Western Sydney University

Westmead Subdivision of Lot 4

Traffic Impact and Access Report

001

Rev A | 30 November 2015

Job number 234401

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1 Introduction

1.1 Background

Arup was commissioned by the Western Sydney University (WSU) to provide traffic and transport consultant services for the Westmead Campus Site redevelopment.

In 2012, the University lodged a draft planning proposal with Parramatta City Council seeking to rezone the site to B4 Mixed Use (permitting 122,955m^2 of commercial, retail, residential and community uses). As part of this application, in February 2013 Arup prepared a Transport Management and Accessibility Plan (TMAP). This provided a preliminary assessment of site access, parking rates, traffic modelling, public transport, walking and cycling.

In 2013 WSU secured the rezoning of the site to B4 Mixed Use, permitting commercial, retail, residential and community uses including education, and a gross floor area of 122,955m^2. The redefined site presents an opportunity for further development, which releases funds to facilitate the University's core teaching and research functions both on and off the site.

A site specific Development Control Plan (DCP) was developed as part of the rezoning application. A key objective of the DCP is to encourage travel from the site via non-car modes of travel, taking advantage of the good public transport surrounding the site.

In 2014 the University secured approvals to implement the major infrastructure and subdivision works to create serviced development lots on the site, the Estate Major Works (EMW). The scope of the Stage 1 DA EMW (DA571/2014) includes the necessary demolition, remediation and infrastructure works and serviced subdivision to create the development lots and the residual public realm for dedication to Parramatta Council, as well as the master plan development envelopes for the development of five separate lots.

1.2 Scope

The development application seeks approval for the subdivision of Lot 4 on the Westmead campus as shown in Figure 1. The following report expands upon the findings of the previous studies to support the previous sub-division application (DA571/2014).

Figure 1 Site layout

2 Transport network

2.1 Site location and access

The site is located adjacent to Darcy Road and Hawkesbury Road within the Westmead Precinct (Figure 2). The centroid of the site is approximately 400m from Westmead Railway Station. The Westmead Hospital Precinct is situated adjacent to the site, and currently acts as the major generator of vehicle and pedestrian movement in the area.

Vehicular access to the site is currently from Hawkesbury Road only with no access from Darcy Road. The primary pedestrian access is from Hawkesbury Road with a secondary access via steps from Darcy Road at the north-western corner of the site. A gated pedestrian access also exists between the site and the adjacent high school.

