Addendum 1 – Barker Road traffic volume survey

Traffic volume information for Barker Road, between Todman Place and Wallis Avenue, was provided to DP&I by residents opposed to the proposed expansion of ACU Strathfield Campus at a meeting on 10 December 2012. The survey was undertaken from Saturday 25 February 2012 to Friday 2nd March 2012. Points to note about this survey include:

- The average weekday traffic volume of 9,383 vehicles per day (two-way) is approximately 2,000 vehicles per day (vpd) (around 25%) higher than the survey presented by ARUP in the PPR of 7,413vpd taken in May 2012 (when student numbers are reportedly lower).
- Some of the difference is likely to be due to the higher ACU student numbers in March, although there may be other reasons for the difference in numbers.
- ACU is proposing a reduction in the turnover of student numbers throughout the day, which may influence the difference between the two survey numbers

Traffic Volumes

Based on this new count information, the existing traffic volume is close to the 10,000vpd functional capacity (according to the *RMS Functional Classification for Roads*) of Barker Road. The proposed increase in student and staff numbers at ACU could increase the traffic volumes up to the functional capacity of Barker Road under the worst case mode split (with high car driver percentage). However, if ACU can achieve their proposed mode share, the traffic volume would only increase to around 9,500vpd (within the functional capacity). These calculations assume that all students arrive via Barker Road, whereas, in reality a small number may arrive via the streets north and south of the University, slightly reducing the impact on Barker Road.

The traffic review completed by Parsons Brinckerhoff recommended a temporary cap of 1,600 students at any one time to ensure that student parking numbers are capped at current levels (if a worst-case mode share is occurring), until it can be demonstrated that the shuttle bus patronage, on-street parking and mode share are at required levels to allow the full expansion. This staged approval also protects the traffic volume on Barker Road from increasing above its functional capacity (due to the ACU expansion).

This analysis does not look at traffic increases from other sources, which may influence the average traffic volume at different times of the year.

Intersection Operation

The traffic increase also has implications for the operation of local intersections. The SIDRA modelling undertaken by ARUP in the TAS results indicate that the intersection of Redmyre Street, Barker Street and Elwin Street has spare capacity. However the analysis has only assessed the implications of a 10% increase. If traffic volumes are 25% higher before the additional ACU traffic is included, the capacity of this intersection may be tested under the worst case mode share for the full student increase.

The staged increase in student numbers recommended by Parsons Brinckerhoff helps to reduce the peak traffic impact. If ACU can achieve their proposed mode share targets, the amount of additional traffic using the intersections due to the full ACU expansion would be relatively small.

Summary

The new traffic count information indicates a higher existing traffic volume than originally assessed. The implications are that Barker Road and the surrounding intersections are likely to approach their functional capacity sooner, but not necessarily exceed them because of the ACU expansion. If ACU can achieve their mode share targets, the impact should be within acceptable limits. The recommended 1,600 peak student cap and staged increase reduces the risk that the capacity of the road system will be exceeded, with the full increase dependent on information from ACU demonstrating that its mode share targets are achievable.