Lendlease

UNSW D14 Redevelopment (SSD 9606)

Preliminary Construction Pedestrian and Traffic Management Plan

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Arup Pty Ltd ABN 18 000 966 165

Arup
Level 10 201 Kent Street
PO Box 76 Millers Point
Sydney NSW 2000
Australia
www.arup.com

ARUP

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1 Introduction

This report details the Construction Pedestrian Traffic Management Plan (CPTMP) for the proposed new mixed-use building, known as D14, at the University of New South Wales (UNSW) Kensington campus (the campus). The plan has been created by Arup on behalf of Lendlease.

The purpose of the CPTMP is to assess the proposed access and operation of construction traffic associated with the proposed development with respect to safety and capacity.

This plan details the management needed to control construction traffic, while minimising effects on the surrounding developments and allowing for appropriate access at all times. Lendlease will prepare a more detailed version of this plan, with detailed Traffic Control Plans including specific methods of safely managing construction vehicle traffic within the surrounding area when subcontractors are appointed.

1.1 Site Location

The site is located at the UNSW Kensington campus which is situated within the Randwick Local Government Area (LGA). The UNSW Kensington campus lies to the south of the Royal Randwick Racecourse, to the west of the Prince of Wales Hospital Campus / Randwick Health Precinct, and between the Kensington and Kingsford town centres on Anzac Parade. The campus is located 8km south of the Sydney CBD and about 6km north-east of Sydney Airport.

Within the campus, the site is located centrally between Alumni Park (west), the Fig Tree Theatre (north), the UNSW Quadrangle (south) and Fig Tree Lane and Goldstein Hall (east). The site for the proposed enabling works, in its entirety, is situated within Lot 3 in Deposited Plan 1104617. The works area has a total area of approximately 5,000m2. A site location map identifying the site within the context of the wider campus is shown in Figure 1, and the indicative building envelope is shown in Figure 2.

Figure 1: UNSW site location context plan

Source: Ethos Urban

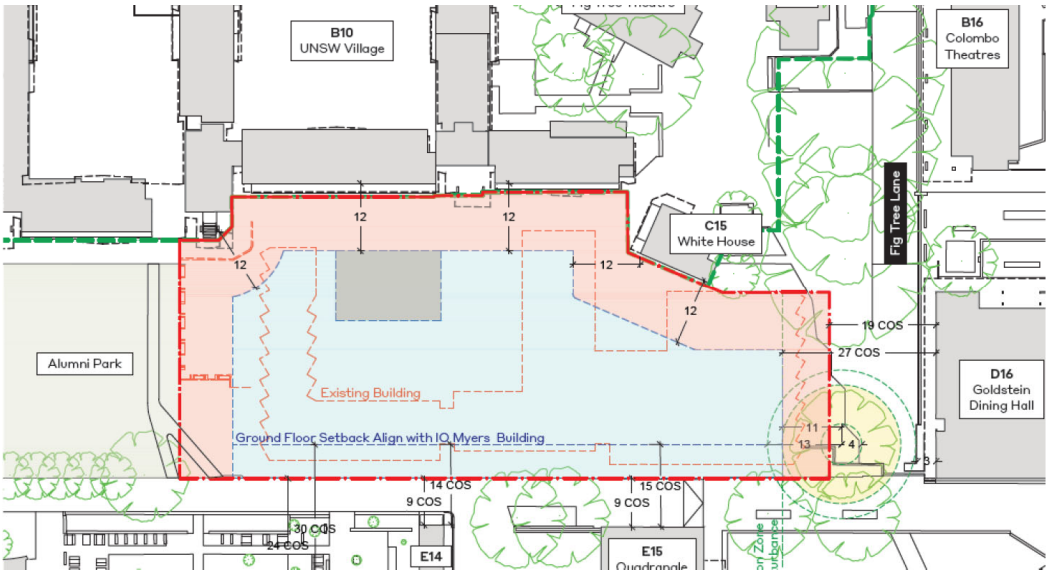

Figure 2: Indicative building envelope

Source: Estate Management UNSW Sydney (2018)

2 Description of Proposed Works

2.1 Overview

The proposed scope includes the demolition of the existing D14 building and the construction of a new building of up to 15,000m^2 Gross Floor Area (GFA). The proposed new building is to be multifunctional, serving the following functions:

- Faculty space;
- Learning environments;
- Centrally Allocated Teaching Spaces (CATS);
- End of trip facilities;
- Retail; and
- Outdoor places.

