

Our Ref: 12Sg004000

02 August 2012

Savills (Aust) Pty Ltd
Level 7, 50 Bridge Street
SYDNEY NSW 2000

Attention: Ms. Hayley Bell (Project Manager)

Dear Hayley,

RE: ROYAL PRINCE ALFRED HOSPITAL – NORTHWEST PRECINCT DEVELOPMENT PEDESTRIAN AND TRAFFIC MANAGEMENT PLAN

GTA Consultants was commissioned by Savills (Aust) Pty Ltd in March 2012 to provide traffic and transport advice as it relates to the development of the Northwest Precinct within the Royal Prince Alfred Hospital (RPAH) campus. As part of this work, a Pedestrian and Traffic Management Plan is required to mitigate the impact of construction works associated with the proposed development. These works include the construction of a new Mental Health Facility and Ambulatory Services Building.

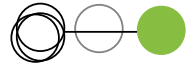
The proposed facility is to accommodate a minimum of 67 psychiatry in-patients within a 7-storey building with associated basement level car parking for 38 vehicles. The main structure will be located within the western section of the site and extend over Brodie Street. A temporary car park will be constructed east of the main structure, adjacent to Missenden Road.

Works associated with the construction of New Hospital Road to link Brodie Street with Lucas Street and a new bulk oxygen store, together with demolition of existing on-site structures, will be completed as part of an early works package. An Early Works Traffic Management Plan has been prepared by GTA Consultants and details activity associated with these works stages.

It is proposed, where possible; to contain the majority of the construction works within the precinct boundaries, with site entry proposed via Brodie Street and site exit via Lucas Street. Construction works are anticipated to commence in February 2013 (subject to approvals) and continue for a period of up to 84 weeks, ending September 2014.

In preparing this Construction Traffic Management Plan, reference has been made to the following:

- several inspections of the site and its surrounds
- procedures for use in the Preparation of a Traffic Management Plan (TMP), Roads and Maritime Services (RMS), December 2001 (Version 2.0)
- Traffic Control at Work Sites Manual, RMS, June 2010
- Australian Standard AS1742.3 – 2009 Manual of Uniform Traffic Control Devices – Part 3: Traffic control for works on roads.



