

2 Proposed Works

2.1 Proposed Construction Works and Traffic Management

2.1.1 Overview of Works

The CEMP report outlines the various stages of construction for the proposed development at 1 Denison Street and 88 Walker Street.

The works will include:

- Early works (to relocate existing essential services);
- Demolition;
- Excavation ; and
- Building works.

The construction activities will be staged with work commencing initially on the 1 Denison Street site and then subsequently on 88 Walker Street site.

The location of the site and the surrounding road and transport network is shown in Figure 1.

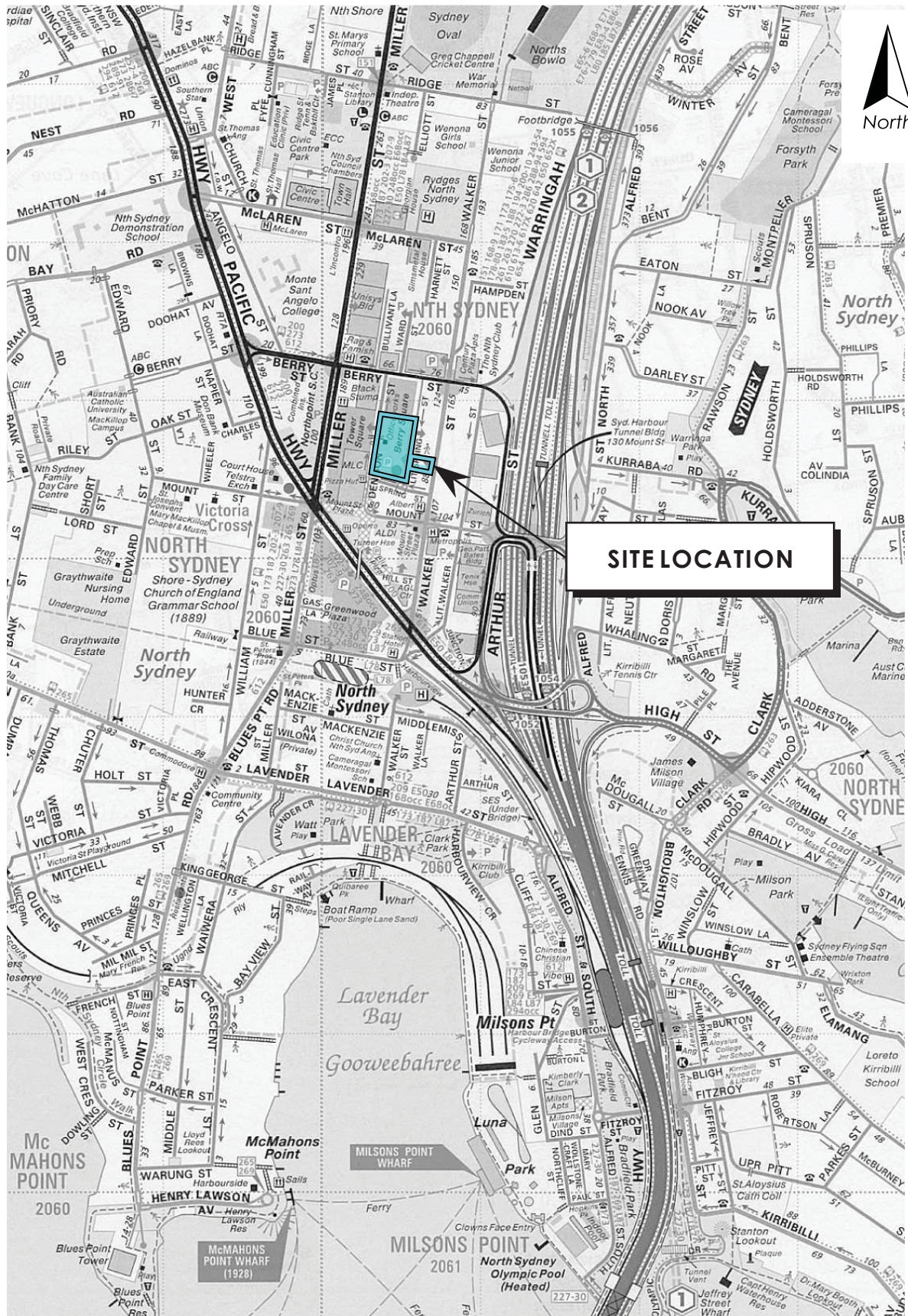
2.1.2 Overview of Truck Movement Types

The proposed construction operations affecting traffic are outlined below:

- Delivery trucks associated with site establishment works including the installation of any fencing / hoarding, worker facilities, and the like;
- Loading and unloading of trucks from public roads throughout the works;
- Use of Medium Rigid Vehicles (including truck and trailer) for demolition and excavation material removal;
- Use of trucks longer than heavy rigid vehicles such as semi trailers for delivery of materials and machinery.
- Concrete deliveries by medium rigid concrete trucks; and
- Delivery vans, utilities and cars as required.

SITE LOCATION

1 DENISON STREET & 88 WALKER STREET, NORTH SYDNEY



2.1.3 *Work Zones*

It is proposed that material handling will be undertaken via 4 separate Construction (Work) Zones, namely:

- Construction Work Zone 1 - western side of Little Spring Street
- Construction Work Zone 2 - eastern side of Denison Street (southern zone)
- Construction Work Zone 3 - western side of Walker Street at 88 Walker Street
- Construction Work Zone 4 - eastern side of Denison Street (northern zone)

These Work Zones will be utilised at various stages of the overall construction works. For example Work Zone 4 would only be used as a work zone during the early works associated with the construction of the electrical substation room.

It is proposed to construct a loading platform at the southern end of the 1 Denison Street site. This will reduce the volume of materials received at the other “on street” work zones.

The proposed Work Zones are shown in Appendix A and Appendix B of this review.

Further details are provided in the CEMP.

These Work Zones will include the permanent use of hoardings / fencing and would be directly controlled by construction staff when in operation. In this way the public is protected from overhead loading by cranes.

The selection of locations for Work Zones has taken into account a number of significant restrictions for material handling, including;

- Crane manoeuvrings and reach limitations associated with adjacent buildings; and
- Heavy vehicle access restrictions to Work Zone areas (namely difficulties in maintaining semi trailer access to Little Spring Street and Denison Street).

It is noted that the proposed Work Zone in Walker Street would not operate on a 24 hour per day basis.

In Walker Street, parking would be permitted outside of clearway and construction hours. In Little Spring Street, parking would be permitted outside of construction hours in the section without B-Class hoarding (ie. north of the site).

2.2 Timing of the Works

Approximate timing of the works has been calculated and presented in the CEMP based on the approved hours of operation as set out in the conditions of consent, namely:

- Monday – Friday : 7am – 5pm
- Saturday: 8am – 1pm
- Sunday: No work

As stated above, the proposed Walker Street Work Zone would only be available between 10am – 3pm on weekdays.

3 Construction Vehicle (Truck) Management

3.1 Truck Routes

General truck traffic would have different origins / destinations throughout Sydney. There are a limited number of options for inbound and outbound routes depending on origin and destination of trucks.

The recommended truck arrival and departure routes for construction vehicles accessing the site are shown in Figure 2 and Figure 3.

These figures show the local road routes to be used to access the proposed construction site from the regional road network.

The truck access routes shown in Figure 2 and Figure 3 attempt to minimise the extent of construction traffic movements on local roads and direct construction vehicles to the Warringah Freeway or Pacific Highway as directly as possible.

The extent of the proposed “work Zones” in Little Spring Street and Denison Street is to facilitate convenient vehicle access for both construction vehicles and other vehicles.

