VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants
ACN 071 762 537 ABN 88 071 762 537

31 January 2022
Ref 20355

Fairfield City Council
P.O. Box 21
FAIRFIELD NSW 1860

Attn: Andrew Mooney

Dear Andrew,

SSD-8859
PROPOSED SUBDIVISION
1111-1141 ELIZABETH DRIVE, CECIL PARK
TRAFFIC MATTERS

I refer to Council's letter dated 10 January 2022 to Mr Thomas Bertwistle from the Department of Planning, Industry & Environment (DPIE), requesting further additional information (RFI) in respect of the abovementioned development proposal (SSD-8859).

The abovementioned RFI includes 11 items that remain outstanding in Council's opinion. I understand in recent days however, Council has held a productive meeting with Mr Bertwistle to discuss their RFI and those outstanding matters.

I can also confirm that I myself have had a productive telephone conversation with Mr Bertwistle today, where he advised that the vast majority of Council's 11 outstanding items have been addressed by recently submitted additional information (including information provided by the concept intersection designer's *MU Group*) or is capable of being resolved and/or conditioned to be addressed at the construction certificate stage. This includes the Construction and Operational Management Plans referenced under RFI Item 2.

Notwithstanding, it is my understanding, following my conversation with Mr Bertwistle, that Council have narrowed their concerns down to, "*how the increase in vehicle movements (heavy vehicle and passenger vehicle movements) accessing the proposed access road (travelling to/from the sites) will be managed during the peak AM and PM peak hours*" (as detailed in RFI Item 2).

In particular, the capacity of the future subdivision road to accommodate the anticipated level of traffic volume that the subdivision may generate (given the road will be dedicated to Council as a public local road), as well as the potential queuing that may occur within the subdivision road.

As noted in the Traffic Impact Assessment Report (TIA) that accompanied the application, the future uses of the lots within the subject site are not yet known, and a variety of land uses are permissible. Applying specific land uses from the RMS Guide or the TDT 2013/04a is therefore not considered appropriate in this instance. A variety of land uses and their RMS-specified traffic generation rates were therefore used as reference, and a very conservative rate of *6 peak hour trips per 100m^2* was adopted. Furthermore, it is reasonable to expect a development site the size of the subject site to generate a certain level of traffic.

As noted in the TIA, based on the cumulative potential floor area of approximately 9,490m^2 GFA and the very conservative trip rate of *6 peak hour trips per 100m^2*, the subdivision has the *potential* to generate in the order of 568 peak hour vehicle trips (284 trips IN & 284 trips OUT).

The M12 Motorway project team has been modelling the surrounding road network to help inform their design requirements and have factored in the subject site's associated traffic volumes into their model, to determine the impacts on the adjoining road network.

To date, the M12 Motorway project team have not provided their traffic volumes for the Applicant's project team to use, therefore for the purposes of understanding how the proposed new subdivision road intersection may operate in the future, two scenarios have been modelling using the SIDRA program, as follows:

1. 1200 vph along Wallgrove Rd past the site (plus 284 trips IN & 284 trips OUT)

2. 2000 vph along Wallgrove Rd past the site (plus 284 trips IN & 284 trips OUT)

The results of both scenarios are attached, and summarised below:

1. 1200 vph scenario has all movements operating at *Level of Service "A"*, with an Average Vehicle Delay of 8.6 seconds for left-turn out movements, and a 95th percentile Back-of-Queue length of 12.3m for left-turn out movements

2. 2000 vph scenario has the Wallgrove through and left-turn in movements operating at *Level of Service "A"* whilst the left-turn out movements are operating at *Level of Service "B"*, with an Average Vehicle Delay of 20.2 seconds for left-turn out movements, and a 95th percentile Back-of-Queue length of 28.5m for left-turn out movements

Further to the above SIDRA assessment, reference is also made to the RMS Guide which provides indicative volume thresholds for various scenarios and *Level of Service.*

Table 4.3
Typical mid-block capacities for urban roads with interrupted flow

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Table 4.4
Urban road peak hour flows per direction

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

As can be seen by Table 4.3 and Table 4.4, based on the estimated traffic volumes, the proposed subdivision is expected to generate between *Level of Service "A"* & *Level of Service "B"*, which are optimum conditions with spare capacity.

In light of the above, I am confident that the proposed new intersection will operate with minimal delays and minimal queue lengths, including vehicles exiting left out of the subdivision road back onto the new Wallgrove Road.

I trust the above responses address Council's comments. Please do not hesitate to contact me on telephone 9904 3224 should you have any enquiries.

