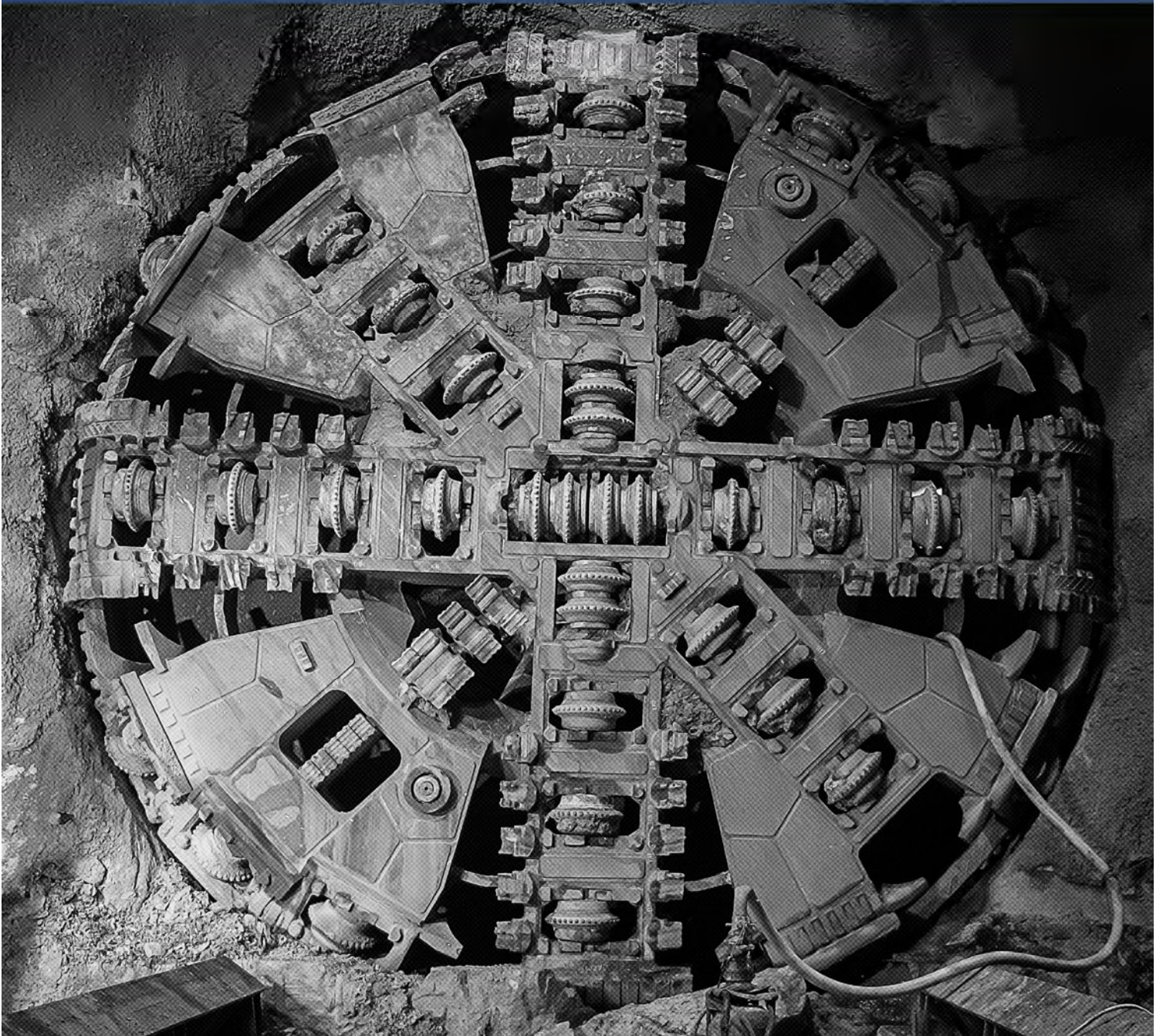


# Heavy Vehicle Local Road Report for Use of Local Roads

Hunter Street Tower Crane Assembly

Rev 0



## Heavy Vehicle Local Road Report for Use of Local Roads

### Hunter Street Tower Crane Assembly

Project number	7040
Document number	SMWSTETP-JCG-SCB-SN100-TF-RPT-090015

#### Document approval

Rev	Date	Prepared by	Reviewed by	Comments	Approved by
A	22/05/2023				
0	20/06/2023			DPE Approval	
Signature:					



## Table of contents

<b>1. Introduction.....</b>	<b>2</b>
1.1. Project Background.....	2
1.2. Purpose and Scope of this HVLR .....	3
1.3. Ministerial Conditions of Approval.....	3
1.4. Existing Approved Routes.....	4
<b>2. Proposed Route and Local Roads to be Used.....</b>	<b>4</b>
2.1. Proposed Routes and Local Roads .....	4
2.2. Existing Road Environment.....	5
2.3. Public Transport Network.....	6
2.4. Pedestrian and Cyclist Routes.....	7
2.5. School Zones .....	8
2.6. Aged Care and Childcare Facilities.....	8
2.7. Construction Traffic.....	9
2.8. Dilapidation .....	10
<b>3. Swept Path Assessment.....</b>	<b>11</b>
<b>4. Road Safety Audit.....</b>	<b>11</b>
<b>5. Consultation.....</b>	<b>11</b>
<b>6. Qualification.....</b>	<b>12</b>
<b>7. Conclusion .....</b>	<b>12</b>
Appendix A Swept Path Assessment.....	13
Appendix B Road Safety Audit.....	14
Appendix C CTMP Comment Register .....	15
Appendix D Traffic Guidance Scheme .....	16
Appendix E Heavy Vehicle Safety Equipment .....	17
Appendix F Approvals.....	18

## 1. Introduction

### 1.1. Project Background

Sydney Metro West is a new 24-kilometre metro line that will connect Greater Parramatta with the Sydney CBD via stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street (Sydney CBD).

The planning process for Sydney Metro West was assessed as a staged infrastructure application under section 5.20 of the Environment Planning and Assessment Act 1979 (EP&A Act).

Stage 1 of the development, the Sydney Metro West Concept and major civil construction work for Sydney Metro West between Westmead and The Bays (SSI-10038 Schedule 2), was approved on 11 March 2021 and includes:

- Construction of a new passenger rail infrastructure between Westmead and the central business district of Sydney, including:
  - Tunnels, stations (including surrounding areas) and associated rail facilities
  - Stabling and maintenance facilities (including associated underground and overground connections to tunnels)
- Modification of existing rail infrastructure, including stations and surrounding areas
- Ancillary development.

Stage 2 of the planning approval process, the ETP Works, includes all major civil construction work including station excavation (Pyrmont Station and Hunter Street Station (Sydney CBD) and tunnelling between The Bays and Sydney CBD (Figure 1).

It is noted that the existing Sydney Metro West precast facility at Eastern Creek will be utilised in the delivery of concrete segments.

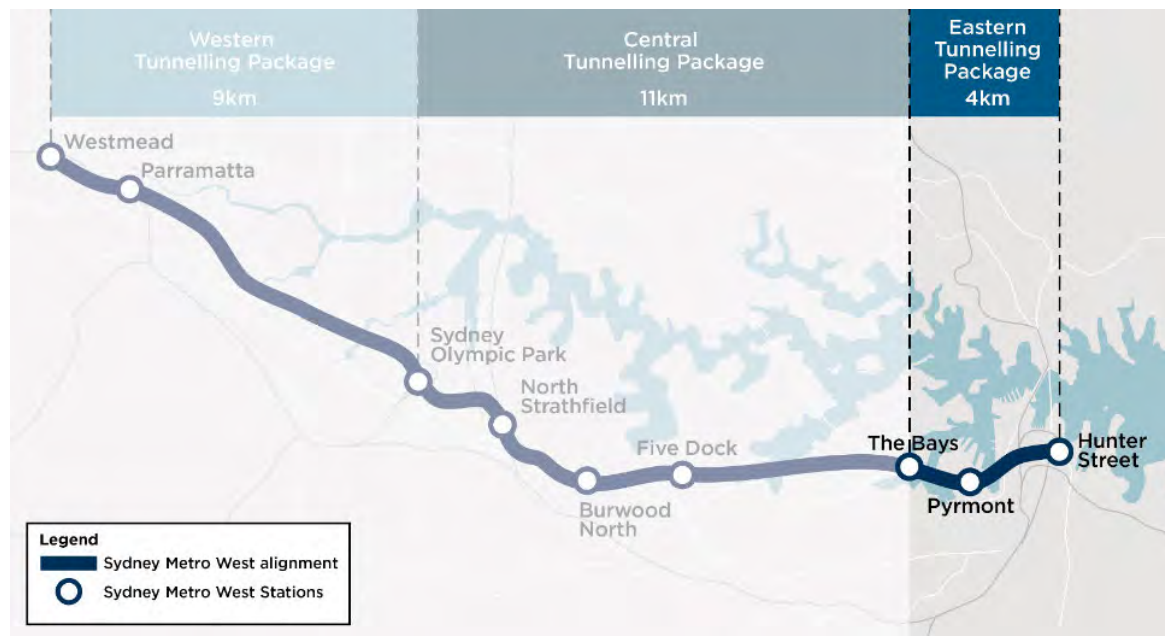


Figure 1: Sydney Metro West alignment



## 1.2. Purpose and Scope of this HVLR

The scope of this Heavy Vehicle Local Road (HVLR) report is in relation to the heavy vehicle routes which are in addition to the approved haulage routes as shown in Figure 2. There are two additional routes required for the assembly of the Hunter Street East and West tower cranes. The routes are required to provide an inbound route using Gresham Street, and an outbound route using Pitt Street, not currently provided by the approved routes.

The following assessments have been undertaken in this HVLR to address the Ministerial Conditions of Approval:

- Swept path analysis assessment for the design vehicle (19.5m long semi-trailer) along the proposed inbound and outbound haulage routes as depicted in the light blue and red in Figure 3. The swept path diagrams include all intersections where turning movements of the design vehicle will occur along these haulage routes.
- Road Safety Audit undertaken independently on the swept path assessment with a site inspection to identify safety issues associated with pedestrians, cyclists and two-way traffic flow.
- Details on the dates of the road dilapidation survey for the subject modified haulage routes.
- Measures to avoid schools, aged care facilities, and child care facilities during their peak operation times.
- Development of recommendations on the suitability of the proposed modified haulage routes taking into consideration the above assessment results.

## 1.3. Ministerial Conditions of Approval

This report complies with the following Condition of Approvals (CoA) and Revised Environmental Management Measures requirements.

Table 1: Compliance to CoA

ID	Conditions	Reference in this HVLR Report
D73	Local roads proposed to be used by heavy vehicles to directly access construction sites that are not identified in the documents listed in Condition A1 must be approved by the Planning Secretary and be included in the CTMPs.	This HVLR report
D74	All requests to the Planning Secretary under Condition D73 must include the following:	-
	(a) a swept path analysis;	Section 2.8 Appendix A
	(b) demonstration that the use of local roads by heavy vehicles for the CSSI will not compromise the safety of pedestrians and cyclists or the safety of two-way traffic flow on two-way roadways;	Section 4 Appendix B
	(c) details as to the date of completion of the road dilapidation surveys for the subject local roads;	Section 2.8
	(d) measures that will be implemented to avoid where practicable the use of roads past schools, aged care facilities and child care facilities during their peak operation times; and	N/A (Section 2.5 and Section 2.6)  Refer to Section 2.7.2 for pedestrian and cyclist management
	(e) written advice from an appropriately qualified professional on the suitability of the proposed heavy vehicle route which takes into consideration items (a) to (d) of this condition.	Section 6



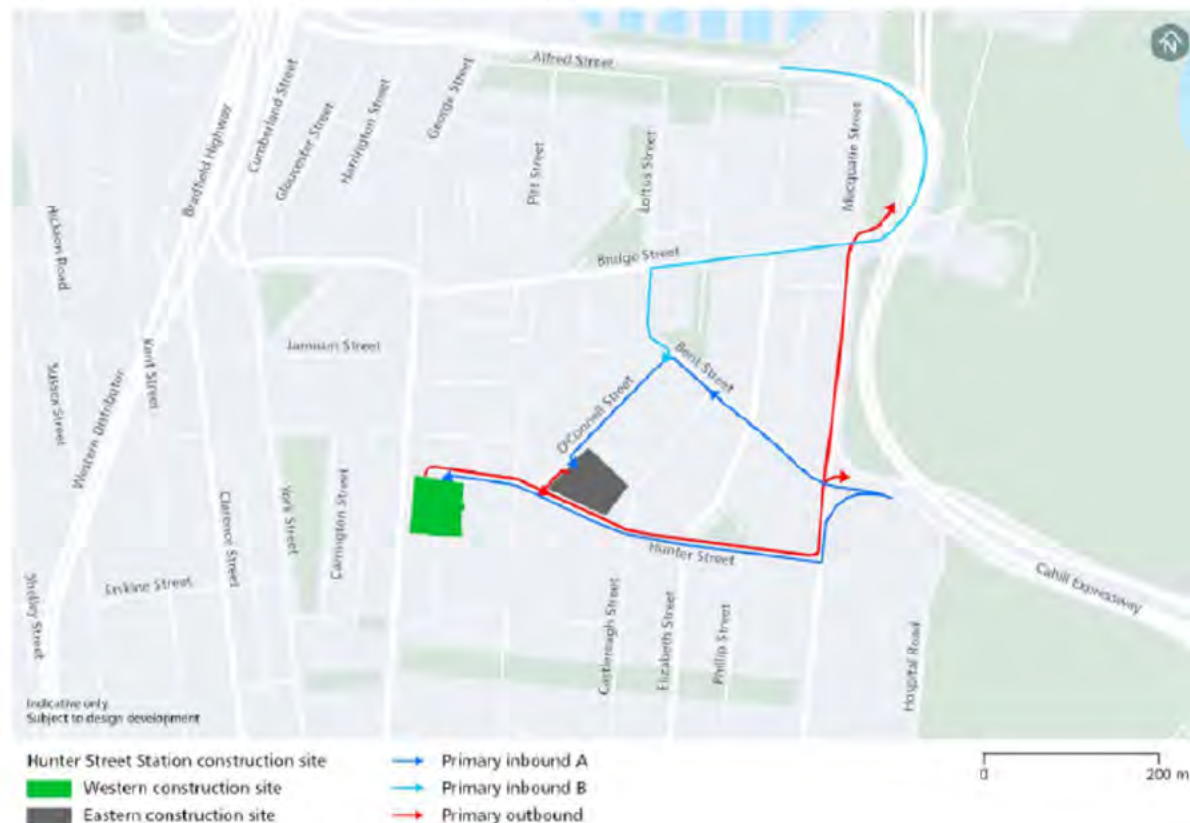
Table 2: Compliance to REMM

ID	Conditions	Reference in this HVLR Report
TT6	All trucks would enter and exit construction sites in a forward direction, where feasible and reasonable.	Appendix A
TT7	Construction site traffic would be managed to minimise movements during peak periods.	Section 2.7.3
TT8	Construction site traffic would be managed to minimise vehicle movements through school zones during pick up and drop off times.	N/A (Section 2.5 and Section 2.6)  Refer to Section 2.7.2 for pedestrian and cyclist management

Refer to Construction Traffic Management Plan SMWSTETP-JCG-SCB-SN100-TF-PLN-002525 - Hunter St- Tower Crane Install (22 May 2023) for the compliance for other REMM requirements.

## 1.4. Existing Approved Routes

The existing approved EIS routes for the Hunter Street constructions site are shown in Figure 2, as identified in the Response to Submission (RTS).



Reference: Response to Submission

Figure 2: Existing Approved Haulage Routes

## 2. Proposed Route and Local Roads to be Used

### 2.1. Proposed Routes and Local Roads

The approved EIS haulage routes do not provide an inbound or outbound route to the Hunter Street East site via Pitt Street.

The proposed inbound haulage route to the Hunter Street sites is denoted by the light blue line in Figure 3, the egress route from the site is denoted by the red line in the same figure. The proposed routes are not identified in Condition A1 of the Conditions of Approval for this project.

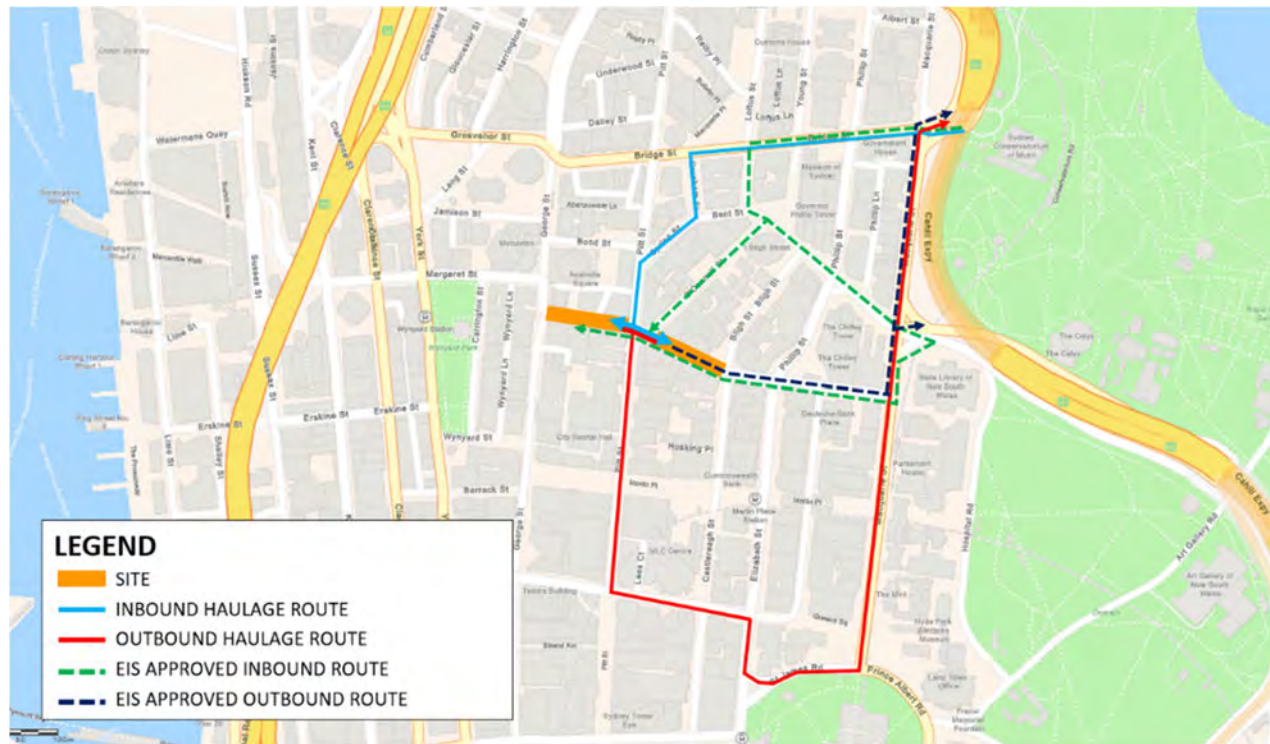


Figure 3: Modified Haulage Routes

The full extent of proposed additional inbound routes as depicted by the light blue line in Figure 3 is described as follows:

- Take the Bridge Street exit from the Cahill Expressway (as consistent with EIS)
- Turn left from Bridge Street into Gresham Street (proposed)
- Turn right from Gresham Street into Spring Street (proposed)
- Turn left from Spring Street into Pitt Street (proposed)
- Turn left or right from Pitt Street into Hunter Street and reverse across Pitt Street into the site under police control (proposed)

The full extent of proposed additional outbound routes as depicted by the red line in Figure 3 is described as follows:

- Turn left or right from Hunter Street onto Pitt Street under police control (proposed)
- Turn left from Pitt Street into King Street (proposed)
- Turn right from King Street into Elizabeth Street (proposed)
- Turn left from Elizabeth Street into St James Road (proposed)
- Turn left from St James Road into Macquarie Street (proposed)
- Turn right onto the Cahill Expressway from Macquarie Street (as consistent with EIS)

As these proposed haulage routes are in addition to the EIS routes as shown in the Response to Submission (RTS), they trigger planning approval conditions D73 and D74 as shown in Table 1.

## 2.2. Existing Road Environment

The road network surrounding the subject site comprises local streets in the CBD road network having a 40 km/h speed zone. These streets are described herein.



**Hunter Street** is a four-lane, two-way road in the CBD road network, extending between George Street in the west to Macquarie Street in the east. The section of the road between George Street and Pitt Street provides loading zones, taxi zones and four-hour restricted parking along the kerbside of the road. Hunter Street intersects with George Street, Pitt Street and Castlereagh Street via signalised junctions with marked pedestrian crossings on all approaches of the intersections. The section of the road between Pitt Street and Macquarie Street offers restricted on-street parking within the kerbside lane. Hunter Street intersects with O'Connell Street and Bligh Street/ Castlereagh Street via signalised junctions with marked foot crossings on all approaches of the intersection, except for the eastern leg at the O'Connell Street intersection.

**George Street** between Grosvenor Street and Ultimo Road is pedestrianised with the Sydney light rail track running down the centre of roadway. Vehicle access on George Street is restricted to local residents and tenants where vehicular access to existing buildings along George Street are retained. Parking along both sides of George Street are prohibited in the near vicinity of the site.

**Pitt Street** extends between Alfred Street to the north and Lee Street / George Street to the south. In the vicinity of the site, Pitt Street is a two-lane, one-way road in the southbound direction with kerbside parking prohibited to the north of Hunter Street. To the south of Hunter Street, kerbside parking and loading zones are available, with one trafficable southbound lane. An on-road cycle path is available adjacent to the traffic lanes on Pitt Street.

**O'Connell Street** is a two-lane, one-way road in the southbound direction extending, between Bent Street and Hunter Street. Indented parking is provided on the eastern side of the road and a kerbside parking lane is available on the western side of the street. Bus layovers zone are located on both sides of O'Connell Street along with loading zones, a mail zone, a pickup / drop-off area. Footpaths are located on both sides of the road which are approximately 3m in width. There is a Telstra phone booth kiosk situated along the western frontage of the site.

**Castlereagh Street** operates as a one-way road in the southbound direction from Hunter Street to Hay Street. It has four trafficable lanes with two kerbside lanes for parking and two middle lanes for through traffic movements. One of the middle traffic lanes operates as a bus lane. Pedestrian footpaths are located on both sides of the street.

**Bligh Street** is a two-lane, one-way road in the southbound direction, extending between Bent Street to the north and Hunter Street to the south. Indented kerb side parking is provided on both sides of the road. Bus zone layover facilities and loading zones are located on both sides of the road. Footpaths are available on both sides of Bligh Street which are approximately 4m in width and widens to approximately 15m from the end of the bus layover on the western side of Hunter Street.

### 2.3. Public Transport Network

The Hunter Street construction sites are surrounded by extensive public transport services due to the location with the Sydney CBD in close proximity to various commercial offices, retail and hospitality buildings, and shopping centres. Public transport services around the site vicinity include trains, buses, light rails and ferries.

Train stations in vicinity of the subject site include Wynyard, Circular Quay and Martin Place station. These train stations are serviced by multiple train lines, including T2 Inner West, T8 Airport and South, T1 North Shore and Western, T9 Northern Line and Central Coast & Newcastle, T4 Eastern Suburbs and Illawarra train lines. These train lines provide connections across the Sydney Greater Metropolitan Area through the Sydney CBD.

It is noted Sydney metro City and Southwest (Chatswood to Sydenham) Is currently underway, which is expected to be operational in 2024. This would open up three additional metro stations in the Sydney CBD, namely Barangaroo, Martin Place and Pitt Street. These stations are located within the proximity of the subject site. It is also noted that the proposed construction works would coincide with the Sydney Metro City and Southwest project.

Light rail services can be accessed at the nearby Bridge Street and Wynyard light rail stops. Both of these light rail stops are serviced by L2 Randwick Line and L3 Kingsford Line, which provide connection

between the Sydney CBD, Surry Hills, Moore Park, Kingsford and Randwick. Bus stops are extensively available across the Sydney CBD, consolidating along York Street, Carrington Street, Clarence Street, Kent Street, Bridge Street, Phillip Street and Macquarie Street. The buses running through the Sydney CBD and servicing these bus stops provide connections to a number of suburbs and suburban hubs across the Greater Sydney Metropolitan Area. Night bus services are also available at some of these bus stops to accommodate the night travel demand induced by the surrounding licenced and entertainment venues within the Sydney CBD.

Ferry services can be accessed at Circular Quay, which is located at approximately 650m walking distance (8-minute walk) from the Hunter Street West construction site. The F1 Manly, F2 Taronga Zoo, F3 Parramatta River, F4 Pyrmont Bay, F5 Neutral Bay, F6 Mosman Bay, F7 Double Bay, F8 Cockatoo Island and F9 Watson Bay ferry lines service the Circular Quay wharfs, which provide connection between Circular Quay and multiple suburbs along the Sydney Harbour.

The public transport network facilities and services in the vicinity of the Hunter Street construction sites are shown in Figure 4.

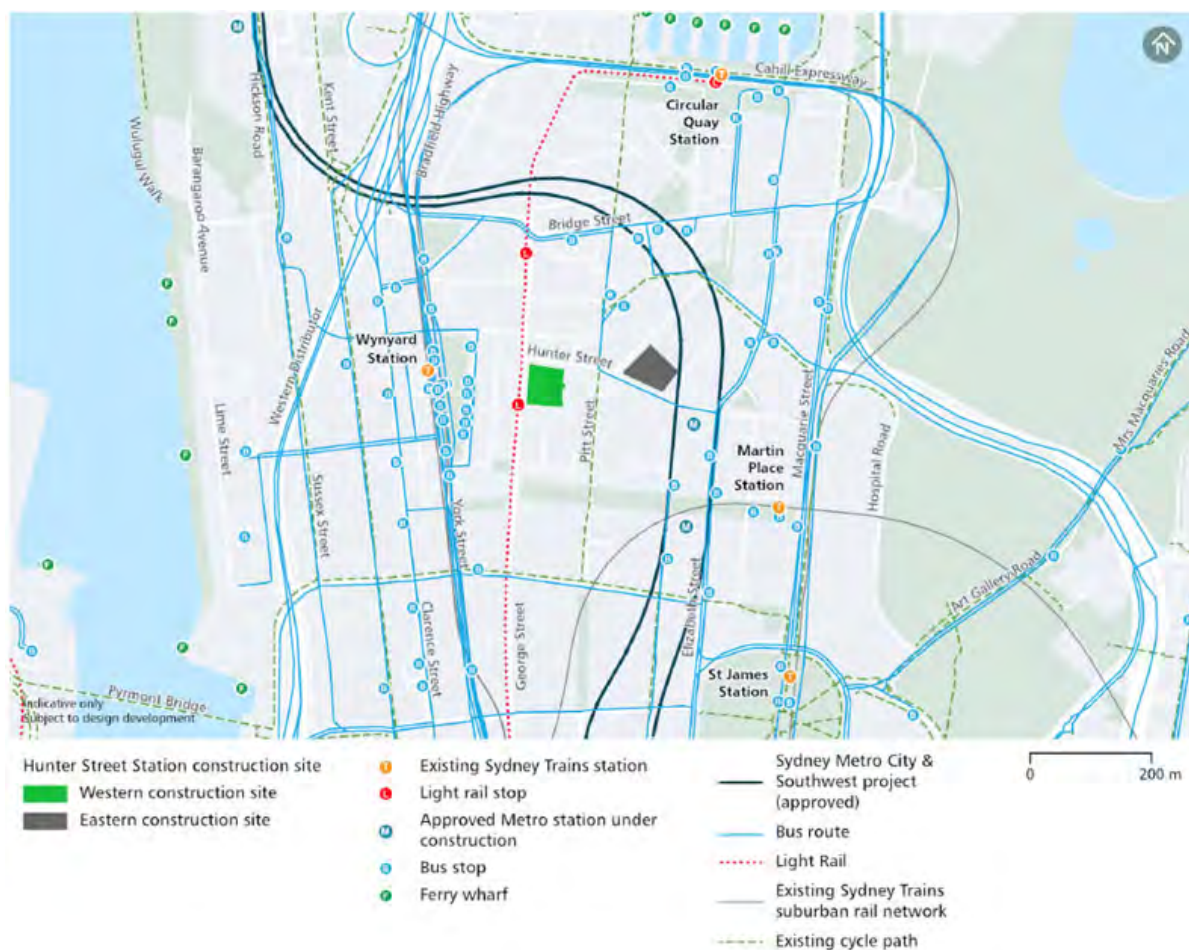


Figure 4: Public Transport Services Surrounding Hunter Street Construction Sites

## 2.4. Pedestrian and Cyclist Routes

Footpath widths along both sides of most roads in the Sydney CBD to cater for the frequently high volumes of pedestrian movement. Signalised crossings are available at majority of intersections. Pedestrian activities are generally high during both day and night times, considering the proximity of the site to commercial, educational, entertainment and retail uses. In addition, George Street between Grosvenor Street and Ultimo Road has been pedestrianised as part of the Sydney Light Rail servicing between Sydney CBD and Randwick. As a result, pedestrians share the roadway with the light rail services.



In addition, there is an underground walkway known as Hunter Connection, which provides pedestrian access between Wynyard Station and Pitt Street.

Cycling infrastructure around the construction site is well established, which consists of an off-road cycle route along Kent Street, shared user path on Macquarie Street and a dedicated cycleway along the western side of Pitt Street. Bicycle parking facilities are located through the Sydney CBD, including Hunter Street and Margaret Street.

The existing cycle infrastructure surrounding the Hunter Street construction sites are shown in Figure 5.