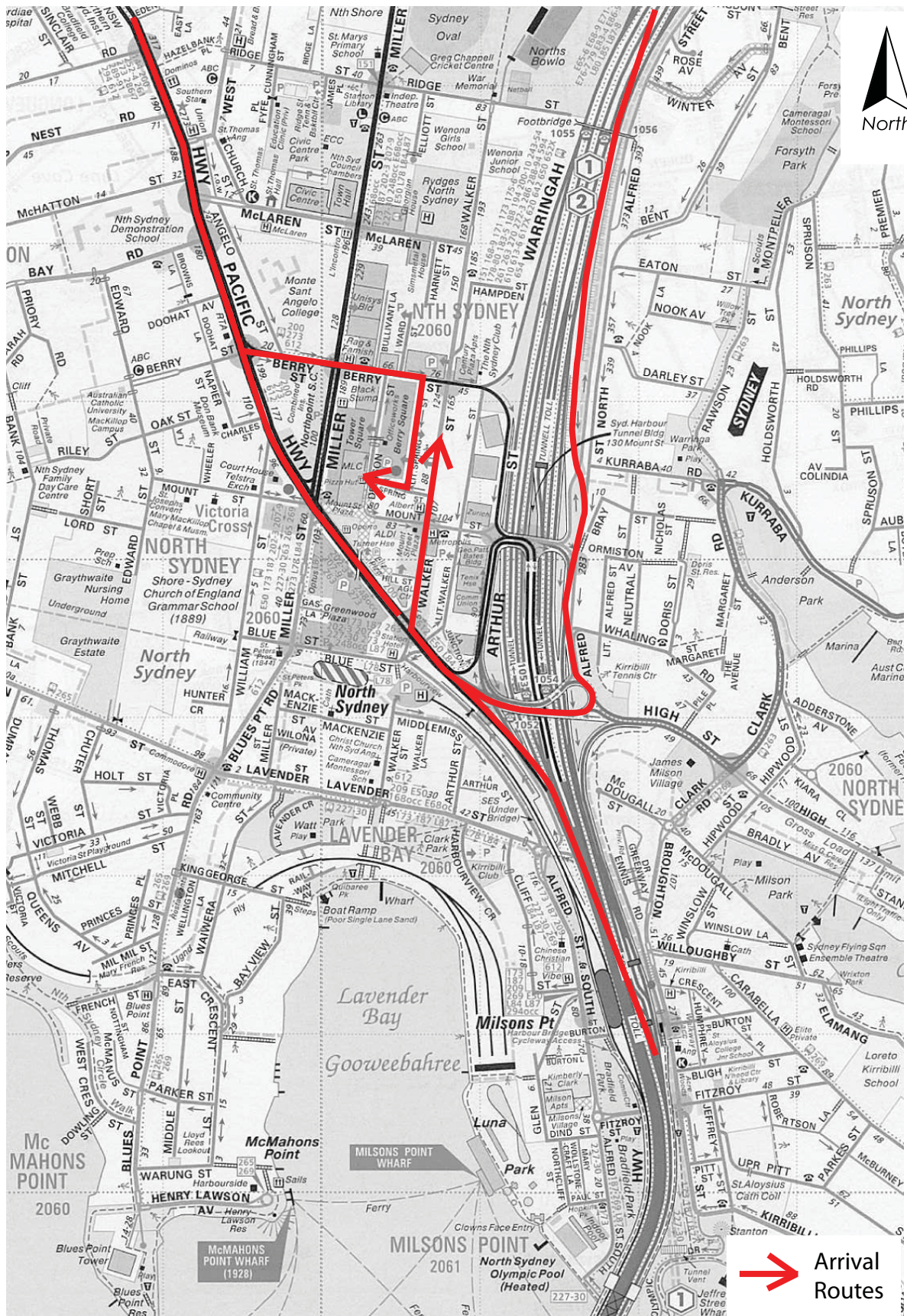
3.2 Materials Handling Options

3.2.1 Onsite Loading

Onsite loading and unloading would be facilitated with the early construction of the vehicle platform at the southern end of the site. The onsite platform would allow construction vehicles to enter and exit in a forward direction. This arrangement provides the safest method of work as it minimises the impact to the public and reduces the amount of traffic control that would be required.

