

Our Reference: 20100082

Date: Monday, 30 August 2010

Australand Industrial Constructions Pty Ltd

Level 3, 1C Homebush Bay Drive

Rhodes NSW 2138

Attention: Mr Paul Solomon

PROPOSED KMART WAREHOUSE & DISTRIBUTION CENTRE, EASTERN CREEK

In response to the dot points referenced in the letter by Gallagher Jeffs Consulting, dated 27 August, 2010, Road Delay Solutions has investigated, in detail, the operation of the proposed Kmart facility.

- The *End State* road network, subjected to the full, operational, vehicular generations from the Eastern Creek Precinct, is considered to have the greatest impact on the local and arterial road network. As developments come on line throughout the precinct, planned infrastructure is constructed to carry the interim loadings from each development parcel.

Reference to the relevance of existing traffic counts within the Eastern Creek Precinct refers to the preparation of a calibrated base case model. Given that current infrastructure, within the precinct, is fragmented, Road Delay Solutions considered that a calibrated base model would have no significant relevance in assessing the future road requirements and afforded Council the opportunity to comment on such action.

The interim conditions, under roundabout control, have been modelled and returned a good LoS during the morning and evening peak periods, as shown in *Table 1*.

No further action is considered necessary at this time.



- The traffic generation, stated in the report, refers to the mandatory requirements under Council and RTA guidelines for traffic generating developments which will be greater than anticipated actual traffic. Kmart has indicated in a client questionnaire that their specific vehicle generation will be lower than quoted. Kmart have stated that heavy vehicle generation will be in the order of some 150 vehicles, daily. The report modelled 42vph, with 21vph leaving the site. The Kmart has stated that the generation will be considerably less than modelled for the report. Generations modelled in the report represent a 'worst case' scenario.

No further action is considered necessary at this time.

- While we are aware that during the interim stage of the Eastern Creek Precinct Stage 3 development the north/south Road B will terminate to the immediate south of the proposed Kmart development and the sole access to the site will be via a proposed roundabout controlled intersection formed to the north of Road B at Hansen Quarry Road, it is considered the volume of projected traffic does not present an operational concern.

The modelled, interim, traffic generation at the proposed roundabout is shown in *Figure 1*. Computer based micro intersection modelling has been undertaken on the proposed roundabout, subjected to the interim traffic projections and the roundabout was found to operate at a good LoS 'A' during both the AM and PM peak periods.

No further action is considered necessary at this time.

- The generation rate expressed in the traffic impact assessment is in accordance with the RTA's *Guide to Traffic Generating Developments*, representing a worst case scenario as modelled. The predominant majority of vehicles, generated by the Kmart site, will be private passenger vehicles, estimated, under the RTA guidelines, to be some 234vph during the peak periods and with an 85/15 split favouring the peak flow direction. Heavy vehicles will approximate a 50/50 split. The modelled, interim, peak flow movements through the roundabout on Hansen Quarry Road at Road B are presented in *Figure 1*.

Kmart has indicated, in a client questionnaire, that the anticipated vehicle generations will be lower than those prescribed in the RTA *Traffic Generating Development Guide* with only 150 heavy vehicles generated per day. The quoted one (1) truck trip every two (2) minutes represents one outbound trip from the site every 4 minutes equalling a total of 15 vehicles outbound and 15 vehicles inbound during the peak periods. The modelling of the precinct actually adopted 21 heavy vehicles per hour. The projected traffic movements do not cause any area of concern as indicated in the results presented in *Table 1*.

