61 Mobbs Lane, Epping

Epping Park Development

Stage 3

Traffic Impact Assessment

transportation planning, design and delivery

12S1410000 19/03/13

GTAconsultants

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Traffic Impact Assessment

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1. Introduction

This report has been prepared by GTA Consultants on behalf of Meriton Apartments Pty Ltd to present the findings of a review of the traffic and parking implications of Stage 3 of the Epping Park development, located on the former Channel 7 studios site at 61 Mobbs Lane, Epping.

This report has been prepared with reference to the Transport and Accessibility Impacts components of the Director-General's requirements for the Environmental Assessment, which require the following for the construction and operational stages of the development:

- *The EA shall provide details of transport and accessibility generation, access, loading areas, car parking arrangements, pedestrian and bicycle linkages associated with the proposed works.*
- *Details of the proposed accesses and the parking provisions associated with the proposed development including compliance with the relevant Australian Standards (i.e.: turn paths, sight distance requirements, aisle widths, etc).*
- *Details of service vehicle movements (including vehicle type and likely arrival and departure times).*

A Concept Plan for the development as a whole has been approved MP05_0086 MOD2 on 21 February 2011. This review considers the Stage 3 development against the relevant Australian Standards and established parking rates for the site.

The remainder of the report is set out as follows:

- Section 2 describes the approved Concept Plan for Epping Park, and the proposed Stage 3 development.
- Section 3 reviews the Stage 3 development with regard to traffic generation, parking provision and the layout of access and parking arrangements.
- Section 4 provides an overview of the construction methodology and associated traffic management measures to address construction traffic implications.
- Section 5 presents the conclusions of the investigation.

2. Epping Park Development

2.1 Approved Concept Plan

The Epping Park residential development project involves the construction of residential dwellings; landscaped open space; and internal and external associated services and infrastructure such as roads, footpaths, resident facilities and a child care centre. Development approval has been granted for Buildings 1 to 10, together with recreational facilities and child care centre, which are now under construction. The site was formerly occupied by the Seven Network television studios.

The composition of the residential component of the modified Concept Plan as approved is summarised in Table 2.1.

Table 2.1: Concept Plan Apartment Schedule

Dwelling Size	Number of Dwellings
1 bedroom	38
2 bedroom	627
3 bedroom	123
4 bedroom	12
Total	**800**

Vehicular access for the Epping Park Concept Plan is via a new access road from Mobbs Lane located approximately midway along the site frontage. An internal road system provides access to the individual buildings and car parking areas around the site.

Approvals have been granted Stages 1 and 2 of the overall development, which are under construction in accordance with the composition set out in Table 2.2.

Table 2.2: Stages 1 and 2 Approved Apartment Schedule

	Stage 1 Dwellings	Stage 2 Dwellings	Total Dwellings
1 bedroom	35	15	50
2 bedroom	172	160	332
3 bedroom	70	12	82
4 bedroom	12	0	12
Total	**289**	**187**	**476**

2.2 Stage 3 Development

The proposed Stage 3 development consists of 324 apartments, of which 36 apartments are adaptable. The sizes and distribution of the apartments across the Stage 3 site are summarised in Table 2.3.

Table 2.3: Proposed Stage 3 Apartment Schedule (Number of Dwellings)

	1 Bedroom	2 Bedroom	3 Bedroom	Total
Building 11	7	38	2	47
Building 12	6	72	0	78
Building 13/14	0	65	7	72
Building 15/16	6	76	4	86
Building 17	7	34	0	41
Total	**26**	**285**	**13**	**324**
Adaptable Units (included in Total)	4	31	1	36

Parking is proposed in a split level basement carpark beneath Buildings 11 to 16 combined and one basement level beneath Building 17. Vehicular access to each of the basements is proposed to be provided via ramps connecting to the internal roads within Epping Park. Table 2.4 summarises the proposed parking provision for Stage 3.

