VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants
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2 May 2013
Ref 12454

Marchese Partners International
Level 7, 107 Mount Street
NORTH SYDNEY NSW 2060

Attn: Mr Paolo Salotto
psalotto@marchesepartners.com.au

Dear Paolo,

PROPOSED RESIDENTIAL DEVELOPMENT
AVON ROAD & BEECHWORTH ROAD, PYMBLE
TRAFFIC AND PARKING MATTERS

I refer to the RMS's letter dated 8 March 2013 requesting additional information in respect of the abovementioned development proposal. The following advice is provided in response to the traffic matters raised by the RMS:

1. Traffic Modelling

   a. The traffic modelling has been modified to incorporate the 5.0 second *early cut-off* feature at the Bobbin Head Road and Beechworth Road intersection, as discussed with the RMS.

   b. The cycle times for the signalised intersections located on the Pacific Highway have been reduced from 150 seconds to 140 seconds, as requested by the RMS.

   c. As above.

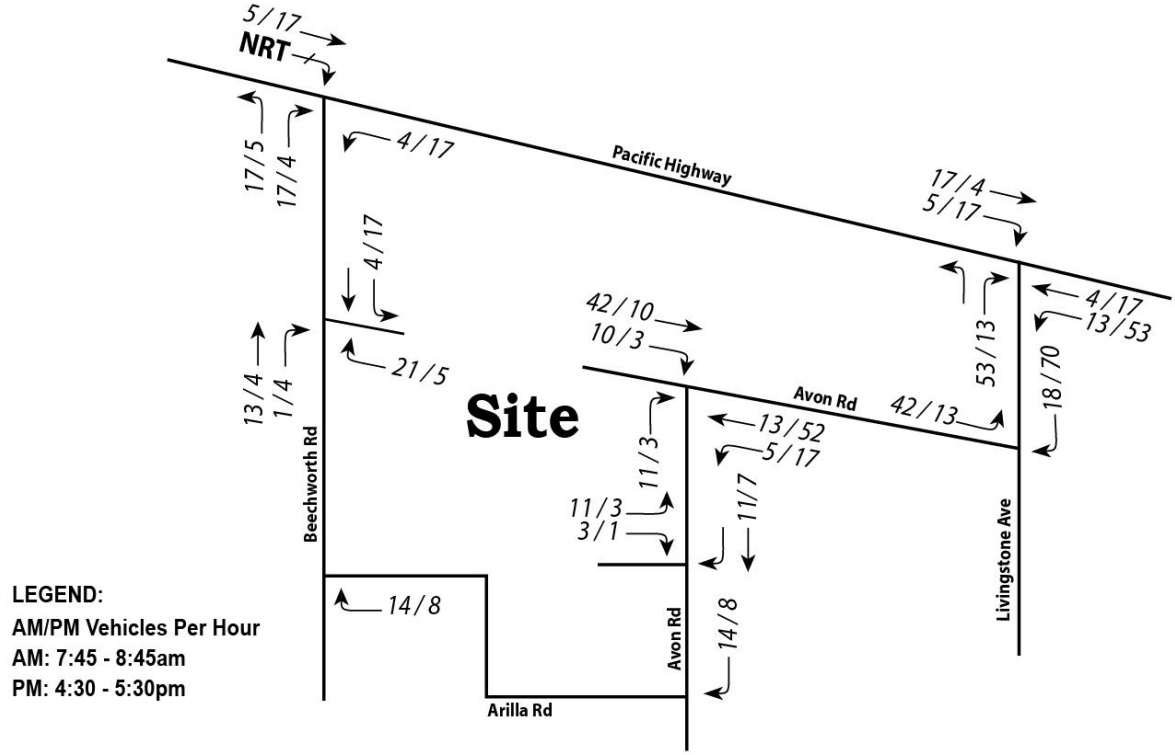
   d. The traffic modelling included in the original traffic report was already based on the traffic generation rate of 0.4 vph/dwelling for medium density housing, yielding a traffic generation potential of 109 vph during commuter peak periods.

   e. An electronic copy of the SIDRA modelling will be forwarded to the RMS for their review, by email.

   f. The traffic modelling was based on the busiest one-hour period identified by the traffic surveys on the Pacific Highway. Those one-hour periods occurred between 7:45am-8:45am, and between 4:30pm-5:30pm when traffic volumes of up to 5300 vph were recorded on the Pacific Highway.

