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**Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness**

8<sup>th</sup> April 2015

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Airbosi Pty Limited  
c/- Think Planners  
9A O'Connell Street  
Parramatta NSW 2150

Atten: Adam Brynes / Evian Delfabbro

### **GRAN CENTRAL PLANNING PROPOSAL PARRAMATTA RD / COWPER ST / GOOD ST, GRANVILLE SUPPLEMENTARY LETTER TO TRAFFIC REPORT**

Dear Adam and Evian,

Following on from comments outlined by Parramatta City Council on the Gran Central Planning Proposal, this submission will act as a supplementary letter to the submitted Traffic & Parking Impact Assessment dated 16<sup>th</sup> December 2014, prepared by *M<sup>C</sup>Laren Traffic Engineering (MTE)*.

Revised plans have been prepared by *Krikis Tayler Architects*, as requested by Council officers, illustrating two schemes – a base scheme and a bonus scheme. These are supplementary to the original yield as outlined in the traffic report. The base scheme is shown in **Annexure A** for reference.

Since the plans have been revised due to the revisions made to the vehicular access and alterations to the location of the non-residential GFA, the base scheme has been slightly altered and results in an increased residential apartment yield.

Council also suggested that a 15% bonus to FSR and height be adopted for design excellence and will be assessed separately as a “bonus scheme”. The apartment yield of the bonus scheme is obviously greater than the revised base scheme and represents the worst case scenario in terms of traffic and parking impacts.

A parking assessment will be undertaken for the revised yield options and will be compared to the original requirements detailed in the traffic report. A revised traffic assessment will also be conducted to compare the impacts of the base scheme and bonus scheme.

**Table 1** below outlines both revised schemes in comparison to the original base scheme specified in MTE's traffic report.

**TABLE 1: YIELD OPTIONS**

| Type                    |                       | Original Base Scheme (2014) | Revised Base Scheme (2015) | 15% Bonus Scheme (2015) |
|-------------------------|-----------------------|-----------------------------|----------------------------|-------------------------|
| Floor Space Ratio (FSR) |                       | 7:1                         | 7:1                        | 8.05:1                  |
| Commercial GFA          |                       | 3,000m <sup>2</sup>         | 2,425m <sup>2</sup>        | 2,425m <sup>2</sup>     |
| Retail GFA              |                       | 1,600m <sup>2</sup>         | 1,660m <sup>2</sup>        | 1,660m <sup>2</sup>     |
| Non-Residential GFA     |                       | 4,600m <sup>2</sup>         | 4,085m <sup>2</sup>        | 4,085m <sup>2</sup>     |
| Residential GFA         |                       | 31,000m <sup>2</sup>        | 31,965m <sup>2</sup>       | 37,372m <sup>2</sup>    |
| Apartment Mix           | 1 bed units / studios | 71                          | 99                         | 115                     |
|                         | 2 bed units           | 320                         | 312                        | 364                     |
|                         | 3 bed units           | 5                           | 8                          | 9                       |
|                         | <b>Total</b>          | <b>396</b>                  | <b>419</b>                 | <b>488</b>              |

As shown in the table above, the apartment yield has been increased from 396 units in the original scheme to a total of 488 units in the 15% bonus scheme. The commercial and retail GFA in the revised schemes has remained similar to the original scheme with a slight decrease in scale. FSR in the bonus scheme has been increased by 15% as previously discussed, resulting in a maximum FSR of 8.05:1.

### **Parking Assessment**

Reference is made to *Parramatta DCP 2011 – Part 3: Development Principles* which designates the following MINIMUM parking rates for developments within 400m of high frequency public transport and within the Granville Town Centre precinct:

#### *Residential Component of Mixed Use*

*1 space per 1 or 2 Bedroom Unit*

*1.2 spaces per 3 Bedroom Unit*

*2 spaces per 4 Bedroom Unit*

*Plus 0.25 spaces per dwelling for visitor parking & a car wash bay which may also be a visitor space*

#### *Business and Retail Premises*

*1 space per 60m<sup>2</sup> of GFA*

*Where there is a combination of land uses, a maximum of 40% of resident visitor parking can be used in the calculations for retail parking provided that these areas are shared*

Although the subject site resides in the Granville Town Centre (GTC) within the Parramatta LGA, Council has advised that the rates outlined for developments within the Epping Urban Activation Precinct (EUAP) of the Hornsby LGA shall be adopted for comparison. The rates outlined in the NSW Department of Planning report for developments within the Epping Precinct are as follows:

### Residential Flat Buildings

0.5 spaces per studio (maximum)

0.8 spaces per 1 Bedroom Unit (maximum)

1 space per 2 Bedroom Unit (maximum)

1.2 spaces per 3 Bedroom Unit (maximum)

Minimum of 1 visitor space per 7 dwellings

The previous parking requirements for the original base scheme in MTE's traffic report are outlined in **Table 2** below.

**TABLE 2: DCP PARKING REQUIREMENTS**

| Land Use                                     | Type       | Spaces Required                 |                                  |                                  |
|----------------------------------------------|------------|---------------------------------|----------------------------------|----------------------------------|
|                                              |            | Original Base Scheme (2014)     | Revised Base Scheme (2015)       | 15% Bonus Scheme (2015)          |
| Parramatta DCP – Granville Town Centre Rates |            |                                 |                                  |                                  |
| Residential                                  | 1 bedroom  | 71                              | 99                               | 115                              |
|                                              | 2 bedroom  | 320                             | 312                              | 364                              |
|                                              | 3 bedroom  | 6                               | 10                               | 11                               |
|                                              | Visitor    | 99 including up to 40% dual-use | 105 including up to 40% dual-use | 122 including up to 40% dual-use |
| Retail                                       | Shops      | 27 (Can be dual-use)            | 28 (Can be dual-use)             | 28 (Can be dual-use)             |
| Business                                     | Commercial | 50                              | 41                               | 41                               |
| Total                                        | -          | 546 including 27 dual-use       | 567 including 28 dual-use        | 653 including 28 dual-use        |
| Hornsby DCP – Epping Precinct Rates          |            |                                 |                                  |                                  |
| Residential                                  | 1 bedroom  | 71                              | 99                               | 115                              |
|                                              | 2 bedroom  | 320                             | 312                              | 364                              |
|                                              | 3 bedroom  | 5                               | 8                                | 9                                |
|                                              | Visitor    | 40                              | 42                               | 49                               |
| Retail                                       | Shops      | 27                              | 28                               | 28                               |
| Business                                     | Commercial | 50                              | 41                               | 41                               |
| Total                                        | -          | 513 (maximum)                   | 530 (maximum)                    | 606 (maximum)                    |