Table 2.4: Proposed Stage 3 Parking Provision (Number of Parking Spaces)

	Buildings 11 to 16	Building 17	Total
Resident cars	316	45	361
Resident Disabled cars	32	4	36
Visitor cars off street	34	5	39
Visitor Cars on-street	6	2	8
Car wash	4	1	5
Bicycles	167	28	195
Loading bays	5	0	5

3. Impacts of the Development

3.1 Traffic Generation

The traffic generation of the Stage 3 development has been determined based on the rates published in the *Guide to Traffic Generating Developments*, (NSW Roads and Traffic Authority, 2002) which is consistent with the methodology used for all traffic assessments of the development undertaken to date.

The calculation of peak hourly traffic generation is set out in Table 3.1 for the proposed development with the schedule of apartments by size as proposed, and compares this with the traffic generation resulting from the approved schedule of apartments.

Table 3.1: Epping Park Development Peak Hour Traffic Generation

Component	Rate per Unit per Hour	Vehicle Trips per Hour
Approved Stages 1 and 2 Plus Proposed Stage 3		
76 x one bedroom	0.4	30.4
617 x two bedroom	0.5	308.5
95 x three bedroom	0.6	57.0
12 x four bedroom	0.65	7.8
Total (rounding)		*404*
Approved Concept Plan		
38 x one bedroom	0.4	15.2
627 x two bedroom	0.5	313.3
123 x three bedroom	0.6	73.8
12 x four bedroom	0.65	7.2
Total (rounding)		*417*

The traffic generation of the residential component of the site with the proposed Stage 3 development of 404vehicle trips per hour is therefore slightly less than that allowed for by the residential component of the approved Concept Plan of 417 vehicle trips per hour. The Stage 3 development therefore raises no new issues with regard to the impacts of the site development on the external road system.

It is noted that recent traffic surveys of the already occupied apartments of Epping Park Stage 1 indicate that actual traffic generation rates per unit are lower than those used in the Concept Plan traffic assessment and Stage 1 and Stage 2 development applications.

3.2 Vehicular Access

The basement parking for Buildings 11 to 16 would be accessed from a ramp from the extension of the main access road, and Building 17 would be accessed from a ramp from the main access road. These general access arrangements are consistent with the Concept Plan arrangements, and therefore do not raise any new issues with regard to the distribution of traffic within the site and the site's vehicular access arrangements with regard to the surrounding road network.

3.3 Impacts on the External Road System

The proposed vehicular access arrangements for Stage 3 are consistent with those of the proposed Concept Plan, and the peak hourly traffic generation is consistent with that allowed for in the Concept Plan assessment. It therefore follows that the proposed Stage 3 development raises no new issues with regard to the impacts of generated traffic on the surrounding road system.

3.4 Car Parking Provision

As part of the Stage 2 approval, the Department of Planning and Infrastructure (DoPI) specified the rates at which parking must be provided for the Epping Park Stage 2 and Stage 3 development.

Table 3.2 presents the required provision of car parking as they relate to the Stage 3 proposal.

Table 3.2: Stage 3 Required Car Parking Provision

Component	Required Rate	Spaces Required
36 x adaptable units	1.0 space per unit	36
22 x one bedroom units	1.0 space per unit	22
254 x two bedroom units	1.20 spaces per unit	305
12 x three bedroom units	1.5 spaces per unit	18
Residential total		*381*
324 units – visitor parking	1 space per 7 units	47
Car wash bays	1 bay per building [A]	5
Total		**433**

[A] Parramatta DCP 2011 – noting that car wash bay may also be a visitor space

The proposed provision of 449 spaces, being 397 spaces for residents, 47 spaces for visitors and 5 car wash bays (refer to Table 2.4), therefore exceeds the overall DoPI requirements.

It is noted that the approved Concept Plan allows for 1,135 car parking spaces, while the total car parking spaces on site with the proposed Stage 3 development would be 1,190 spaces (residential and visitors combined). The difference is a result of the amendment to the car parking provision requirements for Stage 2 and Stage 3 made by DoPI after the Concept Plan approval.

