GTAconsultants

Central Park Block 4N Proposed Mixed Development Construction Traffic Management Plan

Client // Central Park JV No. 2

Office // NSW

Reference // 12S1395000

Date // 21/10/14

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Construction Traffic Management Plan

Issue: A 21/10/14

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Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	21/10/14	Final	Oasika Faiz, Brigette Humphrey-Robinson	Wayne Johnson	Michael Lee	

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Tables

1. Introduction

1.1 Background

GTA Consultants has been commissioned to prepare a Construction Traffic Management Plan (CTMP) for Block 4N construction works at Central Park. The CTMP is to accommodate a State Significant Development Application for Block 4N.

The State Significant Development Application seeks approval for the redevelopment of Block 4N as a mixed use building, with associated non-residential/retail uses located on ground floor, consistent with the Concept Plan. Specifically, the proposal includes the following uses (as shown on the Architectural Drawing):

- Residential – 3,518m^2 located on levels 11 to 16 consisting of 48 permanent residential apartments
- Retail – 236m^2 located on the ground level with frontage to Central Park Ave
- Hotel – 13,986m^2 located from ground to level 18 – approximately 283 hotel rooms
- Commercial – 6,146m^2 located on levels 5 to 10
- Childcare Centre (shell space) – 1,080m^2 located on level 3 and 4
- Existing Australia Hotel and Terraces (Heritage Pub and Terraces) – 789m^2.

The proposal has a total gross floor area of 25,755m^2 of which 22,237m^2 is to be used for non-residential purposes and 3,518m^2 is to be used for residential purposes in accordance with the Concept Plan as recently modified (MP 06_0171 MOD9).

Hotel facilities, including concierge, storage, swimming pool, spa, gym, conference facilities, will be located within the building. The hotel swimming pool, spa and gym will also be made available to permanent residents. Separate entries and lobbies are proposed to the commercial office, childcare, hotel and permanent residential.

The existing Australia Hotel and adjoining Abercrombie Street terraces will be retained, with the design creating a publicly accessible courtyard behind the terraces, accessible from Broadway and Abercrombie Street.

A combined basement below Block 1 and 4N is proposed, that will accommodate all car parking, bicycle parking, residential and commercial storage, waste handling, back of house facilities, building plant and services. The basement will have a connection into Block 4S and Central Park's Central Thermal Plant. Service vehicle loading is provided via the Abercrombie Street access ramp, and car park access for residents, hotel guests, office, retail and childcare drop off car spaces provided via Central Park Avenue. The basement will accommodate a total of 126 car parking spaces for the proposed Block 4N use. Additional spaces are provided within the basement that will service Block 1 and the Brewery Yard building as shown on the Architectural Plans.

1.2 Purpose of this Report

This Construction Traffic Management Plan (CTMP) addresses the traffic and transport impacts during the construction phase of the development.

The objectives of this report are:

- to provide a detailed description of the project and construction activities

- to examine and consider the proposal's likely impact to traffic on the surrounding road network, and
- to provide mitigating measures to address any traffic and transport impacts.

This CTMP has considered comments raised in the Secretary's Environmental Assessment Requirements (SEARs) for the Environmental Impact Statement (EIS). The relevant comments are:

- detail the access arrangements at all stages of construction, potential vehicle routes, number of trucks, and traffic control measures (this is addressed in Sections 3, 4 and 5), and
- provide an assessment of pedestrian movements through and around the site, and if necessary, identify an appropriate alternate route for pedestrians during construction (this is addressed in Sections 2 and 4).

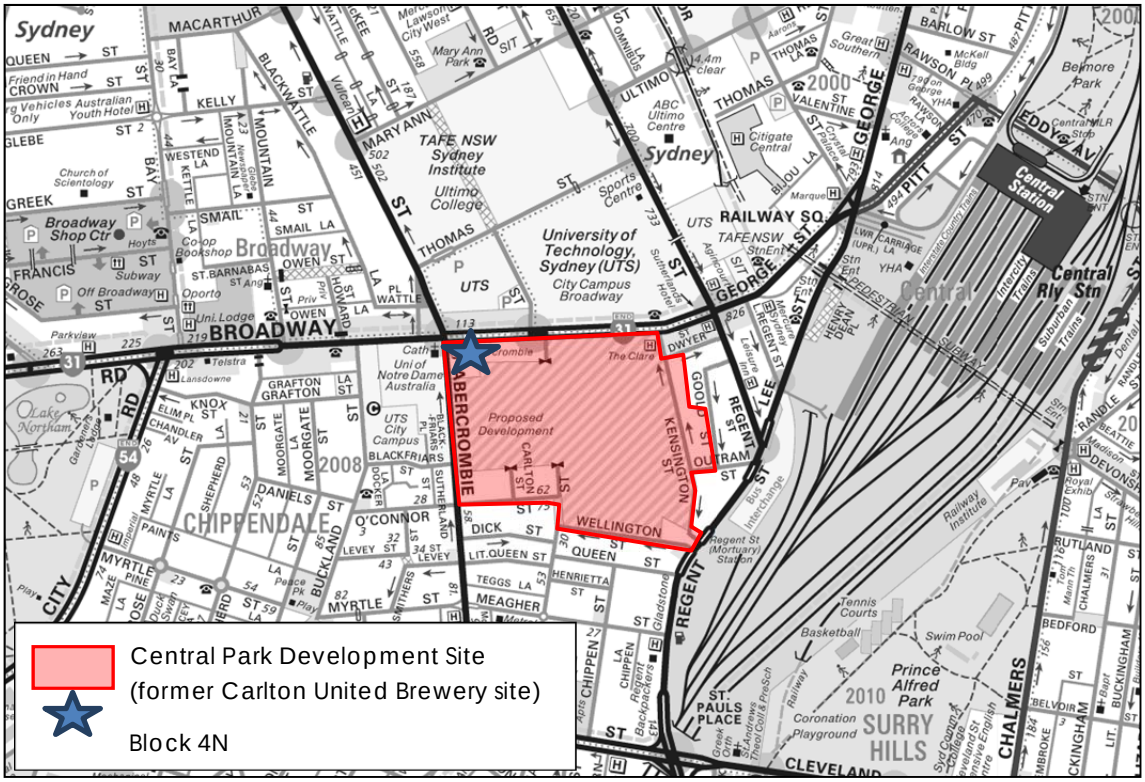
It is noted that a contractor has not yet been appointed. As such, this CTMP has been prepared using information provided by Frasers Property Australia based on their expectations and construction works already completed for other buildings within Central Park.