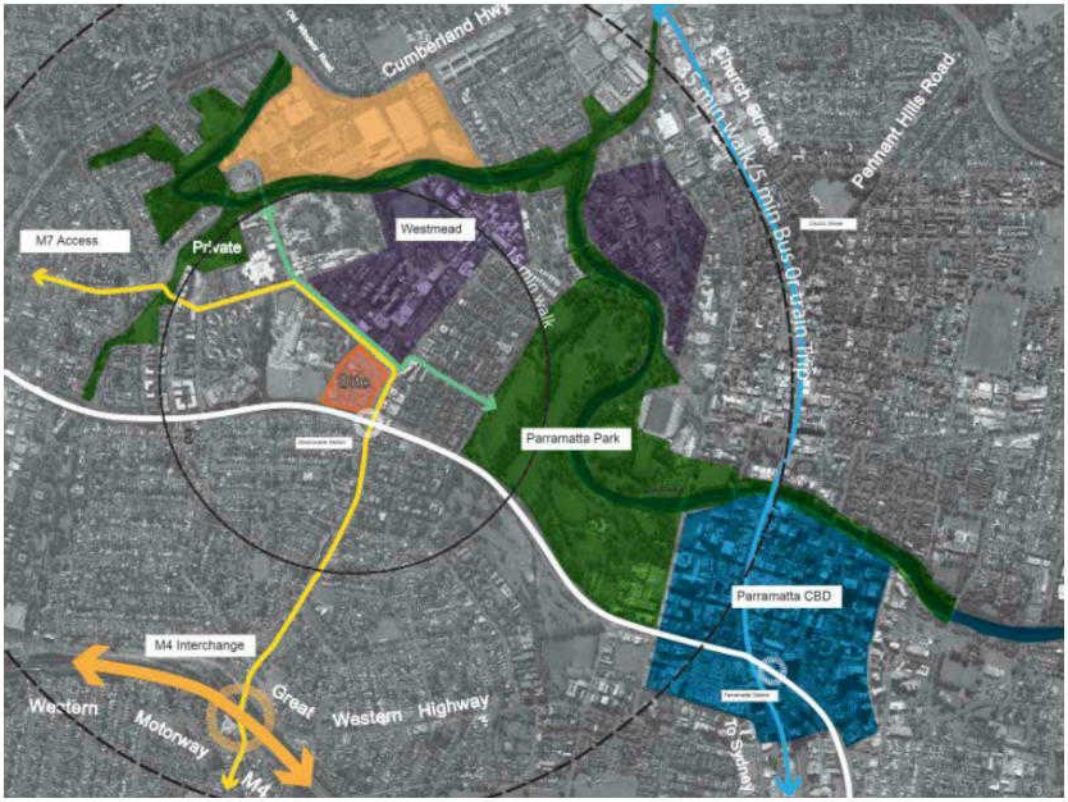


Figure 2 Site location

2.2 Road network

The main local (Council controlled) roads in the Westmead area are Hawkesbury Road and Darcy Road. Bus-only lanes and dedicated bus-only traffic signals provide for the T-way (State controlled). The site is located some distance from the major metropolitan (State controlled) arterial roads, including M4 Motorway, Cumberland Highway, Great Western Highway and Old Windsor Road.

The location of the Westmead Precinct results in roads such as Hawkesbury Road and Darcy Road carrying little through traffic, except for traffic to Parramatta from nearby suburbs such as Wentworthville. Bridge connections across Toongabbie Creek (Redbank Road) and Parramatta River (Bridge Road) are in effect private roads for hospital staff only.

2.3 Walking and cycling

The Westmead area is generally served by good, wide footpaths with signalised crossings of main roads, including across Hawkesbury Road near the station. A regional off-road cycling route is located on the eastern side of the T-way linking Parramatta to Rouse Hill. Hawkesbury Road (west of Darcy Road) and Alexandria Avenue (south of Bridge Road) are designated bicycle routes.

2.4 Public transport

Westmead Station is a high order station on the Sydney Trains network. Most Blue Mountains, Cumberland Line and Western Line services stop at the station permitting fast trips from Westmead to Sydney CBD, and direct trips to Penrith, Blacktown, Richmond and Campbelltown.

The site is located adjacent to the North West Transitway (T-way) that runs along Alexandra Ave – Hawkesbury Road – Darcy Road. Bus stops are located on Darcy Road near the site. The T-way connects Rouse Hill to Parramatta via Old Windsor Road with up to 4 minute headways at peak times.

3 Transport assessment

3.1 Proposed development

The subject of this report is the proposed subdivision of Lot 04 into two lots. The overall gross floor area (GFA) for the campus remains unchanged from the approvals granted under DA571/2014. The subdivision of Lot 4 separates the previous 28,795 m^2 (GFA) into two lots as follows:

- Lot 401 - 17,500m^2 GFA
- Lot 402 – 11,295m^2 GFA

3.2 External site access

No modifications to the external site access arrangements impacting the external road network are proposed under these works.

3.2.1 Darcy Road Access

There are no changes proposed to the external site access compared to the previous application. The approved access arrangements are illustrated in Figure 3 below.

The primary access to the Site will be via the extension of the existing traffic signals on Darcy Road, opposite Westmead Hospital no.1 entrance. This intersection was reconstructed in 2007 to accommodate the T-way in the centre of Darcy Road and the future connection to the University site.

3.2.2 Hawkesbury Road

A secondary vehicular access point will be located on Hawkesbury Road at the existing driveway location. The access will be in the form of a left-in/left-out arrangement, with this application proposing no changes to that approved under DA571/2014.