3.5 Bicycle Parking Provision

The Stage 3 development proposes 167 dedicated secure bicycle parking spaces for Buildings 11 to 16 (5 single frame spaces and 81 double sided spaces) and 28 dedicated secure bicycle parking spaces (14 double sided spaces)for Building 17.

Bicycle parking for Stages 1 and 2 was provided at a rate of 1 space per 3 apartments, which is consistent with the Parramatta Council DCP requirements. Application of this rate suggests that 108 bicycle spaces would be required for the 324 apartments in Stage 3, thus the proposed provision is satisfactory.

3.6 Parking Layout and Design

The proposed car parking and access arrangements have been reviewed with respect to the Australian Standards for off-street parking facilities AS2890.1 (2004) and off-street parking for people with a disability AS2890.6 (2009). These set out minimum requirements for the design and layout of off-

street parking facilities. Compliance with these Standards will facilitate efficient vehicle circulation to, from and within the parking areas for all users.

The layout of the car parking generally meets the requirements of the Standards and is satisfactory. It is noted that height clearances are not presented on the plans, however the floor-to-floor heights are likely to result in adequate clearances to meet the requirements of AS2890.1 and AS2890.6. It is recommended that compliance with AS2890.1 (2004) and AS2890.6 (2009) be required as conditions of development approval.

Visitor parking is proposed to be located in groups close to lift lobbies, and not within dead end aisles. Appropriate signage will be installed to assist legibility for visitors to the different buildings.

Based on the traffic generation rates set out in Table 3.1 the car park for Buildings 11 to 16 would be expected to generate 141 vehicle trips per hour during the peak hours. Two internal ramps are proposed to spread the traffic between the upper and lower parking levels, and a single entry/exit driveway ramp would provide access to the Epping Park internal road system. The main driveway would be expected to carry some 141 vehicles per hour during peak hours, and based on the number of spaces on each parking level the two internal ramps combined would carry around 85 vehicle trips per hour during peak hours. Each internal ramp would carry a portion of those 85 vehicles per hour. These volumes are sufficiently low that congestion at the ends of ramps is considered unlikely to be a concern.

Thirty-one pairs of spaces are proposed in tandem configuration, which would each be allocated to one of the 73 apartments which would have two parking spaces. Many of the tandem spaces are located within short or dead end aisles, so any additional manoeuvring of cars would result in minimum disruption to other vehicular movement in the car park.

3.7 Bicycles

Bicycle stores are proposed to be located in the basement parking areas under both Buildings 11 to 16 and Building 17. The bicycle stores are proposed to be located in groups around the car park, and are clear of vehicular and pedestrian traffic routes. The majority of bicycle parking is proposed in double sided frames. The general layout of bicycle facilities is considered satisfactory.

3.8 Service Vehicles

The garbage bins from Building 17 will be taken to the street by the Building Manager for collection from the internal road. This general arrangement is considered satisfactory.

A garbage room is proposed adjacent to the driveway to the car park for Buildings 11-16. Manoeuvring space is provided to allow a waste collection truck to access the garbage collection area without entering the basement car park, and by forward movements to and from the internal roads.

This area would also be available for use by furniture removal trucks, which are typically smaller than garbage trucks. Five loading bays are also provided in the basement car parking area, for use by smaller delivery vehicles as required. These bays are in addition to the required visitor parking provision and would be suitable for use by utes and small vans.

3.9 Non-Car Modes

Pedestrian, bicycle and public transport connections were previously examined as part of the approved Concept Plan and were considered adequate. The Stage 3 development would not alter the provision of pedestrian, cyclist and public transport services and facilities from those of the approved Concept Plan, thus raises no new issues with respect to these aspects of the development.

4. Construction Traffic

The purpose of this chapter is to provide an overview of the likely construction traffic impacts associated with the Stage 3 development, and proposed mitigation measures.