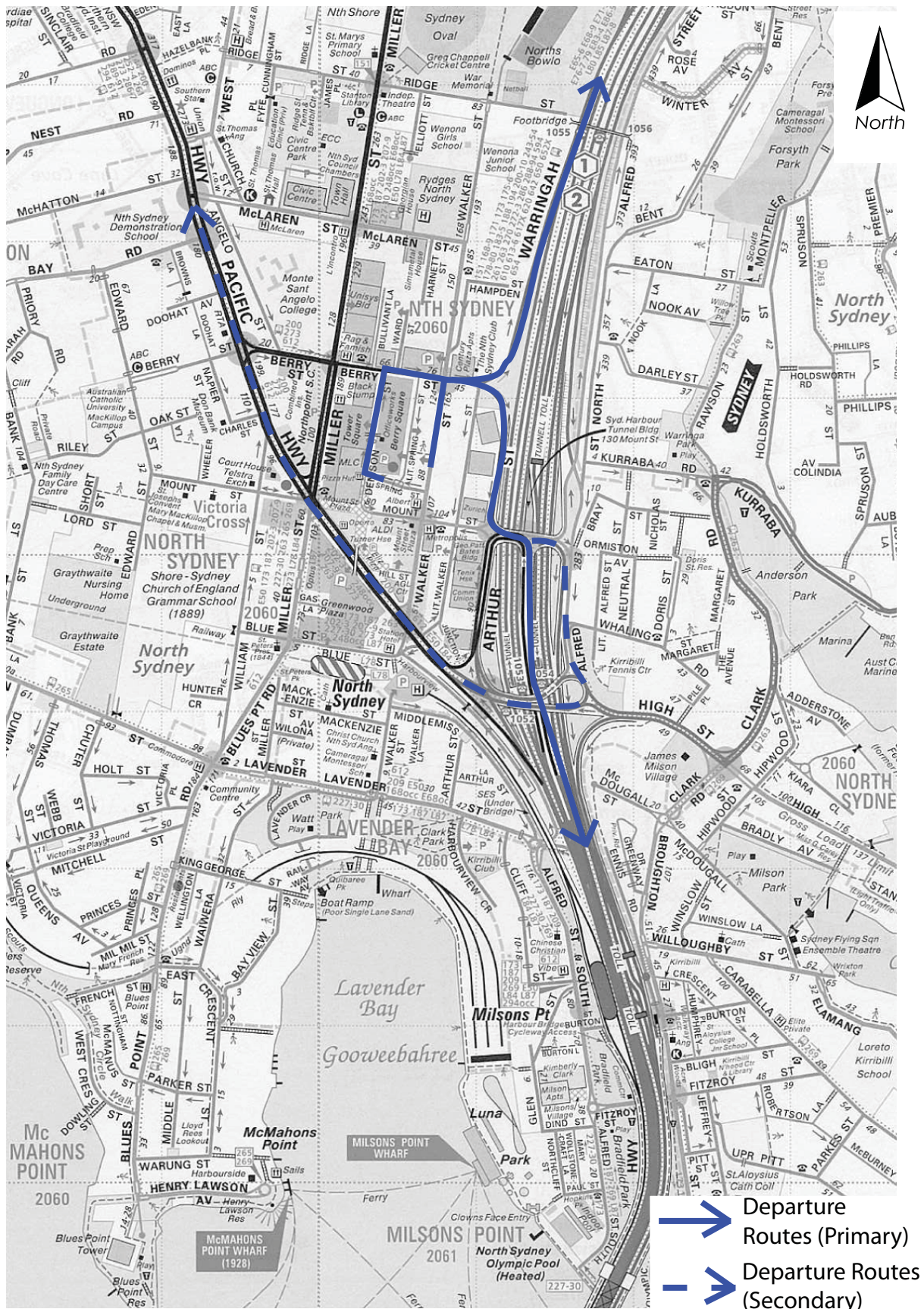
CONSTRUCTION VEHICLE ARRIVAL ROUTES

1 DENISON STREET & 88 WALKER STREET, NORTH SYDNEY



CONSTRUCTION VEHICLE DEPARTURE ROUTES

1 DENISON STREET & 88 WALKER STREET, NORTH SYDNEY



3.2.2 *Offsite Loading*

Use of the on site loading platform would need to be supplemented by on street areas.