3.2.3 Darcy Road Service Vehicle Access

The approvals under DA571/2014 includes access for services vehicles into Lot 2 to be via a new site access point off Darcy Road. No changes to this arrangement proposed as part of this application.

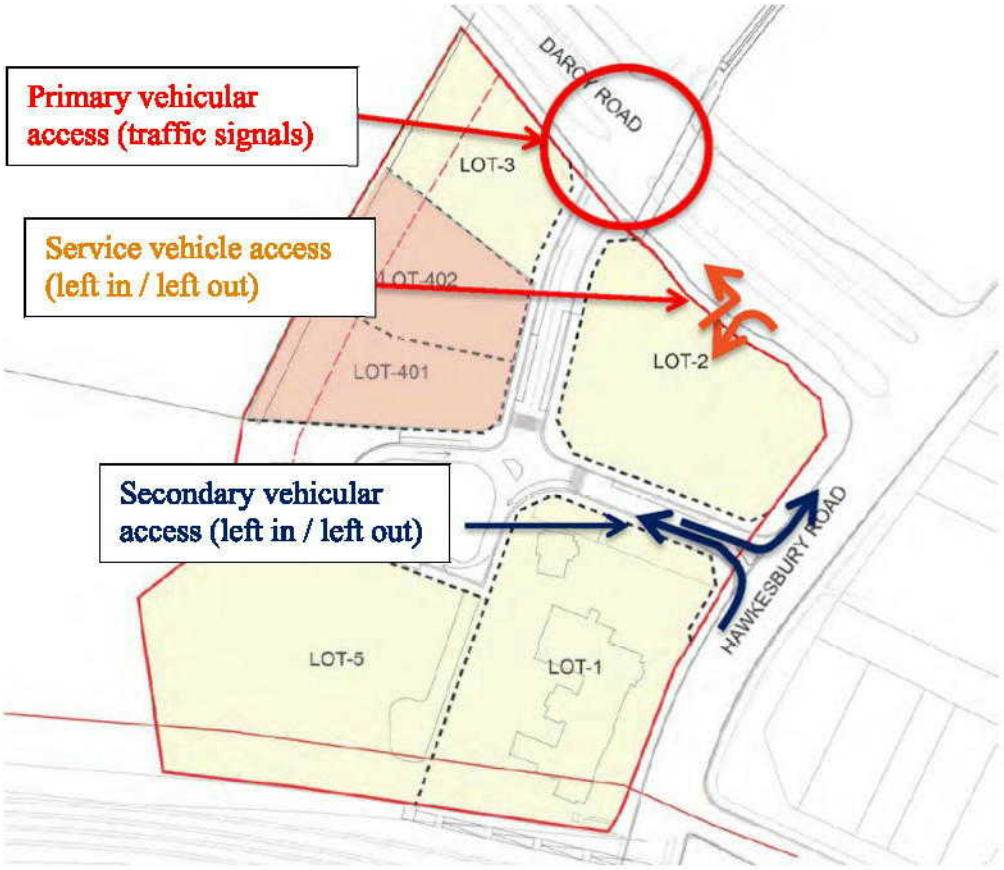


Figure 3 Approved Vehicular Site Access

3.3 Proposed Lot Access

Vehicular access to Lots 1, 2, 3 and 5 remain unchanged from that approved under DA571/2014.

Access into the previous lot 4 was formerly via the common street as a shared entry into Lot 3. The split into the northern Lot 402 and southern Lot 401 will now utilise two separate access points. Entry into the proposed Lot 402 will now be via the northern shared access. Vehicular entry into the proposed Lot 401 utilises the loop road adjacent to the sites.

A summary of the proposed vehicle lot access into and out of Lot 401 and 402 is illustrated in Figure 4.

