

RECEIVED
04/03/2025
TOOWOOMBA
REGIONAL COUNCIL



APPENDIX A – TRAFFIC ENGINEERING ADVICE

RMA Engineers

Monday, 3 March 2025



Jeteld Pty Ltd
C/- Precinct Urban Planning
PO Box 3038
TOOWOOMBA QLD 4350

Attention: Paul Kelly

Project Name: Subdivision - Dallang Road | Middle Ridge
Project No: 22E-0042

Dear Paul,

RMA Engineers has been engaged by Jeteld Pty Ltd ATF Clive Berghofer Developments (the Client) to provide traffic engineering advice in relation to a development application for a proposed 47 lot residential subdivision located at Dallang Road, Middle Ridge. The site is described as Lot 3 and Lot 4 on SP153091 (the subject site) and is located within the Toowoomba Regional Council (TRC) local government area.

This letter has been prepared in response to the traffic and transport item raised in the Toowoomba Regional Council (TRC) *Information Request* dated 22 January 2025, with regards to the previously submitted Traffic Impact Assessment (TIA) report (Revision 2, dated 17 December 2024). The information request is included at Enclosure 1.

The information request item and associated response is detailed in the following sections.

Council Information Request response

Item 1.1 – Traffic Impact Assessment

1.1	Issue:
	The Reconfiguration of a Lot Code includes Performance Outcomes that ensure the road network provides for safe and convenient movement between local streets and higher order roads; and safe, convenient and efficient intersections are provided for vehicles, pedestrians, cyclists and public transport.
	The submitted Traffic Impact Assessment (TIA) does not provide adequate and up to date traffic data for Dallang Road and Hume Street. The traffic counts provided within the TIA are from 2019 and Council does not consider 6 year old traffic counts to be appropriate for confirming the impacts of this development on the road network.
	Information Required:
	Provide an amended TIA, with updated traffic count data (within the last 12 months) to confirm the accuracy of all assumptions (turn warrant assessments, traffic distribution, infrastructure capacity and upgrade requirements, etc.) made within the TIA.

Figure 1 - Council Information Required – Item 1.1

Response

The count data that was utilised in the TIA included midblock traffic survey data that was obtained from TRC at the following sites and dates:

- Dalling Road (between Menzies Street and Hume Street) – 30 Sept 2022 to 11 Oct 2022
- Hume Street (between Dalling Road and Nelson Street) – 27 Mar 2019 to 9 Apr 2019
- Hume Street (between Hinchliffe Drive and Dalling Road) – 27 Mar 2019 to 9 Apr 2019

A linear growth rate of 1.5% per annum was used to approximate the background traffic at the 2025 (opening year) and 2035 (10-year design horizon year). This growth rate is comparable to the ABS data for the surrounding population (Middle Ridge), and the AADT for the nearby New England Highway. Further to this, it is noted that the entire population of Toowoomba has grown by 1.4% per annum (2017-2022), and the New England Highway corridor growth over the last 5 year period is approximately 0.7% compound per annum. Therefore, the 1.5% used in the TIA is deemed conservative.

It is deemed that the count data used in the TIA is considered adequate for the estimation of future traffic demands along the corridor. This is because the data was collected outside of the COVID pandemic, and that there are no surrounding catalysts that would change the current travel and growth patterns along both Hume Street and Dalling Road corridors in the vicinity of the subject site. Also, as per the TIA, there is sufficient capacity in the road network and updating the count data will not change the outcomes and recommendations of the TIA.

To further justify the above, a reverse capacity assessment was undertaken for the operational intersection capacity, midblock capacity and turn warrant requirements for both 2025 and 2035 scenarios. The outcomes of each of these analyses are discussed in the relevant sections below.

Turn warrants

For any impact (i.e. channelisation) to be triggered by the turn warrant assessment, the background traffic volumes would need to be double the current count volumes. This represents a 10% compound growth rate, which is more than 10 times the current growth rate.

Traffic distribution

The traffic distribution considers both the count data patterns as well as surrounding local attractors (i.e. place of work, schools, recreational and retail shops). Updating the count data will not adversely change these traffic distributions.

Given the conservativeness of the TIA and the remaining capacity in the surrounding road network, any minor changes to the traffic distribution will not affect the overall outcomes of the assessment.

Infrastructure capacity

Intersection capacity

A reverse capacity assessment was undertaken for the key intersections using the typical desired standards of service (DSS) values for unsignalised intersections, (i.e. degree of saturation (0.80) and delay (42 seconds)) using SIDRA. The results indicated that the background count data would need to be a minimum of 5 times the current counts for the intersection to reach practical capacity. This can also be represented by increasing the count data by a minimum of 18 times the current growth rate (i.e. 13% compound per annum) each year to the applicable assessment years.

Midblock capacity

Levels of service (Los) values for midblock locations on urban roads with interrupted flow conditions are described in Table 1 below.

Peak hour traffic flow ranges are based on broad assumptions and could potentially change depending on the width of traffic lanes, frictional characteristics, adjacent intersection arrangements and other factors.