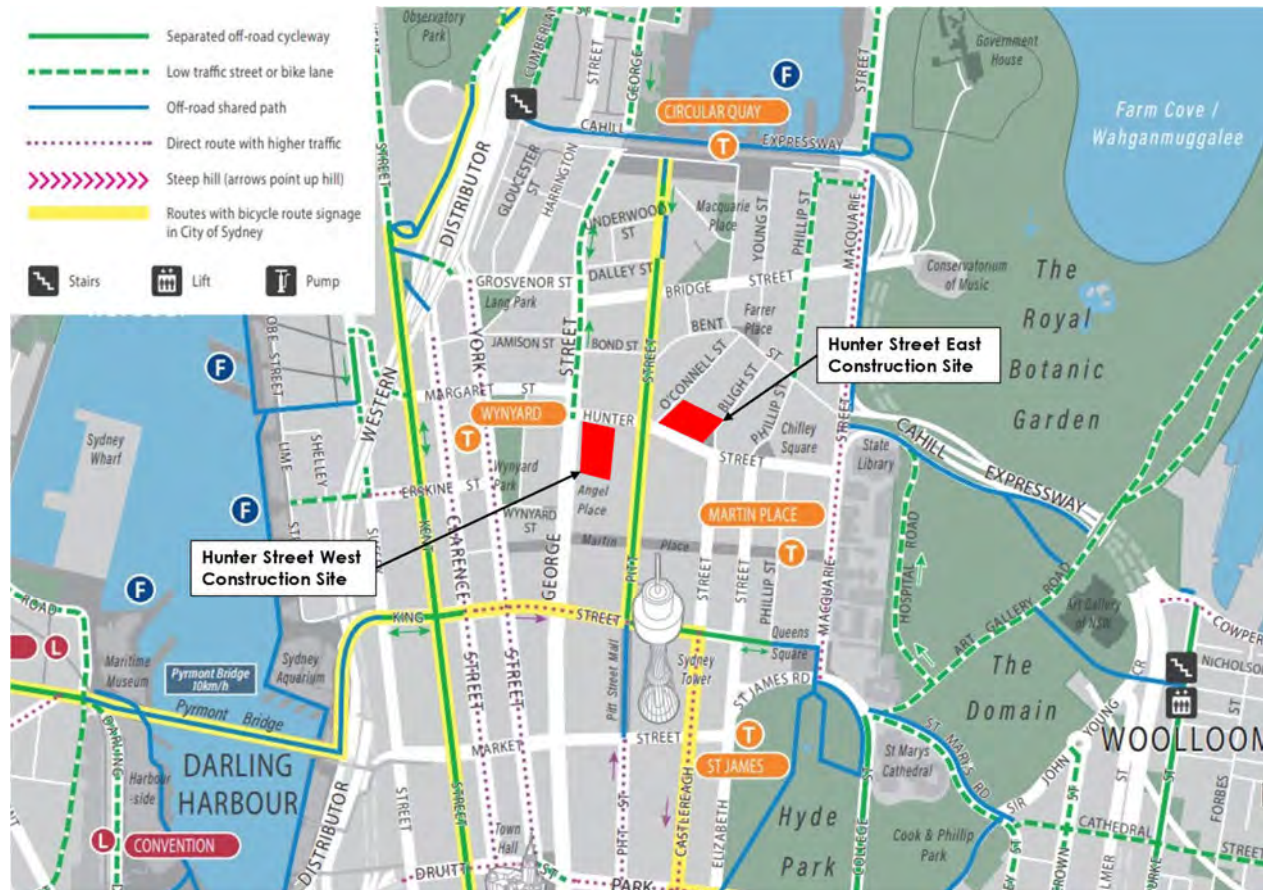


Figure 5: Cycle Infrastructure and Routes Surrounding Hunter Street East Construction Site

## 2.5. School Zones

There are no public schools or high schools within the vicinity of the nominated routes.

## 2.6. Aged Care and Childcare Facilities

There are no known aged care and childcare centres located on the roads nominated for the modified haulage route.

Considering the operating hours for this driveway would be limited to low pedestrian traffic periods between 7pm and 7am, it is anticipated that impact on aged care and childcare centres (if any) would be minimal on these nominated haulage routes.



## 2.7. Construction Traffic

### 2.7.1. Construction Traffic Management

Construction vehicles will be managed through monitoring, marshalling, traffic control and communication between vehicles and the site.

#### 2.7.1.1. Traffic Management

Traffic Controllers and police will be stationed at the Pitt Street, O'Connell Street and Hunter Street intersection and will assist construction vehicles entering the Hunter Street sites. The intersection will be flashing amber and police will control all traffic for the duration of the works. The traffic controllers will manage the interface with pedestrians and general traffic.

#### 2.7.1.2. Communication

The haulage route will be communicated and adhered to by drivers through the implementation of a Drivers Code of Conduct, which would be made available to the relevant personnel during the site induction training. All drivers will undergo the mandatory project-specific induction training provided by JCG JV.

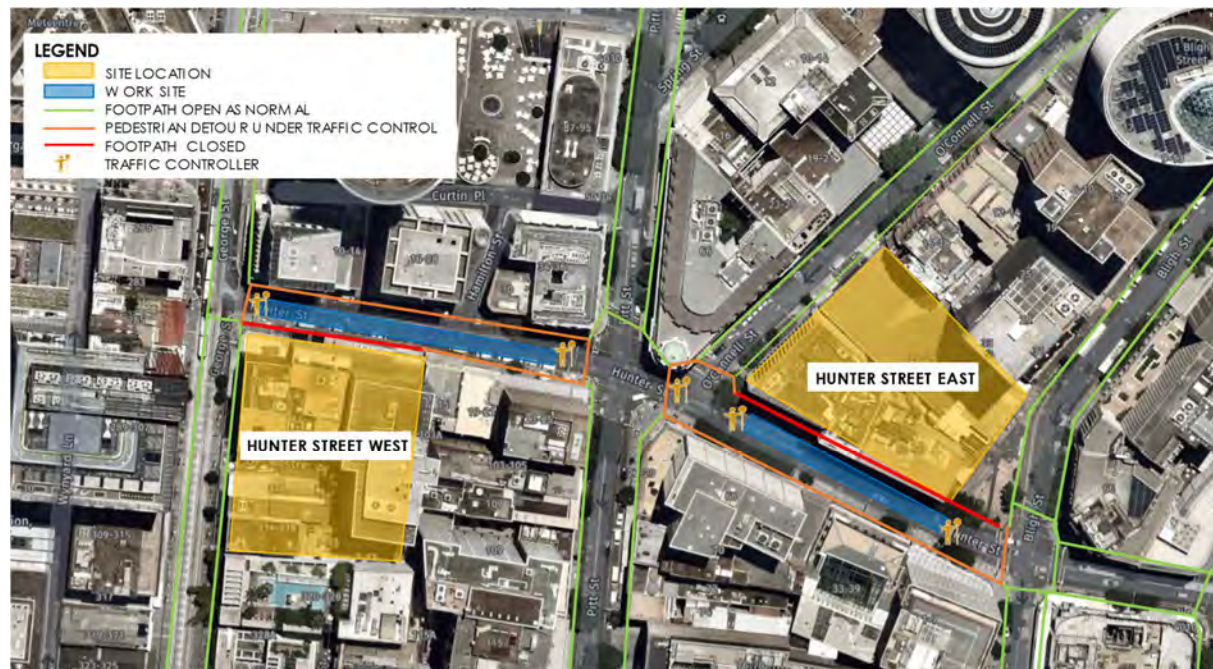
As mentioned above, the Telematic system is able to provide details of the construction vehicle movements through real time monitoring. Telematics allow JCG JV to communicate directly with construction truck drivers.

### 2.7.2. Pedestrian and Cyclist Safety Management

Pedestrian crossings will be retained on all approaches of the surrounding signalised intersections at Hunter Street – O'Connell Street, Hunter Street – Bligh Street/Castlereagh Street, Hunter Street – Pitt Street, and Hunter Street – George Street.

The pedestrian footpath will be closed on the northern side of Hunter Street within the work site area as shown in Figure 6. The footpath on the southern side of Hunter Street will remain open to pedestrians under the management of traffic controllers.

Figure 6: Hunter Street Pedestrian Access



Pedestrian access on Hunter Street between O'Connell Street and Bligh Street would be detoured to the southern side of Hunter Street. Traffic controllers would be positioned on-site to guide pedestrians along the detour route as shown in Figure 6.



The pedestrian footpath will be closed on the southern side of Hunter Street within the work site area as shown in Figure 6. The footpath on the northern side of Hunter Street will remain open to pedestrians under the management of traffic controllers.

Pedestrian access on Hunter Street between George Street and Pitt Street would be detoured to the northern side of Hunter Street. Traffic controllers would be positioned on-site to guide pedestrians along

The proposed demolition activities will not result in any major impacts on cyclist movements in close proximity to the construction site. The Pitt Street cycle route will be maintained for the duration of the proposed works. Cyclists travelling through Hunter Street on the Pitt Street cycle route will travel through this intersection under police control along with all other traffic.

In addition, cyclists using the King Street cycleway will be impacted as the outbound route uses this road. Trucks will be required to turn across the cycleway, this will be under signalised control.

Flashing lights will be mounted on the construction vehicle to alert pedestrians of the presence of the construction vehicle in the low-speed environment.

Driver training will consider current best practice and information, including cycle awareness training. The contractor must ensure that regular briefings are provided to drivers on routes, potential changes and impacts on the routes in the form of toolbox talks.

All heavy vehicles used for spoil haulage will be equipped with safety equipment as described in the Sydney Metro Principal Contractor Health and Safety Standard (SM-20-00100838). The corresponding list of safety equipment that will be installed on all heavy vehicles frequently entering the sites, is included in Appendix E.

### 2.7.3. Construction Traffic Volumes

Table 3 provides a summary of the anticipated traffic volume for the crane operation activities for each site.

Table 3: Construction Traffic Generation

Vehicle Type	Task	Total No.
19.5m semi-trailer	Deliver tower crane, counterweights, fly sections	21
Oversize 19.5m semi-trailer (wide load)	Deliver tower crane	1
Oversize float	Deliver boom	1
17.5m long mobile crane	Assemble tower crane	1
Escort vehicle	Escort	3
Total		27

Based on Table 3, the crane activities for each subject site are expected to generate a maximum of 27 trucks during the scheduled crane activities (i.e. a total for 54 trucks across the two Hunter Street sites).

The longest construction vehicle to be used as part of the works will be a 19m long semi-trailer. One vehicle will be 2.8m wide and all other vehicles will be 2.5m wide or less.

The 2.8m wide semi-trailer is classified as over-sized and a special permit for this vehicle will be part of a separate application.

## 2.8. Dilapidation

An additional road dilapidation report will be undertaken for routes outside of the approved EIS routes and other HVLR assessments.

A dilapidation report will be prepared by 10 June 2023.

A copy of the dilapidation report will be provided to TfNSW and City of Sydney.



### 3. Swept Path Assessment

Swept path assessment is presented in Appendix A for all intersections as encircled in Figure 7 where turning movements of a 19.5m long semi-trailer.

One off and special oversized deliveries will be managed under a separate application.

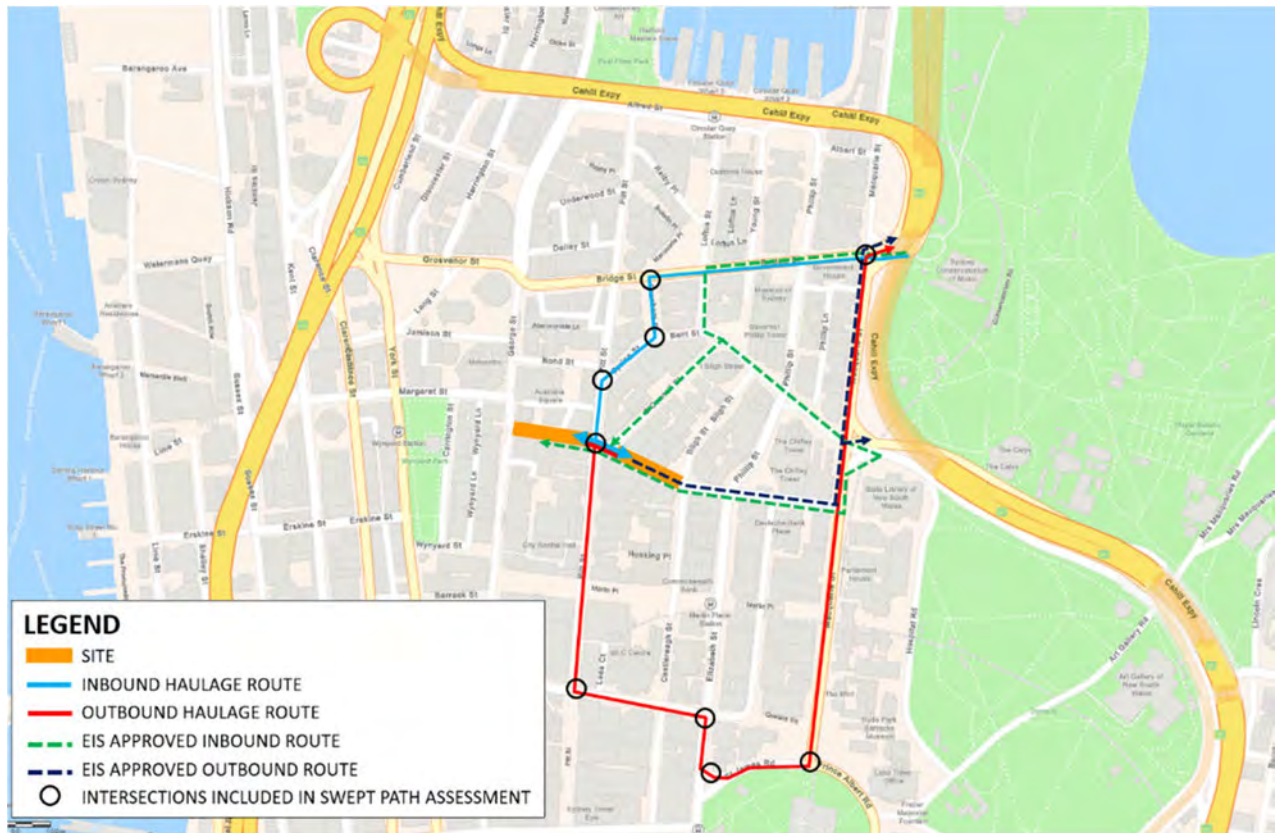


Figure 7: Intersections Included in Swept Path Assessment

The swept path assessment as shown in Appendix A demonstrates that the proposed additional haulage routes are suitable for 19.5m long semi-trailer.

### 4. Road Safety Audit

A road safety audit was conducted on the proposed additional haulage routes based on the swept path assessment in conjunction with a site inspection of the haulage routes. The road safety audit report is presented in Appendix B.

There were no high-risk items identified.

Designer responses are shown in the last column in Table 4.2 in the road safety audit report in Appendix B. Swept path diagrams have been revised and are shown in Appendix C in response to the audit findings.

### 5. Consultation

Consultation of the Hunter Street Tower Crane CTMP which included the additional proposed haulage routes, has been undertaken in accordance with the requirements of the CTMF, including the TCG and the TTLG.

Through the CTMP consultation, comments were received from Sydney Light Rail, City of Sydney Council and Transport for New South Wales. The comments, including the JCG responses recently provided for closeout, are included in Appendix C.



## 6. Qualification

This HVLR report in relation to the proposed haulage route has been prepared by Doris Lee, an Associate Traffic Engineer with a Bachelor of Civil Engineering. Doris has 20 years' experience in traffic engineering and transport planning, and is an accredited Level 3 Road Safety Auditor and has certification to prepare work zone traffic management plans.

The road safety audit was carried out by the following team:

- Ashish Tamhane (RSA-02-1607) – level 3 road safety auditor (lead auditor)
- Adeline Sim (RSA-02-1527) - level 2 road safety auditor (team member)

Ashish and Adeline are registered road safety auditors with the TfNSW Register of Road Safety Auditors and are experienced in traffic engineering and design/ inspection of traffic management schemes. Both auditors are independent of the design process.

## 7. Conclusion

Alternative inbound and outbound routes are required for the assembly of the tower cranes for the Hunter Street East and Hunter Street West site due to the proposed closure of Loftus Street and the closure of Hunter Street.

The swept path assessment demonstrates that the intersections along the modified outbound route can provide sufficient clearance to accommodate the turning movements of a 19.5m semi-trailer.

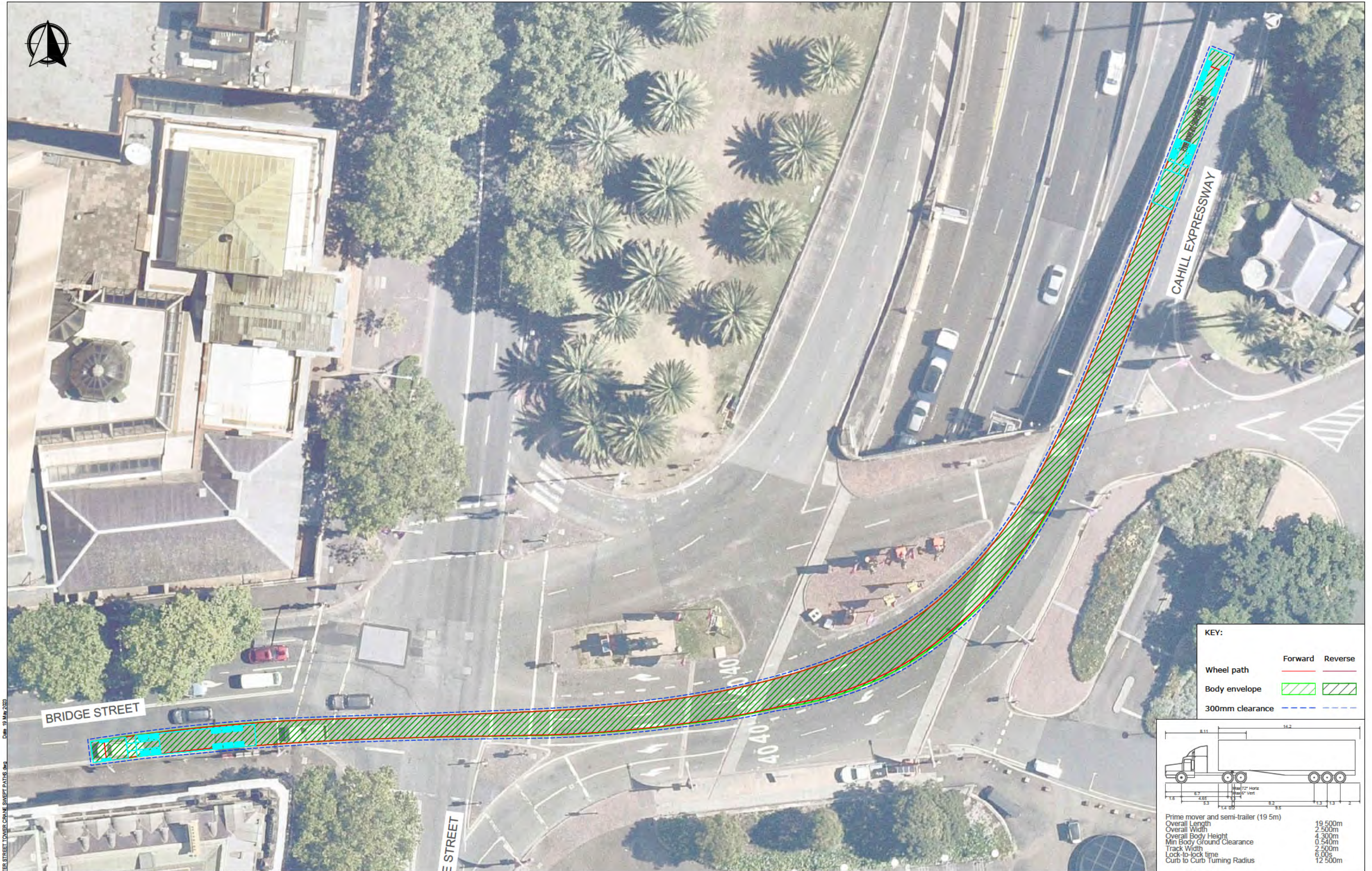
A road safety audit was conducted on the proposed haulage routes and there were no high-risk items identified, and only one medium risk was identified which has been addressed by the designer and considered negligible.

Finally, there are no known aged care facilities or childcare facilities along the proposed heavy vehicle route, and one high school is located adjacent to the approved EIS route. Therefore, the proposed additional haulage routes are suitable for use and are recommended for approval.

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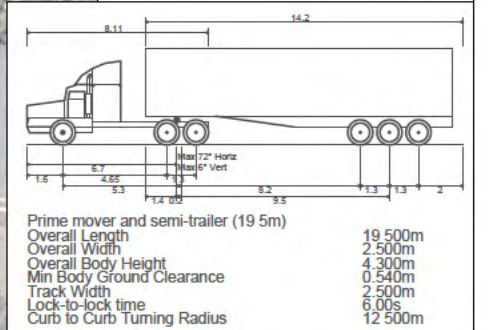
## Appendix A      Swept Path Assessment





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300mm clearance		



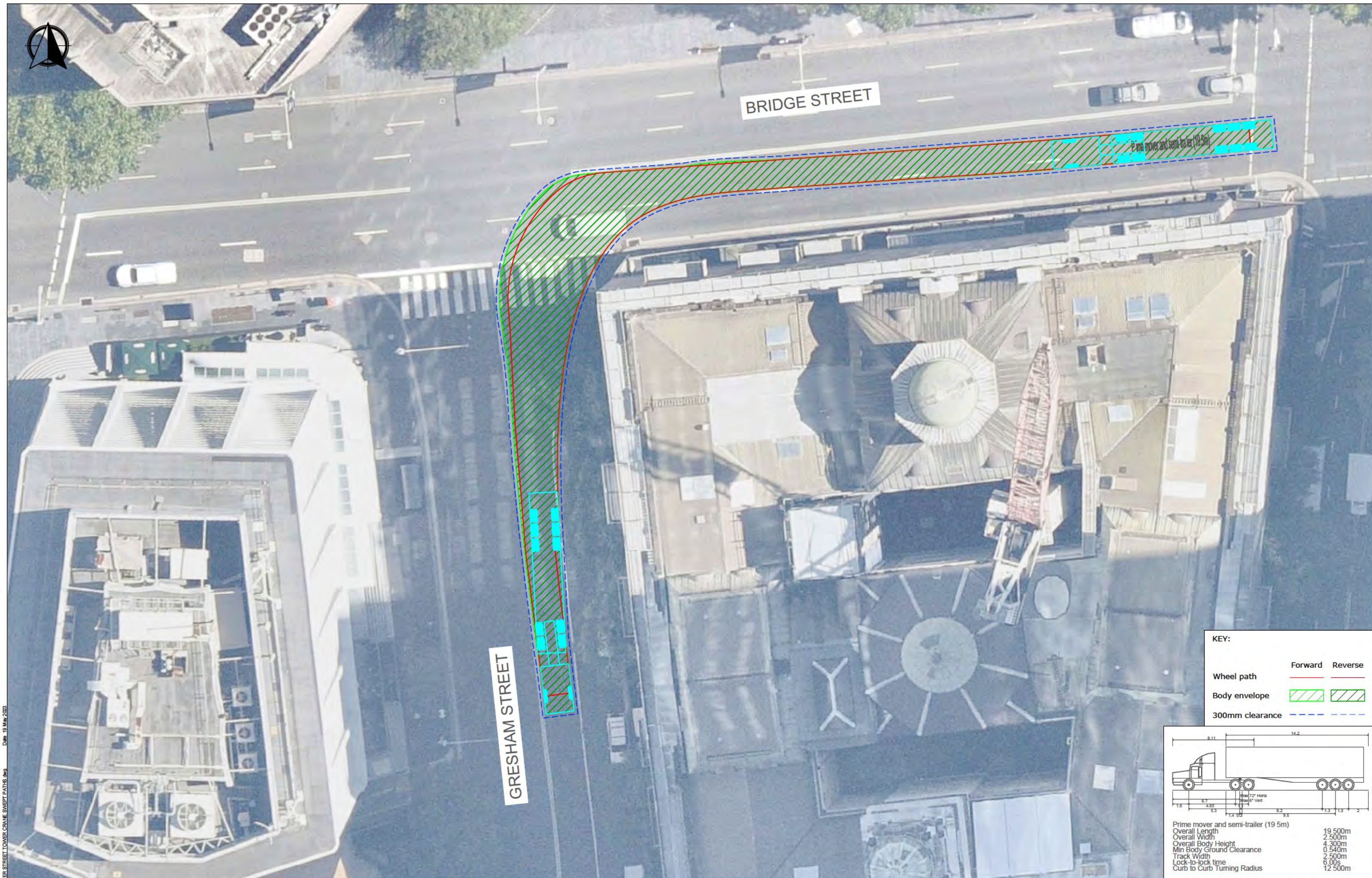
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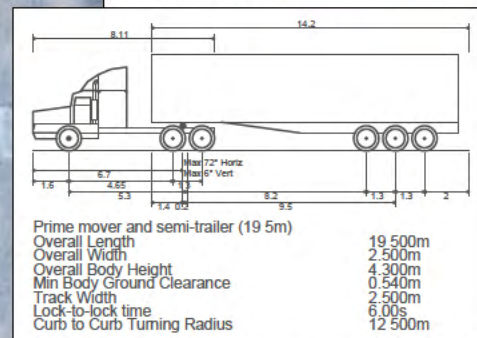
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TITLE	SWEPT PATH ANALYSIS - INBOUND - CAHILL EXPRESSWAY ONTO BRIDGE STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

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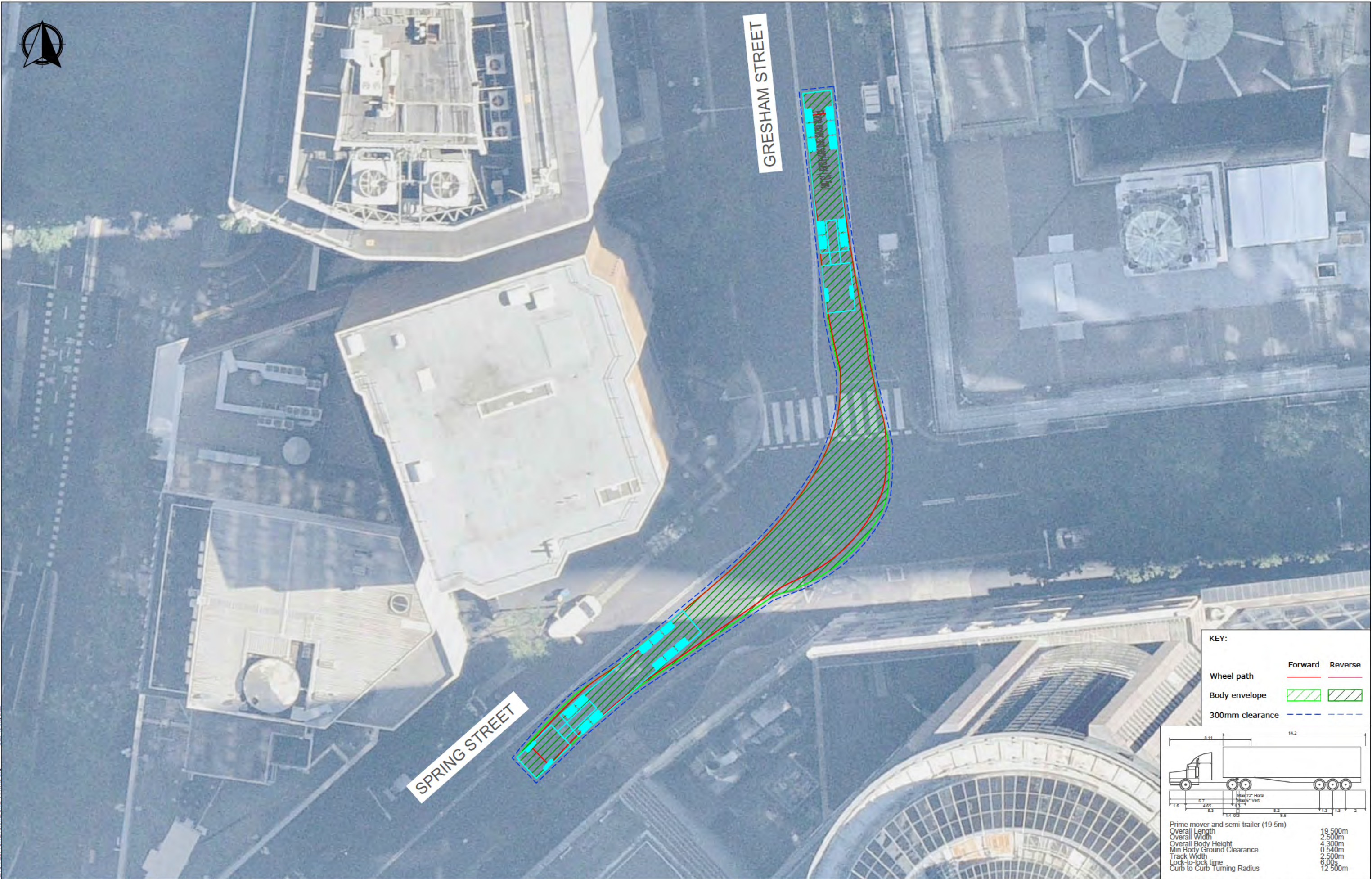
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TITLE	SWEPT PATH ANALYSIS - INBOUND - BRIDGE STREET ONTO GRESHAM STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

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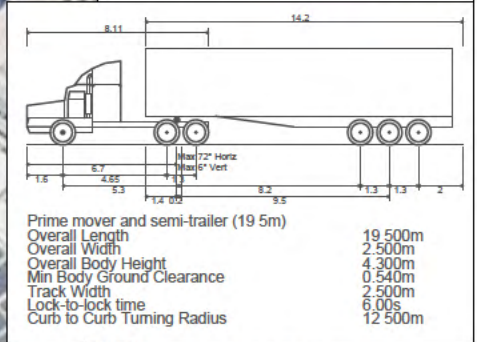




