
Colston Budd Hunt & Kafes Pty Ltd

as Trustee for C & B Unit Trust
ABN 27 623 918 759

Our Ref: SK/7556/jj

Transport Planning
Town Planning
Retail Studies

1 December, 2010

State Property Authority
c/- Mitcham Nelson Pty Ltd
C18/99 Jones Street
ULTIMO NSW 2007

Attention: Gerald Ward
Email: gward@mitchamnelson.com.au

Dear Sir,

RE: SOUTH ORANGE RESIDENTIAL DEVELOPMENT

1. As requested we are writing regarding traffic matters raised by the Department of Planning and in submissions in relation to the above development. We have previously prepared a report⁽¹⁾ which was submitted with the concept plan application for the proposed development.
2. The site of the proposed development forms part of land owned by the NSW Department of Primary Industries, which includes the Orange Agricultural Institute. The site is located on Forest Road and has been the subject of a State Significant Site Investigation. The site has been rezoned to allow the development of land for urban residential and ancillary uses.
3. In a letter dated 22 October 2010, and submissions dated 27 September 2010, the Department of Planning, Orange City Council and the Roads and Traffic Authority have raised traffic and transport related matters. These matters are summarised, and our responses are set out below:-

Department of Planning

- **Clarification of road hierarchy and suitability to support through site movements to the future western growth area and potential connection to existing developed areas to the north west of the site;**

¹ "Transport and Accessibility Impact Assessment for Proposed Development, South Orange", June 2010, Colston Budd Hunt & Kafes Pty Ltd.

4. As discussed in our previous report which supported the concept plan application, the internal road network (as shown on Figure I) incorporates a logical hierarchy of road functions and appropriate design to prioritise and facilitate pedestrian and cycle activity. Roads within the site will be designed to promote a movement system that gives appropriate priority to walking, cycling, public transport and private car. Roads will be designed to cater for emergency vehicles, buses and service vehicles.
5. The proposed road hierarchy supports the site movements internally and adequately caters for future access to the west and north-west. Impacts of the development to the west and north-west will be assessed at the time of application, however, the proposed road design within the subject site does not preclude any future modification to support this growth if required.
6. The retail centre will be located at the entry to the site off Forest Road, where the principal internal circulation roads intersect. This will minimise the number of access points along Forest Road and reduce traffic generation by allowing residents to combine trips.
7. The internal circulation roads within the proposed development will be based on Council's "Geometric Road Design Guide", with roads within the residential development based on two levels of streets (local streets and distributor streets). The internal circulation roads are shown on Figure I, Street Types Plan.
8. On local streets the residential environment dominates. Traffic speeds and volumes are low and pedestrian/cycle movements encouraged. Vehicle speeds should, as far as possible, be controlled by street length, parked cars, landscaping design, built form and activity along the frontage. Bicycles are generally provided for on-street.
9. Distributor streets collect traffic from local streets and generally carry higher traffic flows. A good level of residential amenity and safety is maintained by restricting traffic volumes and traffic speeds. Vehicle speeds on distributor streets should be controlled by street alignment, parked cars, street lengths, intersection design and built form. Bicycles will be provided for in a mix of on-street and off-street facilities.
10. The proposed road hierarchy provides a framework for the promotion of alternative travel modes to private car (in particular providing appropriate access for public transport and designing the road network to incorporate convenient pedestrian and cyclist facilities). Roads within the proposed development will incorporate the following characteristics:-

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- Interdistrict Road
 - two traffic lanes (one in each direction);
 - on-street parking provided within kerbside parking lane;
 - 22 metre road reserve with a 13 metre carriageway width;
 - generally provide pedestrian footpaths on both sides of the road; and
 - cyclists to be provided for on-street.
 - Local Distributor Street
 - two traffic lanes (one in each direction);
 - on-street parking provided within kerbside parking lane;
 - 20 metre road reserve with an 11 metre carriageway width;
 - generally provide pedestrian footpaths on both sides of the road; and
 - cyclists to be provided for on-street.
 - Local Street
 - two traffic lanes (one in each direction);
 - 18 metre road reserve with a 9 metre carriageway width;
 - on-street parking permitted;
 - generally provide pedestrian footpath on one side of the road; and
 - cyclists to be provided for on-street.
 - Local Street (Edge Street)
 - two traffic lanes (one in each direction);
 - 14 metre road reserve with a 9 metre carriageway width;
 - verge widths of 4.5 metres on one side and 0.5 metres on other side;
 - pedestrian footpath on one side of the road; and
 - cyclists to be provided for on-street.
11. The internal road network is designed to accommodate the swept paths of service vehicles, including removal trucks, garbage trucks, delivery vans and buses. The proposed layout will provide for an efficient subdivision pattern and a low speed environment in accordance with Council's road design requirements. Detailed engineering design will require Council approval and acceptance.
12. In regards to the suitability of the road network to support through site movements to the future western growth area, the proposed residential development will provide an interdistrict road through the site. This road will provide an east-west connection, between Forest Road in the east and the future urban growth area to the west and north-west. In accordance with Council's

requirements this road will provide for the integration of public transport (bus) routes, off-street pedestrian facilities and on-street/off-street bicycle facilities. In accordance with Council's requirements, the interdistrict road will comprise a road reserve width of 22 metres and a carriageway width of 13 metres. This is the largest classification for roads within a residential subdivision road network, as outlined in Council's Geometric Road Design Guide.