There is a significant shift in travel mode behaviour being encouraged and supported by planning submissions near to and within the region of the site. Considering the proximity of the site to Granville Railway Station and to the major employment and residential hub of Parramatta, it would be appropriate to reduce private vehicle ownership and develop sustainable and active modes of transport, such as buses, trains, walking and cycling. The rates recommended by the NSW Department of Planning for the Epping Urban Activation Precinct should be the target for this development and be incorporated into any future development control plan changes for the Parramatta and Granville Town Centres.

Census data has been retrieved from the 2011 Census which shows that for the Granville and Parramatta suburbs, an average of 72% of studio tenants and 49% of 1 bed unit tenants do not own a private motor vehicle. It is clear then that the area benefits well from alternate modes of transport and that for irregular trips, car share schemes can allow for the flexibility for future tenants. Assuming an average of 50% of the 1 bed and studio apartments require a provision of 1 car space, the demand of the 15% bonus scheme reduces by 57 spaces to a total of 549 car spaces.

The planning proposal provides 560 basement car parking spaces and a large loading dock which should be sufficient for even the 15% bonus scheme considering the actual car ownership in the area and encouraging a shift towards more sustainable and active transport modes. The scheme is hence supported with a total provision of 560 car spaces which also complies with a MAXIMUM of 606 spaces.

### **Traffic Assessment**

Reference is made to the RMS 'Guide to Traffic Generating Developments' (2002) and the RMS Technical Direction TDT 2013/04) which publicises updated traffic generation rates for high density residential dwellings and bulky goods retail.

The rates applicable to the existing developments and future development components are as follows:

*Residential Dwelling House*

*Weekday peak hour vehicle trips = 0.85 per dwelling*

*High Density Residential*

*0.19 vehicle trips during AM peak hour*

*Retail*

*5.6 vehicle trips per 100m<sup>2</sup> during AM peak hour*

*Bulky Goods Retail*

*Weekday peak hour vehicle trips = 2.7 vehicles per 100m<sup>2</sup> gross floor area*

*Office / Commercial*

*Evening peak hour vehicle trips = 2 vehicles per 100m<sup>2</sup> gross floor area*

*Motor showrooms*

*Evening peak hour vehicle trips = 0.7 vehicles per 100m<sup>2</sup> gross floor area*

It is noted that some of the traffic generation rates prescribed by the RMS are for the evening peak hour only, however, as a worst case scenario, the AM peak has been shown the same as the PM.

The expected traffic generation for the three schemes, with discount given to the existing traffic generated by the fifteen lots is presented in **Table 3**.

**TABLE 3: ESTIMATED TRAFFIC GENERATION**

| Use                               | Original Base Scheme<br>(2014) |                             | Revised Base Scheme<br>(2015) |                             | 15% Bonus Scheme<br>(2015)  |                             |
|-----------------------------------|--------------------------------|-----------------------------|-------------------------------|-----------------------------|-----------------------------|-----------------------------|
|                                   | Peak Hour Split                |                             |                               |                             |                             |                             |
|                                   | AM                             | PM                          | AM                            | PM                          | AM                          | PM                          |
| EXISTING TRAFFIC                  |                                |                             |                               |                             |                             |                             |
| Residential Dwelling <sup>1</sup> | 0 in<br>2 out                  | 2 in<br>0 out               | 0 in<br>2 out                 | 2 in<br>0 out               | 0 in<br>2 out               | 2 in<br>0 out               |
| Car Yard <sup>2</sup>             | 6 in<br>5 out                  | 5 in<br>6 out               | 6 in<br>5 out                 | 5 in<br>6 out               | 6 in<br>5 out               | 5 in<br>6 out               |
| Bulky Goods <sup>3</sup>          | 24 in<br>24 out                | 24 in<br>24 out             | 24 in<br>24 out               | 24 in<br>24 out             | 24 in<br>24 out             | 24 in<br>24 out             |
| Retail <sup>4</sup>               | 28 in<br>28 out                | 28 in<br>28 out             | 28 in<br>28 out               | 28 in<br>28 out             | 28 in<br>28 out             | 28 in<br>28 out             |
| <b>Total Existing</b>             | <b>58 in<br/>59 out</b>        | <b>59 in<br/>58 out</b>     | <b>58 in<br/>59 out</b>       | <b>59 in<br/>58 out</b>     | <b>58 in<br/>59 out</b>     | <b>59 in<br/>58 out</b>     |
| PROPOSED FUTURE TRAFFIC           |                                |                             |                               |                             |                             |                             |
| Residential <sup>1</sup>          | 15 in<br>60 out                | 60 in<br>15 out             | 16 in<br>64 out               | 64 in<br>16 out             | 19 in<br>74 out             | 74 in<br>19 out             |
| Retail <sup>4</sup>               | 45 in<br>45 out                | 45 in<br>45 out             | 47 in<br>46 out               | 46 in<br>47 out             | 47 in<br>46 out             | 46 in<br>47 out             |
| Commercial <sup>5</sup>           | 48 in<br>12 out                | 12 in<br>48 out             | 39 in<br>10 out               | 10 in<br>39 out             | 39 in<br>10 out             | 10 in<br>39 out             |
| <b>Total Proposed</b>             | <b>108 in<br/>117 out</b>      | <b>117 in<br/>108 out</b>   | <b>102 in<br/>120 out</b>     | <b>120 in<br/>102 out</b>   | <b>105 in<br/>130 out</b>   | <b>130 in<br/>105 out</b>   |
| <b>NET CHANGE</b>                 | <b>+ 50 in<br/>+ 58 out</b>    | <b>+ 58 in<br/>+ 50 out</b> | <b>+ 44 in<br/>+ 61 out</b>   | <b>+ 61 in<br/>+ 44 out</b> | <b>+ 47 in<br/>+ 71 out</b> | <b>+ 71 in<br/>+ 47 out</b> |

Notes: (1) Assumes 20% inbound & 80% outbound during AM peak: Vice versa for PM.