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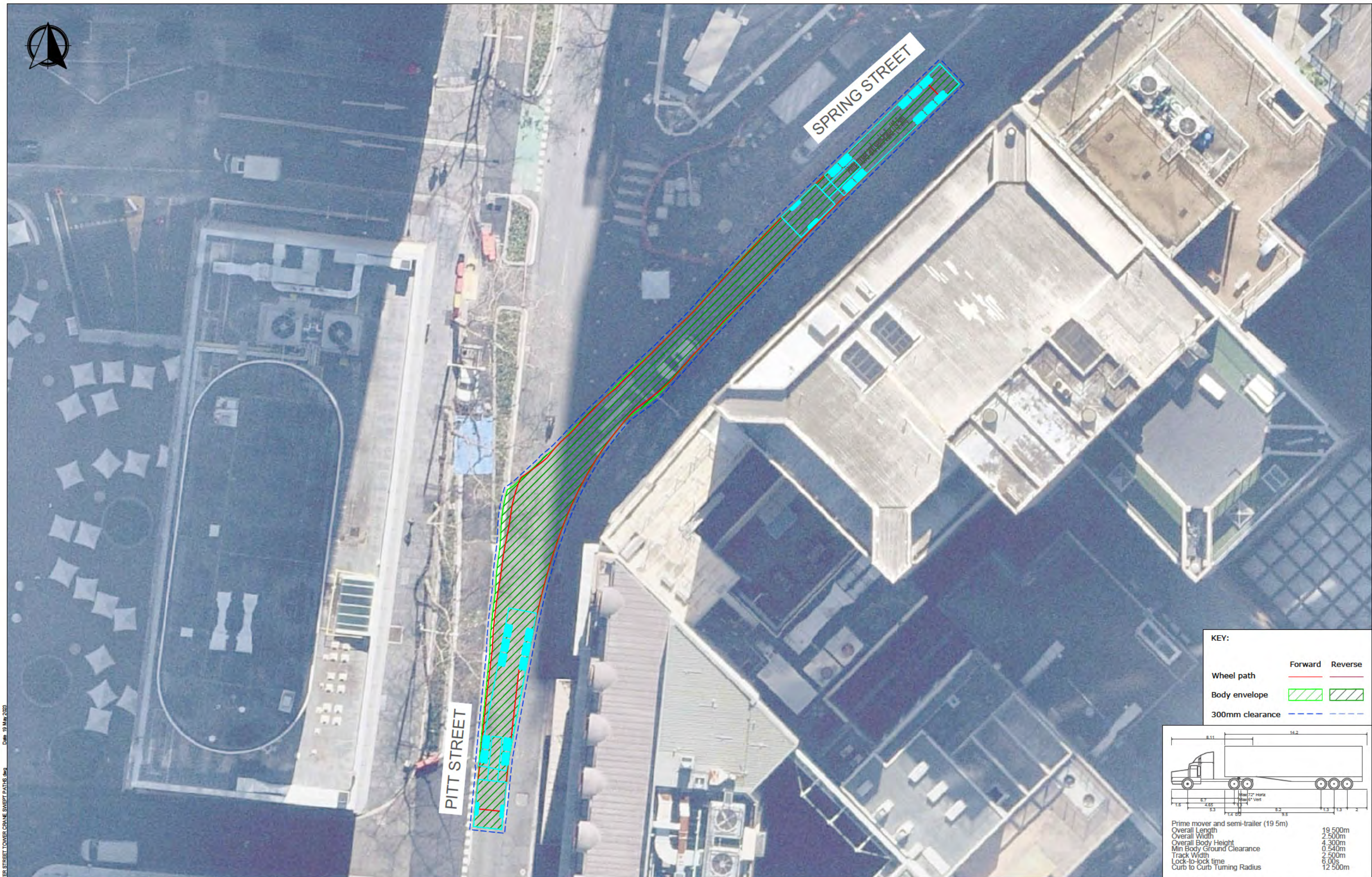
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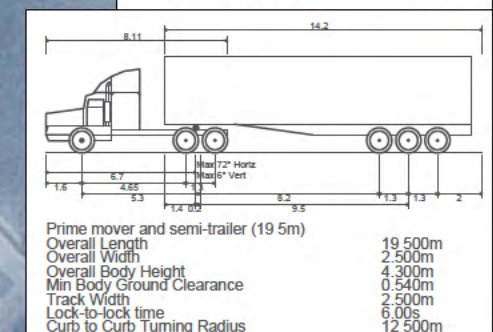
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DWG No.	21480CAD010 FIGURE 3		
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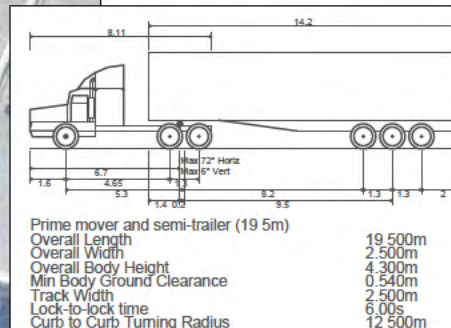
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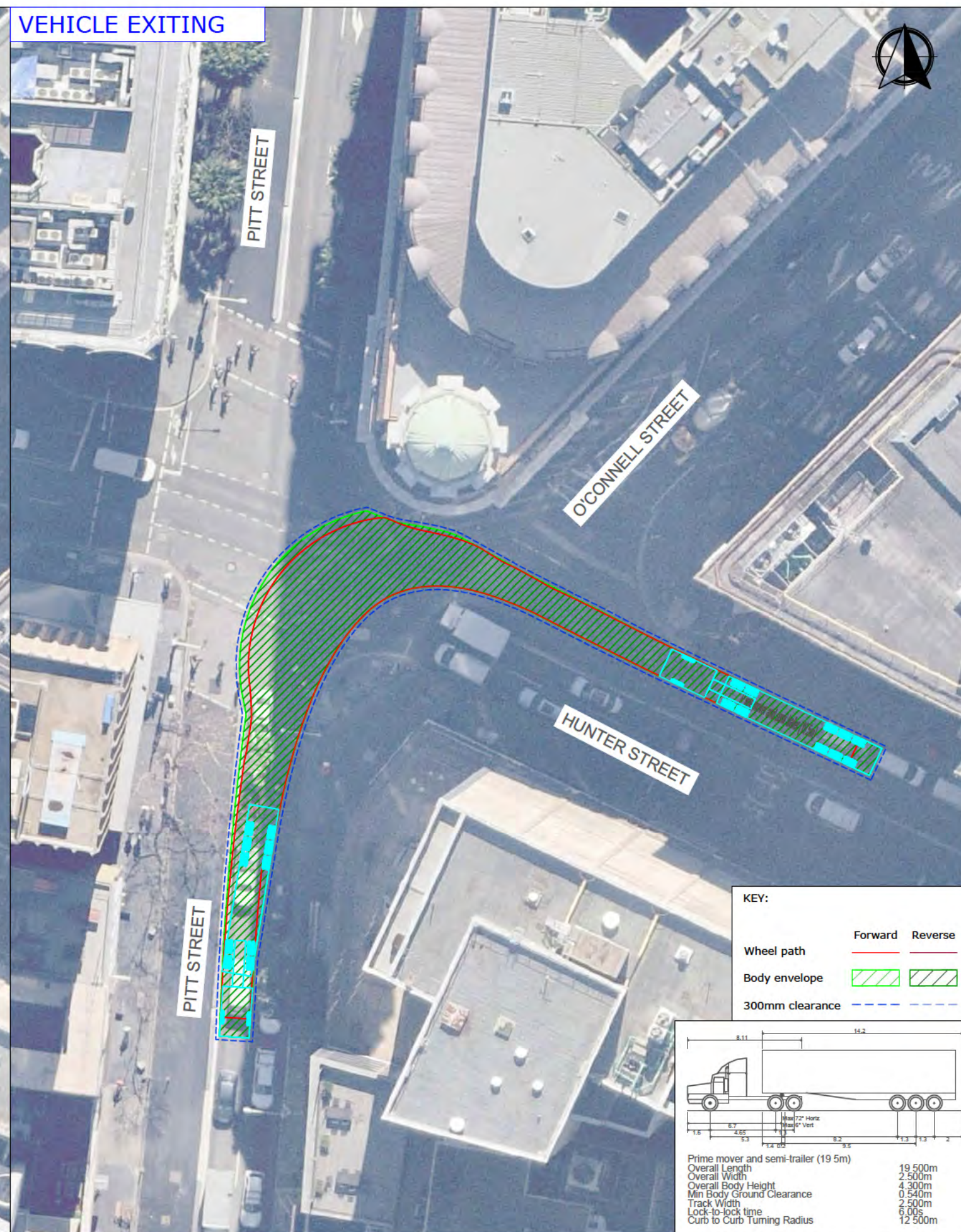
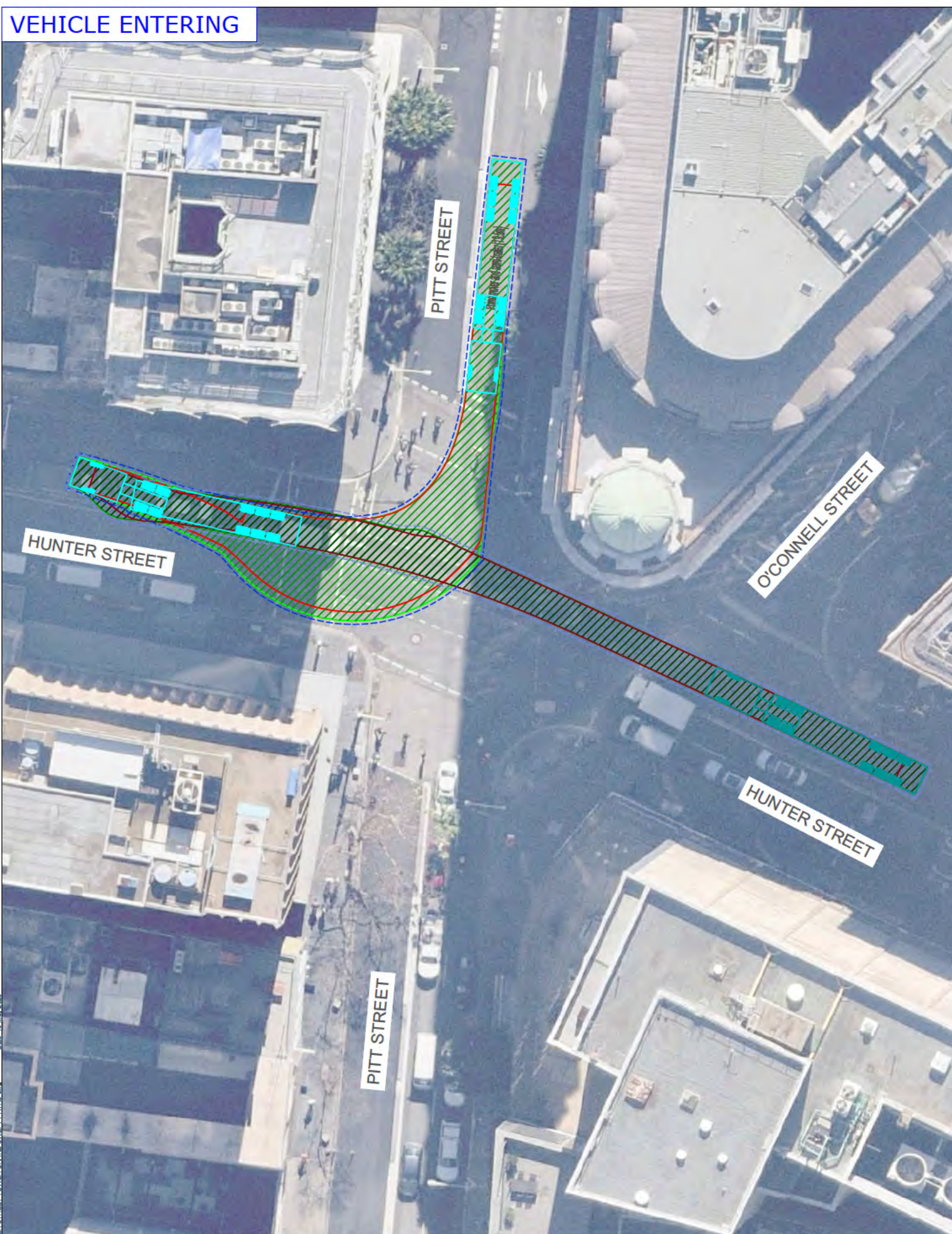
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - HUNTER WEST SITE ACCESS 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD010 FIGURE 5		
DATE STAMP	19 MAY 2023		
PROJECT No.	SCALE	REV.	
21480	1:400 @A3	A	



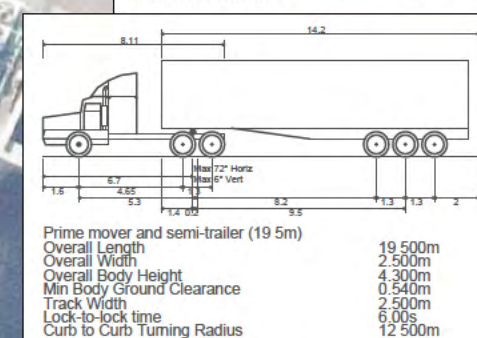
VEHICLE ENTERING

VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/05/23



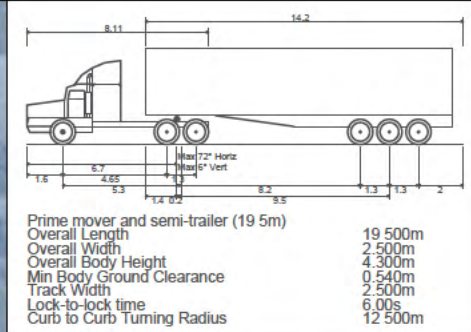
PROJECT  
SYDNEY METRO WEST PROJECT  
HUNTER STREET- TOWER CRANE INSTALLATION

TITLE  
SWEPT PATH ANALYSIS - HUNTER EAST SITE ACCESS  
19.5m PRIME MOVER AND SEMI-TRAILER

DWG No.	21480CAD010 FIGURE 6		
DATE STAMP	19 MAY 2023		
PROJECT No.	SCALE	REV.	
21480	1:400 @A3	A	

File name: 21480CAD010-202319-HUNTER STREET TOWER CRANE SWEPT PATHS.dwg Date: 19 May 2023





KEY:		
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Wheel path	<div></div>	<div></div>
Body envelope	<div></div>	<div></div>
300mm clearance	<div></div>	<div></div>



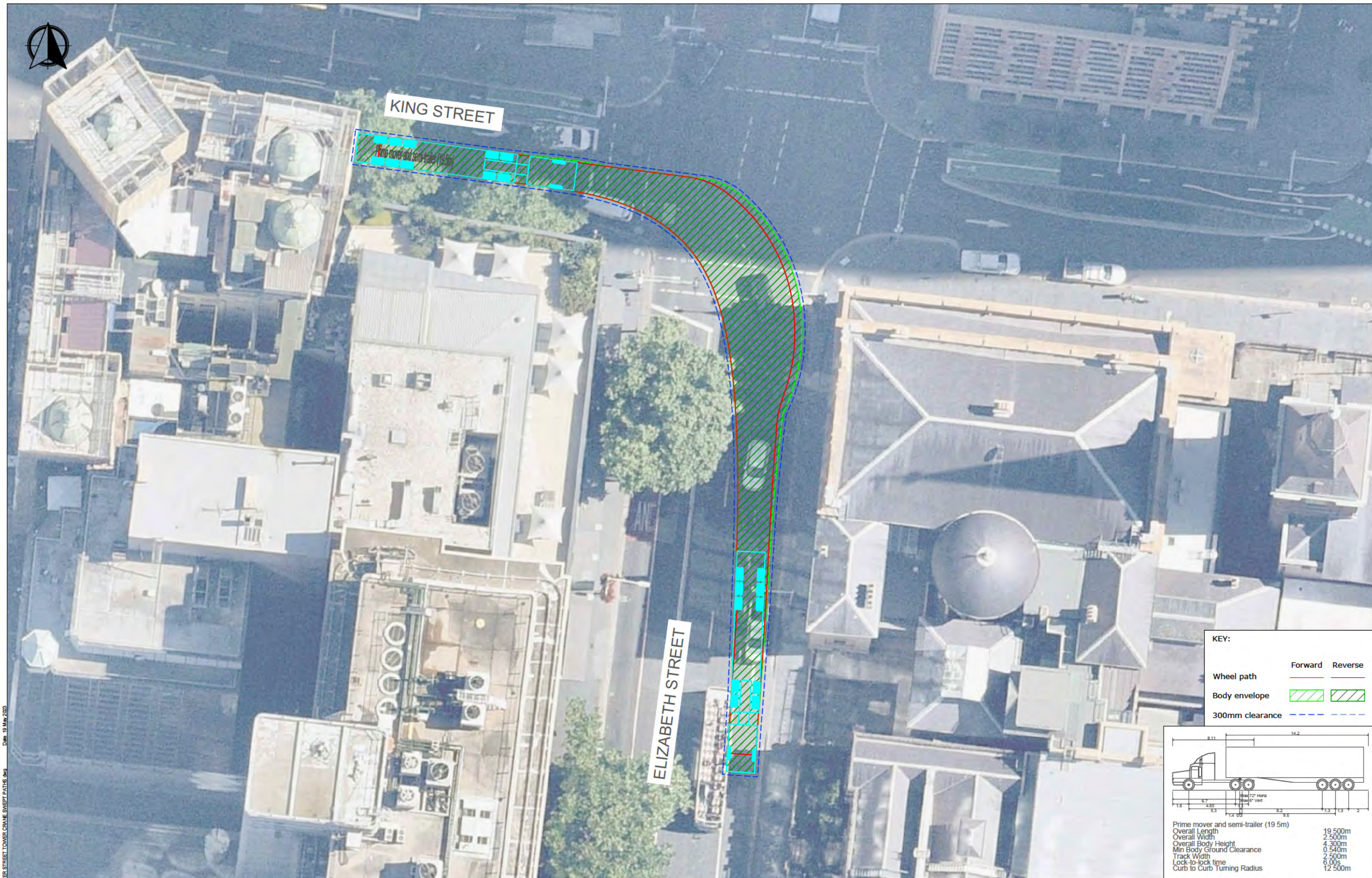
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A	FOR INFORMATION	JG	WJ	WJ	19/05/23



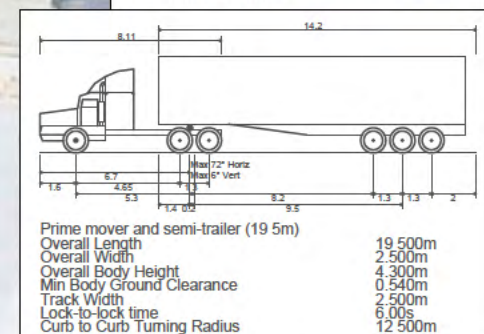
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TITLE	SWEPT PATH ANALYSIS - OUTBOUND - PITT STREET ONTO KING STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD010 FIGURE 7		
DATE STAMP	19 MAY 2023		
PROJECT No.	SCALE	REV.	
21480	1:200 @A3	A	





KEY:		
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Body envelope	<span style="color: green;">▨</span>	<span style="color: green;">▨</span>
300mm clearance	<span style="color: blue;">---</span>	<span style="color: blue;">---</span>



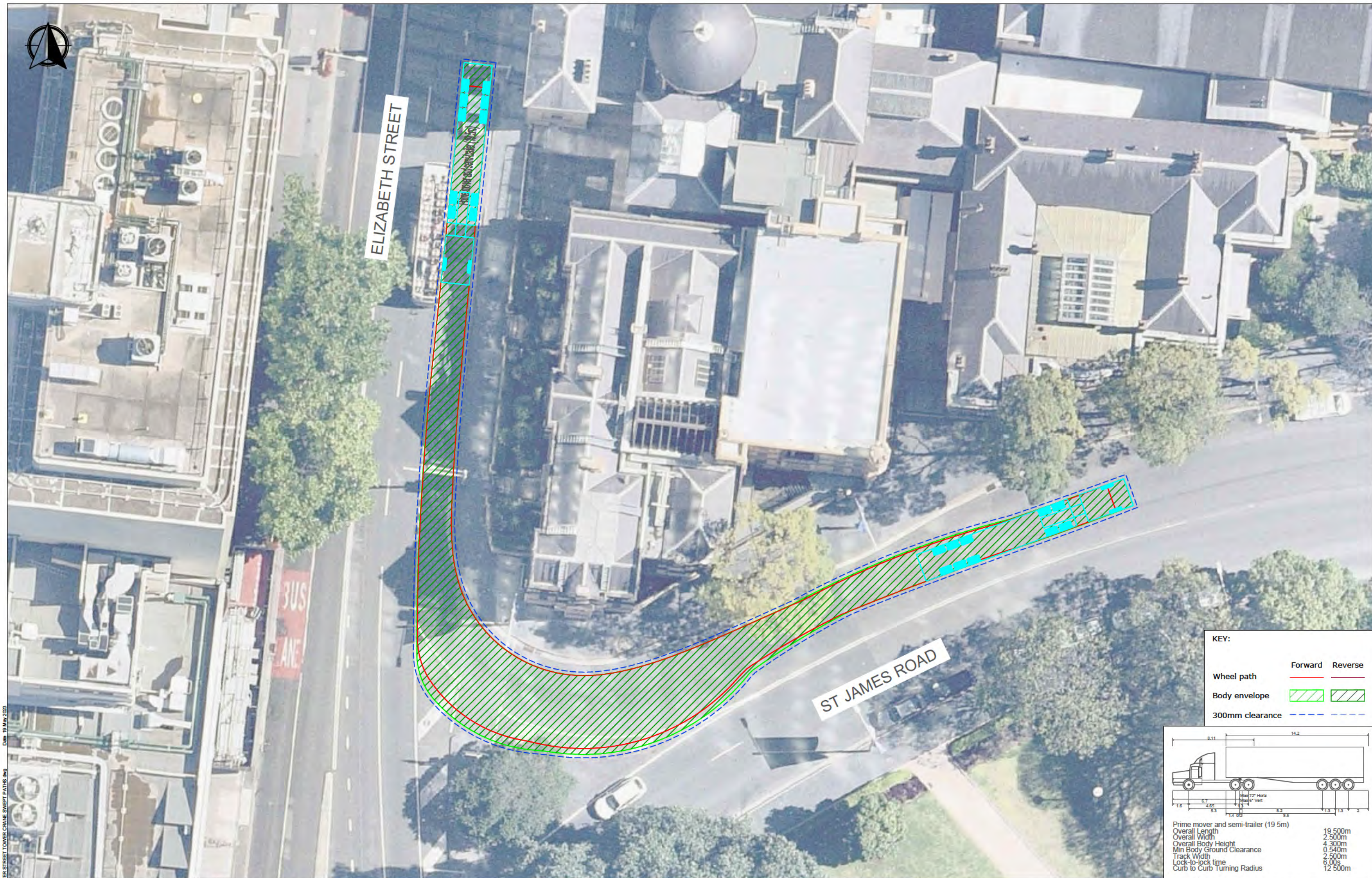
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A	FOR INFORMATION	JG	WJ	WJ	19/05/23



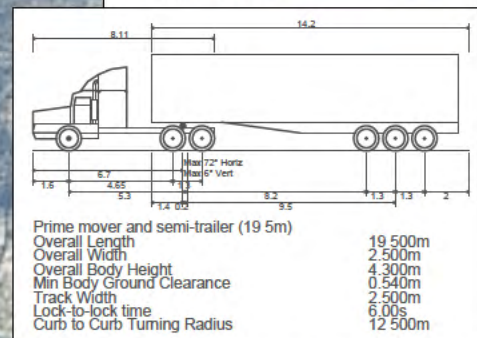
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION	
TITLE	SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - KING STREET ONTO ELIZABETH STREET 19.5m PRIME MOVER AND SEMI-TRAILER	

DWG No.	21480CAD010 FIGURE 8	
DATE STAMP	19 MAY 2023	
PROJECT No.	SCALE	REV.
21480	1:300 @A3	A





KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



File name: 21480CAD010-202315-HUNTER STREET TOWER CRANE SWEEP PATHS.dwg Date: 19 May 2023

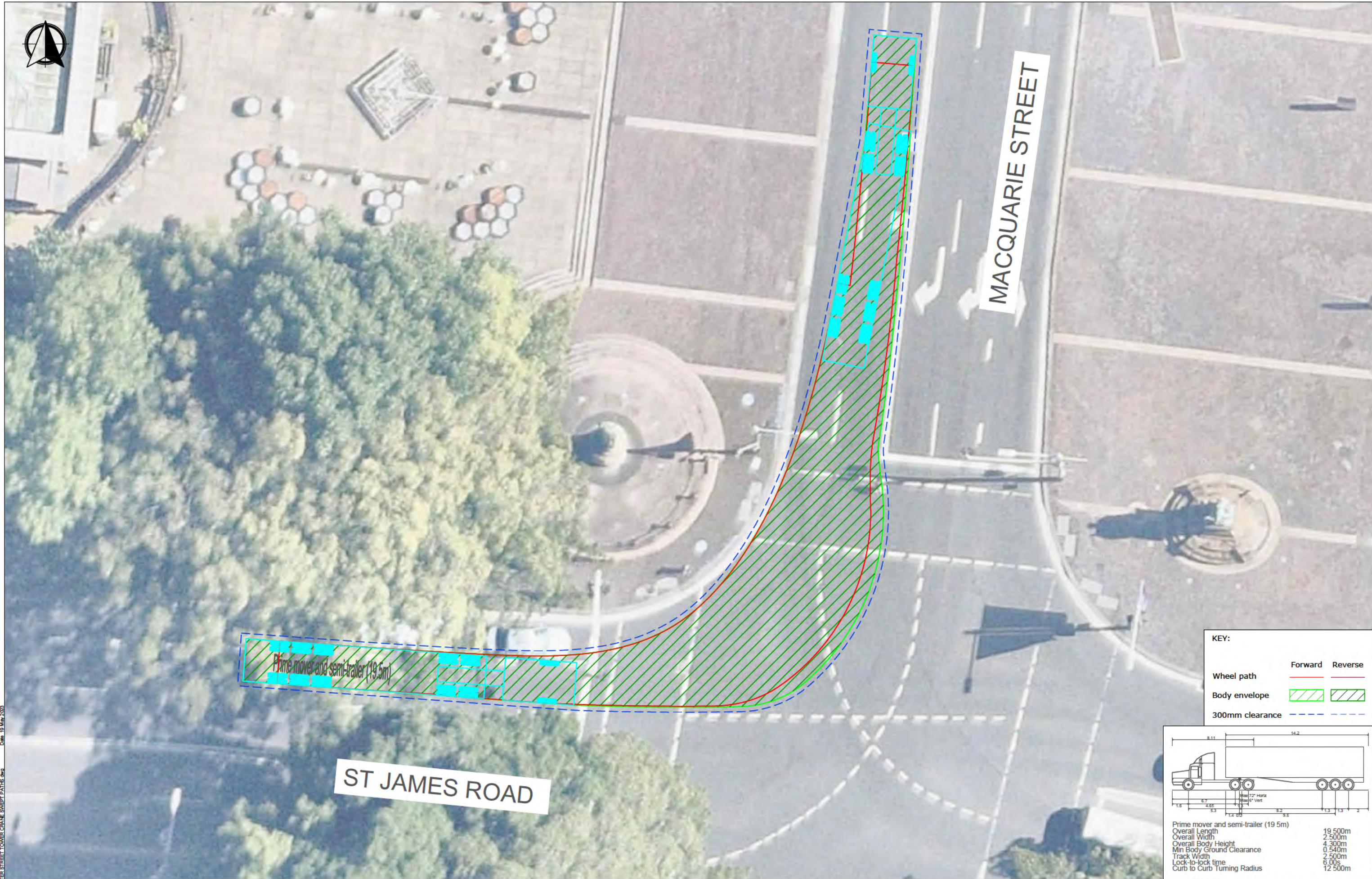
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A	FOR INFORMATION	JG	WJ	WJ	19/05/23



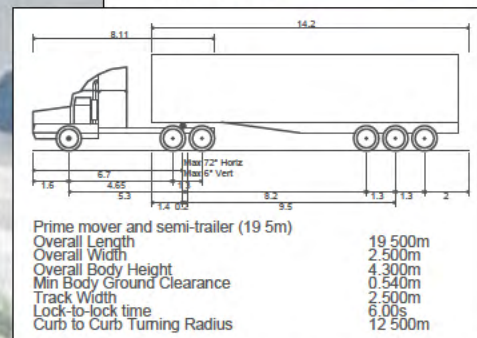
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - ELIZABETH STREET ON ST JAMES ROAD 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD010 FIGURE 9		
DATE STAMP	19 MAY 2023		
PROJECT No.	SCALE	REV.	
21480	1:300 @A3	A	





KEY:		
	Forward	Reverse
Wheel path	<span style="color: red;">—</span>	<span style="color: green;">—</span>
Body envelope	<span style="color: green;">▨</span>	<span style="color: green;">▨</span>
300mm clearance	<span style="color: blue;">---</span>	<span style="color: blue;">---</span>



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/05/23



PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - ELIZABETH STREET ON ST JAMES ROAD 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD010 FIGURE 10		
DATE STAMP	19 MAY 2023		
PROJECT No.	SCALE	REV.	
21480	1:200 @A3	A	





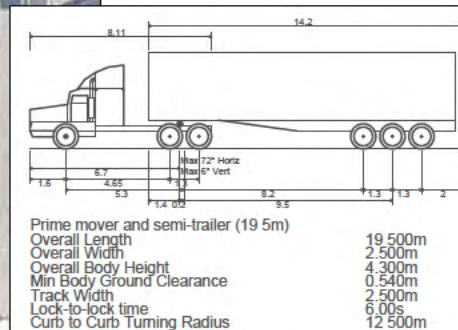
BRIDGE STREET

MACQUARIE STREET

CAHILL EXPRESSWAY

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/05/23



PROJECT

TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET- TOWER CRANE INSTALLATION

SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - MACQUARIE STREET ONTO CAHILL EXPRESSWAY  
19.5m PRIME MOVER AND SEMI-TRAILER

DWG No.	21480CAD010		
	FIGURE 11		
DATE STAMP	19 MAY 2023		
PROJECT No.	21480	SCALE	1:400 @A3
REV.	A		



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## **Appendix B      Road Safety Audit**





# Hunter Street Temporary Road Closure

## Road Safety Audit

Prepared for:

JCG JV

19 May 2023

The Transport Planning Partnership



# Hunter Street Temporary Road Closure

## Road Safety Audit

Client: JCG JV

Version: V02

Date: 19 May 2023

TPP Reference: 21480

### Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	27/04/2023				
V01	19/05/2023				



## Table of Contents

1	Road Safety Audit Summary .....	1
2	Introduction .....	2
2.1	Background.....	2
2.2	Audit Objective .....	2
2.3	Procedures and Reference Material .....	2
2.4	Audit Team .....	3
3	Road Safety Audit Program.....	4
3.1	Commencement Meeting .....	4
3.2	Site and Field Audit .....	4
3.3	Completion Meeting.....	4
4	Road Safety Audit Findings.....	5
4.1	Introduction.....	5
4.2	Responding to the Audit Report.....	6
4.3	Road Safety Audit Findings .....	6
5	Concluding Statement .....	13

## Tables

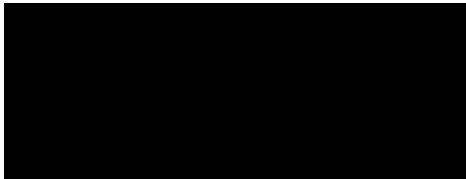
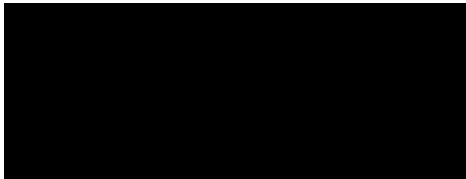
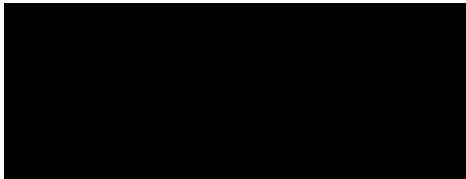


Table 2.1:	Information Supplied .....	3
Table 4.1:	Risk Matrix .....	5
Table 4.2:	Road Safety Audit Findings .....	7

## APPENDICES

- A. TRAFFIC GUIDANCE SCHEME
- B. SWEPT PATH ASSESSMENT
- C. PORTABLE VMS STRATEGY



# 1 Road Safety Audit Summary

Audited project:	Hunter Street Temporary Road Closure
Client:	JCG JV
Project manager:	
Email address:	
Telephone:	
Audit Team:	 (level 3 lead road safety auditor)
	 (level 2 road safety auditor)
Audit type:	Roadworks
Commencement meeting:	N/A
Audit date:	24 April 2023
Completion meeting:	Not required



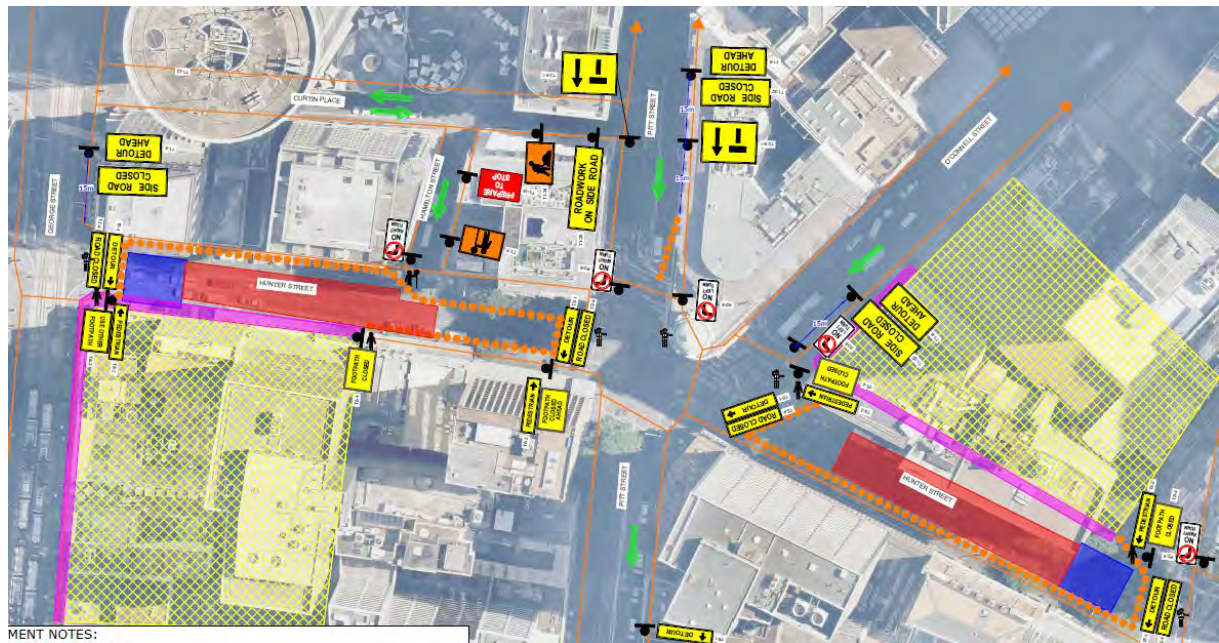
## 2 Introduction

### 2.1 Background

This report has been prepared on behalf of JCG JV to present road safety audit findings that have been identified from the proposed temporary road closure of Hunter Street for the crane installation works associated with the construction of the Hunter East and West metro stations as part of the Sydney Metro West Eastern Tunnelling Package.