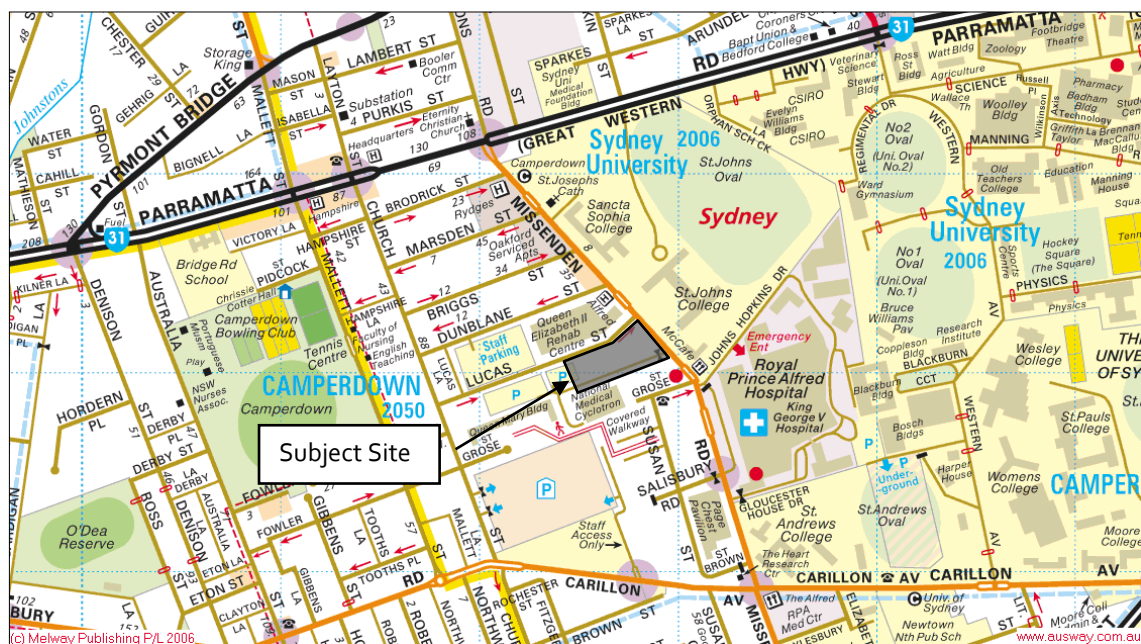
Existing Conditions

The RPAH Northwest Precinct is located west of Missenden Road between Brodie Street and Lucas Street, Camperdown. The site of approximately 5,000m² has a frontage of 55 metres to Missenden Road and approximately 130 metres to Brodie Street and Lucas Street. The precinct is located within the RPAH campus and as such has a land classification of SP2 (Infrastructure) and set aside for Health Services Facilities. The surrounding properties predominantly include commercial and medical services buildings with the Consulate-General of the People's Republic of China located northwest of the site. Further away from the precinct the land uses are generally residential in nature with a mixture of high to medium density buildings.

The site is currently occupied by a medical services building adjacent to Missenden Road with an at-grade car park located adjacent to the western boundary of the site. Access to the site is via Brodie Street and Lucas Street with each under boom gate control. The site access arrangements generally operate in a one-way loop (enter via Brodie Street and exit via Lucas Street).

The location of the Northwest Precinct and its surrounding environs is shown in Figure 1.

Figure 1: Northwest Precinct and Its Environs



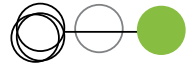
Basemap source: Reproduced with permission from Sydney Publishing Pty Ltd

Adjoining Roads

Missenden Road functions as a collector road and is aligned in a north-south direction along the eastern boundary of the site. It provides access to a variety of developments (including RPAH), Parramatta Road to the north and King Street to the south.

Lucas Street is a one-way (eastbound) road travelling along the northern boundary of the site and provides access to the Queen Elizabeth Rehabilitation Centre and the subject site.

Brodie Street is a one-way (westbound) access road under the control of RPAH and travels along the southern boundary of the site. Access to Brodie Street is under boom gate control west of Missenden



Road and provides access staff car parking areas and loading facilities associated with Building 12, the Cyclotron, Child Care Centre and the Endocrine Research Facility.

Active Transport Infrastructure

Sealed footpaths are provided along both sides of Missenden Road, Brodie Street and Lucas Street within the vicinity of the site. The Missenden Road footpath is generally up to 4 metres wide with Brodie Street and Lucas Street footpaths generally 1.5 metres wide.

Two marked pedestrian crossings are located on Missenden Road approximately 50 metres north and 50 metres south of the site. A bus stop is also located on Missenden Road approximately 30 metres south of the site.

Lucas Street forms part of the City of Sydney's cycle network and operates as mixed traffic conditions however is currently unmarked.

Construction Traffic Management Plan

Overall Principles of Traffic Management

The overall principles of traffic management during the construction works include the following:

- provide an appropriate and convenient environment for pedestrians
- minimise the impact on pedestrian movements
- maintain appropriate capacity for pedestrians at all times on footpaths adjacent to the site along Missenden Road, Lucas Street and Brodie Street
- maintain appropriate public transport access
- maintain the operational efficiency of intersections in the vicinity of the site
- retain, as far as possible, existing kerb space for loading , buses and taxis
- minimise the loss of on-street parking
- maintain access to/ from adjacent properties at all times
- restrict construction vehicle movements to designated routes to/ from the site
- manage and controlling construction vehicle activity in the vicinity of the site
- provide an on-street 'Works Zone' along the northern side of Lucas Street in the vicinity of the construction vehicles exit driveway
- provide construction vehicle access to ensure all vehicles enter and exit the site in a forward direction
- construction access driveways to be managed and controlled by site personnel
- pedestrian activity in the vicinity of the construction site accesses to be managed and controlled by site personnel
- construction activity be carried out in accordance with City of Sydney's approved hours of works.

Staging Schedule

Construction activities are anticipated to take up to 84 weeks and will be undertaken as a single stage of works. The construction works area is illustrated in Figure 2.

Figure 2: Construction Stage Works Area



Hours of Operation

It is anticipated that construction works will be carried out between the following hours, in accordance with the City of Sydney's standard construction hours for works within the CBD:

- Monday to Friday 7.00am and 7.00pm
- Saturday 7:00am and 5:00pm
- Sunday/ Public Holidays no work.

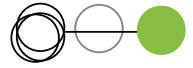
Operating hours for works outside of the CBD are 7:30am to 5:30pm Monday to Friday and 7:30am to 3:30pm Saturdays. Given that the Northwest Precinct is located within the RPAH campus and surrounded by medical, commercial and diplomatic buildings, it is reasonable to assume that the longer working hours would generate a limited impact and therefore, are considered appropriate.