There will be no net increase in staff, students or visitations to the campus as a result of the proposal. Rather, the development is allowing for a re-distribution of the existing campus population. As a result, the development is not anticipated to generate any additional person trips to the campus.

2.2 Construction Programme

Construction is anticipated to occur between January 2020 and August 2021.

2.3 Vehicle Types Expected

The following types of 2890.2 Australian Standard trucks are proposed to be used during the project:

- Single Articulated Vehicles (AVs);
- Truck and trailers;
- Medium Rigid Vehicles (MRVs);
- Small Rigid Vehicles (SRVs);
- Utes/vans; and

The large construction materials are proposed to be transported via truck. The maximum truck size that will likely utilise the site is a 19m Articulated Vehicle. There is provision on-site for these vehicles to turn around and so they will be able to access the site directly, and will not require a Works Zone.

All heavy goods such as machinery plant will need to be delivered outside of peak traffic hours. It is envisaged that a number of mobile crane days will be required during the construction stage of the program, with limited lifting operations on weekends. These operations will be subject to a separate application for partial road closure with the Roads and Maritime Services and Randwick City Council as required.

2.4 Proposed Site Access

All construction vehicles are proposed to enter and exit the campus via the signalised intersection of Gate Two Avenue and High Street (UNSW Gate 2) during construction activities (shown in Figure 3). Secondary access for SRVs and small utes/vans is available at Gate 4 off High Street.

Figure 3: Gate Two Avenue / High Street intersection

Vehicles will travel along Gate Two Avenue, enter Alumni Park at its north-west corner before setting down adjacent to the western end of the site. Vehicles will exit Alumni Park via the same gate and travel back along Gate Two Avenue. This configuration is a loop and will thus allow the vehicles to both enter and exit the area in the forward direction. The access to the site will permit manoeuvres to and from High Street in the forwards direction only, with no reverse manoeuvres permitted.

A swept path analysis was undertaken with a 19m articulated vehicle to test the feasibility of this access arrangement. The vehicle paths for the site circulation loop on Alumni Park and the left turn on Gate Two Avenue can be seen in Figure 5 and Figure 6, respectively.

Existing pedestrian controls at Gate 2 and along Gate Two Avenue will apply to construction traffic. Specifically, the signalised pedestrian crossing at Gate 2 and the zebra crossing on Gate Two Avenue, adjacent to the IGA. Traffic controllers may need to be considered to manage the interaction of pedestrians and construction vehicles closer to Alumni Park.

