
Colston Budd Rogers & Kafes Pty Ltd

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

Our Ref: JH/10954/jj

Transport Planning
Traffic Studies
Parking Studies

4 July, 2018

Warwick Farm Village Pty Ltd
c/- SJB Planning
Level 2, 490 Crown Street
SURRY HILLS NSW 2010

Attention: Scott Barwick
Email: sbarwick@sjb.com.au

Dear Sir,

**RE: PLANNING PROPOSAL FOR PROPOSED
RESIDENTIAL/RETAIL/COMMERCIAL DEVELOPMENT, WARWICK FARM**

1. As requested, we are writing regarding our initial review of the traffic aspects of the planning proposal for the proposed residential/retail/commercial development, which will include some 823 residential apartments plus 1,200m² retail and 3,836m² commercial. Our comments are set down through the following sections:
- site location and road network;
 - approved development and road works;
 - potential scale of development;
 - public transport;
 - access and internal layout;
 - traffic generation; and
 - summary.

Site Location and Road Network

2. The site is on the southern side of the Hume Highway, west of Governor Macquarie Drive (on the south-western corner of the intersection), at Warwick Farm. It occupies the block bounded by Hume Highway/Warwick Street to the north, Munday Street to the south, Governor Macquarie Drive to the east and Manning Street to the west. Warwick Farm Racecourse is east of the site. Warwick Farm railway station is west of the site.
3. Near the site, the Hume Highway provides three traffic lanes in each direction with a central median. Clearways operate during weekday peak periods in the direction of peak traffic flow (eastbound in the morning and westbound in the afternoon). There are commercial uses on the northern side of the road and racecourse and associated uses on the southern side of the road.

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4. The Hume Highway intersects Governor Macquarie Drive at a traffic signal controlled intersection adjacent to the site. The northern leg of the intersection provides access to and from the car yard site on the northern side of the road. There are right turn bays in Hume Highway for turns into Governor Macquarie Drive and the car yard.
5. Governor Macquarie Drive connects the Hume Highway in the north with Newbridge Road in the south. It provides access to industrial and residential areas. South of Munday Street, it provides for one traffic lane in each direction, clear of intersections. There are additional turn lanes at the Hume Highway intersection.
6. Munday Street runs along the southern side of the site and combines, with Manning Street, to form part of a route to and from an industrial area south of the site. Munday Street provides for one traffic lane and one parking lane in each direction, clear of intersections. Munday Street provides access to facilities associated with the racecourse, as well as residential properties. The intersection of Munday Street with Governor Macquarie Drive is controlled by traffic signals. These signals have been provided as part of a voluntary planning agreement (VPA) for the site. There is a right turn bay in Governor Macquarie Drive for turns into Munday Street. There are two lanes on Munday Street on the approach to Governor Macquarie Drive.
7. West of Governor Macquarie Drive, Warwick Street runs south-west from the Hume Highway at an unsignalised, priority-controlled intersection. Turns at the intersection are left in/left out due to the median in Hume Highway. Warwick Street provides for one traffic lane and one parking lane in each direction, clear of intersections. It provides access to a small number of residential properties on the southern side of the road. At its western end, it terminates at the railway line, where it provides access to the railway station.
8. Manning Street runs south from Warwick Street and provides access to residential properties in its northern part and industrial areas in the south. It provides for one traffic lane and one parking lane in each direction, clear of intersections. The intersections of Manning Street with Warwick Street and Munday Street are priority controlled t-intersections.

Approved Development and Road Works

9. The site had development consent for a home improvement centre. The approved home improvement centre is some 13,500m², with vehicular access from Warwick Street and Munday Street.

10. A series of road works has been agreed between council, RMS and ATC (formers owners of the site) to accommodate development of this site and a number of other sites in the area. The works are the subject of voluntary planning agreements between the ATC and council (attached), and include:
- signalling the intersection of Governor Macquarie Drive with Munday Street. This measure is the subject of the VPA for the subject site and has been implemented;
 - land dedication for future widening of Governor Macquarie Drive northbound to provide a left slip lane into Hume Highway. The VPA for the subject site notes that this land has been dedicated;
 - land dedication for future widening the Hume Highway east of Governor Macquarie Drive to provide a left slip lane into Governor Macquarie Drive. This land has also been dedicated;
 - widening of Governor Macquarie Drive south of the site, with appropriate intersection treatments, for access to the Inglis and Coopers Paddock sites. These works are the subject of a separate VPA for those sites, and have been implemented;
 - upgrades to pedestrian and cycle paths Munday Street and Governor Macquarie Drive. These works form part of the VPA for the Inglis and Coopers Paddock sites, and have been implemented.

