University of Sydney Health Precinct
Susan Wakil Health Building
Construction Traffic and Pedestrian Management Plan

Client // Laing O’Rourke Australia
Office // NSW
Reference // N116133
Date // 12/09/18
# Construction Traffic and Pedestrian Management Plan

**University of Sydney Health Precinct**

**Susan Wakil Health Building**

**Issue:** C 12/09/18

**Client:** Laing O’Rourke Australia  
**Reference:** N116133

GTA Consultants Office: NSW

---

## Quality Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Description</th>
<th>Prepared By</th>
<th>Checked By</th>
<th>Approved By</th>
<th>Signed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>13/07/18</td>
<td>Final</td>
<td>Ghizlane Chergaoui</td>
<td>Ashish Modessa Rhys Hazell</td>
<td>Rhys Hazell</td>
<td>Rhys Hazell</td>
</tr>
<tr>
<td>B</td>
<td>17/08/18</td>
<td>Final incorporating RMS comments</td>
<td>Ghizlane Chergaoui Ashish Modessa</td>
<td>Ashish Modessa Rhys Hazell</td>
<td>Rhys Hazell</td>
<td>Rhys Hazell</td>
</tr>
<tr>
<td>C</td>
<td>12/09/18</td>
<td>Final</td>
<td>Ashish Modessa</td>
<td>Ashish Modessa Rhys Hazell</td>
<td>Rhys Hazell</td>
<td></td>
</tr>
</tbody>
</table>
# Table of Contents

1. **Introduction** 1  
   1.1 Background and Proposal 1  
   1.2 References 2  
2. **Existing Conditions** 3  
   2.1 Subject Site 3  
   2.2 Road Network 3  
   2.3 Public Transport 5  
   2.4 Pedestrian and Cycling Infrastructure 7  
3. **Overview of Construction Activities** 9  
   3.1 Description of Construction Activities 9  
   3.2 Work Hours 9  
   3.3 Construction Worker Induction 9  
   3.4 Construction Worker Parking 10  
   3.5 Construction Site Access 10  
   3.6 On-Street Works Zone 11  
   3.7 Construction Traffic Volumes 11  
   3.8 Construction Vehicle Routes 11  
4. **Construction Traffic Management** 14  
   4.1 Traffic Guidance Scheme 14  
   4.2 Pedestrian Management 14  
   4.3 Cyclist Management 15  
   4.4 Nearby Construction Sites 15  
   4.5 Public Transport 15  
   4.6 Emergency Vehicle Access 15  
   4.7 Traffic Movements in Adjoining Council Areas 15  
   4.8 Site Inspections and Record Keeping 15  
   4.9 Notification of works 15  

**Appendices**  
A: City of Sydney CTMP Standard Requirements  
B: Swept Path Assessment  
C: Traffic Guidance Scheme and Pedestrian Management Plan  
D: Authority Correspondence  
E: Proposed Portable Boom Gate Operation
Figures

- Figure 2.1: Subject site and its environs
- Figure 2.2: Western Avenue, looking south
- Figure 2.3: Western Avenue, looking north
- Figure 2.4: Carillon Avenue, looking east
- Figure 2.5: Carillon Avenue, looking west
- Figure 2.6: Parramatta Road, looking east
- Figure 2.7: Parramatta Road, looking west
- Figure 2.8: Bus Stop Locations
- Figure 2.9: Existing Bicycle Parking Locations
- Figure 3.1: Site access arrangements
- Figure 3.2: Construction vehicle approach routes
- Figure 3.3: Construction vehicle departure routes

Tables

- Table 2.1: Public Transport Provision
- Table 3.1: Staging of works
1. Introduction

1.1 Background and Proposal

It is understood that a Construction Traffic and Pedestrian Management Plan (CTPMP) is required for construction of health facilities that form part of University of Sydney’s (USYD) Health Precinct State Significant Development Application (SSDA 7974). The works include construction of the Susan Wakil Health Building on the site historically occupied by the Blackburn Building, adjacent to Royal Prince Alfred Hospital (RPAH).

Laing O’Rourke engaged GTA Consultants (GTA) to prepare a CTPMP for the construction works, examine the impacts on the surrounding road network and detail the proposed construction traffic and pedestrian management measures. This CTPMP was prepared to address Conditions B11, B26 and B27, reproduced below:

**Condition B11**

Plans demonstrating compliance with the following traffic and parking requirements must be submitted to the satisfaction of the Certifying Authority prior to the commencement of above ground works:

a) all vehicles should enter and leave the subject site in a forward direction from Western Avenue;

b) all construction vehicles (excluding worker vehicles) are to be contained wholly within the site or designated work zone and vehicles must enter the site and/or work zone before stopping;

c) all works/ regulatory signposting associated with the proposed development must be at no cost to the relevant roads authority; and

d) the swept path of the longest vehicle entering and exiting the subject site in association with the new work, as well as manoeuvrability through the subject site, must be in accordance with Austroads. In this regard, a plan must be submitted to the certifying authority for approval, which shows that the proposed development complies with this requirement.

