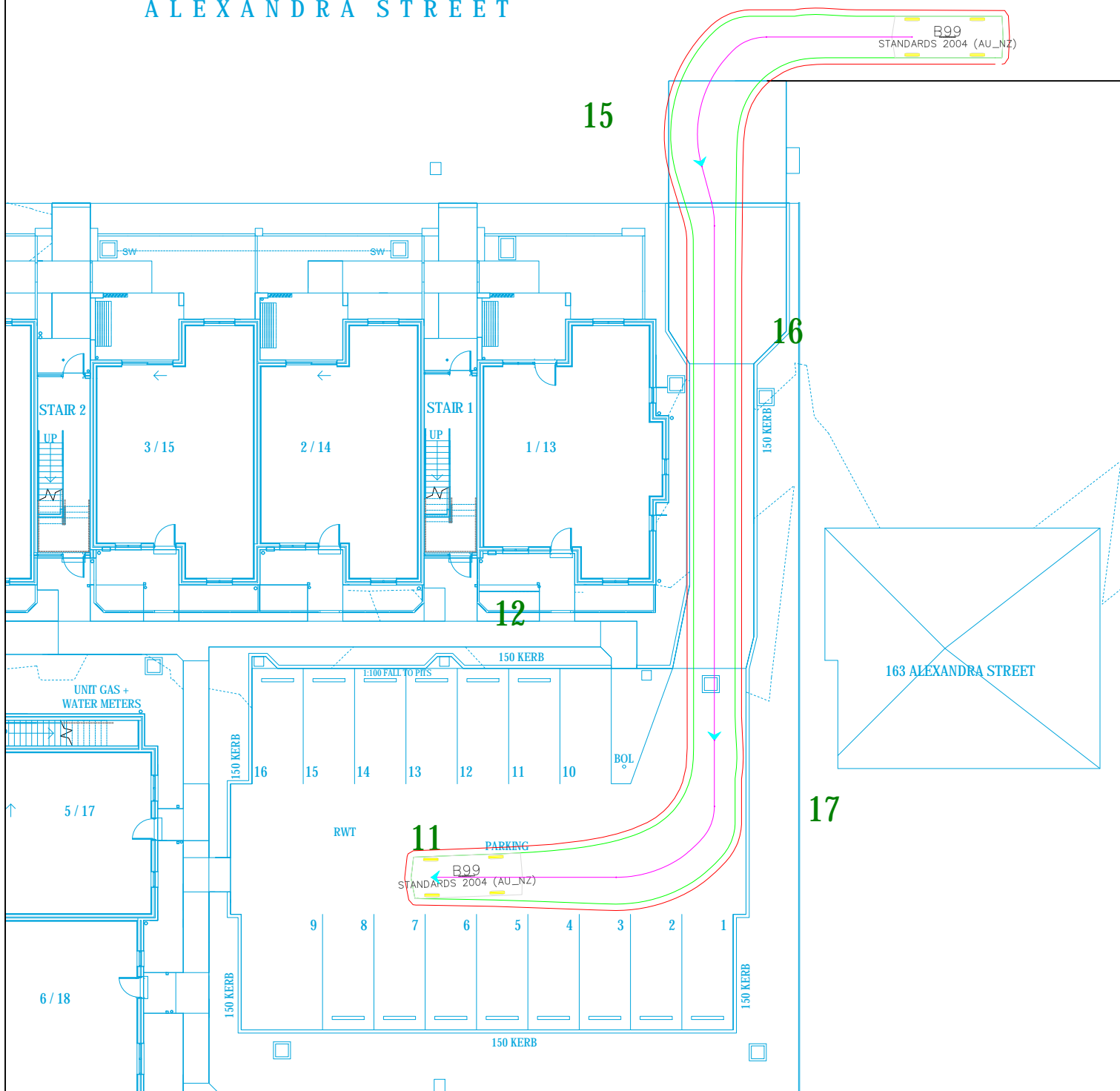
SP 8



B99

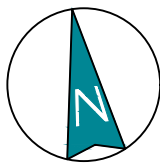
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Lock to Lock Time : 6.0
Steering Angle : 33.9

ALEXANDRA STREET



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. 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
A B99 VEHICLE ENTERING
THE CAR PARK**

SP 9

ALEXANDRA STREET

B99
STANDARDS 2004 (AU_NZ)

15

16

12

163 ALEXANDRA STREET

17

STAIR 2

UP

3 / 15

2 / 14

STAIR 1

UP

1 / 13

UNIT GAS +
WATER METERS

5 / 17

6 / 18

RWT

B99
STANDARDS 2004 (AU_NZ)

