29 October 2018

Michael de Zilva
Gazcorp
Level 10, 60 Park St
SYDNEY NSW 2000

Dear Michael

27-35 PUNCHBOWL ROAD - SECTION 4.55 TRAFFIC REVIEW

SCT Consulting has been engaged to prepare a Section 4.55 Traffic Review of proposed amendments to existing development application (DA) consent 2016/17/1 at 27-35 Punchbowl Road, Belfield.

The proposed amendments comprise:

– Increase of dwellings from 115 apartments to 122 apartments including a change of mix as per below; and

Apartment type	Previous DA consent	Current proposal
Studio	-	-
1 bedroom	16	22
2 bedroom	77	80
3 bedroom	22	20
Total	**115**	**122**

– Addition of two visitor parking spaces and seven residential spaces.

This letter contains a review of the impact of these changes including a swept path assessment of the car park layout.

Traffic impact review

Using *Roads and Maritime Services Guide to Traffic Generating Developments Updated traffic surveys TD 2013/4a*, the trip generation rate could be between 0.07-0.32 trips per apartment in the AM peak and 0.06-0.41 in the PM peak. A conservative estimate of 0.32 in the AM and 0.41 in the PM peak would result in an additional 3 vehicle trips in the peak hour. This is considered a minor change in the proposed traffic generation of the proposal and able to be accommodated in the road network.

Parking requirements

Based on Strathfield Council's *Development Control Plan for Multiple-Unit Housing* (DCP Part C) and *Provision of Off-Street Parking Facilities* (DCP Part I), the following parking rates are identified for the residential component of the site:

– Residential one-bedroom: 1 space per unit;

– Residential two-bedroom: 1.5 spaces per unit;

– Residential three-bedroom: 2.0 spaces per unit; and

– Visitors: 1 space per 5 residential units.

Using these rates, the minimum parking requirements are identified as follows:

Apartment	DCP requirement	Development provision
1 bedroom	22	22
2 bedroom	120	121
3 bedroom	40	40
Total reserved spaces	**182**	**183**
Visitor	24	25

The proposal still fully conforms with the Strathfield DCP parking requirements.

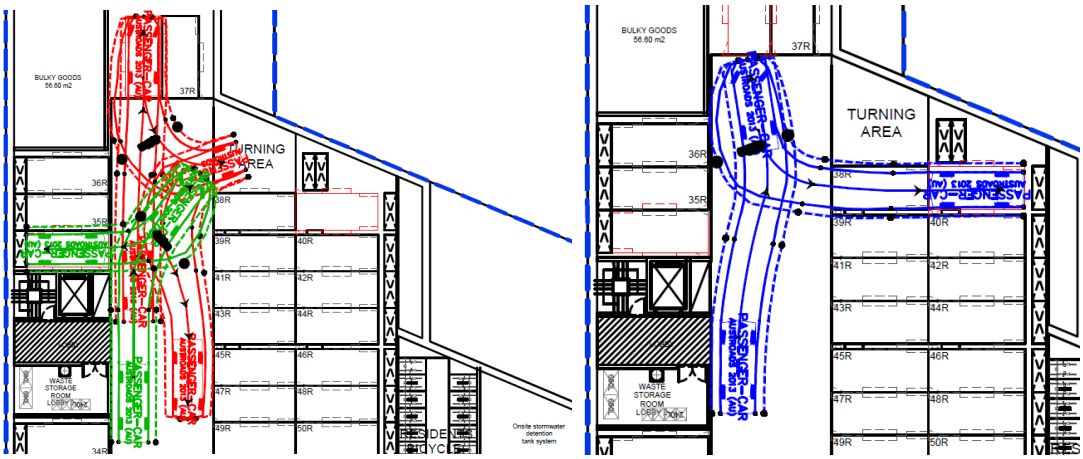
Car park modifications swept path analysis

Swept path analysis was undertaken by Crossroads Civil Design Pty Ltd at the request of SCT Consulting. Excerpts of the analysis are provided below, with the full swept path assessment in Appendix A. The design was undertaken with the plan dated 25/09/2018, which has subsequently been updated based on recommendations of this report. Car bay numbers have been retained in the latest plan for readability.

Basement level 1

Analysis of manoeuvres to access the new parking bays adjacent to 35R, 37R and 38R in the south western section of basement level 1 (top of the drawing) are shown in **Figure 1**.