**Condition B26**

a) Prior to the commencement of construction works, a Construction Traffic and Pedestrian Management Plan (CTPMP) must be prepared by a suitably qualified expert in consultation with RMS and TfNSW (Sydney Coordinating Office), and submitted for the approval of the Certifying Authority. The CTPMP must address, but not be limited to, the following matters where relevant:

i) location of proposed work zones;

ii) haulage routes;

iii) construction vehicle access arrangements, primarily as a Left-in and Left-out (LILO) arrangement from Western Avenue/Carillion Avenue;

iv) construction hours;

v) construction program;

vi) predicted construction traffic volumes and vehicle movements, types and routes including any known road closures and consideration of alternate routes;

vii) details of construction vehicle movements including parking, dedicated vehicle turning areas and ingress and egress points;

viii) loading and unloading;

ix) details of management measures to minimise traffic impacts, including temporary road works and/or implementation of traffic control measures;
x) pedestrian and traffic management methods;
xii) any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the works;
xiii) consideration of the cumulative construction traffic impacts of surrounding projects under construction, including those within the University of Sydney precinct. Existing CTPMPs for developments within or around the Subject Site should be referenced in the CTPMP to ensure that the coordination of work activities are managed to minimise impacts on the surrounding road network; and
xiv) should impacts be identified, the duration of the impacts and measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts.

b) The Applicant must submit a copy of the CTPMP to the Secretary and City of Sydney Council, prior to the commencement of works.

Condition 27
The CTPMP (as revised from time to time) must be implemented by the Applicant for the duration of the construction works.

This CTPMP has been prepared in accordance with the City of Sydney Standard Requirements for Construction Traffic Management Plan as well as in consultation with Roads and Maritime Services (Roads and Maritime), Sydney Coordination Office (Transport for NSW) and City of Sydney. Feedback received from these authorities has been incorporated into this CTPMP. Laing O’Rourke will complete all works in accordance with this CTPMP. The City of Sydney requirements are included in Appendix A.

The overall principles of traffic management and safety during the construction activity are to:

- Minimise the impact on pedestrian and cyclist movements.
- Maintain appropriate public transport access.
- Minimise the loss of parking.
- Maintain access to/from adjacent buildings.
- Restrict construction vehicle movements to designated routes to/from the site.
- Manage and control construction vehicle activity near the site.
- Minimise impacts to general traffic near the site.

This report has been prepared and checked by the following personnel who hold the Roads and Maritime Services (Roads and Maritime) Prepare a Work Zone Traffic Management Plan accreditation:

- Rhys Hazell – card no. 0045865613, expiry 05/10/2020

1.2 References
In preparing this report, reference has been made to the following:

- Traffic Control at Work Sites manual, Roads and Maritime, June 2010
- Development plans provided by Laing O’Rourke as referenced in this report
- Other documents and data as referenced in this report.
2. Existing Conditions

2.1 Subject Site

The site is located towards the western end of the University’s Camperdown campus and adjacent to RPAH.

The site has a land use classification of education establishment and was previously occupied by the Blackburn Building. Bosch Building 1A is southeast of the site and Bosch Building 1B to the south. These buildings will ultimately form part of the planned Health Precinct and be developed in subsequent stages.

Western Avenue bounds the site to the south and provides for the main site access. The location of the site and its surrounding environs is shown Figure 2.1.

![Subject site and its environs](Reproduced with permission from Sydway Publishing Pty Ltd)

2.2 Road Network

Western Avenue

Western Avenue is a road internal to USYD and bounds part of the sites southern boundary. It is generally aligned in a north-south direction and links the campus with Carillon Avenue to the south and Parramatta Road to the north. It is a two-way road with one traffic lane in each direction set within a carriageway of approximately six metres. Western Avenue has a posted speed limit of 25 km per hour.

No parking is permitted along Western Avenue.

Western Avenue is shown in Figure 2.2 and Figure 2.3.
Carillon Avenue

Carillon Avenue functions as a collector road and is aligned in an east-west direction. It is a two-way road generally configured with one traffic lane and one parking lane in each direction. Carillon Avenue has a posted speed limit of 50 km per hour.

Time restricted and ticketed kerbside parking is generally permitted on both sides of the carriageway, clear of intersections. Carillon Avenue is shown in Figure 2.4 and Figure 2.5.

Parramatta Road

Parramatta Road is a State Road and provides the major east-west traffic route through the area. It is configured with three traffic lanes in each direction, including a dedicated peak period kerbside bus only lane. It has a posted speed limit of 60 km per hour.

Kerbside parking is permitted on both sides of the carriageway outside the morning and afternoon bus lane peak periods. During these times, parking on the southern side is unrestricted and subject to one-hour time restrictions on the northern side.

Parramatta Road is shown in Figure 2.6 and Figure 2.7.
Figure 2.6: Parramatta Road, looking east

Figure 2.7: Parramatta Road, looking west

City Road
City Road is a State Road and combined with King Street, is a key traffic route south and east of the site. It links Carillon Avenue with Parramatta Road and provides two to three traffic lanes in each direction. Time restricted four-hour kerbside parking is permitted outside clearway times.

2.3 Public Transport

In the vicinity of the site, access to public transport is largely reliant on the high frequency bus services along Parramatta Road. There are several bus stops within walking distance of the site which provide regular services between the inner west and Sydney’s CBD. The bus stops in the vicinity of the site are shown in Figure 2.8.

Rail services are also a key public transport mode for the Campus. Both Redfern Station and Central Station are regularly used for daily travel purposes.