Figure 4: Construction vehicle access – site circulation

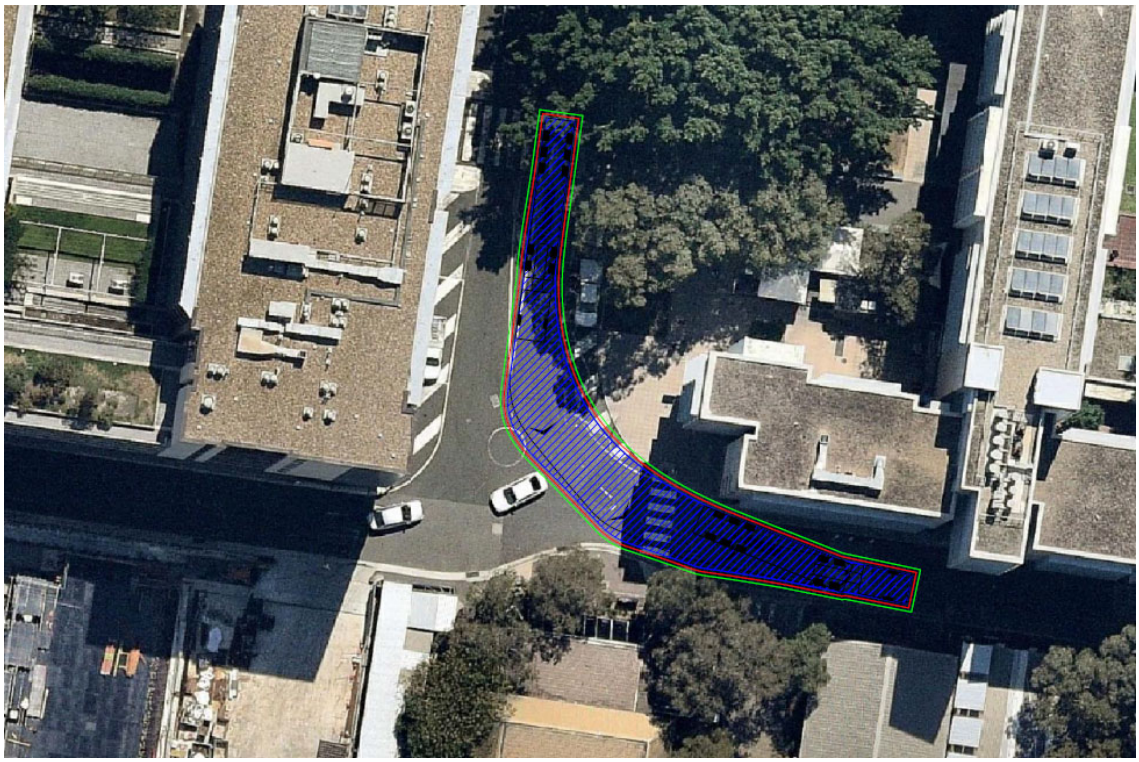

Figure 5: Construction vehicle access – Gate Two Avenue

2.5 Works Zone

All construction vehicles will be wholly accommodated within the site, and so no Works Zones are proposed.

3 Impact of Proposed Measures

3.1 Truck Routes and Controls

To keep construction-related traffic to a minimum on the surrounding roads, it is necessary to define a route for the holding circulation and access into the site from the main access points such as Anzac Parade and Gardeners Road. The routes will be clearly marked by traffic control signage to ensure construction vehicles are following the correct route.

Figure 6 describes the inbound routes to the construction site. Outbound vehicles are anticipated to follow the same routes. All vehicles accessing Gate 2 will be required to turn right into the campus and left out of the campus, with the aid of the traffic signals.

