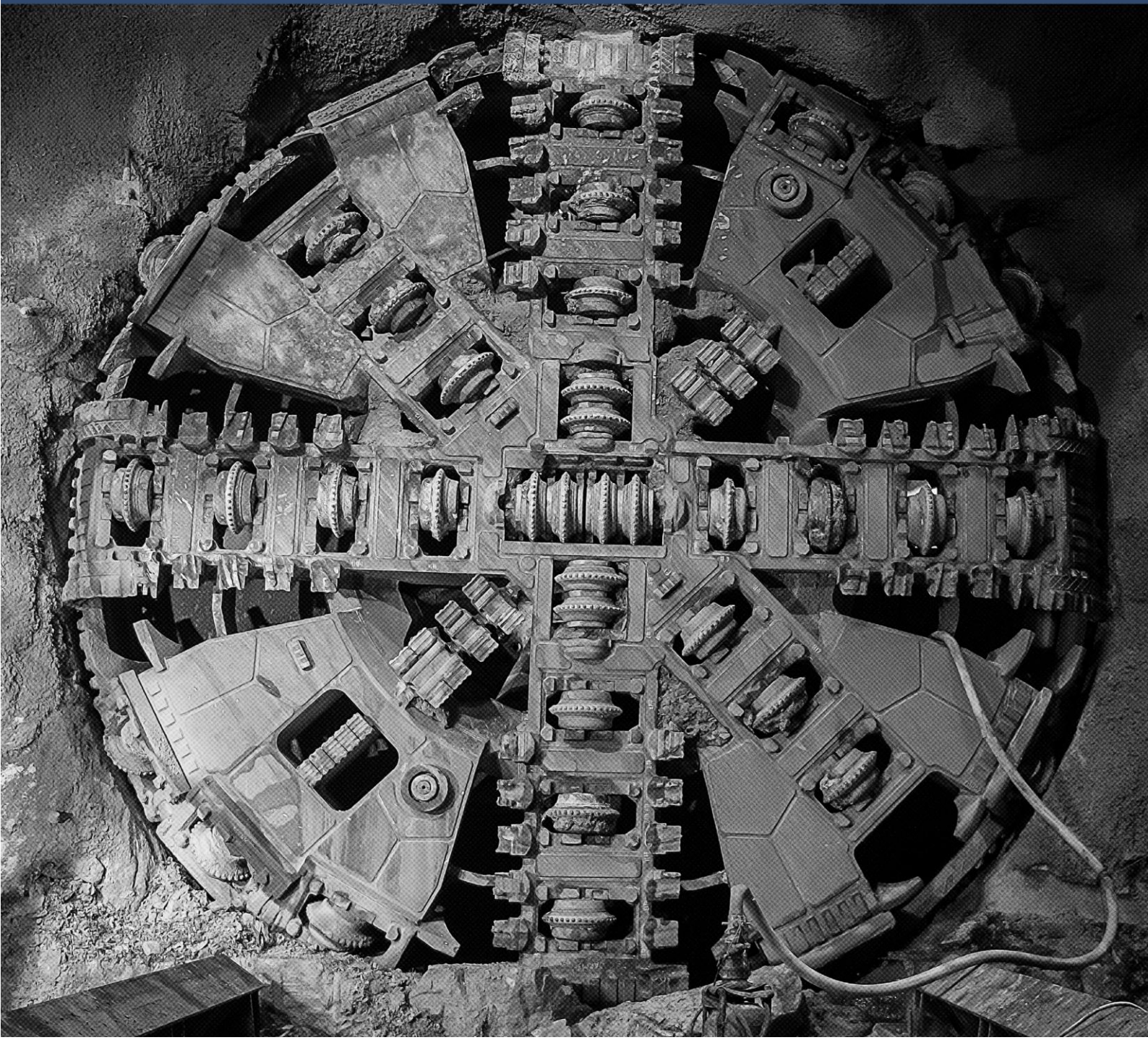


Heavy Vehicle Local Road Report for Use of Local Roads

Pymont East and West Construction Sites – Loop Route

Rev 02



Project number	7040
Document number	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016

Rev	Date	Prepared by	Reviewed by	Comments	Approved by
0	20 September 2023				
Signature:					
1	27/12/23			Addressing Comments from rev 00	
2	18/1/24			Attached are the closed out comments and CJP approval	
Signature:					

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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.

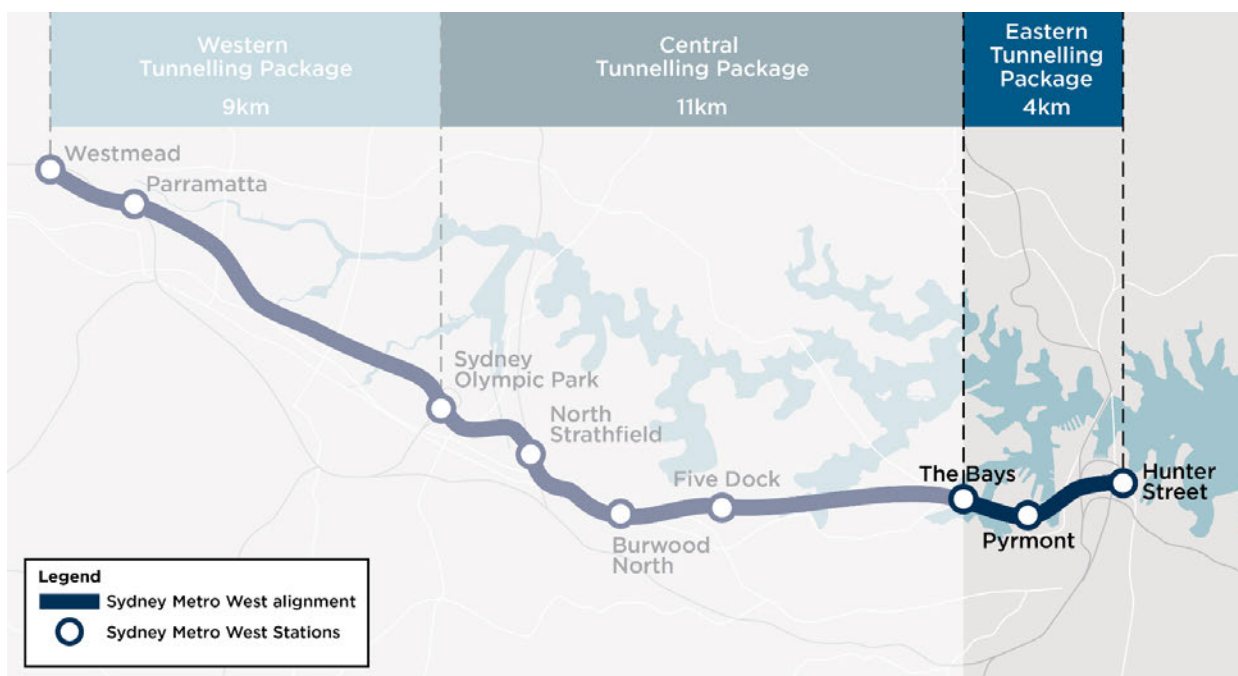


Figure 1: Sydney Metro West alignment

1.2. Pyrmont East and West Construction Sites

As part of the Sydney Metro West Eastern Tunnelling Package, the Pyrmont East and West construction sites are located in Pyrmont. The site at Pyrmont East is bounded by Union Street, Edward Street and Pyrmont Bridge Road, and the site at Pyrmont West is located to the north of Pyrmont Bridge Road, extending between Paternoster Row and Pyrmont Street. The two construction sites are shown in Figure 2.

As shown in Figure 2, the Pyrmont East site would access via Edward Street and Pyrmont Bridge Rd, and egress via Pyrmont Bridge Road. Pyrmont West site would access via Pyrmont Bridge Road and exit via Pyrmont Street.

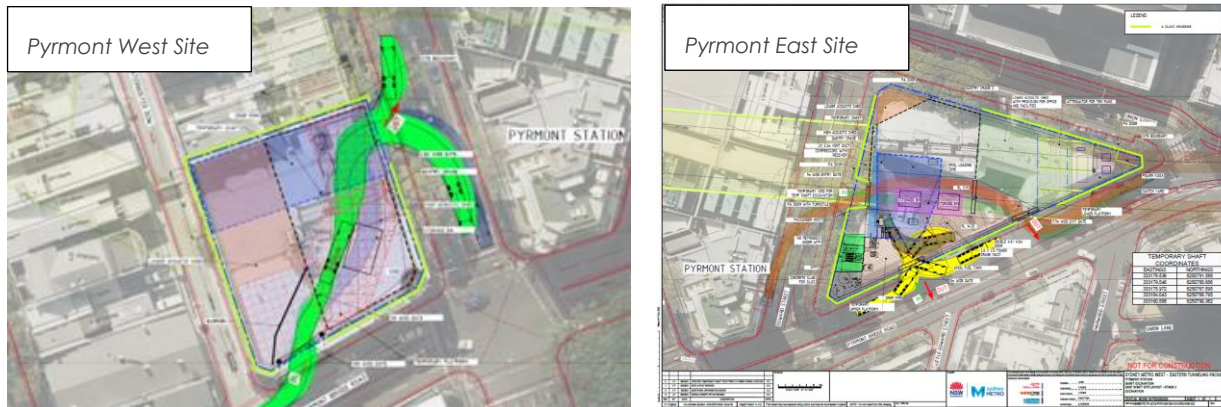


Figure 2: Proposed Pyrmont East and West Construction Site Access Locations

The largest heavy vehicle to access Pyrmont East and West sites will be a 12.5m Heavy Rigid Vehicle (HRV). All loading and unloading activities can be sufficiently accommodated within both sites, as discussed in the site-specific CTMPs of these sites.

1.3. Purpose and Scope of this HVLR

The scope of this Heavy Vehicle Local Road (HVLR) report is to provide a contingency construction access routes that will be used by heavy vehicles up to 12.5m (HRV) for looping between and around Pyrmont East and Pyrmont West sites when they cannot access the site for any unplanned reasons. These HV would have left the marshalling yard from The Bays and have arrived within the Pyrmont precinct. Available on-site queueing space at both the Pyrmont East and West sites is extremely limited and therefore expected that throughout the project, some vehicles will not be able to enter the sites on the first attempt. Currently vehicles that do not gain entry must continue along the nominated haulage route and cross Anzac Bridge towards Rozelle, therefore an undefined loop must be completed before returning to the site. This loop is expected to take around 20 mins, depending on traffic.

The proposed additional route would provide flexibility with both looping back to the site or looping from the Pyrmont East to Pyrmont West construction site and significantly reduce the travel time that is currently required to complete the approved route.

While queueing and idling are not permitted, the time required to drive the current approved loop route may result in driver non-compliances. By providing a shorter loop will encourage compliance with approved routes and minimise the risk of heavy vehicles idling and queuing on the surrounding roads in the vicinity of the Pyrmont East and Pyrmont West sites. The shorter loop road will have a lower impact on the pedestrians and cyclist then having the HV to return to the marshalling yard at The Bays and recommence their trip to the site.

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

- Swept path analysis assessment for the largest design vehicle (12.5m HRV) along the proposed haulage route as depicted by the orange line in Figure 5. 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 proposed 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 haulage routes taking into consideration the above assessment results.

1.4. 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;	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
	(c) details as to the date of completion of the road dilapidation surveys for the subject local roads;	Section 2.10
	(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	Section 2.7 and Section 2.8 Refer to Section 2.9.2 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.	N/A 12.5m HRV would not enter the site as part of the proposed loop route. All site access arrangements are to be in accordance with site-specific CTMP
TT7	Construction site traffic would be managed to minimise movements during peak periods.	Section 2.9.3
TT8	Construction site traffic would be managed to minimise vehicle movements through school zones during pick up and drop off times.	Section 2.7 and Section 2.8 Refer to Section 2.9.2 for pedestrian and cyclist management

Refer to Construction Traffic Management Plan Pyrmont East – Stage 2 – Site Establishment & Excavation - Rev 02 (May 2023) and Construction Traffic Management Plan Pyrmont West – Stage 2 –

Site Establishment, Excavation and Tunnelling - Rev 00 (October 2023) for the compliance for other REMM requirements.

2. Proposed Route and Local Roads to be Used

2.1. Existing Approved Routes

The existing approved EIS routes for the Pyrmont East and West construction sites are shown in Figure 3, as identified in the Response to Submission (RTS).



Reference: Response to Submission

Figure 3: Existing Approved Haulage Routes

In June 2023, a HVLR report was prepared to introduce an additional haulage route to be used by a 19m semi-trailer, which was later approved. The additional route was required to accommodate the delivery of long steel members for the construction of acoustic sheds and access decks during the site establishment stage. The additional haulage route is illustrated in Figure 4.

The yellow-dotted line depicts the additional approved route to travel via Darling Drive, Pier Street and Harbour Street towards the Sydney Harbour Bridge. The EIS approved routes are shown with a solid yellow and blue lines in Figure 4.