A summary of available public transport services is shown in Table 2.1.
Construction Traffic and Pedestrian Management Plan

Figure 2.8: Bus Stop Locations

Table 2.1: Public Transport Provision

<table>
<thead>
<tr>
<th>Service</th>
<th>Route #</th>
<th>Route Description</th>
<th>Location of Stop</th>
<th>Distance to Nearest Stop</th>
<th>Frequency On/Off Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus</td>
<td>413</td>
<td>City to Campsie Station</td>
<td></td>
<td></td>
<td>10 minutes peak/ 15 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>436</td>
<td>City to Chiswick</td>
<td></td>
<td></td>
<td>10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>438</td>
<td>City to Abbotsford</td>
<td></td>
<td></td>
<td>10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>439</td>
<td>City to Mortlake</td>
<td></td>
<td></td>
<td>S-10 minutes peak/ 15 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>440</td>
<td>City to Rozelle</td>
<td></td>
<td></td>
<td>10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>461</td>
<td>City to Burwood</td>
<td></td>
<td></td>
<td>S-10 minutes peak/ 15 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>480</td>
<td>City to Strathfield Station</td>
<td></td>
<td></td>
<td>10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>483</td>
<td>City to Strathfield Station</td>
<td></td>
<td></td>
<td>10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>352</td>
<td>Bondi Junction to Marrickville Metro via Oxford Street</td>
<td></td>
<td></td>
<td>20 minutes peak/ 30 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>370</td>
<td>Leichhardt Marketplace to Coogee</td>
<td></td>
<td></td>
<td>10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>422</td>
<td>City to Kogarah</td>
<td></td>
<td></td>
<td>S-10 minutes peak/ 20 minutes off peak</td>
</tr>
<tr>
<td></td>
<td>423</td>
<td>City to Kingsgrove via central station and Newtown</td>
<td></td>
<td></td>
<td>Every 10 minutes</td>
</tr>
</tbody>
</table>

### Construction Traffic and Pedestrian Management Plan

**Issue:** C

### University of Sydney Health Precinct, Susan Wakil Health Building

**Service** | **Route #** | **Route Description** | **Location of Stop** | **Distance to Nearest Stop** | **Frequency On/Off Peak** |
--- | --- | --- | --- | --- | --- |
426 | City to Dulwich Hill | | | | 10 minutes peak/ 20 minutes off peak |
428 | City to Dulwich Hill | | | | 5-10 minutes peak/ 15 minutes off peak |
M30 | Sydenham to Mosman | City Road opposite Carillon Avenue | | 650m | 10 minutes peak/ 15 minutes off peak |
L23 | City to Kingsgrove | | | | Every 15 minutes 4:30pm – 6:30pm |
L28 | City to Canterbury | City Road near Butlin Avenue | | 550m | Every 15 minutes 4:30pm – 6:30pm |
N10 | City to Sutherland | | | 550m | Hourly 1am – 5am |
N30 | City to Macarthur | | | 15 minutes off peak |
N40 | City to East Hills | | | | Every Half Hour 1am-5am |
412 | City to Campsie Station | Outside RPAH on Missendon St | | 750m | Every Half Hour 12am-5am |
**Train** | n/a | All except airport branch of the Airport, Inner West & South Line and the Cumberland Line | Redfern Station | 1600m | Frequency is less than 5 minutes |
**All Lines** | **Central Station** | **2400m** | **Frequency is less than 5 minutes** |

A free shuttle bus service is also available for use by staff and students. This bus route comes within 150 m of the site.

### 2.4 Pedestrian and Cycling Infrastructure

The University promotes the use of active travel to/from and within the campus. Footpaths are generally provided on all internal campus roads and provide convenient paths of travel between the site and surrounding bus stops. Safe crossing points are provided at key intersections in vicinity of the site including the intersections of Western Avenue with Carillon Avenue and Parramatta Road.

It is understood that approximately 1,300 bicycle parking/storage spaces are provided across the campus, as shown in Figure 2.9. These facilities are generally well utilised daily.
Figure 2.9: Existing Bicycle Parking Locations

Source: http://sydney.edu.au/maps/campuses/?area=CAMDAR
3. Overview of Construction Activities

3.1 Description of Construction Activities

The new Susan Wakil Health Building is to be constructed on the site previously occupied by the Blackburn Building and adjacent to RPAH. These new health facilities form part of the University of Sydney’s aim to develop a new Health Precinct and will serve as a teaching and learning precinct for students and staff.

Construction will be completed in stages to minimise disruption to campus operations and local area facilities. Use of Bosch Glasshouse and Bosch Buildings 1A and 1B will continue throughout construction. Construction will take approximately 18 months and are scheduled for completion in February 2020. Demolition works are currently being completed as part of a separate works package. The staging of works is shown in Table 3.1, with some overlapping of stages expected.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavation Stage</td>
<td>3 months</td>
</tr>
<tr>
<td>Structural Stage</td>
<td>12 months</td>
</tr>
<tr>
<td>Façade and Fit-out</td>
<td>12 months</td>
</tr>
</tbody>
</table>

A range of construction vehicles will require access to the site throughout all works stages. Trucks will include 19 m semi-trailers, 17.1 m truck and dog, heavy rigid vehicles, concrete trucks and mobile cranes.

3.2 Work Hours

Construction will be carried out during the following approved hours:
- 7:00am to 6:00pm Monday to Friday
- 7:30am to 3:30pm Saturdays
- no work Sundays or public holidays.