Potential Scale of Development

11. The planning proposal would provide for a residential/retail/commercial development, which will include some 823 residential apartments plus 1,200m² retail and 3,836m² commercial in a number of buildings.

Public Transport

12. As noted previously, the site is close to Warwick Farm railway station, being within some 100 metres' walking distance. Warwick Farm is on the Bankstown, Cumberland and Inner West and Leppington Lines. Services through Warwick Farm operate on a 15 to 30 minute headway in each direction.
13. Local bus services are provided by Transdev. There are bus stops on Hume Highway, east of the site. Route 904 operates along Hume Highway between Liverpool and Fairfield via Lansvale. It operates on a 60 minute headway in each direction, Monday to Saturday, with more frequent services during peak periods. Services include links to Fairfield, Warwick Farm and Liverpool railway stations.

14. The proposed development would therefore be readily accessible by public transport, and is consistent with government objectives and the planning principles of:
- a) improving accessibility to employment and services by walking, cycling, and public transport;
 - b) improving the choice of transport and reducing dependence solely on cars for travel purposes;
 - c) moderating growth in the demand for travel and the distances travelled, especially by car; and
 - d) supporting the efficient and viable operation of public transport services.

Access and Internal Layout

15. Access to the external road network would be provided from Munday Street, in two locations, and from Manning Street. An internal loop road would provide access to the various buildings within the development.
16. The road connections at Munday Street would be opposite the existing Bull and Stroud Street intersections. These are short, dead-end streets running south from Munday Street which carry low traffic volumes. New connections at these locations would not cause unusual issues. Right turn bays may be required in Munday Street for turns into the new access points.
17. The new access points, and other internal roads within the site, should be designed in accordance with appropriate council requirements to accommodate cars and the swept paths of service vehicles such as garbage collection vehicles and removal vans.

Traffic Generation

18. Traffic generated by the proposed residential/retail/commercial development would have its greatest effects during weekday afternoon and Saturday peak periods when it combines with other traffic on the surrounding road network.
19. Surveys undertaken by RMS include the following traffic generation rates for commercial and high density residential development close to public transport:
- 0.6 vehicles per hour per 100m² for commercial development during weekday afternoon peak hours;
 - 15.5 and 14.7 vehicles per hour per 100m² for supermarkets during weekday afternoon and Saturday peak hours respectively; and

- 0.15 and 0.21 vehicles per hour per apartment for high density residential apartments during weekday afternoon and Saturday peak hours respectively.
- 20. With an indicative yield including 3,836m² commercial, a 1,200m² supermarket and 823 residential dwellings, the proposed development would generate some 330 and 350 vehicles per hour two-way during weekday afternoon and Saturday peak hours respectively.
- 21. By comparison, the approved home improvement centre would have traffic generations of some 330 and 830 vehicles per hour two-way during weekday afternoons and Saturdays respectively.
- 22. Therefore, the proposed residential/retail/commercial development would have a similar generation on a weekday afternoon, with a lesser generation than the home improvement centre on a Saturday. Hence, traffic effects would be similar or less than the approved development.
- 23. As noted in paragraph 10, there is a VPA which includes upgrading the intersection of Governor Macquarie Drive with Munday Street, to accommodate development of the subject site. As also noted above, these road works have been constructed.
- 24. As the proposed development would have similar or lesser traffic effects to the approved development, the previously agreed and constructed road works are also appropriate for the proposed development.

Summary

- 25. In summary, the main points relating to our initial review of the traffic implications of the proposed residential mixed use development are as follows:
 - i) the site is south of the Hume Highway and west of Governor Macquarie Drive at Warwick Farm, close to Warwick Farm railway station;
 - ii) it has development consent for a home improvement centre;
 - iii) a series of road and intersection works have been agreed and form part of voluntary planning agreements for development of the subject site and other nearby sites;
 - iv) these road works, including those in the VPA for the subject site, have been constructed;

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- v) the potential scale of development envisaged in the planning proposal includes some 823 residential apartments plus 1,200m² retail and 3,836m² commercial;
- vi) appropriate access should be provided from Munday Street and Manning Street. Right turn bays may be required in Munday Street at the site accesses;
- vii) the proposed residential/retail/commercial development would have a similar traffic generation on a weekday afternoon, and a lesser generation than the home improvement centre on a Saturday. Hence, traffic effects would be similar or less than the approved development;
- viii) therefore, the agreed road works, including the works already constructed in association with the voluntary planning agreements for the subject site and other nearby sites, are also appropriate for the proposed development.