Figure 1 South western additional bays swept path assessment – Level 1

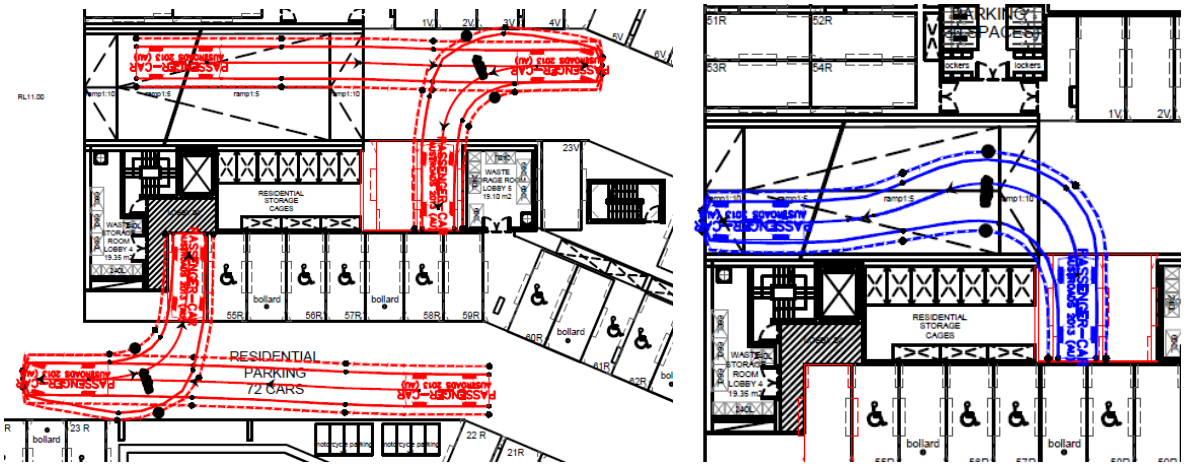


Source: Crossroads Civil Design, 2018

The number of turns in each manoeuvre is considered appropriate given the nature of the facility.

Access to the new parking bays near 23V in the centre of basement level 1 is shown in **Figure 2**.

Figure 2 Central additional bays swept path assessment – Level 1

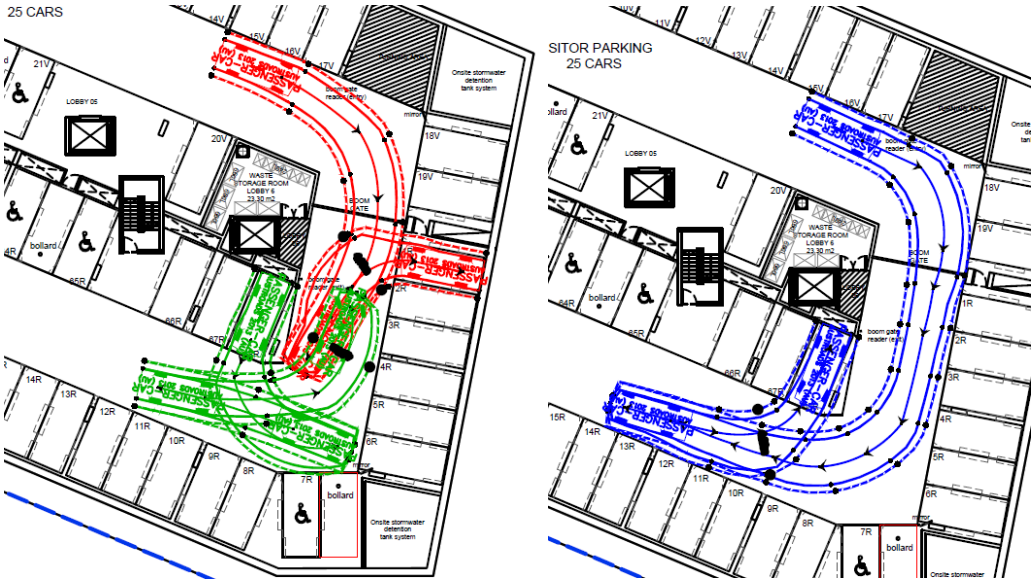


Source: Crossroads Civil Design, 2018

The number of turns in each manoeuvre is considered appropriate given the nature of the facility.

Analysis of manoeuvres to bays 1R and 68R in the northern section of basement level 1 (right of the drawing) are shown in **Figure 3**.