The use of larger trucks would be required when:

- materials must be delivered by a heavy rigid truck over 10.7 metres due to size or weight;
- direct crane lifting is required from the street frontage;
- during construction of the loading platform; and
- accommodate truck numbers during peak periods such as concrete pours.

3.3 *Traffic Control Plans (TCP)*

As indicated in Section 1 of this report, this review sets out the principles for construction traffic management including standard TCPs to be implemented.

Detailed traffic control plans (TCP's) including signage location, details of traffic control and work zone occupation will be made via separate TCPs and applications for road occupation for each of the various stages of development.

The operation of the proposed “work zones” would not necessitate the preparation of a TCP as defined by the RTA's *Traffic Control at Work Sites* manual.

However the principles of the manual shall be applied and specific TCP's be development for the following activities:

- Use of traffic controllers;
- Temporary partial or full closure of road ways for erection of hoarding / tower cranes; and
- Closure of pedestrian access.

Example TCPs extracted from the RTA's *Traffic Control at Work Sites* manual are provided in Appendix C.

3.4 *Work Zone Impacts to On-street Parking*

As indicated above, the implementation of on street work zones will impact on the existing on street parking provisions.

An audit of the existing on street parking signage (and other signage) has been undertaken as part of this review. This audit of existing signage has been used to identify where changes to the existing on street parking signage are required to accommodate the proposed work zones.

Details of the existing and proposed on street parking signage are provided in Appendix B.

The purpose of the detailed signage plans is to allow Council to:

- Quantify the impact to the various types of on street parking (ie. metered / unmetred parking); and
- Install signage in accordance with the proposal (if approved).

3.5 *Pedestrians*

Details of the proposed pedestrian management and safety measures are provided in the CEMP. Essentially hoarding (B-Class and A-Class) would be used to protect pedestrians on the footpaths.

Pedestrian access along the laneways shall be maintained at all times. Where existing pedestrians may need to be temporarily disrupted, alternate crossings and pathways shall be provided and appropriately signposted.

3.6 *Public Transport*

There are no designated bus stops within the laneways or areas of the proposed work zones.

It is not expected that public transport services would need to be detoured during construction works.

3.7 *Emergency Vehicle Access*

Emergency protocols on the site would include a requirement for traffic controllers to assist with emergency access from the street. Emergency protocols must also be established and staff inducted on emergency evacuation protocols for the site under OHS.

3.8 *Green (Work Place) Travel Plan*

It is recommended that the builders of the development implement a Green (Workplace) Travel Plan for construction workers.