The report has been checked by engineers who hold the Roads and Maritime Services (RMS) Select/ Modify Traffic Control Plans (red card) and Design and Inspect Traffic Control Plans (orange card) certification.

2. Existing Conditions

The Central Park development site is located in Chippendale on the southern edge of the Sydney CBD, in close proximity to Central Railway Station, the University of Technology Sydney (UTS) and Broadway Shopping Centre. The site is bounded by Broadway to the north and Abercrombie Street to the west, O'Connell Street and Wellington Street to the south and Kensington Street and Goold Street to the east. Block 4N is located in the north-west corner of the site, adjacent to Abercrombie Street and Broadway as shown in Figure 2.1.

Figure 2.1: Subject Site and its Environs



Basemap Source: Sydway Publishing

2.1 Road Network

2.1.1 Adjoining Roads

Broadway

Broadway is a State Road (HW5) in the vicinity of the site and is aligned in an east-west direction. It is a two-way road configured with four lanes in each direction (including one bus lane in each direction) and functions as one of the main routes for traffic into and out of the Sydney CBD. East of the Regent Street/ Harris Street intersection (60 metres east of the site), Broadway becomes George Street and carries approximately 72,000 vehicles per day[1].

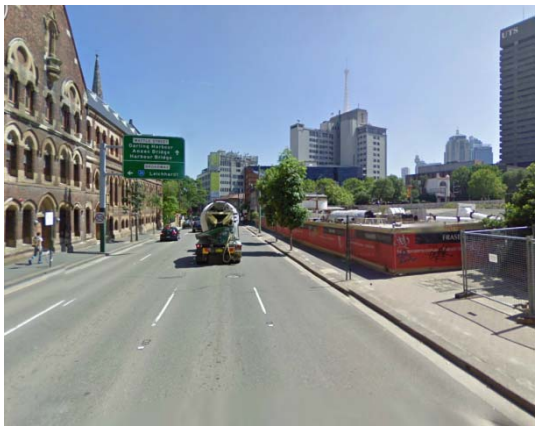
1 Based on 2005 Roads and Maritime Services (RMS) AADT data.

Abercrombie Street

Abercrombie Street is a classified State Road (MR594) in the vicinity of the site aligned in a north-south direction. It is a one-way northbound road configured with a four-lane, 14m wide carriageway, set within a 24m wide road reserve (approx.). Abercrombie Street is shown in Figure 2.3 and carries approximately 18,000 vehicles per day[2].

Figure 2.2: Broadway (looking west)

Figure 2.3: Abercrombie Street (looking north)



2.1.2 Surrounding Intersections

The following intersections currently exist in the vicinity of the site:

- Abercrombie Street-Broadway-Wattle Street (signalised)
- Abercrombie Street-O'Connor Street (signalised), and
- Broadway-Chippendale Way (signalised).

2.2 Public Transport

The site is well serviced by high frequency public transport with Central Transport Interchange, the key transport hub in Sydney located 750m east of the site.

2.2.1 Bus Network

The subject site is located in close proximity to several key bus corridors including George Street to the east and Broadway to the north. Central Transport Interchange features four main bus hubs, including Railway Square (750m east of the site), George Street, Eddy Avenue and Chalmers Street which serve destinations across the Sydney Metropolitan Area including Sydney's south, eastern suburbs, inner-west, northern beaches and north-west.

2.2.2 Rail Network

Central Railway Station located approximately 750m east of the site serves as the key rail hub in Sydney for CityRail services to destinations across the Sydney Metropolitan Area, the Illawarra, Blue Mountains and Central Coast. Central Station is also the hub for interstate rail services in Sydney as well as the main terminus for the Central to Lilyfield Light Rail Network.