Figure 3 Northern bays swept path assessment – Level 1



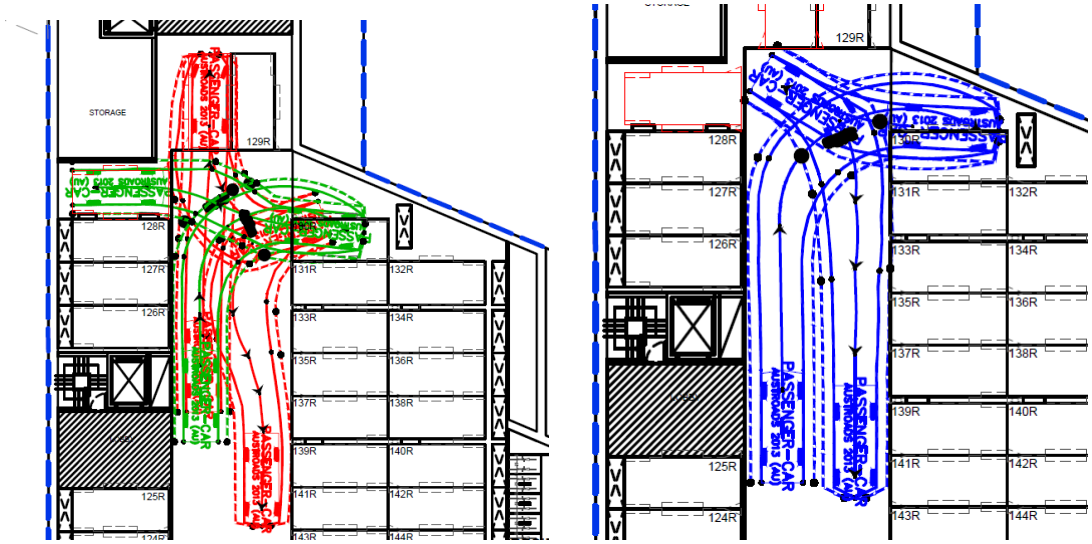
Source: Crossroads Civil Design, 2018

The number of turns in each manoeuvre is considered appropriate given the nature of the facility.

Basement level 2

Analysis of manoeuvres to access the new parking bays adjacent to 128R, 129R in the south western section of basement level 2 (top of the drawing) are shown in **Figure 4**.

Figure 4 South western additional bays and aisle swept path assessment – Level 2



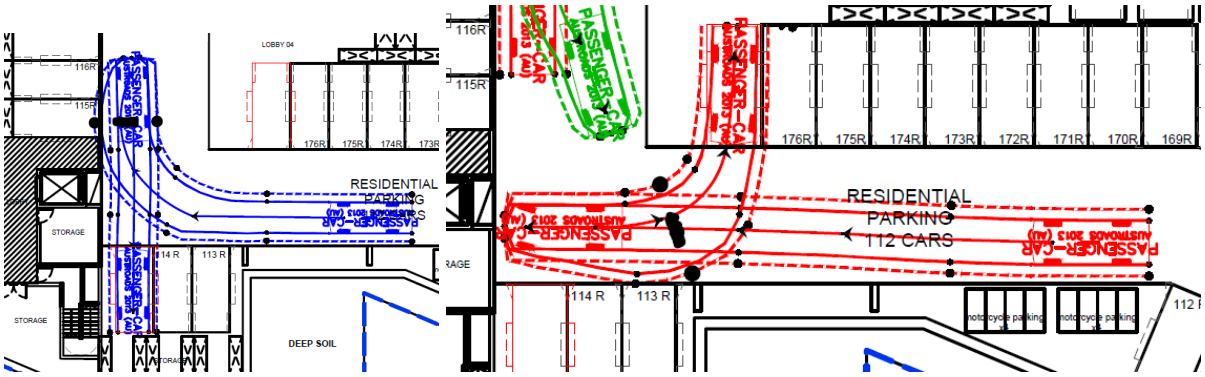
Source: Crossroads Civil Design, 2018

Access to the new proposed bays and turning around in the blind aisle would either impact on space 130R (if not occupied) or require an unreasonable number of manoeuvres. Removal of bay 130R to enable a turning area as per basement level 1 would address this concern. Removal of this space has been undertaken and is reflected in the current plans.