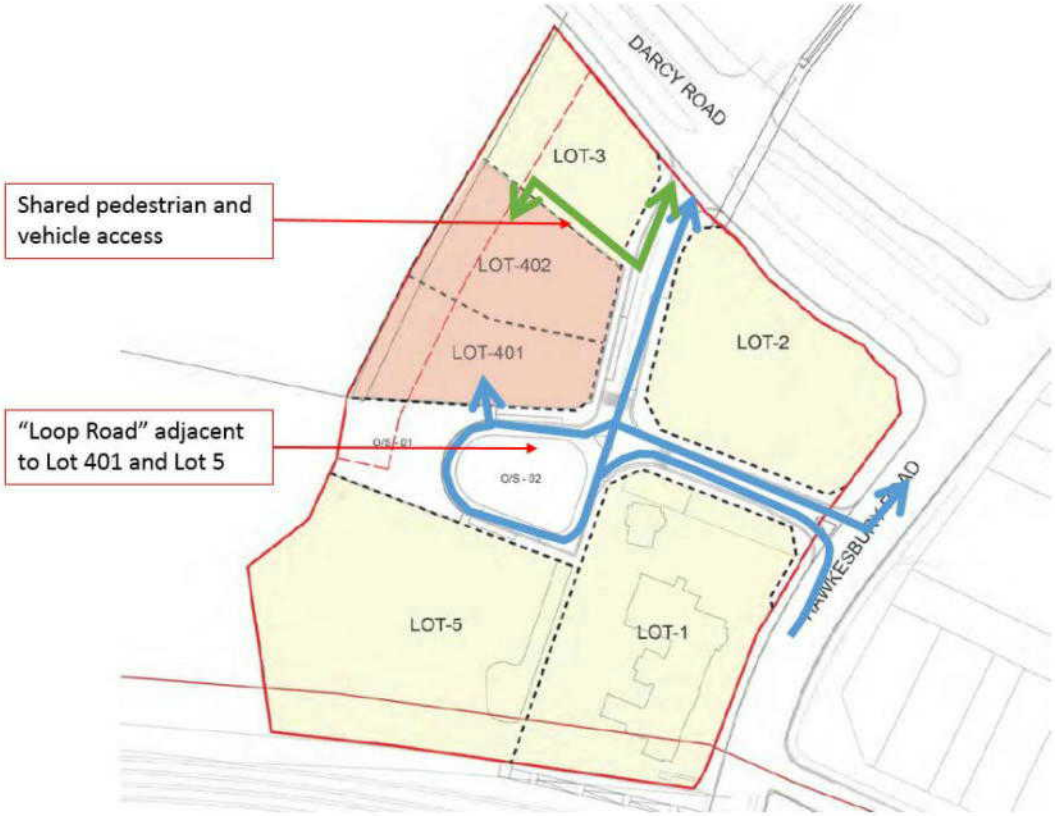


Figure 4 Site lot access schematic

3.4 Internal site circulation

The internal road through the site will provide local connections to each of the six development lots, as well as a connection between the site access points on Hawkesbury Road and Darcy Road.

It is intended this road will be a low speed environment to enhance pedestrian safety and reduce through traffic intrusion. This will be achieved through the provision of traffic calming devices and pedestrian (zebra) crossings at multiple locations. Traffic speeds will be further tempered by the narrow road carriageway with visual side friction from trees and street furniture. No significant changes to the approved road environment is proposed as part of this application

The high levels of pedestrian activity within the Site will result in lower vehicle speeds and naturally discourage drivers from using the site as a 'rat run'.

3.5 Traffic generation

Given the overall floor space and mix for the site remains as per the approvals under DA571/2014, there will be no additional external traffic generation into the campus compared to that previously assessed. The only change with respect to traffic movements is related to movements within the site due to an additional access point. This is considered to have a negligible impact on the operation of the internal roads within the site.

Figure 5 and Figure 6 illustrate the change in traffic distributed into and out of the proposed subdivided site for the AM and PM peak hour.