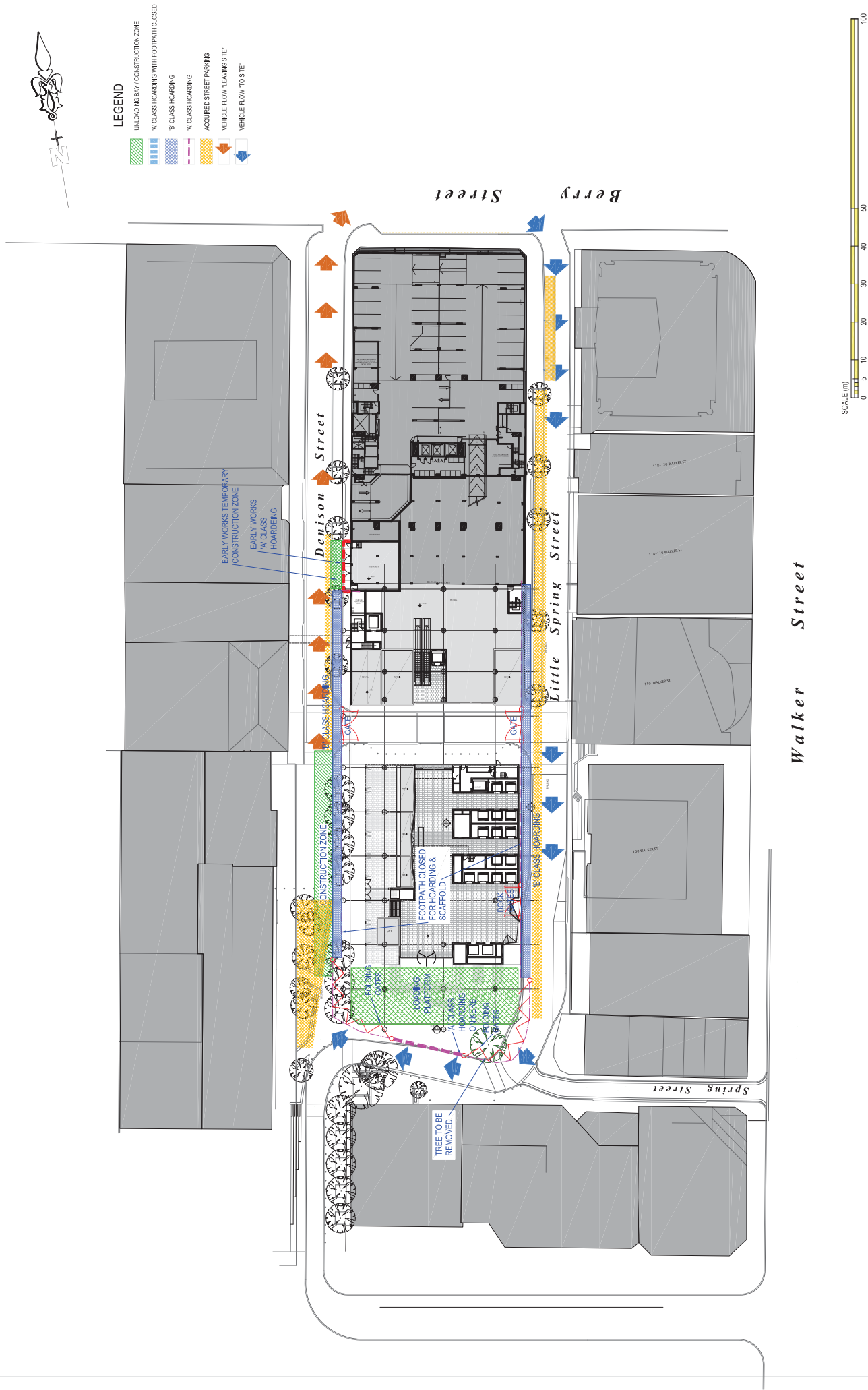
A Green Travel Plan would potentially include:

- Information on Transport Options
 - Preparation of an “access guide brochure” detailing how to get to and from North Sydney by public transport, cycling and walking.
 - This access guide shall be provided to each employee and contractor on the project as part of the site induction process.
 - The access guide shall be mounted on employee notice boards
- On Site Bicycle Facilities
 - Bicycle parking areas could be provided on site.
 - Showers will be provided on site and would be available to workers cycling to the site.
- Tool Drop Off and Storage Facilities
 - On site tool drop off and storage facilities shall be provided such that workers do not need to bring tools each day to the site by vehicle. Storage of tools allows workers to more conveniently utilise public transport.

