

University of Technology Sydney

Multi Purpose Sports Hall and Alumni Green  
Construction Traffic Management Plan

21 September 2009

Final

Prepared for

**University of Technology, Sydney**

# University of Technology Sydney Multi Purpose Sports Hall and Alumni Green Construction Traffic Management Plan

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## **Halcrow MWT**

Suite 20, 809 Pacific Highway, Chatswood, NSW 2067 Australia  
Tel +61 2 9410 4100 Fax +61 2 9410 4199  
[www.halcrow.com/australasia](http://www.halcrow.com/australasia)

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# 1 Introduction

Halcrow MWT has been commissioned by University of Technology Sydney (UTS) to prepare a construction traffic management plan (CTMP) for the proposed Multi Purpose Sports Hall (MPSH) and Alumni Green at the UTS Broadway Precinct of City Campus.

The MPSH is proposed as a new sports building comprising of office and reception, tutorial room, indoor sports courts, gymnasium, dance hall, change rooms, and bicycle storage. The MPSH would be located underground and accessed via UTS Building 4.

The Alumni Green is proposed as an area of landscaping and seating. The Alumni Green will be located above the MPSH. The Alumni Green will provide a direct connection between UTS Broadway Precinct of City Campus and Thomas Street.

The purpose of this report is to provide information on the extent of the work site, access, crane, material unloading, pedestrian protection and site sheds. In addition the report includes an overview of the proposed construction activities with respect to traffic and describes the potential impacts on the surrounding road network.

This CTMP report will be appended to an application to the Department of Planning for the construction of the MPSH.

A detailed Construction Site Management Plan (CSMP) will be developed by the construction contractor. This will be submitted to the Consent Authority for approval prior to the commencement of construction.

## 2 Background and Surrounding Road Network

### 2.1 *Background*

The proposed Multi Purpose Sports Hall (MPSH) and Alumni Green is a part of the proposed UTS Concept Plan. The UTS Concept Plan guides planning for the land holdings within the 'Broadway Precinct' of the UTS City Campus.

Plans of the proposed MPSH are shown in **Appendix A**.

### 2.2 *Surrounding Road Network*

The location of the MPSH and Alumni Green are shown in **Figure 1**.

Roads in the vicinity of the site include:

**Harris Street** runs north – south along the eastern edge of the Broadway Precinct of City Campus. Harris Street has four or five lanes wide running one-way southbound between Thomas Street to Broadway. Harris Street is two way north of Thomas Street.

The intersection of Harris Street and Thomas Street is controlled by traffic signals. Harris Street is suitable for heavy vehicle use and provides access to southern and eastern Sydney.