The proposed locations of the temporary road closure are indicated in Figure 2.1.

**Figure 2.1: Hunter Street Temporary Road Closure**



The road closure is proposed to take place along Hunter Street between George Street and Pitt Street for the Hunter West site and between O'Connell Street and Bligh Street/ Castlereagh Street for the Hunter East site.

### 2.2 Audit Objective

The objective of this audit is to examine the road safety issues associated with the proposed temporary road closure along Hunter Street.

### 2.3 Procedures and Reference Material

The procedures used are described in the following guidelines:

- Roads and Maritime Services' 2011 Guidelines for Road Safety Audit Practices
- Austroads Guide to Road Safety 2022: Part 6 Road Safety Audits



Following information was supplied and referenced prior to undertaking Road safety Audit:

**Table 2.1: Information Supplied**

Documentation	Date	Document Reference
SYDNEY METRO WEST PROJECT, HUNTER STREET – TOWER CRANE	18 APRIL 2023	21480CAD006-230419-HUNTER STREET TOWER CRANE.pdf (4 sheets)
SYDNEY METRO WEST HUNTER STREET – TOWER CRANE INSTALLATION, SWEPT PATH ANALYSIS	19 APRIL 2023	21480CAD007-230419-HUNTER STREET TOWER CRANE SWEPT PATH.pdf (14 sheets)
PORTABLE VMS STRATEGY		

## 2.4 Audit Team

The RSA was carried out by the following team:

- Ashish Tamhane (RSA-02-1607) – level 3 road safety auditor (lead auditor)
- Adeline Sim (RSA-02-1527) – level 2 road safety auditor (team member)

Ashish and Adeline are registered road safety auditors with the TfNSW Register of Road Safety Auditors and are experienced in traffic engineering and design/ inspection of traffic management schemes. Both auditors are independent of the road design process.



## 3 Road Safety Audit Program

### 3.1 Commencement Meeting

A formal meeting was not held.

### 3.2 Site and Field Audit

A site inspection was carried out on Monday 24 April 2023 in fine weather conditions from 1:00pm – 2:00pm, and 6:00 pm – 7:00 pm for day and night time inspections. The proposed road closure segments along Hunter Street were walked over to identify possible road safety concerns. Video footage was taken during the site visit.

### 3.3 Completion Meeting

Not required.



## 4 Road Safety Audit Findings

### 4.1 Introduction

Table 4.1 provides specific details of the road safety deficiencies and a risk rating as extreme, high, medium, low, or negligible. The risk ratings have been based on the risk matrix presented in Table 4.1, which has been adopted from Figure 10.2 of Guide to Road Safety part 6 – Road Safety Audit.

**Table 4.1: Risk Matrix**

			Severity				
			Insignificant	Minor	Moderate	Serious	Fatal
			Property damage	Minor first aid	Major first aid and/or presents to hospital (not admitted)	Admitted to hospital	Death within 30 days of the crash
Likelihood (includes exposure)	Almost Certain	One per quarter	Medium	High	High	Extreme (FSI)	Extreme (FSI)
	Likely	Quarter to 1-year	Medium	Medium	High	Extreme (FSI)	Extreme (FSI)
	Possible	1 to 3 years	Low	Medium	High	High (FSI)	Extreme (FSI)
	Unlikely	3 to 7 years	Negligible	Low	Medium	High (FSI)	Extreme (FSI)
	Rare	7 years+	Negligible	Negligible	Low	Medium (FSI)	High (FSI)

Safe System crash outcome threshold

The terms in Table 4.1 are described below.

Likelihood:

- Almost certain – occurrence once per quarter
- Likely – occurrence once per quarter to once per year
- Possible – occurrence once per year to once every three years
- Unlikely – occurrence once every three years to once every seven years
- Rare – occurrence less than once every seven years.



Severity:

- Insignificant – property damage
- Minor – minor first aid
- Moderate – major first aid and/or presents to hospital (not admitted)
- Serious – admitted to hospital
- Fatal – at scene or within 30 days of the crash.

Priority:

- Negligible – no action required
- Low – should be corrected or the risk reduced if the treatment cost is low
- Medium – should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
- High – should be corrected or the risk significantly reduced, even if the treatment cost is high
- Extreme – must be corrected regardless of cost.

## 4.2 Responding to the Audit Report

As set out in the road safety audit guidelines, the responsibility for the road rests with the project manager, not with the auditor. The project manager is under no obligation to accept the audit findings. Neither is it the role of the auditor to agree to or approve the project manager's responses to the audit.

The audit provides the opportunity to highlight potential road safety problems and have them formally considered by the project manager in conjunction with all other project considerations.

## 4.3 Road Safety Audit Findings

The audit findings are documented in Table 4.2 which provides:



- specific details of the road safety issues identified during the audit
- a risk level rating for each of the road safety audit findings.

It should be acknowledged that positive attributes of the audited road section have not been discussed. Deficiencies that do not cause a safety problem are also not listed.



In-line with TfNSW's best practice recommendations have not been included in the road safety audit findings.






**Table 4.2: Road Safety Audit Findings**

Item No.	Location	Descriptions of Findings	Photo	Likelihood	Severity	Risk Rating	Designer Response
1.	Little Hunter Street	There is no signage proposed on the Little Hunter Street approach to indicate the road closure ahead at Hunter Street. Pedestrians or cyclists may access Hunter Street from Curtin Place via Little Hunter Street which potentially exposes them to the hazards associated with construction activities.		Rare	Insignificant	Negligible	Construction activities will be separated from the footpath.
2.	Bligh Street southbound approach	The "Side Road Closed" sign without directional arrow does not indicate the road closure west of Bligh Street. Vehicles intending to turn left may misinterpret the sign and make a last-minute lane change, resulting in side swipe type crashes and minor injuries.		Possible	Insignificant	Low	Directional arrows added.





Item No.	Location	Descriptions of Findings	Photo	Likelihood	Severity	Risk Rating	Designer Response
3.	Spring Street – Pitt Street	Construction vehicles turning left from Spring Street onto Pitt Street, while looking right waiting for a gap to turn left may potentially overlook pedestrians or cyclists crossing on the left at the southern kerb, resulting in incidents with pedestrians / cyclists potentially causing minor to moderate injury. It is acknowledged that it is an existing operation, however construction trucks are relatively 'high' vehicles compared with light vehicles which could present the risk identified above.		Possible	Minor	Medium	<p>Cyclists will primarily be using the cycleway on the other side of Pitt Street and are unlikely to cross at a pedestrian crossing on the footpath. Due to the width of the road, heavy vehicles will need to slow down to manoeuvre onto Pitt Street from Spring Street.</p> <p>Heavy vehicles will queue over the pedestrian crossing when turning left to make sure there is an adequate gap for them to attempt the manoeuvre, whilst they are queued the pedestrian crossing will be blocked.</p>
4.	King Street – Elizabeth Street	The swept path of a construction vehicle turning left from King Street on to Elizabeth Street shows that the right and though shared lanes are used to turn with wheels mounting the kerb west of Elizabeth Street. This may possibly result in conflict with vehicles in turning left from the kerb side lane leading to side swipe type crashes and minor injury, as well as potential damage to road furniture.		Possible	Insignificant	Low	<p>The swept paths have been amended to show that vehicles do not mount the kerb.</p>






Item No.	Location	Descriptions of Findings	Photo	Likelihood	Severity	Risk Rating	Designer Response
5.	Bridge Street – Gresham Street	The swept path shows the construction vehicle is likely to cross over the centre line on Gresham Street. This may possibly result in conflict with oncoming vehicles resulting in head-on type crashes and minor injury.		Possible	Insignificant	Low	The swept paths have been amended to show that vehicles do not cross over the centreline.
6.	Bridge Street – Cahill Expressway	The swept path shows the construction vehicle is likely to occupy two through lanes to travel through to Bridge Street. This may possibly result in conflict with vehicles waiting at the signals resulting in side swipe type crashes and minor injury.		Possible	Insignificant	Low	Vehicles travelling in this direction diverge just before this point, allowing heavy vehicles to occupy both lanes at the lights. Vehicles will not be able to pass them.
7.	Pitt Street – King Street	The swept path of a construction vehicle turning left from Pitt Street onto King Street indicates the vehicle body hitting the traffic light pole located near to the kerb. This presents risks of property damage, as well as chances of hitting pedestrians standing close to the edge of the kerb, which may result in minor injury.		Possible	Insignificant	Low	The swept paths have been amended to show that vehicles do not hit the traffic lights.


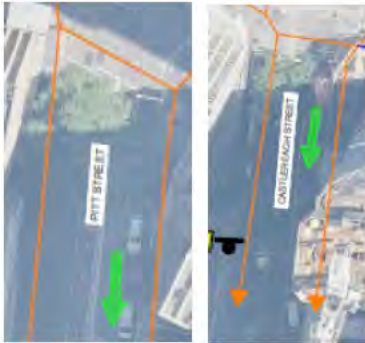



Item No.	Location	Descriptions of Findings	Photo	Likelihood	Severity	Risk Rating	Designer Response
8.	St James Road – Macquarie Street	The swept path of a construction vehicle turning left from St James Road on to Macquarie Street shows the wheels mounting the kerb, resulting in damage to roadside furniture. The vehicle is also possibly going over the centreline on Macquarie Street, resulting in side swipe type crashes with a large vehicle in the right turning lane in the opposite direction.		Possible	Insignificant	Low	The swept path shows that the wheels enter the gutter but do not mount the kerb. The clearance envelope remains on the centreline and does not cross over.
9.	St James Rd – Macquarie St	The swept path of a construction vehicle turning left from St James Road onto Macquarie Street shows the construction vehicle is using the right turning lane to turn left onto Macquarie Street. This may result in conflict with vehicles turning left from the kerbside lane leading to side swipe type crashes and minor injury.		Possible	Insignificant	Low	Heavy vehicles will occupy both lanes when turning so that light vehicles can not turn with them. The swept paths have been amended to reflect this.



Item No.	Location	Descriptions of Findings	Photo	Likelihood	Severity	Risk Rating	Designer Response
10.	George Street – Hunter Street	<p>George Street on approach to Hunter Street is currently blocked for vehicular access.</p> <p>Consequently, the detour signage is not required.</p> <p>It is however noted that an additional set of signage at this location may help with informing local access drivers to maintain road safety.</p>		-	-	Note Only	This is for local access drivers.
11.	Curtin Place	Traffic flow arrows are shown in wrong directions.		-	-	Note Only	Amended.
12.	Hamilton Street and Curtin Place	<p>The TGS signage along Hamilton Street and Curtin Place appears to deviate from guidelines. The spacing distance between the signs along Hamilton Street and Curtin Place are also missing on the plan.</p> <p>Non-standard signage may not provide adequate information for motorists to be aware of the nearby construction activities.</p>		-	-	Note Only	The spacing distance has been provided.



Item No.	Location	Descriptions of Findings	Photo	Likelihood	Severity	Risk Rating	Designer Response
13.	Curtin Place – Hamilton Street	A “Road Works on Side Road” sign is missing on the Curtin Place approach to the intersection with Hamilton Street. Motorists on the Curtin Place approach may not be informed prior to turning onto Hamilton Street which could result in confusion and erratic driver behaviour.		-	-	Note Only	Added.
14.	Exit lane at Pitt Street and Castlereagh Street	“End of Road Work” signs are missing on the departure side of Pitt Street and Castlereagh Street to inform the end of construction zone.		-	-	Note Only	Added.
15.	Hunter Street east of Phillip Street	No “End detour” sign is provided for the “Pitt Street traffic eastbound detour route.”		-	-	Note Only	Added.

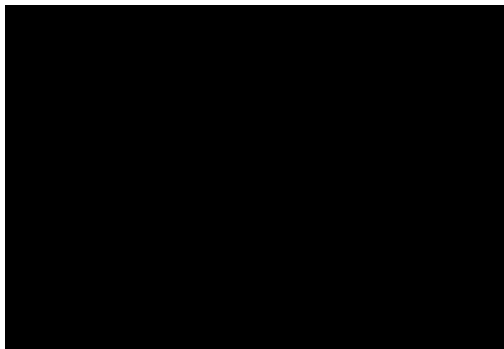


## 5 Concluding Statement

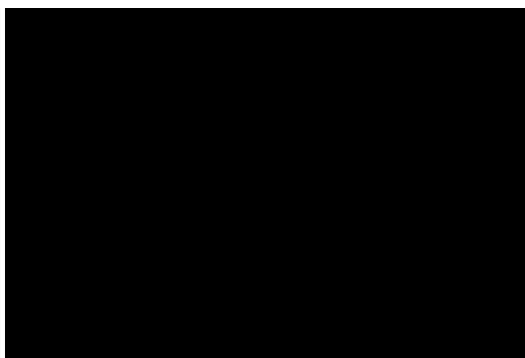
The findings and opinions in the report are based on the examination of the specific road and environments and might not address all concerns existing at the time of the audit.

The auditors have endeavoured to identify features of the road that could be modified in order to improve safety, although it must be recognised that safety cannot be guaranteed since no road can be regarded as absolutely safe.

While every effort has been made to ensure the accuracy of this report, it is made available strictly on the basis that anyone relying on it does so at their own risk without any liability to the Auditors.



Level 3 Lead Road Safety Auditor  
The Transport Planning Partnership



Level 2 Road Safety Auditor  
The Transport Planning Partnership



## Appendix A

### Traffic Guidance Scheme



TRAFFIC MANAGEMENT NOTES:

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 MINIMUM SIZE A.
4. ALL SIGNS TO BE CLASS 1 REFLECTIVE OR DIAMOND GRADE.
5. ALL WORKERS WILL BE CONFINED TO THE DEDICATED WORKS AREA SHOWN ON THE PLAN.
6. ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE TfNSW "TRAFFIC CONTROL AT WORK SITES" MANUAL, VER6 (2020) AND AUSTRALIAN STANDARDS AS1742.3:2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 3: TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS.
7. THIS TRAFFIC CONTROL PLAN MUST BE SETUP BY A PERSON HOLDING AN "APPLY TRAFFIC CONTROL PLANS" (YELLOW TICKET) AND THE TfNSW TRAFFIC CONTROL AT WORK SITES CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION.
8. IT IS THE SITE FOREMAN'S RESPONSIBILITY TO ENSURE THE FOLLOWING:
  - THE INTEGRITY OF ALL TRAFFIC CONTROL MEASURES THROUGH TO THE FINAL REMOVAL. THIS INCLUDES DAILY CHECKS OF ALL SIGNS AND DEVICES. THE CORRESPONDING RECORDS OF CHECKS SHALL BE KEPT ON FILE FOR AUDITING PURPOSES.
  - VEHICULAR ACCESS AND SERVICING REQUIREMENTS ARE TO BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES AFFECTED BY TRAFFIC CONTROL MEASURES
  - PEDESTRIAN ACCESS AROUND THE WORK AREA TO BE MAINTAINED AT ALL TIMES.
  - AT ALL TIMES UP-TO-DATE COPY OF "TRAFFIC CONTROL AT WORK SITES" SHOULD BE AVAILABLE FOR REFERENCE AND IMPLEMENTATION AS REQUIRED ON-SITE
  - IF THERE IS NO DESIGNATED SITE FOREMAN, THE RESPONSIBILITY SHALL FALL ON THE CONTRACTOR OF WORKS
9. ALL WORKERS MUST ADHERE TO THE APPLICABLE SAFE WORK DISTANCE AS DESCRIBED IN AS1742.3:2009
10. ALL DISTANCES BETWEEN SIGNS ARE TO BE IN ACCORDANCE WITH THE SECTION 2.5.2 OF AS1742.3:2009. HOWEVER, MODIFICATIONS MADE TO SUIT SITE CONDITIONS.
11. ALL CONSTRUCTION VEHICLE ACTIVITY SHOULD BE MINIMISED, WHERE POSSIBLE, DURING PEAK PERIODS.
12. NO TRUCK QUEUING OR PARKING WILL BE PERMITTED IN ANY PUBLIC ROAD OUTSIDE THE PROPOSED WORKS ZONE.
13. VEHICLES ALREADY ON THE ROAD WILL HAVE A RIGHT OF WAY. AS SUCH EVERY VEHICLE LEAVING THE SITE MUST WAIT UNTIL A SUITABLE GAP IN TRAFFIC ALLOWS THEM TO EXIT UNDER THE DIRECTION OF QUALIFIED TRAFFIC AND PEDESTRIAN CONTROLLER.
14. PEDESTRIANS WILL ONLY BE HELD FOR SHORT TIME TO ALLOW TRUCKS TO ENTER AND EXIT FROM THE SITE. PEDESTRIANS HAVE THE RIGHT OF WAY ON THE FOOTPATH AND WILL NOT BE STOPPED IN ANTICIPATION.
15. ADJOINING PROPERTIES AND SIDE ROADS WILL NOT BE AFFECTED BY THE WORKS.

CERTIFICATION

THE UNDERSIGNED HAS OBTAINED "PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN" CERTIFICATION.

CERTIFICATE NO: TCT1036878  
JAMES GOODMAN

SITE PERSONNEL TO  
MANAGE TRAFFIC  
ENTERING AND EXITING  
DRIVEWAYS

O'CONNELL STREET  
CHANGED TO TWO-WAY  
CONTRA FLOW

- LEGEND
- SUBJECT SITE
  - CRANE WORK ZONE
  - TEMPORARY CRANE WORK ZONE
  - B-CLASS HOARDING
  - PEDESTRIAN ROUTE
  - TRAFFIC CONES
  - TRAFFIC FLOW
  - SIGN POST
  - TRAFFIC CONTROLLER
  - POLICE TRAFFIC CONTROLLER
  - SITE PERSONNEL

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	DRAFT	JG	WJ	WJ	05/05/23



PROJECT

TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET - TOWER CRANE

DRAFT TRAFFIC GUIDANCE SCHEME

DWG No. 21480CAD008  
FIGURE 1

DATE STAMP  
05 MAY 2023

PROJECT No. 21480	SCALE NTS	REV. A
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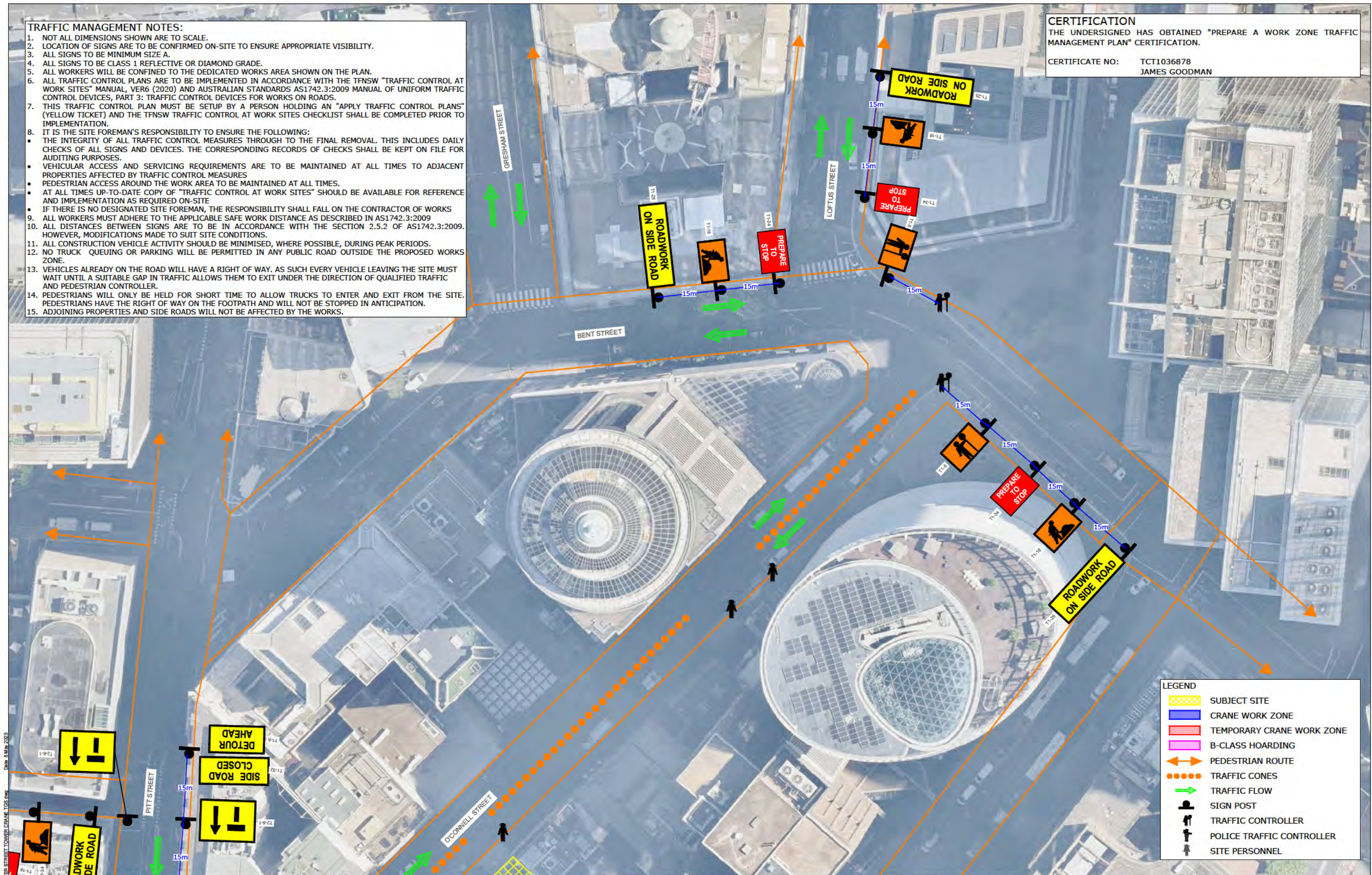
# TRAFFIC MANAGEMENT NOTES:

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 MINIMUM SIZE A.
4. ALL SIGNS TO BE CLASS 1 REFLECTIVE OR DIAMOND GRADE.
5. ALL WORKERS WILL BE CONFINED TO THE DEDICATED WORKS AREA SHOWN ON THE PLAN.
6. ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE TfNSW "TRAFFIC CONTROL AT WORK SITES" MANUAL, VER6 (2020) AND AUSTRALIAN STANDARDS AS1742.3:2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 3: TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS.
7. THIS TRAFFIC CONTROL PLAN MUST BE SETUP BY A PERSON HOLDING AN "APPLY TRAFFIC CONTROL PLANS" (YELLOW TICKET) AND THE TfNSW TRAFFIC CONTROL AT WORK SITES CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION.
8. IT IS THE SITE FOREMAN'S RESPONSIBILITY TO ENSURE THE FOLLOWING:
  - THE INTEGRITY OF ALL TRAFFIC CONTROL MEASURES THROUGH TO THE FINAL REMOVAL. THIS INCLUDES DAILY CHECKS OF ALL SIGNS AND DEVICES. THE CORRESPONDING RECORDS OF CHECKS SHALL BE KEPT ON FILE FOR AUDITING PURPOSES.
  - VEHICULAR ACCESS AND SERVICING REQUIREMENTS ARE TO BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES AFFECTED BY TRAFFIC CONTROL MEASURES
  - PEDESTRIAN ACCESS AROUND THE WORK AREA TO BE MAINTAINED AT ALL TIMES.
  - AT ALL TIMES UP-TO-DATE COPY OF "TRAFFIC CONTROL AT WORK SITES" SHOULD BE AVAILABLE FOR REFERENCE AND IMPLEMENTATION AS REQUIRED ON-SITE
  - IF THERE IS NO DESIGNATED SITE FOREMAN, THE RESPONSIBILITY SHALL FALL ON THE CONTRACTOR OF WORKS
9. ALL WORKERS MUST ADHERE TO THE APPLICABLE SAFE WORK DISTANCE AS DESCRIBED IN AS1742.3:2009.
10. ALL DISTANCES BETWEEN SIGNS ARE TO BE IN ACCORDANCE WITH THE SECTION 2.5.2 OF AS1742.3:2009. HOWEVER, MODIFICATIONS MADE TO SUIT SITE CONDITIONS.
11. ALL CONSTRUCTION VEHICLE ACTIVITY SHOULD BE MINIMISED, WHERE POSSIBLE, DURING PEAK PERIODS.
12. NO TRUCK QUEUING OR PARKING WILL BE PERMITTED IN ANY PUBLIC ROAD OUTSIDE THE PROPOSED WORKS ZONE.
13. VEHICLES ALREADY ON THE ROAD WILL HAVE A RIGHT OF WAY. AS SUCH EVERY VEHICLE LEAVING THE SITE MUST WAIT UNTIL A SUITABLE GAP IN TRAFFIC ALLOWS THEM TO EXIT UNDER THE DIRECTION OF QUALIFIED TRAFFIC AND PEDESTRIAN CONTROLLER.
14. PEDESTRIANS WILL ONLY BE HELD FOR SHORT TIME TO ALLOW TRUCKS TO ENTER AND EXIT FROM THE SITE. PEDESTRIANS HAVE THE RIGHT OF WAY ON THE FOOTPATH AND WILL NOT BE STOPPED IN ANTICIPATION.
15. ADJOINING PROPERTIES AND SIDE ROADS WILL NOT BE AFFECTED BY THE WORKS.

## CERTIFICATION

THE UNDERSIGNED HAS OBTAINED "PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN" CERTIFICATION.