13. As shown on the concept plan, a single access is proposed to the future western growth area, via the east-west road. This connection will extend through the proposed development to intersect with Forest Road at a single point of access. It is envisaged that the future western growth area will also have connections and access to/from the north via Shiralee Road and Lysterfield Road.
14. Through the residential component of the development, the interdistrict road is expected to carry traffic flows ranging up to some 300 to 400 vehicles per hour two-way during the morning and afternoon peak periods. Other local roads away from the main east-west interdistrict road would carry traffic flows of some 100 to 200 vehicles per hour two-way at peak times.
15. At the main access onto Forest Road, peak period traffic flows on the interdistrict road would be higher at some 500 to 700 vehicles per hour two-way. The internal road network and its intersections within the proposed development have been designed to cater for this traffic generation.

- **Suitability of access arrangements from Forest Road in the vicinity of the Village Centre;**

16. Vehicular access to the proposed development (at the eastern end of the interdistrict road) is proposed to be provided via a new seagull intersection on Forest Road. The intersection will be located some 370 metres south of the proposed traffic signal controlled intersection, which will provide access to the Orange Base Hospital (eastern side of Forest Road) and the Orange Private Hospital (western side of Forest Road).
17. Our previous report indicated that the proposed seagull controlled site access onto Forest Road will operate with average delay, for the movement with the highest average delay, of less than 20 seconds per vehicle during the morning and afternoon peak periods. This represents a level of service B, which is an acceptable level of intersection operation.

Orange City Council

18. In regards to matters raised by Orange City Council, we note that the transport and accessibility assessment which supported the concept plan application, assessed the cumulative impact of the proposed development and other approved developments in the area, including the Orange Base Hospital and Health Campus located on the eastern side of Forest Road, and the Orange Private Hospital and supporting facilities on the western side of Forest Road. The assessment also assessed proposed roadworks in the vicinity of the site, including the southern distributor road.
19. The transport and accessibility assessment concluded that the proposed development will have minimal impact on the operation of the surrounding road network and its intersections, including the proposed access to the development, the signalised intersection with the approved hospital developments and the proposed intersection improvements at Forest Road/Huntley Road and Forest Road/Sharp Road. The surrounding road network and its intersections will be able to cater for the additional traffic at satisfactory traffic levels of service.
20. In regards to the proposed internal road layout, access onto Forest Road and connections to the future western growth area, refer to paragraphs 4 to 12 of the preceding discussion. We note that Council has requested two connections through the site to the western growth area. As the proposed development scheme includes only a single connection to Forest Road, a second connection is not considered warranted on traffic grounds. However, should the Department consider that a second connection is desirable based on urban design principles, a second connection could be included through the northern part of the subdivision. This could be included as a condition of consent.

Roads and Traffic Authority

The EA has been reviewed and the RTA recommends the following conditions of concept plan approval:

- **A lit seagull intersection is to be constructed in accordance with the RTA Road Design Guide and the RTA Delineation Manual. RTA concurrence is required on the final intersection design prior to the commencement of any road works.**
- **The access treatment is to be completed prior to any works being undertaken at the site.**

- **The developer is to demonstrate in the plans for project approval that the internal road system will provide for the integration of public transport (bus) routes, off-street pedestrian facilities and off-street bicycle facilities.**
- **The proposed landscaping, signage and fencing are not to impede sight lines of traffic and/or pedestrians within the development, or when entering and leaving the development.**
- **All works associated with the development are to be at no cost to the RTA.**

21. These matters are noted and could be included as conditions of consent.

The RTA also notes that:

- **the infrastructure in the greater Bloomfield area needs to be improved through the design and construction of off-street pedestrian footpaths and bicycle facilities interlinking with the surrounding amenities including the: existing Bloomfield hospital; public hospital currently under construction; proposed private hospital; DPII Research Facility, TAFE; Bloomfield Golf Course; and, primary and high schools in the Orange South, Glenroi and Warrendine areas.**
- **The *Traffic and Accessibility Impact Assessment for the Proposed Development* (Traffic Report) does not address the impact of the development on the level railway crossing at the intersection of Huntley Road and Ash Street. The likely affect on the intersection and the suitability of the existing crossing infrastructure should be further assessed and considered before project approval is given.**
- **The EA anticipates future development to the west of the subject site. Any such development will require a fresh analysis of the suitability of the intersection treatment at Forest Road.**

22. These matters are noted.

23. In regards to the operation of the level railway crossing at the intersection of Huntley Road and Ash Street, we note that this will ultimately be addressed with the introduction of the proposed southern distributor road from Elsham Avenue

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and Blowes Road in the east, through to Anson Street and Woodward Street to the west. It is understood that the south distributor road will incorporate a grade separation over the railway line.

24. It should be noted that the proposed residential subdivision will be staged over an eight years period. As a result, the peak traffic flows generated by the proposed development will not be achieved until the completion of the final stage.
25. Recent traffic counts undertaken in the vicinity of the level crossing show that the traffic flows along Ash Street and across the crossing are some 450 to 500 vehicles per hour two-way during the morning and afternoon peak periods. The proposed development is expected to increase these flows by some 65 to 75 vehicles per hour two-way during the morning and afternoon peak periods. These are relatively moderate increases that should not noticeably affect the operation of the level crossing.
26. We trust the above provides the information you require. Finally, if you should have any queries, please do not hesitate to contact us.

Yours faithfully,

COLSTON BUDD HUNT & KAFES

A handwritten signature in black ink, appearing to read 'S. Kafes', written in a cursive style.

S. Kafes
Director