(2) Assumes 50% inbound & 50% outbound during AM peak: Vice versa for PM.

(3) Assumes 50% inbound & 50% outbound during PM peak. AM is not the peak trade for bulky goods retail however has been assumed to be the same as the PM period.

(4) Assumes 50% inbound & 50% outbound during PM peak. AM is not the peak trade for retail however has been assumed to be the same as the AM period. Rate utilised from shopping centre specialty store which is a worst case scenario for the small retail premises.

(5) Assumes 80% inbound & 20% outbound during AM peak: Vice versa for PM.

As shown above, the traffic generation associated with the original scheme is in the order of 108 vehicle trips above the existing traffic generation for the site. The revised base and 15% bonus schemes generate a total of 105 and 118 vehicle trips during the peak hour respectively. This change is negligible and no discount has been made for the lower car parking rates provided. Consistent with our previous advice, traffic generation of this scale is supported and the minor increase in traffic for the revised and 15% bonus schemes are unlikely to affect the future operation of the precinct considered by the *WestConnex* planning instruments.

## **Vehicular Access Arrangements**

Swept path tests for the site's vehicular access and proposed loading docks are shown in **Annexure B**. All swept paths were shown to be acceptable, however a detailed analysis will need to be undertaken during the DA stage. There appears to be ample opportunity for a compliant design to be achieved.

The two-way system is acceptable, providing access to the subject site and neighbouring properties. However, further consideration and design development at DA stage should be undertaken to minimise any congestion and reduce conflicting movements.

## **Conclusion**

The planning proposal involves growth of the Granville Town Centre and it is expected to operate similar to the planned Epping Urban Activation Precinct. Based on the yields proposed and the preliminary plans, the planning proposal is supported in terms of traffic and parking including the 15% bonus scheme for design excellence.

Please contact the undersigned should you require further information or assistance.

Yours faithfully

**M<sup>C</sup>LAREN TRAFFIC ENGINEERING**



Craig M<sup>C</sup>Laren

Director

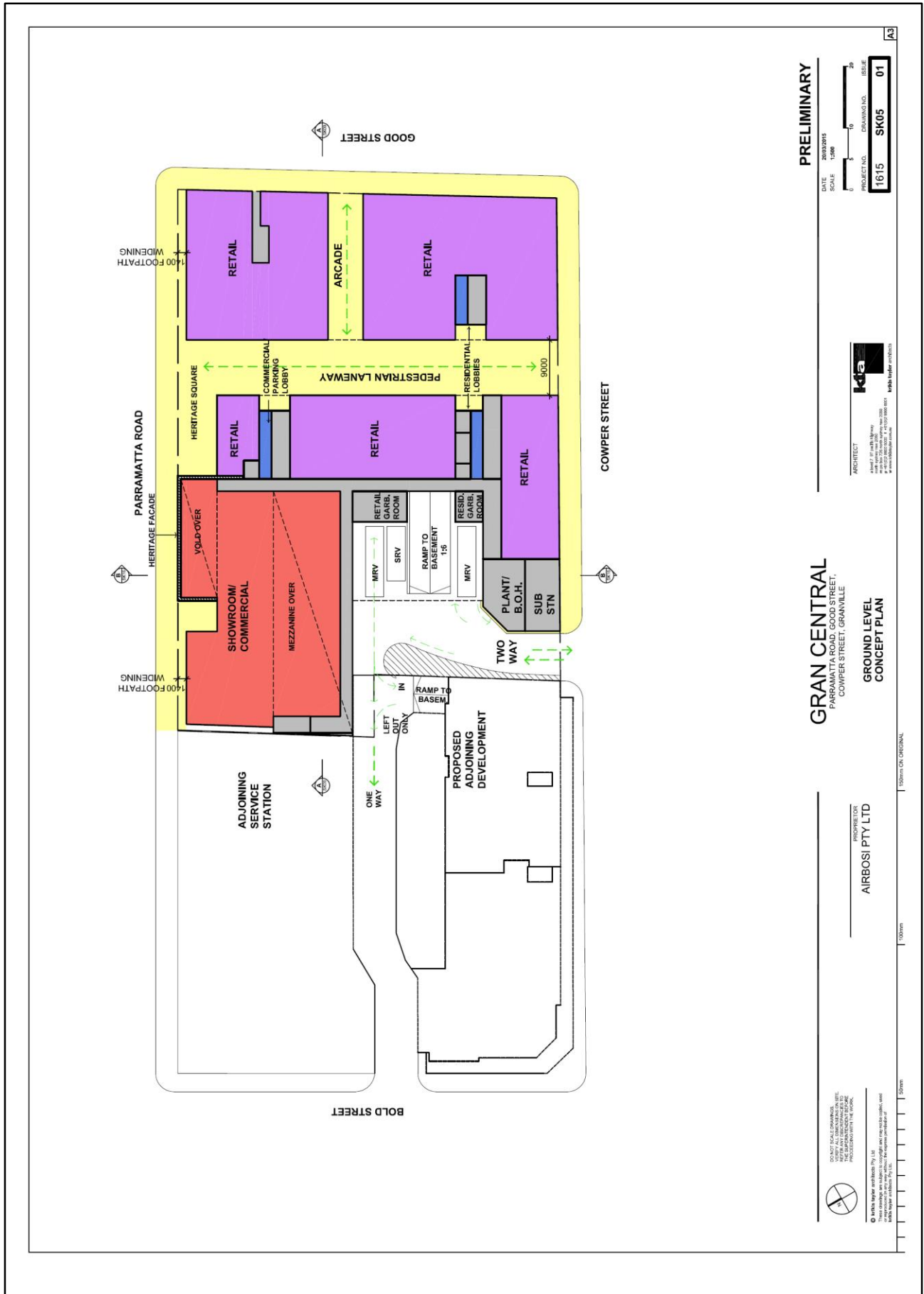
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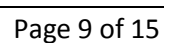
RMS Accredited Level 3 Road Safety Auditor