2 Based on 2005 Roads and Maritime Services (RMS) AADT data.

2.3 Pedestrian Infrastructure

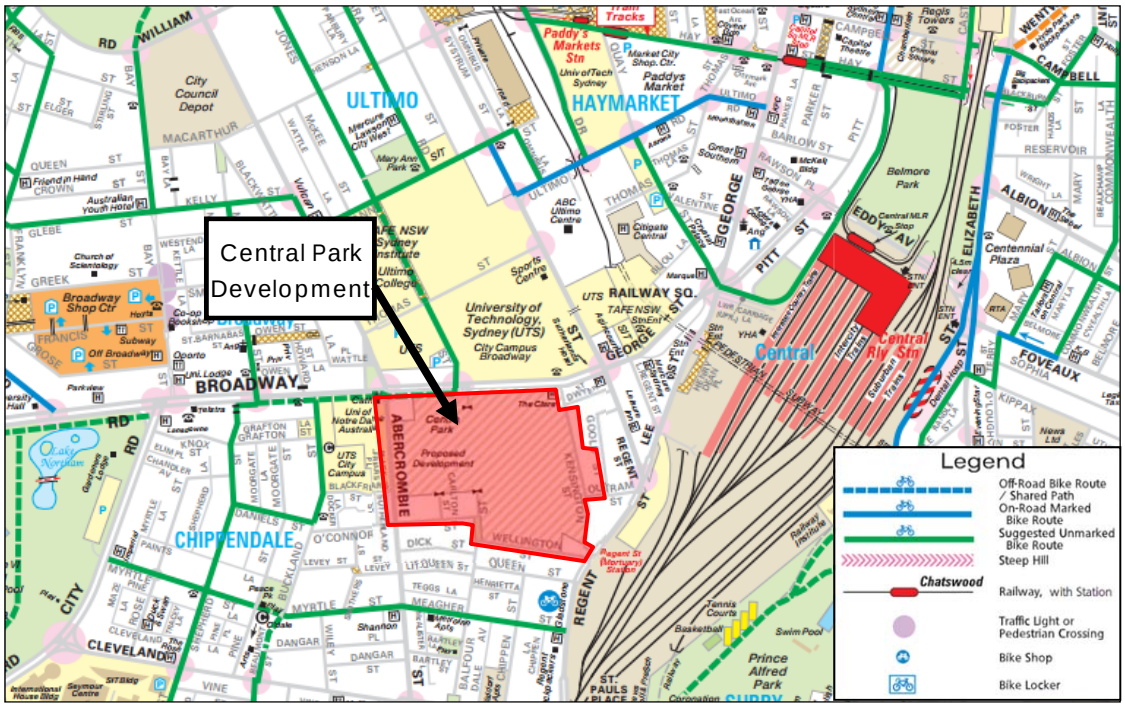
The pedestrian network surrounding the site is well established with pedestrian paths located on both sides of Abercrombie Street, Chippendale Way, Broadway and O'Connor Street. Safe crossing facilities are provided at the following locations:

- all legs of the Abercrombie Street-Broadway-Wattle Street intersection
- all legs of the Broadway-Chippendale Way intersection (east of the site), and
- all legs of the Abercrombie Street-O'Connor Street intersection (south of the site).

2.4 Cycle Infrastructure

The site is located within close proximity to both on and off-road cycling facilities as indicated in an extract from the City of Sydney's cycle network map shown in Figure 2.4.