      The traffic volumes used in this analysis are summarised on Figure 1 (Existing) and Figure 2 (Proposed) below:

EXISTING TRAFFIC VOLUMES
FIGURE 1



PROPOSED ADDITIONAL TRAFFIC VOLUMES
FIGURE 2

The results of the revised traffic modelling are summarised in the table below, confirming that:

- the proposed development will have little, if any appreciable effect on the operational performance of nearby intersections, with increases of just 2 to 3 seconds/vehicle expected to occur at the Pacific Highway intersections as a consequence of the development proposal, and

- those increased delays are minimal and will clearly not warrant any road improvements or intersection upgrades to accommodate the projected additional traffic flows.

RESULTS OF SIDRA CAPACITY ANALYSIS												
	EXISTING						**PROPOSED**					
	AM PEAK			**PM PEAK**			**AM PEAK**			**PM PEAK**		
	LOS	**D/S**	**AVD**	**LOS**	**D/S**	**AVD**	**LOS**	**D/S**	**AVD**	**LOS**	**D/S**	**AVD**
Pacific Hwy/Livingstone Rd (1405)	B	0.775	223.6	B	0.858	18.8	B	0.813	25.2	B	0.888	20.4
Pacific Hwy/Beechworth Rd (1405)	A	0.700	11.2	A	0.860	11.6	A	0.739	14.7	A	0.878	12.9
Pacific Hwy/Bobbin Head Rd (1405)	B	0.723	17.4	B	0.853	16.4	B	0.723	17.4	B	0.853	16.4
Avon Rd/Arilla Rd	A	0.247	4.4	A	0.265	4.8	A	0.250	4.5	A	0.175	4.9
Avon Rd/Bldgs 3 & 4 Site Access	A	0.148	0.6	A	0.108	0.4	A	0.161	1.3	A	0.158	1.5
Avon Rd/ Bldg 1 Site Access	-	-	-	-	-	-	A	0.151	2.5	A	0.117	0.5
Beechworth Rd/Bldg 5 Site Access	-	-	-	-	-	-	A	0.176	1.2	A	0.134	0.8

LOS – Level of Service; D/S – Degree of Saturation; AVD – Total Average Vehicle Delays (sec/veh)

2. The projected traffic flows expected to be generated by the development proposal are illustrated on Figure 2 above. As can be seen, the increased traffic flows expected to occur in Arilla Road is expected to be less than 15 vph, comprising traffic departing the site with a destination towards the north (a No Right Turn restriction into Beechworth Road from the Pacific Highway precludes the reverse direction movement for southbound traffic). Those increased traffic flows of less than 15 vph would clearly not warrant the provision of a *through site link* between Avon Road and Beechworth Road.

   In addition, the provision of a *through site link* would likely result in the introduction of a peak hour *short-cut* movement through the site and would result in increased traffic conflicts occurring at the "new" intersections on Beechworth Road and Avon Road.

   Accordingly, the provision of a *through site link* is not favoured on traffic grounds.

Consideration has also been given to Council's request to provide a pedestrian refuge island in Avon Road. However, the current dimensional requirements for refuge islands specified in the RMS technical directions (ie; a raised concrete island 2.0m wide and 15.0m long with a 3.0m gap in the middle) could not accommodate heavy vehicle movements such as buses and trucks negotiating the bend. It would also block right-turn movements in/out of the main access driveway, thus forcing traffic returning home to the site to travel around the block to access the site.

It is agreed with Council's observation that the RMS numerical warrants for a *Marked Foot Crossing* are unlikely to be met. It is therefore recommended that the current proposal to realign the footpaths on either side of Avon Road to facilitate a shorter, more direct pedestrian movement across Avon Road be adopted (albeit without the *Marked Foot Crossing*) as indicated on the current plan.

Realignment of the footpath on either side of Avon Road would improve the safety of the existing crossing facility by reducing the width of the road to be crossed, whilst maintaining the optimum location for a crossing in terms of driver/pedestrian visibility which is achieved on the apex of the bend.

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