

Mark Waugh Pty Limited
ABN 67 106 169 180
Transport Planning & Engineering

27 March 2009
P0377 Dd Trsc Comm Da Rev04

Defined Developments
35 Lime Street, King Street Wharf
SYDNEY NSW 2000
Attention: Mr Tim Campbell

Dear Tim

Top Ryde Shopping Centre Traffic investigations Development Application for Top Ryde Commercial

1. Introduction

This paper has been prepared to support the Development Application for the Top Ryde Shopping Centre (TRSC). It specifically summarises the possible impacts on the approved development of modifications to the land use schedule resulting from changes to the allocation of space for commercial activity within the overall site. The purpose of the paper is to document the potential impacts (if any) of the changes to the approved development resulting from this reconfiguration of the centre as detailed in drawings provided (Turner & Associates 07020 DA21-22 27/2/09).

The original D/A approval was for NUFA of 10,000m² with parking allocated at 1 space per 40m², requiring 250 spaces. The revised floor area is now 11,736m² which would require 293 parking spaces, however, the constraints of the site only achieve 264 parking spaces, a ratio of 1 space per 44m²

As with previous development applications we have considered the following areas of potential impact that this amendment may have on the traffic operations of the development:

- **Changes to Car Parking Supply requirements** - The proposed changes result in a minor modification to the car parking supply requirements.
- **Traffic generation** – The DA TIS applied traffic generation levels based on the maximum NUFA in LEP 143 of 150,000 m² as well as the proposal for Precinct 2 at a lower area of approximately 128,000 m². This change in activity level needs to consider whether there will be any resultant increase in traffic generation above that already assessed in the TIS.
- **Distribution of traffic flow** - The DA TIS applied a particular distribution and assignment of traffic flows for the LEP and Precinct Two proposals. This change in parking needs to consider whether there will be any resultant change in distribution of flows
- **Design and layout** - The amendment proposed needs to be assessed in terms of the design and layout meeting the relevant standards and road authority requirements.
- **Public Transport** – The amendment proposed needs to be assessed in terms of any potential shift in public transport patronage to and from the centre.

The results of this assessment are outlined overleaf.

2. Traffic Generation

The traffic impact of the Precinct Two development was modelled on the maximum Net Useable Floor Area (NUFA) as nominated in the Top Ryde LEP 143. A separate analysis was made of the actual proposal for Precinct Two as put forward for the Development Application however the impact analysis was based on the full development potential allowable for the site.

The development scenarios for Precincts One and Two applied in the Traffic Impact Statement are reproduced from Table 6.1 from the Traffic Impact Statement below (**Table 1**).

Table 1 - Table 6.1 Development Scenarios

Land Use	PRECINCT 1 Existing (NUFA)¹	PRECINCT 1 Maximum Potential (NUFA)	PRECINCT 2 Existing (NUFA)	PRECINCT 2 Maximum Potential (NUFA)	Precinct 2 Proposed Development (NUFA)
Retail	Nil	20,000	22,500	67500	61215
Other /Entertainment	850 Seat Auditorium	Nil	Nil	12500	12500
Civic	Library	Nil	Nil	2500	2500
Residential units	Nil	40,000	Nil	52500	40500
Commercial	10,000	40,000		15,000	10,000
TOTAL		100,000		150,000	128,715

Notes: 1. NUFA – Net Useable Floor Area m²
 Source: Mark Waugh Pty Ltd October 2006

Table 2 - Land Use Schedule

Land Use	DA672/2006 – original DA	DA672/2006/06 – modified consent	Commercial DA
Shops	54,354	54,000 (-354)	54,000
Refreshment Rooms	6,848	4,908 (-1,940)	4,908
Non Retail Commercial Premises	4,523	6,530 (+2,007)	6,530
Recreation Area	1,810	3,841 (+2,031)	3,841
Community Facility	2,700	2,727 (+27)	2,727
Place of Assembly	3,577	3,293 (-284)	3,293
Child Care Centre	1,448	1,455 (+7)	1,455
Place of Worship	2,955	2,919 (-36)	2,919
Total NUFA	78,215	79,673 (+1,458)	79,673
Commercial	10,000	10,000	11,736 (+1,736)
Residential	40,500	40,500	40,500
Total	128,715	130,173 (+1,458)	131,909 (+3,194) (+1,736)
Car Spaces	3,870	3,900 (+30)	3,914 (+44) (+14)

Source: JBA March 2009

The originally approved development allowed for a total NUFA of 128,715m². Subsequent s96 modifications have allowed for a total NUFA of 130,173 m² which is still well within the LEP limit of 150,000 m².

Importantly these proposals mean that the development proposal still utilises only 87% of the allowable NUFA under the LEP.

