

University of Sydney

**Abercrombie Precinct
Redevelopment**

**Construction Traffic Management
Plan**

222991

Issue | 20 February 2012

Arup
Arup Pty Ltd ABN 18 000 966 165

Arup
Level 10
201 Kent Street
Sydney
NSW 2000
Australia
arup.com.au



This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 222991

ARUP

Document Verification

ARUP

Job title		Abercrombie Precinct Redevelopment		Job number	
				222991	
Document title		Construction Traffic Management Plan		File reference	
Document ref		222991			
Revision	Date	Filename	01CTMP.docx		
Draft 1	30 Jan 2012	Description	First draft		
			Prepared by	Checked by	Approved by
		Name	Eoin Cunningham	Craig McGeoch	
		Signature			
Issue	20 Feb 2012	Filename	01CTMP.docx		
		Description	Issue		
			Prepared by	Checked by	Approved by
		Name	Eoin Cunningham	Craig McGeoch	Craig McGeoch
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
Issue Document Verification with Document					<input checked="" type="checkbox"/>

Contents

	Page
1 Introduction	1
2 Construction	1
2.1 Early works	1
2.2 Excavation	2
2.3 Construction	2
2.4 Finishing work	2
2.5 Landscaping	2
2.6 Hours of construction	2
2.7 Construction programme and construction traffic	3
3 Impact of proposed works	5
3.1 Existing traffic	5
3.2 Construction traffic	5
3.3 Cumulative impact of existing site and construction traffic	5
3.4 Parking	6
3.5 Driver code of conduct	6
4 Measures to ameliorate impacts	7
5 Conclusions	7

1 Introduction

This Construction Traffic Management Plan has been prepared by Arup for the University of Sydney in relation to the proposed Abercrombie precinct redevelopment project. The proposed development site area is approximately 1.92 hectares in Darlington. The development is a proposed Business School consisting of education facilities with associated student accommodation and two levels of underground parking. The purpose of this report is to assess the volume and route selection of vehicles associated with the construction of the development. The contractor will prepare a detailed Traffic Management Plan prior to the commencement of works detailing specific methods of safely managing construction vehicle traffic with the surrounding area.

2 Construction

2.1 Early works

Existing buildings on site are proposed to be demolished with the exception of the existing faculty for economics and business building. Buildings adjacent to the site including the Darlington Public School and Mandelbaum House are to be retained as part of the development plan. Figure 1 illustrates the proposed site boundary.

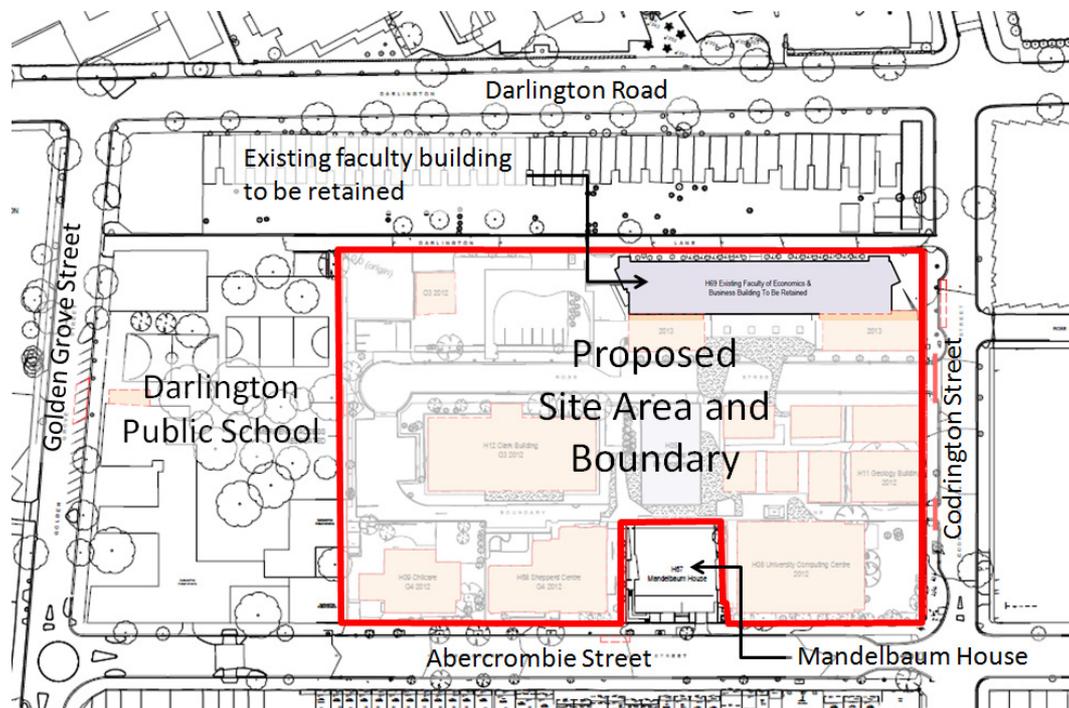


Figure 1: Site boundary

2.2 Excavation

Excavation of the site requires:

- Removal of existing substructures
- Bulk excavation of basement

2.3 Construction

Construction phase work includes:

- Construction of basement car parking levels
- Construction of buildings

2.4 Finishing work

Finishing work is expected to include:

- Public domain works and internal and perimeter footpaths

2.5 Landscaping

Several public park areas are proposed surrounding the structures within the site. These areas will undergo final landscaping works to provide surrounding social spaces and parkland as per the Development Application (DA) proposal.