The full extent of modified outbound route as shown in Figure 5 are described as follows:

- Turn left onto Pyrmont Bridge Road eastbound (as consistent with EIS)
- Turn onto Darling Drive and continue southbound (as consistent with EIS)
- At the roundabout (just north of Convention light rail stop), continue southbound on Darling Drive (approved)
- Turn left at the roundabout onto Pier Street (approved)

- To access Harbour Bridge via Harbour Street (approved)

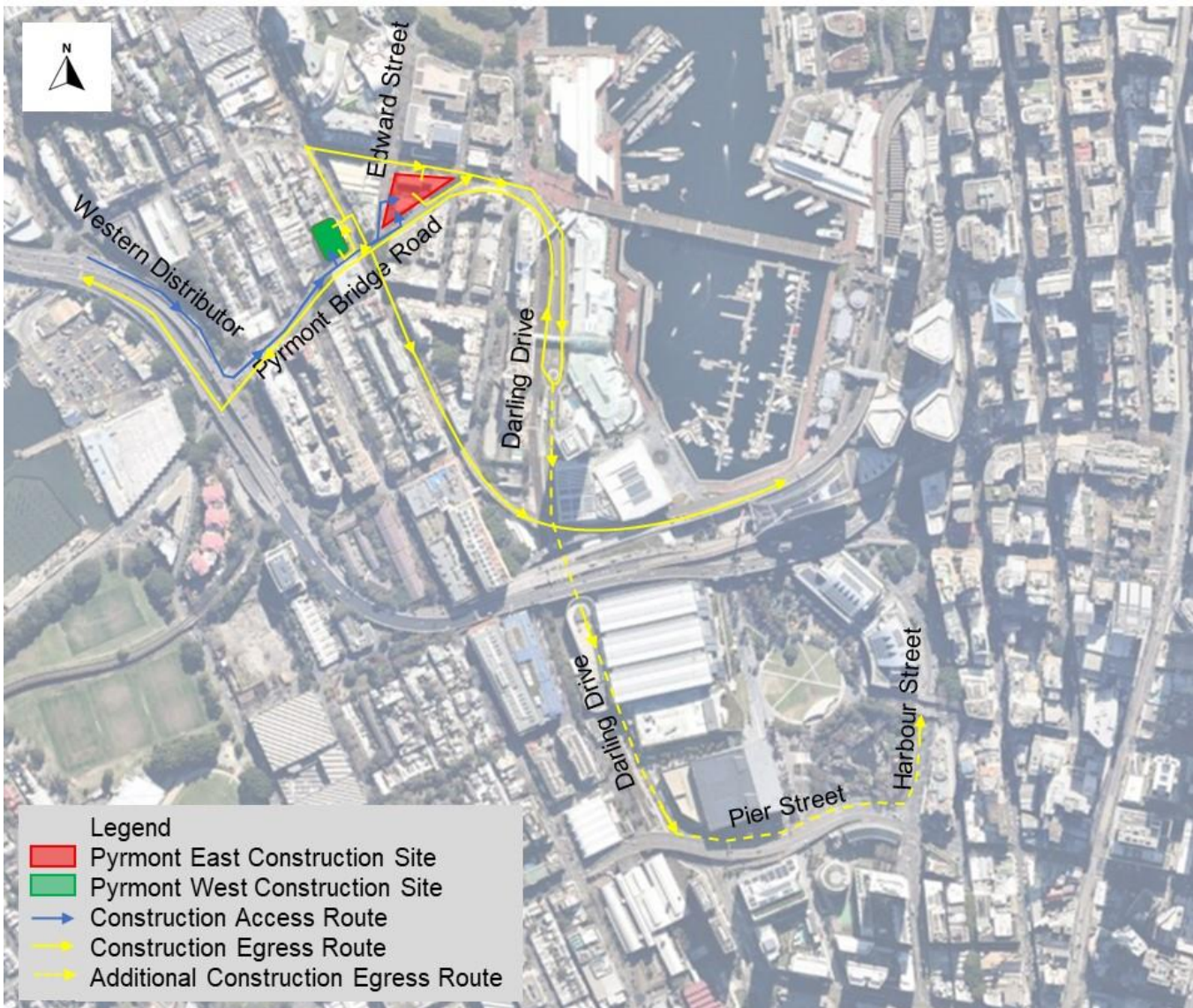


Figure 4: Approved Haulage Routes (Pier Street HVLR report)

19m semi-trailers in the approved HVLR report are longer and have wider turning radius than the 12.5m HRVs as proposed in this HVLR report. Hence, the additional haulage route is expected to sufficiently accommodate the turning movements of HRVs.

2.2. Proposed Routes and Local Roads

A proposed loop route around Pyrmont East and West sites is required for construction vehicles to loop around the Pyrmont area when there is congestion within the sites preventing construction vehicles from entering. The proposed loop route would also allow construction vehicles to loop between Pyrmont East and Pyrmont West site, while minimising the risk of non-compliances associated with truck queuing and idling on public roads.

As the proposed loop route was not captured as part of the modified EIS routes as shown in the Response to Submission (RTS) and the approved additional route identified in the Pier Street HVLR report (Document No: SMWSTETP-JCG-PYR-SN150-TF-RPT-093005), it is likely to trigger planning approval conditions D73 and D74 as stipulated in Table 1.

This report has been prepared to assess the loop route that JCG JV propose to loop between the Pyrmont East and Pyrmont West sites via Darling Drive, Ultimo Road, Harris Street, William Henry Street, Wattle Street, and Pyrmont Bridge Road by a 12.5m HRV.

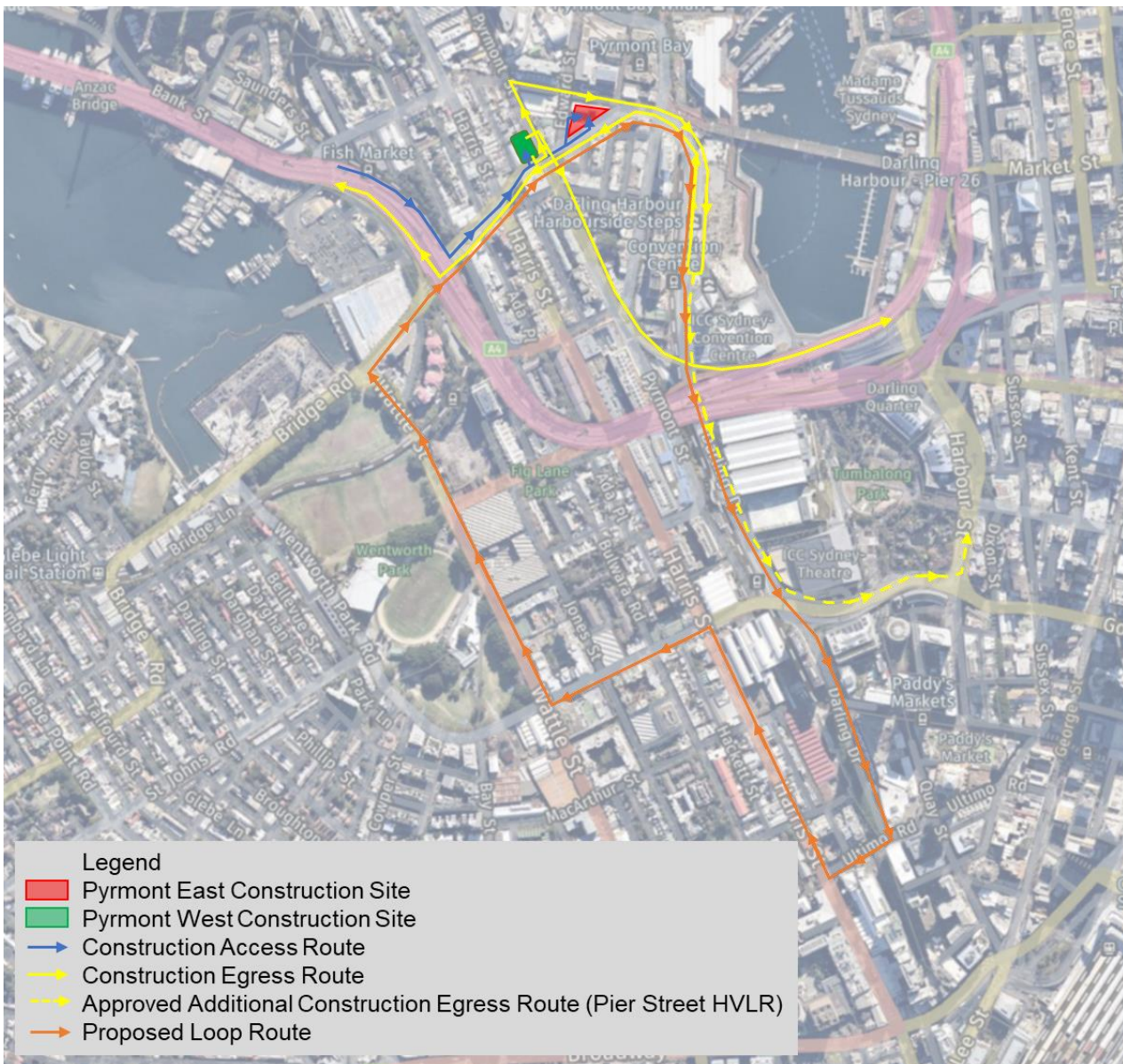


Figure 5: Proposed Loop Route - Pyrmont

2.3. Road Classifications

The majority of the proposed loop route is either approved or along classified regional and state roads based on the TfNSW Road Network Classifications Map, as shown in Figure 6. Regional roads and state roads are generally traversed by heavy vehicles daily.

Only a short section of the proposed loop route comprises local roads, in addition to the approved additional route in the Pier Street HVLR. The newly proposed local roads for the loop route include Darling Drive between Pier Street and Ultimo Road and Ultimo Road between Darling Drive and Harris Street.

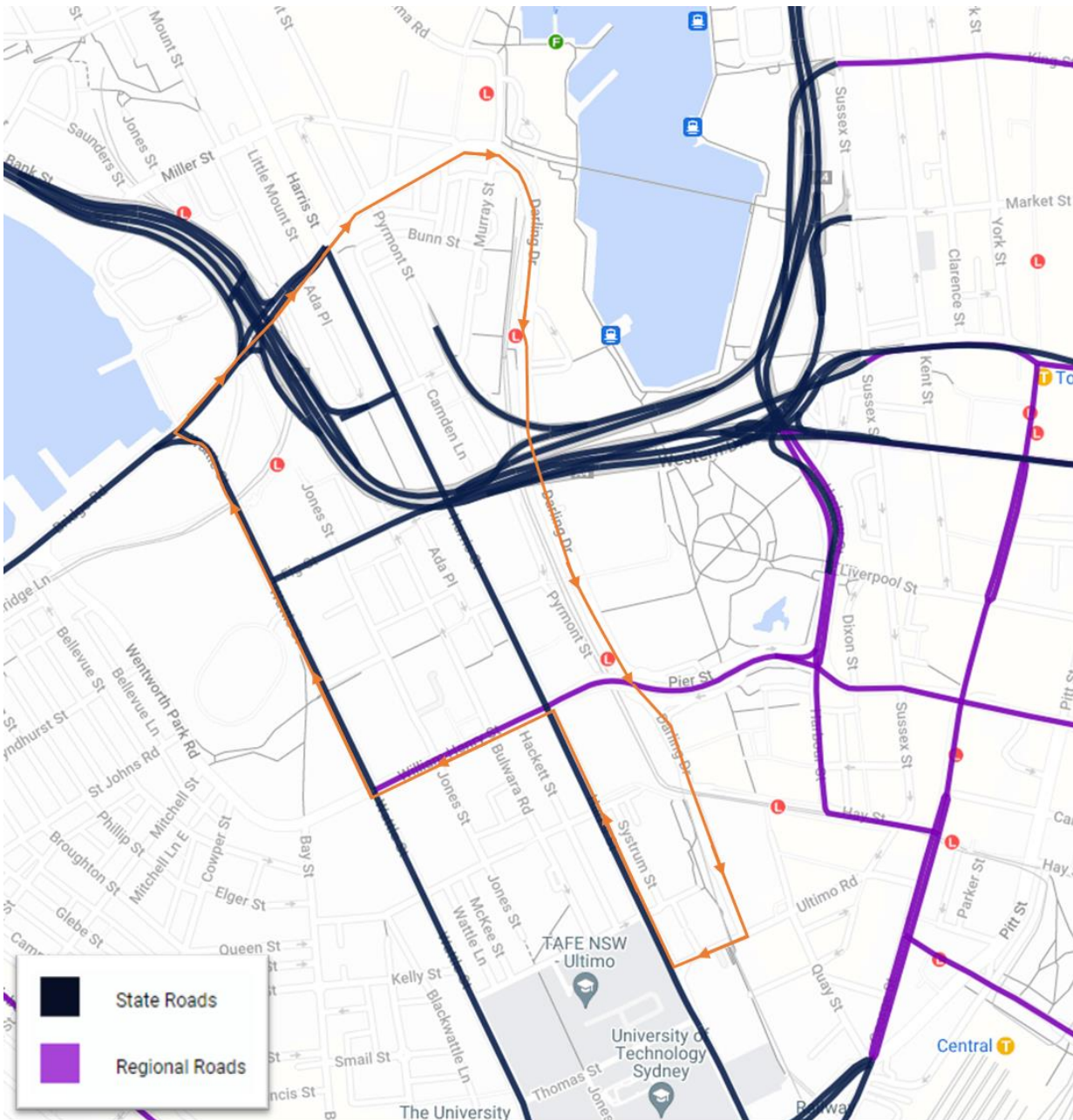


Figure 6: TfNSW Road Network Classifications Map – Proposed Loop Route

2.4. Existing Road Environment

Existing road environment and the road network surrounding the subject site and the proposed haulage routes are described as follows:

Pyrmont Bridge Road is generally a four-lane, two-way classified state road connecting Bridge Road to the west and Union Street to the east. Pyrmont Bridge Road intersects with Pyrmont Street via a signalised junction with formal pedestrian crossings provided on all approaches of the intersection. On-street parking is prohibited on Pyrmont Bridge Road at all times. Pyrmont Bridge Road is a 40km/h Local Traffic Area in the vicinity of the Pyrmont East construction site.

Pyrmont Street is a two-lane, two-way road to the north of Pyrmont Bridge Road, connecting to Point Street. To the south of Pyrmont Bridge Road, it is a four-lane, one-way road with two lanes connecting to Western Distributor on ramp and two southbound lanes terminating at a cul-de-sac before Pier Street. Outside of clearway restriction hours, 2P on-street metered parking is generally available on both sides of Pyrmont Street. Pyrmont Street is a 40km/h Local Traffic Area in the vicinity of the Pyrmont East construction site.

Union Street, to the east of Pyrmont Street, is a two-lane, two-way road whereas to the west of Pyrmont Street, it is a one-lane, one-way road for eastbound traffic in a 10km/h shared zone. Union Street connects with Darling Drive / Murray Street to the east and with Harris Street / Miller Street to the west. Shared bicycle paths and metered parking are available along sections of Union Street. To the east of Pyrmont Street, the eastbound and westbound kerbside lanes generally provide 2P metred parking zone for 24 hours. To the west of Pyrmont Street, the kerbside lane is a 1P metred parking zone for 24 hours.

Edward Street is a two-lane, two-way road, connecting Pyrmont Bridge Road to the south and a cul-de-sac just north of Union Street. To the south of Union Street, the southbound kerbside lane is a 2P metred parking lane for 24 hours whereas the northbound kerbside lane consists of unrestricted motorbike parking and a loading zone / 2P metred parking area. The loading zone applies between 7am and 6pm (Monday – Friday) and the 2P metred parking area applies between 6pm and 10pm (Monday – Friday) and 8am-10pm on Saturdays and public holidays. To the north of Union Street, the northbound kerbside lane is a No Parking zone between 6pm and 10pm (Friday – Saturday) and a 2P metred parking zone at all other times whereas the southbound kerbside lane is a 2P metred parking zone for 24 hours.

Paternoster Row is a one-lane, one-way northbound road connecting Pyrmont Bridge Road to the south and Union Street to the north. It is a 10km/h shared zone, with provision of road humps for traffic calming. ‘No Parking’ zones are provided on both sides of Paternoster Row. Access to Paternoster Row is restricted for vehicles over three tonnes.

Darling Drive is a two-way divided road connecting Union Street / Murray Street to the north and Ultimo Road to the south. On-street parking is prohibited along this road. Darling Drive intersects with Pier Street via an on ramp provided off a roundabout interchange, adjacent to ICC Sydney Theatre.

Pier Street provides a single lane on ramp connecting the roundabout with Darling Drive to the west, and Harbour Street to the north.

Harbour Street connects with Harbour Bridge and has various lane configuration, with the initial segment connecting Pier Street on ramp a six-lane, two-way divided road.

Ultimo Road is generally aligned in an east-west direction. It connects with Darling Drive at a signalised intersection. Between Quay Street and Harris Street, Ultimo Road is a two-way road, with one to two travel lanes in either direction. To the east of Quay Street, Ultimo Road is a two-lane, one-way road running westbound, connecting with George Street, with kerbside parking on both sides of the road.