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,

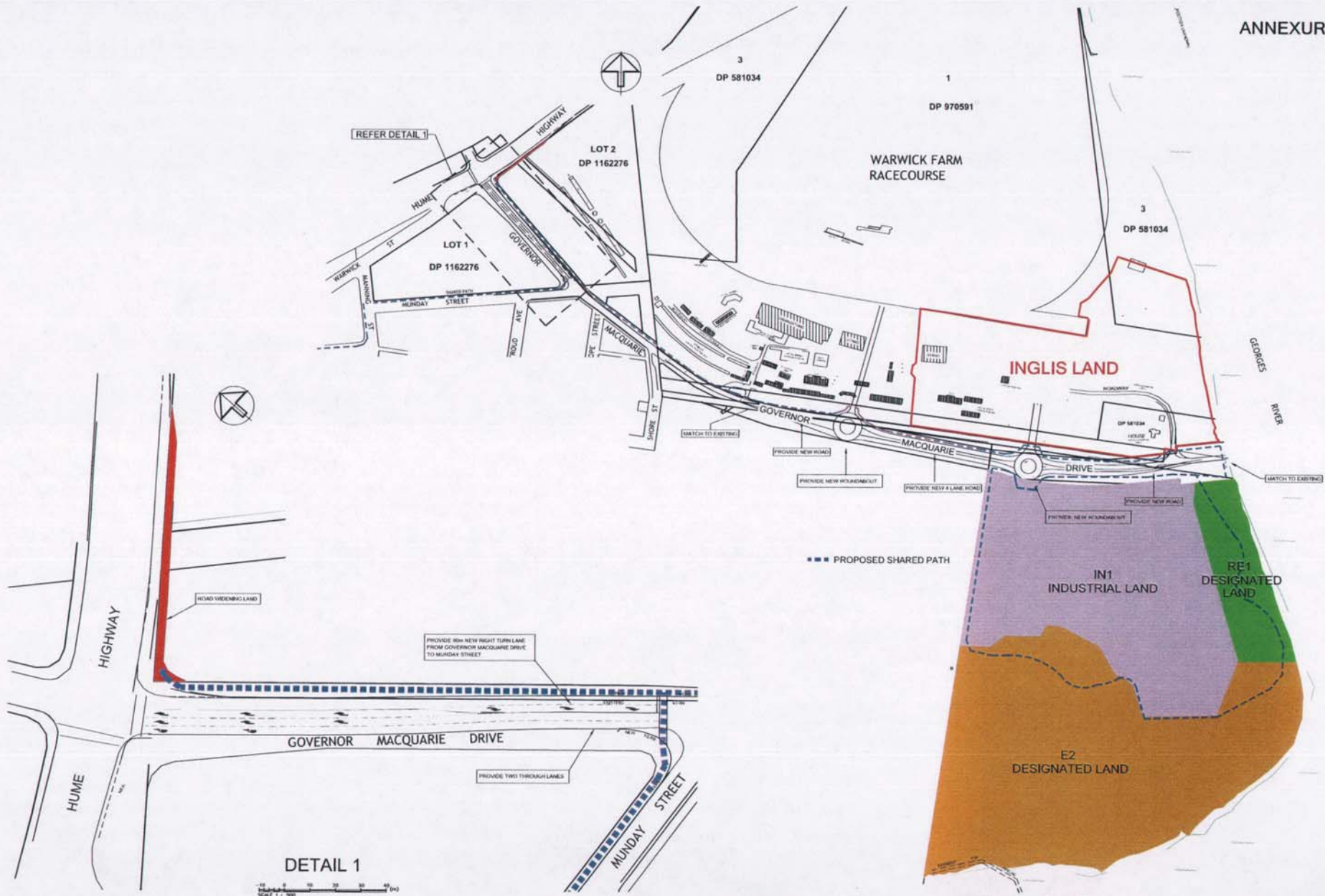
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J. Hollis

Director

ANNEXURE 2



DETAIL 1

SCALE 1:1000

SCALE 1:1000

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NO.	REVISION	DATE	BY	CHKD	APPD
1	ISSUED FOR TENDERS	15.12.10	PH	PH	PH
2	AMENDMENT	15.12.10	PH	PH	PH
3	AMENDMENT	15.12.10	PH	PH	PH
4	AMENDMENT	15.12.10	PH	PH	PH
5	AMENDMENT	15.12.10	PH	PH	PH

PROJECT		CLIENT	
PROJECT NAME	AUSTRALIAN TURF CLUB	CLIENT NAME	WARWICK FARM RACECOURSE
PROJECT ADDRESS	WARWICK FARM	CLIENT ADDRESS	WARWICK FARM
PROJECT REFERENCE		CLIENT REFERENCE	

PROJECT		CLIENT	
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