As stated in **Tables 1 and 2**, the maximum potential NUFA for Precinct 2 is 150,000m². The Traffic Impact Statement, prepared for the approval DA, considered two levels of development, as follows:

1. A maximum development scenario under the allowable development area LEP143 which included the 150,000m² if Precinct 2 as well as 100,000m² NUFA for Precinct 1.
2. A development NUFA of 128,715m² for the development application lodged for approval.

The current modifications considered as part of the commercial component of the TRSC would result in only a slight further increase in developable area, which is again well within the LEP limit of 150,000 m².

Applying the standard RTA and council guideline traffic generation rates, results in a potential increase in traffic flows of around 20 vehicles in the PM per hour. This is based on applying a flow rate per unit floor area. However it has been argued and accepted previously, that as with overall shopping centre size, the overall activity level does not necessarily increase proportionally with changes in individual floor area changes in size (refer to RTA Guidelines for the Traffic Generating Developments, October 2003).

Notwithstanding the above, even if the traffic generation rate were to increase by the 20 vehicles per hour nominated, this represents around a 1.6% increase in flow if it all occurs at peak times. This however, is still well below the maximum development level analysed and reported as part for the approved DA Traffic Impact Statement.

Our conclusion therefore is that the level of traffic generation from this current Development Application is still well within the maximum NUFA levels investigated as part of the LEP143 investigation required for the Development Application.

3. Changes to Parking Requirement

The amendment proposed as part of this current application includes an increase in the area of commercial floor space.

The features of the parking assessment from the DA are summarised below:

Table 3 – Car Parking Supply

	DA672/2006 – original DA	DA672/2006/06 – modified consent	Commercial DA
TRSC Total NUFA	128,715	130,173	131,909
Car Park Spaces Provided	3,870	3,900	3,914
Total Spaces Available Against DCP 2006 Requirements (Equates to 1 space per 33 sq m of floor space)	88%	88%	87%
DCP Discount	12%	12%	13%
Commercial NUFA	10,000	10,000	11,736
Car Park Spaces Provided	250	250	264
Space per sq m of commercial floor space	40*	40*	44

* 1 space per 40 sq m of commercial floor space was derived from the Macquarie Park parking rates – approach approved by Council.

Source: JBA March 2009

The change in total commercial NUFA of 1,736 m² under this current development application is derived from a one off modification to the area of commercial activity within the overall TRSC. The affect of this modification, whilst increasing the DCP discount across the TRSC development from 12 % to 13%, is minimal in terms of overall traffic and parking impacts and the traffic generated will not exceed the acceptable maximum for Ryde Town Centre. The mixed use nature of Top Ryde has been designed to encourage alternate forms of transport, and reduce car dependency. This change in floor area and parking ratio will merely reinforce this encouragement of alternate options

With the previous increase of 30 car parking spaces from the original total of 3870, the principals relating to the justification of this level of parking provision, including linked and contained trips, and higher use of public transport and alternative modes of transport (walking and cycling) still apply and are valid for the overall development.

As part of the approved DA for the Top Ryde Shopping Centre a modified car parking supply ratio of 1 space per 40 m² was applied. This gave a parking space allocation for the nominated 10,000 m² of commercial floor space of 250 spaces and applied the same parking reduction philosophy that had been adopted and approved for the overall Top Ryde mixed use development. This included an average reduction in parking supply of 12%.

The proposed commercial car parking requirement specified in the approved DA was deliberately consistent with the allowance of a lower provision nominated for the Macquarie Park Employment Area in Ryde DCP 2006. It is understood that this parking provision was the result of consideration of a number of factors that impacted on that area. They include impact on the surrounding road network, increased rate of development in the area, recent improvements in bus services in and through the area together with the Parramatta / Chatswood Rail Link.

It was considered the same factors are applicable to the Ryde Town Centre, given particularly that it is recognised as a regional centre by the NSW State Government. The same factors have been assumed to influence the requirement for commercial parking, with visitor parking assumed to be catered for by the general centre parking, and a lower overall parking supply provided for each commercial tenancy in the centre.

The RTA Guide to Traffic Generating Developments specifies parking provisions that are based on unrestrained demand and isolated from adjacent developments. In the same way that the guide confirms that trip generation is reduced by the occurrence of linked and multi-purpose trips, the level of parking demand and hence provision is also reduced by these factors as the size of retail centre increases. This would suggest that a reduction of parking provision of up to 25% could be applied to the Top Ryde Shopping Centre Development, and indeed to the Ryde Town Centre where reciprocal parking is available for multiple purpose trips.

