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1 March 2012

The Manager
Blacktown City Council
PO Box 63
Blacktown NSW 2148

Attention: Rebecca Gordon, Planning Assessment Officer

Re: Review of Traffic Impacts associated with Proposed Development at 8 Myrtle Street,
Prospect – JRPP No. 2011SYW045; Council DA JRPP-11-650

Dear Rebecca,

We refer to the subject development application which has been referred to us for peer review. In particular, we are in receipt of the following documents which have formed the basis of our assessment:

- Statement of Environmental Effects prepared by Turner Hughes Architects dated March 2011.
- Plans prepared by Turner Hughes Architects as submitted with the DA, together with amended plans with particular reference to Drawing DA100 Revision J and Drawing DA101 Revision L.
- Traffic Impact Assessment Report 10 March 2011 prepared by Varga Traffic Planning Pty. Limited.
- Letter from the RMS's SRDAC dated 9th May 2011.
- Minutes of the Local Traffic Committee Meeting held on 17 may 2011 and response from Varga Traffic Planning dated 21 June 2011.
- Memo from Council's Senior Traffic Management Officer dated 20th September 2011.
- Report to the Sydney West JRPP prepared by Council officers (undated).
- Public submissions.

We have reviewed the above and have also undertaken site investigations and we now provide the following advice in the context of undertaking an Independent Peer Review, which is intended to provide assistance to Blacktown Council and the JRPP in their consideration of the application.



Development Description

Details of the proposed development are outlined in the SEE prepared by Turner Hughes Architects. The proposal relates to seven (7) residential flat buildings comprising a total of 162 residential units. These include 29 x one bedroom units, 110 x two bedroom units and 23 x three bedroom units. The amended plans incorporate an entry-exit driveway onto the internal roundabout that also serves the adjacent shopping centre, with a secondary entry-exit driveway directly onto Myrtle Street generally mid-block along the Myrtle Street frontage. This secondary exit driveway is intended only for left turn exits onto Myrtle Street, with the driveway now incorporating a splay to discourage right turn exits.

Main Vehicular Site Access

The main site access is proposed via the existing roundabout within the shopping centre, which is itself accessed via the adjacent roundabout at Myrtle Street. This roundabout already incorporates a kerb layback to accommodate the driveway that will serve the subject site and it is understood that this access has historically been identified as the preferred means of access to the subject site.

There is however a non-compliance with this access as indicated on the submitted plans that may have significant implications for the development. Specifically, we note that Drawing DA101 Revision L shows a ramp grade of 1 in 20 (5%) on approach to the roundabout. This plan however shows a height difference of 1.45 metres over a length of about 6 metres, from RL 65.00 internally to RL 66.45 at the roundabout. This is a grade of 20% rather than 1 in 20 (5%) shown on this plan which is unacceptable. The latter grade is required in accordance with Clause 3.3 of AS 2890.1 and this matter needs to be addressed and resolved. The difference in height (about 900mm) will probably require the Ground Floor to be raised by this amount, which may be difficult to achieve given that the internal parking aisle is already on a limiting slope of 1 in 20 (5%) over part of its length. This may also result in other planning implications.

Secondary Vehicular Site Access

It is noted that the development has been assessed as generating 47 veh/hr during peak periods in the Varga Traffic Report. While we disagree with this level of generation and consider that it should be higher (see below) the level of generation under either scenario is moderate and can be accommodated by a single driveway (the main driveway discussed above). This is also confirmed by reference to Tables 3.1 and 3.2 of Clause 3.2.1 of AS 2890.1, which shows that a single Category 1 driveway is suitable for access to a residential (Class 1A) development serving less than 300 spaces (whereas the development only has 250 spaces). It is also confirmed by the Traffic Report itself which documents a very good level of service at the roundabout on Myrtle Street, which has a Level of Service A, with negligible delays. That is, residential development is a low-order traffic generating and a single driveway access would be acceptable for this development.