CERTIFICATE NO: TCT1036878  
JAMES GOODMAN



LEGEND	
	SUBJECT SITE
	CRANE WORK ZONE
	TEMPORARY CRANE WORK ZONE
	B-CLASS HOARDING
	PEDESTRIAN ROUTE
	TRAFFIC CONES
	TRAFFIC FLOW
	SIGN POST
	TRAFFIC CONTROLLER
	POLICE TRAFFIC CONTROLLER
	SITE PERSONNEL

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	WJ	WJ	05/05/23



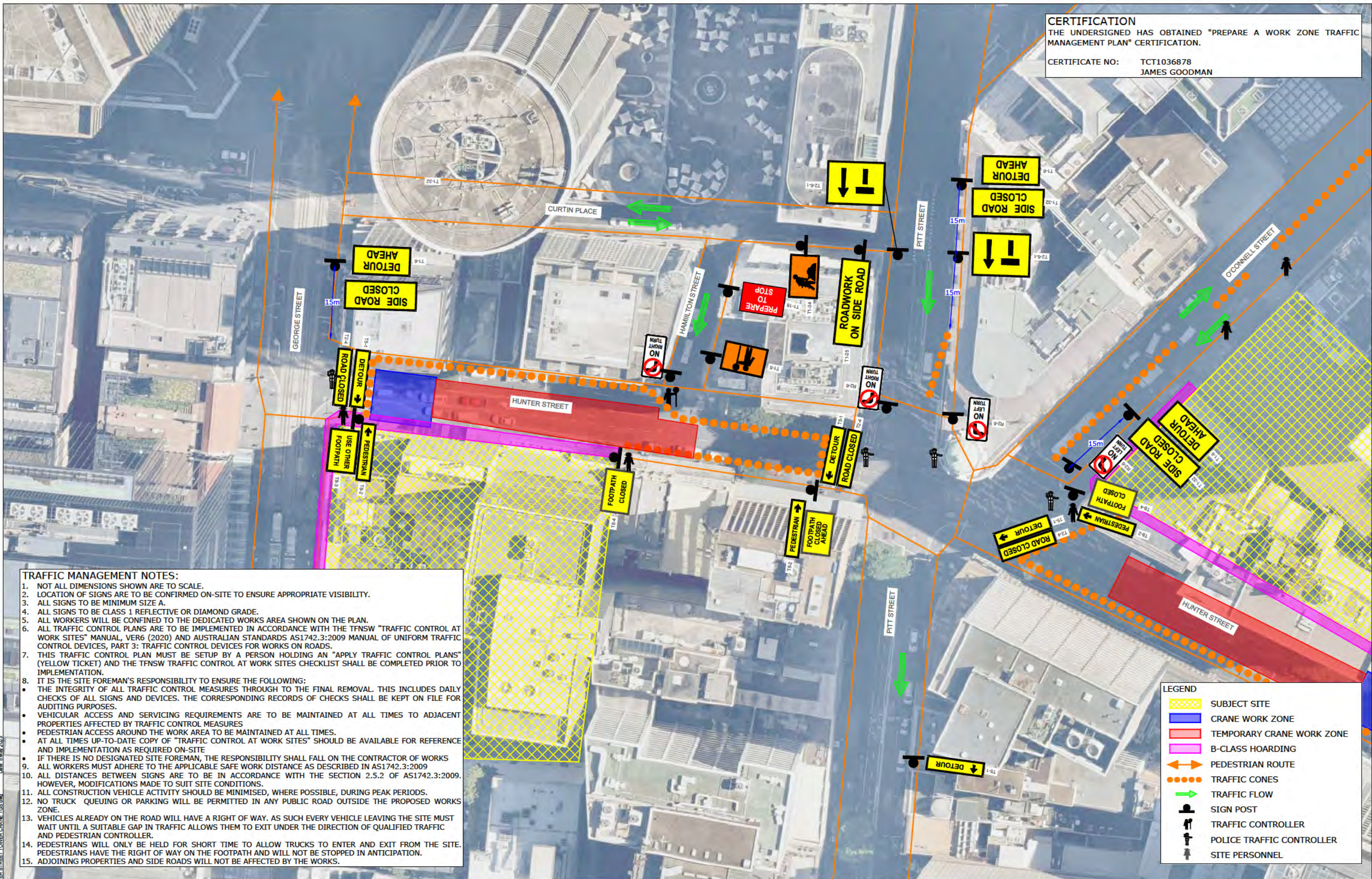
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET - TOWER CRANE		
TITLE	TRAFFIC GUIDANCE SCHEME HUNTER STREET WEST		

DWG No.	21480CAD008 FIGURE 2		
DATE STAMP	05 MAY 2023		
PROJECT No.	21480	SCALE	NTS
REV.	A		

File name: 21480CAD008-250505-HUNTER STREET TOWER CRANE TGS.dwg Date: 5 May 2023



**CERTIFICATION**  
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CERTIFICATE NO: TCT1036878  
JAMES GOODMAN



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	WJ	WJ	05/05/23

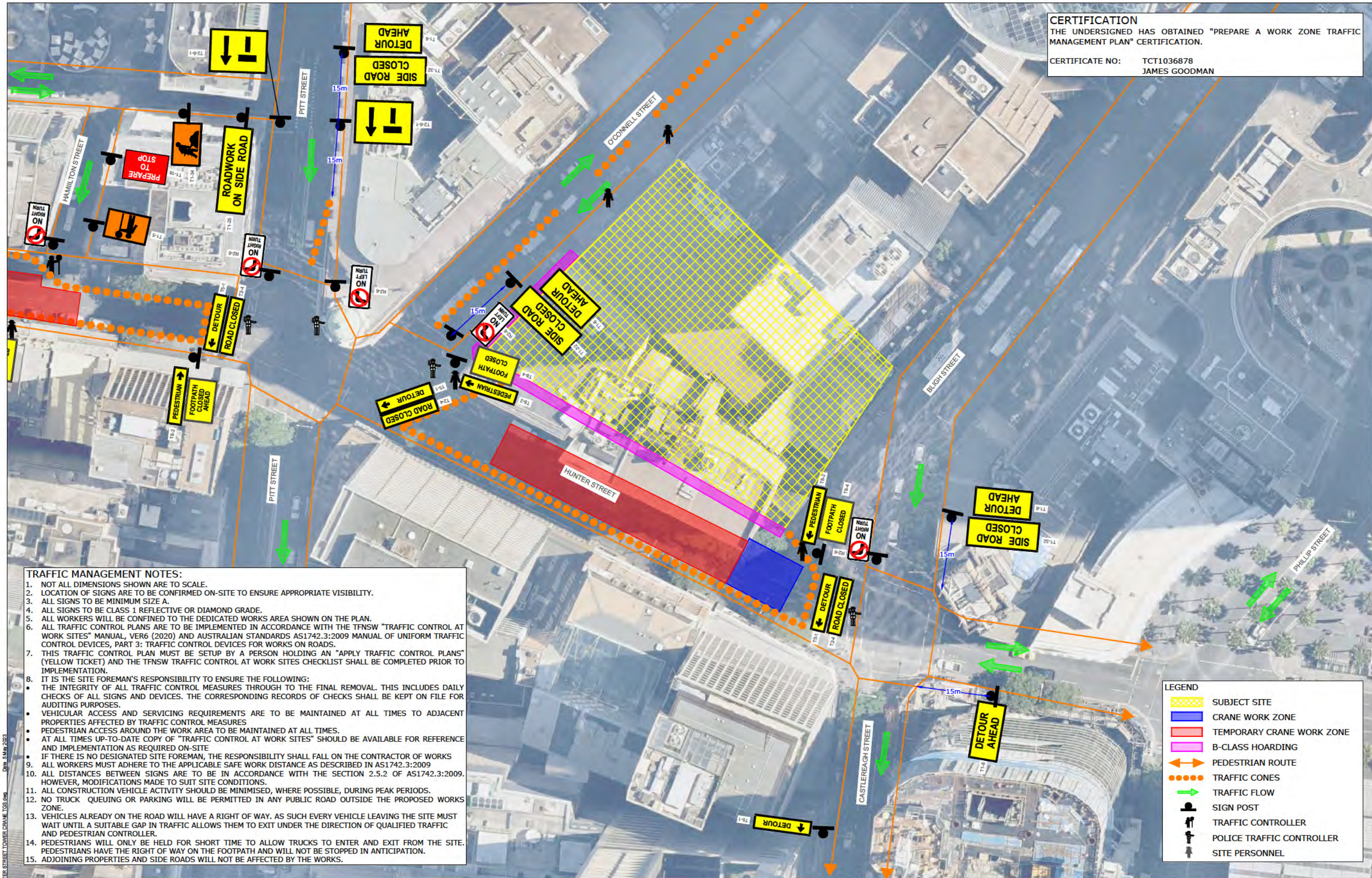


PROJECT  
TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET - TOWER CRANE  
TRAFFIC GUIDANCE SCHEME  
HUNTER STREET WEST

DWG No.	21480CAD008
FIGURE 3	
DATE STAMP	05 MAY 2023
PROJECT No.	21480
SCALE	NTS
REV.	A





**CERTIFICATION**  
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CERTIFICATE NO: TCT1036878  
JAMES GOODMAN

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  2. LOCATION OF SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY.
  3. ALL SIGNS TO BE MINIMUM SIZE A.
  4. ALL SIGNS TO BE CLASS 1 REFLECTIVE OR DIAMOND GRADE.
  5. ALL WORKERS WILL BE CONFINED TO THE DEDICATED WORKS AREA SHOWN ON THE PLAN.
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    - PEDESTRIAN ACCESS AROUND THE WORK AREA TO BE MAINTAINED AT ALL TIMES.
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    - IF THERE IS NO DESIGNATED SITE FOREMAN, THE RESPONSIBILITY SHALL FALL ON THE CONTRACTOR OF WORKS
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  10. ALL DISTANCES BETWEEN SIGNS ARE TO BE IN ACCORDANCE WITH THE SECTION 2.5.2 OF AS1742.3:2009. HOWEVER, MODIFICATIONS MADE TO SUIT SITE CONDITIONS.
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  14. PEDESTRIANS WILL ONLY BE HELD FOR SHORT TIME TO ALLOW TRUCKS TO ENTER AND EXIT FROM THE SITE. PEDESTRIANS HAVE THE RIGHT OF WAY ON THE FOOTPATH AND WILL NOT BE STOPPED IN ANTICIPATION.
  15. ADJOINING PROPERTIES AND SIDE ROADS WILL NOT BE AFFECTED BY THE WORKS.

- LEGEND**
- SUBJECT SITE
  - CRANE WORK ZONE
  - TEMPORARY CRANE WORK ZONE
  - B-CLASS HOARDING
  - PEDESTRIAN ROUTE
  - TRAFFIC CONES
  - TRAFFIC FLOW
  - SIGN POST
  - TRAFFIC CONTROLLER
  - POLICE TRAFFIC CONTROLLER
  - SITE PERSONNEL

File name: 21480CAD008-220505-HUNTER STREET TOWER CRANE TGS.dwg Date: 5 May 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	DRAFT	JG	WJ		05/05/23

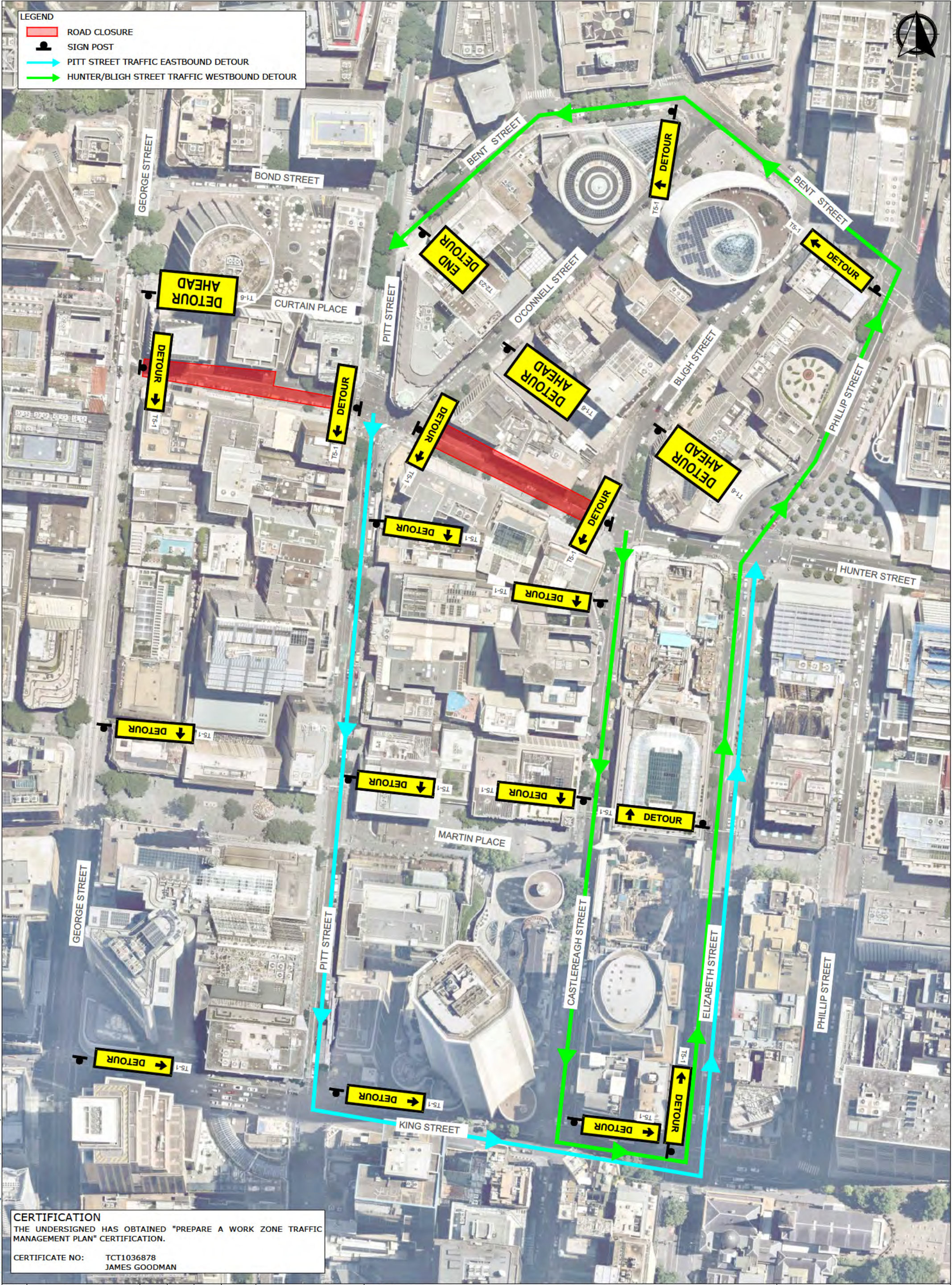


PROJECT  
TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET - TOWER CRANE  
  
TRAFFIC GUIDANCE SCHEME  
HUNTER STREET EAST

DWG No.	21480CAD008 FIGURE 4		
DATE STAMP	05 MAY 2023		
PROJECT No.	21480	SCALE NTS	REV. A





File Name: 21480CAD008-210504-HUNTER STREET TOWER CRANE TGS.dwg Date: 5 May 2023 By: WVK

**CERTIFICATION**  
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CERTIFICATE NO: TCT1036878  
JAMES GOODMAN

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	WJ	WJ	19/04/23



PROJECT  
**SYDNEY METRO WEST  
HUNTER STREET - TOWER CRANE**

TITLE  
**TRAFFIC GUIDANCE SCHEME  
DETOUR PLAN**

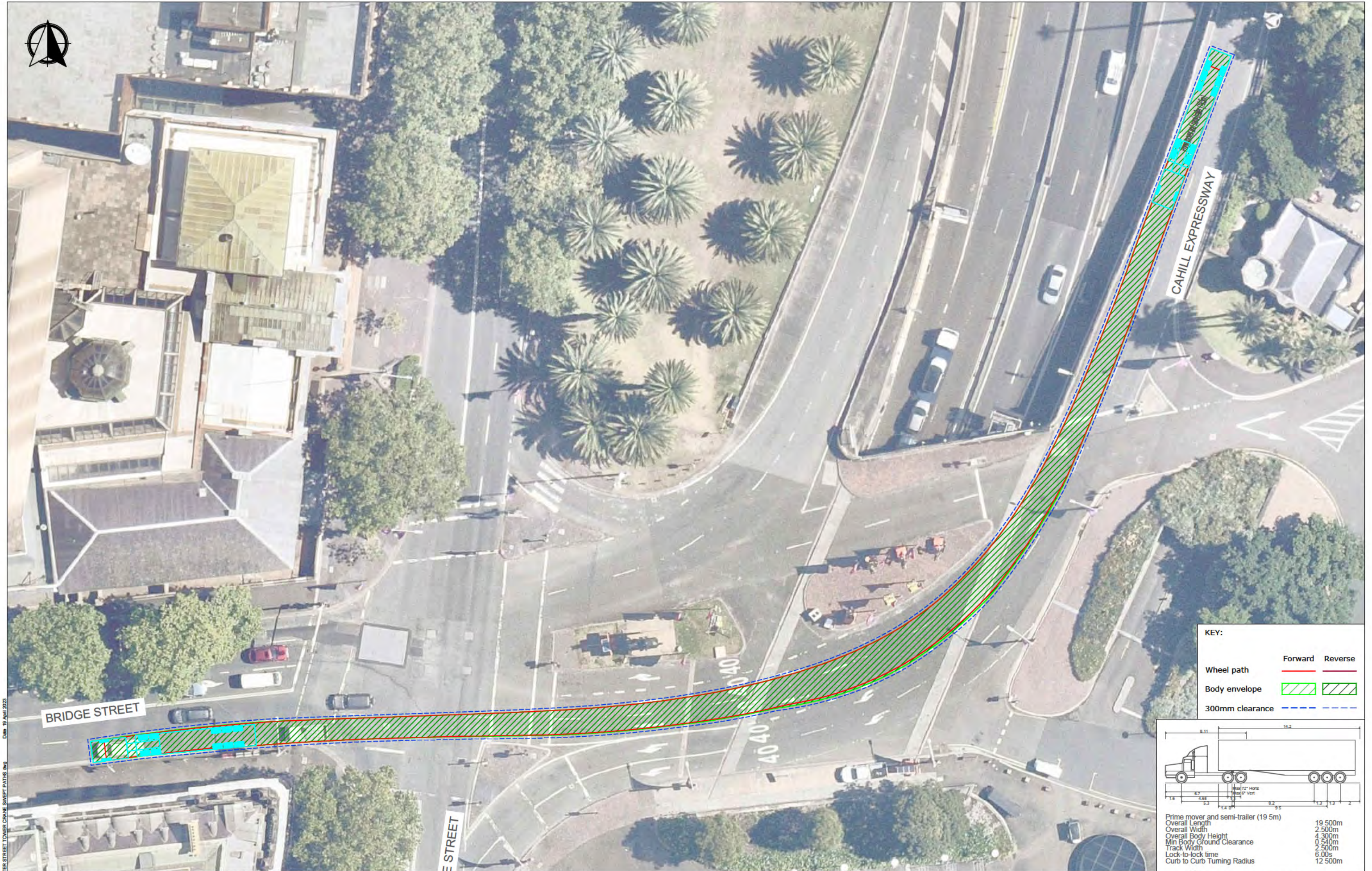
DWG No.	21480CAD008 FIGURE 5		
DATE STAMP	19 APRIL 2023		
PROJECT No.	21480	SCALE NTS	REV. A



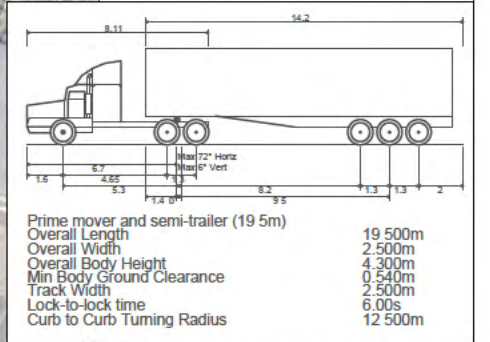
## Appendix B

### Swept Path Assessment





KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



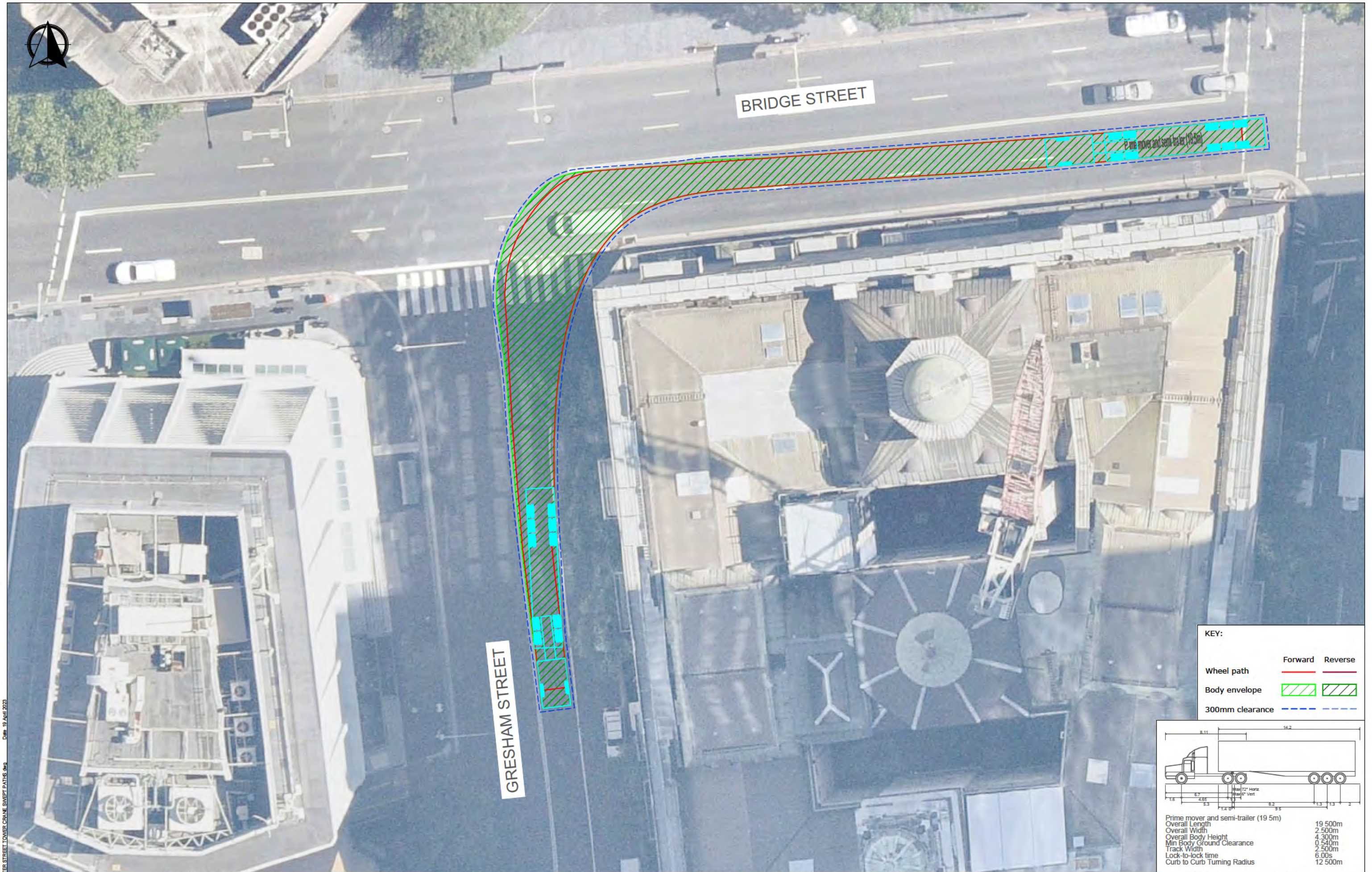
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A	FOR INFORMATION	JG	WJ	WJ	19/04/23



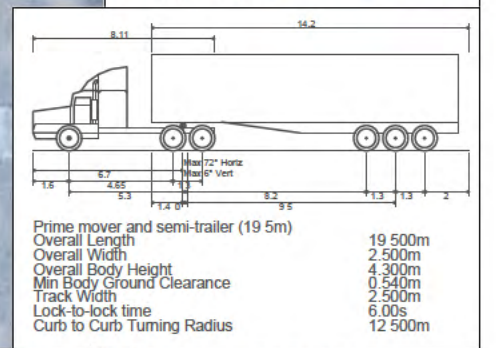
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION
TITLE	SWEPT PATH ANALYSIS - INBOUND - CAHILL EXPRESSWAY ONTO BRIDGE STREET 19.5m PRIME MOVER AND SEMI-TRAILER

DWG No.	21480CAD007R ST
FIGURE 1	
DATE STAMP	19 APRIL 2023
PROJECT No.	21480
SCALE	1:400 @A3
REV.	A





KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



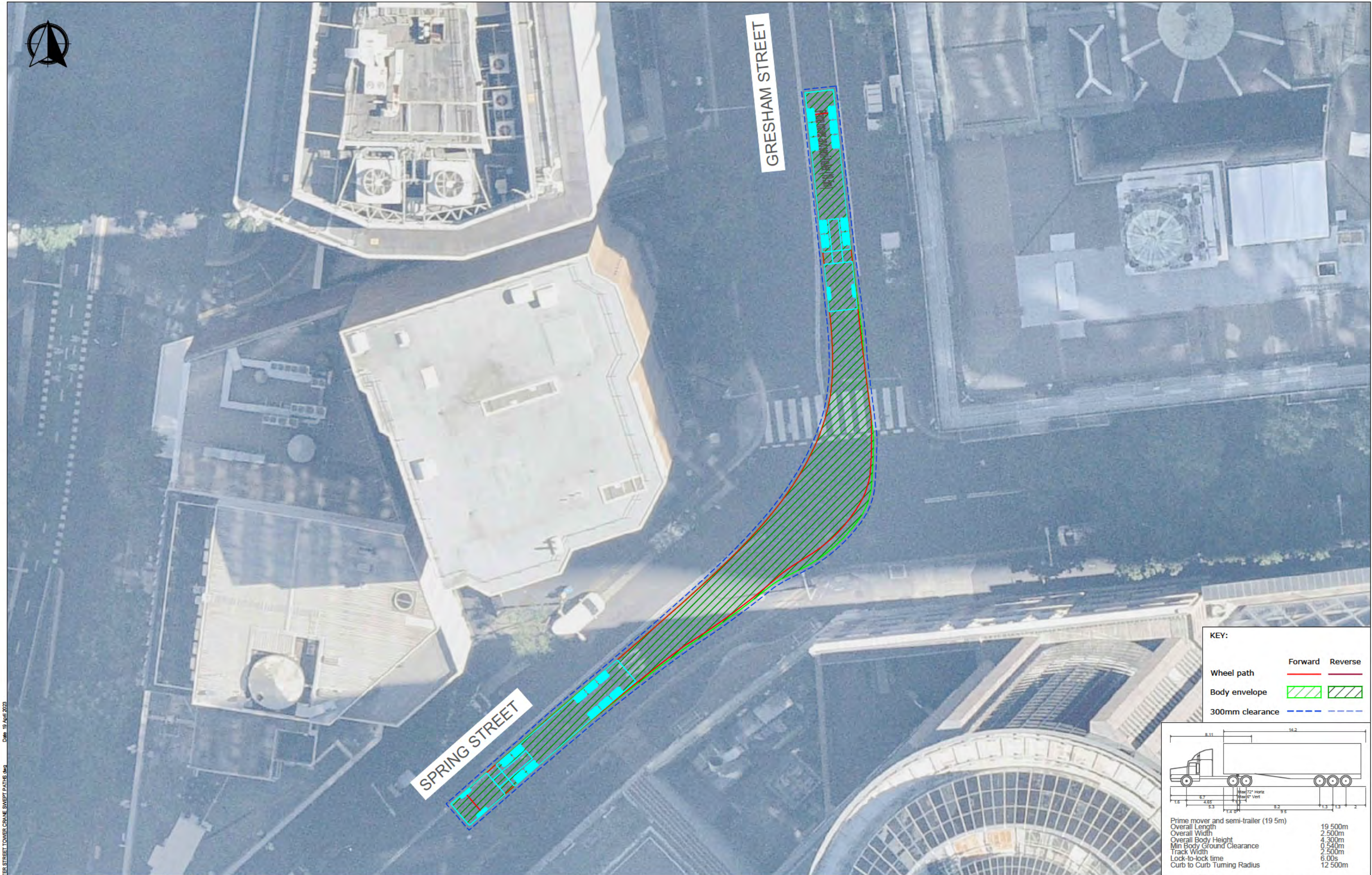
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - INBOUND - BRIDGE STREET ONTO GRESHAM STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 2		
DATE STAMP	19 APRIL 2023		
PROJECT No.	21480	SCALE	1:300 @A3
REV.	A		

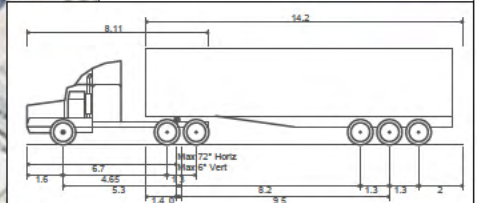




File name: 21480CAD007-200419-HUNTER STREET TOWER CRANE SWEEP PATHS.dwg Date: 19 April 2023



KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19.5m)	19.500m
Overall Length	19.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