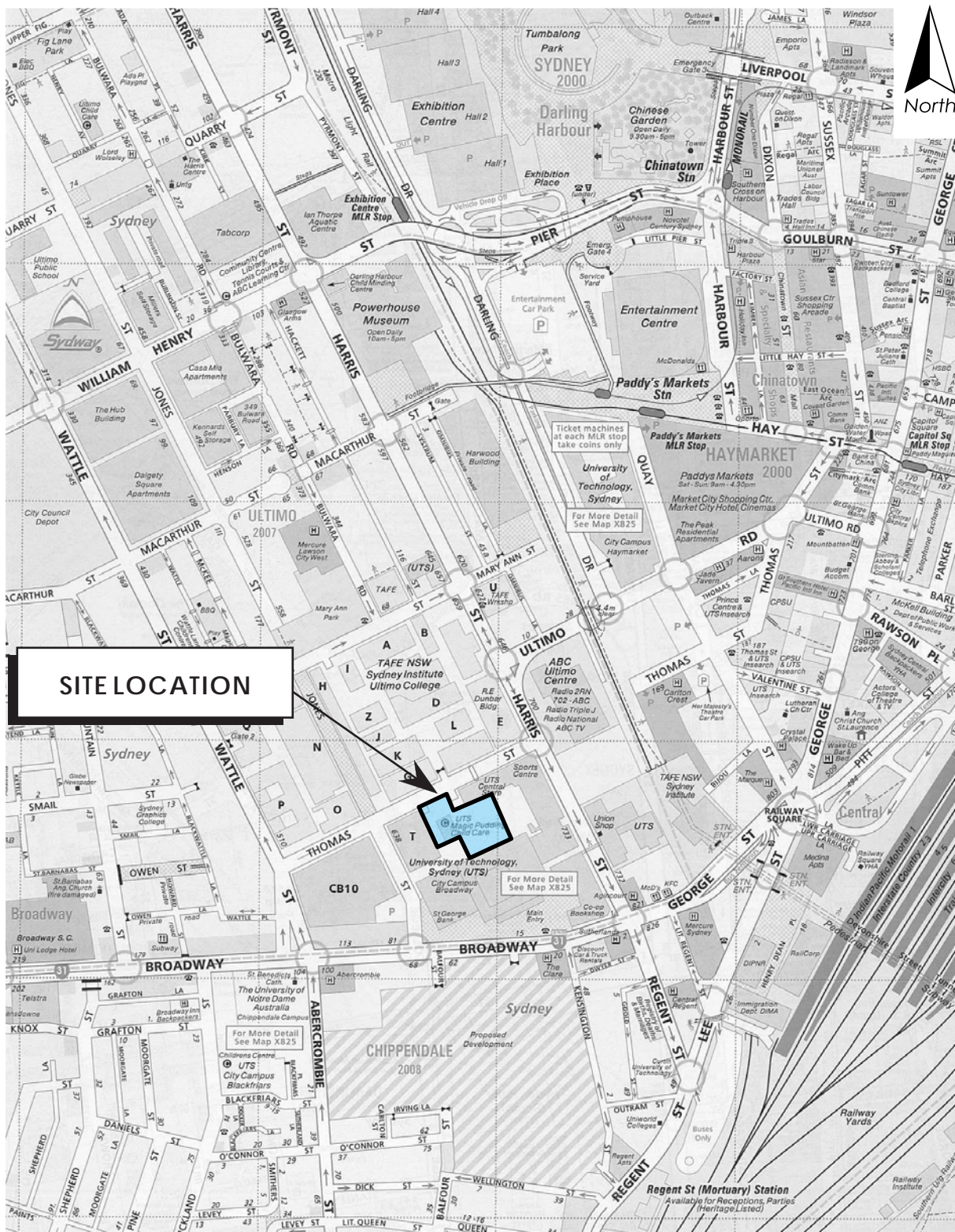
**Wattle Street** runs northbound. It consists of three travel lanes and parallel parking lanes on either side of the street north of Thomas Street. The intersection of Wattle Street and Thomas Street is priority controlled. Wattle Street is suitable for heavy vehicle use and provides access to northern and western Sydney.

**Thomas Street** is a local street connecting Wattle Street in the west and Harris Street in the east. Thomas Street consists of a single travel lane in each direction.

There is time restricted parallel parking on both sides of Thomas Street for the majority of its length. A section of "No Parking Motorcycles Excepted" exists along the site's

# SITE LOCATION

## UTS MULTI PURPOSE SPORTS HALL



frontage. The street provides access to the Building 10 car park and the Building 1 staff and service vehicle car park.

**Jones Street** is a local street connecting Thomas Street in the north and Broadway in the south. The Jones Street and Broadway intersection is controlled by traffic signals.

## 3 Site Layout and Stages of Work

### 3.1 *Work site and Access*

A worksite plan showing the work areas and the proposed internal truck loading is shown in **Figure 2 and 3**.

The worksite plan shows a temporary access driveway. The driveway would be located to the west of an existing driveway. The proposed layout of the temporary access driveway is consistent with the requirements of AS2890.2 for access by articulated and heavy rigid trucks.

### 3.2 *Stages of Construction*

The project is expected to be completed within a twelve month period. There are five main stages in the construction that are detailed below.

#### 3.2.1 *Site Establishment*

The site establishment works involve the construction of a temporary access driveway off Thomas Street into the site, security boundary fencing and establishment of the site sheds.