The contractor will be responsible for instructing and controlling all subcontractors regarding the hours of work. Any work or deliveries required outside the approved construction hours will be subject to specific prior approval from Council. Such work may include:
- delivery of large plant or equipment required to the site
- non-noise generating activity such as internal fit-out works.

3.3 Construction Worker Induction

All workers and subcontractors engaged on-site would be required to undergo a site induction. The induction should include permitted access routes to and from the construction site for all vehicles, as well as standard environmental, Work Health and Safety, driver protocols and emergency procedures.

Any workers required to undertake traffic control within the public domain would be suitably accredited and covered by adequate and appropriate insurances.
3.4 Construction Worker Parking

It is anticipated that there will be a maximum of up to 220 workers on-site during peak construction activity.

There will be no on-site parking provided for construction workers. Given the site's proximity to high frequency public transport services, all workers will be encouraged to use public transport when travelling to and from the site, with appropriate tool/equipment drop-off arrangements available.

3.5 Construction Site Access

Construction vehicle access will be from Western Avenue via two access gates on Blackburn Circuit. Construction vehicles will enter/exit the gates in a forward direction with an area provided on site for large vehicles to manoeuvre. This would be completed under traffic control.

Site access arrangements are shown in Figure 3.1.

Figure 3.1: Site access arrangements

The largest trucks requiring access to the site will be 19 m semi-trailers for delivery of materials. All loading and unloading will be completed within the site. Swept path assessment, provided in Appendix B indicates that the largest design vehicle is able to access the Western Avenue gates in a forward direction.

Accredited traffic controllers will manage and control construction site access, through traffic and pedestrians. Priority will be given to through traffic and pedestrians, where practical.

Construction vehicles will use Western Avenue via Parramatta Road and Ross Street to the north on approach and departure. With an approximate six-metre wide carriageway, Western Avenue is able to accommodate two-way traffic movements. At select locations construction vehicles will give way to approaching vehicle where practical. No direct access via Carillon Avenue will be permitted.
While left-in/ left-out access from Carillon Avenue has been recommended in Condition B26, swept path assessment confirms that this would require traffic management plus significant modifications. This includes removal of parking and refuge island and/ or widening of the access. During consultation with the Sydney Coordination Office (Transport for NSW) and City of Sydney, it was indicated that there was a minor error with the requirement to use Carillon Avenue, as confirmed in the correspondence included in Appendix D. The reason for this is to minimise impacts on sensitive existing land uses such as RPAH and Newtown North Public School. Given this, it is recommended that construction vehicles avoid use of the Carillon Avenue to access the site at all times.

Queuing or marshalling of construction vehicles will not be permitted on the surrounding road network, with call-up procedures required to manage arrivals.

Class A construction fencing, and secure site access gates will be installed around the perimeter of the site, where required. Existing Western Avenue parking spaces will be retained.

A Traffic Guidance Scheme (TGS), has been prepared and included in Appendix C.

3.5.1 Portable Boom Gate

Laing O’Rourke is proposing use of portable boom gates on Western Avenue to support traffic controllers. The portable boom gates will stop through traffic at times when construction vehicles require access to/ from the site and will be operated by an accredited traffic controller. Vehicle queuing will be monitored to ensure minimal impacts on general traffic.

Given the nearest local road (Carillon Avenue) is 250 metres south of the proposed southern portable boom gate location, such measures are not expected to impact the local road network.

The implementation of this boom gate operation is subject to relevant authority approval.

A TGS for the operation of the boom gates has been prepared by D&D Traffic Management and is provided in Appendix E.

3.6 On-Street Works Zone

No on-street work zone is required to facilitate the proposed works, with all construction and loading/ unloading activities to occur within the site area. Therefore, there will be no impact to existing on-street parking conditions in the immediate vicinity of the site.

3.7 Construction Traffic Volumes

It is anticipated that the site would generate an average of 32 trucks per day (64 two-way movements), with up to 40 trucks per day (80 two-way movements) during peak construction activity. This equates to an average of less than six truck movements in any peak hour and up to eight movements during peak construction activity. Such low volumes will have a negligible impact on Parramatta Road traffic, including buses using the dedicated bus lane past the campus access. Peak construction vehicle activity will also be limited to outside peak periods, where possible.

3.8 Construction Vehicle Routes

Construction vehicles will have origins and destinations from a variety of locations throughout Sydney. All construction vehicles will be restricted to the arterial road network, where possible.

Truck drivers will be advised of the designated truck routes. No queuing or marshalling of trucks will be permitted on Western Avenue or surrounding streets at any time. Laing O’Rourke will manage truck arrivals to minimise disruption on the surrounding streets. Drivers will be instructed to make
contact on approach to ensure site personnel are adequately prepared. The construction vehicle arrival and departure routes are detailed below and shown in Figure 3.2 and Figure 3.3.

- **Approach routes:**
  - **North:** Sydney Harbour Bridge, Western Distributor, Anzac Bridge, Victoria Road, The Crescent, Minogue Crescent, Ross Street and Western Avenue.
  - **West:**
    - Parramatta Road, Wattle Street/ City West Link Road, The Crescent, Minogue Crescent, Ross Street and Western Avenue
    - Victoria Road, The Crescent, Minogue Crescent, Ross Street and Western Avenue.
  - **East/ South:** Eastern Distributor, Cross City Tunnel, Western Distributor, Anzac Bridge, Victoria Road, The Crescent, Minogue Crescent, Ross Street and Western Avenue.