2.6 Hours of construction

The hours of construction throughout the duration of the project are proposed as per City of Sydney (CoS) standard conditions as follows:

- Monday to Friday: 7:00am to 7:00pm
- Saturday: 7:00am to 5:00pm
- No work on Sundays or NSW public holidays

With these hours, the following is a preliminary summary of the Works Program:

- Excavate for Basements
- Construct Structures
- Finishing works to buildings
- Hard and soft landscapes

Some work activities noted above will be occurring concurrently, it is anticipated that subject to planning approval the period of works will commence in October 2012 and continue until December 2014.

To ensure minimal disruption to university activities, such as examinations, it is expected that there will be several no construction work days required.

2.7 Construction programme and construction traffic

Construction will generate traffic around the site, ranging from workers making their way to site, to large, heavy vehicles such as concrete trucks. The peak number of trucks needed has been estimated based upon the gross excavation volume and assumptions on the building traffic requirements. It is estimated that at peak construction traffic activity the excavation will require approximately 80 medium rigid vehicle (MRV) trips a day, or an average of 7 MRVs trips per hour between 7:00am and 7:00pm based on excavation volumes. Figure 2 illustrates the construction traffic routes which will be used around the site.

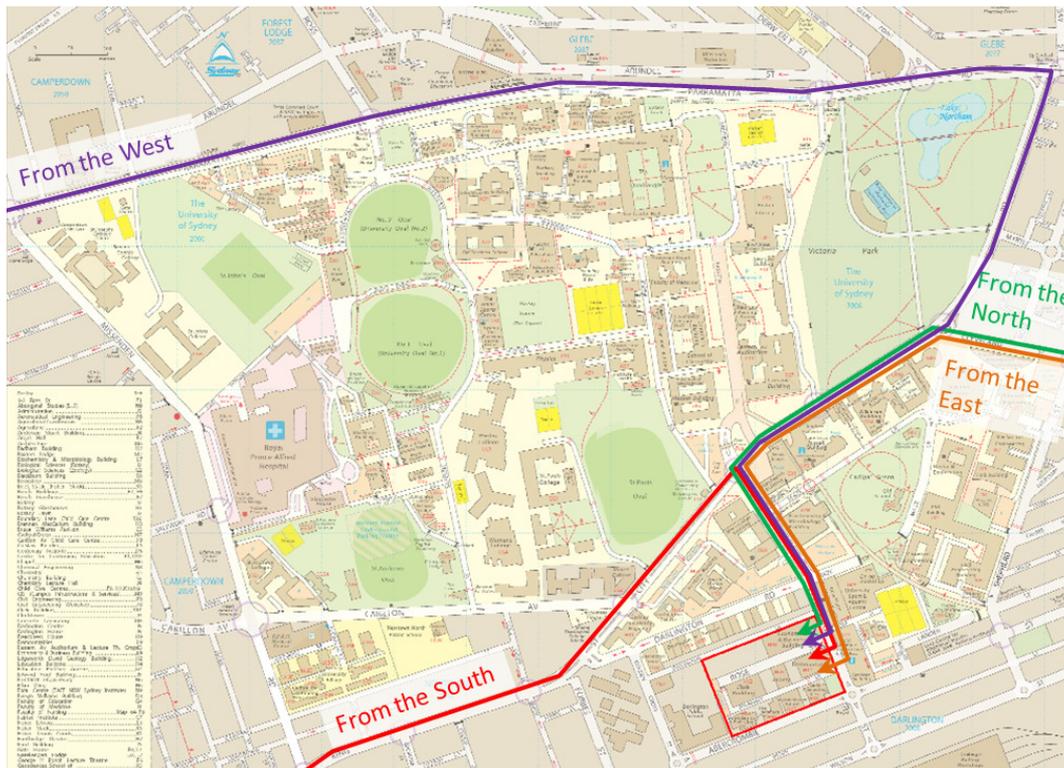


Figure 2: Construction traffic vehicle routes

It is proposed that access for construction vehicles will be provided off Codrington Street. Construction traffic will arrive via the routes as follows:

- Construction traffic arriving from the west will arrive from Parramatta Road via City Road and Codrington Avenue,
- Construction traffic arriving from the south will arrive from the Princes Highway, City Road and Codrington Street,
- Construction traffic arriving from the east will arrive from Cleveland Street, via City Road and Codrington Street,
- Construction traffic arriving from the north will arrive via the Eastern Distributor Highway to South Dowling Street, Cleveland Street, City Road and Codrington Street.