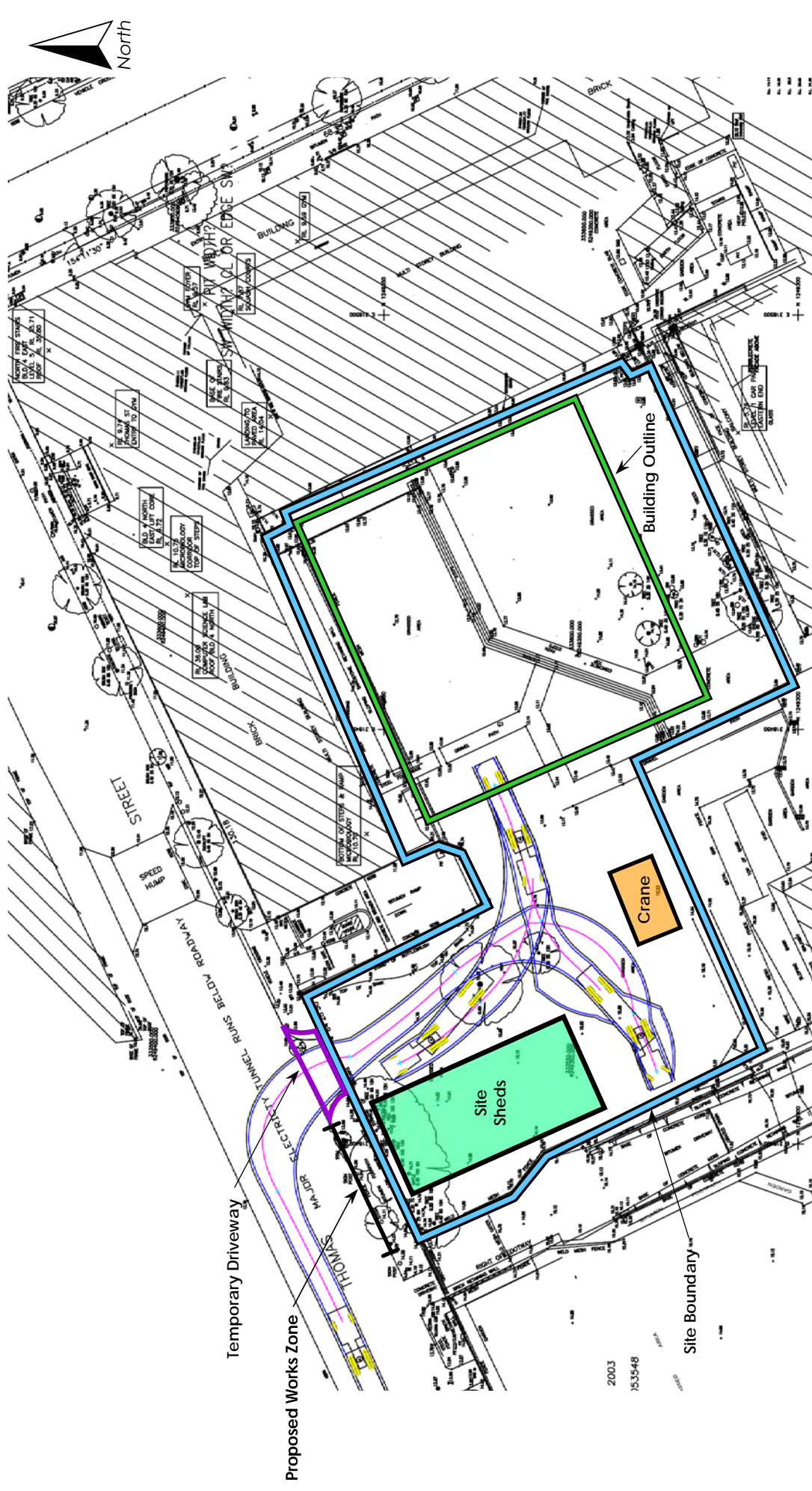
The existing access to an underground car park in Building 1 is via Thomas Street. The existing car park will be open throughout the works. The temporary construction access for the site will cross the section of the existing car park access which is underground. As part of the building contract the existing underground access to the car parking will be tested and any required strengthening carried out as part of the site establishment.