Appendix A CEMP Traffic Management Diagrams

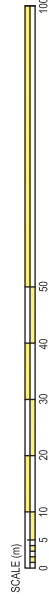
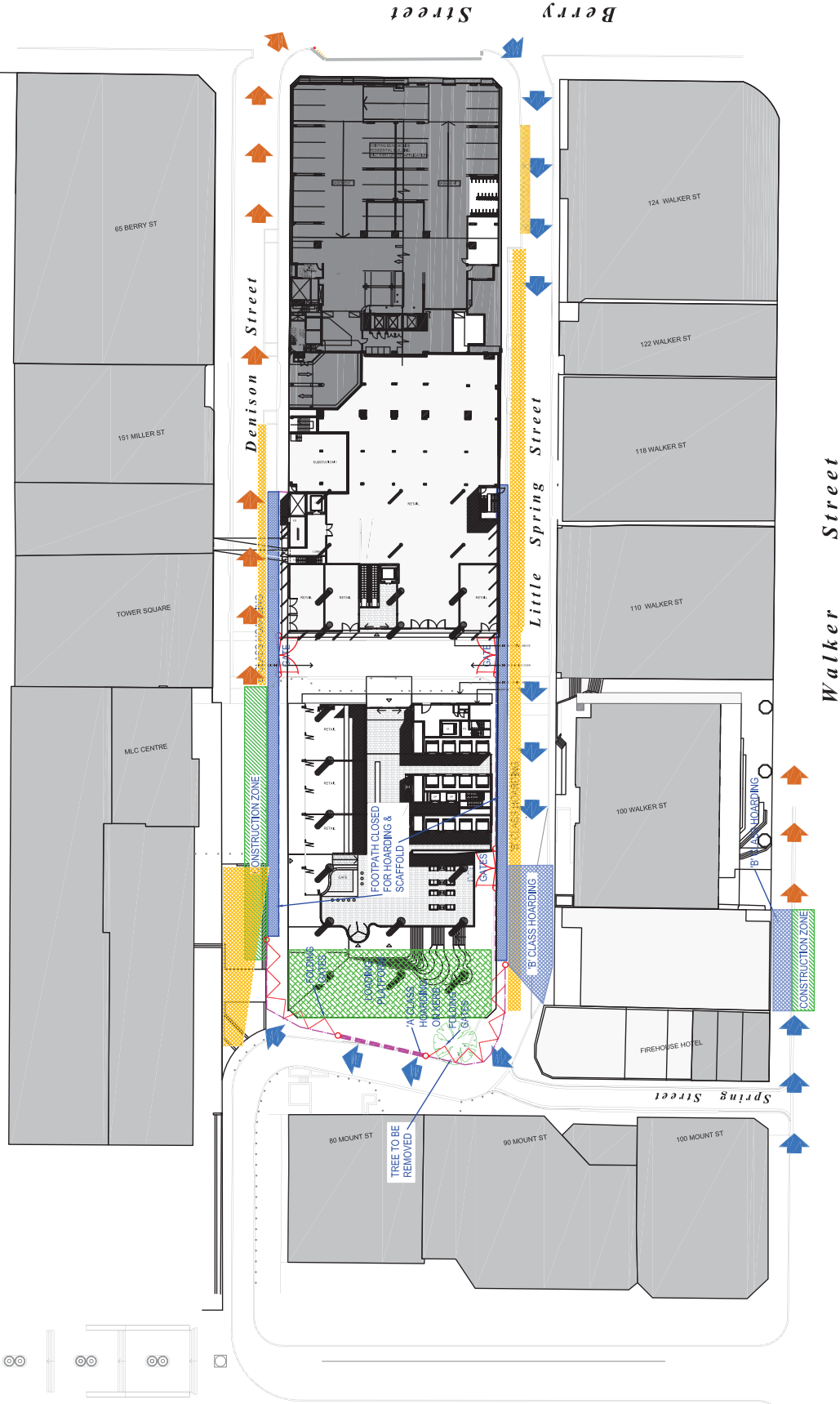
Source: CEMP prepared by Brookfield Multiplex (7 July 2011)

Appendix B On Street Parking Signage Plans





LEGEND	
	UNLOADING BAY / CONSTRUCTION ZONE
	A' CLASS HOARDING WITH FOOTPATH CLOSED
	B' CLASS HOARDING
	A' CLASS HOARDING
	ACQUIRED STREET PARKING
	VEHICLE FLOW "LEAVING SITE"
	VEHICLE FLOW "TO SITE"



Legend

Project

1001

1001



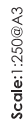
Brookfield Multiplex
Constructions Pty Ltd
No.1 KENT STREET, STONEY NSW, 2000
1001

1 DENISON STREET

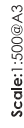
TRAFFIC FLOW, CONSTRUCTION ZONES & HOARDINGS

TRAFFIC FLOW, CONSTRUCTION ZONES & HOARDINGS	
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1 DENISON STREET + 88 WALKER STREET, NORTH SYDNEY