After the removal of bay 130R, the turning manoeuvres to these spaces and turning around in the blind aisle are appropriate for this type of facility.

Analysis of the manoeuvre to access the new parking bays adjacent to 141R in the south section of basement level 2 (left of the drawing) is shown in **Figure 5**.

Figure 5 South additional bays swept path assessment – Level 2

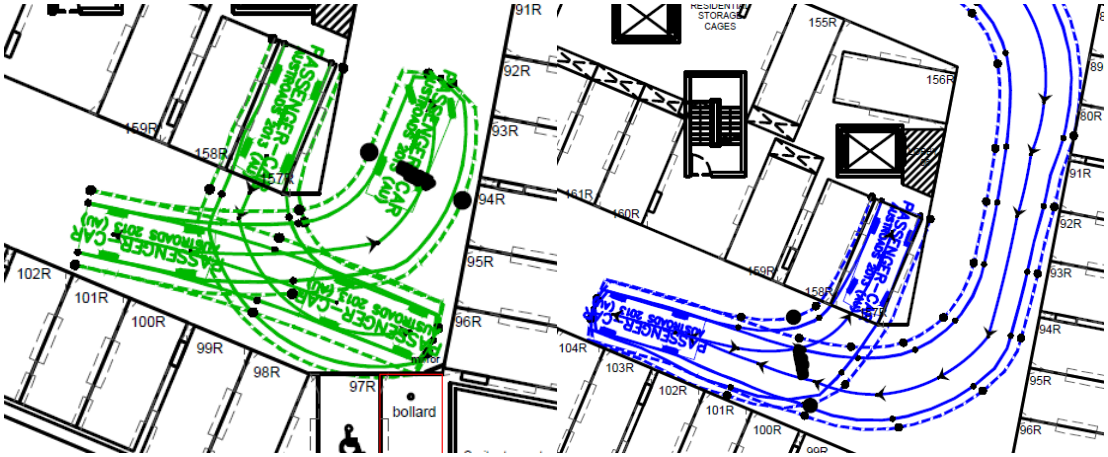


Source: Crossroads Civil Design, 2018

The number of turns in each manoeuvre is considered appropriate given the nature of the facility.

Analysis of manoeuvres to bay 157R in the northern section of basement level 1 (right of the drawing) are shown in **Figure 6**.

Figure 6 Northern bays swept path assessment – Level 2

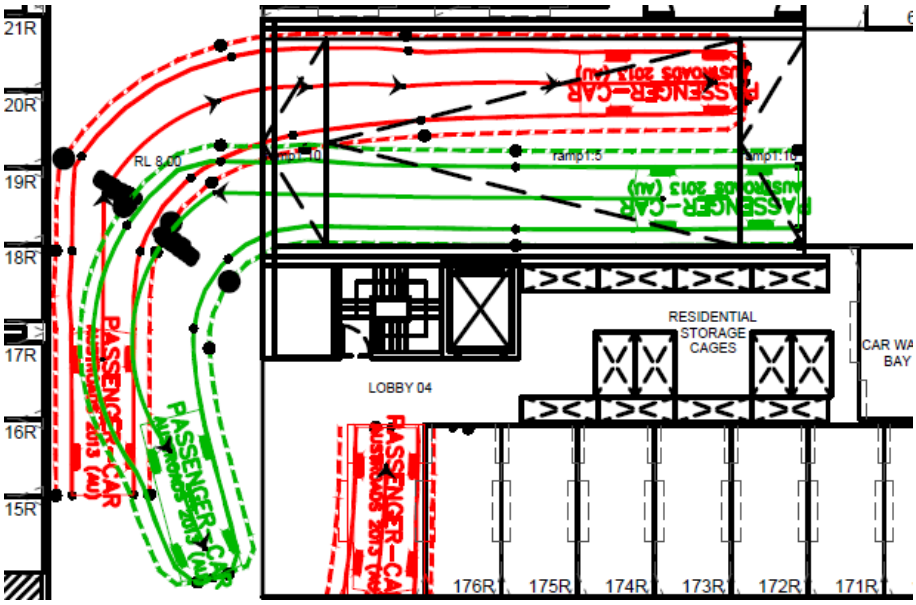


Source: Crossroads Civil Design, 2018

The number of turns in each manoeuvre is considered appropriate given the nature of the facility.

The access manoeuvres to the ramp on the southern side of basement level 2 is shown in **Figure 7**.