RMS Accredited Traffic Control Planner, Auditor & Certifier (Orange Card)



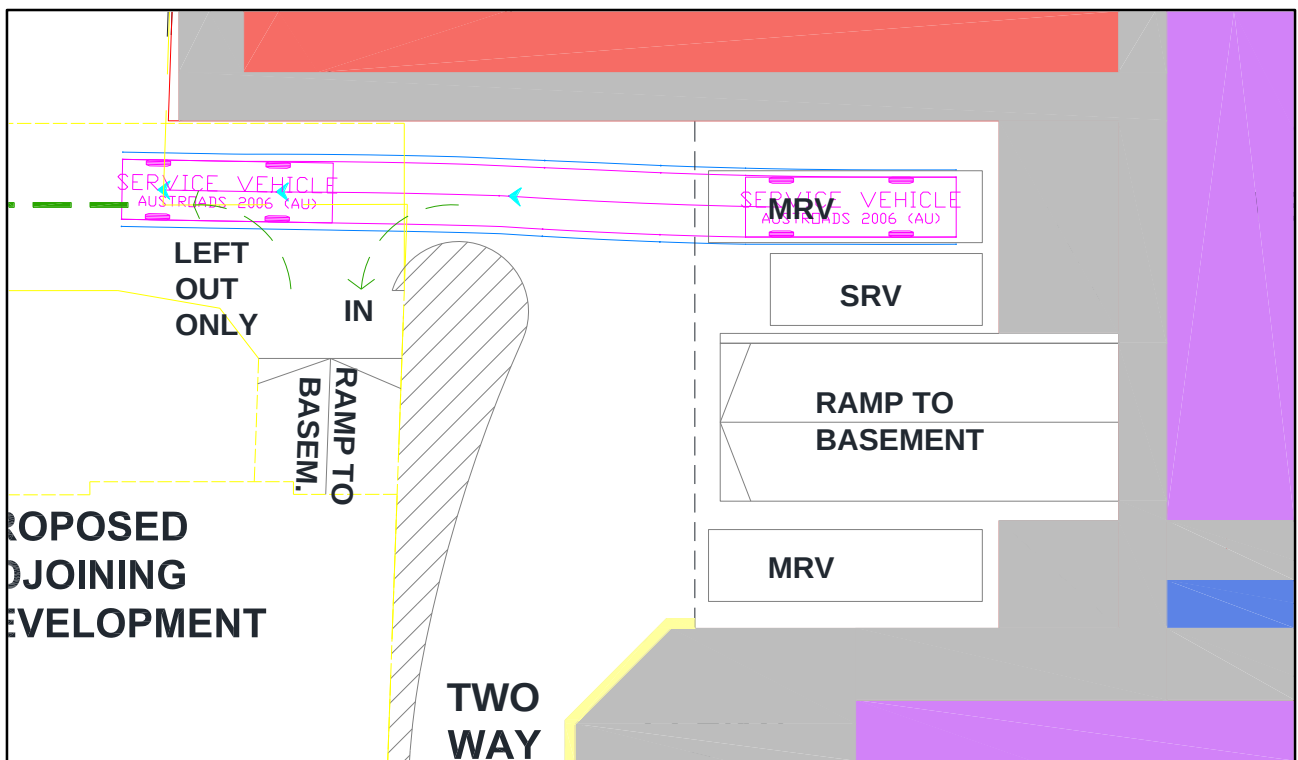
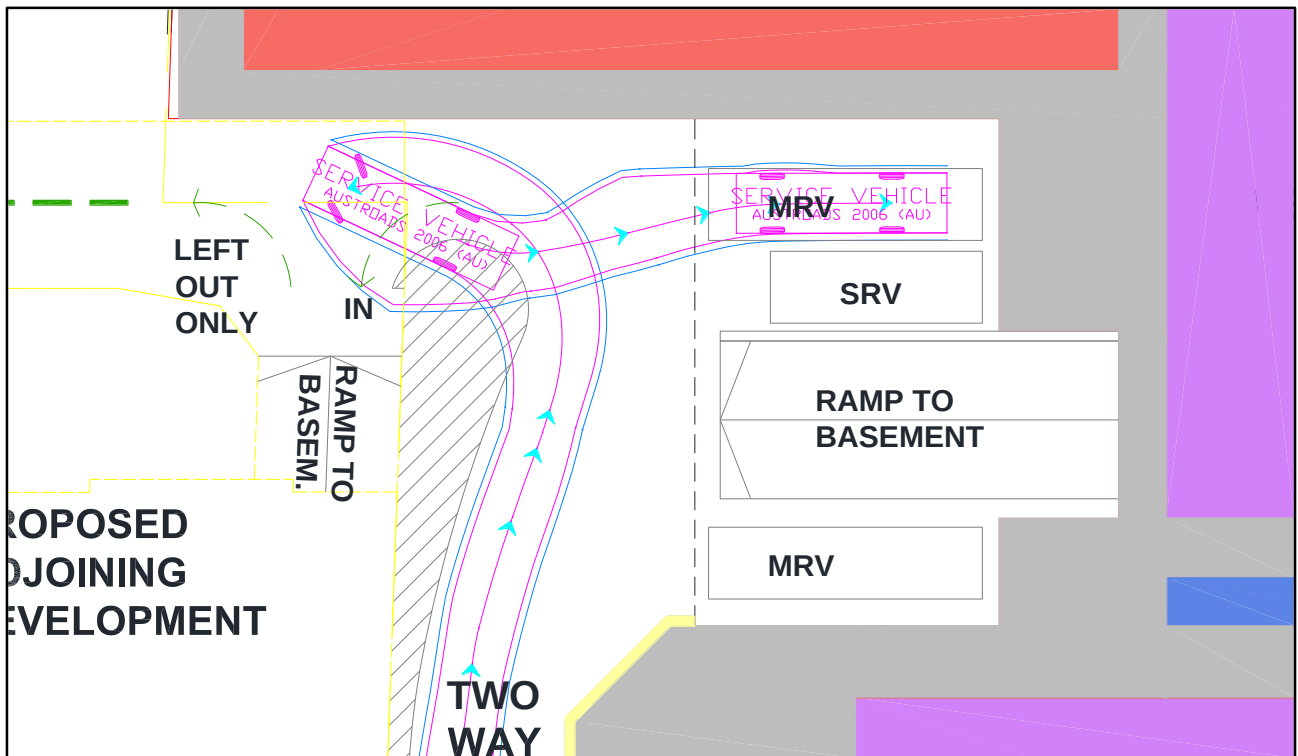
# ANNEXURE A: REVISED PLANS (Sheet 2 of 3)