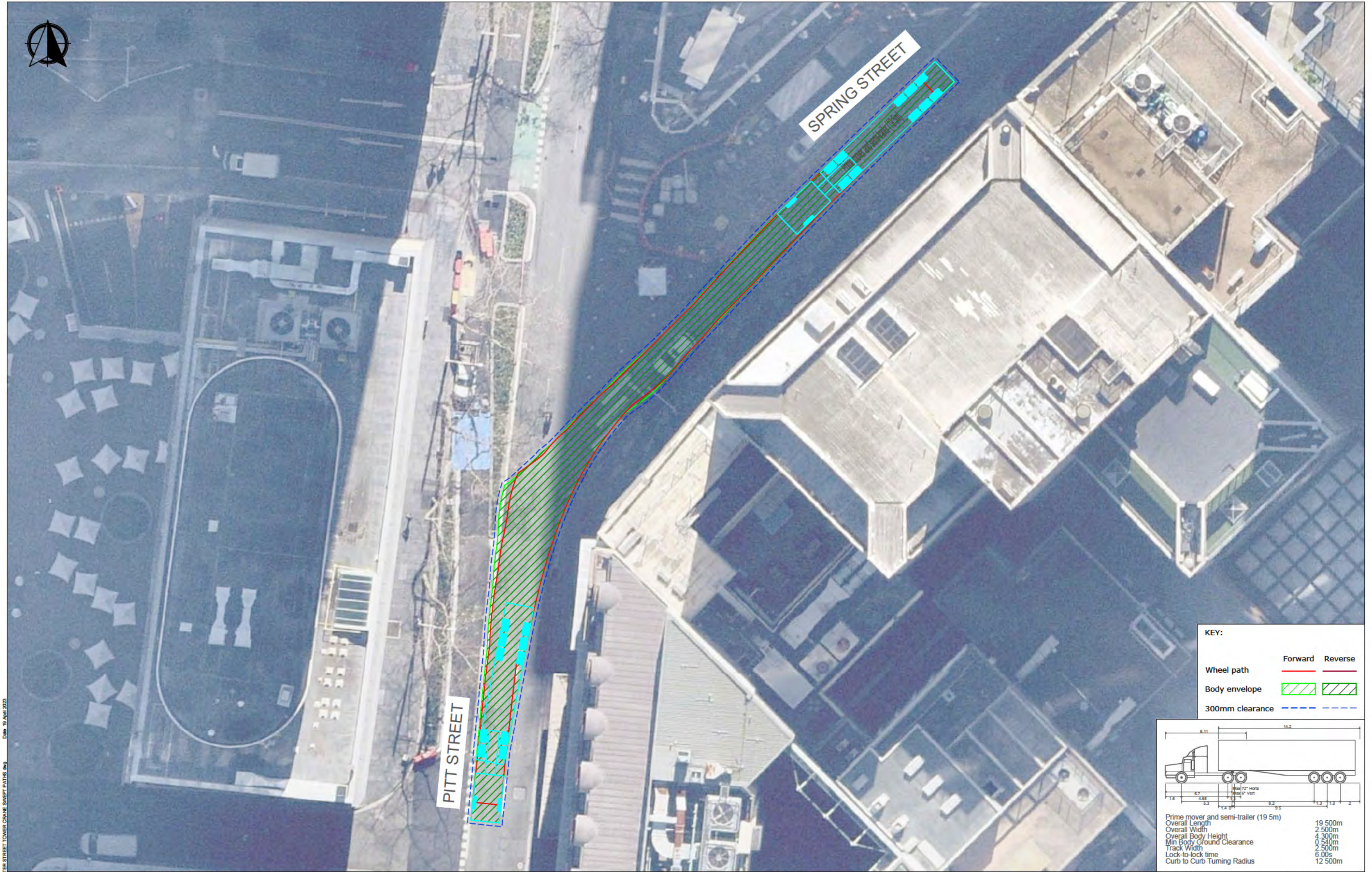
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A	FOR INFORMATION	JG	WJ	WJ	19/04/23



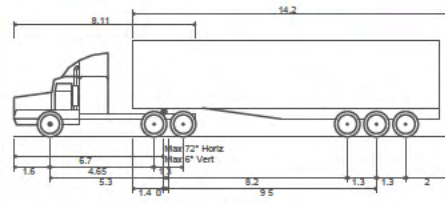
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - INBOUND - GRESHAM STREET ONTO SPRING STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 3		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
21480	1:300 @A3	A	





KEY:		
Wheel path	Forward	Reverse
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19.5m)	19.500m
Overall Length	2.500m
Overall Width	4.300m
Overall Body Height	0.540m
Min Body Ground Clearance	2.500m
Track Width	6.00s
Lock-to-lock time	12.500m
Curb to Curb Turning Radius	

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



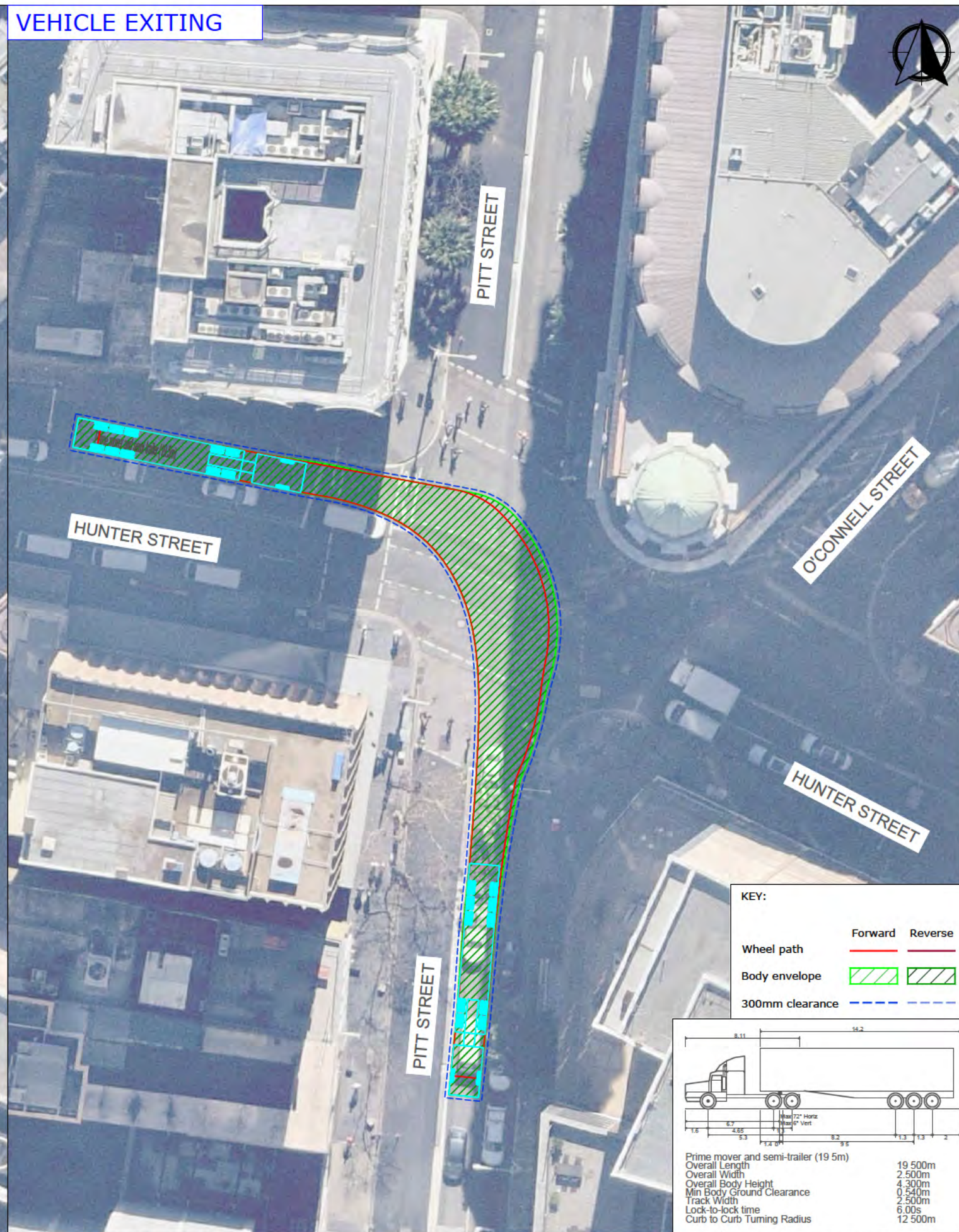
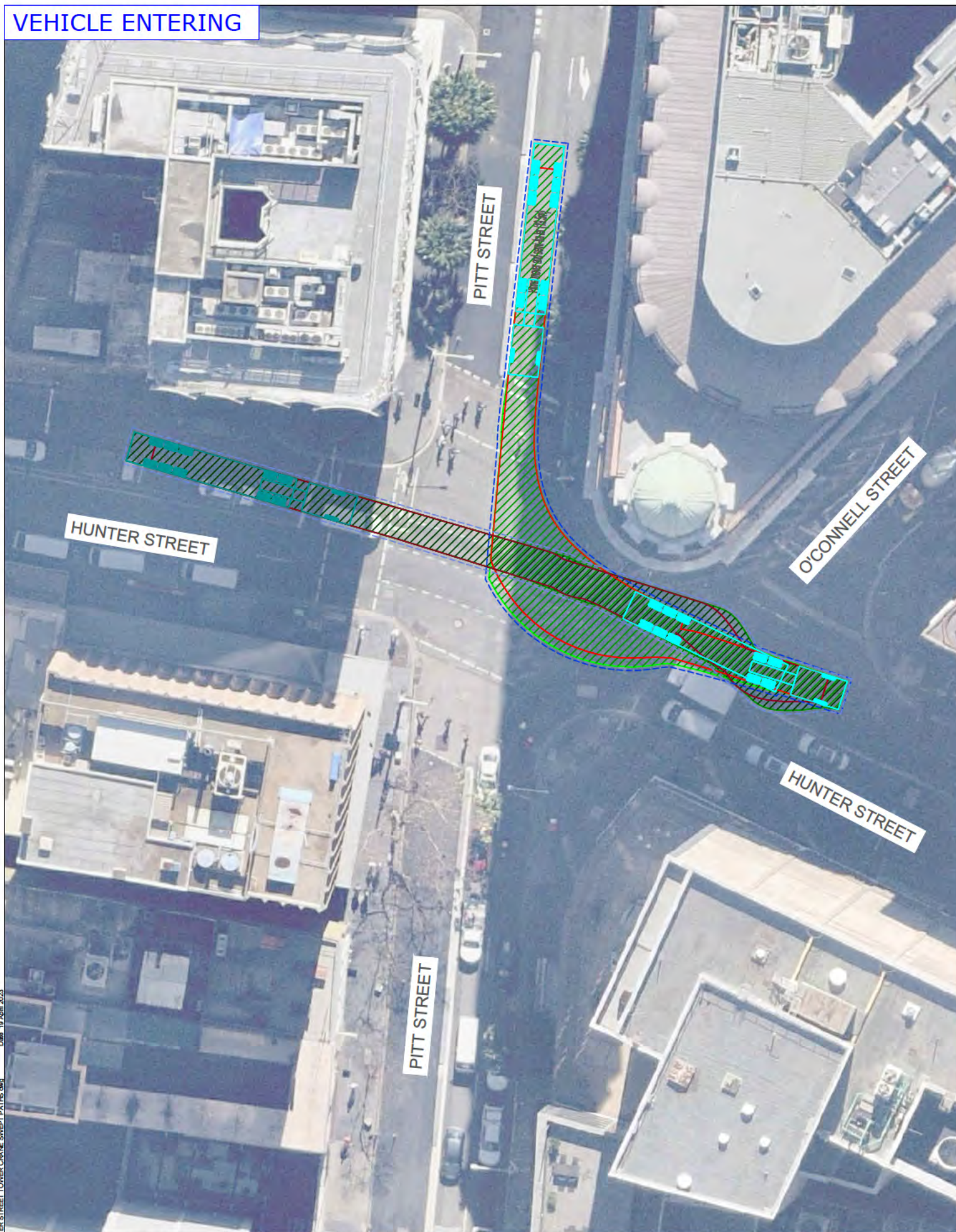
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION	
TITLE	SWEPT PATH ANALYSIS - INBOUND - SPRING STREET ONTO PITT STREET 19.5m PRIME MOVER AND SEMI-TRAILER	

DWG No.	21480CAD007 FIGURE 4	
DATE STAMP	19 APRIL 2023	
PROJECT No.	SCALE	REV.
21480	1:300 @A3	A



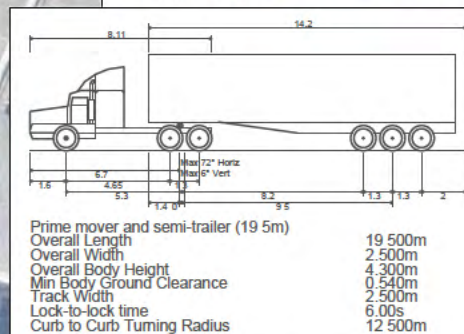
VEHICLE ENTERING

VEHICLE EXITING



KEY:

	Forward	Reverse
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Body envelope	<span style="color: green;">▨</span>	<span style="color: green;">▨</span>
300mm clearance	<span style="color: blue;">---</span>	<span style="color: blue;">---</span>



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT

TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET- TOWER CRANE INSTALLATION

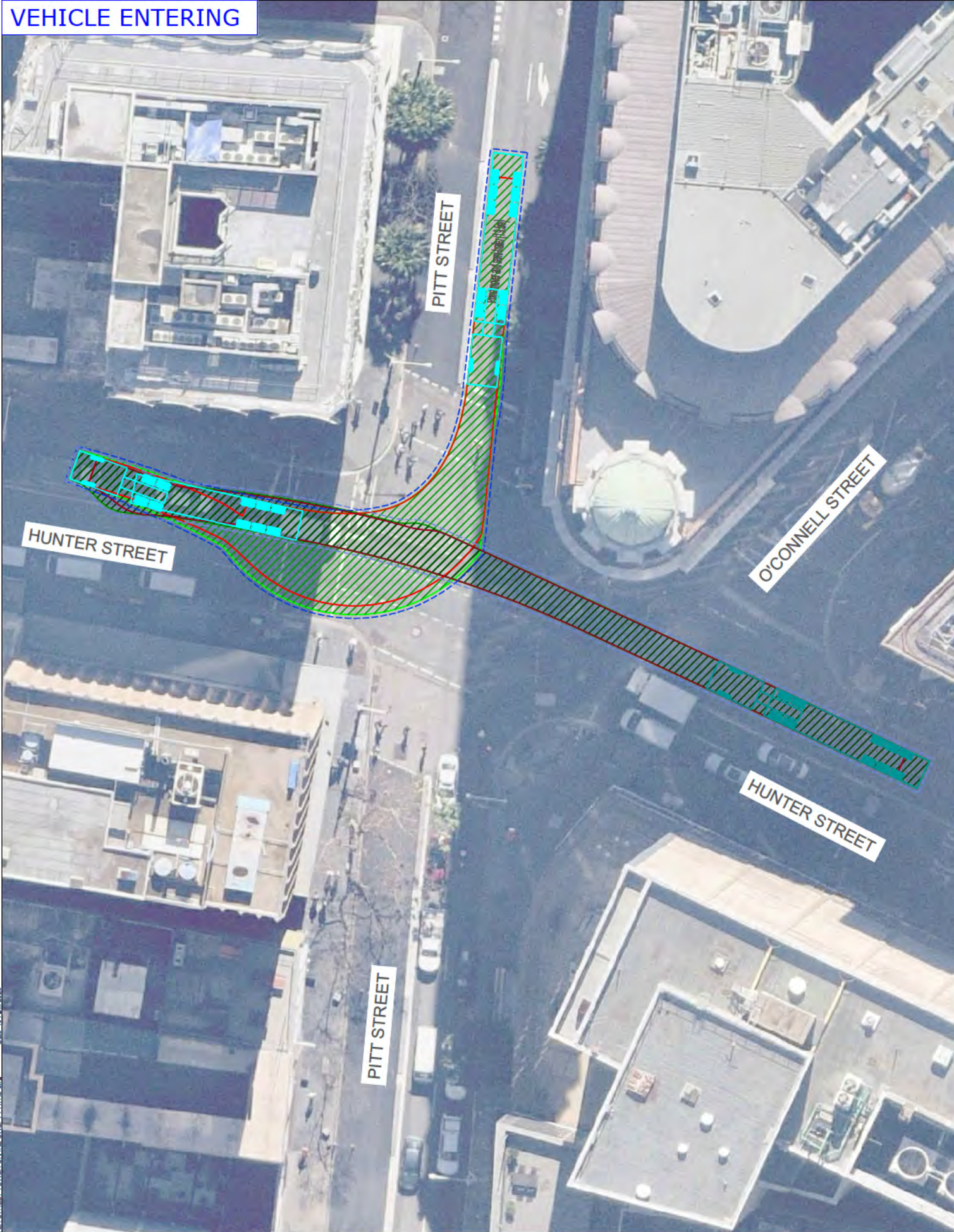
SWEPT PATH ANALYSIS - HUNTER WEST SITE ACCESS  
19.5m PRIME MOVER AND SEMI-TRAILER

DWG No.	21480CAD007 FIGURE 5		
DATE STAMP	19 APRIL 2023		
PROJECT No.	21480	SCALE	1:400 @A3
REV.	A		

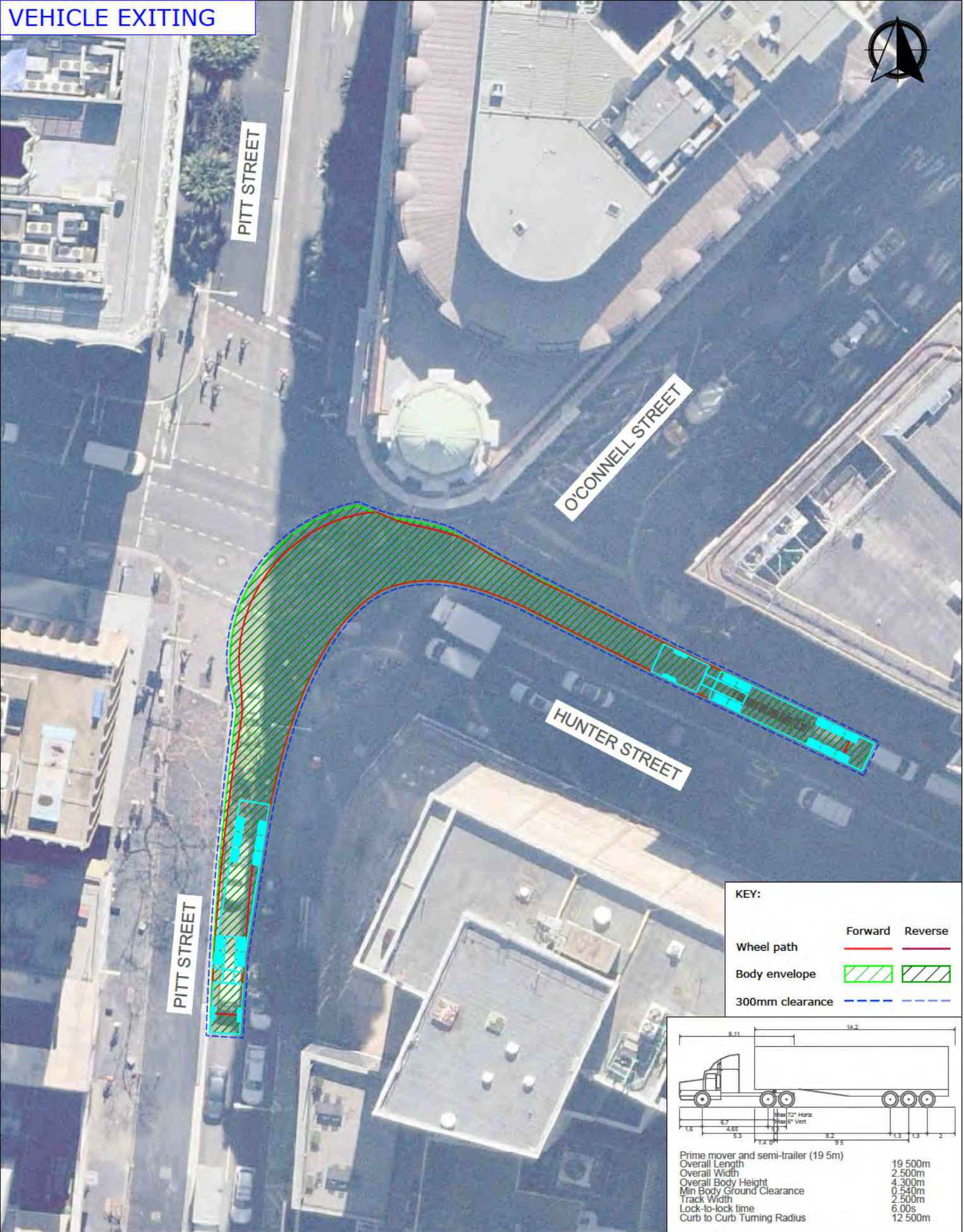
File name: 21480CAD007-202419-HUNTER STREET TOWER CRANE SWEEP PATHS.dwg Date: 19 April 2023



VEHICLE ENTERING

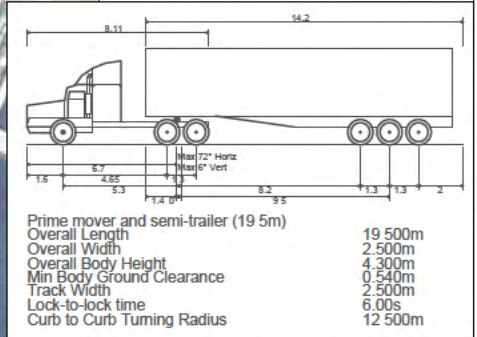


VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23

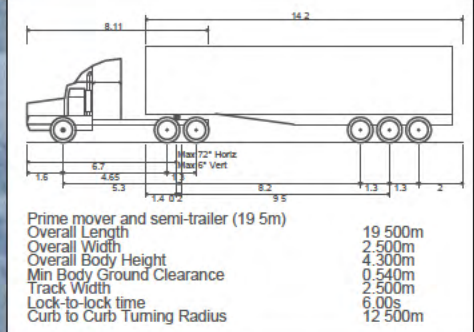


PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - HUNTER EAST SITE ACCESS 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 6		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
21480	1:400 @A3	A	

File name: 21480CAD007-200419-HUNTER STREET TOWER CRANE SWEPT PATHS.dwg Date: 19 April 2023





KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND - PITT STREET ONTO KING STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 7		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
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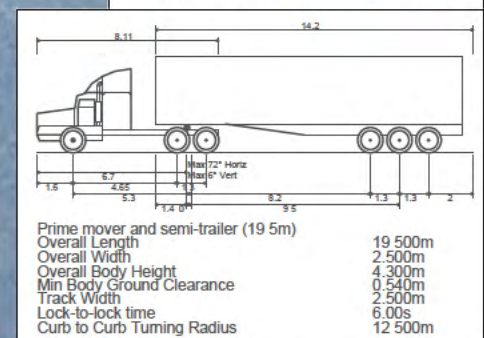




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KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

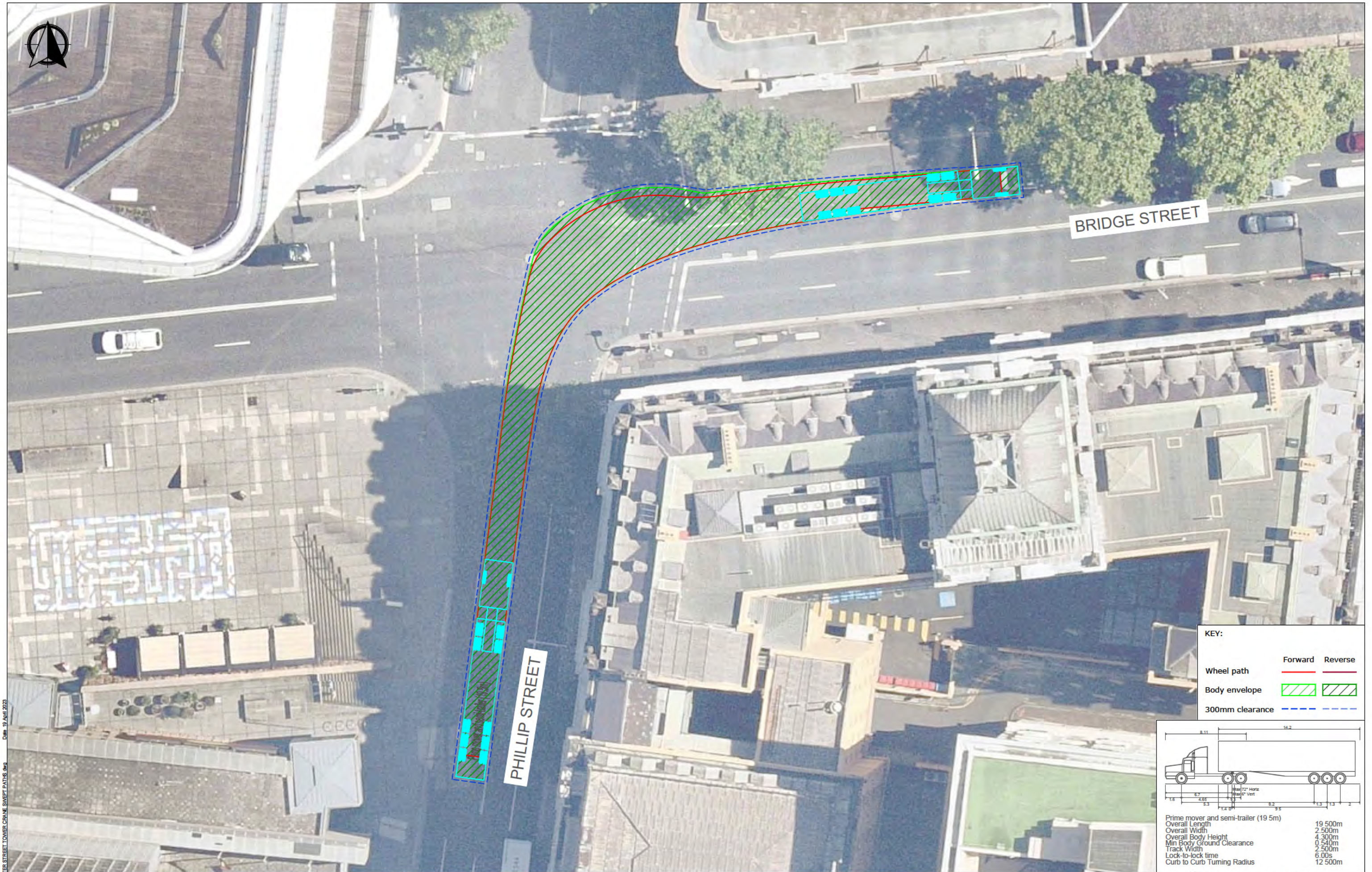


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION			DWG No. 21480CAD007 FIGURE 8	
	TITLE SWEPT PATH ANALYSIS - OUTBOUND - KING STREET ONTO ELIZABETH STREET 19.5m PRIME MOVER AND SEMI-TRAILER			DATE STAMP 19 APRIL 2023	
				PROJECT No. 21480	SCALE 1:200 @A3
			REV. A		





File name: 21480CAD007-200419-HUNTER STREET TOWER CRANE SWEEP PATHS.dwg Date: 19 April 2023

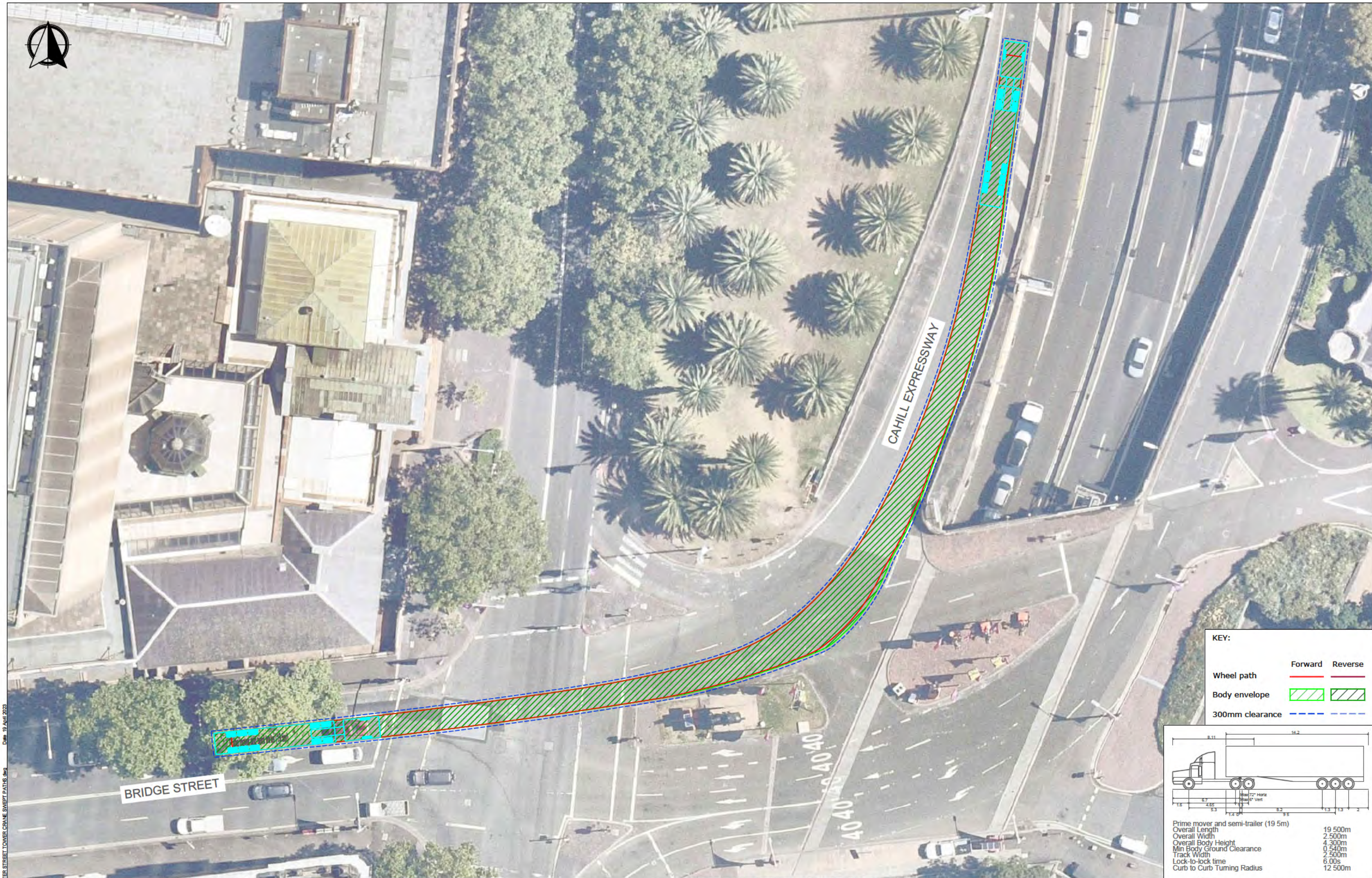
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND - PHILLIP STREET ONTO BRIDGE STREET 19.5m PRIME MOVER AND SEMI-TRAILER		