It is noted that as Abercrombie Street is classed as a 'major local road'¹, where possible construction vehicles will access the site via the surrounding major roads discussed which can better accommodate larger vehicles associated with construction.

¹ Sydways Greater Sydney Street Directory 2008

3 Impact of proposed works

3.1 Existing traffic

City Road is an arterial route equipped with two lanes in each direction with a central median and an additional bus lane in the southbound direction. Existing traffic on City Road is predominantly commuter traffic, with the highest traffic flows occurring in the AM and PM peaks. Intermittent ticketed parking areas are located in areas along the road.

Codrington Street and Butlin Avenue have a slower traffic environment to City Road and have a single traffic lane in each direction. A raised pedestrian crossing is located on Butlin Avenue facilitating safer pedestrian movements.

3.2 Construction traffic

Class A hoardings will be installed along site frontages as required, protecting pedestrians passing the site. The primary purpose of the work zone beyond the hoardings will be for handling of construction materials. The existing traffic lane arrangements will typically be maintained on surrounding roads.

Subject to planning approval construction works are anticipated to commence in October 2012 and are set to continue until December 2014. Construction vehicles will access the site via a gated access on the eastern footpath on Codrington Street. Traffic controls will be in place to ensure the safety of pedestrians passing the site will be maintained. These measures will be described in detail in the contractor's construction traffic management plan.

Construction traffic may occasionally require access to the site via Abercrombie Street. Access will be restricted to specific and locally required deliveries such as crane access and will not be used regular construction material deliveries. On these occasions where access off Abercrombie Street is required appropriate safety measures such as truck marshalling will be carried out in accordance with the contractors Traffic Management Plan (TMP).

If an emergency vehicle is required on site, it is proposed that access will be provided via the main site access on Codrington Street.

The appropriate documentation of the above construction activities and required Traffic Management Plans (TMP) will be undertaken during by the contractor when the final program is known.

3.3 Cumulative impact of existing site and construction traffic

Construction will generate traffic around the site, ranging from workers making their way to site, to large, heavy vehicles such as concrete trucks. The number of trucks needed at each stage has been estimated based upon the gross excavation volume and assumptions on the building traffic requirements.

- Excavation Approx. 80 MRV trips a day or 7 trucks per hour
- Construction Approx. 60 MRV trips a day or 5 trucks per hour
- Finishing Approx. 25 MRV trips a day or 2 trucks per hour
- Landscape Approx. 15 MRV trips a week

The construction traffic routes discussed in Section 2.7 can accommodate the number of construction vehicle movements predicted on the road network. Road widths and intersection controls currently in place can accommodate the predicted vehicle movements including turning movements at intersections.

3.4 Parking

On-site car parking will not be provided for site workers, hence there will be minimal traffic impact arising from personal parking use. Significant numbers of the workforce will travel by train and bus outside the morning and afternoon commuter peak periods, i.e. 8am-9am and 5pm-6pm. Vehicle parking may be used on Darlington Road or within the Shepherd Street car park where there is significant space capacity. These traffic movements are not expected to be high and the majority would occur outside of peak traffic periods.

3.5 Driver code of conduct

The contractor will be required to manage access to the site, providing instructions to vehicles accessing the site, including the following:

- Designated transport routes to and from the site
- Times for scheduled vehicle movements
- Parking instructions (if any)

4 Measures to ameliorate impacts

The contractor will be required to prepare a Traffic Management Plan (TMP) prior to the commencement of works. Traffic will generally be managed at the site in the following way:

- Designated transport routes shall be communicated to all personnel
- Strict scheduling of vehicle movements is to occur to minimize vehicles waiting off the site
- Site workers are to utilize local public transport and car sharing where possible

The following issues will be considered in more detail in the TMP;

- Traffic Impact
- Parking Impact
- Pedestrian Activity at/ near the Site
- Impact to Adjacent Businesses/ Properties
- Construction Traffic Management
- Construction Traffic in the vicinity of the site

5 Conclusions

Site access to the Abercrombie precinct development is proposed off Codrington Street. A more detailed Traffic Management Plan will be provided by the contractor detailing specific access and control arrangements in order to maintain pedestrian safety in the area.

The anticipated construction vehicle movements can be accommodated on the existing road system. During the most active phase of construction in terms of vehicle numbers, it is expected that approximately 6 trucks per hour will access the site.

Sufficient spare parking is available nearby to cater for additional demands due to construction site workers. Many of these workers are also expected to travel by public transport or car-pool, reducing the impact on surrounding parking.