Based on the parking allocation of 264 spaces for commercial premises contained within the approved comprehensive DA, the parking ratio achieved would be in the order of 1 space per 44 m². There are a number of factors that can be considered here, as with the Macquarie Park Employment area:

- Top Ryde is well serviced by public transport and is a recognised transport hub on the State Transit bus network
- The rate of increased development planned within the area of the approved Top Ryde LEP
- The extent of mixed use development, including residential, commercial, community, civic, retail and entertainment activities

It is noted also that the primary town centre of many other local government areas in Sydney have car parking rations of up to 1 space in 60 m² allocated for commercial activity with justification for this level of parking understood to be related to access to public transport and other activities as linked trips.

In recent considerations of other proposed developments within the Greater Metropolitan Region, Better Transport Futures has been expressly required to demonstrate what measures are being implemented to reduce the level of parking demand for developments as a method of encouraging the greater mode shift to public transport together with increased walking and cycling. This has been a requirement of the NSW

Ministry of Transport in consideration of major developments in urban areas through the requirements of the Director General of the NSW Department of Planning.

With the planned intent of encouraging public transport use, which is particularly relevant to the employees that will occupy the commercial premises, it is considered that this component of the Top Ryde Development should seek to encourage use of alternate transport by minimising the parking supply as has been requested by the MoT in recent times. Such an approach is then consistent with achieving all the environmental and transport objectives of the Government through reducing the dependency by commuters on private car travel.

In support of this approach the entire development has been designed based on an Integrated Transport Solution with access to public transport, cycling and walking facilities as an important consideration. Excellent access to public transport has been achieved, walking links through the centre to the external connections are provided and extensive bicycle facilities are provided which contribute to cycling being a viable transport option. The 92 bicycle parking spaces and amenities have been provided as part of the Green Star (Green Building Council Australia) initiative to encourage the use of bicycles by the building occupants and visitors.

It should be noted that adoption of this approach will not affect the ability of visitors to the commercial premises to access the facility, with visitor parking more than adequately covered by the general centre allocation. This is possible because the general period of business activity requiring visitor allocations falls out of the commuter peaks, and only occurs Monday to Friday.

Please also note that the subject commercial DA seeks only approval for the 223 commercial car parking spaces i.e. The 41 spaces in the residential are already approved. The commercial parking spaces will be provided separate to the main retail car park.

4. Proposed TRSC Access Arrangements

There are no changes in traffic distribution, internal access or site access recommended as part of this Development Application. The overall access system remains within the guidelines as established in the approval for the TRSC Development application.

5. Amended Site Design and Layout Issues

As stated above the change in total NUFA of 1736 m² under the DA commercial modification is derived from an increase in floor area of commercial activity. The overall affect is minor in terms of traffic and parking impacts.

No change in parking supply is recommended as part of this development application. Whilst there is a minor alteration in terms of the supply ratio and traffic generation levels, the modification does not in my opinion alter the overall performance of the available access and car parking facilities. The overall parking provision remains within the guidelines as established in the approval for the TRSC Development application.

6. Public Transport

Top Ryde is well serviced by public transport provided by an extensive bus service. It is a focal point for services, with a number of services terminating at Top Ryde. From Top Ryde, buses provide regional connections (with a number of express services operating at peak times) to the City, North Sydney, Burwood, Parramatta, Chatswood and Macquarie Park. Local services provide access to the surrounding area and to West Ryde train station. The main bus stops are located in Devlin Street and Blaxland Road, adjacent to Top Ryde Shopping Centre (Precinct Two) with a further bus stop located on Devlin Street to the south of Blaxland Road. Services operate 7 days a week with more frequent services during the commuter peak period.

There is no change to the availability of public transport services nor to their prominence and as such given that the change in parking nominated in this amendment still falls within the allowable guidelines

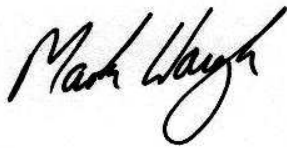
for parking for a shopping centre of this nature, the impacts on public transport usage are expected to be minimal.

This access to high quality public transport is to be encouraged at Top Ryde, and particularly in relation to employment activities such as the commercial component of the subject site.

7. CONCLUSION

Based on our assessment of the proposed alterations to the development in relation to the commercial component of the site the traffic and parking arrangements remain satisfactory for the purposes of the development and within the level of traffic impact considered and approved for the original development consent. The change to the overall parking supply is considered to be consistent with the approved arrangements that seek to reduce car dependency and encourage use of public transport for employees at the centre. This philosophy is particularly relevant to the commercial component of the development.

We conclude that the traffic and parking elements of the commercial DA are consistent with the approved DA and recommend approval of this component of the development.

A handwritten signature in black ink, appearing to read "Mark Waugh". The signature is written in a cursive, flowing style.

Director

Attachment: Design Plans DA 21/22