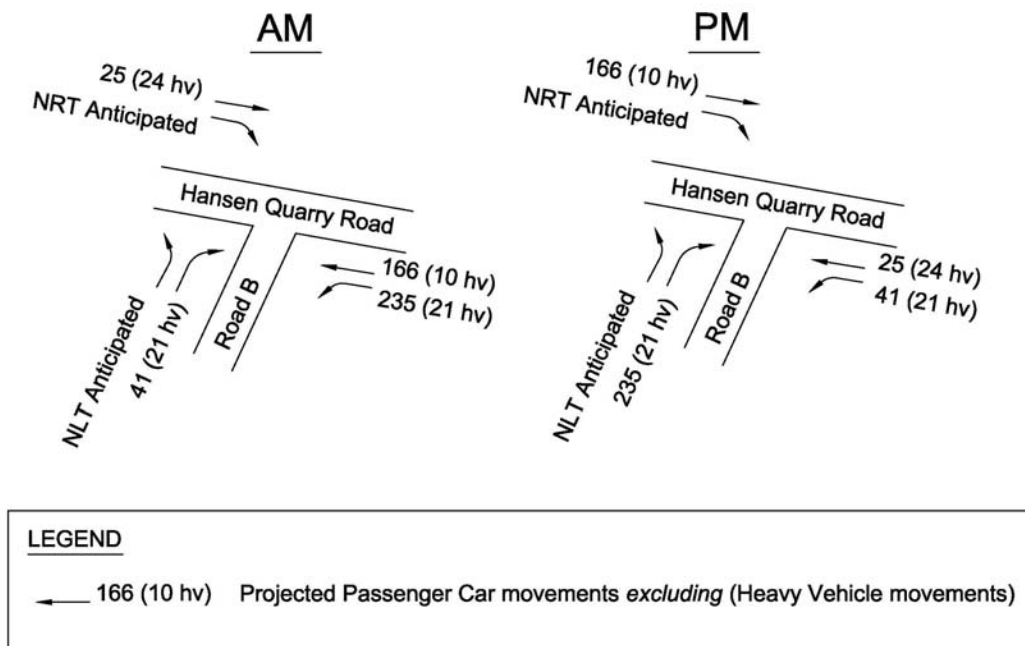
Given that no right turn movement from Hansen Quarry Road, eastbound, to Road B, southbound, is envisaged during the interim stage, vehicle movement priority should result in unimpeded movement by westbound vehicles along Hansen Quarry Road and provide relief to the corresponding eastbound through movement by stopping northbound traffic on Road B.

No further action is considered necessary at this time.

Table 1: Hansen Quarry Road and Road B Operational Performance

Control Method	Time Period	DS	AVD (sec)	LoS
Roundabout	AM	0.15	4	A
	PM	0.14	5	A

Figure 1: Projected Interim Peak Hour Traffic Flows



The projected traffic flows presented are in accordance with RTA requirements and the Guide to Traffic Generating Developments. The actual traffic generations pertaining to the Best & Less and Kmart Developments are anticipated to be lower as indicated on the Client Questionnaires held by Australand.

- As fore mentioned the vehicle generation rates prescribed in the RTA's *Guide to Traffic Generating Developments* has been adopted in the future modelling of the precinct and specifically, the intersection, to satisfy the DCP requirements. The significant majority of vehicles generated by the site will be private passenger vehicles, estimated under the RTA guidelines to be some 234vph during the peak periods.

The proposed Kmart warehouse and distribution facility is intended to operate on a 24 hour basis with the majority of heavy vehicle movements undertaken during the business and off peak hours. Kmart has indicated that, daily, it is anticipated that the site will generate some 100 to 150 heavy vehicle trips inbound and correspondingly, some 100 to 150 heavy vehicle trips outbound.

The quote taken from the traffic impact report stating one (1) truck trip every two (2) minutes equates to two trips every four (4) minutes, on average, with one (1) inbound and one (1) outbound. The modelled volume, adopted for the interim peak, is 21 vehicles leaving the Kmart site and should not jeopardise the operational integrity of the proposed roundabout.

Periodic delay and queuing will occur either on Hansen Quarry Road, eastbound, or Road B, northbound, as the result of coincidental vehicle trip arrivals. However, the duration of delay is not anticipated to be significant, with the projected traffic volumes affording sufficient gap time to facilitate all movements at the proposed roundabout. The modelling of the interim traffic conditions suggests no evidence of excessive delays or queuing during the peak periods. Further, significant spare capacity is exhibited at the site, allowing for an increase in vehicle volumes, above those presented in *Figure 1*.

No further action is considered necessary at this time.

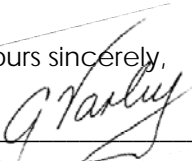
- Given the above information, it is considered that the traffic management measures proposed at the intersection of Hansen Quarry Road and Road B are sufficient in providing access to the planned developments during both the interim and 'End State' conditions, as modelled.
 - Any further consideration of infrastructure, based on further precinct development, is beyond the control of Australand Holdings Ltd and subject to neighbouring development and Council determination,
 - Major capital works is considered unnecessary as the proposed roundabout is an appropriate traffic management control measure with a satisfactory LoS A in both the AM and PM peak periods for the interim and 'End State' conditions outlined.

No further action is considered necessary at this time.

In closing, it is the considered opinion of Road Delay Solutions that the Blacktown Council approved roundabout, at the intersection of Hansen Quarry Road and Road B, Eastern Creek, will satisfactorily manage the projected traffic volumes during the interim and 'End State' stages of development.

Should you require clarification of any issue addressed in this document, please contact Glen Varley on mobile 0414 800 912.

Yours sincerely,



Glen Varley

Director - Traffic and Transport
Road Delay Solutions Pty Ltd