Figure 2.4: Cycle Network



Source: City of Sydney Cycling Guide

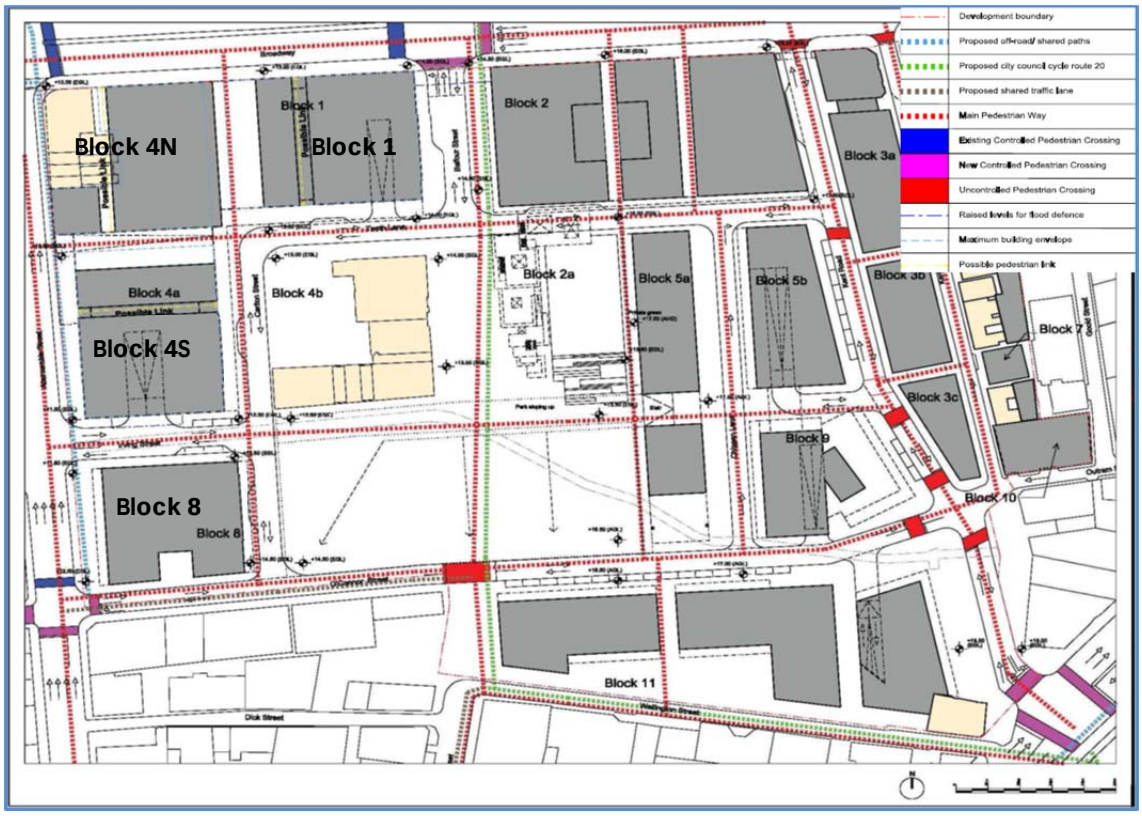
3. Overview of Construction Activities

3.1 Description of Works

Block 4N is proposed as a mixed-use building located at the corner of Abercrombie Street and Broadway. Block 4N shares a combined basement car park with Block 1 which is included as part of an earlier stage of the Central Park construction works.

The location of Block 4N is shown in Figure 3.1. This plan shows the approved Concept Plan including the internal road network and external road network connections.

Figure 3.1: Current Concept Plan



Source: Frasers

3.2 Duration and Staging of Works

The staging, description and estimated duration of the construction activities are summarised in Table 3.1.

Table 3.1: Construction Staging, Description and Duration

Construction Phase	Description	Timing	Duration
Site establishment	○ clearance of the site ○ installation of hoarding and scaffolding	Oct 2015 – Dec 2015	3 months
Construction	○ erection of tower crane ○ construction of new building superstructure ○ façade ○ services and fit out	Jan 2016 – May 2017	17 months
Public domain works	○ public domain works within and around the buildings.	Jun 2017	1 month
	Total	**October 2015 - Jun 2017**	**21 months**

As shown in Table 3.1, the construction works are anticipated to take approximately 21 months to complete.

3.3 Construction Details

3.3.1 Plant and Equipment

Construction vehicles which are likely to be generated by the proposed construction activities generally include large, medium and small rigid trucks. The use of semi-trailers and articulated trucks including truck and dogs would require separate approval from the City of Sydney Construction Regulation Unit (CRU) in accordance with the City of Sydney Standard Requirements for Construction Traffic Management Plan.

3.3.2 Work Hours

Construction activities would be undertaken in accordance with City of Sydney consent conditions which would be between the following times consistent with the other works within the Central Park site:

- 7:00am - 7:00pm, Monday to Friday
- 7:00am - 5:00pm, Saturdays.

No work would be undertaken on Sundays or public holidays. Work outside of these hours would only occur with specific approval from City of Sydney.

3.3.3 Worker Parking

No dedicated worker parking would be provided for construction workers. Given that the Central Park site is located in close proximity to high frequency public transport, specifically Central Railway Station and bus services along Broadway, staff would be encouraged to use public transport where practical. Workers would also be encouraged to car pool.

3.3.4 On-street works zone

Given the constraint of the site, it is not possible to provide any on-site loading facilities relating to construction activities. As such, an on-street works zone is required to enable the delivery and removal of materials for the duration of Block 4N works. It is understood that the proposed construction activities would not be possible without an on-street works zone for which the contractor would be required to seek a separate approval from Council/RMS. Impacts of the