In this context, the secondary site access directly onto Myrtle Street should only be considered if it provides a planning benefit. This could include the fact that a secondary access provides a 'safety valve' in the event of an accident within the main shopping centre access, or possibly an emergency evacuation. In our view, while we have no objection to the secondary access, there are some concerns with this driveway as follows:

- Drawing DA101 Revision L shows a change in level from RL63.3 within the site to RL64.3 near the property boundary. This suggests a gradient of about 15% which is significantly more than the 5% permitted under Clause 3.3 of AS 2890.1 and this matter needs to be addressed and



resolved. The difference in height (about 600mm) will probably require the Ground Floor to be raised by this amount, which may be difficult to achieve and have adverse consequences.

- The left turn exit movement onto Myrtle Street introduces potential headlight glare issues which need to be considered and addressed. Given that there is limited scope to prevent right turn exit movements, this may also be an issue for other residential dwellings opposite the driveway; and
- The entry and exit movements across the footpath may be considered an unnecessary conflict point for pedestrians, given that this driveway is not required for capacity reasons.

In the event that these issues can be overcome or are otherwise acceptable to Council and the JRPP, we do not oppose this driveway in principle as it affords improved access flexibility and in addition, provides a more suitable service access as discussed further below.

Pedestrian Safety

The main entry-exit driveway onto the 'internal' roundabout appears to be constructed with kerb returns, such that vehicles have priority over pedestrians (as occurs at the roundabout at Myrtle Street or indeed any other roundabout on a public road). It is considered that the driveway should be constructed with laybacks, so that pedestrians have priority across this driveway frontage on a level grade. This comment is equally valid in relation to the secondary driveway onto Myrtle Street, if this driveway is to be pursued and the design issues identified overcome.

It is considered that the footpath connection between this driveway crossing and the shopping centre along the eastern side of the shopping centre access is unresolved and this is an issue for the public generally as well as residents of the subject development. Specifically, the footpath leads pedestrians to the supermarket loading dock ramp area, where no crossing opportunity is available and where trucks presumably reverse down the ramp across an apron area that will be traversed by pedestrians. This situation is exacerbated by the relatively poor pedestrian connectivity along the western side of the shopping centre access, which is narrow and has steep gradients. This would require cooperation with the adjoining landowner and may not be deliverable in the context of this development application. Nevertheless, it remains a public safety issue that arises as a direct consequence of the development.

Parking Provision

We note that the parking provision is compliant with DCP 2006, Part C, Section 7.6.5. It is recommended that a suitable condition be imposed on any consent requiring the requisite (65) visitor spaces to be provided, with appropriate signage.

It is noted that the main entry driveway from the roundabout is not controlled by boom gates on the plans provided. In our view, this is desirable in order to provide security and avoid intrusion by shopping centre traffic.

Traffic Generation and External Traffic Impacts

The Varga Traffic Report adopts the RMS trip rate of 0.29 trips/dwelling/hr. This is the RMS rate for high density developments in a sub-regional centre, where excellent public transport services are



available, generally bus and rail. This is an acknowledged shortcoming of the RMS Guideline, which does not address high density developments outside regional or sub-regional centres. Similarly, the medium density rates published by RMS do not apply. In our experience and based on surveys, the proposed development will generate a minimum 0.40 trips/dwelling/hr in peak periods. This would result in the traffic generation increasing from 47 veh/hr to 65 veh/hr, with 80% of these volumes in the peak direction.

Under normal circumstances, this would require sensitivity testing. However the difference is small and in addition, the roundabout at the intersection of Myrtle Street with the shopping centre access (and Upway Street) is operating very satisfactorily, so that additional modelling is not considered necessary.

We note that the Traffic Report does not consider the performance of the main intersection of Myrtle Street with Flushcombe Road. Nevertheless, we are in possession of separate traffic count data and have undertaken a Sidra analysis which demonstrates satisfactory operation, with Level of Service A and minimal delays.

Finally, we note that in the event that the mid-site access onto Myrtle Street is retained, vehicles turning right into this driveway will block through traffic in the event that there is kerbside on-street parking opposite the driveway. On this basis, we would recommend the introduction of 'No Stopping' restrictions opposite the driveway for a short distance on approach and departure.

Notwithstanding, on the basis of our assessment, we conclude that the traffic generated by the development can be readily accommodated by the road network in terms of capacity considerations. Indeed, the 65 veh/hr that are generated at peak times as we have assessed is comparable to the traffic that would be generated by about 20 retail parking spaces, which typically generate 3 trips/space/hr during the more critical PM peak period.

