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

23rd March 2016

Reference: 14444.02FA

Hunters Hill Council
c/o Architectus Sydney
Lvl 18, 19 Martin Place
Sydney NSW 2000
Attention: Jane Fielding

PRELIMINARY TRAFFIC ADVICE OF PLANNING PROPOSAL AT GLADESVILLE SHOPPING VILLAGE

Dear Jane,

Reference is made to the planning proposal for the Gladesville Shopping Village (GSV) to amend building height and floor space ratio development standards under Hunters Hill Local Environmental Plan 2012 to facilitate the redevelopment of the Gladesville Shopping Centre.

As part of the planning proposal, the Traffic Impact Assessment (TIA) prepared by Road Delay Solutions dated 7th October 2015 has been reviewed. The undersigned's preliminary review of the planning proposal and raised issues are provided in the sub-headings below.

It is understood that the planning proposal to amend the development standards prescribed in Council's LEP 2012 will result in an increase yield of development above what could be achieved with the current permissible controls. The development yield is generally summarised below, where the existing, permissible and proposed development yields have been extracted from the planning proposal.

TABLE 1: DEVELOPMENT YIELD SUMMARY

Variable	Existing	Current Controls⁽²⁾	Proposed Controls⁽²⁾
Number of Dwellings	0	180	250
Retail Floor Space	4,962 ⁽¹⁾	8,343	9,200
Commercial Floor Space	Not specified	Not specified	1,900

Notes: (1) found on page 8 of the TIA, (2) found on page 22 of the planning report dated January 2016 prepared by DFP Planning

1 Existing & Future Scenario Analysis

The planning proposal should provide comparative traffic flows, and intersection performances based on the following conditions:

- Intersection performance and two-way volumes excluding the GSV development and mitigating measures however including background growth
- Intersection performance and two-way volumes excluding the GSV development however including mitigating measures and background growth
- Intersection performance and two-way volumes excluding background growth and mitigating measures however including the GSV development
- Intersection performance and two-way volumes excluding mitigating measures however including the GSV development and background growth
- Intersection performance and two-way volumes including GSV development, mitigating measures and background growth

The purpose of the above scenarios is to provide a transparent and systematic approach to the recommended mitigating measures detailed in the TIA. Additionally, the horizon year 2021 is not usual practice as a 10 year horizon is usually the minimum requirement, particularly for a significant development. The TIA should clearly outline growth factors (percentages) and provide a 10 year horizon.

Furthermore, the resulting traffic flows should be assessed including consideration to residential amenity thresholds of the local road network.

The resulting intersection analysis (SIDRA) should be provided electronically to assess the input parameters whilst the resulting bi-directional traffic flows in the surrounding road network shall be provided in high resolution PDF's (as Figures 13, 15, 38 and 39 are not legible).

In its current form, the TIA cannot be supported without the additional information provided to properly identify the impacts of the planning proposal and resulting traffic flows distributed to the surrounding network as a result of both the GSV developed site and mitigating measures.

2 Existing & Future Traffic Volumes

Further to the scenarios outlined above, the traffic surveys undertaken on Thursday 26th May 2015 cover only 1 morning and evening hour, being 8-9am and 5-6pm. It is typical that a 2 hour survey during the morning and evening is undertaken to ensure an accurate representation of the on-street (and on-site) traffic volumes are captured.

The TIA should provide the raw survey data undertaken on Thursday 26th May 2015 and confirm whether the survey range was over a single hour only. Depending on the survey range, a minimum 2 hour survey should be conducted to ensure the peak on-street and on-site movements are captured.

The TIA states on page 47 that the Cowell Street closure (in conjunction with the partial closure of Flagstaff Street) will eliminate some 165 rat runners. The TIA should identify where the 165 vehicles per hour rat-run was deduced as no discussion on origin-destination surveys where undertaken or have been discussed and it is unclear if this is a morning, evening or weekend issue.

Whilst the TIA states that *the weekend peak on a Saturday, between 11am till 12 noon was collected and found to be relatively low. The Saturday peak field data has been omitted from this assessment,*

it is considered that the Saturday assessment shall be included, as the GSV redevelopment involves a significant increase in retail floor space (existing 4,962 inclusive of Coles stated on page 8 to 9,280m² stated on page 33, an increase of 87%) which typically attracts a higher trip generation rate compared to the weekday peaks. The traffic generation for the retail component should consider the various types of retail trade within the shopping centre, which consists of slow trade, fast trade, specialty retail etc.

