



24 June 2021
Ref 19360

Swaab
Level 4, 20 Hunter Street
SYDNEY NSW 2000

Attn: Ms Emma Fleming

Dear Emma,

**L & E COURT PROCEEDINGS No. 2020/00320892
PROPOSED RESIDENTIAL DEVELOPMENT
205-209 GRANGE AVENUE, MARSDEN PARK**

I refer to the Council's Statement of Facts and Contentions dated 17 December 2020 prepared in respect of the abovementioned development proposal. The following advice is provided in response to the traffic and parking related contentions.

Contention 7 - Development Engineering

- i) **Provide all appropriate swept paths for vehicles around the basement car parks**

Please find attached the updated swept turning path diagrams which have been prepared in respect of the revised basement car parking plans. The swept turning path diagrams have been prepared using the Autodesk Vehicle Tracking 2020 program in accordance with the requirements of AS2890.2 confirming that the 8.8m long MRV rigid trucks will be able to access the proposed loading bays without difficulty, such that they will be able to enter and exit the site whilst travelling in a forward direction at all times.

Contention 12 – Transport for NSW

- a) **The traffic generation rates of 0.15-0.19 in the submitted traffic report apply to developments located in close proximity to public transport. The proposed development is likely to have a higher traffic generation rate and as such the traffic report should be updated.**
- b) **It is not clear in the submitted report what the expected trip distribution will be for this development. The applicant is requested to provide further information regarding potential traffic impacts on Richmond Road/Grange Avenue and South Street/Schofields Road intersections. The applicant may need to undertake SIDRA modelling for these intersections.**

Extensive traffic modelling of the *North-West Growth Centre* was undertaken on behalf of the then Department of Planning NSW by *Road Delay Solutions* in 2008, and updated in 2009 to reflect changes proposed to various *Indicative Layout Plans* located within the *North-West Growth Centre* in 2009.

More detailed traffic modelling of the road network proposed in the Marsden Park Precinct was undertaken by AECOM in 2013 to assess the intersection upgrades required to accommodate the developments envisaged by the *Indicative Layout Plan*. That modelling included SIDRA modelling of key intersections on Richmond Road.

Extracts from the AECOM report SIDRA analysis *Table 3 – 10 Proposed Intersection Layouts* and the results of that analysis for projected 2036 peak hours *Table 3-11 Proposed Intersection Performance* are reproduced in the following pages.

The traffic modelling included the provision of *Bus Lanes* on all approaches to key intersections on Richmond Road in anticipation of increased public transport services which will be provided as the population of the *North-West Growth Centre* increases.

In addition, it is noted that the *Marsden Park Precinct Indicative Layout Plan* also makes provision for a future transport corridor approximately 50m in width along the northern side of South Street/Schofields Road to enable the Sydney Metro to be extended from Tallawong Station to the proposed Marsden Park Town Centre.

Accordingly, in circumstances where the residential density of the proposed development is consistent with the *Blacktown City Council Growth Centre Precincts DCP* it is clear that no further traffic modelling is required.

All access is concentrated at locations off Grange Avenue and consideration should be given to a single entry/exit access. Minor traffic treatment may be needed to allow right turn in.

Both vehicular access driveways are proposed to be located along the southern local road frontage of the site rather than off Range Avenue, and no specific or unusual traffic treatments are considered necessary to allow for all turning movements in/out of the site.

- c) The development should consider a footpath along the proposed laneway and active transport provision along Grange Avenue should be considered.**

It is understood that footpaths are proposed along both frontages of the site in accordance with Council's requirements.

- d) The site is located near Bells Creek and the underground parking design must need to consider flooding.**