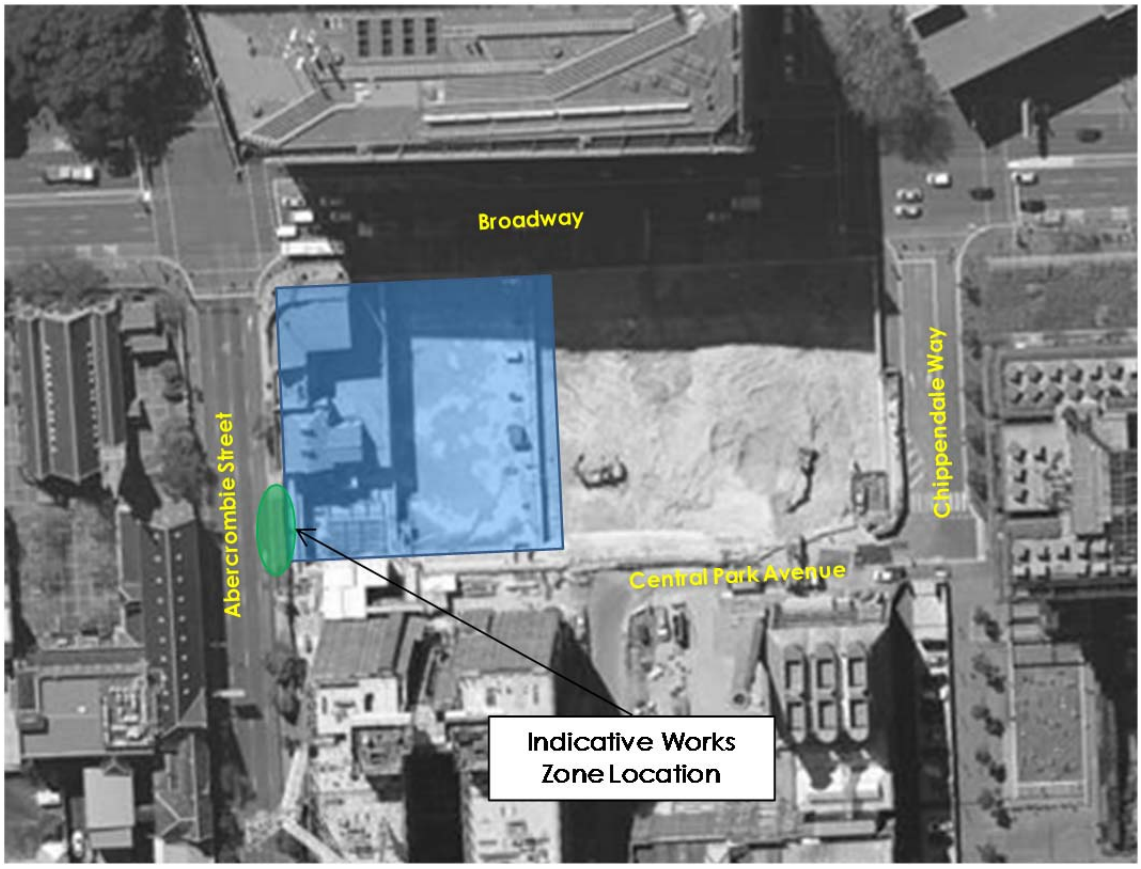
works zone and any mitigating measures would also be assessed as part of the works zone Application.

It is worth noting that the proposed works zone would only be utilised for Block 4N works, with other arrangements made for construction works at adjacent sites, as detailed in their separate CTMP's.

For pedestrian safety, materials cannot be craned over an unprotected footpath. Therefore, Class B hoarding would be required along the Abercrombie Street frontage of the site (subject to approval from CRU).

The indicative location of the proposed Works Zone is illustrated in Figure 3.2.

Figure 3.2: Indicative Works Zone Location



Basemap source: Nearmap

3.4 Cumulative Construction Staging

It is understood that the construction of Block 4N would overlap with the following construction works:

- Block 4S, located south of Block 4N on the northern side of Irving Street
- Block 8, located south of Irving Street
- Block 1, located on the eastern alignment of Block 4N.

The relative locations of the sites are shown in Figure 3.1.

In addition to the above, works are also being conducted along Kensington Street (east of the site). It is considered that traffic arising from activities on Kensington Street would not directly

interact with traffic movements from the subject site. Therefore, this is not considered further in this assessment.

The anticipated construction staging and overlapping is shown in Table 3.2.

Table 3.2: Basement and Construction Works Overlap

Stage (for the purpose of this report only)	Block 1	Block 4S Construction	Block 8 Construction	Block 4N Construction	Duration (From June 2015)
1 (Commencing June 2015)	Construction	Public domain works	Construction		1 month
2	Construction	Block 4S Construction Complete	Construction		3 months
3	Construction		Construction	Site Establishment	3 months
4	Construction		Construction	Construction	7 months
5	Construction		Public domain works	Construction	1 months
6	Construction		Block 8 Construction Complete	Construction	3 months
7	Public domain works			Construction	1 months
8	Block 1 and 4N Construction Complete			Construction	5 months
9				Public domain works	1 month
				Total	**25 months**

4. Construction Impact Assessment

This section of the report outlines specific tasks during the construction works of Block 4N.

4.1 Truck Movements

The estimated truck movements associated with each stage of Block 4N construction works are summarised in Table 4.1.

Table 4.1: Summary of Construction Traffic Movements

Construction Phase	Approx. Working Days	Peak Movements Per Hour	Average Movements Per Day
Site Establishment	72	4	10
Construction	408	6	30
Public domain works	24	2	6

As shown in Table 4.1, the construction of Block 4N is expected to generate between 6 and 30 truck movements (two-way) per day, with peak truck movements expected to occur during the construction stage.

The works zone would be designed to accommodate the peak vehicle movements as presented above.

4.2 Cumulative Truck Movements

With consideration of the truck movements outlined above and the cumulative staging outlined in Section 3.4, the cumulative truck movements have been estimated and are shown in Table 4.2.

Table 4.2: Cumulative Construction Traffic Movements

Stage (for the purpose of this report only)	Peak Movements Per Hour				Total Peak Truck Movements Per Hour	Average Movements Per Day				Total Average Truck Movements Per Day
	Blocks 1 & 4N	Block 4S	Block 8	Block 4N		Blocks 1 & 4N	Block 4S	Block 8	Block 4N	
1	6	2	6		14	30	6	30		66
2	6		6		12	30		30		60
3	6		6	4	16	30		30	10	70
4	6		6	6	18	30		30	30	90
5	6		2	6	14	30		6	30	66
6	6			6	12	30			30	60
7	2			6	8	6			30	36
8				6	6				30	30
9				2	2				6	6

As shown in Table 4.2, the peak traffic generation will occur when there is an overlap of construction activities at all four sites. The peak traffic volumes would be approximately 90 movements per day or approximately 18 truck movements per hour. This is significantly less than the future traffic volumes determined within the Concept Plan for the site and would be adequately accommodated within the existing road network.