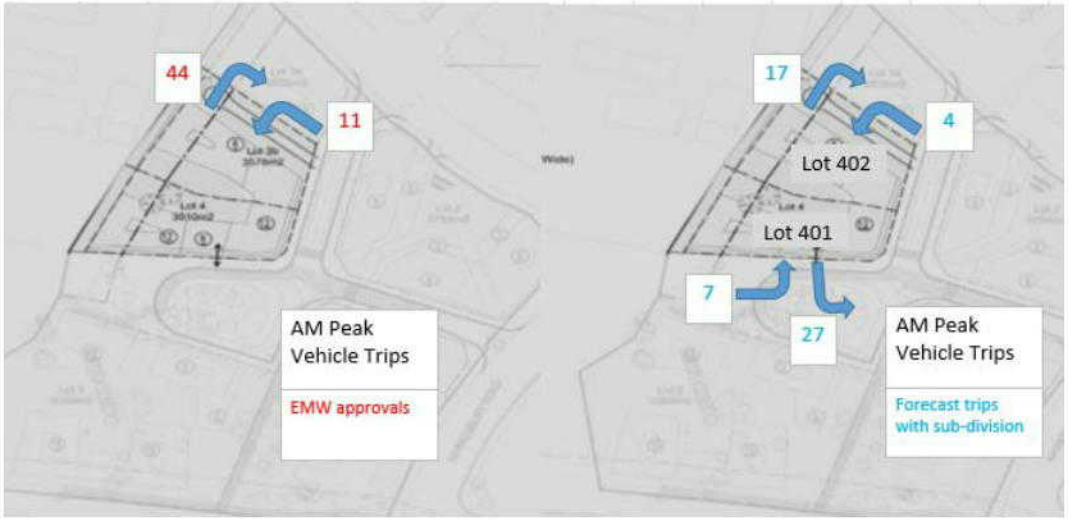


Figure 5 Traffic distribution of the proposed site in the AM Peak

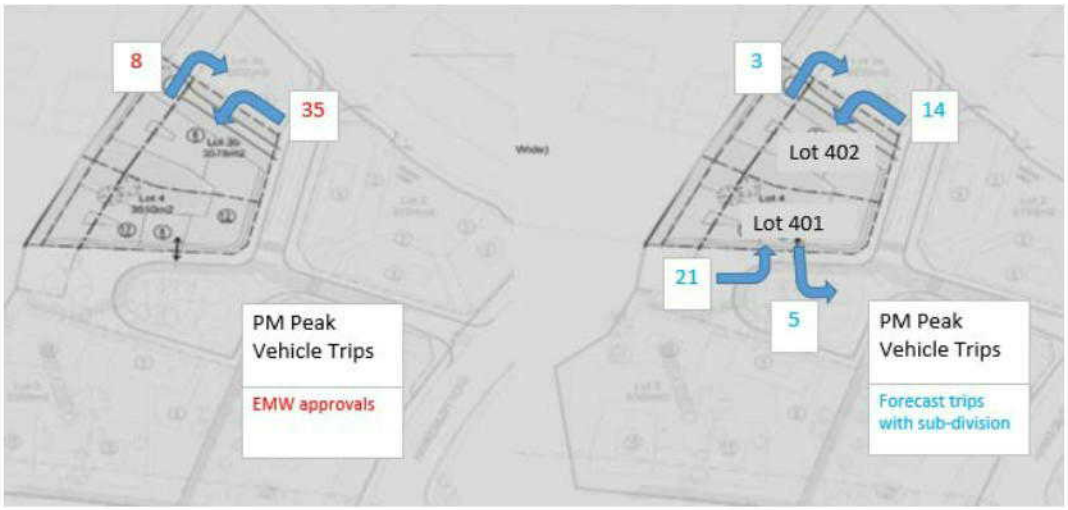


Figure 6 Traffic distribution of the proposed site in the PM Peak

3.6 Road network impacts

Traffic analysis undertaken by Arup for the EMW development application noted that the road network in the Westmead precinct would operate in a similar manner to existing conditions following the development of the site. As a result no improvements to existing intersections (with the exception of the future site access off Darcy Road) were deemed necessary.

The proposed sub-division of lot 4 results in no additional traffic generated by the site. The only change with respect to traffic movements is related to movements within the site due to an additional access point. Therefore the road network impacts arising from the proposal are considered negligible.

3.7 Parking and servicing

There are no changes proposed to the total provision of parking and loading for the overall site.