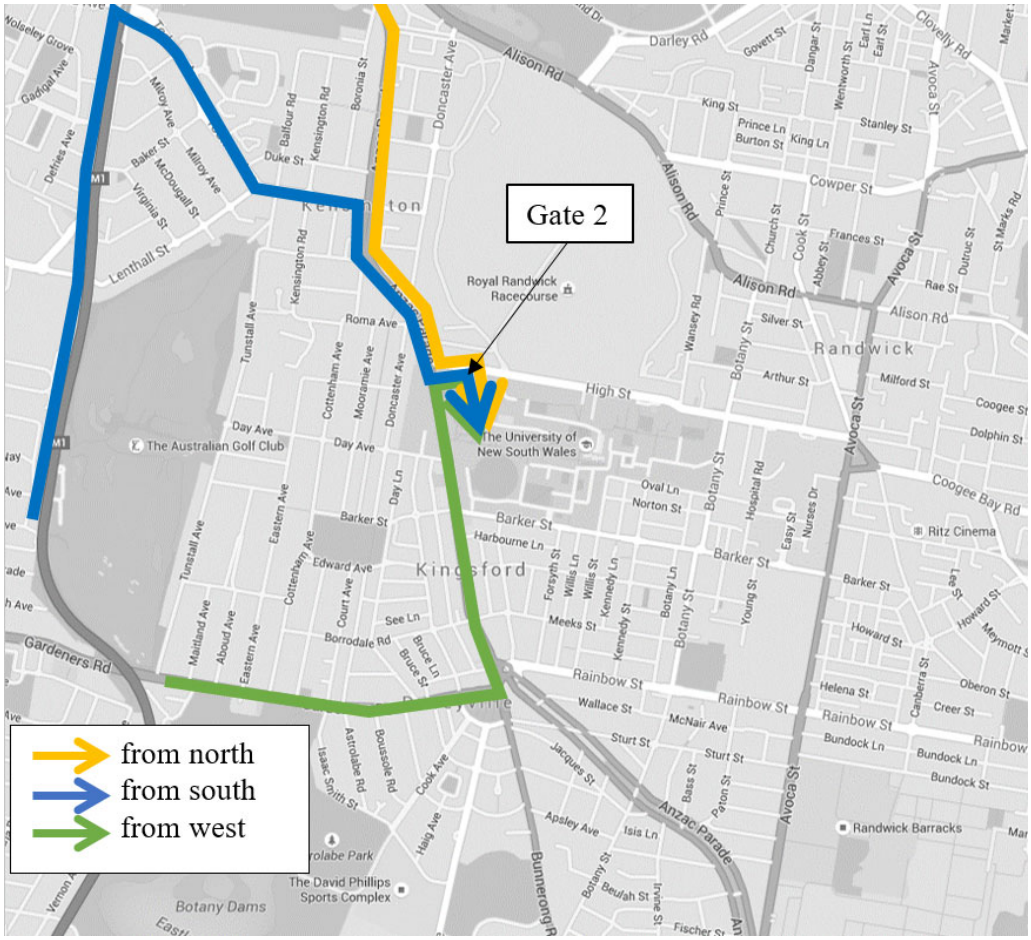

Figure 6: Construction vehicle inbound routes

3.2 Construction Traffic

Heavy vehicle trips generated are estimated to be in the order of approximately 60 truck movements per day or up to 20 trips per hour.

Workers may generate additional traffic to the site in the form of vans, utes and SRVs. A maximum workforce of approximately 250 personnel are forecast during the project. Construction workers generally start earlier and finish earlier than the commuter peak periods, and would likely not coincide with the commuter and UNSW peak periods.

3.3 Road Network Impacts

Traffic generation of this magnitude is anticipated to have a minimal impact on the surrounding road network. The largest number of truck movements associated with the site is in the order of 20 trips per hour, which is expected to have a minimal impact on surrounding roads and intersections. If queuing around the site becomes an issue, this may be managed by an off-site marshalling area.

Furthermore, road network impacts may be mitigated by the fact that construction workers generally start earlier and finish earlier than the commuter peak periods, and would likely not coincide with the peak traffic period of the Kensington/Randwick road network.

3.4 Parking

No car parking is proposed to be provided for construction staff. As part of site induction employees will be advised of the public transport options and encouraged to use these facilities or carpooling arrangements to decrease the number of employee vehicles.

3.5 Pedestrians

Construction vehicles entering, exiting and driving around the site will be required to give way to pedestrians at all times, as required under the NSW Road Rules.

College Road will be closed to pedestrians and general traffic during site hours. Access will be limited to emergency vehicles and deliveries, noting truck sizes will be limited. This access will be managed by on-site personnel. Outside of site hours, College Road will be open to all users.

Construction phases will be staged in consideration for the provision of pedestrian access paths. The staging of the works, including their indicative timings, are described below and in Figure 7, Figure 8 and Figure 9.