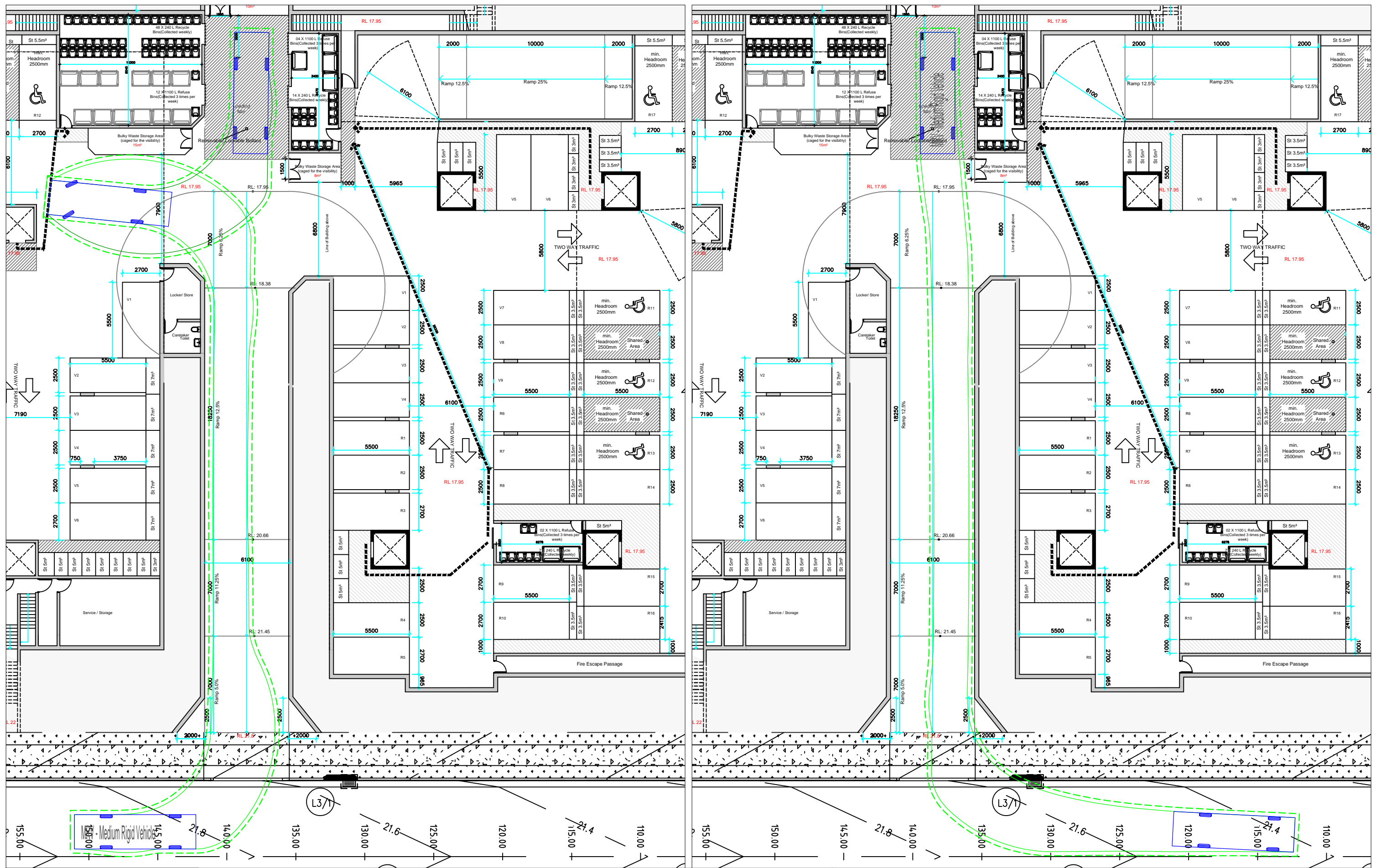
Noted.

Please do not hesitate to contact me on telephone 9904 3224 should you have any enquiries.

Yours sincerely



Robert Varga
Director/Varga Traffic Planning Pty Ltd



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PROJECT
RESIDENTIAL DEVELOPMENT