# ANNEXURE B: SWEEPED PATH TESTS (Sheet 2 of 6)



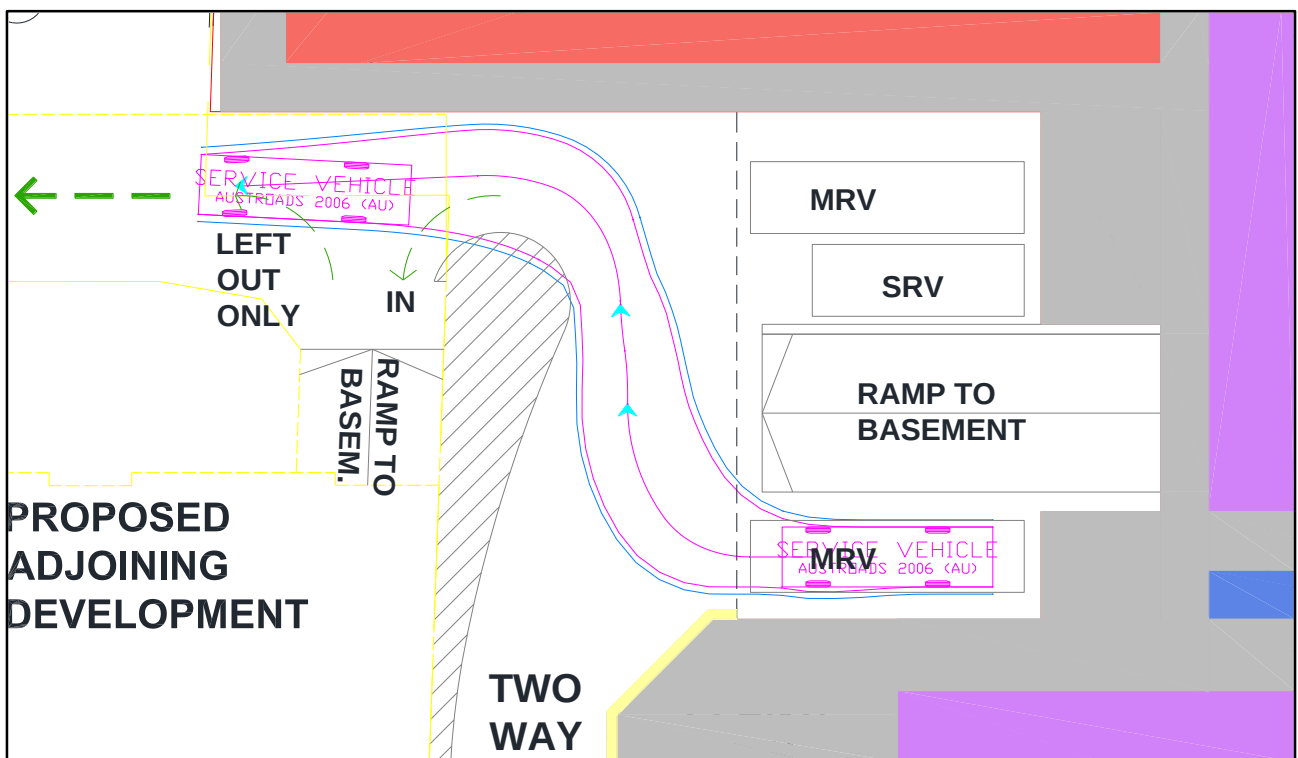
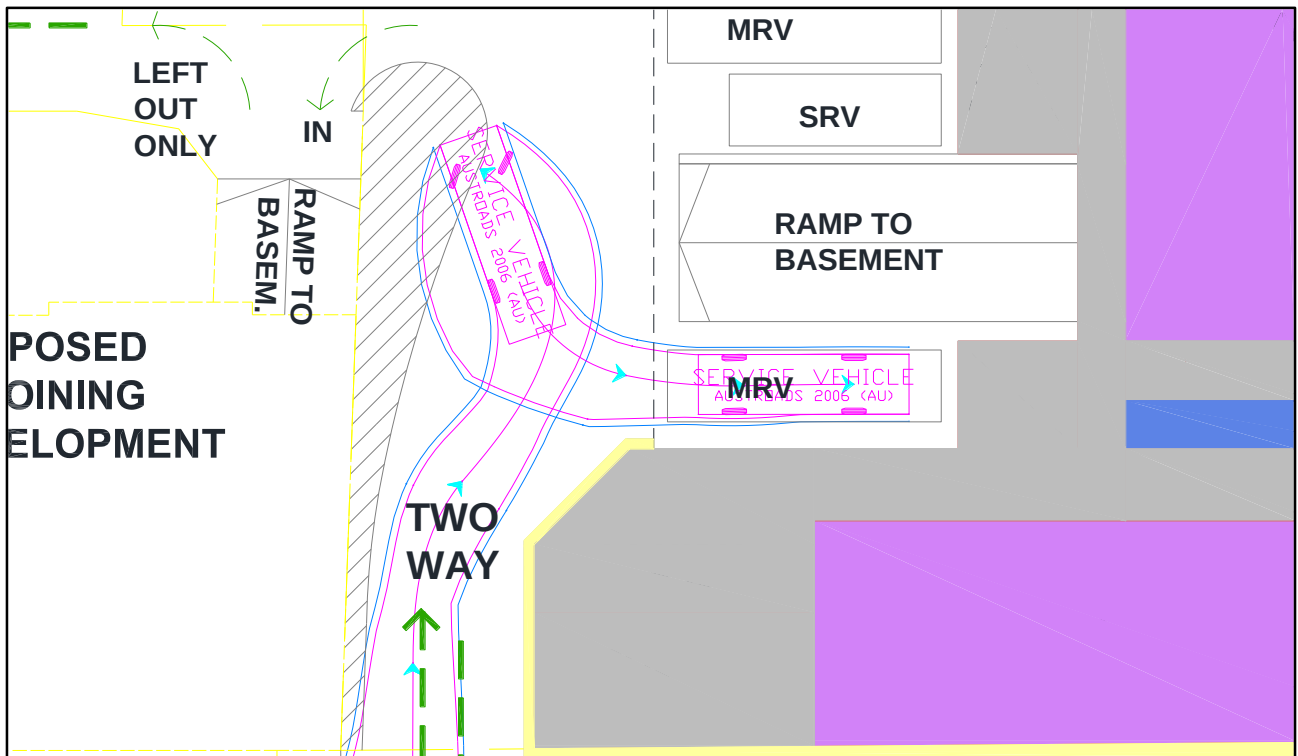
8.8m MRV reverse into / forward out of MRV loading dock 1