Figure 7 Ramp access on basement level 2



Source: Crossroads Civil Design, 2018

The overlap of the swept paths for ramp access could be mitigated by provision of a mirror so that vehicles existing the ramp can see vehicles entering the ramp.

This point applies generally to all ramp and aisle intersections – mirrors or other sight aiding devices would improve manoeuvrability in accessing ramps.

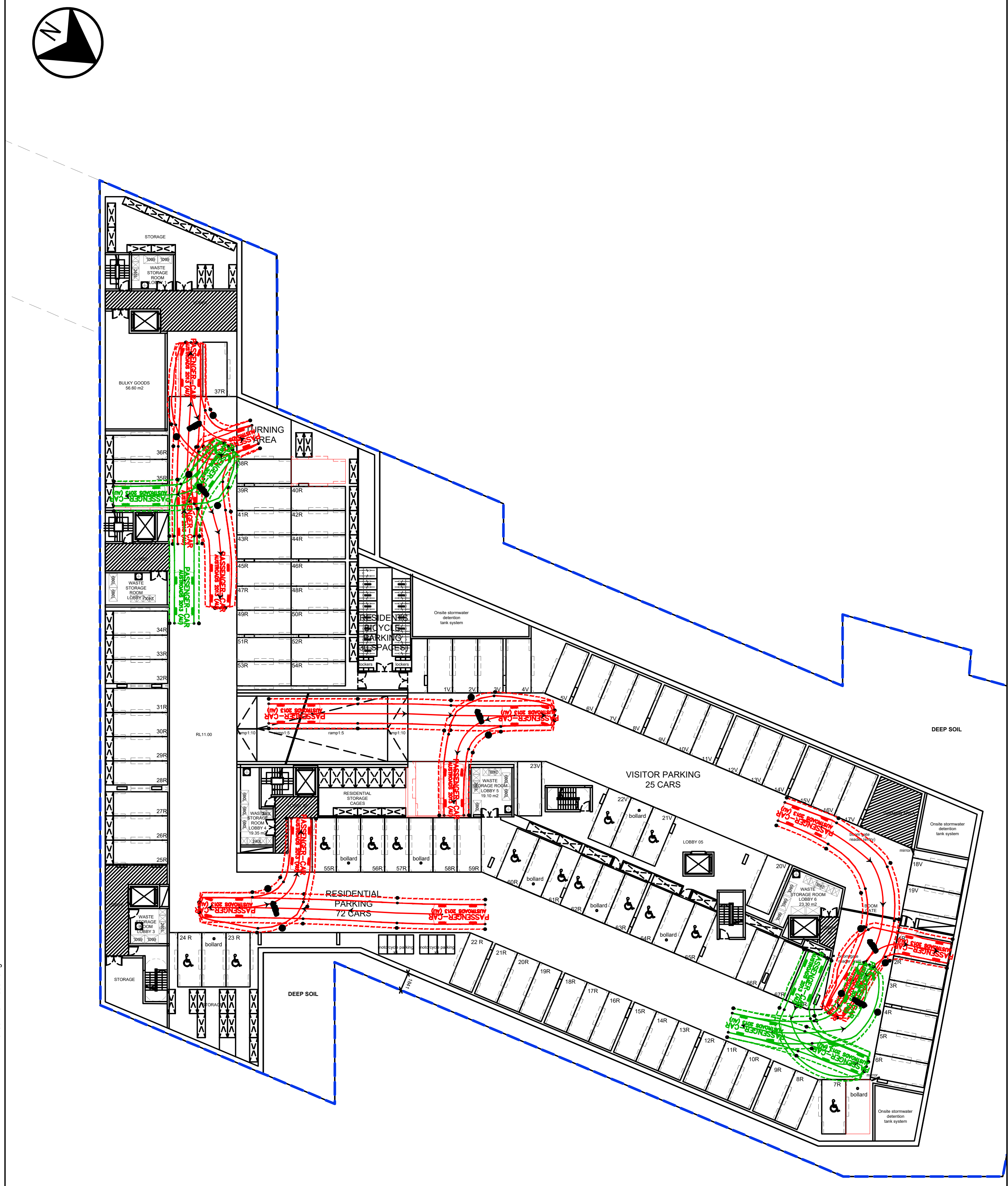
Conclusion

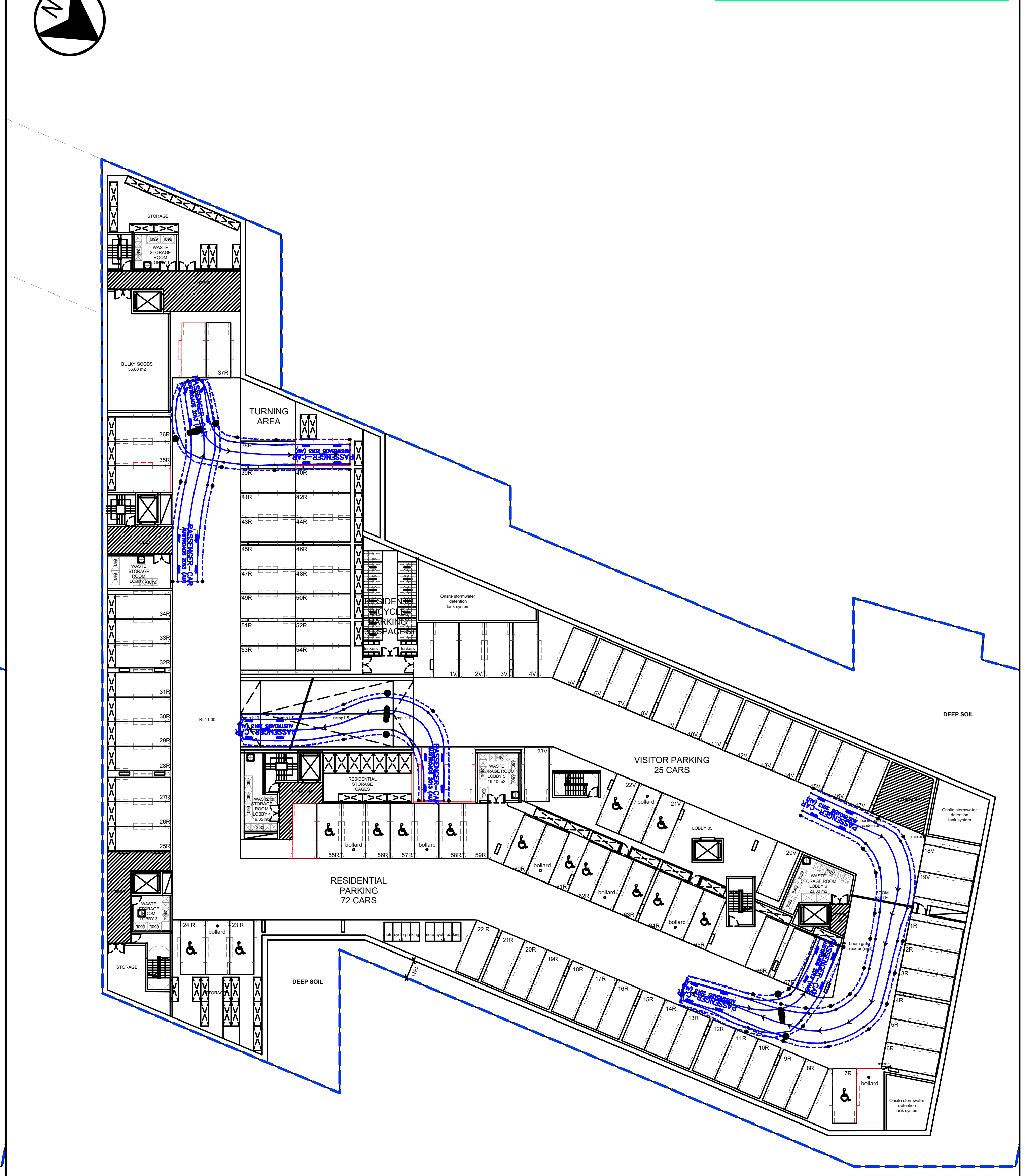
Based on the small scale of the changes, being incremental in nature, the proposal is considered substantially the same as originally approved on 15 June 2017 and modified on 13 June 2018 from a transport perspective. The impacts of the proposal are considered minor. Mirrors or other sight aiding devices are also proposed as they would improve manoeuvrability for ramps.

Yours sincerely

Jonathan Busch
Associate Director
jonathan.busch@sctconsulting.com.au | 0481 818 776 | (02) 9042 0591
sctconsulting.com.au | Bay 9, 9 Middlemiss Street, North Sydney, 2060
SCT Consulting

Crossroads Civil Design Pty. Ltd.