150 KERB

LEGEND

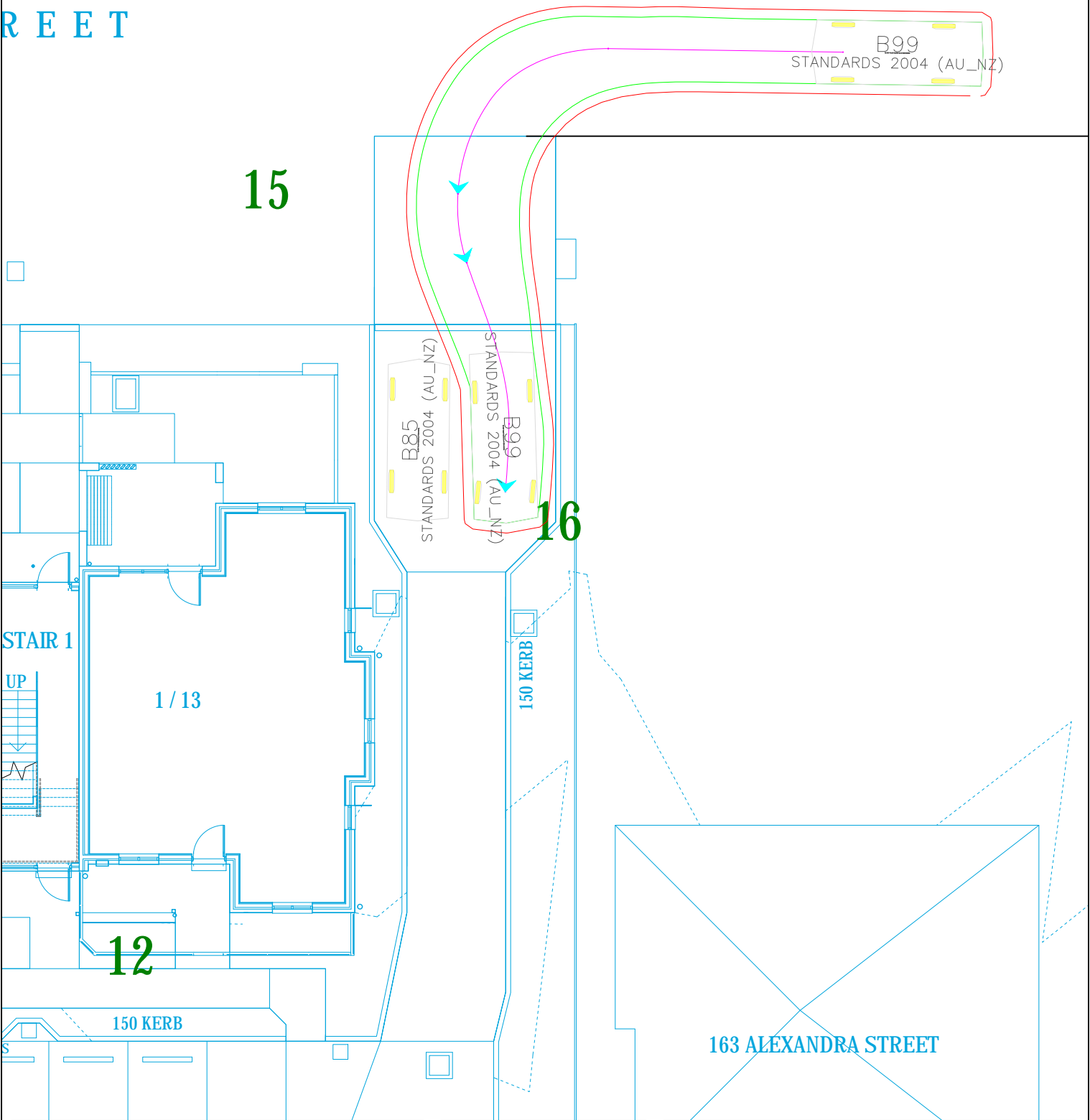
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SWEPT PATH ANALYSIS OF A B99 VEHICLE EXITING THE CAR PARK

SP 10

R E E T



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. 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
B99 AND B85 VEHICLES
PASSING ONE ANOTHER**

E E T

15

B85
STANDARDS 2004 (AU_NZ)

B99
STANDARDS 2004 (AU_NZ)

B85
STANDARDS 2004 (AU_NZ)

16

150 KERB

1 / 13

12

LEGEND

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**SWEPT PATH ANALYSIS OF
B85 AND B99 VEHICLES
PASSING ONE ANOTHER**

SP 12