Tested @ 10km/h

Successful

Pink = Vehicle Body  
Blue = 300mm clearance

ANNEXURE B: SWEEP PATH TESTS (Sheet 3 of 6)



8.8m MRV reverse into / forward out of MRV loading dock 2

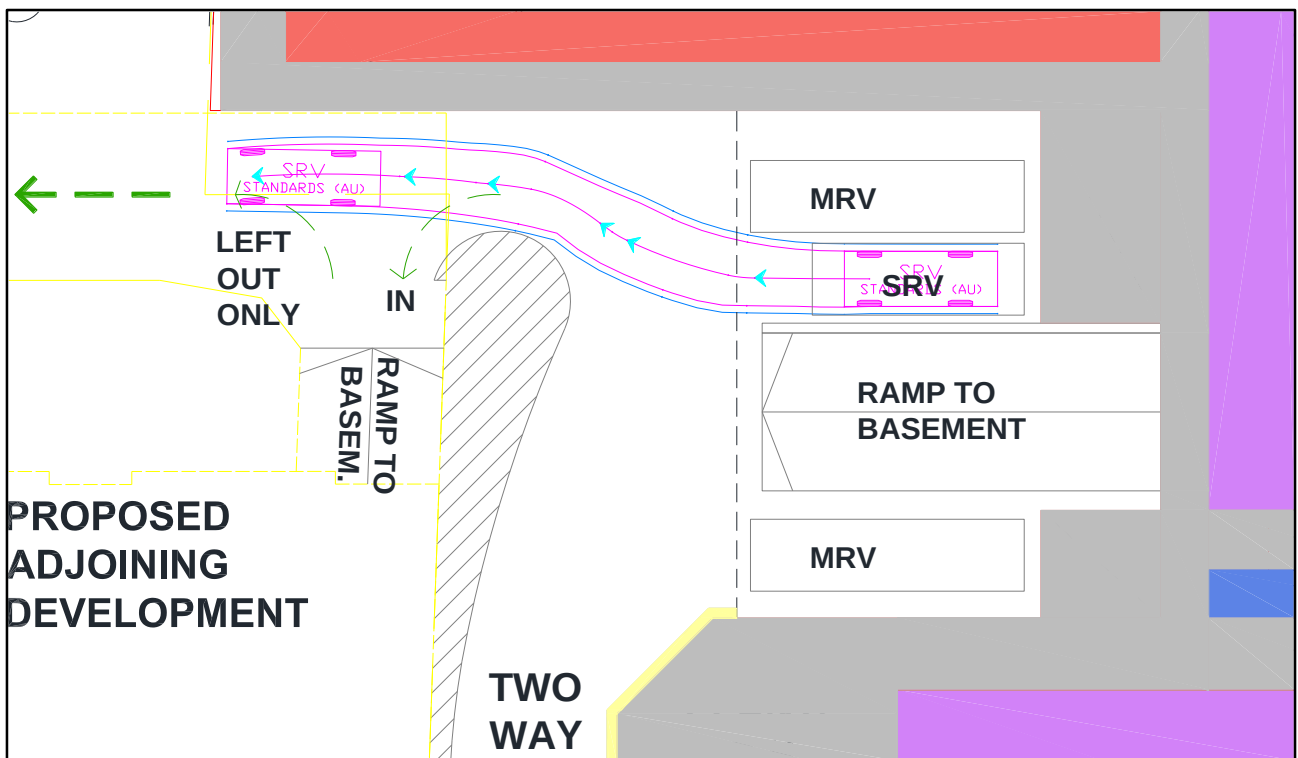
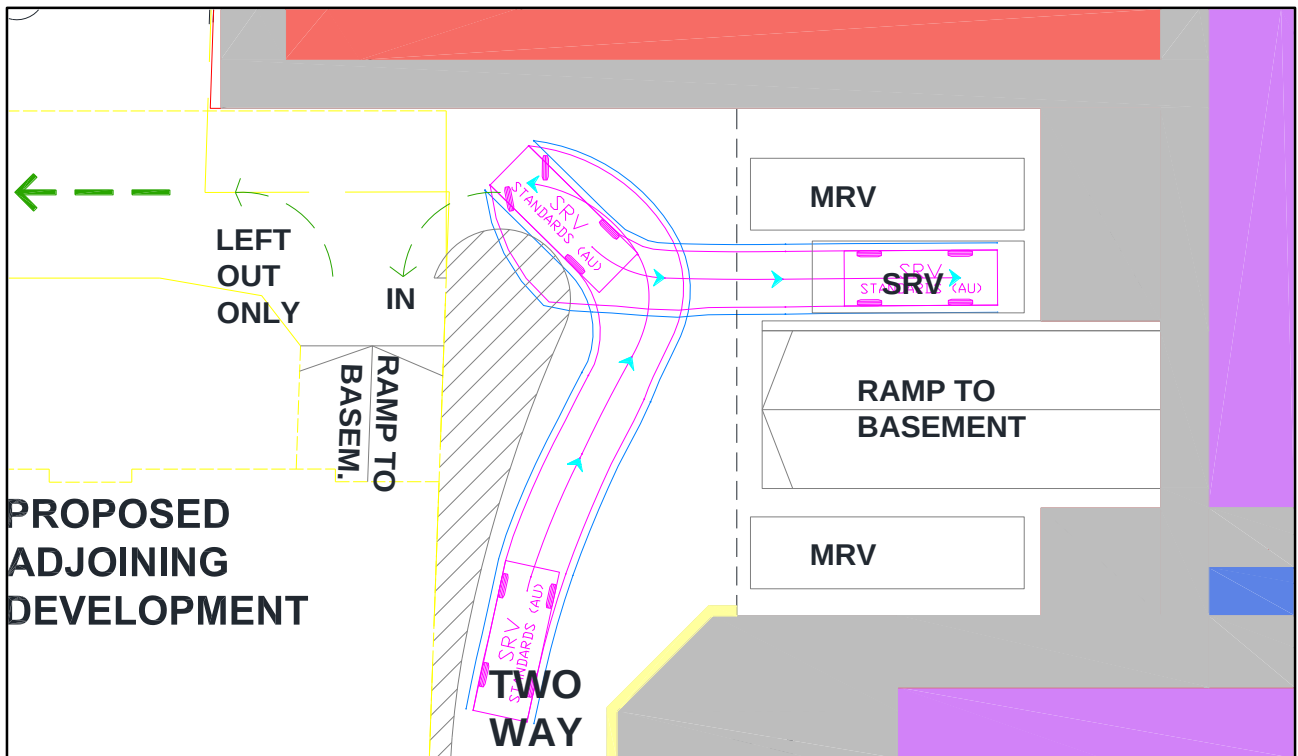
Tested @ 10km/h