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25 Oct 18 - 14:33

LEGEND

REV: 01

ISSUED DATE: 25/10/18

PASSENGER-CAR AUSTROADS 2013 (AU) — 5.2m PASSENGER CAR

0 10 20 25m

1 : 500 (FULL SIZE)

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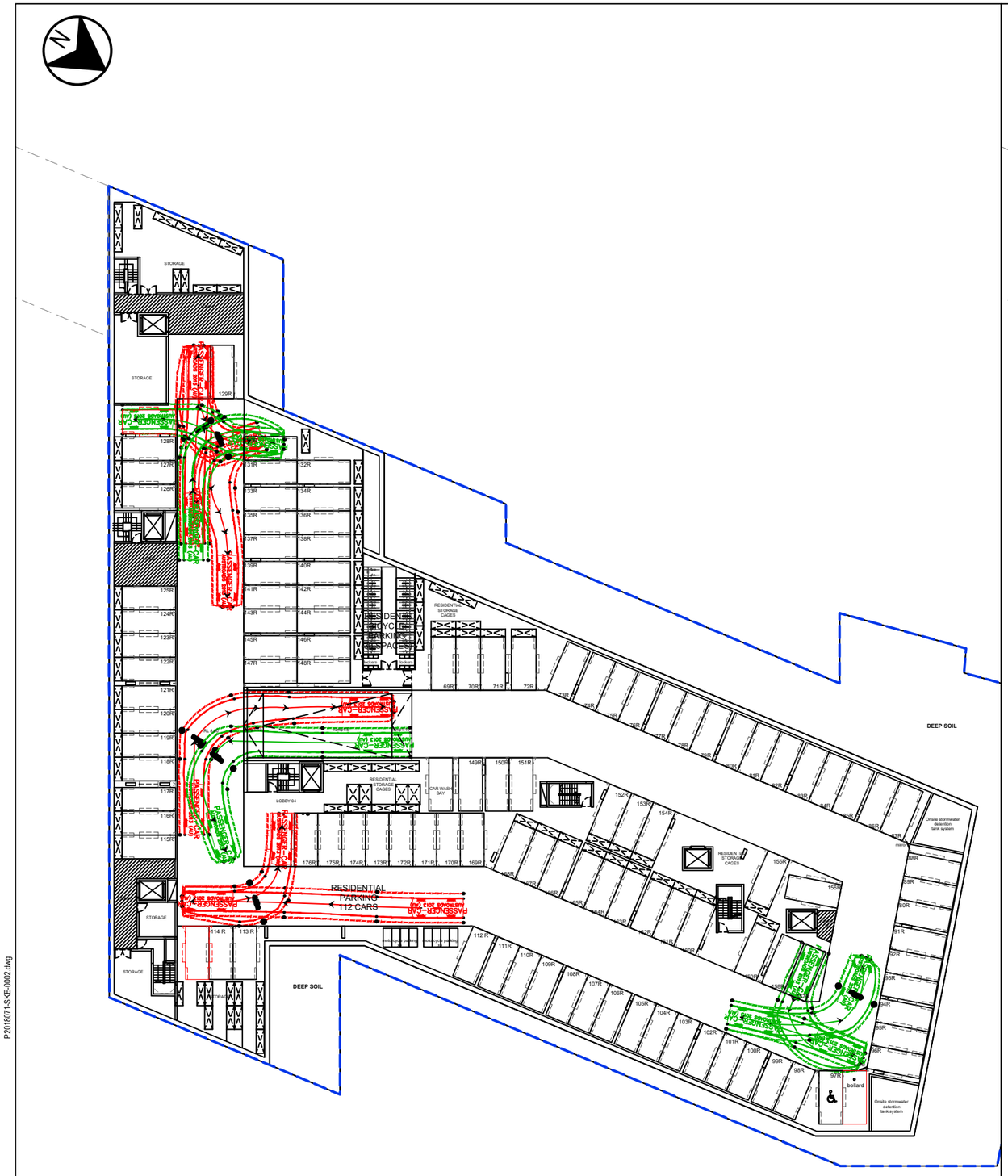
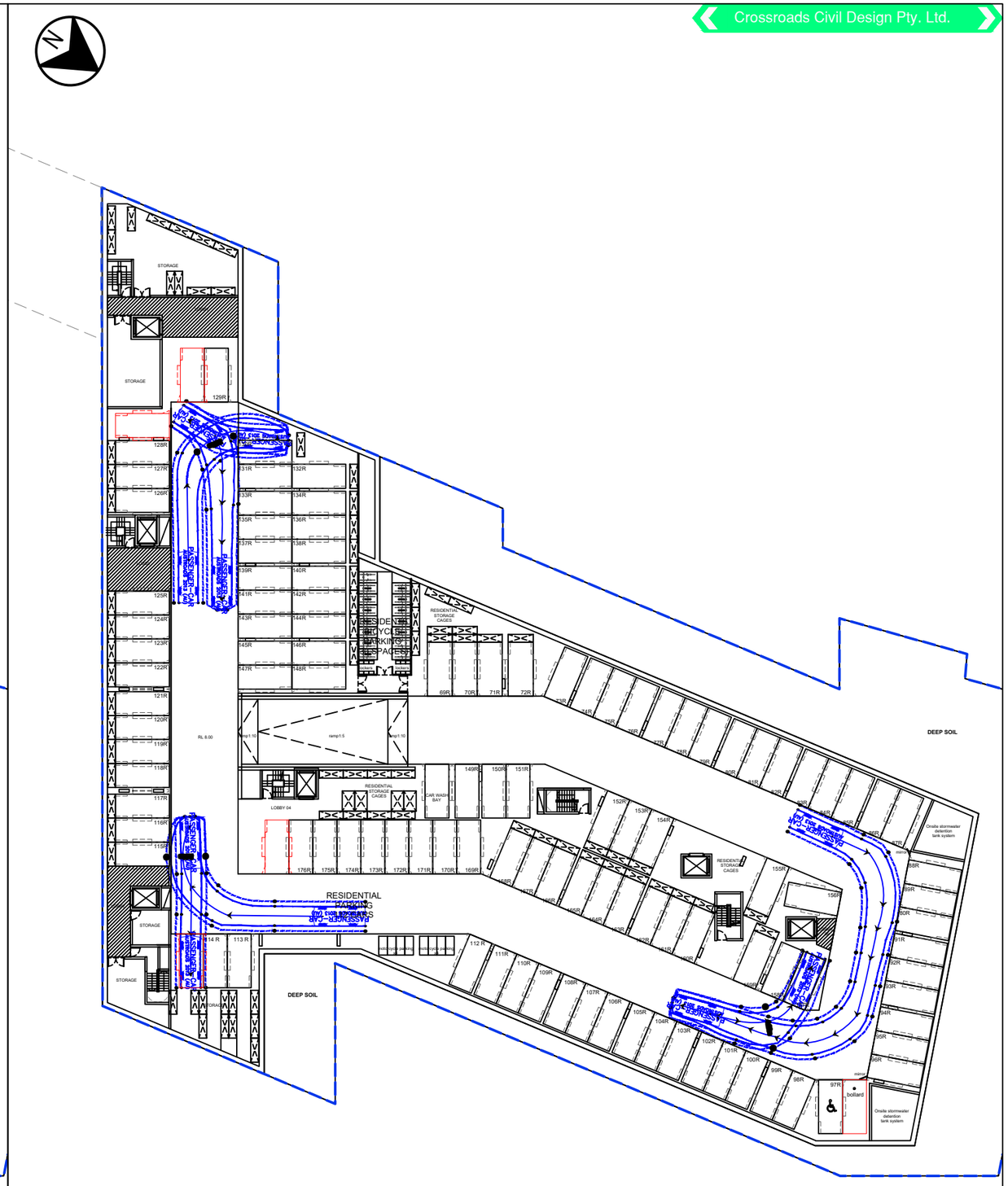
27 - 35 PUNCHBOWL ROAD, BELFIELD

VEHICLE TURNING PATH PLAN - BASEMENT LEVEL 1

P2018071-SKE-0001





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LEGEND

PASSENGER CAR AUSTROADS 2013 (A6) — 5.2m PASSENGER CAR

0 10 20 25m

1 : 500 (FULL SIZE)

REV: 01
ISSUED DATE: 25/10/18

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27 - 35 PUNCHBOWL ROAD, BELFIELD
VEHICLE TURNING PATH PLAN - BASEMENT LEVEL 2
P2018071-SKE-0002