- **Departure routes:**
  - **North:** Western Avenue, Ross Street, Minogue Crescent, The Crescent, Victoria Road, Anzac Bridge, Western Distributor and Sydney Harbour Bridge.
  - **West:**
    - Western Avenue and Parramatta Road
    - Western Avenue, Ross Street, Minogue Crescent, The Crescent and Victoria Road.
  - **East/ South:** Western Avenue, Ross Street, Minogue Crescent, The Crescent, Victoria Road, Anzac Bridge, Western Distributor, Cross City Tunnel and Eastern Distributor.

**Figure 3.2:** Construction vehicle approach routes
Figure 3.3: Construction vehicle departure routes

Basemap source: Sydway Publishing Pty Ltd
4. Construction Traffic Management

4.1 Traffic Guidance Scheme

A TGS has been prepared and included in Appendix C. It presents the principles of traffic management and is subject to WorkCover requirements. The TGS will be submitted to Council for approval.

Detailed information for the work site is contained in the Traffic Control at Work Sites manual (Roads and Maritime, 2010). The control of traffic at work sites must be undertaken in accordance with WorkCover requirements and Laing O’Rourke’s own workplace health and safety manuals.

The TGS includes the following considerations:

- Construction vehicle activity, including the loading/unloading of trucks and all materials handling to be undertaken within the work site at all times.
- Accredited site personnel and/or traffic controllers to manage construction vehicle access at all times.
- Impacts on through traffic will be minimised at all times, as much as practical.
- Class A construction fencing will be provided, where necessary.
- Pedestrians will be managed and controlled with footpaths to be redirected as required, and to ensure safe paths of travel around the construction site.
- All signage will be clean, clearly visible and unobstructed.

It is not expected that construction will require any closure of the roads internal to the University of Sydney or those on the surrounding road network.

4.2 Pedestrian Management

The work activities will require the closure of the pedestrian path along the site frontage to Western Avenue between the site access gates. Appropriate pedestrian detour signage will be provided at either end of the closure to redirect pedestrians to the eastern side of Western Avenue. Accredited traffic controllers will control and manage pedestrians when construction vehicles enter or depart the site.

The footpath on the western side of Western Avenue east of the site, has been modified to include a temporary marked pedestrian crossing to maintain pedestrian safety.

Temporary pedestrian footpath closure will also be required through the internal pedestrian network linking Bosch Building 1A to Bosch Building 1B. Class B hoarding will be provided adjacent to Bosch Building 1B, with appropriate signage to redirect pedestrians to Cadigal Lane, thus providing a safe detour. Similarly, appropriate signage will be provided adjacent to Bosch Building 1A to redirect pedestrians towards Bosch Building 1B and Bosch Commons.

Class A hoarding is provided along the site frontage to Western Avenue as well as along the perimeter of the site. Fencing and hoarding will prevent pedestrian access to the work site and protect pedestrians from construction activities.

The pedestrian management plan for the construction is included in Appendix C.
4.3 Cyclist Management

Construction activity is not expected to impact the existing bicycle routes on the surrounding local road network. Cyclists along Western Avenue would also be temporarily held when traffic controllers and/or portable boom gates are required to manage general traffic at the site accesses.

4.4 Nearby Construction Sites

It is understood that as part of The University of Sydney Campus Improvement Program, key transformation projects are currently being undertaken on site. These projects include the Chau Chak Wing Museum project, located on the north-eastern end of the development in conjunction with the Camperdown Health Precinct project. It is further understood that the construction of the FASS has occurred in line with the F23 Administrative Building and Lees 1 Building, with all developments having an anticipated completion date in Mid-2018. Furthermore, the Sydney University Regiment Building, fronting the Princes Highway is also currently being developed.

The CTMPs previously prepared for the F23 and LEES 1 buildings each indicate access to the construction sites will be provided via City Road (Princes Highway). Access to the regiment building will also be provided via City Road. Given the site access will be limited to Parramatta and Ross Street, access arrangements for the above-mentioned sites will be independent of those proposed for the site.

It is however noted that access to the Chau Chak Wing Museum is proposed via Parramatta Road. On this basis, it is recommended that construction vehicle access and deliveries to the site using vehicles larger than a 12.5-metre rigid truck be coordinated with deliveries to the Chau Chak Wing Museum deliveries to limit disruptions to activity on Campus and queueing on the internal road network.

4.5 Public Transport

The construction activities are not expected to impact existing public transport services near the site.

4.6 Emergency Vehicle Access

The proposed construction activities are not expected to impact on existing emergency vehicles movements near the site.

4.7 Traffic Movements in Adjoining Council Areas

No adverse impacts are expected from the movement of heavy vehicles through adjacent council areas.

4.8 Site Inspections and Record Keeping

The construction work would be monitored to ensure that it proceeds as set out in the Construction Management Plan provided by Laing O’Rourke. A daily inspection before the start of the construction activity should take place to ensure that conditions accord with those stipulated in the plan and there are no potential hazards. Any possible adverse impacts would be recorded and dealt with if they arise.