Successful

Pink = Vehicle Body

Blue = 300mm clearance

# ANNEXURE B: SWEEPED PATH TESTS (Sheet 4 of 6)



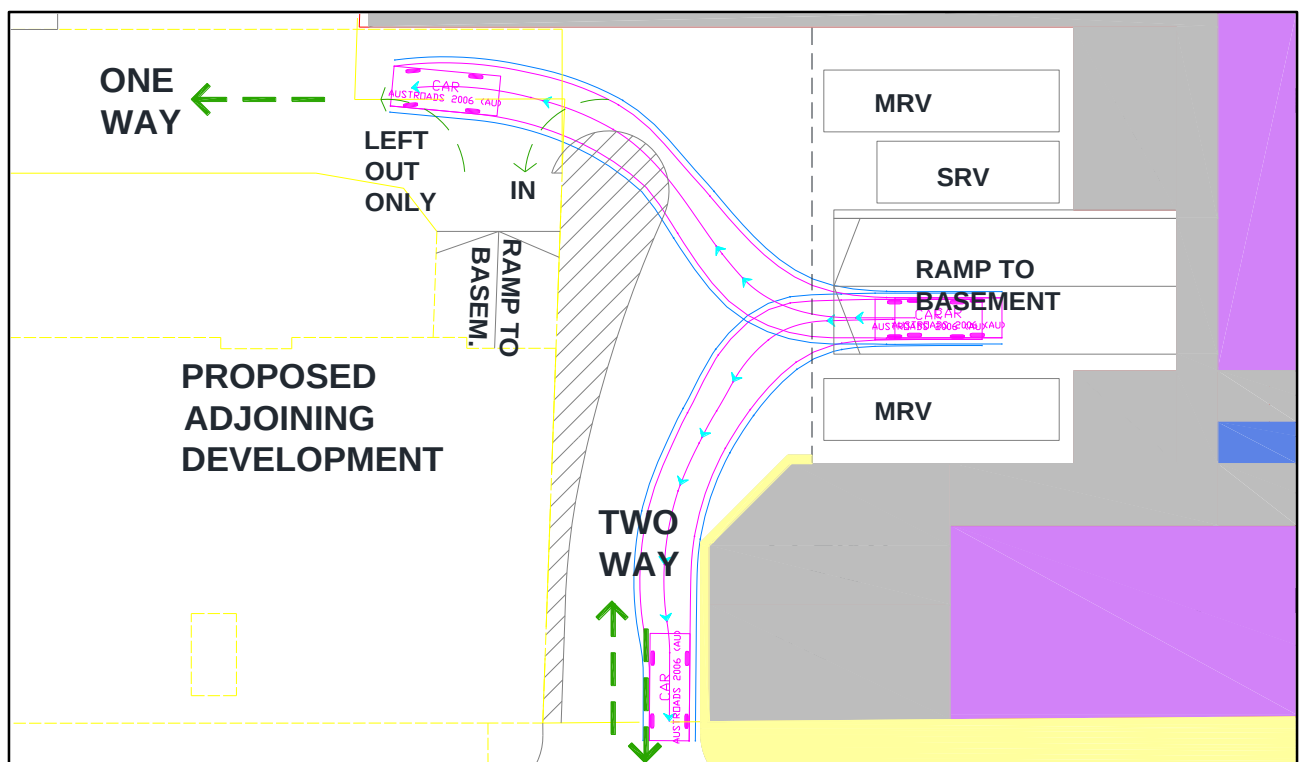
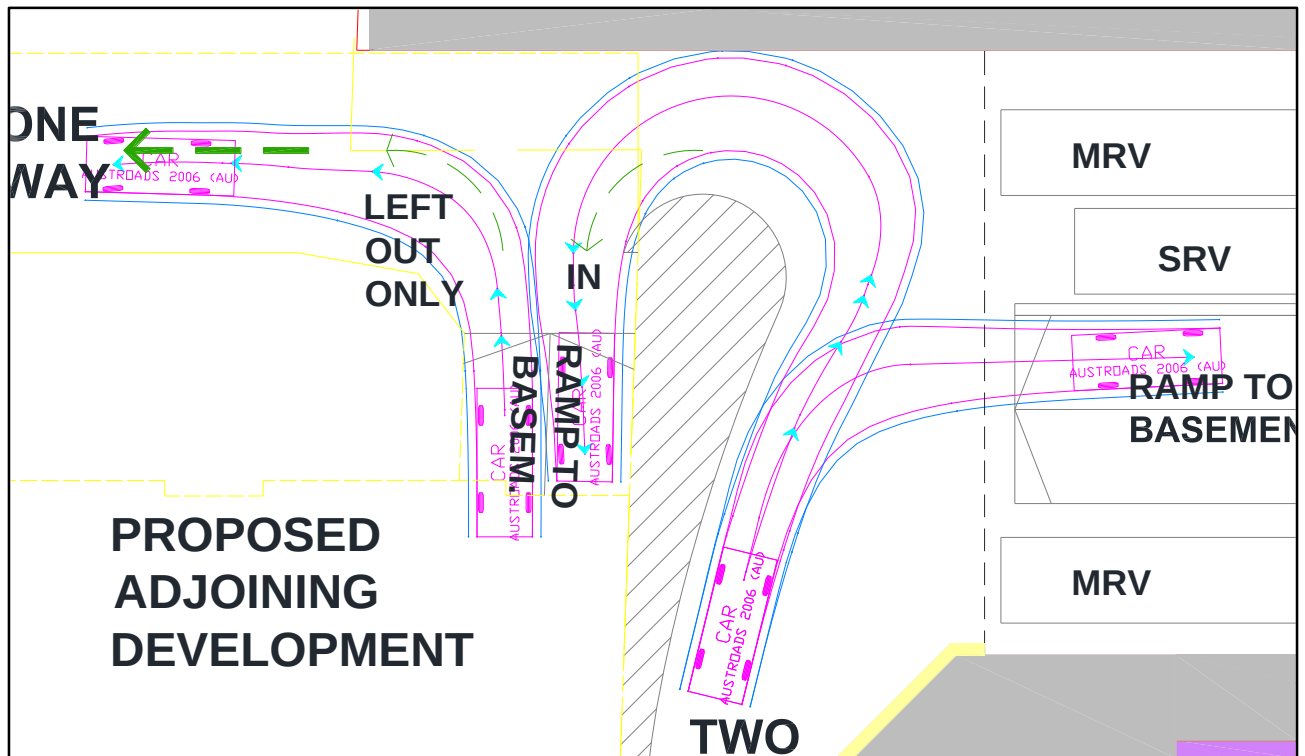
6.4m SRV reverse into / forward out of SRV loading dock