Harris Street is a two-way classified state road, aligned in a north-south direction. It connects with George Street to the south and terminates north of Pirrama Road to the north. Harris Street intersects with Ultimo Road at a T-junction signalised intersection. It generally has one travel lane in the northbound direction with clearway restriction along the kerbside lane during the PM peak, and two travel lanes in the southbound direction, with an additional lane freed up during the clearway restriction in the AM and PM peaks.

William Henry Street is generally aligned in an east-west direction, connecting with Pier Street to the east and William Park Road to the west. It generally has two travel lanes in either direction.

Wattle Street is a classified state road running in a north-south direction. It is a three-lane, one-way northbound road, between Fig Street and Broadway. To the north of Fig Street, Wattle Street is a four-lane, two-way road, connecting with Pyrmont Bridge Road to the north at a signalised intersection.

2.5. Public Transport Network

The Pyrmont East and West construction sites are served by extensive public transport services as it is located within close proximity to commercial and retail, shopping centres and Darling Harbour precincts. Public transport services around the site vicinity include trains, buses, light rail and ferries.

The nearest train services can be accessed at Town Hall train station, which provides connection to other suburban hubs across the Sydney Greater Metropolitan Area. Town Hall train station is located approximately 1km walking distance (13-minute walk) from the Pyrmont East and West construction sites via the Pyrmont footbridge.

Light rail services can be accessed at the surrounding light rail stops, including Pyrmont Bay, Convention, the Star Sydney, John Street Square, Fish Market and Wentworth Park light rail stops. All of these light rail stops form part of the L1 Dulwich Hill Line, which provides connection between Central and Dulwich Hill. The closest light rail stop to the Pyrmont East and West construction sites is Pyrmont Bay, which is located approximately 130m walking distance (1-minute walk) from the site.

Bus stops are located along Harris Street, Pirrama Road and Miller Street with bus services providing connection to a number of major precincts including the Sydney CBD, Bondi, Rozelle and Parramatta. Night bus services are also available within the vicinity of the construction site to accommodate the night travel demand induced by the surrounding licenced and entertainment venues. The closest bus stop is located on Harris Street, just north of Pyrmont Bridge Road, which is a 210m walking distance (3-minute walk) from the Pyrmont East construction site. The closest bus stop to Pyrmont West site is located on Harris Street, just north of Pyrmont Bridge Road, which is a 100m walking distance (1-minute walk).

Ferry services can be accessed at Pyrmont Bay wharf, which is located approximately 300m walking distance (4-minute walk) from the Pyrmont East construction site. The F4 Pyrmont Bay ferry line services this wharf, which provides connection between Pyrmont Bay and Circular Quay.

The public transport network context in the vicinity of the subject site is shown in Figure 7.



Figure 7: Public Transport Services Surrounding Pyrmont East and West Construction Sites

2.6. Pedestrian and Cyclist Routes

Footpaths are generally provided along the majority of roads in the vicinity of the proposed Pyrmont East construction site, except for Western Distributor. Signalised crossings are available at the majority of the intersections. Pedestrian activity is generally high considering the proximity of the site to commercial and retail land uses, as well as licensed entertainment venues. A 40km/h Local Traffic Area has been established around the site vicinity on Pyrmont Bridge Road, Edward Street and Union Street, and the majority of roads along the proposed loop route.

Cycling infrastructure around the construction site consists of an off-road shared user path along Pyrmont Bridge Road, cycling route along Miller Street and Darling Drive north of the Convention light rail stop, and an off-road shared path along Darling Drive south of the Convention light rail stop. A dedicated cycle lane is also provided on Ultimo Road, alongside vehicle traffic lanes.

The existing cycling infrastructure around the vicinity of the site is shown in Figure 8.



Figure 8: Cycle Infrastructure and Routes Surrounding Pyrmont East and West Construction Site

2.7. School Zones

Ultimo Public School is located to the east of Wattle Street, just north of William Henry Street and adjacent to Wentworth Park.

Fort Street Public School is being upgraded and is temporarily located in Wentworth Park, opposite Ultimo Public School. The temporary school site will remain at this location until the upgrade is completed at the end of 2023. School locations are shown in figure 9.

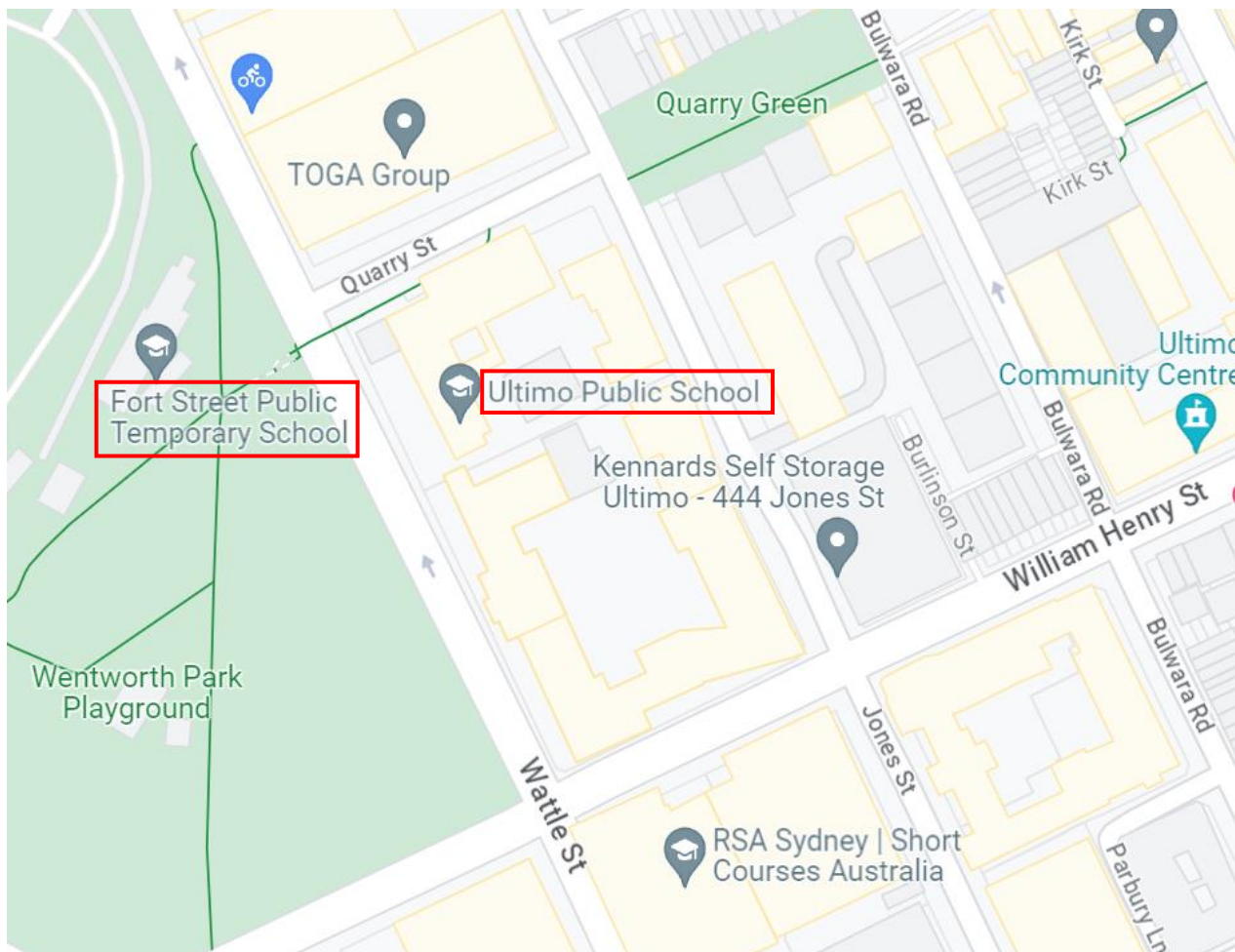


Figure 9: Location of Ultimo Public School and Fort Street Public Temporary School

A 40km/h school zone speed restriction (8:00am – 9:30am, 2:30pm – 4:00pm) applies between just north of William Henry Street and Quarry Street. Outside of the school zone restriction, the posted speed limit is 50km/h.

There are no other known public schools or high schools located along the vicinity of the proposed loop route.

Construction vehicles would be managed to minimise the number of vehicles on the road network during the school zone periods. Truck drivers would be instructed to follow all speed restrictions associated with school zone operation and practice extra caution, when travelling along these areas (i.e. Wattle Street). This would be stressed on during the induction training and regular toolbox talks, as well as included in the Driver Code of Conduct to inform truck drivers.

2.8. Aged Care and Childcare Facilities

There are two childcare centres located along the proposed loop route.

One of which is the Genius Childcare, located on Pymont Bridge Road, adjacent to the current approved route. Children are being drop off and picked up via the building basement car park off Bulwara Rd. The centre is located on 1st floor in the Wotso building. Location shown in Figure 10.

Another childcare is Believe Playschool, which is located within the Ultimo Community Centre at the corner of William Henry Street / Bulwara Rd intersection Ultimo. Believe Playschool childcare provides pick-up / drop-off facilities in the building basement. A lift access is available, providing direct access between the basement car park and the childcare centre. Hence, the proposed loop route would not impact the pick-up / drop-off operation of the childcare centre. Location of the Playschool is shown in Figure 11.

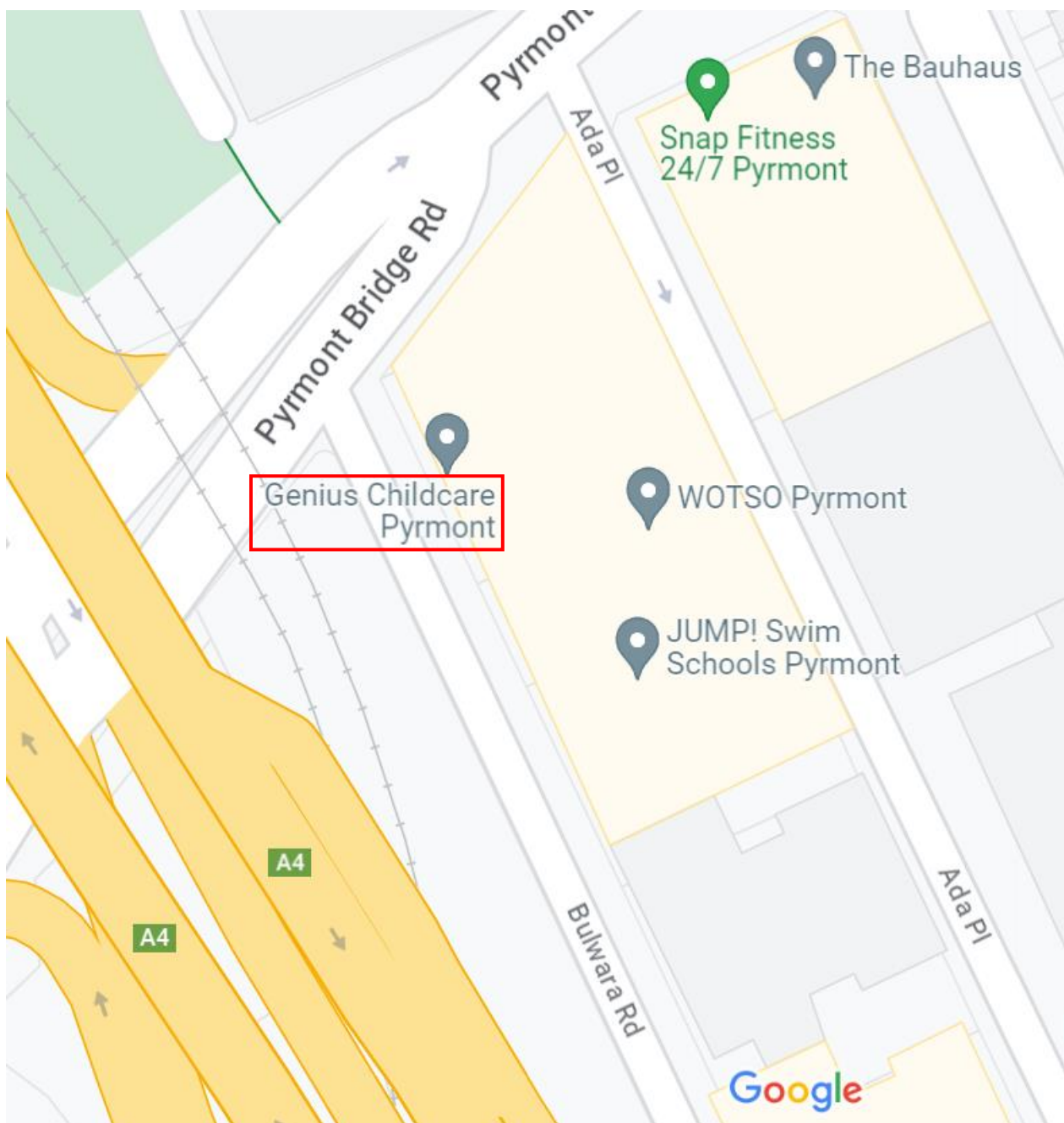


Figure 10: Location of Genius Childcare, Pymont

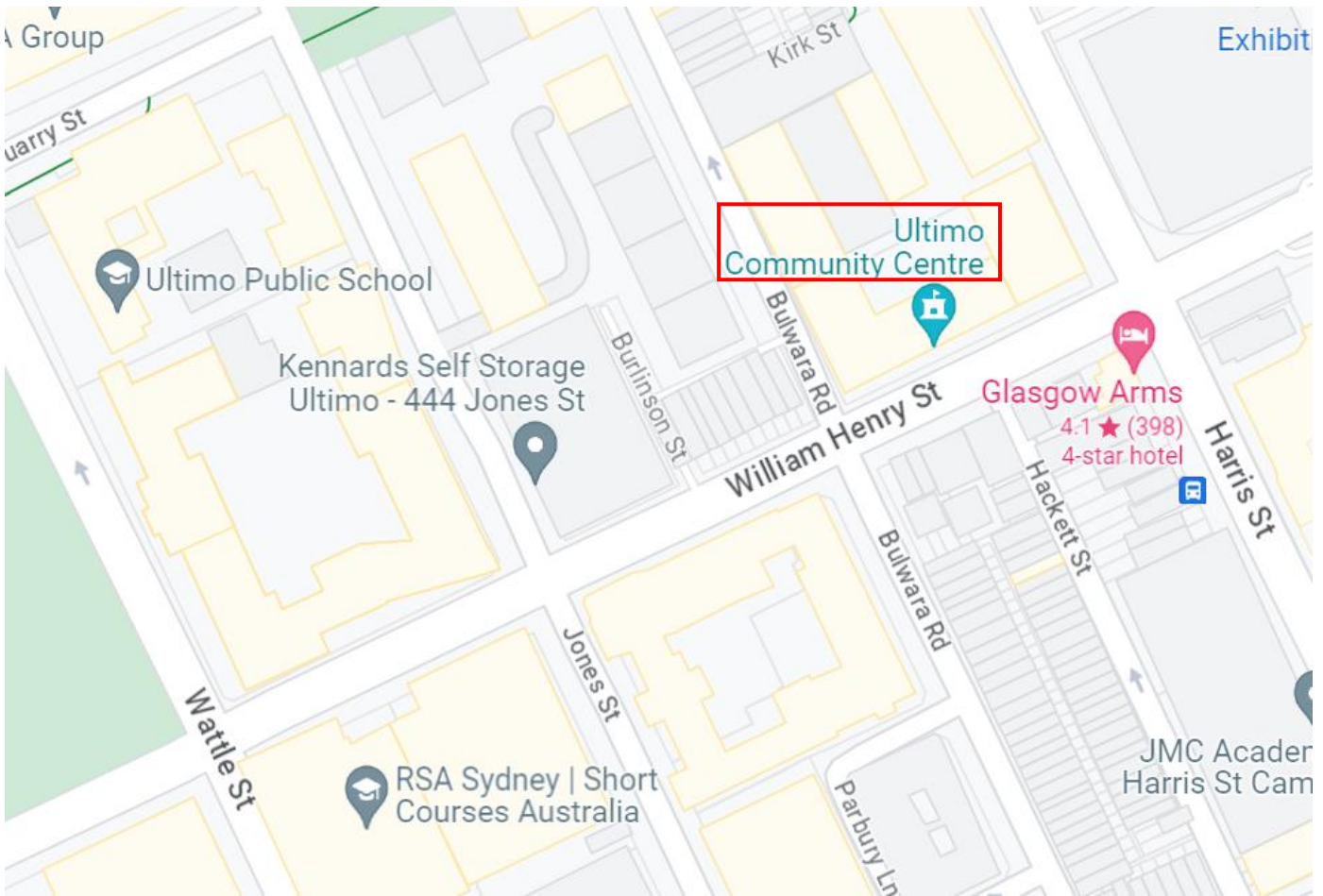


Figure 11: Location of Believe Playschool, Ultimo

There are no known aged care facilities located along the proposed loop route.