The contractor will be responsible for instructing and controlling all sub-contractors in relation to the hours of work. Any work outside the approved construction hours will be subject to specific prior approval from the City of Sydney.

Construction Traffic Volumes

The main traffic generating activities during the construction stage will occur during the concrete pours. Concrete pours will be managed on-site within the materials handling area, with up to one to two concrete pours per week. It is estimated that the number of concrete trucks generated by such pours range up to 10 trucks and equates to 2-4 trucks per hour. In addition, trucks delivering formwork and other construction material, together with the removal of waste bins from the site are also thought to number approximately 10 trucks per day, or 1-2 trucks per hour.

Construction vehicles will generally incorporate truck-and-dog vehicles and 12.5m long large rigid trucks. Given the above, it is considered that truck volumes will be a maximum of approximately 20



trucks per day during construction works with up to 120 trucks per week. This equates to up to 6 trucks per hour.

The site is located within a short walking distance from major bus routes operating along Missenden Road, Parramatta Road and King Street and workers will be encouraged to use public transport when travelling to/ from the site. It is understood that there will be some capacity for workers to park on-site adjacent to New Hospital Road, with limited capacity to park within the surrounding road network.

The intersections in the vicinity of the site will continue to operate at existing levels of service during construction works.

Truck Routes

Access to the site during the construction period will be via a one-way loop with entry via Brodie Street and exit via Lucas Street. The entry driveway will be located along the southern boundary of the site (approximately 30m west of Missenden Road) and the exit driveway along the corresponding northern boundary of the site. The construction site accesses will be managed and controlled by qualified traffic controllers and construction vehicles will enter and exit the site in a forward direction. Given that Brodie Street is a private road with restricted access (boom gate control) within RPAH grounds, the need for a traffic controller at the site entry will be monitored and provided if required.

The movement of construction traffic via Missenden Road to/ from the site will be managed and controlled by qualified traffic controllers. Should the need arise; through traffic along Missenden Road will be stopped to allow the efficient movement of trucks and to minimise disruption to the local road network.

Trucks will be accommodated on-site within the boundaries of the site and will not be permitted to queue or park within the surrounding streets.

Truck movements will be restricted to designated truck routes and confined to the main road network. Truck routes to/ from the site, as indicated below and illustrated in Figure 3, have been identified with the aim of minimising the impact on streets within the vicinity of the site.

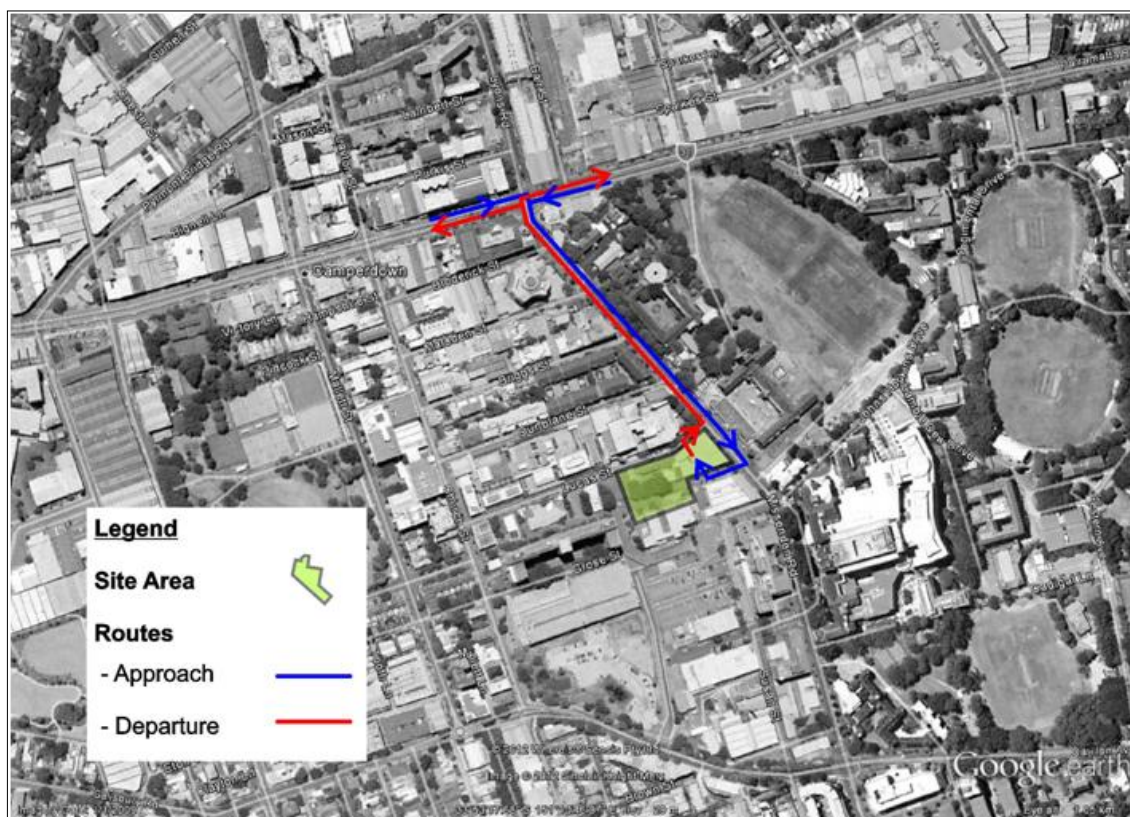
Approach routes:

- Parramatta Road (from the west), right turn into Missenden Road, right turn into Brodie Street
- Parramatta Road (from the east), left turn into Missenden Road, right turn into Brodie Street.

Departure routes:

- exit the site right turn into Lucas Street, left turn into Missenden Road, left turn into Parramatta Road (to the west)
- exit the site right turn into Lucas Street, left turn into Missenden Road, right turn into Parramatta Road (to the east).

Figure 3: Proposed Truck Routes



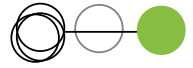
Construction Site Access

The construction site access driveways via Brodie Street and Lucas Street have been considered in terms of sight lines and construction vehicles swept paths for adequacy given the number, type and size of vehicles. These accesses will be appropriate to service the requirements during the construction period.

It is proposed to provide a 'Works Zone' along the northern side of Lucas Street, opposite the construction site exit. This area will be approximately 18m in length and is required to accommodate trucks exiting the site. The 'Works Zone' will necessitate the removal of approximately 3 on-street short-stay car parking spaces (and maintain the car share space) and will operate during the approved hours of operation. The movement of trucks to/ from the site will be the responsibility of the site contractor.

Truck arrivals and departures and pedestrian movements in the vicinity of the construction site accesses will be managed and controlled by qualified traffic controllers. The requirement for this at the Brodie Street construction site entry will be monitored given this is a private road within RPAH. Truck drivers will be advised of the presence of the traffic controllers and must observe their direction at all times.

All trucks accessing the site will adhere to the prescribed weight limits and loose material covered during transport to/ from the site. Loose material will be removed from vehicles using cleaning machinery (such as a wash facility) prior to leaving the site, with a sediment control system to be located within the site to deal with any run-off.



Pedestrian Management

Pedestrian movements adjacent to the site, in particular along Missenden Road, Lucas Street and Brodie Street will be maintained during construction works. These pedestrian routes however, will be subject to some minor modification as a result of the on-site works, with Type B hoardings to be erected along Lucas Street (west of the construction site exit) for pedestrian safety. Type A construction fencing is to be erected around the remaining site perimeter. It is noted that the southern site boundary is located within Brodie Street and removes the pedestrian footpath along the northern side of Brodie Street, with pedestrians able to use the existing footpath along the southern side, adjacent to the Cyclotron building.

During the works associated with the overhead structure along Brodie Street, east of New Hospital Road, scaffolding and overhead protection will be provided, where required. Pedestrian warning signs will be located adjacent to the construction accesses with the interaction of construction vehicles and pedestrians to be managed and controlled by qualified site personnel, when in use.

Traffic and Parking Effects

Car parking

On-street parking (approximately 3 spaces) will be affected along Lucas Street near the construction site exit.

Public Transport

Given the relatively infrequent truck movements associated with the construction works, the overall impact to existing public transport services is expected to be negligible. This includes the impact on bus services along Missenden Road in the vicinity of the site.

Cyclists, Emergency Vehicles and Heavy Vehicles

No special provisions are required or proposed for emergency vehicles and/ or cyclists. It is however noted that Missenden Road experiences high volumes of emergency vehicles given the proximity to RPAH and as such truck drivers are to be made aware of this activity.

The works are not expected to impact on existing heavy vehicle movements in the vicinity of the site.