DRAWING TITLE
BuildingB-8.8mMRV-Entry&Exit

ADDRESS
 205-209 Grange Avenue
 Marsden Park

PROJECT NO.
 19360
 REVIEWED
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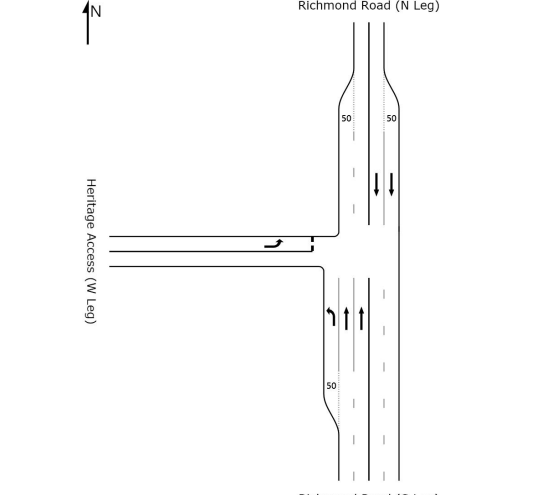
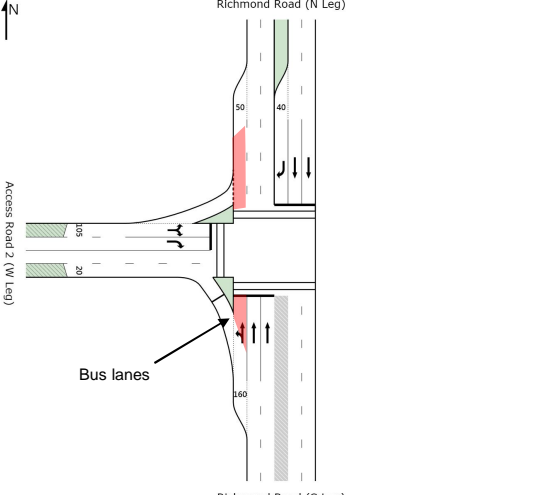
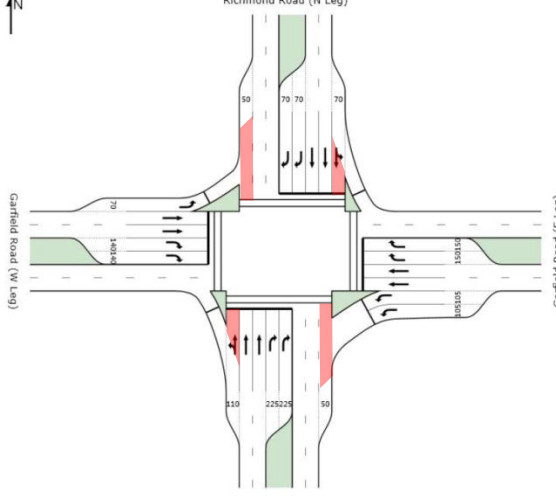
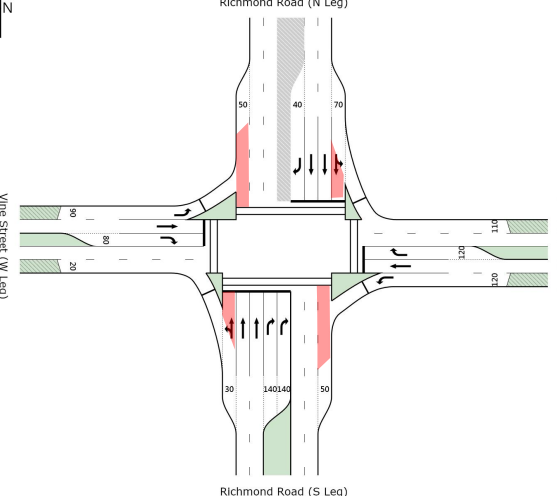
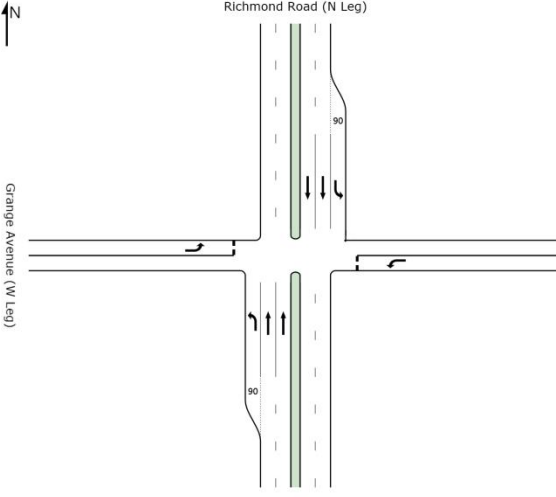
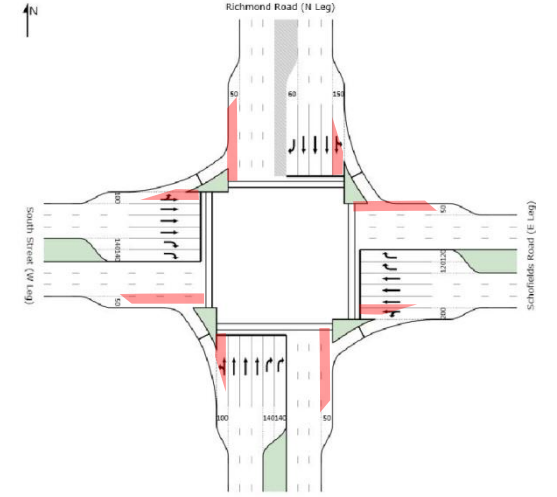
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VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