Based on the above, no adverse impacts are expected from the proposed loop route on the nearby childcare centres and aged care facilities.

2.9. Construction Traffic

2.9.1. Construction Traffic Management

Construction vehicles will be managed through monitoring, marshalling and communication between vehicles and the sites. Marshalling activities will be undertaken at the Bays construction site as well as the spoil disposal sites to prevent vehicles queuing and idling on the surrounding public roads.

In the event of congestion within the Pyrmont sites preventing vehicles from entering the sites, construction vehicles are to wait at the Bays marshalling area / spoil disposal sites. Construction vehicles already on the roads would be required to travel along the proposed loop route and only enter the sites when construction vehicle space is available.

For construction vehicles looking to access both Pyrmont East and Pyrmont West sites as part of a single vehicle trip, they would also utilise this loop route.

2.9.1.1. Real Time Monitoring

The locations of all heavy vehicles used for spoil haulage will be monitored in real time and the records of monitoring will be made available electronically to the Planning Secretary and the Environmental Protection Authority (EPA) upon request for a period of no less than one year following the completion of the construction.

The real time monitoring will be undertaken using a Telematic system to track and analyse construction vehicle movements. Telematics are able to analyse real-time traffic data, allowing JCG JV to manage its spoil haulage vehicles fleet more efficiently by predicting arrival times and communicate directly with construction workers.

The GPS tracking feature allows JCG JV to determine the speed and location of the fleet to better manage the spoil haulage vehicle movements by determining pinch-points and adjust accordingly. If drivers are found to not comply with the posted speed limit, the traffic manager will receive notifications, enabling immediate action to mitigate the unsafe driver behaviour.

The spoil haulage vehicles will be restricted to use only the approved vehicle routes and avoid any unapproved local roads unless it is permitted for specific works by the authorities.

2.9.1.2. Inspection and Monitoring

Regular inspections will be conducted by the Foremen regarding compliance of the implementation of the relevant Pyrmont East and West CTMP in conformance with the Construction Traffic Management Framework and TCAWS manual. All critical safety defects will be rectified as soon as practicable.

Long-term traffic management setups will be inspected weekly with minor issues recorded and rectified within a reasonable timeframe. More significant issues will be recorded for rectification. The inspections will be documented.

Daily inspections will be undertaken to ensure all traffic management signs and devices are properly located, oriented and maintained in an effective condition.

All critical safety defects caused by the project activities, to any road, footpath, shared path or cycleway which is open to the public will be rectified as soon as practicable. Temporary rectification (e.g. cold mix, plating and etc.) might be used as an interim solution prior to permanent rectification works to the conditions it was in prior to the occurrence of the damage.

2.9.1.3. Marshalling

All truck marshalling is to be contained at The Bays site on Glebe Island as well as the spoil disposal sites. The marshalling area at the Bays site could accommodate up to seven trucks concurrently, away from sensitive land users. No on-street parking is required for truck marshalling in the vicinity of the Pyrmont sites, and no layover would occur in any public roads nor the proposed haulage route. Hence, it is expected that the construction impacts associated with idling and queueing on the surrounding road and road users will be minimal.

2.9.1.4. 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.

2.9.2. Pedestrian and Cyclist Safety Management

The proposed works will not result in any major pedestrian impacts as pedestrian movements will be maintained on the existing footpath and crossing facilities.

Warning signage will be erected to warn and inform pedestrians of the changes in travel conditions and the traffic arrangement in place. TfNSW have implemented a 'Be Truck Aware' campaign which aims to show road users, the challenges that truck drivers face every day.

Truck Decals will be installed at two mid-block signalised crossings in Darling Drive as per the approved Pier Street HVLR report to raise pedestrian awareness of trucks on local roads. Additional Truck Decals can be installed along the local road sections of the proposed loop route, in particular, the pedestrian crossing facilities across the proposed route. This includes the following pedestrian crossing facilities:

- Mid-block signalised crossing on Darling Drive, south of Pier Street
- Signalised crossing on Darling Drive across the northern leg of the Ultimo Road / Darling Drive signalised intersection
- Signalised crossing on Ultimo Road across the eastern leg of the Ultimo Road / Harris Street signalised intersection

In addition, Truck Decals will be installed on Wattle Street and William Henry Street outside schools and childcare centres:

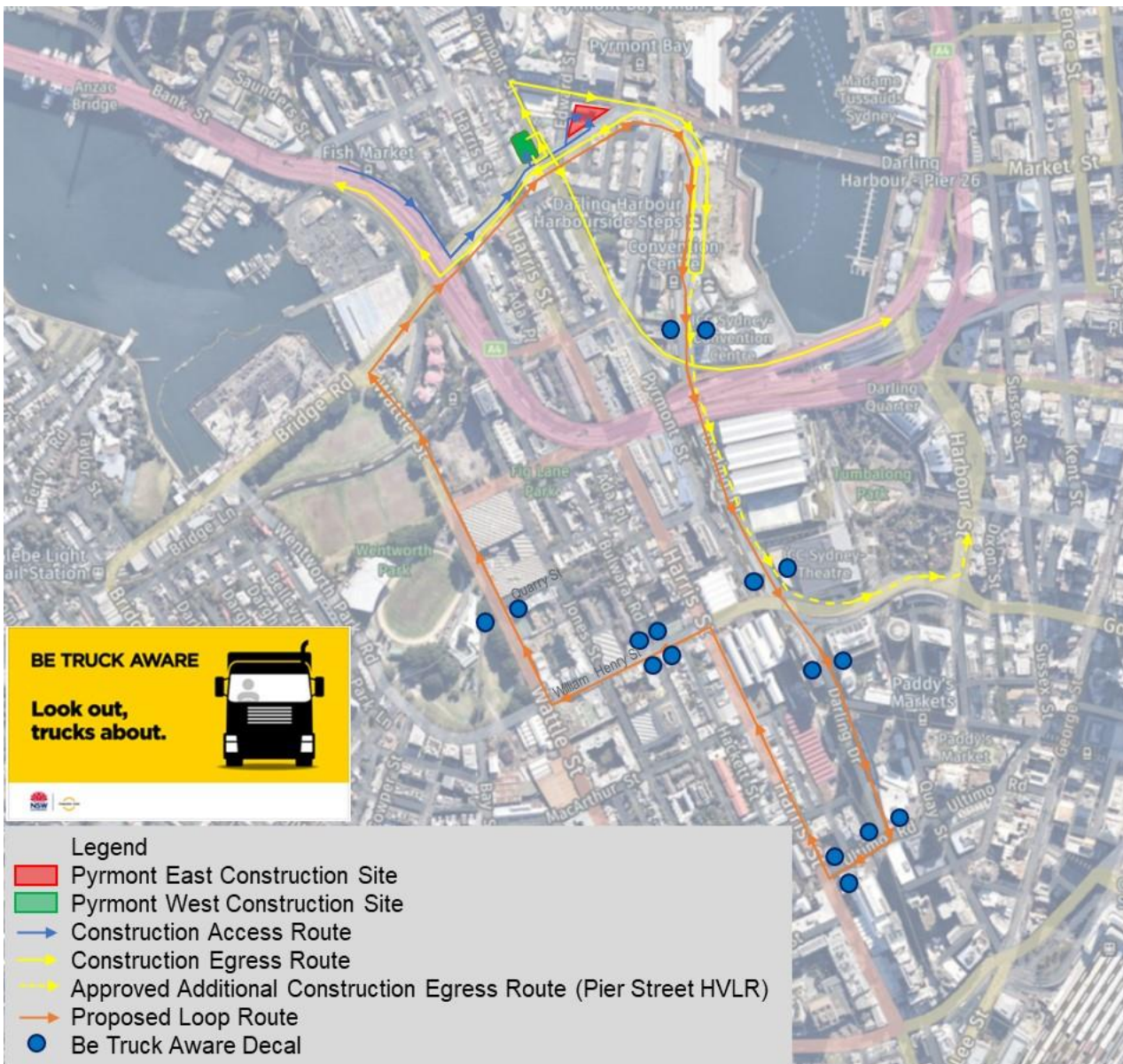
- Signalised crossing on Wattle Street across the southern leg of the Wattle Street / Quarry Street signalised intersection
- Signalised crossing on William Henry Street across both eastern and western legs of the William Henry Street / Bulwara Road intersection.

Where the proposed haulage route crosses a pedestrian crossing facility along the proposed haulage route, truck awareness decals (Figure 12) will be placed on the footpath on either side of the pedestrian crossings, as shown in Figure 13 subject to City of Sydney's approval.



Reference: <https://roadsafety.transport.nsw.gov.au/campaigns/be-truck-aware/index.html>

Figure 12: Truck Aware Decals



Basemap Source: Nearmap

Figure 13 Proposed Location for Truck Aware Decals

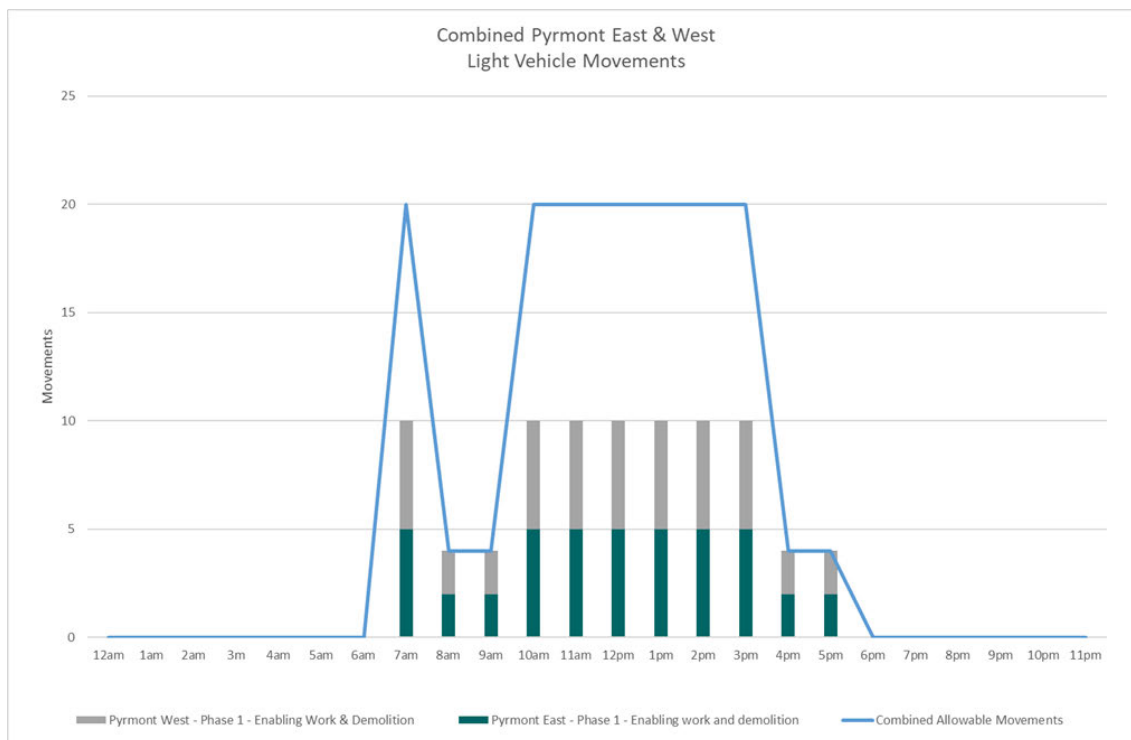
The proposed loop route will not result in any major impacts on cyclist activities along the vicinity of the roads. All cycle routes will be maintained for the duration of the proposed works. A cycle route painted in green runs along Darling Drive and Ultimo Road and they are observed to be prominent to motorists. During the night time, the cycle path is visible and well-lit.

Toolbox talks will be held regularly during construction works. They will reinforce and reiterate information from induction training. Toolbox talks will advise drivers of any risk areas especially the proposed haulage route where several pedestrian crossings are located across Darling Drive, one pedestrian crossing on Ultimo Road, and one pedestrian crossing on Wattle Street.

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.