4.3 Construction Vehicle Routes

Generally, construction vehicles would have origins and destinations throughout Sydney. However, all construction vehicles would be restricted to the arterial road network as much as practical.

As such, dedicated construction vehicle routes have been developed to provide the shortest distances to/from the arterial road network and are shown in Figure 4.1.

The designated truck routes for construction vehicles travelling to and from the site are as follows.

Inbound

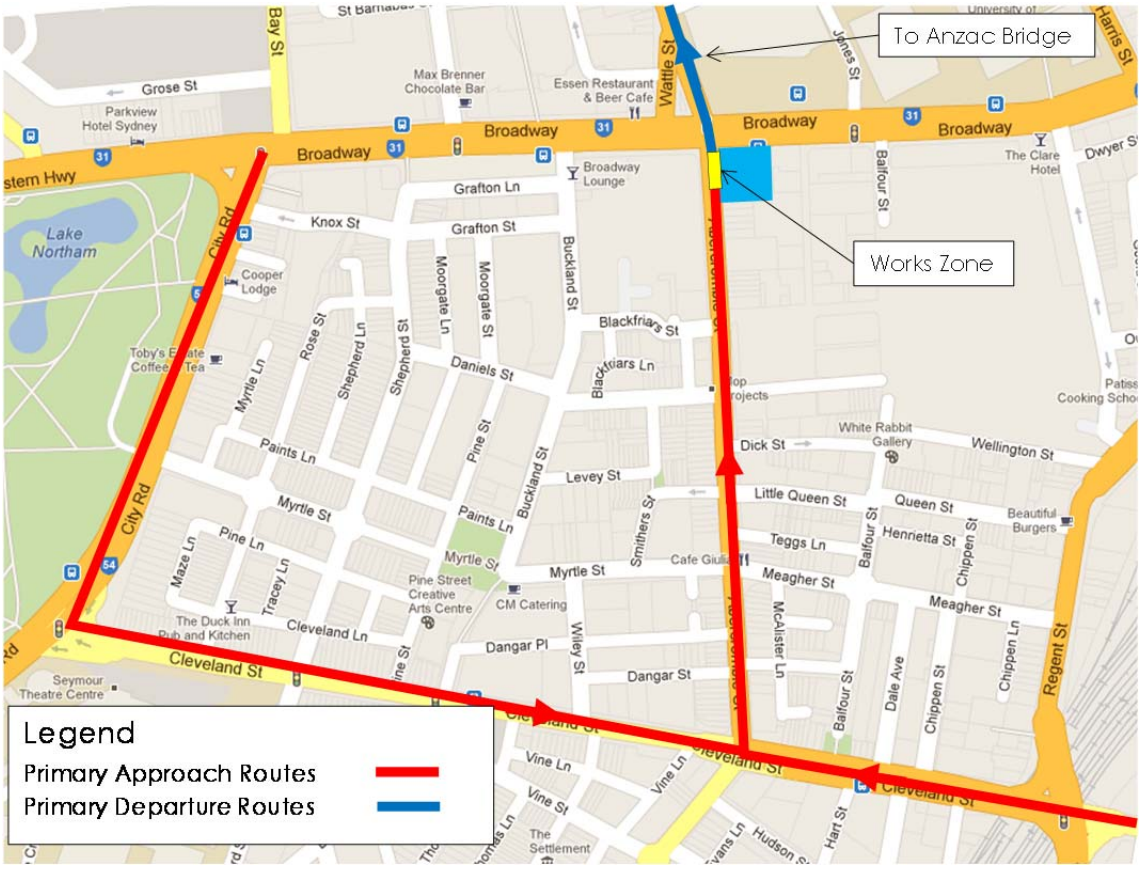
- From the Eastern Distributor, travel west along Cleveland Street, turn right into Abercrombie Street and merge into the works zone.
- From the M4 Motorway, travel east along Cleveland Street, turn left into Abercrombie Street and merge into the works zone.

To avoid delays and queuing at surrounding intersections, vehicle drivers would radio the site office on approach to confirm their arrival location.

Outbound

- From the works zone at Abercrombie Street travel straight through to Wattle Street, to Anzac Bridge and Sydney Harbour Bridge.

Figure 4.1: Block 4N Construction Traffic Routes



Basemap Source: Google Maps

4.4 Public Transport Services

There will be no re-direction of public transport services during construction works. No adverse impacts on existing public transport services or facilities would be expected.

4.5 Pedestrian and Cyclist Access

Pedestrian access along Abercrombie Street would not be affected as part of the site. However, as discussed, Class B hoarding would be required along the Abercrombie Street footpath to maintain pedestrian safety.

Cyclists are not expected to be affected as a result of the construction works.

4.6 Emergency Vehicle Access

Emergency vehicle access to, from and around the construction site would be maintained at all times.