Residential Environmental Amenity Impacts

These impacts technically only arise in relation to Myrtle Street to the east of the site, as the portion of Myrtle Street west of Upway Street is not an exclusively residential street environment, but rather a mixed residential/commercial environment where residents would reasonably expect additional traffic volumes and hence a reduced residential amenity.

That is, with regard to the concept of environmental amenity generally, the amenity thresholds outlined in the RMS Guideline relate to a residential street and even with an exclusively residential street, there are factors that warrant variations to these thresholds. One such factor is the use of traffic management devices which can increase environmental amenity by reducing speeds. In our view, the presence of kerbside parking and the roundabout in Myrtle Street are both factors that would reduce speeds and thereby increase the environmental capacity threshold above the 'nominal' RMS threshold which is a maximum 500 veh/hr for a residential collector road, as set out in Section 4 of the RMS Guideline.

Myrtle Street is a residential collector road to the east of the subject site and it therefore has a maximum environmental amenity threshold of 500 veh/hr. The surveys reported upon in the Varga Traffic report show that this section of Myrtle Street presently carries a maximum of 245 veh/hr (two-way) in the AM peak (which occurs between 7.30am and 8.30am); and a maximum of 386 veh/hr in the PM peak (which occurs between 4.30pm and 5.30pm). These volumes are well below the maximum threshold level of 500 veh/hr and it is concluded that the development creates no unacceptable amenity impacts arising from its traffic generation.



External Road Improvements

We consider that there is no basis for any external road network improvements to accommodate the proposed development, due to the low traffic volumes that are generated.

Internal Design Aspects

We have reviewed the DA plans referenced above and consider that the design is generally supportable, subject to the following deficiencies being satisfactorily addressed prior to consent. This is necessary having regard for the substantive nature of some of these deficiencies, which in our view render an approval subject to conditions as a potentially unsafe approval:

- The driveway non-compliances as discussed above, which raise potentially significant issues in order to achieve compliant gradients.
- The necessity for the secondary access and the issues identified above in relation to this driveway including adverse gradients and headlight glare issues.
- The pedestrian issues as discussed above more generally.
- The inadequate geometry of the left turn from Block A to the exit driveway, which requires a swept path analysis to be undertaken as identified by Council's Traffic Committee.
- A swept path analysis to demonstrate that uninterrupted two-way flow is possible at the ramp that connects to the Estate Road from the 'internal' roundabout. Priority control is also desirable at this junction to reinforce the intended priority and reduce conflicts, given that all traffic passes through this junction by the confluence of both access driveways; and
- Relocation of all columns 750mm back from the parking aisles on Basement car park level to comply with Figure 5.2 of AS 2890.1.

In addition to the above and notwithstanding that these matters can be resolved, we recommend the imposition of a general condition requiring compliance with AS 2890.1 (2004) and AS 2890.2 (2002).

Service Vehicles

The service vehicle access is proposed for a 9.5m garbage truck via the secondary access onto Myrtle Street. As discussed above, this driveway is deficient even for cars and it totally unsuited for trucks in view of the steep gradients that arise from the stated RL's. Compliance with AS 2890.2 will be required, which requires a gradient of 1 in 20 (5%) for a distance of 6.0 metres within the site, then transitions beyond that achieve a change of grade of no more than 6.25% over a length of 7.0 metres of travel, as required in Table 3.2 of AS 2890.2.

In addition, we consider that a swept path analysis is required to demonstrate satisfactory site access and also turning within the reversing area provided for this truck. We also support the Traffic Committee recommendation that this area be signposted as 'No Stopping'.



Construction Traffic Impacts

It is considered that a standard condition of consent should be imposed on the development requiring the preparation of a detailed Construction Traffic and Pedestrian Management Plan. It is possible that the secondary access onto Myrtle Street could be provided for construction access purposes to overcome conflicts with shopping centre traffic. This would be closed in the event that this secondary driveway system cannot be designed to be compliant and/or if headlight glare issues cannot be overcome.

We trust that this advice is of assistance and we are available to attend any meetings, should this be required. Please contact the undersigned should you have any queries regarding this matter.

Yours faithfully,

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Graham Pindar
Director