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Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

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Hunters Hill Council
22 Alexandra Street
Hunters Hills 2110
Attention: Steve Kourepis

SUMMARY OF TRAFFIC ASSESSMENT OF THE PROPOSED GLADESVILLE TOWN CENTRE (EAST SIDE OF VICTORIA ROAD) FROM JUNCTION STREET TO PITTWATER ROAD

Dear Steve,

Reference is made to your request to provide a summary of the undertaken Traffic Impact Assessment for the Gladesville Town Centre (East side of Victoria Road) between Junction Street to Pittwater Road. This letter provides an overview of the traffic assessment constraints and findings as part of the Gladesville Town Centre study conducted conjointly by M^CLaren Traffic Engineering (**MTE**), GMU – Urban Design and Architecture and Hunters Hill Council to determine the development potential of the site. **Annexure A** provides a map of the study area and provides a reference number for each block.

The method undertaken by **MTE** as part of the traffic analysis is as follows:

1. Gather existing traffic data at key intersections surrounding the study area for the weekday PM commuter peak period to understand the traffic environment under current conditions.

    a. Main Road Performance

    Upon analysis, it was evident that the critical road corridor was that along Victoria Road. This meant that with respect to traffic, the Victoria Road corridor was the key constraint as to the scale of any proposed development. It is noted that the traffic assessment was undertaken with the requirement to retain an acceptable intersection level of performance (known as Level of Service) along Victoria Road, particularly at the key intersection of Victoria Road / Pittwater Road / Jordan Street as this existing intersection was assessed as being close to capacity.

    b. Local Road Performance

    The local road intersections surrounding the subject study area were found to perform at a high level of service under existing conditions, with additional spare capacity and low delays times.

2. Determine expected traffic generation of existing uses of Block 4 (shopping centre).

    This was required to understand the existing and approved impact of the existing retail centre. From traffic surveys, existing uses within Block 4 exhibits in the order of 390 peak hour vehicle trips (measured two-way volumes) during the PM peak hour period. Based on traffic generation rates as published by Transport for New South Wales (the traffic authority), the existing Block 4 development scale is approved to generate in the order of 590 vehicle trips during the PM peak hour period, with approximately 540 trips associated with the supermarket and secondary retail currently on the site.

3. Determine base case traffic scenario for assessment.

   As the major traffic generator of the study area is the shopping centre (Block 4), any increase of the size of the shopping centre will have the greatest impact upon the surrounding road network. It is noted that any development on the sites fronting Victoria Road, being Blocks 1-3, will not noticeably increase the retail area of the existing uses and as such, no change in traffic generated from these sites is expected.

   In this regard, residential and office space generates significantly lower peak hourly traffic levels per square metre compared to high turnover supermarket use. Small scale specialty shops generate much lower traffic generation levels per square metre compared to supermarkets.

   Ultimately, the base case traffic scenario comprised of the existing traffic volumes plus traffic associated with the proposed residential development expected within Blocks 1 to 3 (inclusive) less traffic associated with the existing shopping centre (Block 4). A micro-simulation model was developed using a computer program called SIDRA, which was utilised to assess the traffic conditions under the base case.

   It is important to note that peak hour traffic volumes associated with medium and high-density residential developments are generally minor and do not significantly impact the local traffic network, particularly when a major generator (i.e. shopping centre / supermarket) is located nearby. For example, the Transport for New South Wales peak hour traffic generation rates for high-density units are 0.19 trips per unit in the AM peak hour periods and 0.15 trips per unit in the PM peak hour period whilst a supermarket generates 15.5 per 100m^2 of floor space compared to an equivalent 100m^2 dwelling unit (typically two-bedroom unit).

4. Determine development potential of Block 4.

   Upon review and analysis of the base case traffic model, the potential additional traffic load that could be accommodated within the existing traffic environment without significantly impacting the operations of both the main and local road networks was determined. This level of traffic was then subject to an iteration analysis to determine the potential scale (i.e. size) of a proposed shopping centre on Block 4 with regard to the expected path of travel to / from Block 4 based on the existing traffic distributions.

   It is noted that it was assumed that no upgrades to the roads, changes to the intersection traffic light operations or changes to existing traffic management controls (i.e. one-way roads, stop signs, give-way signs and the like) were to be implemented under this assessment (i.e. Do Nothing). Indeed, there is little scope to undertake significant road network changes that would support a higher supermarket size.

   Subsequently, it was determined that a shopping centre on Block 4 could generate in the order of 570 vehicle trips within the PM peak hour period without detrimentally effecting the traffic network and key intersections in the area, being in the order of the approved traffic generation of the existing uses within Block 4. This is equivalent to a shopping centre size of approximately 5,000m^2, which comprises a 3,000m^2 supermarket and 2,000m^2 of speciality / secondary retail floor space. It is noted that as a supermarket would be the major traffic generator in this area, any scale above 3,000m^2 would result in a loss of speciality retail area based on external traffic network capacity, unless capacity improvements could be identified.

The traffic impact assessment of the Gladesville Town Centre redevelopment as conducted by **MTE** is preliminary in nature and used to determine an expected scale of any future development. The traffic assessments conducted conclude that ultimately, the scale of any future development of the Gladesville Town Centre is to be consistent with the existing scale of the retail uses. Additional traffic associated with new residential dwellings is expected to be able to be accommodated by the surrounding road network with no adverse impacts.

Further technical analysis will be required when more detailed information is determined with respect to the scale of the proposed redevelopment, locations of driveways, underground parking links as well as any future changes to the road network as part of Transport for New South Wales and Council's (Hunters Hill and Ryde) visions for the area, specifically in regard to the Victoria Road corridor.

Please contact Mr Matthew Elyard, Mr Laen Stewart or the undersigned should you require further information or assistance.

Yours faithfully,

M^{c}Laren Traffic Engineering

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ANNEXURE A: STUDY AREA MAP