#### 3.2.2 *Excavation*

Material is proposed to be excavated from the site. Spoil from the excavation of the site is planned to be disposed at the Proposed Port Botany expansion worksite.



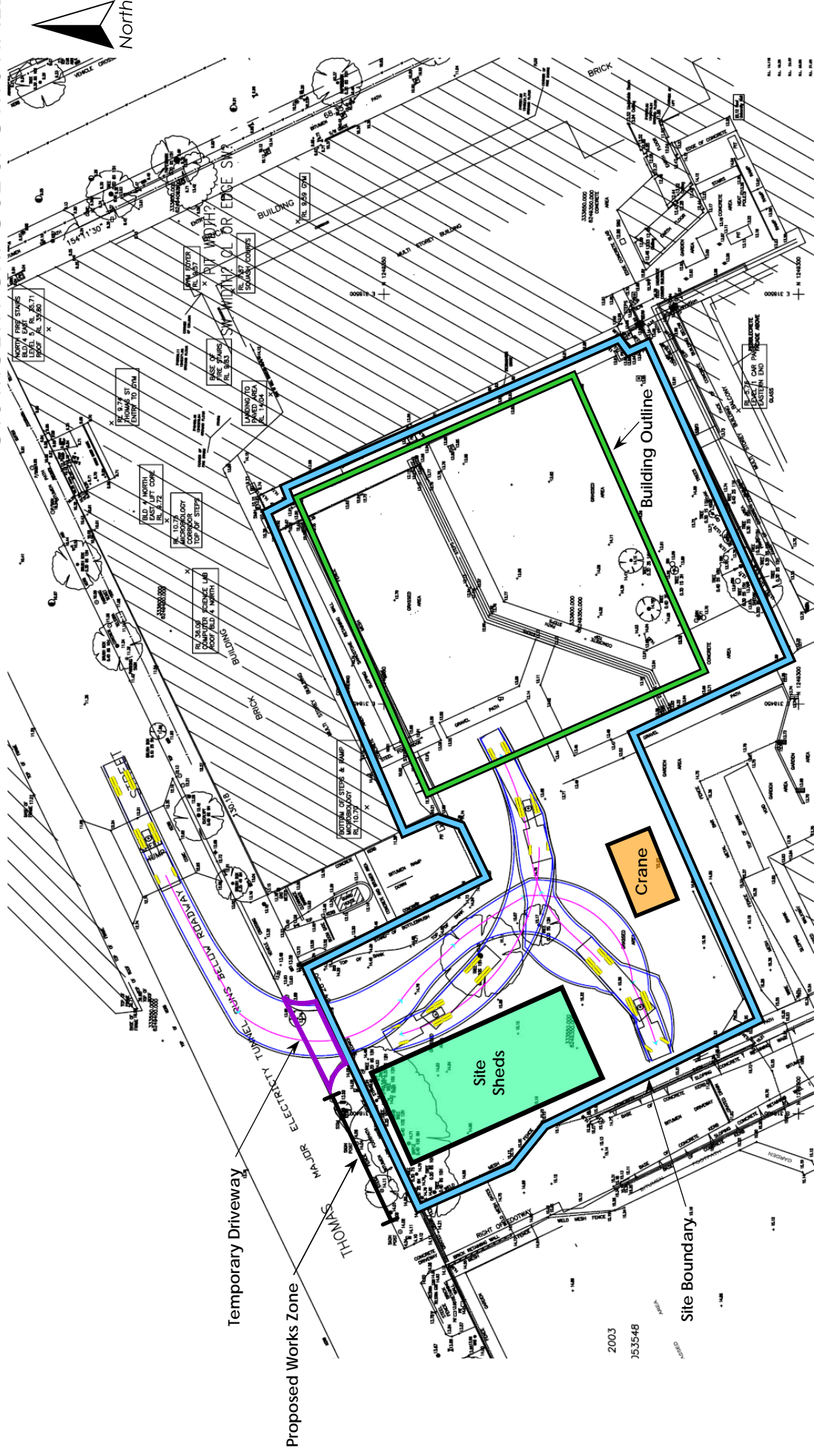
## UTS MULTI PURPOSE SPORTS HALL



## Figure 2

# SITELAYOUT

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### *3.2.3 Building Construction and Interior Fit Out*