As per the approved DA571/2014, off-street parking will be provided at the basement level, with the exception of Lot 1 where an at-grade car park is to be retained. There will be some on-street parking bays provided on the internal roads within the site, likely to be time-restricted throughout the day.

4 Summary

Arup has prepared this transport assessment on behalf of the Western Sydney University (WSU) to support the subdivision of Lot 4 to create lots 401 and 402.

The Site is well located for access to public transport, with Westmead railway station approximately 400m away. The Site is positioned adjacent to the North West Transitway (T-way) that runs along Alexandra Avenue – Hawkesbury Road – Darcy Road. The main roads in the Westmead area are Hawkesbury Road and Darcy Road.

The development of the Site involves the provision of mixed use development, including residential, retail and commercial. The overall gross floor area remains unchanged from the approvals granted under the previous rezoning, subdivision and EMW approvals.

No changes to vehicular site access from the external road network are proposed under these works. The proposed subdivision would results in no overall change to the external traffic generated from the site compared to that from the previous study. Therefore no improvements to the existing transport network are considered necessary.

The development of an additional access point to into lot 401 results in a minor change in the distribution of internal traffic and access routes within the site. This would have a negligible impact on the operation of the internal road system.

In summary, the proposed subdivision of Lot 4 does not affect the overall traffic impacts compared with the approvals granted until the EMW development application (DA571/2014).

2.3 Access and Parking

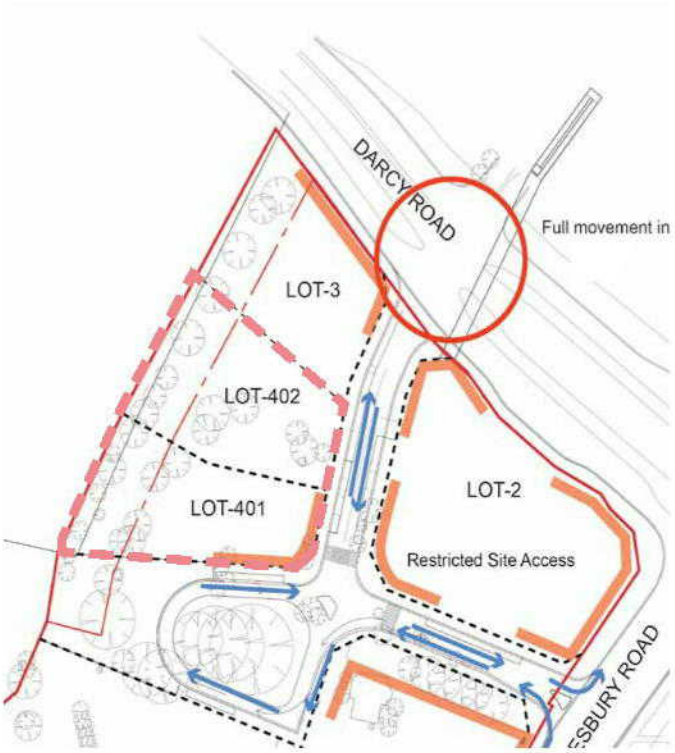
Road and pedestrian access on the site remain unchanged from the approved DA with a maximum of 1,480 cars provided on the site

An access easements on Lot 402 provides access to parking and servicing to Lot 3:

Access to Lot 401 will be from the loop road.

Parking provision will meet the requirements of the DCP. Initial parking allocation is outlined below. This may be varied subject to the final mix and the traffic constraints on the site.

The loop road will service some 510 spaces on Lot 5, 50 car spaces on the St Vincents site and 205 spaces on Lot 401.



Vehicular Access Plan

			Lot-1	Lot-2	Lot-3	Lot-401	Lot-402	Lot-5	TOTAL
Non Residential	Education	1 Space/100m2	50						50
	Commercial	1 Space/100m2		129	160				289
	Retail	1 Space/30m2		253					253
	Health	1 Space/300m2		8					8
	Serviced Apartments	1/5 rooms + Employees		24					24
Residential	Housing	1/Unit		0		205	140	510	855
		Parking	**50**	**414**	**160**	**205**	**140**	**510**	**1,479**

Indicative Parking Alocation