4.9 Notification of works

Laing O’Rourke will liaise with The University of Sydney to advise of the construction works and temporary pedestrian arrangements.
Appendix A

City of Sydney CTMP Standard Requirements
The City of Sydney
Standard Requirements for Construction Traffic Management Plan

The Applicant or contractor undertakes to follow and abide by the following requirements at all times during the demolition, excavation and construction works at The University of Sydney, Susan Wakil Health Building.

1. Details of routes to and from site and entry and exit points from site – site specific

2. Details of roads that may be excluded from use by construction traffic i.e. roads with load limits, quiet residential streets or access/turn restricted streets – site specific

3. The approved truck route plan shall form part of the contract and must be distributed to all truck drivers.

4. All vehicles must enter and exit the site in a forward direction (unless specific approval for a one-off occasion is obtained from the City’s Construction Regulation Unit).

5. Trucks are not allowed to reverse into the site from the road (unless specific approval for a one-off occasion is obtained from the City’s Construction Regulation Unit).

6. The Applicant must provide the City with details of the largest truck that will be used during the demolition, excavation and construction.

   NOTE: No dog trailers or articulated vehicles (AV) to be used on local roads (unless specific approval for a one-off occasion is obtained from the City’s Construction Regulation Unit).

7. Oversize and over-mass vehicles are not allowed to travel on Local Roads (unless approval for a one-off occasion is obtained from the City’s Traffic Operations Unit). Requests to use these vehicles must be submitted to the City 28 days prior to the vehicle’s scheduled travel date. For more information please contact the National Heavy Vehicle Regulator (NHVR) on 1300 696 487 or www.nhvr.gov.au.

8. No queuing or marshalling of trucks is permitted on any public road.

9. Any temporary adjustment to Bus Stops or Traffic Signals will require the Applicant to obtain approval from the STA and RMS respectively prior to commencement of works.

10. All vehicles associated with the development shall be parked wholly within the site. All site staff related with the works are to park in a designated off street area or be encouraged to use public transport and not park on the public road.

11. All loading and unloading must be within the development site or at an approved “Works Zone”.

APPENDIX A

12. The Applicant must apply to the City’s Traffic Works Co-ordinator to organise appropriate approvals for Work Zones and road closures.

13. The Applicant must apply to the City’s Construction Regulations Unit to organise appropriate approvals for partial road closures.

14. The Applicant must apply to the Transport for NSW’s Transport Management Centre for approval of any road works on State Roads or within 100m of Traffic Signals and receive an approved Road Occupancy Licence (ROL). A copy of the ROL must be provided to the City.

15. The Applicant must apply to the City’s Construction Regulations Unit to organise appropriate approvals for temporary driveways, cranes and barricades etc.

16. The Applicant must comply with development consent for hours of construction.

17. All Traffic Control Plans associated with the CTMP must comply with the Australian Standards and Roads and Maritime Services (RMS) Traffic Control At Work Sites Guidelines.

18. Traffic Controllers are NOT to stop traffic on the public street(s) to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. 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.

19. Pedestrians may be held only for very short periods to ensure safety when trucks are leaving or entering BUT you must NOT stop pedestrians in anticipation i.e. at all times the pedestrians have right-of-way on the footpath not the trucks.

20. Physical barriers to control pedestrian or traffic movements need to be determined by the City’s Construction Regulations Unit prior to commencement of work.

21. The Applicant must obtain a permit from the City’s Construction Regulation Unit regarding the placing of any plant/equipment on public ways.

22. The Applicant must apply to the City’s Building Approvals Unit to organise appropriate approvals for hoarding prior to commencement of works.

23. The CTMP is for the excavation, demolition and construction of building works, not for road works (if required) associated with the development. Any road works will require the Applicant or the contractor to separately seek approval from the City and/or RMS for consideration. Also WorkCover requires that Traffic Control Plans must comply with Australian Standards 1742.3 and must be prepared by a Certified Traffic Controller (under RMS regulations).

24. Please note that the provision of any information in this CTMP will not exempt the Applicant from correctly fulfilling all other conditions relevant to the development consent for the above site.
Appendix B

Swept Path Assessment
Swept Path Assessment

PM S 19M

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractor Width</td>
<td>2.20</td>
</tr>
<tr>
<td>Tractor Length</td>
<td>1.70</td>
</tr>
<tr>
<td>Tractor Taper</td>
<td>1.00</td>
</tr>
<tr>
<td>Tractor Track</td>
<td>2.50</td>
</tr>
<tr>
<td>Steering Angle</td>
<td>7.80</td>
</tr>
<tr>
<td>Articulating Angle</td>
<td>70.0</td>
</tr>
<tr>
<td>Lock to Lock Time</td>
<td>6.0</td>
</tr>
<tr>
<td>Tractor Width</td>
<td>2.20</td>
</tr>
<tr>
<td>Tractor Length</td>
<td>1.70</td>
</tr>
<tr>
<td>Tractor Taper</td>
<td>1.00</td>
</tr>
<tr>
<td>Tractor Track</td>
<td>2.50</td>
</tr>
<tr>
<td>Steering Angle</td>
<td>7.80</td>
</tr>
<tr>
<td>Articulating Angle</td>
<td>70.0</td>
</tr>
<tr>
<td>Lock to Lock Time</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Swept Path Key