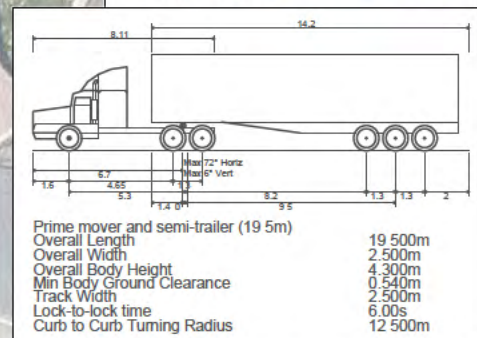
DWG No.	21480CAD007 FIGURE 9		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
21480	1:300 @A3	A	





KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND - BRIDGE STREET ONTO CAHILL EXPRESSWAY 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 10		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
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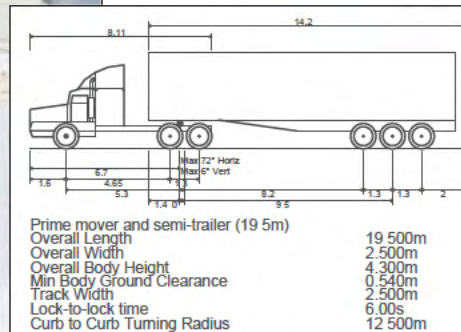


KING STREET

ELIZABETH STREET

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



File name: 21480CAD007-200419-HUNTER STREET TOWER CRANE SWEEP PATHS.dwg Date: 19 April 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT

TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET- TOWER CRANE INSTALLATION

SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - KING STREET ONTO ELIZABETH STREET  
19.5m PRIME MOVER AND SEMI-TRAILER

DWG No.	21480CAD007 FIGURE 11		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
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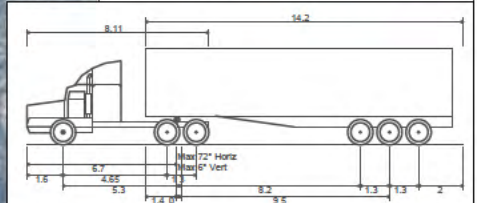




ELIZABETH STREET

ST JAMES ROAD

KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19.5m)	19.500m
Overall Length	19.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

File name: 21480CAD007-202419-HUNTER STREET TOWER CRANE SWEEP PATHS.dwg Date: 19 April 2023

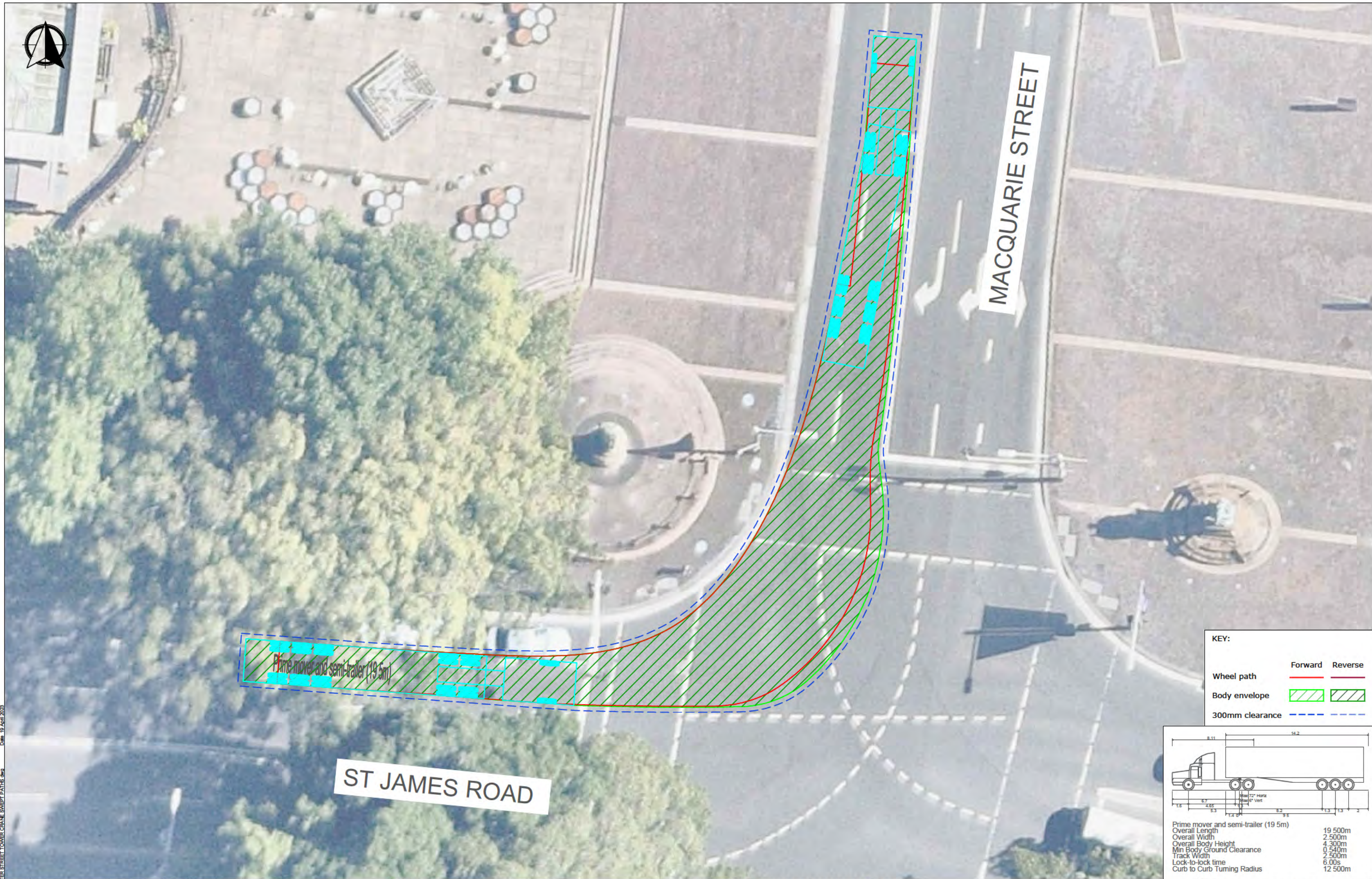
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



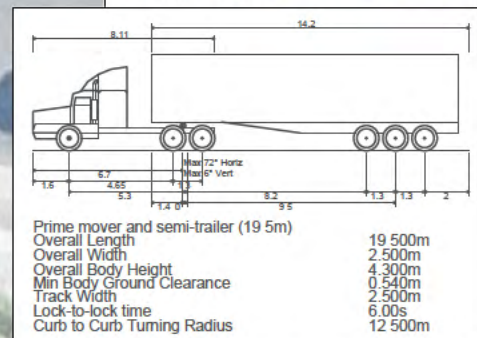
PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - ELIZABETH STREET ON ST JAMES ROAD 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 12		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
21480	1:300 @A3	A	





KEY:		
	Forward	Reverse
Wheel path	<span style="color: red;">—</span>	<span style="color: green;">—</span>
Body envelope	<span style="color: green;">▨</span>	<span style="color: green;">▨</span>
300mm clearance	<span style="color: blue;">- - -</span>	<span style="color: blue;">- - -</span>



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT	SYDNEY METRO WEST PROJECT HUNTER STREET- TOWER CRANE INSTALLATION		
TITLE	SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - ELIZABETH STREET ON ST JAMES ROAD 19.5m PRIME MOVER AND SEMI-TRAILER		

DWG No.	21480CAD007 FIGURE 13		
DATE STAMP	19 APRIL 2023		
PROJECT No.	SCALE	REV.	
21480	1:200 @A3	A	





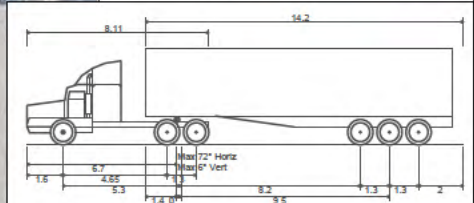
BRIDGE STREET

MACQUARIE STREET

CAHILL EXPRESSWAY

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19.5m)	19.500m
Overall Length	19.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	FOR INFORMATION	JG	WJ	WJ	19/04/23



PROJECT

TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET- TOWER CRANE INSTALLATION

SWEPT PATH ANALYSIS - OUTBOUND ALTERNATIVE - MACQUARIE STREET ONTO CAHILL EXPRESSWAY  
19.5m PRIME MOVER AND SEMI-TRAILER

DWG No.	21480CAD007		
	FIGURE 14		
DATE STAMP	19 APRIL 2023		
PROJECT No.	21480	SCALE	1:400 @A3
REV.	A		



## Appendix C

### Portable VMS Strategy



# Portable VMS Strategy

Hunter Street, Sydney

Name of Possession: Hunter Street

Strategy Dates: Friday 23 June 2023 – Monday 26 June 2023

VMS Deployment Date: 16 June 2023



## PORTABLE VMS STRATEGY

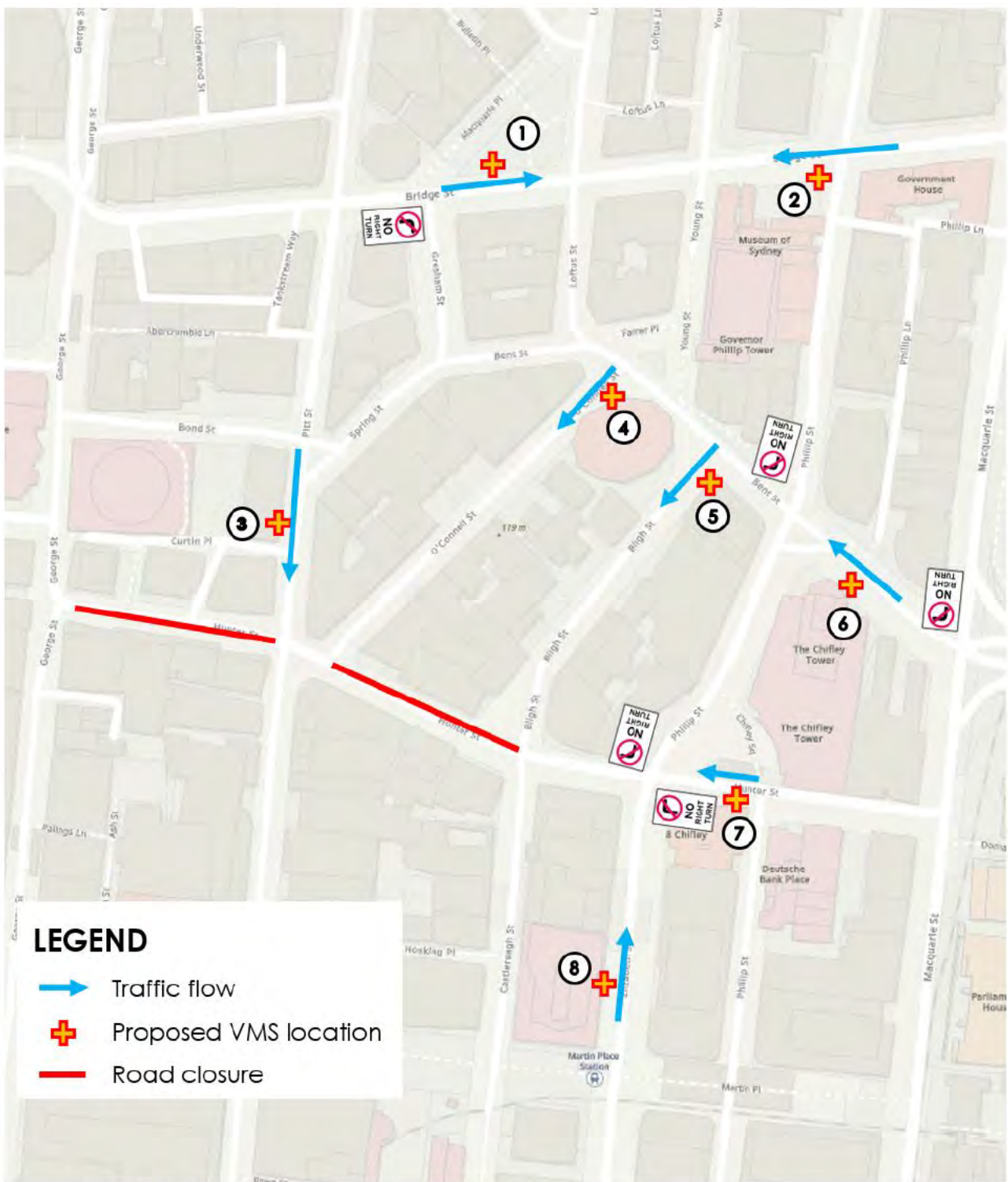


Figure 1 – Portable VMS Locations (Displayed as yellow and red cross symbol).



# 1. Bridge Street, eastbound, approaching Loftus Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

## Message 1

HUNTER  
STREET  
CLOSURE

## Message 2

ROADWORK  
9PM FRI  
-5AM MON

**During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023**

## Message 1

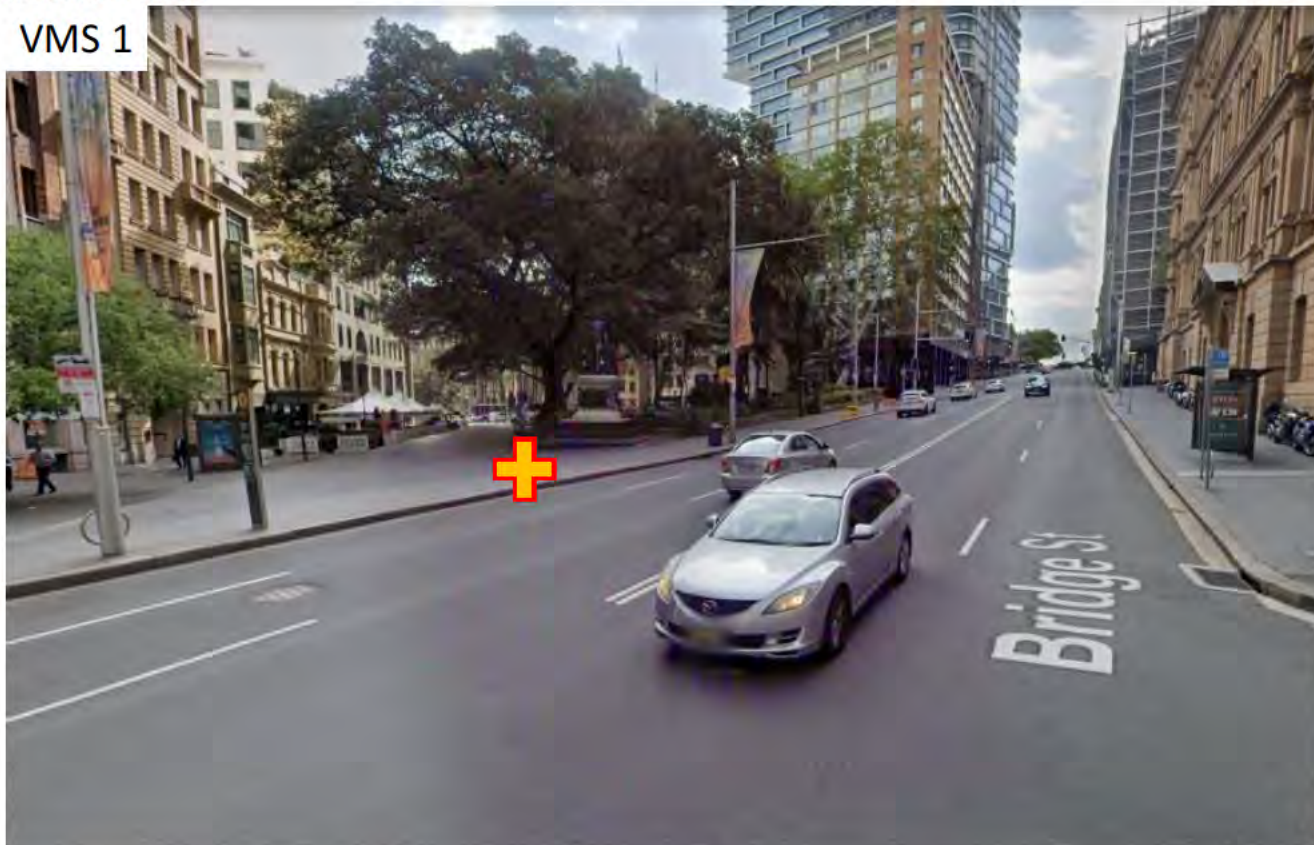
HUNTER  
STREET  
CLOSED

## Message 2

CITY EAST  
VIA  
BRIDGE ST

## Location Photo:

VMS 1



**Notes:** Size B VMS Board. Place on the northern side of Bridge Street on footpath, east of George Street traffic signals. Facing eastbound traffic.



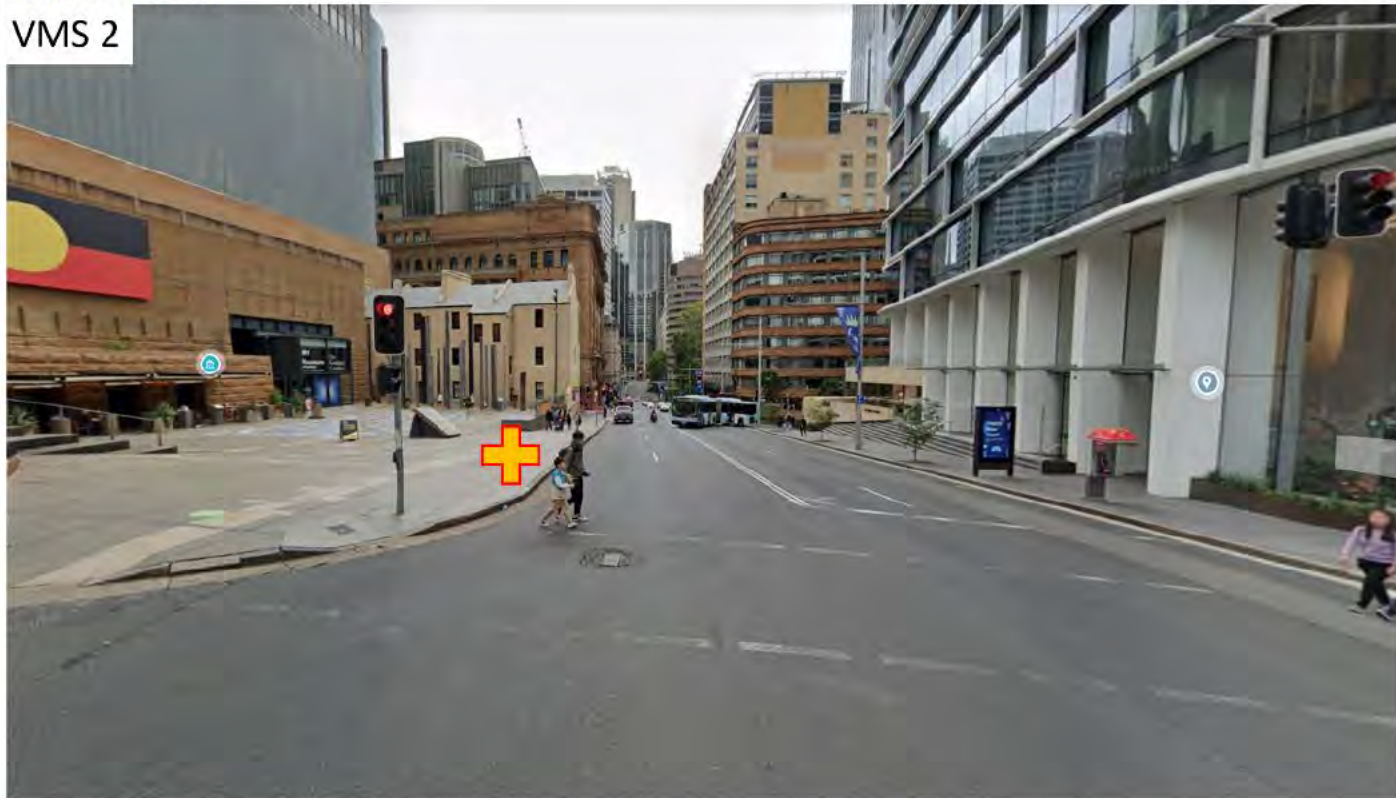
## 2. Bridge Street, westbound, approaching Young Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

Message 1	Message 2
HUNTER STREET CLOSURE	ROADWORK 9PM FRI -5AM MON
During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023	
Message 1	Message 2
HUNTER STREET CLOSED	CITY WEST VIA BRIDGE ST

**Location Photo:**

VMS 2



**Notes:** Size B VMS Board. Place on the southern side of Bridge Street on footpath, west of Phillip Street traffic signals. Facing westbound traffic.



### 3. Pitt Street, southbound, approaching Hunter Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

Message 1	Message 2
HUNTER STREET CLOSURE	ROADWORK 9PM FRI -5AM MON
During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023	
Message 1	Message 2
HUNTER STREET CLOSED	FOLLOW MARKED DETOUR

**Location Photo:**

VMS 3



**Notes:** Size B VMS Board. Place on the western side of Pitt Street on footpath, north of Curtin Place intersection. Facing southbound traffic.



#### 4. O'Connell Street, southbound, approaching Hunter Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

Message 1	Message 2
HUNTER STREET CLOSURE	ROADWORK 9PM FRI -5AM MON
During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023	
Message 1	Message 2
HUNTER STREET CLOSED	NO ENTRY BUSES

**Location Photo:**

VMS 4



**Notes:** Size B VMS Board. Place on the eastern side of O'Connell Street on footpath, prior to on-street parking zone. Facing southbound traffic.



## 5. Bligh Street, southbound, approaching Hunter Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

Message 1	Message 2
HUNTER STREET CLOSURE	ROADWORK 9PM FRI -5AM MON
During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023	
Message 1	Message 2
HUNTER STREET CLOSED	FOLLOW MARKED DETOUR

**Location Photo:**

**VMS 5**



**Notes:** Size B VMS Board. Place on the eastern side of Bligh Street on footpath, prior to on-street parking zone. Facing southbound traffic.



## 6. Bent Street, westbound, approaching Phillip Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

### Message 1

HUNTER  
STREET  
CLOSURE

### Message 2

ROADWORK  
9PM FRI  
-5AM MON

**During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023**

### Message 1

HUNTER  
STREET  
CLOSED

### Message 2

CITY WEST  
VIA  
BRIDGE ST

### Location Photo:

VMS 6



**Notes:** Size A VMS Board. Place on the southern side of Bent Street on footpath, prior to on-street parking zone. Facing westbound traffic.



## 7. Hunter Street, westbound, approaching Elizabeth Street, CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

Message 1	Message 2
HUNTER STREET CLOSURE	ROADWORK 9PM FRI -5AM MON
During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023	
Message 1	Message 2
HUNTER STREET CLOSED	FOLLOW MARKED DETOUR

**Location Photo:**

VMS 7



**Notes:** Size A VMS Board. Place on the southern side of Hunter Street on footpath west of Phillip Street intersection. Facing westbound traffic.



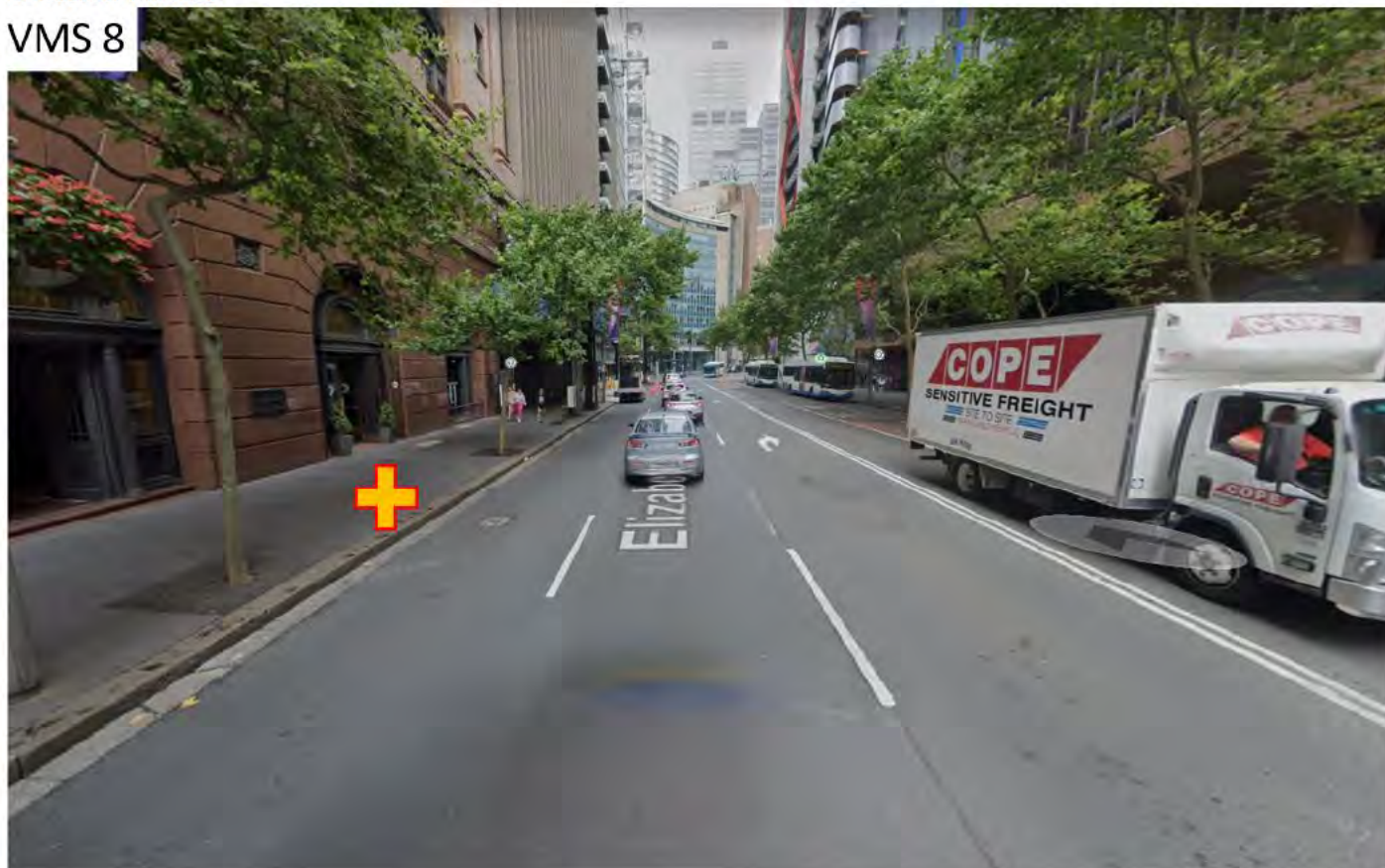
## 8. Elizabeth Street, northbound, approaching Hunter Street CBD

**Prior to Road Works: 21:00 Friday 16/06/2023 - 21:00 Friday 23/06/2023**

Message 1	Message 2
HUNTER STREET CLOSURE	ROADWORK 9PM FRI -5AM MON
During Road Works: 21:00 Friday 23/06/2023 - 05:00 Monday 26/06/2023	
Message 1	Message 2
HUNTER STREET CLOSED	CITY WEST VIA BRIDGE ST

**Location Photo:**

VMS 8



**Notes:** Size A VMS Board. Place on the western side of Elizabeth Street on footpath, south of bus stop. Facing northbound traffic.