- Stage 1 (January 2020 – April 2021): the existing footpath immediately to the north of the site will remain open, with A-Class hoarding providing a barrier to the site. Pedestrians who currently use the footpath across Alumni Park will be diverted further west to Gate Two Avenue

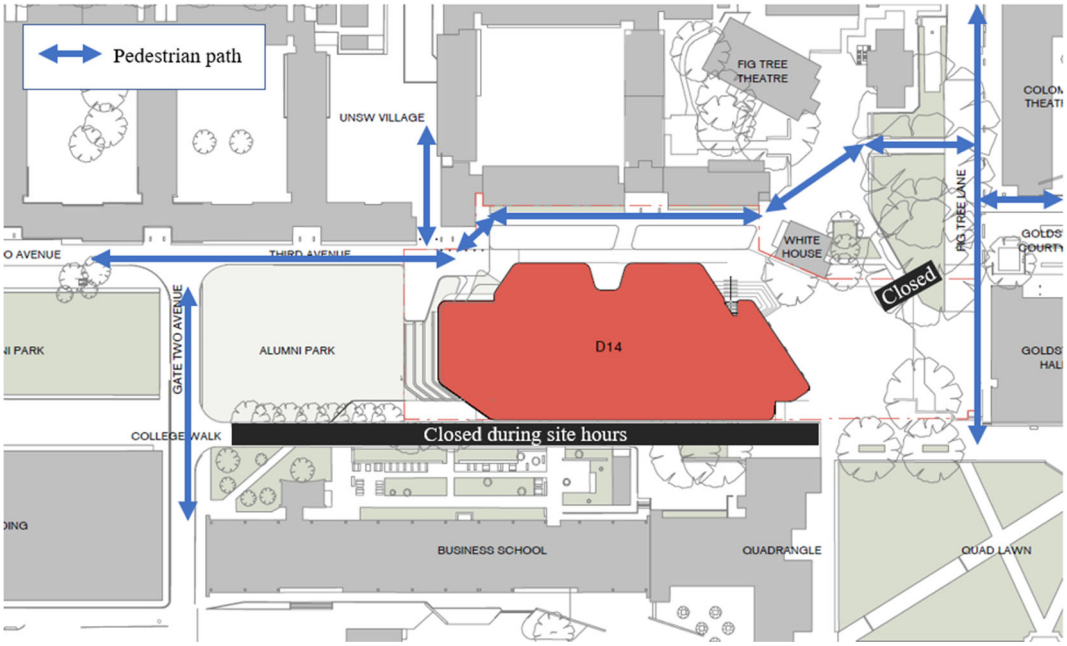

Figure 7: Stage 1 pedestrian access.

- Stage 2 (May 2021 – June 2021): access to the existing footpath immediately to the north of the site will be partially closed to pedestrians (western end). Pedestrians will be required to use the footpath within UNSW Village