- Vehicle Centre Line
- Vehicle Tyre Path
- Vehicle Body Path
- Vehicle Clearance
- From Vehicle Body

Assumed Speed 5km/h

Swept Path Assessment

UNIVERSITY OF SYDNEY

Access Option 2

Preliminary Plan

Drawn: MODESSA
Checked: ANDESSA
Design: GTA

Potential Conflict with Existing Kerb

Preliminary Plan

Drawn: MODESSA
Checked: ANDESSA
Design: GTA

Potential Conflict with Existing Kerb
Appendix C

Traffic Guidance Scheme and Pedestrian Management Plan
GATE ORIENTATION AND PEDESTRIAN CROSSING LOCATION UPDATED

NOTE: REFER TO SHEET 01 FOR TRAFFIC GUIDANCE SCHEME

1. NOT ALL DIMENSIONS SHOWN ARE TO SCALE.
2. LOCATION OF SIGNS ARE TO BE CONFIRMED ON SITE TO ENSURE APPROPRIATE VISIBILITY.
3. ALL SIGNS TO BE CLASS 1 REFLECTIVE OR DIAMOND GRADE.
4. ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE RMS TRAFFIC CONTROL AT WORK SITE MANUAL VER. 6 (RMS 2009) AND AUSTRALIAN STANDARDS AS1742.3:2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 4 TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS.
5. THE TRAFFIC CONTROL PLAN MUST BE SETUP BY A PERSON HOLDING 'IMPLEMENT TRAFFIC CONTROL PLANS' AND THE RMS TRAFFIC CONTROL AT WORK SITE CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION.
6. THE ACCREDITED PERSONNEL WILL IMPLEMENT THE APPROVED TRAFFIC CONTROL PLAN ON-SITE AND CONFIRM A COPY OF THE TCP IS KEPT ON-SITE. THE ACCREDITED PERSONNEL MAY ALSO VARY THE SIGNAGES TO ENSURE THAT FOR THE TCP HAS BEEN IMPLEMENTED CORRECTLY AND THAT IT WILL WORK PROPERLY AND THE ROAD confuse as designed. ANY VARIATIONS MADE TO THE PLAN MUST BE MARKED ON THE PLAN AND INITIALLED BY THE ACCREDITED PERSONNEL.
7. IT IS THE RESPONSIBILITY OF AN ACCREDITED PERSONNEL WITH 'PREPARE TRAFFIC MANAGEMENT PLAN' TO ENSURE THE FOLLOWING:
   - THE INTEGRITY OF ALL TRAFFIC CONTROL MEASURES THROUGHOUT THE PRODUCTION PERIOD. THE AUDIT IS TO BE CONDUCTED AT ALL SITES TO ENSURE THAT WORKERS ARE PROPERLY ENSURE THAT THE APPROPRIATE MEASURES ARE TAKEN TO PROVIDE A SAFE ENVIRONMENT FOR VEHICLES AND PEDESTRIANS TO TRAVEL IN THE WORK ZONE. THE TCP HAS BEEN IMPLEMENTED CORRECTLY AND THAT IT WILL WORK PROPERLY AND THE ROAD confuse as designed.
8. THE ACCREDITED PERSONNEL SHALL IMPLEMENT THE APPROVED TRAFFIC CONTROL PLAN PRIOR TO IMPLEMENTATION AND CONFIRM A COPY OF THE TCP IS KEPT ON-SITE. THE ACCREDITED PERSONNEL MAY ALSO VARY THE SIGNAGES TO ENSURE THAT FOR THE TCP HAS BEEN IMPLEMENTED CORRECTLY AND THAT IT WILL WORK PROPERLY AND THE ROAD confuse as designed. ANY VARIATIONS MADE TO THE PLAN MUST BE MARKED ON THE PLAN AND INITIALLED BY THE ACCREDITED PERSONNEL.
9. ACCREDITED PERSONNEL WITH 'IMPLEMENT TRAFFIC CONTROL PLANS' AND THE RMS TRAFFIC CONTROL AT WORK SITE CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION.
10. ACCREDITED PERSONNEL shall implement the approved traffic control plan and confirm a copy of the TCP is kept on site. The accredited personnel may also vary the signages to ensure that for the TCP has been implemented correctly and that it will work properly and the road confuse as designed. Any variations made to the plan must be marked on the plan and initialled by the accredited personnel.
11. ACCREDITED PERSONNEL must provide a Work Zone TMP Card and is suitably experienced to design, select and modify traffic control plans.
12. ACCREDITED PERSONNEL shall implement the approved traffic control plan and confirm a copy of the TCP is kept on site. The accredited personnel may also vary the signages to ensure that for the TCP has been implemented correctly and that it will work properly and the road confuse as designed. Any variations made to the plan must be marked on the plan and initialled by the accredited personnel.
13. ACCREDITED PERSONNEL shall implement the approved traffic control plan and confirm a copy of the TCP is kept on site. The accredited personnel may also vary the signages to ensure that for the TCP has been implemented correctly and that it will work properly and the road confuse as designed. Any variations made to the plan must be marked on the plan and initialled by the accredited personnel.
14. ACCREDITED PERSONNEL shall implement the approved traffic control plan and confirm a copy of the TCP is kept on site. The accredited personnel may also vary the signages to ensure that for the TCP has been implemented correctly and that it will work properly and the road confuse as designed. Any variations made to the plan must be marked on the plan and initialled by the accredited personnel.
Appendix D

Authority Correspondence
Hi Ashish,

As per our discussion I can confirm that the condition should have read:

iii) construction vehicle access arrangements, primarily as a Left-in and Left-out (LILO) arrangement from Western Avenue/Parramatta Road

In accessing site, please note that right turns are not permitted from Parramatta Road onto Western Avenue. This should be taken into consideration when determining construction vehicle access.