2.9.3. Construction Traffic Volumes

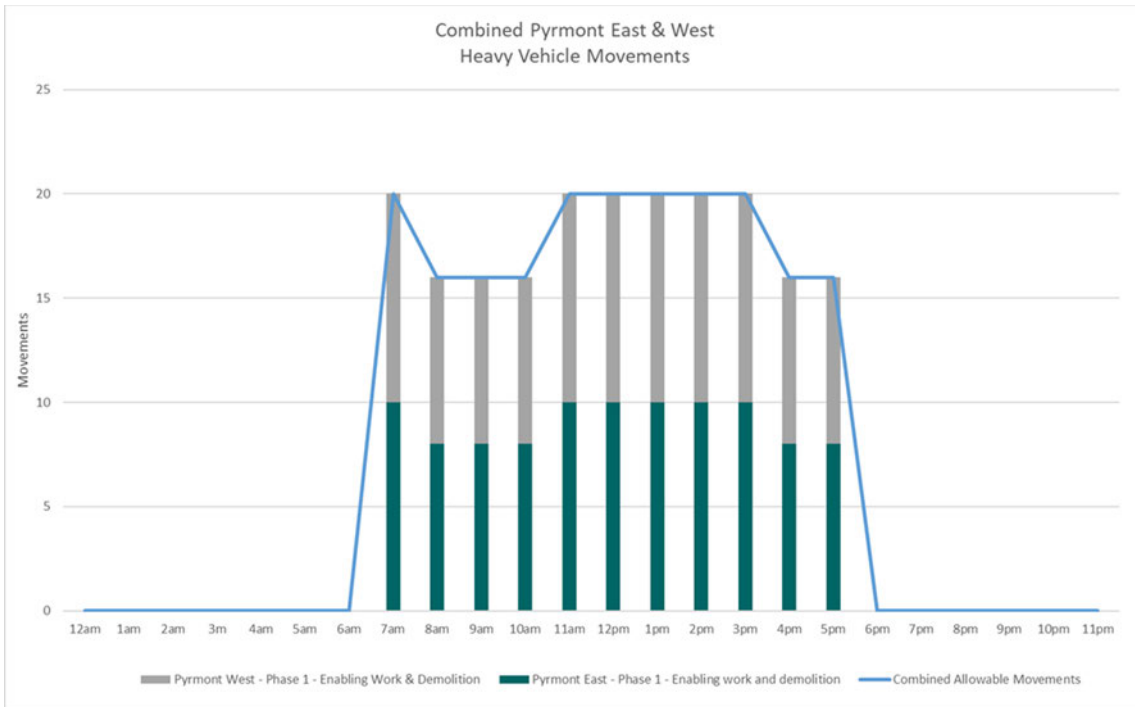
Construction traffic generated by the Pymont East and West construction sites are expected to be consistent with the traffic generation identified in the Response to Submissions Report (RTS). Figure 14 and Figure 15 detail the combined traffic generation of the Pymont East and West sites, noting construction traffic would be managed to minimise movements during AM and PM peak periods and school zone operation. Vehicle movement refers to one-way; hence a vehicle entering then leaving the site represents two vehicle movements. It is anticipated that approximately 20% of the combined hourly movements permitted for Pymont East and West will utilise the proposed loop road. The loop road will only be utilised as a contingency route and not as a planned route. The contingency construction access routes that will be used by heavy vehicles up to 12.5m (HRV) for looping between and around Pymont East and Pymont West sites when they cannot access the site for any unplanned reasons. These HV would have left the marshalling yard from The Bays and have arrived within the Pymont precinct. This equates to 4 heavy vehicle movements per hour outside of the peak, and 3 heavy vehicles during the peak.



Note: Movement means one way. A vehicle entering then leaving the site represents two movements.

Reference: Construction Traffic Management Plan Pymont East – Stage 1 - Tunnel Excavation and Lining – Rev 2 (10 March 2023)

Figure 14 Cumulative Pymont East & West Light Vehicle Movements



Note: Movement means one way. A vehicle entering then leaving the site represents two movements.

Reference: Construction Traffic Management Plan Pyrmont East – Stage 1 - Tunnel Excavation and Lining – Rev 2 (10 March 2023)

Figure 15: Cumulative Pyrmont East & West Heavy Vehicle Movements

2.10. Dilapidation

A road dilapidation survey was completed on 5th September 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 16 where turning movements of a 12.5m Heavy Rigid Vehicle (HRV) will occur along the proposed loop route.

The swept path assessment as shown in Appendix A demonstrates that the proposed haulage route is suitable for 12.5m HRVs.

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

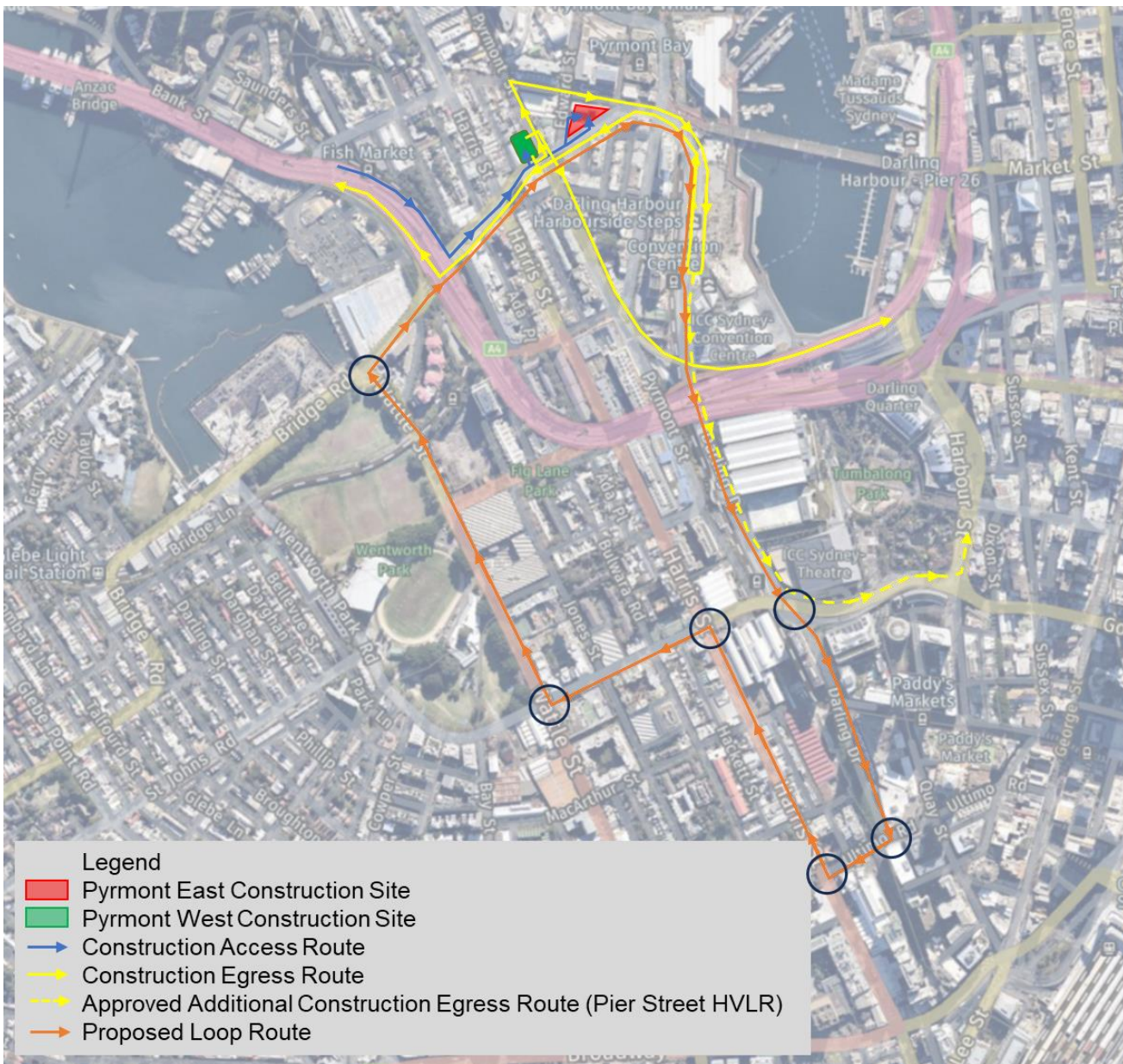


Figure 16: Intersections Included in Swept Path Assessment

4. Road Safety Audit

A road safety audit was conducted on the additional haulage route portion, based on the swept path assessment in conjunction with a site inspection along the proposed loop route via Darling Drive, Ultimo Road, Harris Street, William Henry Street, Wattle Street and Pyrmont Bridge Road which is deviated from the approved modified EIS route as shown in Figure 3 and the additional local roads as part of the Pier Street HVLR approval. The road safety audit report is presented in Appendix B.

There were no high-risk items identified. One medium-risk item and one low-risk item were identified. The medium risk was categorised as 'possible' in terms of likelihood and 'minor' in terms of severity level. The low-risk was categorised as 'unlikely' and 'low' severity level. Refer to the risk matrix presented in the road safety audit report.

Designer responses are shown in the last column in Table 4.2 in the road safety audit report in Appendix B.

5. Consultation

Consultation of the Pyrmont East and West CTMP was undertaken in accordance with the requirements of the CTMP.

JCG JV presented and discussed the proposed loop route in the TCG meeting 59, held on 5 October 23. City of Sydney representative sits on the TCG meetings. Copy of the agenda is attached in Appendix C.

6. Qualification

This HVLR report in relation to the proposed loop 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:

- Wayne Johnson (RSA-02-0769) - level 3 road safety auditor (lead auditor)
- Jessica Ng (RSA-02-1207) - level 2 road safety auditor (team member)

Wayne and Jessica 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

The swept path assessment demonstrates that the intersections along the proposed loop route can provide sufficient clearance to accommodate the turning movements of a 12.5m HRV. This loop route is required for heavy vehicles to travel around the vicinity of the Pyrmont East and Pyrmont West sites during congestion within the sites. This would minimise the risk of trucks idling and queuing on the surrounding road network.

There were no high-risk items identified, and one medium risk item was categorised as “possible” in terms of likelihood, and “minor” in terms of severity. Another item is a low risk with a “unlikely” in terms of likelihood, and “minor” in terms of severity.

A road dilapidation survey was completed on 5th September 2023 prior to the commencing heavy vehicle traffic on the modified haulage route, as part of the construction works at Pyrmont East and Pyrmont West sites.

While there are two public schools located along the state road, Wattle Street, construction vehicle traffic would be managed to avoid the school peak hours, where practical. Construction vehicle drivers would also be informed to practice caution and watch out for pedestrian activities near the school area.

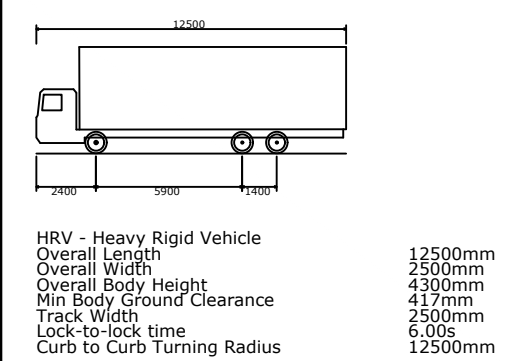
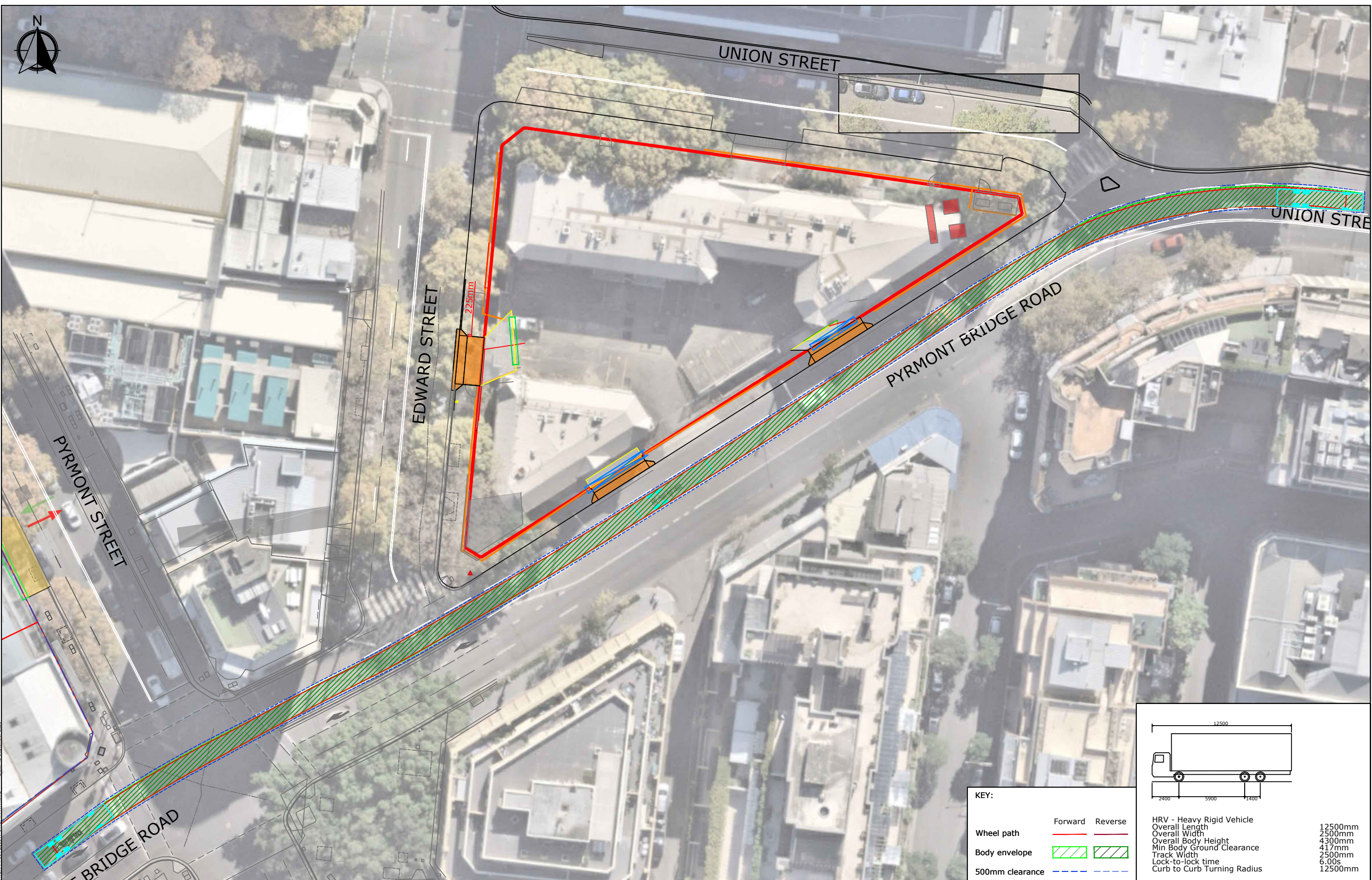
No adverse impacts are expected on the childcare centres located along the proposed loop route given that one of the two childcare centres is located adjacent to the approved construction route and another childcare picking-up / drop-off operation being sufficiently accommodated in the basement car park, away from traffic.

There are no known aged care facilities along the proposed loop route.

Based on the above, the proposed loop route is suitable for use and are recommended for approval.