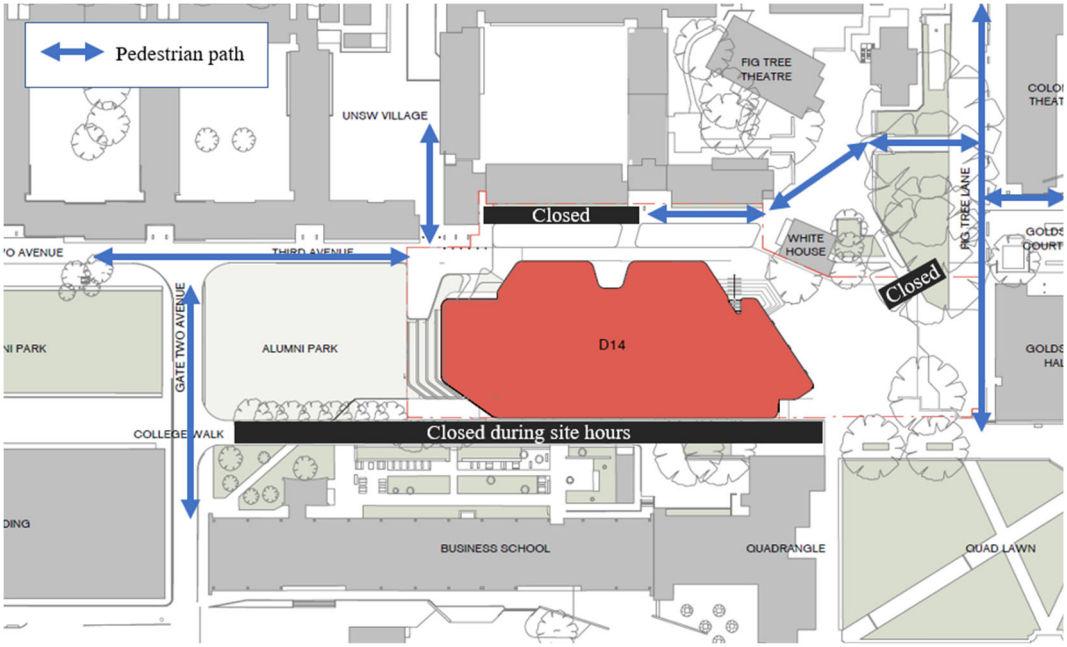

Figure 8: Stage 2 pedestrian access

- Stage 3 (July 2021 – August 2021): access to the existing footpath immediately to the north of the site will be partially closed to pedestrians (eastern end). Pedestrians will be required to use the footpath within UNSW Village

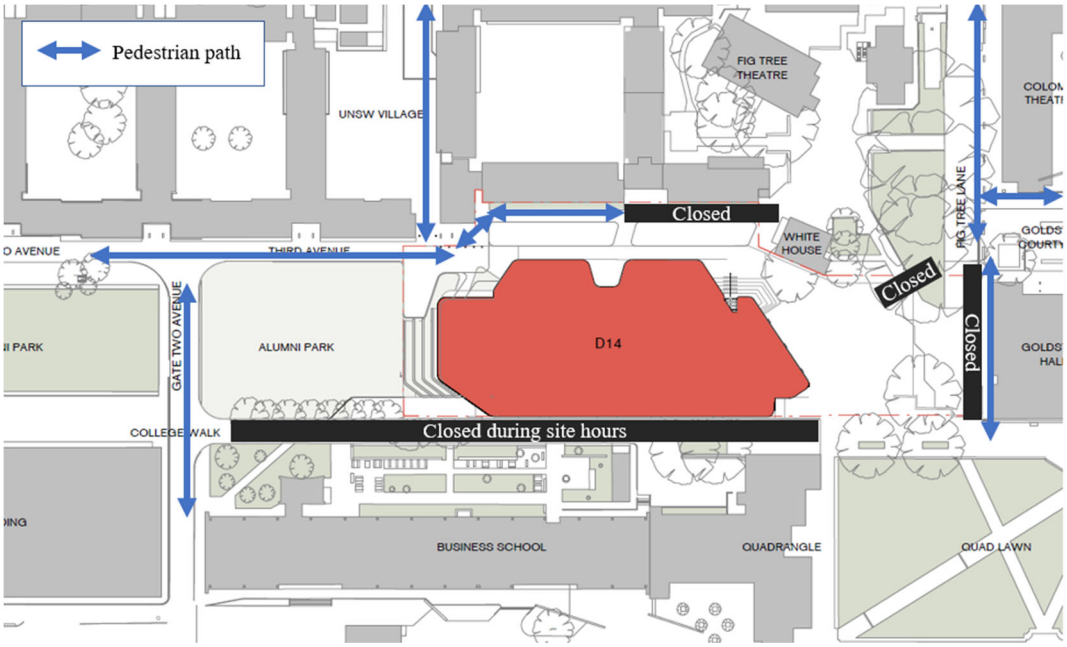

Figure 9: Stage 3 pedestrian access

The Fig Tree Precinct to north-east of the site will remain an active pedestrian area due to The Whitehouse and its function as a through-route between lower and upper campus.

Roads and Maritime Services accredited traffic controllers will manage the interaction of construction vehicles with pedestrians and allow pedestrians to cross these works area. Lendlease will prepare a detailed Construction Pedestrian and Traffic Management Plan (CPTMP) prior to works being carried out on site and will include details in relation to advanced warning signage and the location of traffic controllers.