Construction of the building and interior fit out would comprise the bulk of work on the site. The work is internal to the site.

### *3.2.4 Alumni Green*

The Alumni Green works would include some earthworks, planting and seating. Material would be spread over the top of the MPSH with planting, together with planting across the site.

### *3.2.5 Restoration Works*

The restoration works would involve the removal of the temporary access driveway and reinstatement of the footpath. Other works include the boundary fencing and removal of the site sheds.

## 4 Traffic Implications of the Work

### 4.1 *Staging Traffic Implications*

#### 4.1.1 *Site Establishment*

The preparation work on the temporary access driveway would generate concrete trucks and tradesmen's utilities. During this phase of work it is expected that vehicles associated with construction will be minimal, at around six trucks a week. It is anticipated that the construction of the driveway would occur across a week.

The construction of a temporary access driveway will involve occupation of the kerbside lane and temporary closure of the footpath during the formation of the driveway. Standard Traffic Control Plans will be used to divert pedestrians and close the kerbside lane and footpath in accordance with RTA Traffic Control at Worksites.

The establishment of the site sheds would involve the delivery of materials to the site using small to medium trucks. The number of trucks is estimated at no more than ten trucks across a week.

During this phase of work it is expected that deliveries trucks and their impacts would be minimal. Material deliveries are planned to occur from the kerbside lane in a works zone.

#### 4.1.2 *Excavation*

Spoil from the excavation of the site is planned to be disposed at the proposed Port Botany expansion worksite. It is proposed to load trucks during the excavation works internal to the site.

The designated truck routes for excavation trucks (to and from Botany) are:

- Inbound – Wattle Street, right into Thomas Street.
- Outbound – Right from Thomas Street into Harris Street.

**Figure 2** shows the internal manoeuvring for a 16.9m (articulated truck) using the inbound excavation truck route from Port Botany expansion worksite (Thomas Street via Wattle Street).

It is estimated that approximately 1,525 truck loads would leave the site in total, which equates to four to six trucks an hour across a six week period.

The nominated truck routes are RTA controlled arterial roads and are suitable for use by excavation trucks. The number and frequency of trucks is estimated as relatively low and would not adversely impact on the proposed routes.

#### *4.1.3 Building Construction and Interior Fit Out*

All works would be carried out within the site. The works include interior fit out such as new services, fittings and fixtures, joinery, and floor finishes and the like. This stage of work is expected to occur over a nine to ten month period.

The majority of materials would be loaded and unloaded from small rigid vehicles and medium rigid vehicles on the site. Some deliveries would also occur in the proposed “Work Zone” in Thomas Street outside the site.

During peak construction activities such as concrete pours, there is unlikely to be more than 3-5 truck movements per hour or 20 truck movements per day. It is anticipated that large concrete pours would occur every few weeks for a day at a time.

Similar sites suggest that the average daily number of trucks is 1-2 truck movements per hour and no more than 10 truck movements per day. This volume of trucks will not have any significant impact on traffic movement in Thomas Street.

#### *4.1.4 Restoration Works*

The final restoration works would involve the removal of the temporary access driveway and restoration of the footpath and kerb. It is anticipated that this work would occur over a two week period.

The demolition work on the temporary access driveway would generate concrete trucks and tradesmen's utilities. The number of trucks is estimated at no more than fifteen trucks across the two week period.

These works are external to the site and would require traffic control similar to the traffic control used in construction of the temporary driveway access. Standard Traffic Control Plans can be used for the footpath closure and pedestrian diversions.