Appendix A

Swept Path Assessment



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23

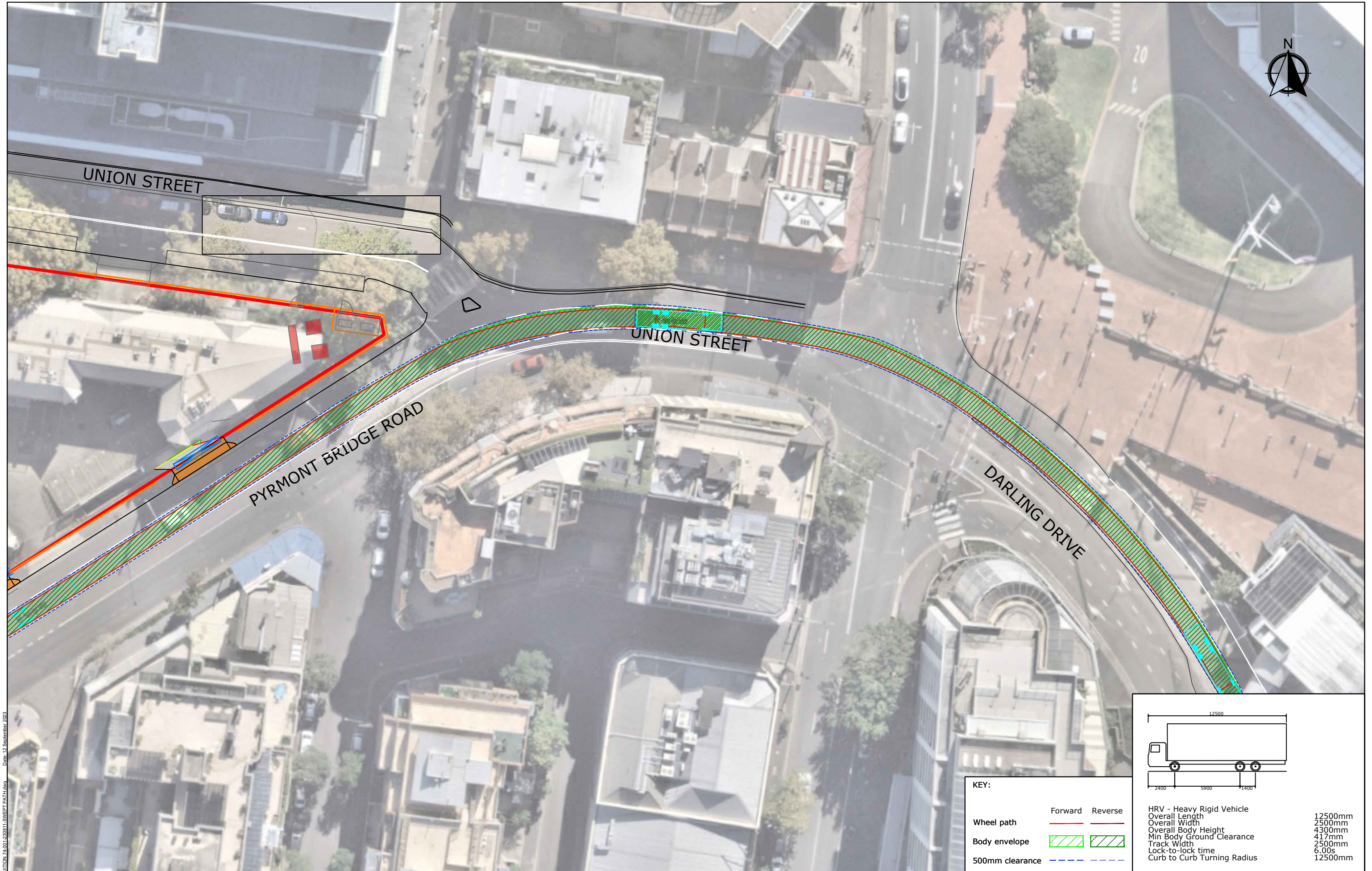


PROJECT
SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE
PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING

TITLE
SWEPT PATH ANALYSIS - LOOP ROUTE - PYRMONT BRIDGE ROAD TO UNION STREET
AS2890.2 12.5m HEAVY RIGID VEHICLE

DWG No. 21480CAD-PY	
FIGURE 1	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEPT PATH.dwg Date: 12 September 2023



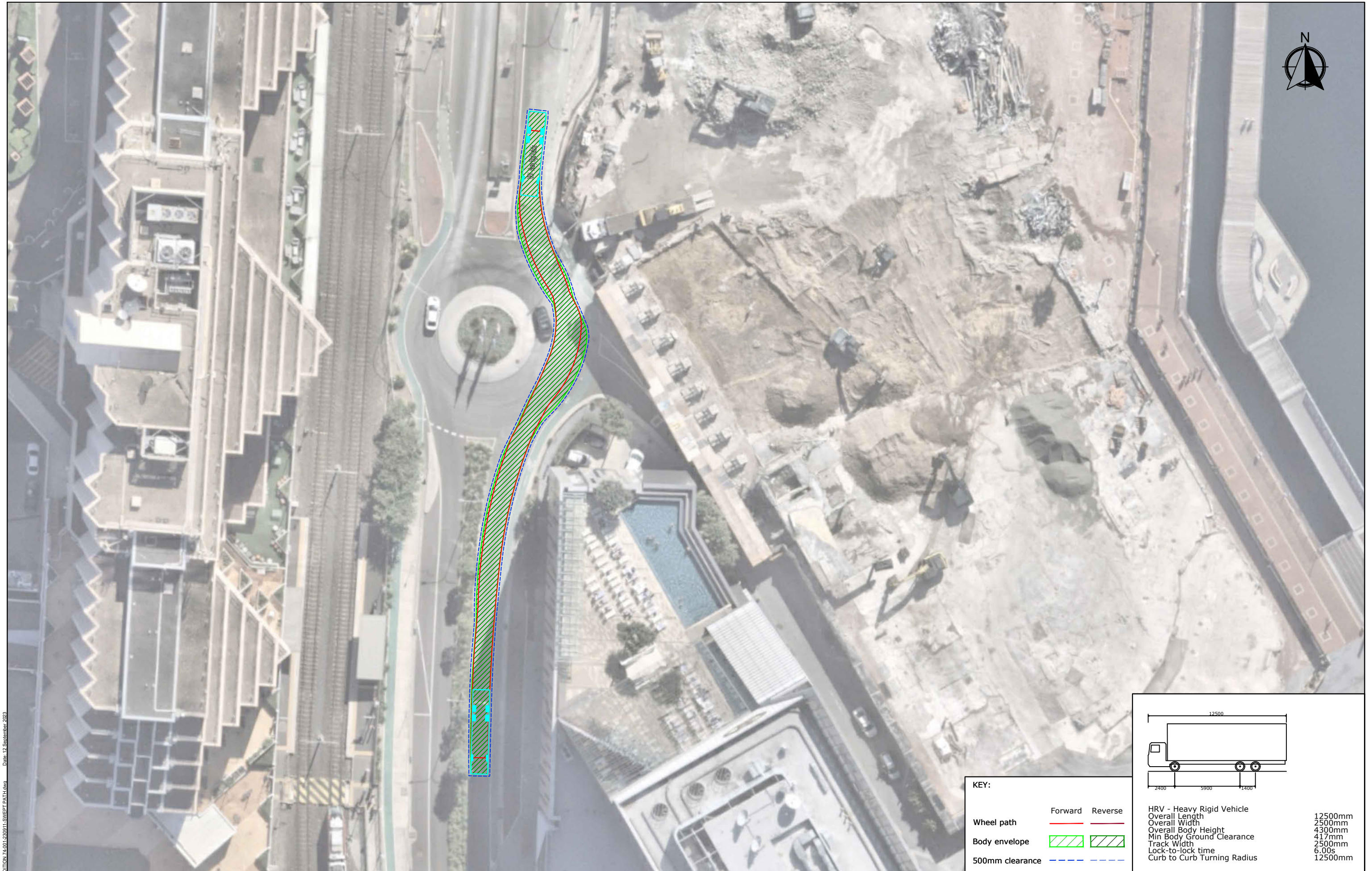
Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - UNION STREET TO DARLING DRIVE AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 2	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

HRV - Heavy Rigid Vehicle
Overall Length 12500mm
Overall Width 2500mm
Overall Body Height 4300mm
Min Body Ground Clearance 417mm
Track Width 2500mm
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12500mm

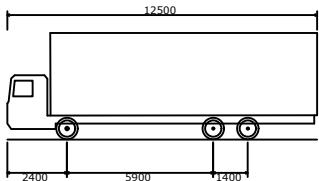
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - DARLING DRIVE ROUNDABOUT AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 3	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

Filename: 21480CAD-PYRMONT-CONDITION 74-001-240911-SWEPT PATH.dwg Date: 12 September 2023



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

HRV - Heavy Rigid Vehicle	
Overall Length	12500mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	417mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - DARLING DRIVE TO HARRIS STREET AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No.	21480CAD-PY FIGURE 4	
DATE STAMP	11 SEPTEMBER 2023	
PROJECT No.	SCALE	REV.
21480	1:500 @A3	A

Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEPT PATH.dwg Date: 12 September 2023



Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - HARRIS STREET TO WILLIAM HENRY STREET AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 5	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

HRV - Heavy Rigid Vehicle

Overall Length 12500mm

Overall Width 2500mm

Overall Body Height 4300mm

Min Body Ground Clearance 417mm

Track Width 2500mm

Lock-to-lock time 6.00s

Curb to Curb Turning Radius 12500mm



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

HRV - Heavy Rigid Vehicle
Overall Length 12500mm
Overall Width 2500mm
Overall Body Height 4300mm
Min Body Ground Clearance 417mm
Track Width 2500mm
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12500mm

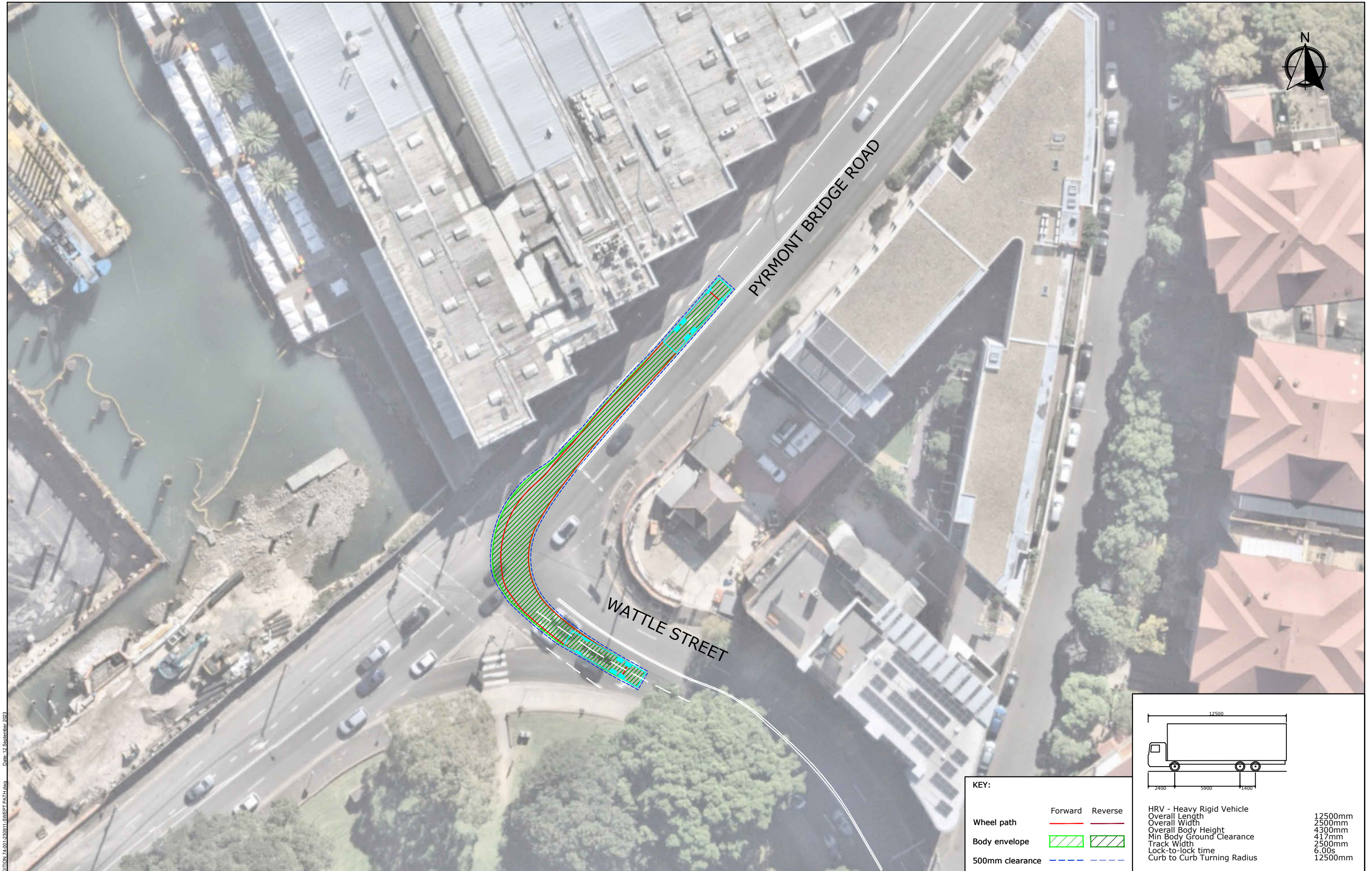
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - WILLIAM HENRY STREET TO WATTLE STREET AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No.			21480CAD-PY		
			FIGURE 6		
DATE STAMP					
11 SEPTEMBER 2023					
PROJECT No.		SCALE		REV.	
21480		1:500 @A3		A	

Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023



Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - WATTLE STREET TO PYRMONT BRIDGE ROAD AS2890.2 12.5m HEAVY RIGID VEHICLE

DWG No.	21480CAD-PY
FIGURE 7	
DATE STAMP	11 SEPTEMBER 2023
PROJECT No.	21480
SCALE	1:500 @A3
REV.	A



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - PYRMONT BRIDGE ROAD TO PYRMONT STREET (WEST SITE) AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 8	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

Appendix B Road Safety Audit



Pymont Loop Route Existing Conditions Road Safety Audit

Prepared for:

JCG JV

19 September 2023

The Transport Planning Partnership

Pymont Loop Route

Existing Conditions Road Safety Audit

Client: JCG JV

Version: V02

Date: 19 September 2023

TPP Reference: 21480

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	15/09/23				
V02	19/09/23				

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2	Introduction	2
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APPENDICES

A. SWEPT PATH DIAGRAMS

1 Road Safety Audit Summary

Audited project:	Pymont Loop Route
Client:	JCG JV
Project manager:	
Email address:	)
Audit type:	Existing Conditions
Commencement meeting:	N/A
Audit date:	14 September 2023
Completion meeting:	Not required