The TIA details residential traffic generation based on the RMS Technical Direction TDT 2013/04, reflecting the most recent published survey data by the RMS. The TIA uses a trip generation rate of 0.09 and 0.07 trips per bedroom for the morning and evening peak hour respectively. The resulting traffic generation of the residential component is summarised in **Table 1** below.

TABLE 1: TRAFFIC GENERATION FROM TIA

Type	Scale	AM Peak	PM Peak
1 bedroom	100	9	7
2 bedroom	138	25	19
3 bedroom	12	3	3
Total	250	37	29

By comparison, the traffic generation based on a trip rate per unit (and not per bedroom) would result in 48 morning trips (250 x 0.19 trips per unit) and 38 evening trips (250 x 0.15 trips per unit) which is typically the methodology used to determine traffic generation. This is a difference of 11 and 9 additional trips above the TIA's assessment. Furthermore, whilst the site benefits from public bus routes, majority of the Sydney survey sites benefit from both bus and rail. Of the Sydney survey sites, Liberty Grove is the nearest site to the Gladesville Village. This survey site recorded a morning peak hour trip generation of 0.28 trips per unit and an evening trip rate of 0.40 vehicles per unit. Furthermore, the area of Gladesville has a car driver percentage of 56.6% compared to the greater Sydney average of 53.8%. It is considered that the TIA undertake sensitivity analysis to account for the trip generation per unit, survey of the nearby Liberty Gove site and the development site's limited access to the rail network.

It is considered that the TIA cannot be supported as it does not provide a robust assessment to adequately address the peak traffic generation of the GSV site.

3 Recommended Mitigating Measures

The TIA details a number of local area traffic management solutions (refer to Figure 27). The TIA shall detail the following:

- The partial road closure in Flagstaff Street needs to be of adequate geometry to cater for emergency vehicles
- The end treatment at the partial road closure in Flagstaff Street needs to cater for the turn-around of a Small Rigid Vehicle (6.4m in length)
- The roundabout treatment recommended at Flagstaff Street & Cowell Street shall demonstrate adequate manoeuvring of service vehicles is achieved, noting the supermarket will require a 19m Semi-trailer.
- The partial road closure may require operative changes for garbage collection, and concurrence shall be sought with Council's waste & services department.
- The TIA recommends increasing the current northbound right turn bay in Victoria Road from 49m to 65m to improve the LoS under the full development of the site. The TIA shall demonstrate how this turn bay extension is achieved, as the current distance from the stop line at the right turn bay, to the marked signalised crossing to the south near Meriton Street is approximately 60m.

Further to the mitigating measures outlined in the TIA, consideration should also be given to displaced vehicles (as a result of the Cowell Street east closure) and impacts on residential amenity.

In regards to the above, the TIA cannot be supported in its current form as it does not demonstrate that the mitigating measures can be adequately accommodated within the existing road network and does not identify the resulting impacts of the mitigating measures as requested in Section 1.

4 On-site Car Parking & Loading

Whilst the application is a planning proposal only (i.e. the detailed design of the internal layouts may subsequently change at the development application stage), the principles of vehicular access and on-site design should be considered and assessed at this early stage.

The TIA identifies that loading will remain off Flagstaff Street, where both loading docks (northern and southern) will utilise an on-site turn table to enable forward entry and forward exit. It is requested that the TIA demonstrate the on-site manoeuvring as the proposed Coles loading dock will require, at a minimum, 19m turn table with additional clearances. Furthermore, details should be included in regards to the likely demand of loading bays for various vehicle sizes (Semi-trailer, HRV, MRV, SRV & Vans) as this could impact the vehicular area within the loading docks. The TIA should address residential garbage collection movements as well.

Currently, the TIA fails to adequately assess the internal design or demonstrate that the design, particularly on-site loading dock, can be achieved as is intended by the TIA.

5 Conclusion

The TIA cannot be supported in its current form as it does not provide adequate information demonstrating the impacts on the surrounding road network as a result of the GSV site and recommended mitigating measures. Furthermore, the TIA should be updated to provide a more robust assessment of the developed GSV site taking into consideration the weekday and weekend peak hours.

Please contact the undersigned should you require further information or assistance.

Yours faithfully
M^cLaren Traffic Engineering

A handwritten signature in black ink, appearing to read 'Craig McLaren'.

Craig M^cLaren
Director

BE Civil. Graduate Diploma (Transport Eng) MAITPM MITE [1985]
RMS Accredited Level 3 Road Safety Auditor
RMS Accredited Traffic Control Planner, Auditor & Certifier (Orange Card)