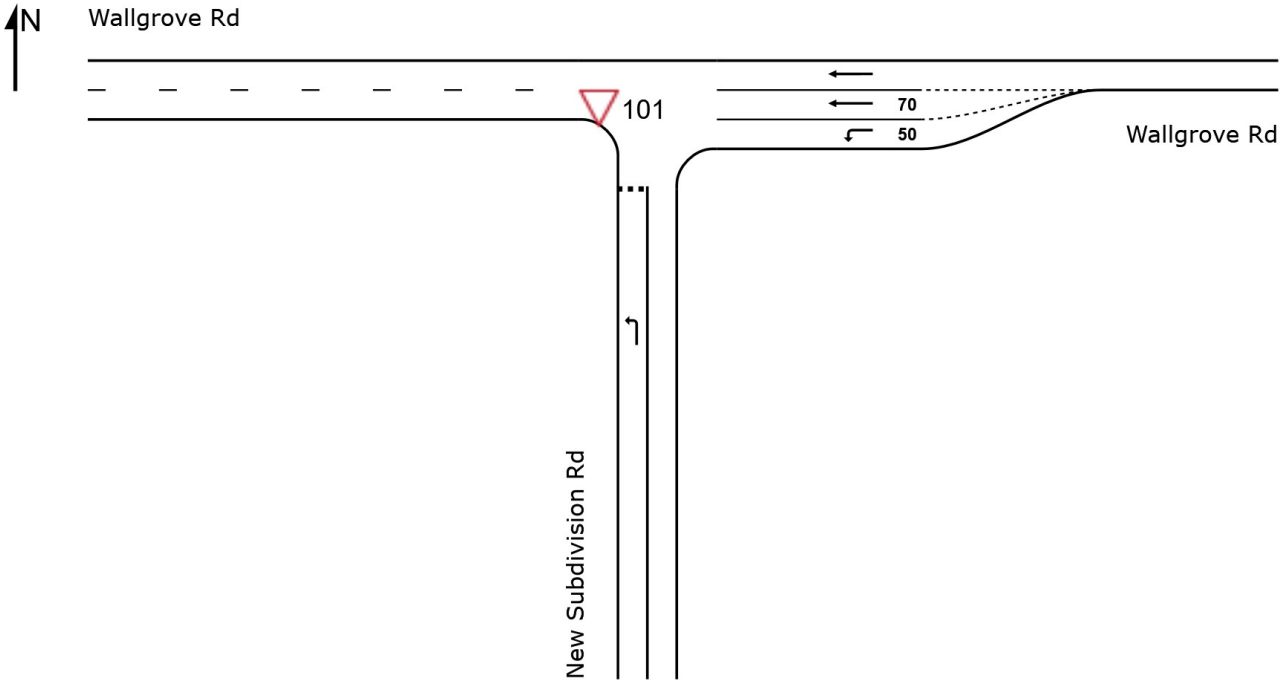
Yours sincerely

Chris Palmer
Executive Engineer B.Eng (Civil)
Varga Traffic Planning Pty Ltd

SITE LAYOUT

Site: 101 [New Wallgrove Rd & Subdivision Rd]

New Wallgrove Rd & Subdivision Rd
Site Category: (None)
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

Site: 101 [New Wallgrove Rd & Subdivision Rd 1200vph]

New Wallgrove Rd & Subdivision Rd
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: New Subdivision Rd												
1	L2	284	5.0	0.340	8.6	LOS A	1.7	12.3	0.61	0.87	0.74	47.1
Approach		284	5.0	0.340	8.6	LOS A	1.7	12.3	0.61	0.87	0.74	47.1
East: Wallgrove Rd												
4	L2	284	5.0	0.158	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	53.4
5	T1	1200	5.0	0.318	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		1484	5.0	0.318	1.1	NA	0.0	0.0	0.00	0.11	0.00	58.5
All Vehicles		1768	5.0	0.340	2.3	NA	1.7	12.3	0.10	0.23	0.12	56.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [New Wallgrove Rd & Subdivision Rd 2000vph]

New Wallgrove Rd & Subdivision Rd
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: New Subdivision Rd												
1	L2	284	5.0	0.675	20.2	LOS B	3.9	28.5	0.90	1.21	1.71	40.9
Approach		284	5.0	0.675	20.2	LOS B	3.9	28.5	0.90	1.21	1.71	40.9
East: Wallgrove Rd												
4	L2	284	5.0	0.158	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	53.4
5	T1	2000	5.0	0.529	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		2284	5.0	0.529	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.9
All Vehicles		2568	5.0	0.675	2.9	NA	3.9	28.5	0.10	0.20	0.19	56.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.