Liaison would be maintained with the police and emergency services agencies throughout the construction period and a 24-hour contact would be made available for 'out-of-hours' emergencies and access.

Emergency protocols on the site would include a requirement for the Principal Contractor to assist with emergency access to the site.

Thus there will be no adverse impacts to the provision of existing emergency vehicle access to other neighbouring properties as a result of the proposed construction activities.

5. Mitigation Measures

5.1 Traffic Management Measures

Advisory road signage should be installed along Abercrombie Street in accordance with Traffic Control Plan (TCP) 195 referenced in Traffic Control at work sites and AS1742.3 Manual of Uniform Traffic Control Devices - Traffic Control Devices for Works on Roads. This TCP is contained in Appendix A. Similar signage is currently installed along Abercrombie Street relating to construction works at Block 8 as shown in Appendix B and it is understood that similar signage would be provided for Block 1 works (with coordination between works and associated access arrangements).

In addition, similar signage would be required for Block 4N. However, the location of advisory signage for the cumulative works would need to be coordinated by the contractor to reduce confusion and unnecessary signage clutter along Abercrombie Street.

The need for any further mitigating measures relating to the works zone (including potential traffic controllers and associated signage) would be assessed as part of the works zone Application.

5.1.1 Vehicle Access (Works Zone)

- Construction vehicles shall radio site office on approach to the site to ensure access to the works zone and loading facilities within the site are available.
- Vehicle access along Abercrombie Street shall be maintained at all times. Any potential impacts associated with the proposed works zone would be addressed as part of the works zone application and are subject to consent authority approval.
- Traffic controllers shall not be permitted to stop traffic flows without prior approval from the appropriate authorities.
- If there are any materials spilled onto the road, site personnel and equipment shall rectify, subject to appropriate OH&S provision and approval from CRU.

5.1.2 Truck Routes

- Site induction shall include procedures for accessing the works zone in Abercrombie Street.
- Drivers shall adhere to the nominated truck routes, as shown in Figure 4.1.
- Drivers shall be aware of pedestrians and cyclists in the vicinity of the site.
- Drivers shall be aware that the local area is signposted as 50km/h with Abercrombie Street and Broadway signposted as 60km/h.

5.2 Site Inspections and Record Keeping

A daily inspection before the start of construction activity shall take place to ensure that conditions accord with those stipulated in this CTMP and that there are no potential hazards. Any possible adverse impacts shall be recorded and dealt with if they arise.

5.3 Site Induction

All staff employed on the site by the Principal Contractor shall be required to undergo a site induction. The induction shall include permitted access routes to and from the construction site for site staff and delivery vehicles as well as standard environmental, OH&S, driver protocols and emergency procedures.

6. Conclusion

This construction traffic management plan (CTMP) has been prepared to document the proposed construction activities and associated construction traffic management measures necessary to facilitate the proposed construction works at Block 4N within the Central Park development site. This CTMP has been prepared with consideration with the SEARs.

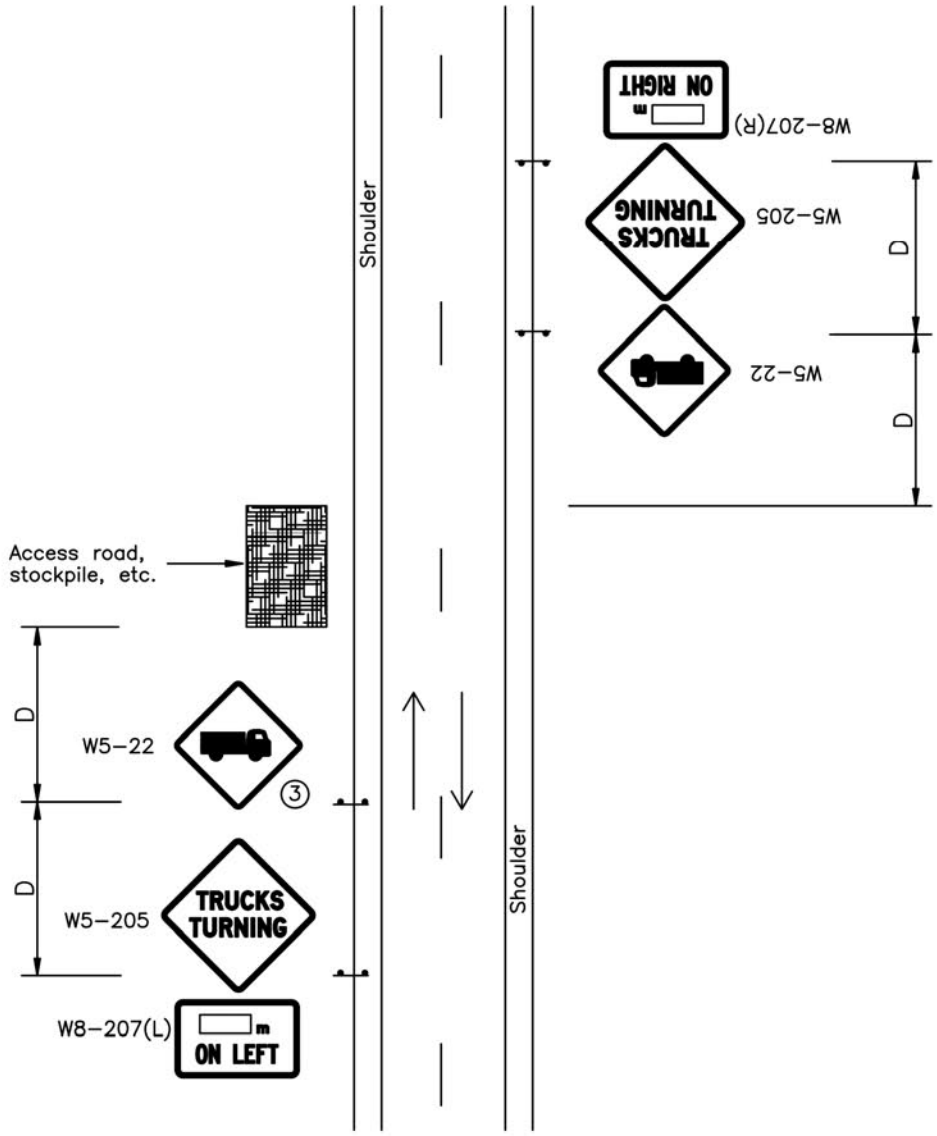
Based on the findings of the report presented above, it is concluded that:

- The construction works at Block 4N are expected to generate approximately 30 vehicle movements (two-way) per day, with a peak hourly generation of up to 6 vehicle movements per hour.
- The cumulative construction of Block 1, Block 4S and Block 8 are expected to generate approximately 90 vehicles per day, with a peak hourly generation of up to 18 vehicle movements per hour.
- Construction vehicle movements to and from the site can be satisfactorily accommodated by the surrounding road network.
- Signage in accordance with Traffic Control Plan 195 will be implemented along Abercrombie Street to alert other drivers, pedestrians and cyclists that construction movements are taking place.
- A works zone application will be required to be submitted for the provision of a works zone on Abercrombie Street for Block 4N construction activities only, including assessment of any potential impacts.
- A number of driver protocols would be established as part of the site induction procedure for drivers to ensure the safety of motorists, pedestrians and cyclists.
- The site is located in close proximity to the Central Transport Interchange which is served by high frequency public transport services.
- Pedestrian access along Abercrombie Street would not be affected as part of the site. However, Class B hoarding would be required along the Abercrombie Street footpath to maintain pedestrian safety.
- Cyclists are not expected to be affected as a result of the construction works.

The contractor has not yet been appointed. As such, this CTMP has been prepared using information provided by Frasers Property Australia based on their expectations and construction works already completed for other buildings within Central Park. However, this CTMP should be updated to address specific details, once the contractor has been appointed and subsequent to discussions with the appropriate consent authorities.

Appendix A

Standard Traffic Control Plan



NOTE:

① For use where roadside is generally undeveloped, ADT is more than 1,500 vehicles per day, sight distance is restricted and there are more than 20 truck movements per shift.

② See ***Traffic control at work sites,*** Section 7.7, ***Signs for depots, stockpiles, quarries, gravel pits etc.***

③ For short term works use T2–25.

ACCESS TO DEPOT, STOCKPILE, QUARRY, GRAVEL PIT ETC.
ALL ROADS
LONG TERM USE

T000195

TCP 195

Appendix B

TCP for Block 8

RED CARD
WAYNE JOHNSON: LICENSE No. 2542040795

BROADWAY

BROADWAY

ABERCROMBIE STREET

N

CONSTRUCTION ACCESS ONLY

CONSTRUCTION ACCESS ONLY

TRAFFIC CONTROLLER TO STOP PEDESTRIANS CROSSING IRVING ST WHILST CONSTRUCTION VEHICLES TURN RIGHT FROM ABERCROMBIE ST INTO IRVING ST

IRVING STREET

FENCE

FENCE

R2-6A(R)
NO RIGHT TURN

BLACKFRIARS STREET

CENTRAL PARK AVENUE

60m

KEY

SIGN

TRAFFIC CONTROLLER

W5-22

W5-22

O'CONNOR STREET

O'CONNOR STREET

50m

W5-205
TRUCKS TURNING
120 m ON RIGHT
W8-207(R)

W5-205
TRUCKS TURNING
120 m ON RIGHT
W8-207(R)

DICK STREET

60m

LEVEY STREET

LITTLE QUEEN STREET

ROADWORK ON SIDE ROAD
T1-25

T1-5-1

ROADWORK ON SIDE ROAD
T1-25

T1-5-1

TEGGS LANE

MEAGHER STREET

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

GTAconsultants
www.gta.com.au

CENTRAL PARK DEVELOPMENT
BLOCK 8
ABERCROMBIE STREET, CHIPPENDALE
11 OCTOBER '13
NOT TO SCALE
12S1395502-05-P1

NOTES
1. All signs to be a minimum of size A.
2. Location of signs to be confirmed on-site to ensure appropriate visibility.
3. Hours of work: 7:30am - 5:30pm, Monday to Friday and
   7:30am - 3:30pm, Saturday.

PLOTTED BY : Barry Li ON 11/10/2013 AT 10:45:46 AM

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