2 Introduction

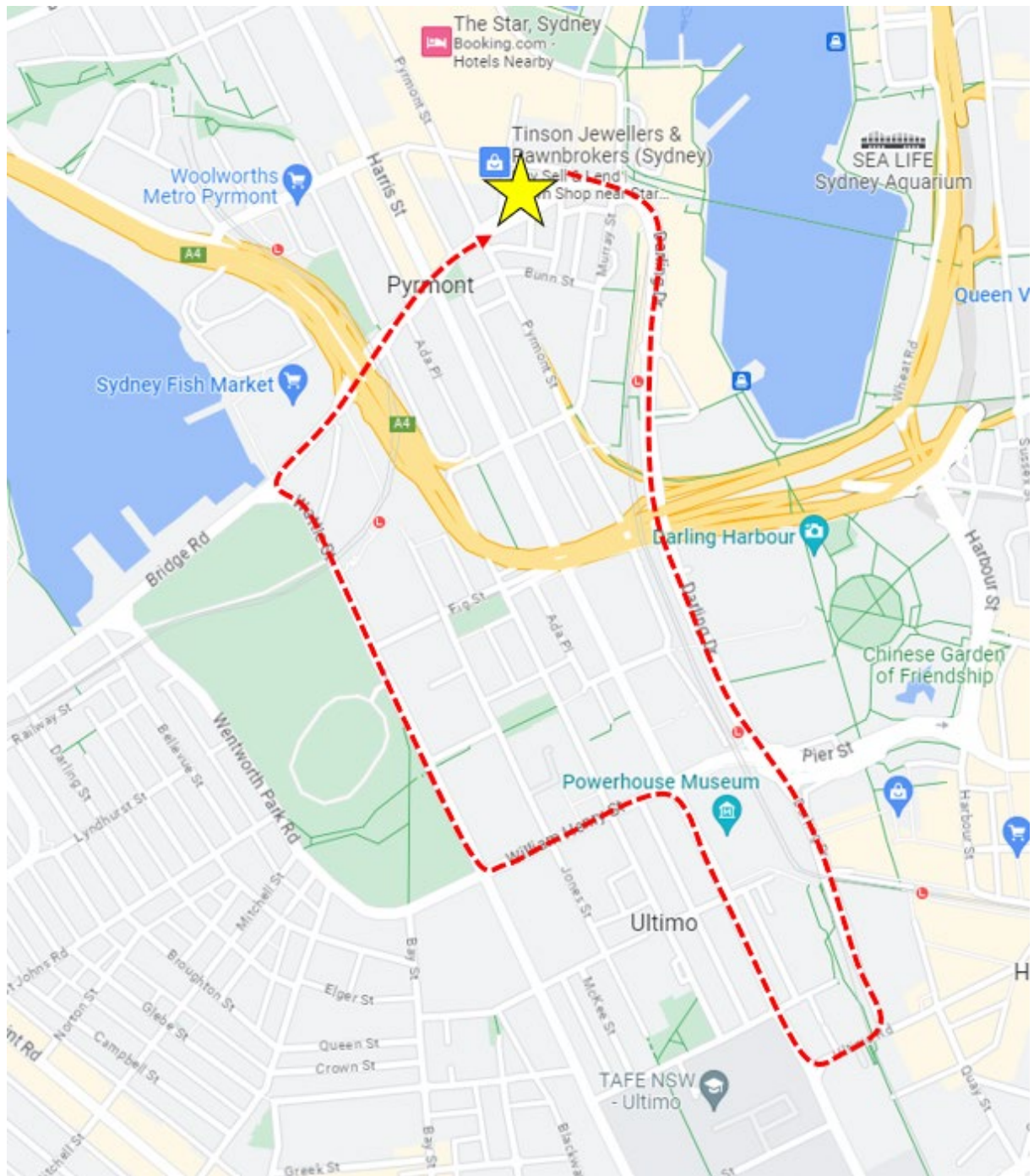
2.1 Background

This report has been prepared on behalf of JCG JV to present road safety audit findings that have been identified from the proposed loop road associated with the construction of the Pyrmont East and West metro stations as part of the Sydney Metro West Eastern Tunnelling Package.

The loop route would be used by construction vehicles when access to Pyrmont East and/or West sites are not available. These construction vehicles would circulate the proposed loop route until appropriate access to the site can be provided. The loop route would be used by vehicles up to and including a 12.5m long heavy rigid vehicle.

The proposed loop route is shown in red in Figure 1.

Figure 1: Proposed Loop Route



Source: Google Maps Australia

2.2 Audit Objective

The objective of this Audit was to examine and identify road safety concerns regarding the proposed Pymont loop route for construction vehicles to circulate until appropriate access to the work site can be provided for Pymont East and/or West construction sites.

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.

Swept path diagrams were also provided and referenced prior to undertaking the audit.

2.4 Audit Team

The RSA was carried out by the following team:

- Wayne Johnson (RSA-02-0769) – Level 3 road safety auditor (lead auditor)
- Jessica Ng (RSA-02-1207) – Level 2 road safety auditor (team member)

Wayne and Jessica are registered road safety auditors with the NSW Centre for Road Safety and are experienced in traffic engineering and design/ inspection of traffic management schemes.

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 Thursday 15 September 2023 in fine weather conditions during both day time and night time. The proposed loop route was driven over to identify possible road safety concerns. Photographs and video footage were taken during the site inspection and have been included in the audit findings.

3.3 Completion Meeting

A completion meeting is 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 the latest Austroads Guide to Road Safety: Road Safety Audit (2022).

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:

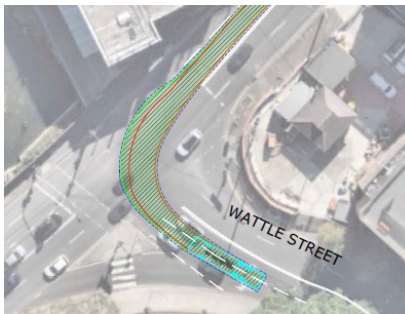
- specific details of the road safety issues identified during the audit
- a risk level rating for each of the road safety audit findings.

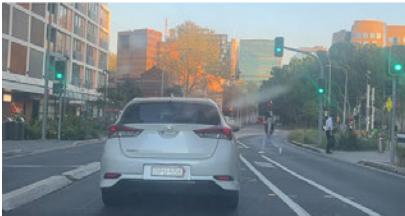
It should be acknowledged that positive attributes of the audited road section have not been discussed. Deficiencies that do not cause a safety problem are also not listed.

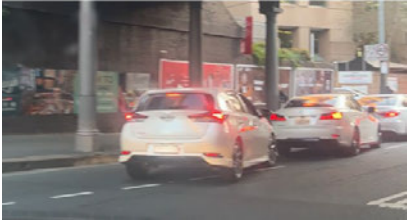
In-line with TfNSW's best practice recommendations have not been included in the road safety audit findings.

Table 4.2: Road Safety Audit Findings

Item No.	Location	Descriptions of Findings	Design/ Photo	Likelihood	Severity	Risk Rating	Designer Response
1.	William Henry Street-Wattle Street intersection	There is a steep downhill decline on William Henry Street on approach to Wattle Street. Vehicles turning right from Wattle Street on William Henry Street were observed to encroach into the right turn lane on William Henry Street, increasing the risk of side sweeps. The westbound travel lanes on William Henry Street are about 2.3m to 2.5m in width. Some vehicles in the adjacent through lane on William Henry Street were observed to encroach the right-turn lane. The swept path diagram also indicates that a 12.5m long heavy rigid vehicle will be required to encroach in to the adjacent lane when turning right onto Wattle Street. This may lead to increased risk of vehicle collisions when construction vehicles travel down William Henry Street and turn right onto Wattle Street.	<i>Downhill decline on William Henry St</i>  <i>Right-turn from Wattle St encroaching into right-turn lane on William Henry Dr</i>  <i>Swept path diagram on William Henry Dr onto Wattle St</i> 	Possible	Minor	Medium	The right turn lane from Wattle Street to William Henry Street is a single right turn lane, but there are two departure lanes in William Henry Street eastbound. Hence, the right turn vehicles from Wattle Street are unlikely to cut across the centreline when another vehicle is waiting in the right turn lane. Similarly, vehicles travelling in the William Henry Street westbound through lane are unlikely to encroach the right turn lane when another vehicle is in the right turn lane. The through lanes can fully accommodate vehicles proceeding along these lanes. When the traffic signal is green for the right turn movement from William Henry Street to Wattle Street, there are no conflicting movements. Therefore, the right turn movement encroaching two lanes would not impose safety issues. Straddling across two lanes.

Item No.	Location	Descriptions of Findings	Design/ Photo	Likelihood	Severity	Risk Rating	Designer Response
							JCG JV to ensure construction vehicles longer than 7.5m are to display a Do Not Overtake Turning Vehicle sign at the back, in accordance with Road Rule 32. 
2.	Multiple Locations – Swept Path Analysis	Swept path diagrams indicate that trucks would encroach into the adjacent lane at the following locations: - Harris Street onto William Henry Street - William Henry Street onto Wattle Street - Wattle Street onto Pyrmont Bridge Road, and - Pyrmont Bridge Road onto Pyrmont Street. It is acknowledged that trucks are permitted to straddle the adjacent lane, however, some vehicles may attempt to use the adjacent lane when a large truck is turning slowly which could result in potential side sweep collisions. This issue is further exacerbated when there are long queues, i.e. driver behaviour may be more erratic when there are long queues such that they would be more willing to undertake more risky behaviours and attempt to use the adjacent lane when large trucks are turning.	Swept path on Wattle St onto Pyrmont Bridge Rd  Queues on Wattle St onto Pyrmont Bridge Rd 	Unlikely	Minor	Low	Given the intersection is sufficient to accommodate the turning movement of a 12.5m vehicle by straddling two travel lanes, this audit finding is not considered a safety concern. However, JCG JV will ensure construction vehicles longer than 7.5m are to display a Do Not Overtake Turning Vehicle sign at the back, in accordance with Road Rule 32. 

Item No.	Location	Descriptions of Findings	Design/ Photo	Likelihood	Severity	Risk Rating	Designer Response
3.	Pymont Bridge Road, near Paternoster Row	There was a pot hole observed on Pymont Bridge Road on approach to Paternoster Row. This may result in damage to construction vehicles, particularly those carrying heavy loads, such as damage to rims and misalignment of wheels.		Rare	Insignificant	Negligible	JCG JV to fill the pot hole.
4.	Multiple Locations on Darling Drive	At the time of the audit, a number of pedestrians were observed to cross Darling Drive illegally when the steady red pedestrian light was on. This may lead to increased vehicle-pedestrian conflicts. It is however acknowledged that trucks already travel through this route, and it is a pre-existing issue.	<i>Darling Drive, near Hay Street</i>  <i>Darling Drive, near Iron Wharf Place</i> 	-	-	Note only	As recommended in the approved HVLR report for the Pier Street route, Truck Aware Decals would be installed at these mid-block signalised pedestrian crossings to raise pedestrian awareness of the trucks on this local road.

Item No.	Location	Descriptions of Findings	Design/ Photo	Likelihood	Severity	Risk Rating	Designer Response
5.	Darling Drive-Ultimo Road intersection	There were long queues on the downstream approach from Darling Drive onto Ultimo Road. This may lead to increased risk of side sweeps when vehicles turn right from Darling Drive onto Ultimo Road. This is however a pre-existing issue.		-	-	Note only	Noted. JCG JV will instruct truck drivers in the Toolbox Talks not to queue across the intersection if the kerbside lane is occupied and impedes the right turn movement from Darling Drive onto Ultimo Road, noting that the truck should not encroach across the centreline to make the right turn movement.

5 Concluding Statement

The findings and opinions in the report are based on the examination of the specific road and environs, 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.

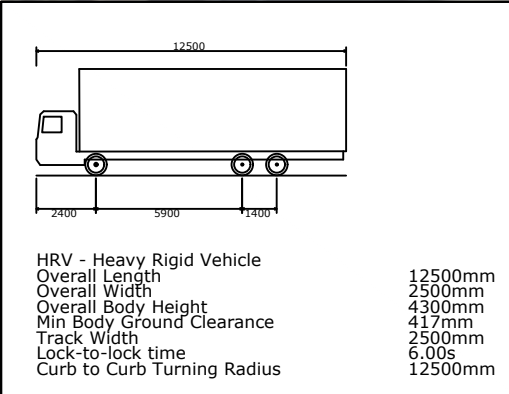
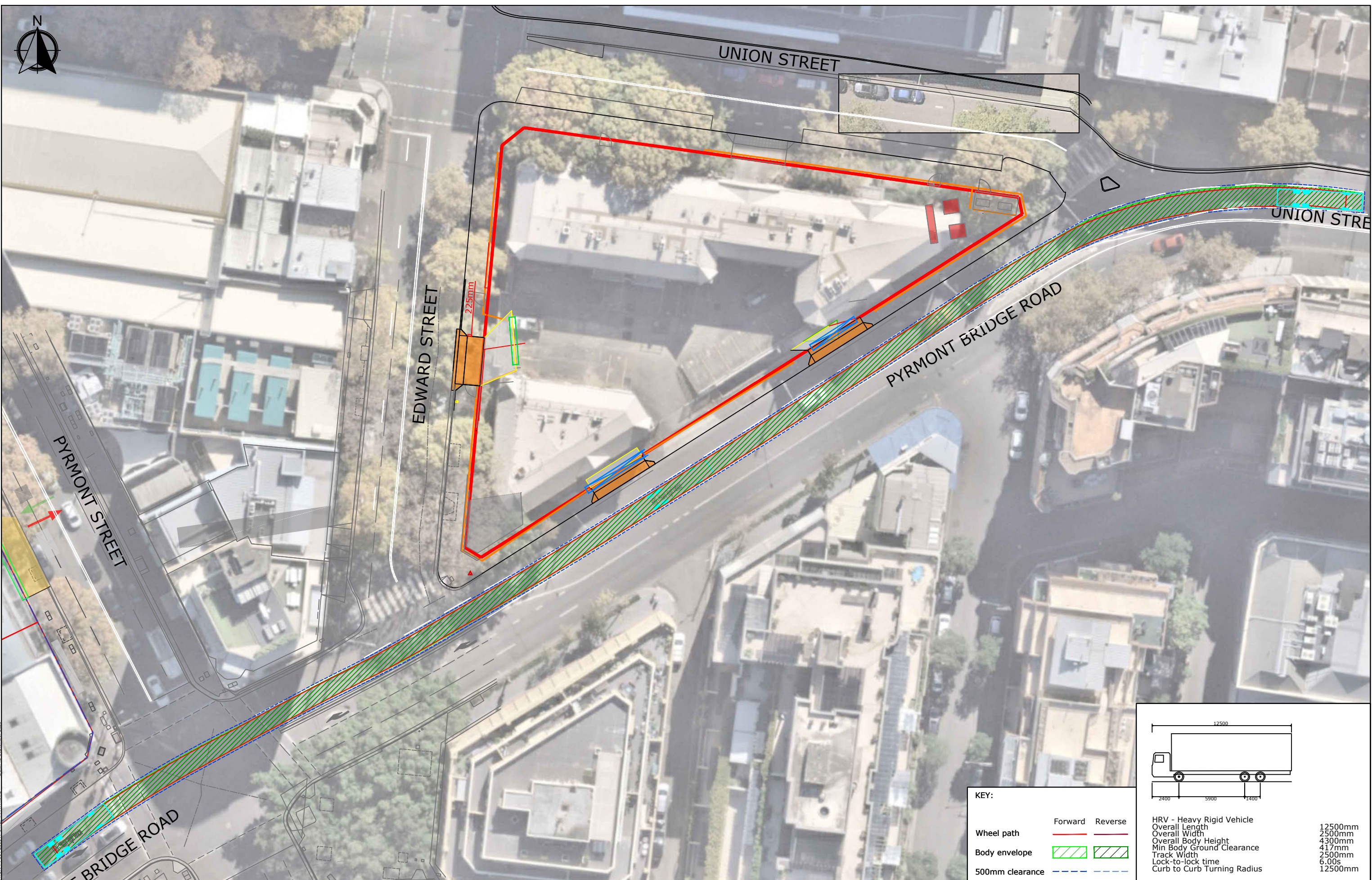
While every effort has been made to ensure the accuracy of this report, it is made available strictly on the basis that anyone relying on it does so at their own risk without any liability to the Auditors.