Tested @ 10km/h

Successful

Pink = Vehicle Body  
Blue = 300mm clearance

ANNEXURE B: SWEEP PATH TESTS (Sheet 5 of 6)



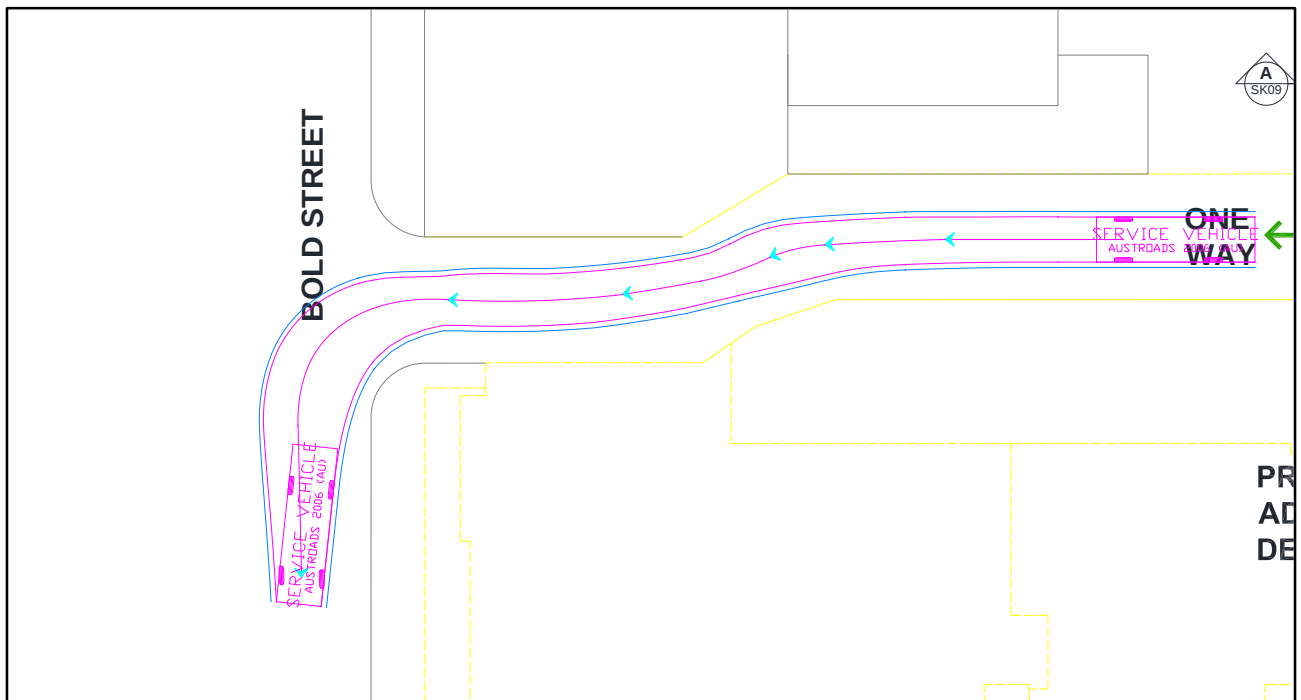
B99 circulation

Tested @ 10km/h within laneway, 5km/h on ramps

Successful

Pink = Vehicle Body  
Blue = 300mm clearance

**ANNEXURE B: SWEPT PATH TESTS (Sheet 6 of 6)**



8.8m MRV forward out of laneway and into Bold Street

Tested @ 10km/h

Successful

Pink = Vehicle Body

Blue = 300mm clearance