Table 3-10 Proposed intersection layouts

Richmond Road Marsden Park Precinct Access Road (North) (Access #1)	Richmond Road Marsden Park Precinct Access Road (North of Garfield Road West) (Access #2)
 <p>Richmond Road (N Leg)</p> <p>Heritage Access (W Leg)</p> <p>Richmond Road (S Leg)</p>	 <p>Richmond Road (N Leg)</p> <p>Access Road 2 (W Leg)</p> <p>Bus lanes</p> <p>Richmond Road (S Leg)</p>
Richmond Road Garfield Road West	Richmond Road Vine Street
 <p>Richmond Road (N Leg)</p> <p>Garfield Road (W Leg)</p> <p>Garfield Road (E Leg)</p> <p>Richmond Road (S Leg)</p>	 <p>Richmond Road (N Leg)</p> <p>Vine Street (W Leg)</p> <p>Vine Street (E Leg)</p> <p>Richmond Road (S Leg)</p>
Richmond Road Grange Avenue	Richmond Road South Street
 <p>Richmond Road (N Leg)</p> <p>Grange Avenue (W Leg)</p> <p>Richmond Road (S Leg)</p>	 <p>Richmond Road (N Leg)</p> <p>South Street (W Leg)</p> <p>South Street (E Leg)</p> <p>Richmond Road (S Leg)</p>

Source: AECOM, 2012

As illustrated, the proposed access strategy involves the signalisation of:

- Richmond Road / Marsden Park Precinct Access Road (north of Garfield Road West)
- Richmond Road / Garfield Road West (existing signalised intersection)
- Richmond Road / Vine Street
- Richmond Road / South Street

These signalised intersections will provide the main access points to and from the Precinct. At-grade intersection layouts were determined through the analysis in order to accommodate forecast flows, as far as practicable. A maximum of two lanes for right turning movements was deemed appropriate for the corridor, considering spatial requirements for swept paths.

Priority intersections will also be provided along Richmond Road adjacent to the Precinct. These priority intersections would only allow left-in / left out turning movement and be located at:

- Richmond Road / Marsden Park Precinct Access Road (north)
- Richmond Road / Grange Avenue

A summary of the performance assessment for each of the proposed intersection layouts under 2036 AM and PM peak hour demand is summarised in **Table 3-11**.

Table 3-11 Proposed intersection performance

Approach	Demand Flow (veh/h)	Level of Service (LoS)	Deg of Satn. (DoS)	Ave Delay (sec)	95% back of queue (m)	Approach with longest queue
2036 AM Peak						
Richmond Rd Access 1 Rd	2,486	LOS A	0.469	0.7	4	Heritage Access (EB)
Richmond Rd Access 2 Rd	3,136	LOS B	0.832	26.1	157	Richmond Rd (NB)
Richmond Rd Garfield Rd	6,273	LOS E	0.961	65.0	388	Richmond Rd (SB)
Richmond Rd / Garfield Rd ²	6,273	LOS D	0.929	45.4	196	Garfield Road (WB)
Richmond Rd Vine St	4,569	LOS C	0.942	34.1	481	Richmond Rd (SB)
Richmond Rd Grange Ave	4,373	LOS A ¹	0.962	5.8	86	Grange Ave (WB)
Richmond Rd South St	7,367	LOS E	0.976	60.6	512	Richmond Rd (SB)
2036 PM Peak						
Richmond Rd Access 1 Rd	3,058	LOS A ¹	0.699	4.4	47	Richmond Rd (NB)
Richmond Rd Access 2 Rd	3,649	LOS B	0.864	21.1	202	Richmond Rd (NB)
Richmond Rd Garfield Rd	6,425	LOS E	0.994	69.1	392	Richmond Rd (SB)
Richmond Rd / Garfield Rd ²	6,425	LOS D	0.918	46.7	202	Garfield Road (EB)
Richmond Rd Vine St	4,906	LOS C	0.914	37.3	448	Richmond Rd (SB)
Richmond Rd Grange Ave	4,647	LOS A	0.742	2.4	21	Grange Ave (EB)
Richmond Rd South St	8,741	LOS D	0.946	53.5	321	Richmond Rd (NB)

Source: AECOM, 2012

Note:

¹Intersection operations at Grange Avenue and Access 1 Road have assumed that gaps in the traffic flow would occur as a result of platooning effects created by upstream signalised intersections. Modelling of these intersections has assumed that for a minimum of 8 seconds per minute, there would be no conflicting traffic flow on Richmond Road due to these effects; during this time, traffic from Grange Avenue and Access 1 Road would be able to access Richmond Road unopposed.

²Intersection performance at Richmond Road / Garfield Road with localised widening (three northbound and southbound lanes for 200m) at intersection approach.