



TRANSPORT & URBAN PLANNING PTY LTD

TRAFFIC ENGINEERING - TRANSPORT PLANNING -
ROAD SAFETY & PROJECT MANAGEMENT CONSULTANTS

ABN 51 164 127 422
ACN 164 127 422

SYDNEY OFFICE:
5/90 TORONTO PDE
SUTHERLAND NSW
P.O. BOX 533
SUTHERLAND NSW 1499
PHONE: (02) 9545 1411
FAX: (02) 9545 1556
E-MAIL: admin@transurbanplan.com.au
www.transurbanplan.com.au

3 June 2015

Andrew Needham
Development Manager
Dexus
PO Box R1822
Royal Exchange NSW 1225

Dear Andrew,

Re: Proposed QuarryWEST Masterplan
Response to Issues Raised by Roads and Maritime Services (RMS)

I have reviewed the issues raised by the RMS concerning the QuarryWEST Masterplan proposal. This letter sets out a response to those issues raised by the RMS.

Issue 1

It is noted that Roads and Maritime did not support a right turn bay from Reconciliation Road into Dolerite Close previously. The applicant shall provide justification of reasoning for the right turn bay at this intersection. The applicant shall demonstrate the traffic signal warrants for this intersection have been met.

Response

The amended approved concept plan for Greystanes SEL did not include a right turn bay in Reconciliation Road (now Prospect Highway) at Dolerite Close, nor were any provided when Prospect Highway (Reconciliation Road) was constructed.

However these arrangements were based on a full development scenario which had a significant amount of commercial uses and a much higher traffic generation from the Greystanes SEL, as well as different road layouts in QuarryEAST and the proposed QuarryWEST Estate.

The traffic generation of QuarryEAST and the proposed QuarryWEST Industrial Estate is considerably lower than that generally assessed in 2006 for the approved amended concept plan.

In early 2013 Dexus sought RMS agreement to realign Turnbull Close in the QuarryEAST Estate to match Dolerite Close at the intersection to form a cross junction, which could be signalised in the future. At that time Dexus did not own the QuarryWEST land and had not developed the QuarryWEST Estate Masterplan. Hence, there was no request to the RMS to consider a right turn bay in Prospect Highway for the right turn into Dolerite Close at that time.

The overall lower traffic generation and the QuarryEAST and proposed QuarryWEST Estate road layouts, now provide the opportunity to enhance the intersection arrangements in



Prospect Highway (Reconciliation Road) at the Dolerite Close and at the Bellevue Circuit intersection. At both intersections new right turn bays are proposed and the traffic signal phasing would include diamond turns for the right turn movements in Prospect Highway. (Reconciliation Road). Signalised diamond turn arrangements where opposing right turn movements turn at the same time are very efficient in terms of maximising intersection capacity.

The proposed changes/enhancements to the intersections in Prospect Highway (Reconciliation Road) will ensure that the traffic generated by QuarryWEST is evenly distributed over the three (3) signalised intersections with each intersection predicted to operate at similar satisfactory levels of service (typically B or C) with spare capacity at full development.

The proposed right turn bay in Prospect Highway at Dolerite Close is part of these enhancements and allows the right turn to be safely accommodated at the intersection. The right turn movement into Dolerite Close is estimated to be up to 133 vehicles per hour (vph). As noted above, the intersection will have a satisfactory level of service.

In terms of the traffic signal warrant the RMS Traffic Signal Design (Guide) sets out general warrants for traffic signals. Leaving aside traffic and pedestrian safety, a warrant is met if the following volumes are met.

(a) Traffic demand:

For each of four one-hour periods of an average day:

- (i) The major road flow exceeds 600 vehicles/hour in each direction; and
- (ii) The minor road flow exceeds 200 vehicles/hour in one direction.

The traffic signal warrant is therefore met by the expected traffic volumes using the intersection with Reconciliation Road at the intersection carrying 1527vph to 1600vph (ie. greater than 600vph in each direction) and Dolerite Close carrying between 201vph to 422vph in one direction for a minimum of 4 hours per day. More importantly given the relatively high proportion of trucks using the intersection and the intersection geometry with multiple lanes in Prospect Highway, it is considered that it would be unsafe to not provide traffic signals and allow the intersection to operate under sign control.

Boral (the original owner/developer of the land) has already paid a contribution to meet the full cost of the installation of the traffic signal at the intersection of Prospect Highway (Reconciliation Road)/Dolerite Close/Turnbull Close.

Dexus is prepared to initially prefund the installation of the signals, so that safe access can be provided for future tenants, who occupy QuarryWEST in the early stages of the development. Dexus will seek reimbursement of the installation costs when sufficient development occurs so that the warrant is met. Dexus will enter into an appropriate agreement with RMS concerning this work.

Issue 2

The applicant has proposed a 100m right turn bay into Dolerite Close as part of this application and an 80m right turn bay into Bellevue Crescent and a 110m right turn bay into Basalt Road. Roads and Maritime requires an electronic copy of the SIDRA modelling undertaken for all three intersections to assess the adequacy of the right turn bay length.



Response

SIDRA traffic modelling files are enclosed for the 3 intersections. This modelling indicates that right turn bay lengths for the existing and proposed right turn bays and are of sufficient length, to prevent any of the right turn bays from queuing out.

Yours faithfully

Terry Lawrence
Director
Transport and Urban Planning Pty Ltd

Enclosed: SIDRA Modelling files