It is recommended that the site discuss with the Consenting Authority to adjust this condition, with the above in mind, so that it can be satisfied.

Kind regards,

Brendan Pegg
Precinct Manager
CBD Planning & Freight
Sydney Coordination Office
Transport for NSW

M 0427 983 135
Level 44, 680 George Street, Sydney NSW 2000

Hi Brendan

GTA Consultants is assisting Laing O’Rourke with construction planning to obtain Construction Certificate for the Susan Wakil Health Building within the Heath Precinct at University of Sydney.

I have reproduced a requirement in Condition 27 (Construction Traffic and Pedestrian Management Plan) relating to construction vehicle access to the site:

iii) construction vehicle access arrangements, primarily as a Left-in and Left-out (LILO) arrangement from Western Avenue/Carillion Avenue;
Could you please confirm from our recent discussion on this requirement, the preference for construction vehicles to avoid use of the Carillon Avenue campus access given the sensitive land uses along the route such as RPAH and Newtown North Public School.

It is our recommendation that all construction vehicle access the site via the Parramatta Road/ Ross Street campus access to the north of the site. This is consistent with the access arrangement for other construction sites within the campus, therefore a proven arrangement.

Appreciate any confirmation on this requirement.

If you have any queries, please let us know.

Regards

Ashish Modessa  
Senior Consultant  
GTA Consultants  
P 02 8448 1800  D 02 8448 1822  M 0432 698 979  
Level 16, 207 Kent Street, Sydney, NSW 2000  
Ashish.Modessa@gta.com.au  
www.gta.com.au
Hi Ashish,

The City raises no objection to you accessing the site via Parramatta Rd/Ross St gates.

We would not like to see construction traffic using Carillion Ave as it is a local Rd and the driveway access is quite small.

Joshua Faull
Construction Liaison Coordinator
Construction & Building

---

Telephone: +612 9265 9767
Mobile: +61 448 488 384
cityofsydney.nsw.gov.au

---

Hi Joshua

Thank you for your time on the phone earlier this week.

GTA Consultants is assisting Laing O’Rourke with construction planning to obtain Construction Certificate for the Susan Wakil Health Building within the Heath Precinct at University of Sydney.

I have reproduced a requirement in Condition 27 (Construction Traffic and Pedestrian Management Plan) relating to construction vehicle access to the site:

iii) construction vehicle access arrangements, primarily as a Left-in and Left-out (LILO) arrangement from Western Avenue/Carillion Avenue;

Could you please confirm from our recent discussion on this requirement, the preference for construction vehicles to avoid use of the Carillon Avenue campus access given the sensitive land uses along the route such as RPAH and Newtown North Public School.

It is our recommendation that all construction vehicle access the site via the Parramatta Road/ Ross Street campus access to the north of the site. This is consistent with the access arrangement for other construction sites within the campus, therefore a proven arrangement.
Appreciate any confirmation on this requirement.

If you have any queries, please let us know.

Regards

Ashish Modessa
Senior Consultant
GTA Consultants
P 02 8448 1800  D 02 8448 1822  M 0432 698 979
Level 16, 207 Kent Street, Sydney, NSW 2000
Ashish.Modessa@gta.com.au
www.gta.com.au

The information contained in this email is confidential and is the subject of professional privilege. If you are not the intended recipient, any use, disclosure or copying of this email or its attachments is unauthorised. If you have received this document in error, please notify GTA Consultants by return email. Please consider the environment before printing.

This email and any files transmitted with it are intended solely for the use of the addressee(s) and may contain information that is confidential or subject to legal privilege. If you receive this email and you are not the addressee (or responsible for delivery of the email to the addressee), please note that any copying, distribution or use of this email is prohibited and as such, please disregard the contents of the email, delete the email and notify the sender immediately.
Appendix E

Proposed Portable Boom Gate Operation
Concrete Pour

Stick & Stomp Post Dividers will be installed permanently during the works.

**Plan Information**

- **Client:** Laing O'Rourke
- **Job Location:** Western Ave, Camperdown
- **Author:** Benjamin Wiffen
- **Cert. No:** 0040970460

**Scope of Works:** Construction works

**Plan Not to Scale**

**Implementation**

- **Name:**
- **Cert No:**
- **Date:**
- **Signed:**

**Dimensions**

- **Dimension 'D':** AS 1742.3. A distance expressed in metres, determined in accordance with Clause 4.1.5 and used for positioning of advance signs and related purposes.

**Taper Lengths**

<table>
<thead>
<tr>
<th>Speed of Traffic, km/h</th>
<th>Dimension 'D'</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 or less</td>
<td>15</td>
</tr>
<tr>
<td>Greater than 45</td>
<td>15</td>
</tr>
</tbody>
</table>

**Web:** [www.invarion.com](http://www.invarion.com)
Stick & Stomp Post Dividers will be installed permanently during the works.