#### *4.1.5 Alumni Green*

Loading and unloading of materials would be carried out at the proposed "Works Zone" into and out of the site. Deliveries of materials would include furniture as well as landscaping supplies. Deliveries would occur in stages, with large deliveries occurring infrequently during the six week period. Around ten trucks a week are expected.

### **4.2 Construction Access Routes**

Construction vehicles likely to be generated by the proposed construction activities include:

- General vehicles such as concrete trucks, medium rigid trucks, small rigid trucks, tradesmen's utilities and courier vans;
- Articulated trucks for the delivery of machinery and crane; and
- Excavation trucks.

Truck access routes for each type of vehicle are detailed below.

#### *4.2.1 General*

General truck traffic excluding excavation trucks will have origins / destinations throughout Sydney. The designated inbound and outbound truck routes for all construction vehicles are shown on **Figure 4**.

The maximum truck size for internal manoeuvring on the site has been determined as 16.9m articulated truck. Plans showing the truck turning manoeuvres in the site are contained in **Figure 2 and 3**. **Figure 2** shows a truck entering the site from Thomas Street via Wattle Street while **Figure 3** shows a truck entering the site from Thomas Street via Harris Street.



TRUCK ROUTES

UTS MULTI PURPOSE SPORTS HALL



The Works Zone is to be located on the southern side of Thomas Street. Construction vehicles wishing to use the works zone must face west. For construction vehicles heading to site from the south, the route would use Wattle Street into Fig Street and thence into Harris Street to allow construction vehicles to face west, this has also been shown on **Figure 4**.

#### **4.2.2** *Excavation Truck Routes*

It is proposed to deposit spoil to the Botany Port expansion in southern Sydney. The proposed excavation truck routes are shown in **Figure 3**.

Excavation trucks transporting the spoil from the site will use the State Road network from Harris Street to Regent Street, Cleveland Street, South Dowling Street thence to Southern Cross Drive and Foreshore Road. On the return trip, trucks will enter the site from Wattle Street which extends from Cleveland Street. The truck route to / from Port Botany is shown on **Figure 4**.

#### **4.2.3** *Delivery of Machinery and Crane*

Earthmoving equipment and the crane will require transport at the start and at completion of their use. A flat bed truck would be used to transport larger machinery and the crane. Delivery of large machinery would occur at night to minimise disruption to traffic and pedestrians. The delivery route for these vehicles would be one of the routes nominated on **Figure 3**.

### **4.3** *Pedestrian Access*

On the frontage of the site in Thomas Street a footpath exists providing pedestrian access to the neighbouring UTS buildings.

A traffic controller would also be located at the temporary access driveway to ensure safety for pedestrians when vehicles are entering and exiting the site.

During the construction, pedestrian access to Building 4 off Alumni Green on the north side of the site will be closed. All other routes will remain open during the construction.



Pedestrian signage will be erected to guide people around Building 4 to the access points off Thomas Street and Harris Street.

#### **4.4     *Parking On Street***

A “Works Zone” is proposed on the southern side of Thomas Street to provide an area for trucks to carry out loading and unloading. The Works Zone is shown in the site plan provided in **Figure 2**.

Installation of a “Work Zone” outside the site would improve safety as there will be no temptation for truck drivers to double-park while carrying out loading and unloading.

The installation of a temporary Works Zone and temporary driveway will displace the existing motorcycle parking along Thomas Street. It is proposed that a suitable location for the motorcycle parking would be on the opposite side of Thomas Street. The relocation of the motorcycle parking would be subject to the approval of City of Sydney Council’s Traffic Committee.

#### **4.5     *Public Transport***

There is a regular bus route along Thomas Street from Jones Street. The nearest bus stop is located in Jones Street.

There are no planned changes to bus stops or bus routes.

#### **4.6     *Staff Parking***

No staff car parking would be provided on site. Public transport and private car parking stations are available within walking distance to the site.

## **Appendix A Plans of Proposed Development**