Table 1: Midblock level of service description

Level of service		Peak hour traffic flow (veh per hour per lane)	
		From	To
A	Free flow – drivers are virtually unaffected by other drivers in the traffic stream	0	200
B	Stable flow – drivers have reasonable freedom to manoeuvre and select their desired speed	200	380
C	Stable flow – drivers are restricted to some extent in their freedom to manoeuvre and select their desired speed	380	600
D	Approaching unstable flow – drivers are severely restricted in their freedom to manoeuvre and select their desired speed	600	900
E	Unstable flow – traffic volumes at or close to capacity, drivers have virtually no freedom to manoeuvre or select their desired speed	900	1,400
F	Forced flow – traffic volumes over capacity with flow breakdown, queuing and delays	Greater than 1,400	

Source: *Guide to Traffic generating Developments (NSW RMS, 2002)*

The LoS D is deemed as an acceptable range for traffic flow, whereby anything exceeding the volumes per lane will result in unstable flow (i.e. LoS E) and would potentially require upgrading to increase the number of lanes (i.e. from two-lane to a four lane road).

From a reverse capacity assessment of the midblock traffic volumes, the background count data would need to be a minimum of 5 times the current counts for the midblock to reach LoS E. This can also be represented by increasing the count data by a minimum of 10 times the current growth rate per annum to the applicable assessment years.

Upgrade requirements

From the above reverse capacity assessments, the peak hour background traffic volumes for Dallang Road and Hume Street would need to increase by a minimum of 10 times the current growth rate, compounding per year to the applicable assessment horizons, for any change in the outcomes of the TIA report. This is highly unrealistic and unlikely for the assessment area.

Conclusion

It is deemed that the count data used in the TIA is considered adequate for the estimation of future traffic demands along the corridor.

From the above reverse capacity assessments, and given the abundant capacity in the surrounding road network, it is evident that updating traffic counts for this site would not change the overall outcomes and recommendations of the TIA report.

It is acknowledged that no further upgrades would be triggered from obtaining new traffic count data and that the proposed development can proceed without any unacceptable or adverse impacts on the external road network. No traffic and transport engineering matters have been identified that should preclude approval of the proposed development.

I trust that the above is of assistance and satisfactorily addresses the traffic and transport related Information Request item. Please do not hesitate to contact me if you require any additional information regarding the above.

Yours sincerely,



NER, CPEng, RPEQ: 15158

Adam Gwatking

Associate | Traffic & Transport Team Lead | Principal Engineer

RMA ENGINEERS PTY LTD

Enclosure 1 – TRC Information Request

Enclosure 1 – TRC Information Request

Our Reference: RAL/2024/8363
 CS Portal Reference: N/A
 Contact Officer: Richard Green
 Contact: (07) 4688 6710
 Email: development@tr.qld.gov.au

INFORMATION REQUEST
Planning Act 2016 Section 68(1)
Development Assessment Rules Part 3

Jeteld Pty Ltd
 C/- Precinct Urban Planning
 PO Box 3038
 TOOWOOMBA QLD 4350

Email: paul@precinctplan.com.au

22 January 2025

Dear Sir/Madam

Development Application for: Reconfiguring a Lot – Code – Two (2) Lots into 47 Lots
Location: 20-42 Dallang Road and 588-592 Hume Street, MIDDLE RIDGE QLD 4350
Property Description: Lot 3 RP153091 and Lot 4 RP153091: PAR DRAYTON
Relevant Planning Scheme: Toowoomba Regional Planning Scheme 2012 (Version 28)

Upon review of the abovementioned Development Application and supporting information, Council requires further information which demonstrates compliance with the Planning Scheme. Please provide the information requested below:

1. Traffic Impact Assessment

1.1	Issue:
	The Reconfiguration of a Lot Code includes Performance Outcomes that ensure the road network provides for safe and convenient movement between local streets and higher order roads; and safe, convenient and efficient intersections are provided for vehicles, pedestrians, cyclists and public transport.
	The submitted Traffic Impact Assessment (TIA) does not provide adequate and up to date traffic data for Dallang Road and Hume Street. The traffic counts provided within the TIA are from 2019 and Council does not consider 6 year old traffic counts to be appropriate for confirming the impacts of this development on the road network.
	Information Required:
	Provide an amended TIA, with updated traffic count data (within the last 12 months) to confirm the accuracy of all assumptions (turn warrant assessments, traffic distribution, infrastructure capacity and upgrade requirements, etc.) made within the TIA.

Note on Alternative Solutions

Where an alternative solution to the Acceptable Outcome is proposed, justification demonstrating how the correlating Performance Outcome has been met must be provided. Requesting an alternative solution without demonstrating how the Performance Outcome has been satisfied, does not oblige Council to favourably consider the alternative solution.

Options Available in Response to this Information Request

In accordance with section 13.2 of the *Development Assessment Rules*, you may respond to this request for information by providing Council with:

- 1) all of the information requested; or
- 2) part of the information requested; or
- 3) a notice stating that none of the information will be provided.

In your response, advise Council which option you are supplying. If you choose 2) or 3), you may also advise Council to proceed with its assessment of the application.

Provide one electronic copy of the response to Council, including any plans or supporting information.

In accordance with section 13.1 of the *Development Assessment Rules*, you must respond to this information request within **three months** of the date the information request was made, or a further period agreed between the applicant and Council. If there is no response to the information request within the period described, Council will proceed with the assessment of the application based on the information currently available.

Yours faithfully

A handwritten signature in black ink, appearing to read 'M. Coleman', with a long horizontal stroke extending to the right.

Matthew Coleman
Acting Manager, Planning Branch