3.6 Cumulative Impacts

There are a number of ongoing and future construction projects in the vicinity of the D14 development. These concurrent projects occurring on the campus will be managed and coordinated to ensure safety for pedestrians and vehicles using the campus are maintained. Where possible, works will also be coordinated to efficiently utilise and share space within the campus for materials handling and construction compounds.

The construction works associated with the CBD and South East Light Rail were originally scheduled for completion in early 2019, coinciding with the start of the demolition works for the D14 building. However, it is now envisaged the light rail construction will continue throughout 2019. Notwithstanding this, the number of construction vehicles associated with the light rail construction around Kensington is low, given the majority of trackwork has been completed. In this context, noting the relatively low construction traffic volumes associated with the D14 development, it is not expected that cumulative construction impacts would be significant enough to warrant any upgrades.

4 Details of Provisions Made for Emergency Vehicles, Heavy Vehicles and Cyclists

No special provisions are required or proposed for emergency vehicles and cyclists.

Construction activity is not expected to affect heavy vehicles travelling on surrounding roads not associated with this site. Garbage and delivery vehicles are proposed to continue accessing the site via Gate 2. Construction works and vehicle storage will be confined to the site. As such, no additional specific provisions for emergency vehicles, heavy vehicles, cyclists or pedestrians have been identified on the surrounding road network.

Waste collection and Fire Brigade access is to be maintained at all times to existing buildings. Generally, these vehicles are in the range of up to 12.5 metres in length. As noted in Section 3.5, access for any emergency vehicles will be provided via College Road, despite being closed to general traffic during site hours. Traffic controllers will be stationed on College Walk to facilitate emergency vehicle entry / exit. The Fire and Rescue NSW (FRNSW) local brigade will be notified and advised of access information for the site and surrounding buildings.

5 Measures to Ameliorate Impacts

5.1 Mitigation measures

Mitigation measures will be adopted during construction to ensure traffic movements have minimal impact on surrounding land uses and the community in general, and would include the following:

- Manage and control construction traffic movements on the adjacent road network and vehicle movements to and from the site;
- Trucks to enter and exit the site in a forward direction;
- No provision of vehicle parking for construction workers;
- Maintain traffic capacity at intersections in the vicinity of the site;
- Restrict construction vehicle activity to designated truck routes;
- Construction access from the external road network to mainly occur at signalised intersection;
- Pedestrian movements adjacent to demolition activity will be managed and controlled by site personnel where required;
- Pedestrian warning signs and construction safety signs/devices to be utilised in the vicinity of the site and to be provided in accordance with WorkCover requirements;
- Construction activity to be carried out in accordance with Council's approved hours of work;
- Truck loads would be covered during transportation off-site;
- Establishment and enforcement of appropriate on-site vehicle speed limits (30km/h), which would be reviewed depending on weather conditions or safety requirements;
- Activities related to the construction works would not impede traffic flow along local roads;
- Materials would be delivered and spoil removed during standard construction hours;
- Construction vehicles not to queue on Gate Two Avenue and be wholly accommodated within the site;
- Minimal construction traffic movements to/from the site will be made during peak hours to minimise the impact on the wider road network.

5.2 Driver Code of Conduct

No queuing or marshalling of trucks is permitted on a public road marked as No Stopping or No Parking. All vehicles must enter and exit the site from High Street in a forward direction. The Roads Act does not give any special treatment to trucks leaving a construction site – the vehicles already on the road have right-of-way. Vehicles entering, exiting and driving around the site will be required to give way to pedestrians at all times.

6 Public Transport Services Affected

No bus services are expected to be impacted by construction traffic as the work will be confined to the off-street site. All construction vehicles will be traffic controlled to ensure minimal impacts on surrounding traffic and pedestrian flows.

7 Public Consultation

Randwick City Council, Sydney Buses and Roads and Maritime Services will be given the opportunity to contribute to the final version of this report.

Should temporary road closures be required at any stage during the construction period, they will be obtained separately through the normal approvals process.

Ongoing consultation will be conducted with UNSW and Lendlease to ensure building occupants are updated on the construction works.