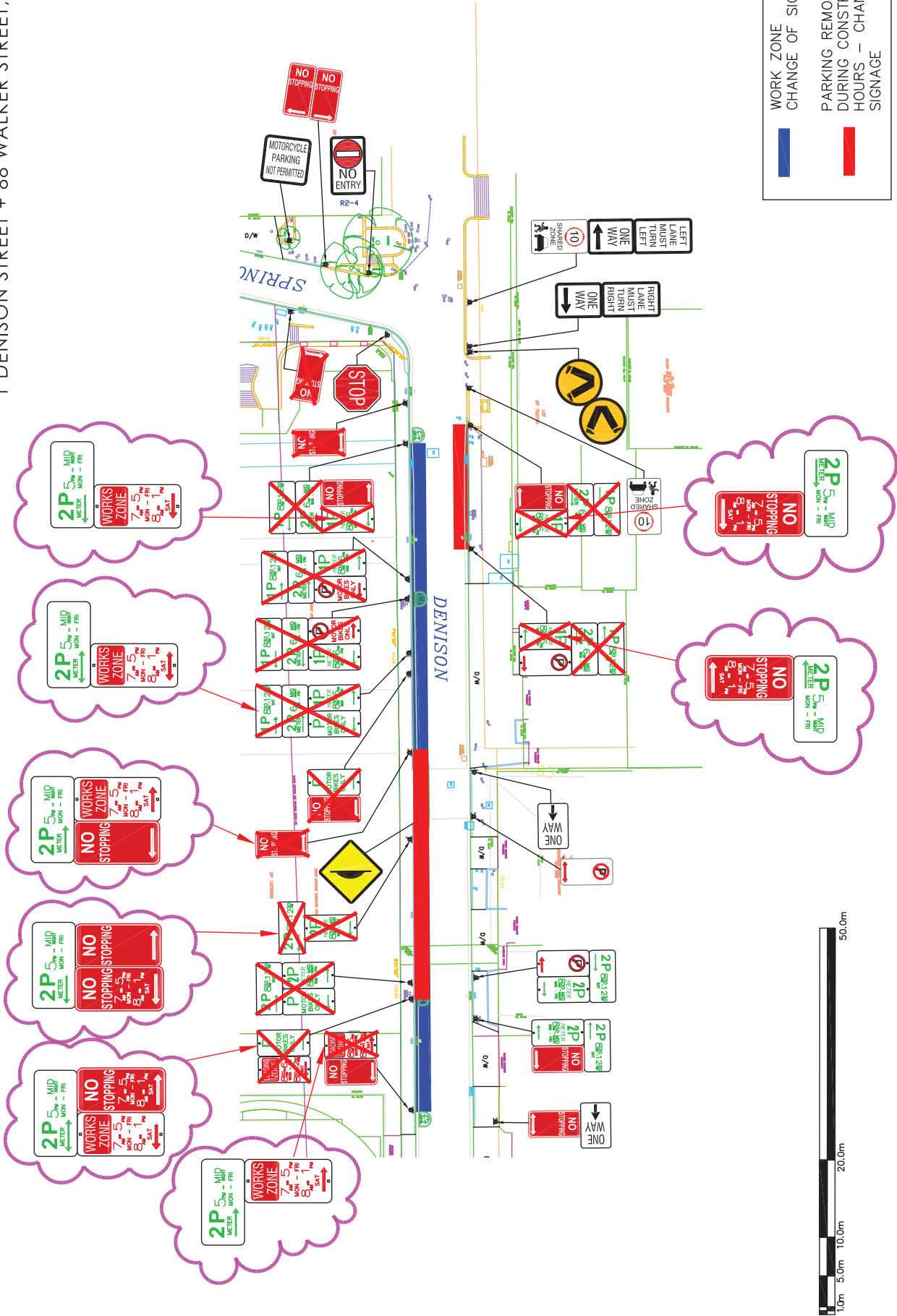


1 DENISON STREET + 88 WALKER STREET, NORTH SYDNEY



DENISON STREET - PROPOSED WORK ZONE SIGNAGE CHANGES

1 DENISON STREET + 88 WALKER STREET, NORTH SYDNEY



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Figure E

Date: 05 JULY 2011

Appendix C Traffic Control Plans (Principles)