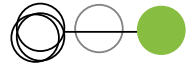
Existing and Future Developments

The 'Lifehouse at RPAH' development is currently under construction and located on the west side of Missenden Road approximately 120 metres south of the site. Heavy vehicles associated with the construction works are expected to be limited to large and medium rigid trucks (concrete and steel/ reinforcement delivery trucks). Given that no approach or departure truck routes are proposed south of the site, the additional heavy vehicles travelling along Missenden Road associated with the construction works are not anticipated to impact on this existing construction activity.

Works are also yet to commence on the refurbishment of the Queen Mary Building located west of the site and as such should not be significantly impacted by the construction works, with traffic associated with this site thought to approach and depart via Church Street, to the west.

Traffic Movements in Adjoining Council Areas

No adverse effects are expected from the movement of trucks through adjacent council areas.



Traffic Control Plans

The proposed overview Traffic Control Plan for the construction works is provided at Attachment A. The plan presents the principles of traffic management and is subject to final design.

Detailed information for work site operations is contained in the RTA Traffic Control at Work Sites manual. The control of traffic at work sites must be undertaken with reference to WorkCover requirements and the contractor/ builders own Workplace Health and Safety manuals.

The Traffic Control Plan details the following:

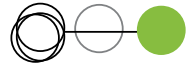
- construction vehicle activity, including the loading/ unloading of trucks to be undertaken on-site within the loading/ unloading area
- the movement of trucks to/ from the site and Missenden Road (in a forward direction) will be managed and controlled by qualified site personnel
- truck movements restricted to designated truck routes through the area
- maintain access to adjacent properties at all times
- construction fencing and hoarding to be erected around the perimeter of the site
- scaffolding and overhead protection to be provided where construction occurs over Brodie Street
- Lucas Street egress will require the temporary removal of on-street short-stay car parking (approximately 3 spaces) during the approved hours of work
- maintain through traffic movements along Brodie Street, other than for 1 or 2 days during the installation of precast elements
- the site contractor will be responsible for the management of the site, including truck arrivals and departures, signage details and traffic and pedestrian management.

I trust this Pedestrian and Traffic Management Plan provides the information you require. Should you have any questions or require any further information, please do not hesitate to contact me in our Sydney office on (02) 8448 1800.