Detailed assessment of construction traffic impacts and management measures will be undertaken once the detailed construction methodology is developed. This detailed assessment will form part of a detailed Construction Site Management Plan (CSMP) for the works. This will be undertaken prior to construction certification in consultation with the construction contractors and the relevant approval authority.

4.1.1 Detailed CSMP and Requirements for Compliance

The following information is general in nature, as a detailed CSMP will be developed by the construction contractor as required. At that time, the contractor will need to amend any details herein should changes be required.

Standard Traffic Control Plans (as required) are recommended in accordance with Australian Standard AS1742 Manual of Uniform Traffic Control Devices, and the associated RMS Supplement (2012) and complementary Traffic Control at Work Sites (2010) guidelines. These specify the locations of signs, bollards, safety barriers, etc., in accordance with the RMS requirements. Additional details will be provided by the contractor to Parramatta City Council and RMS Traffic Management Centre prior to any traffic control for Stage 3 work affecting Mobbs Lane.

4.1.2 Estimated Truck Volumes and Truck Routes

It is estimated that Stage 3 works would generate similar numbers of truck trips as the Stage 2 construction activity. Stage 2 construction activities will be completed before Stage 3 commences.

The volumes of truck traffic would be relatively low and would not have any significant impact on traffic conditions although the extent of any road and footpath closures will affect traffic flow along Mobbs Lane.

It is noted that the Seven Network operations will have relocated elsewhere and that the volumes of construction traffic would be well below the volumes generated by the Seven Network traffic.

During the construction period, truck access will be available from Mobbs Lane only, as this is the only road frontage available to the site. It is noted that an existing 3 tonne load limit exists on Mobbs Lane. The regulations regarding load limits allow vehicles heavier than the restricted weight to use the load limit road where no other access is available. As such, heavy vehicle access to and from the development site is permissible via Mobbs Lane, both from the east and the west.

It is proposed that the same construction traffic route utilised for Stages 1 and 2, the nearby Brickworks site and the former Seven Network operations would be used for heavy construction traffic (over 3 tonnes) associated with the development, i.e. vehicles over 3 tonnes would not use Mobbs Lane to and from the west of the site access.

The main access points for heavy vehicles during construction will be on Mobbs Lane. Sight distances at Mobbs Lane are excellent and in this respect the access will be adequate for construction access.

Any proposed temporary driveways will be constructed in accordance with RMS requirements and approved separately by others. All movements from existing or temporary driveways will occur in a forward direction to minimise the disruption to through traffic.

It is intended that adequate on site car parking facilities will be provided to accommodate construction worker parking and vehicle deliveries to and from the site. The detailed CSMP will detail the location of the site office and facilities including the location and number of staff car parking spaces.

5. Conclusions

This assessment has found that:

- The proposed Stage 3 development is consistent with the Concept Plan for the Epping Park development as a whole with regard to traffic generated on the surrounding road system and general vehicular access arrangements. It therefore raises no new issues with regard to the impacts of generated traffic on the surrounding road system.
- The proposed provision of car parking for the Stage 3 development complies with the requirements of the Department of Planning and Infrastructure, established as part of the Stage 2 approval.
- The proposed provision of bicycle parking for the Stage 3 development complies with the Parramatta Council DCP requirements.
- The layout of the car parking generally meets the requirements of the relevant Australian Standard AS2890.1 and AS29890.6, and compliance with those Standards is recommended as a condition of consent.
- The waste collection area allows for the manoeuvring of a large waste collection truck, and would also be available for use by furniture removal trucks. Loading spaces are also provided within the basement car park for utes and small vans.
- The proposal raises no new issues with regard to the provision of facilities for other transport modes from the approved Concept Plan.
- A detailed CTMP will be developed by the construction contractor. In general, heavy vehicle access will be via Mobbs Lane east of the site access only. Construction traffic generation is expected to be lower than the previous Channel Seven studio operations on the site.

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