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## Appendix C      CTMP Comment Register



## REVIEW COMMENTS SHEET

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Sydney Metro West - ETP - Construction Traffic Management Plan - Hunter Street - Tower Crane Installation	00.01	S3	01	26/04/2023	SMD	FVANDENBRI				No Comments		Y
													Y
				02	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Missing content.		Provide a detailed program of works for each site, with specific hold points shown.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Missing content.		Program of works included in Appendix G	Observation	N
				03	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Missing content.		Please provide all contingencies, rollback plans etc that will be in place to ensure that the road is opened by Monday morning.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Missing content.		New section 5.7 added to detail the rollback plans and contingencies	Observation	N
				04	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 5.4 & 5.4.2		The proposed egress route via Elizabeth St / Phillip St is not supported due to the number of buses utilising this corridor. The route via Macquarie St is preferred.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 5.4 & 5.4.2		The egress route via Elizabeth St/ Phillip St has been removed. All outbound vehicles will travel by Macquarie St.	Observation	N
				05	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 6.2		The TCS at Hunter St / O'Connell St & Pitt St can not remain operational during this closure as the right turn from O'Connell St into Hunter/Pitt is not permitted and would conflict with the southbound Pitt St movement. As such the TCS must be disabled, and all movements controlled by Traffic Controllers / Police during the road closures.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 6.2		Section 6.1 indicates, Police will control the signalised intersection of O'Connell Street/Hunter Street/Pitt Street. Figure 13 shows the simplified access arrangement plan. The signals will be changed to amber for the duration of the works.	Observation	N
				06	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 6.3		Additional bus layover area will be required in Bligh St between Bent St and Hunter St to compensate for the loss of layover area in O'Connell St.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 6.3		Section 6.3 updated to indicate All buses will be overlaid on Bligh Street, which would involve all available parking restrictions along Bligh Street to be changed to 'Bus Zone Route Service Buses Lay Over 15 minute Limit' restrictions during the Hunter Street road closure.	Observation	N
				07	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 6.3		A traffic controller will need to be stationed at the intersection of Bent St and O'Connell St to stop route buses entering O'Connell St.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Clause 6.3		Section 6.3 updated to show, Traffic Controllers will be stationed at the intersection of Bent St / Bligh St and O'Connell St, directing layover buses to Bligh St and stopping buses entering down O'Connell St.	Observation	N
				08	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix B		There are not enough traffic controllers provided to safely control all pedestrian and vehicle movements.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix B		Extra TC have been added on the TGS to assist guide pedestrians.	Observation	N
				09	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix B		Include the TCSs required to get the heavy vehicles into and out of the closure areas.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix B		Extra TC have been added on the TGS to assist guide HV movements	Observation	N
				10	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		All portable VMS messages should be limited to 2 frames with each frame consisting of 3 lines of 8 characters.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		As per the phone discussion, messages have been updated	Observation	N



DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				11	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Lead in messages should begin 7 days prior to the closure.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS strategy updated to show message should begin 7 days prior to the closure.	Observation	N
				12	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		A 'week of' message should be included (from Mon) which specifies days & times rather than dates. E.g. HUNTER/ST/CLOSURE//ROADWORK/9PM FRI/- 5AM MON	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS messages updated to days and times as indicated in the comments	Observation	N
				13	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Location 1 wont be discern ble by drivers as its too close to the intersection.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS 1 location has been amended	Observation	N
				14	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Location 2 has plenty of footway width so a type B or C VMS can be utilised.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS size has been changed to Type B	Observation	N
				15	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Location 3: there is room for a type B VMS using both the shoulder and footway	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS size has been changed to Type B	Observation	N
				16	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Location 4 has plenty of footway width so a type B or C VMS can be utilised.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS size has been changed to Type B	Observation	N
				17	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Location 4 Message 3: second from should be used to tell buses not to enter.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Message 3 is updated to show no entry for buses	Observation	N
				18	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		Location 5 has plenty of footway width so a type B or C VMS can be utilised.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix C		VMS size has been changed to Type B	Observation	N
				19	26/04/2023	SCO	PKEYES	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix D		What is the largest size vehicle that can turn from O'Connell St into Pitt St? Vehicles larger than this should be prevented from entering O'Connell St at Bent St.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix D		The OSOM vehicle will be coming down Pitt St and not be entering O'Connell St from Bent St.	Observation	N
				20	26/04/2023	SMD	PBROGAN	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	General	CTMF	Please clarify in the document whether any aspect of the works triggers the need for referral via the Local Traffic Committee bearing in mind this CTMF extract: "Matters that may need to be considered by the Local Traffic Committee include: establishment of a kerbside work zone on a local or Regional road, CTMP's if regulatory signposting is proposed to be changed, changes to parking restrictions and road closures."	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	General	CTMF	The proposed road closures and the change in parking restriction has been referred to CoS LTC. This confirmation has been provided in section 6.1.	Observation	N
				21	28/04/2023	TFN	LWILBY	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	4.2 Abutting Road Network	NA	This section states that all surrounding roads are 40km/h speed limit - however George Street has a speed limit of 20km/h. Please update the text to reflect this.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	4.2 Abutting Road Network	NA	George St is not proposed to be used by the Tower Crane installation vehicles.	Observation	N



DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				22	28/04/2023	TFN	LWILBY	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	5.4 Haulage routes	NA	Please outline or show on Figure 12 how these routes compare to the EIS approved routes. If they are different, please include an outline of why different routes are needed and what mitigation measures have been added to ensure safety for other road users along these routes.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	5.4 Haulage routes	NA	Figure 12 is updated and a HVLR report added in the appendices explaining the EIS approved routes and the proposed haulage routes for the weekend.	Observation	N
				23	28/04/2023	TFN	LWILBY	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	6.5 Impact on cyclists	NA	Cyclists along the King St cycleway will also potentially be impacted as the haulage route runs along King Street and turns across the cycleway (under signalised control). Please update text to capture this.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	6.5 Impact on cyclists	NA	Section 6.5 updated to capture the comment	Observation	N
				24	28/04/2023	TFN	LWILBY	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	8.3 Road Safety Auditing	CTMF Framework requirements	Please attach a completed road safety audit to this TMP that considers the proposed movements (including longer vehicles), haulage routes and traffic control set up so that the appropriateness and effectiveness of the controls implemented to address risks raised can be assessed.	Actual Non-Compliance	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	8.3 Road Safety Auditing	CTMF Framework requirements	RSA attached in the appendices.	Actual Non-Compliance	N
				25	28/04/2023	TFN	LWILBY	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix D - Swept Paths Gresham onto Spring	Other road users safety clause	The swept path for the 19.5m vehicle turning from Gresham Street onto Spring Street crosses the centre line on Spring Street - increasing the risk of head on collisions and side swipe collisions as the available space for a vehicle approaching the pedestrian crossing narrows considerably. Please consider this risk and demonstrate how it will be managed SFAIRP.	Minor Non-Compliance	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix D - Swept Paths Gresham onto Spring	Other road users safety clause	The swept paths have been amended to show that vehicles do not cross over the centreline.	Minor Non-Compliance	N
				26	28/04/2023	TFN	LWILBY	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix D - Swept Paths Pitt onto King	Other road users safety clause	The swept path for the 19.5m vehicle turning from Pitt Street onto King Street crosses into the cycleway through the intersection. This presents a collision risk to any cyclists using that area as storage before proceeding through the intersection. Although cyclists should not be storing there, some users will make mistakes and we should cater for this where we reasonably can. Please consider what warnings can be given to cyclists about the presence of long heavy vehicles through this intersection to reduce the risk of a serious crash occurring SFAIRP.	Minor Non-Compliance	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix D - Swept Paths Pitt onto King	Other road users safety clause	Pitt / King St is a signalised intersection controlling vehicle, cyclist and pedestrian movement. Cyclist should not be parked in the middle of the intersection. Intersection operation would be no different to any other times. All HV drivers will be toolboxed and made aware of pedestrian and cyclist movements within the CBD.	Minor Non-Compliance	N
				27	1/05/2023	CSC	TMITCHELL	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	N/A	TGS should show traffic controllers in the same location of the police. The police are only there to assist the controllers in their role of managing the closure and traffic movements.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	N/A	Police will be in control of the intersection, not assisting the traffic controllers. Traffic controllers will assist Police by controlling and guiding pedestrians at and around the intersection.	Observation	N
				28	1/05/2023	CSC	JFAULL	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	N/A	CoS feel it would be beneficial to run O'Connell St as 2 way during the closure for your own trucks to get back out. This would be under traffic control and will reduce the impact to Pitt St and Kings St which will already be at capacity.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	N/A	Additional information has been provided and this issue is now closed out. The traffic management will remain as per the original CTMP submission.	Observation	N
				29	1/05/2023	SMD	ASTYPEL	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Table 5	N/A	A. Style: Table 5 requires update in line with the CEMP	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Table 5	N/A	Overview of ETP works phasing has been added in Section 2.3 (Table 4)	Observation	N
				30	1/05/2023	SMD	ASTYPEL	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix	N/A	A. Style: Add an appendix in preparation for "approval" eg JCG approval	Observation	N



DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix	N/A	Appendix I has been added for approval documents	Observation	N
				31	2/05/2023	RMS	MTITA				No Comments		Y
													Y
				32	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Figure 7	NA	Is current parking use outside the Western site No Stopping? It seems like loading zone as the vehicles are parked there behind kerb extension.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Figure 7	NA	It is a No Stopping zone, vehicles ignore parking restrictions. This section of Hunter St will be closed to general traffic.	Observation	N
				33	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 5.4.1	NA	For Hunter East, why do we need vehicles to perform reverse movement? Can they just do a normal left turn from Pitt Street to Hunter Street for inbound movement? For outbound movement can they just continue along Hunter Street and turn left on Macquarie St?	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 5.4.1	NA	Hunter St just west of Bligh St will be fully closed due to the 650t mobile crane set up. The suggested movement is not physically possible.	Observation	N
				34	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 5.4	NA	Why are we not using EIS approved routes/roads? What is the reason for not using King St>Elizabeth St>Hunter St>Macquarie St as outbound route?	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 5.4	NA	Hunter St just west of Bligh St will be fully closed due to the 650t mobile crane set up. The EIS route implementation is not possible	Observation	N
				35	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 5.4.2	NA	Alternate outbound route using St James route not supported. Please remove this route.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 5.4.2	NA	See comment 04 above. Therefore, It is proposed to use the alternative route via St James/ Macquarie St.	Observation	N
				36	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 6.3	NA	Communication and agreement with bus operators regarding the bus layover changes to be made part of the CTMP.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Section 6.3	NA	Section 6.3 has been updated to address the comment.	Observation	N
				37	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Figure 15	NA	Traffic arrangements on O'Connell street shown by red arrows are incorrect. It is left only at the moment.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Figure 15	NA	Figure 15 amended, red arrows removed	Observation	N
				38	3/05/2023	RMS	HYOUSAF	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	General	NA	Communication with all other stakeholders like emergency services, SLR etc or any others being affected to be made part of this CTMP.	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	General	NA	Section 6.6 updated	Observation	N
				39	9/05/2023	SMD	SCLARKE	SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix B - TGS	N/A	It is noted that O'Connell Street is currently 2 lanes towards Hunter Street The TGS does not outline proposed if there is any management of traffic lane configuration on O'Connell Street into Pitt Street. is it intended to have both the two lanes from O'Connell turning right into Hunter / Pitt? Whilst there are two lanes southbound in Pitt (the intended path from O'Connell St), there is risk during the dogleg manoeuvre between O'Connell into Pitt St may have the risk of side impact crashes	Observation	N
								SMWSTETP-JCG-SCB-SN100-TF-PLN-002273	Appendix B - TGS	N/A	Currently there is only one lane out of O'Connell, normally left turn only, which will be converted to one lane right turn during the closure. Police will be controlling the blacked out intersection, Plan is updated to reflect this.	Observation	N



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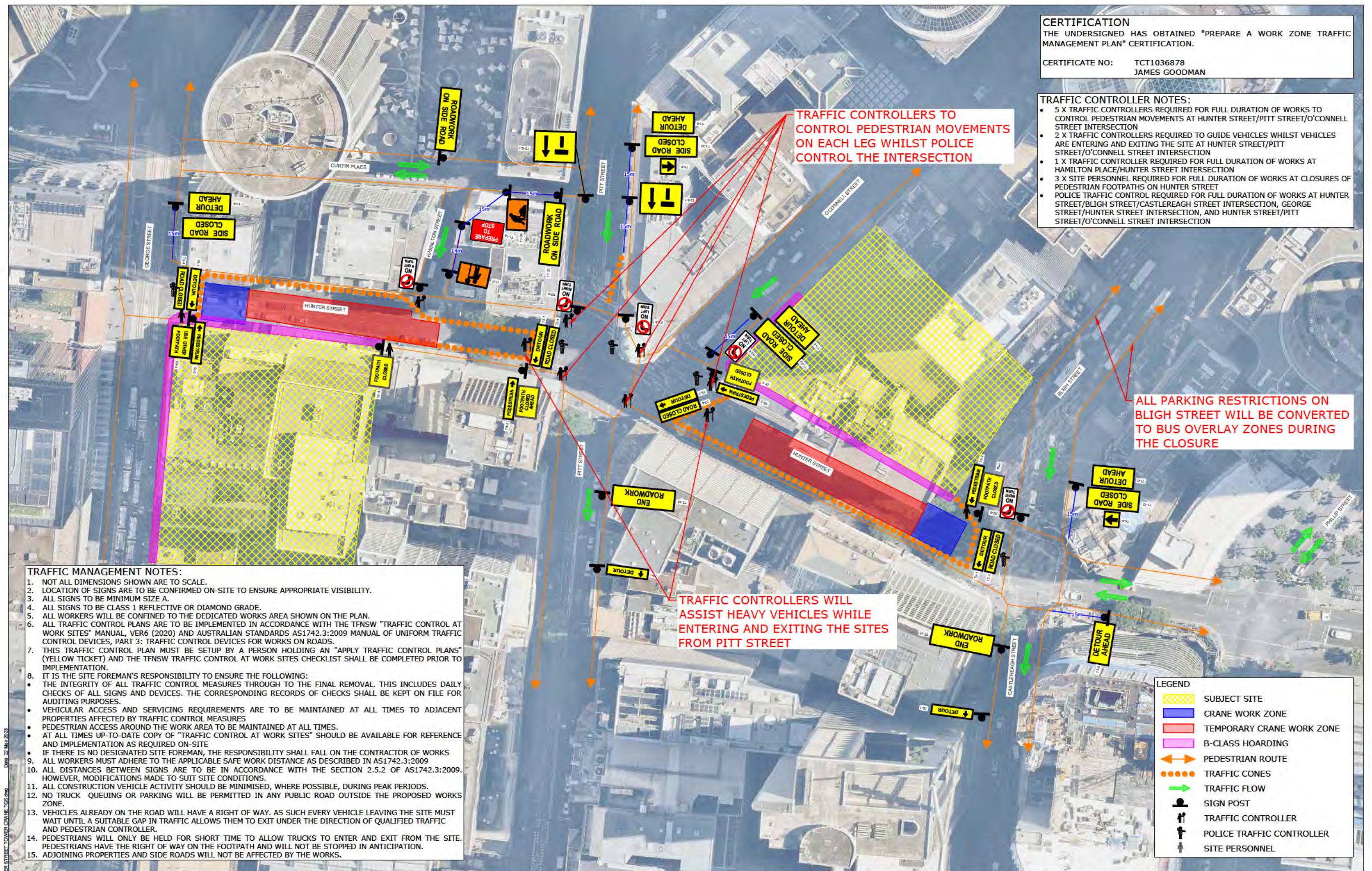
## Appendix D      Traffic Guidance Scheme



**CERTIFICATION**  
THE UNDERSIGNED HAS OBTAINED "PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN" CERTIFICATION.  
CERTIFICATE NO: TCT1036878  
JAMES GOODMAN

**TRAFFIC CONTROLLER NOTES:**

- 5 X TRAFFIC CONTROLLERS REQUIRED FOR FULL DURATION OF WORKS TO CONTROL PEDESTRIAN MOVEMENTS AT HUNTER STREET/PITT STREET/O'CONNELL STREET INTERSECTION
- 2 X TRAFFIC CONTROLLERS REQUIRED TO GUIDE VEHICLES WHILST VEHICLES ARE ENTERING AND EXITING THE SITE AT HUNTER STREET/PITT STREET/O'CONNELL STREET INTERSECTION
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- POLICE TRAFFIC CONTROL REQUIRED FOR FULL DURATION OF WORKS AT HUNTER STREET/BLIGH STREET/CASTLEREAGH STREET INTERSECTION, GEORGE STREET/HUNTER STREET INTERSECTION, AND HUNTER STREET/PITT STREET/O'CONNELL STREET INTERSECTION



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- NOT ALL DIMENSIONS SHOWN ARE TO SCALE.
  - LOCATION OF SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY.
  - ALL SIGNS TO BE MINIMUM SIZE A.
  - ALL SIGNS TO BE CLASS 1 REFLECTIVE OR DIAMOND GRADE.
  - ALL WORKERS WILL BE CONFINED TO THE DEDICATED WORKS AREA SHOWN ON THE PLAN.
  - ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE TfNSW "TRAFFIC CONTROL AT WORK SITES" MANUAL, VER6 (2020) AND AUSTRALIAN STANDARDS AS1742.3:2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 3: TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS.
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  - ADJOINING PROPERTIES AND SIDE ROADS WILL NOT BE AFFECTED BY THE WORKS.

File Name: 21480CAD000-20515-HUNTER STREET TOWER CRANE TGS.dwg Date: 22 May 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	DRAFT	JG	WJ	WJ	19/05/23



PROJECT  
  
TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET - TOWER CRANE

DRAFT TRAFFIC GUIDANCE SCHEME

DWG No.	21480CAD009		
	FIGURE 1		
DATE STAMP	19 MAY 2023		
PROJECT No.	21480	SCALE	NTS
REV.	A		



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# LEGEND

- SUBJECT SITE
- CRANE WORK ZONE
- TEMPORARY CRANE WORK ZONE
- B-CLASS HOARDING
- PEDESTRIAN ROUTE
- TRAFFIC CONES
- TRAFFIC FLOW
- SIGN POST
- TRAFFIC CONTROLLER
- POLICE TRAFFIC CONTROLLER
- SITE PERSONNEL

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	WJ	WJ	19/05/23



PROJECT

TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET - TOWER CRANE

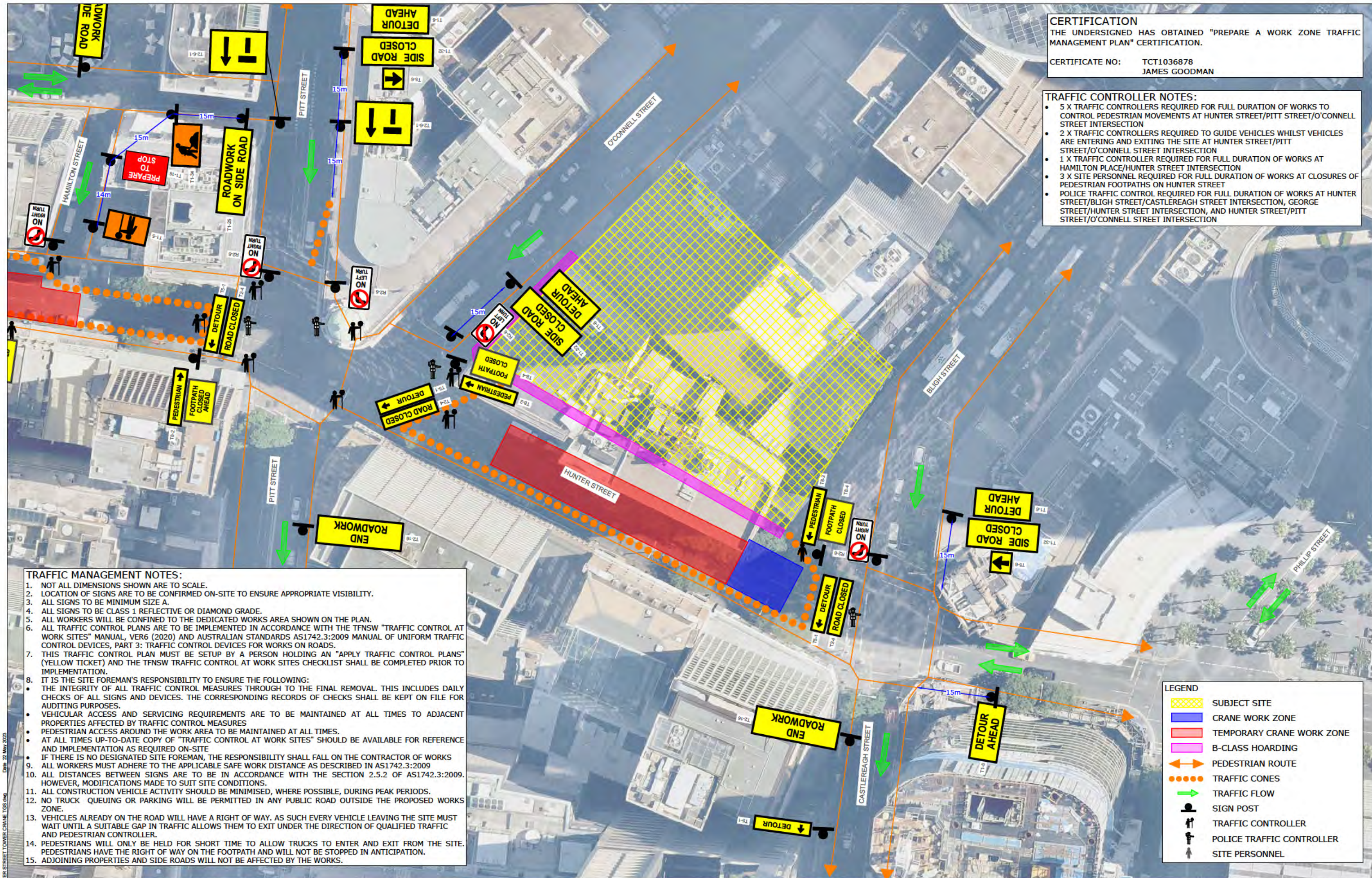
TRAFFIC GUIDANCE SCHEME  
HUNTER STREET WEST

DWG No. 21480CAD009  
FIGURE 2

DATE STAMP 19 MAY 2023

PROJECT No.	SCALE	REV.
21480	NTS	A





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REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	DRAFT	JG	WJ		19/05/23

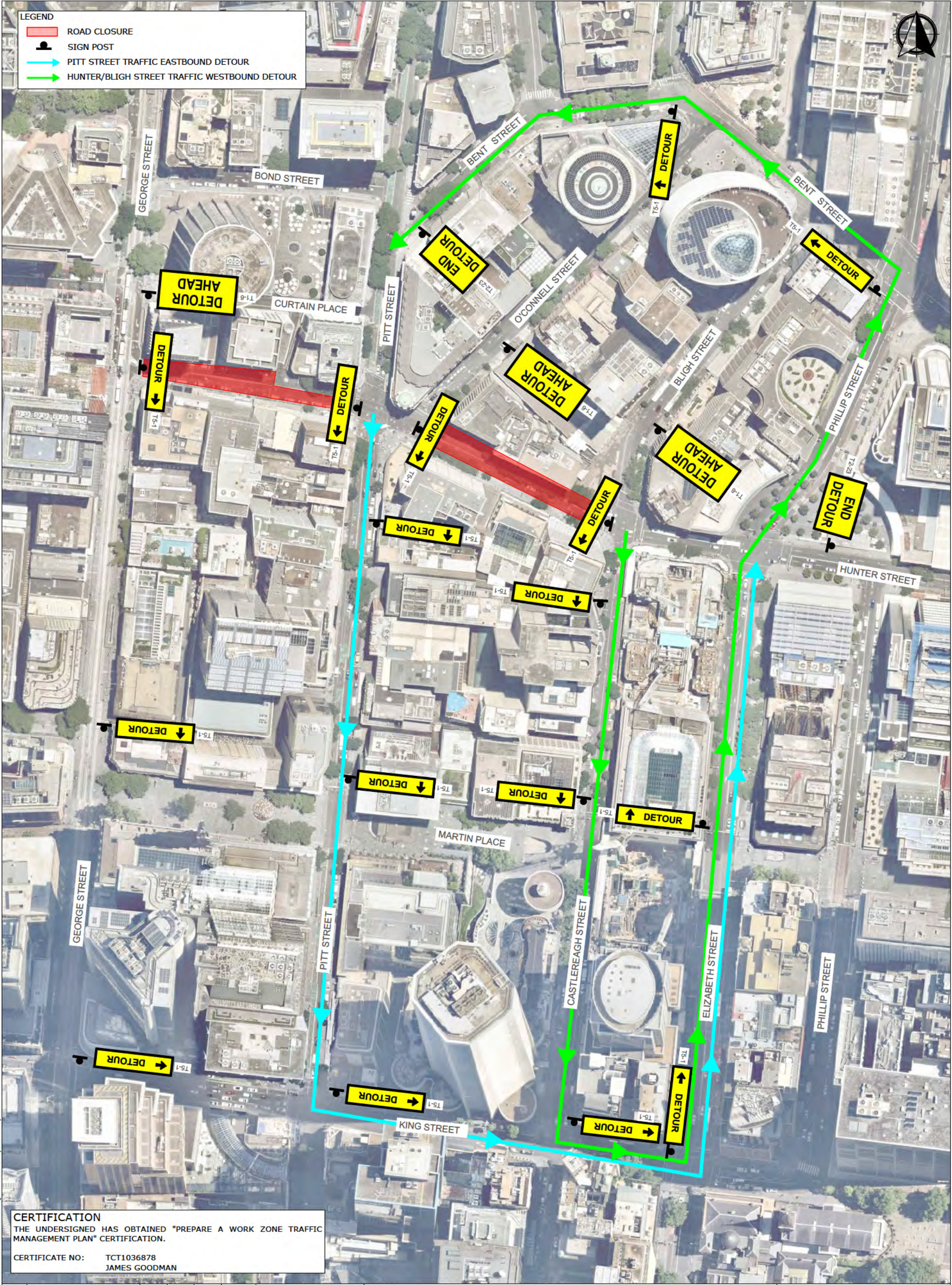


PROJECT  
TITLE

SYDNEY METRO WEST PROJECT  
HUNTER STREET - TOWER CRANE  
TRAFFIC GUIDANCE SCHEME  
HUNTER STREET EAST

DWG No.	21480CAD009	REV.	A
FIGURE 3			
DATE STAMP	19 MAY 2023		
PROJECT No.	21480	SCALE	NTS





LEGEND

ROAD CLOSURE

SIGN POST

PITT STREET TRAFFIC EASTBOUND DETOUR

HUNTER/BLIGH STREET TRAFFIC WESTBOUND DETOUR

**CERTIFICATION**  
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CERTIFICATE NO: TCT1036878  
JAMES GOODMAN

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	WJ	WJ	19/05/23



PROJECT

SYDNEY METRO WEST  
HUNTER STREET - TOWER CRANE

TITLE

TRAFFIC GUIDANCE SCHEME  
DETOUR PLAN

DWG No.	21480CAD009	REV.	A
DATE STAMP	19 MAY 2023	SCALE	NTS
PROJECT No.	21480		



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## Appendix E      Heavy Vehicle Safety Equipment



## Heavy Vehicle Safety Equipment

Below are the specific safety equipment requirements, as described in the Sydney Metro Principal Contractor Health and Safety Standard (SM-20-00100838).

All heavy vehicles used to transport equipment, plant, materials and people to and from a project worksite or working area are to be fitted with the following mandatory safety equipment that complies with relevant Australian Design Rules (ADR) requirements:

- Horn
- UHF radio
- Positive identification signage
- Laminated glass fitted to all windows with unimpeded view
- Seat integrated three-point lap-sash seatbelts with emergency locking retractor (ELR) (for the driver and all passengers)
- Rear-view mirrors, refer below for further details for Heavy Vehicles
- Reversing cameras, sensors and alarm
- Reversing alarm that is automatically activated of the 'quacker-type'. Self-adjusting type alarms, 'Smart Alarms' are preferred
- Headlights, taillights, front and back direction indicators, hazard warning, reverse and brake lights, clearly visible day and night
- Light and high visibility colours for vehicles
- No additional window tinting
- Back-up alarms
- 360-degree visible roof-mounted flashing beacon or double pulse strobe lights visible up to 200 metres (unless determined otherwise by risk assessment)
- Fire safety equipment capable of suppressing or extinguishing potential vehicular fires.
- Suitable load restraint
- Positive identification signage.

All Heavy Vehicles over 4.5 tonnes gross vehicle mass (GVM), are to be fitted with the following additional safety equipment, as a minimum:

- Side-underrun guards, in accordance with the Australian Trucking Association's (ATA) Industry Technical Council Advisory Procedure for Side Under Run Protection, on both sides of the vehicle:
  - Between the front and rear axle of all rigid (single unit) trucks
  - Between the front axle/landing legs and rear axle of trailers forming part of a combination.
- Front Underrun Protection Systems (FUPS) (for all new heavy vehicles from January 2012) that comply with ADR 84—Front Underrun Impact Protection.
- A combination of direct and/or indirect devices to eliminate or minimise front, side and rear blind spots, including:
  - Class V and VI mirrors, or equivalent as defined under ADR 14/02 – Rear Vision Mirrors where blind spots cannot be permanently eliminated
  - The prohibition of accessories that restrict the forward field of view, including opaque or chrome bug deflectors.
- Blindspot elimination/detection systems as per the Truck Industry Council's Voluntary Code of Practice to Ensure an Adequate Field and Clarity of View are to be used if blind spots cannot be eliminated by measures above
- A Telematics Monitoring System which measures and reports on vehicle location, speed compliance, fatigue and other driver behaviour (such as harsh acceleration, braking)
- ABS Brakes, in accordance with ADR 35/04, are required to be fitted to all new heavy vehicles from January 2015)
- Rear warning signs alerting other road users to the dangers of overtaking the Heavy Vehicle and signs on the front nearside warning pedestrians about walking close to the front of a moving or stationary heavy vehicle.



- Front nearside signs warning pedestrians about walking close to the front of a moving or stationary Heavy Vehicle
- Conspicuity (full body line and contour) markings compliant with the requirements of UN/ECE 104 – Uniform Provisions Concerning the Retro-Reflective Markings for Heavy and Long Vehicles and their Trailers and ADR 13/00
- Reflective markings fitted to the drawbar of all trailers
- Heavy vehicles used for spoil haulage must be clearly marked on the sides and rear with the Project name and SSI No: 19238057 to enable immediate identification by a person viewing the heavy vehicle standing 20 metres away
- Automatic tailgate locks are fitted and operational on all heavy vehicles carting loose materials. Spoil trucks are also to be fitted with operating grain locks
- Subcontractors are encouraged to continue to adopt advanced vehicle safety features that are available such as:
  - Electronic stability control
  - Blind spot monitoring
  - Autonomous emergency braking systems
  - Any other vehicle safety technologies.

**Note:**

(1) These requirements apply to all heavy vehicles unless JCG can demonstrate, to the reasonable satisfaction of Sydney Metro, that the vehicle is unable to perform the function with the safety equipment fitted. In these circumstances JCG must apply for a variation in accordance with Clause 1.3.1 of the PC Standard.

(2) Regular inspections must be conducted by the PC to ensure all Frequent Heavy Vehicles entering site locations are compliant with the above requirements.

(3) If mechanical or compliance issues are detected during regular inspections of heavy vehicles and trailers on arrival at a project worksite, the relevant subcontractor or supplier will be notified, and the heavy vehicle or trailer will be sent from site to affect the repairs or other corrective actions.

(4) A reference to 5-Star ANCAP rating only applies only to new passenger vehicles, sports utility vehicles (SUV) and light commercial vehicles (LCV) light vehicles.



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## Appendix F      Approvals



[REDACTED]  
Director Environment, Sustainability & Planning – Metro West  
Sydney Metro  
PO Box K659  
HAYMARKET NSW 1240

**Attention:** [REDACTED] – Environment Manager

20/6/2023

---

**Subject: Sydney Metro West – Eastern Tunnelling Package – Heavy Vehicle Local Roads – Hunter Street Tower Crane Assembly**

Dear [REDACTED]

Thank you for submitting the 'Heavy Vehicle Local Roads Report for Use for Local Roads, Hunter Street Tower Crane Assembly', Revision A, dated 22 May 2023, (the HVLR) on 1 June 2023.

I note the HVLR:

- has been prepared in consultation with Transport for NSW, Roads & Maritime Services, Sydney Light Rail and City of Sydney.
- has been reviewed by Sydney Metro and no issues have been raised with the department.
- has been endorsed by a Level 3 Road Safety Auditor.

Accordingly, as nominee of the Planning Secretary, I approve the use of roads by heavy vehicles as outlined in the HVLR under condition D73 and D74 of SSI-19238057. For the avoidance of doubt, my approval for use of these roads by heavy vehicles applies only as necessary to allow for the assembly and disassembly of the tower cranes at the Hunter Street West and Hunter Street East metro station sites

If there are any inconsistencies between the document and the conditions of approval, the conditions prevail.

Please make the document publicly available on the project website as soon as possible.

If you wish to discuss the matter further, please contact [REDACTED] at [REDACTED]

Yours sincerely

[REDACTED]



Acting Team Leader – Rail  
Infrastructure Management

As nominee of the Planning Secretary