Yours sincerely

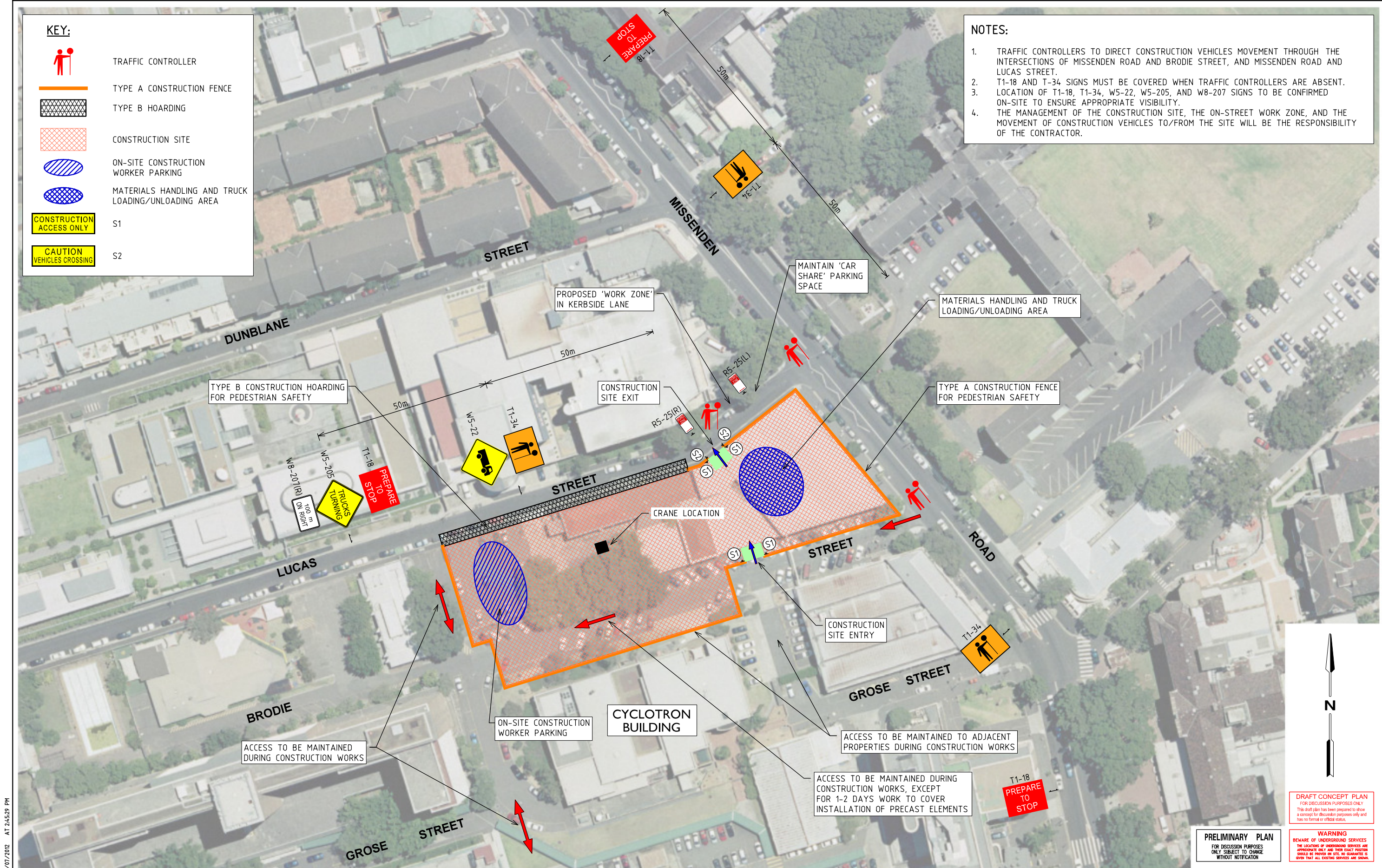
GTA CONSULTANTS

Brett Maynard
Director



Attachment A

Traffic Control Plan



KEY:

- TRAFFIC CONTROLLER
- TYPE A CONSTRUCTION FENCE
- TYPE B HOARDING
- CONSTRUCTION SITE
- ON-SITE CONSTRUCTION WORKER PARKING
- MATERIALS HANDLING AND TRUCK LOADING/UNLOADING AREA
- S1
- S2

NOTES:

- TRAFFIC CONTROLLERS TO DIRECT CONSTRUCTION VEHICLES MOVEMENT THROUGH THE INTERSECTIONS OF MISSENDEN ROAD AND BRODIE STREET, AND MISSENDEN ROAD AND LUCAS STREET.
- T1-18 AND T-34 SIGNS MUST BE COVERED WHEN TRAFFIC CONTROLLERS ARE ABSENT.
- LOCATION OF T1-18, T1-34, W5-22, W5-205, AND W8-207 SIGNS TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY.
- THE MANAGEMENT OF THE CONSTRUCTION SITE, THE ON-STREET WORK ZONE, AND THE MOVEMENT OF CONSTRUCTION VEHICLES TO/FROM THE SITE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

ON 31/07/2012 AT 24:529 PM
PLOTTED BY : Barry Li

AMENDMENTS							
NO.	DATE	DESCRIPTION	BY	CHK	APP	BLL	BDM
P1	31.07.12	INITIAL ISSUE					

GENERAL NOTES

SKETCH PLAN ONLY. THIS PLAN PRESENTS THE PRINCIPLES OF TRAFFIC MANAGEMENT. TRAFFIC MEASURES PROPOSED ARE CONCEPT ONLY AND ARE SUBJECT OT FINAL DESIGN AND APPROVAL BY WORK COVER.

DESIGNED B.LI	DESIGN CHECK R.HAZELL
DRAWN B.LI	DRAFTING CHECK R.HAZELL
APPROVED BY B.MAYNARD	DATE APPROVED FOR INITIAL ISSUE 31 JULY '12
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CLIENT **NSW HEALTH INFRASTRUCTURE**

RPA NW PRECINCT REDEVELOPMENT

**67-73 MISSENDEN ROAD,
CAMPERDOWN**

OVERVIEW TRAFFIC CONTROL PLAN

SYDWAY REF. **64/Q7** DRAWING NO. **12S9004000-01** SHEET **1 OF 1** ISSUE **P1**

DRAFT CONCEPT PLAN
FOR DISCUSSION PURPOSES ONLY
This draft plan has been prepared to show a concept for discussion purposes only and has no formal or official status.

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVIDED ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.