Level 3 Lead Road Safety Auditor
The Transport Planning Partnership

Level 2 Road Safety Auditor
The Transport Planning Partnership

Appendix A

Swept Path Diagrams



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23

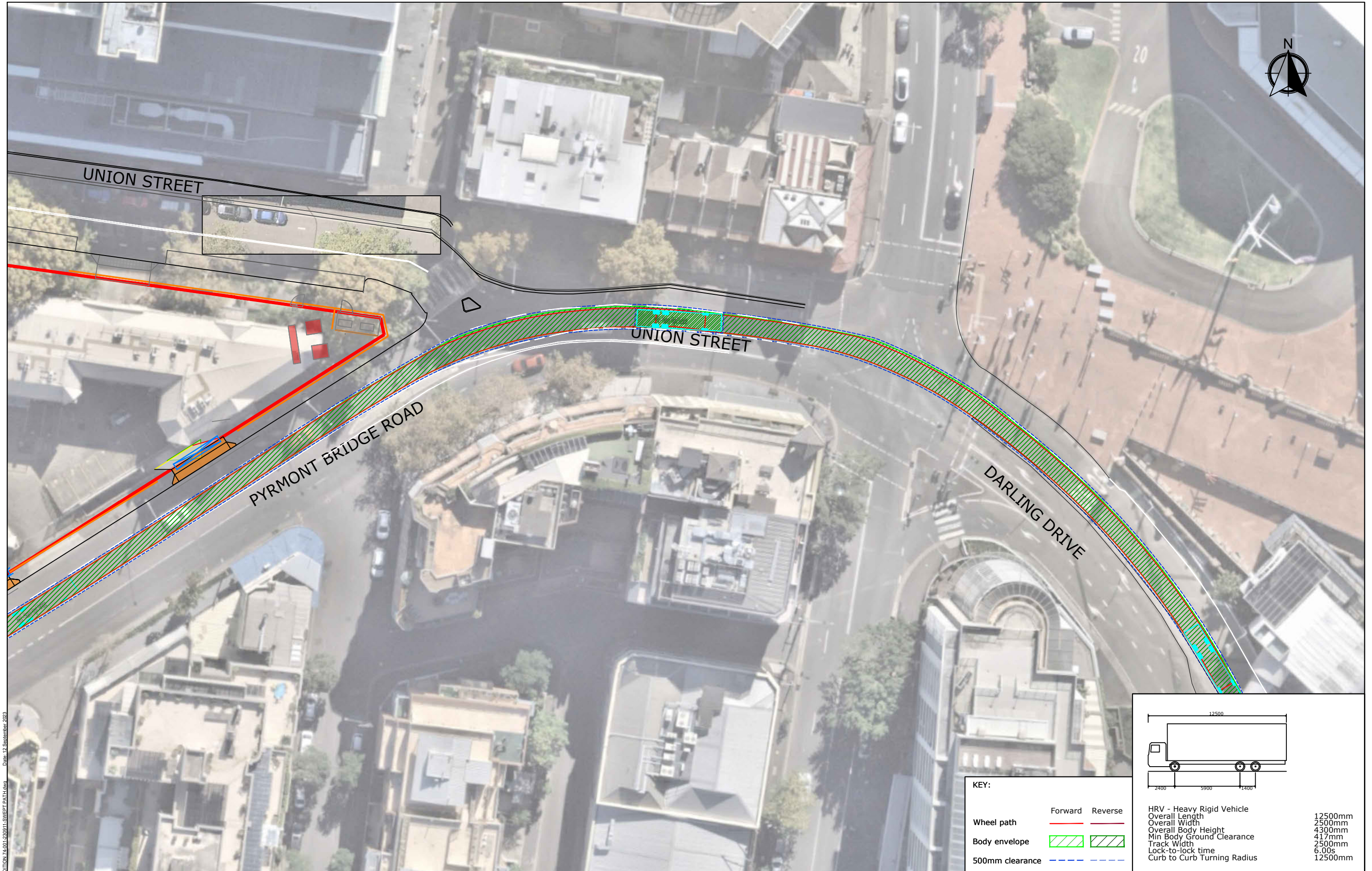


PROJECT
SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE
PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING

TITLE
SWEPT PATH ANALYSIS - LOOP ROUTE - PYRMONT BRIDGE ROAD TO UNION STREET
AS2890.2 12.5m HEAVY RIGID VEHICLE

DWG No. 21480CAD-PY	
FIGURE 1	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEPT PATH.dwg Date: 12 September 2023



Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - UNION STREET TO DARLING DRIVE AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 2	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

HRV - Heavy Rigid Vehicle
Overall Length 12500mm
Overall Width 2500mm
Overall Body Height 4300mm
Min Body Ground Clearance 417mm
Track Width 2500mm
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12500mm

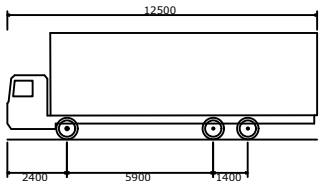
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - DARLING DRIVE ROUNDABOUT AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 3	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

Filename: 21480CAD-PYRMONT-CONDITION 74-001-240911-SWEPT PATH.dwg Date: 12 September 2023



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		

HRV - Heavy Rigid Vehicle	
Overall Length	12500mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	417mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - DARLING DRIVE TO HARRIS STREET AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No.	21480CAD-PY FIGURE 4	
DATE STAMP	11 SEPTEMBER 2023	
PROJECT No.	SCALE	REV.
21480	1:500 @A3	A

Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEPT PATH.dwg Date: 12 September 2023



Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

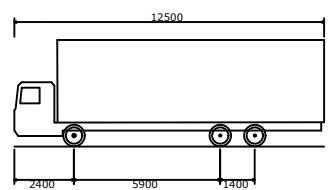
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - HARRIS STREET TO WILLIAM HENRY STREET AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 5	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	

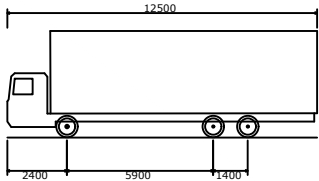
KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		



HRV - Heavy Rigid Vehicle
Overall Length 12500mm
Overall Width 2500mm
Overall Body Height 4300mm
Min Body Ground Clearance 417mm
Track Width 2500mm
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12500mm



KEY:		
Wheel path	Forward	Reverse
Body envelope		
500mm clearance		



HRV - Heavy Rigid Vehicle	12500mm
Overall Length	2500mm
Overall Width	4300mm
Overall Body Height	417mm
Min Body Ground Clearance	2500mm
Track Width	6.00s
Lock-to-lock time	12500mm
Curb to Curb Turning Radius	

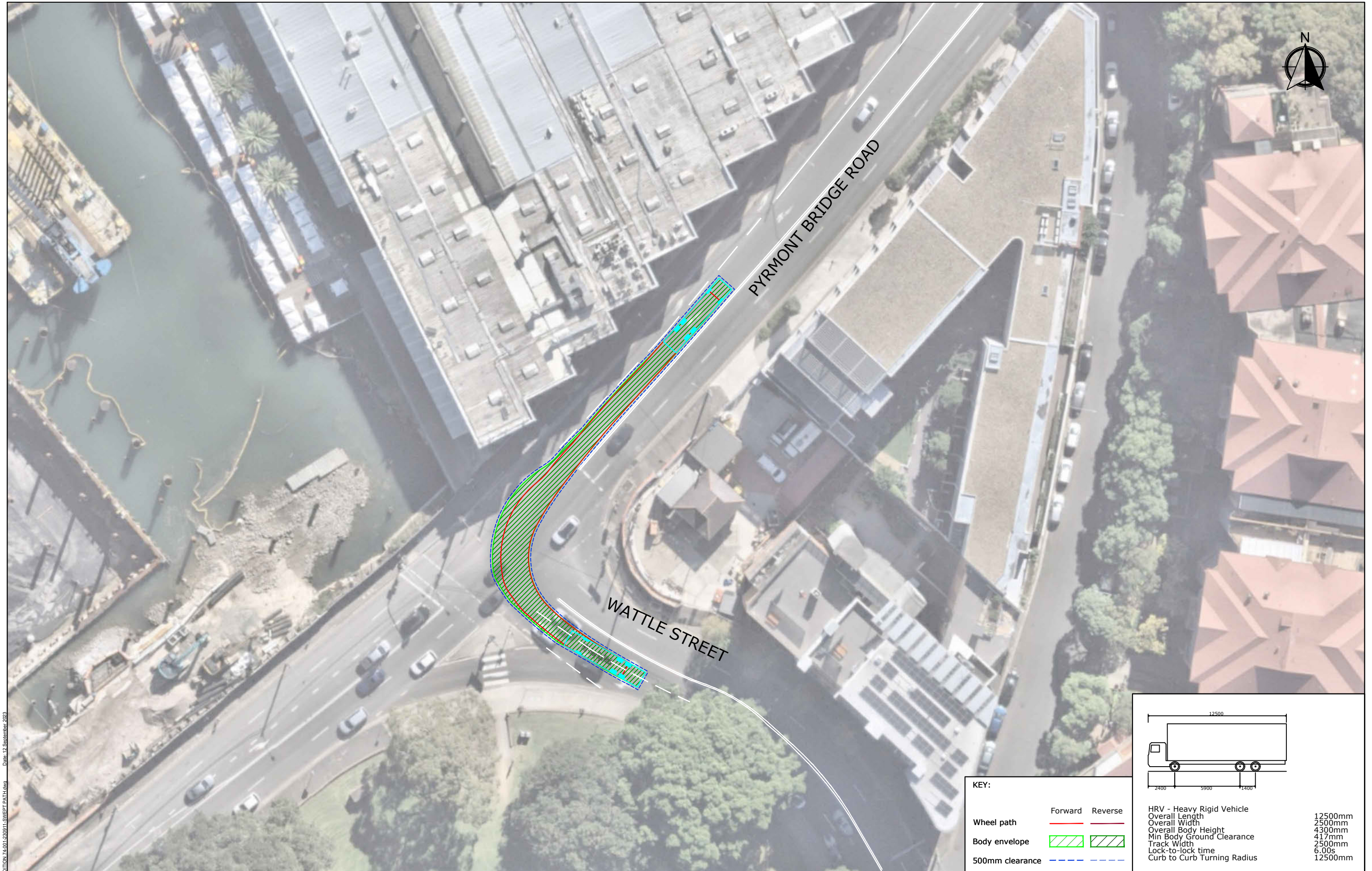
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - WILLIAM HENRY STREET TO WATTLE STREET AS2890.2 12.5m HEAVY RIGID VEHICLE

DWG No.	21480CAD-PY	REV.	A
FIGURE 6			
DATE STAMP	11 SEPTEMBER 2023		
PROJECT No.	21480	SCALE	1:500 @A3

Filename: 21480CAD-PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING.dwg Date: 12 September 2023



Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - WATTLE STREET TO PYRMONT BRIDGE ROAD AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No. 21480CAD-PY FIGURE 7	
DATE STAMP 11 SEPTEMBER 2023	
PROJECT No. 21480	SCALE 1:500 @A3
REV. A	



Filename: 21480CAD-PYRMONT-CONDITION 74-001-200911-SWEEP PATH.dwg Date: 12 September 2023

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	DL	DL	11/09/23



PROJECT	SYDNEY METRO WEST - EASTERN TUNNELLING PACKAGE PYRMONT EAST - SITE ESTABLISHMENT, EXCAVATION AND TUNNELLING	
TITLE	SWEPT PATH ANALYSIS - LOOP ROUTE - PYRMONT BRIDGE ROAD TO PYRMONT STREET (WEST SITE) AS2890.2 12.5m HEAVY RIGID VEHICLE	

DWG No.	21480CAD-PY FIGURE 8	
DATE STAMP	11 SEPTEMBER 2023	
PROJECT No.	SCALE	REV.
21480	1:500 @A3	A

The Transport Planning Partnership
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P.O. Box 237
St Leonards NSW 1590



Appendix C Traffic Control Group (TCG) Agenda and Minutes

Item		Approx. Timing	Overview by
1.	Welcome and Introductions - Acknowledgement of Country - New Introductions - Acceptance of previous meeting minutes (TCG Meeting 57 – 7 September 2023). <i>Note Meeting 58 scheduled for 21 September 2023 was cancelled.</i>	3:30pm	
2.	Actions Arising: - Nil actions arising	-	
3.	Western Tunnelling Package (WTP) Works Overview - Traffic document status - Clyde/Rosehill: Unwin St / Kay St / Wentworth St temporary footpath realignment - Sydney Olympic Park site establishment and TBM preparation	3:32pm	
4.	Westmead Utility Relocation Works Overview - Nil report	-	
5.	Central Tunnelling Package (CTP) Works Overview - Nil report	-	
6.	Eastern Tunnelling Package (ETP) Works Overview - Traffic Plan Status - Pyrmont East and West Construction Sites – Loop Route HVLR	3:45pm	
7.	Other Matters: -	3:55pm	All
8.	Next Meeting - The next TCG meeting is scheduled for 19 October 2023.		

Minutes

Sydney Metro West – Traffic Control Group – Meeting 59

[illegible]

Item		Overview / Action by	Actions
1.	Welcome and Introductions		- Acknowledgment of Country. - JA welcomed all to the meeting and asked for new attendees to introduce themselves. - Nil - The Minutes of TCG Meeting 57 (7 September 2023) were accepted as an accurate record of the meeting and were adopted by the TCG Group. <i>Note Meeting 58 scheduled for 21 September 2023 was cancelled.</i>
2.	Actions Arising		Nil actions arising

Item	Overview / Action by	Actions
3. Western Tunnelling Package (WTP) Works Overview - Traffic document status - Clyde/Rosehill: Unwin St / Kay St / Wentworth St temporary footpath realignment - Sydney Olympic Park site establishment and TBM preparation		DK spoke to the tabled slides noting as follows: • Traffic document status - All traffic documents have been approved with the exception of the following: - SOP CTMP: Expected for submission week commencing 9/10/2023 - SOP HVLR: Expected for submission week commencing 16/10/2023 - SOP CPAS: Expected for submission week commencing 23/10/2023 • Clyde/Rosehill: Unwin St / Kay St / Wentworth St temporary footpath realignment - 9th October: New path to be installed on site behind closed hoarding with work commencing - 30th October: shift pedestrians to new path - 31st October: commence demolition of existing footpath - Footpath works and associated traffic and pedestrian management proposed to be carried out under a briefing paper with TGS to be provided with future construction works to be as per CTMP process - Construction stage 1 TGS removal of existing footpath indicate construction vehicles to enter via gate 7. Kay Street proposed to operate as a stop/go arrangement during the night with the lane reopened during the day • Sydney Olympic Park site establishment and TBM preparation - CTMP/CPAS/HVLR currently being developed - Site scheduled to be occupied at the earliest 18 November. TBM retrieval estimate Aug/Sep 2024 and handover in October 2024 - Site access shared with CTP - Haulage route as per CTP and predicted to consist of low vehicle movements - TBM haul routes outlines in slide 15 with site signs and gates as per existing (slide 16) Questions from the Attendees • DK queried whether a briefing note would be sufficient for the footpath works. VS queried the details to be provided in the briefing note. DK advised TGS, Scope, methodology, and timelines. VS requested to ensure pedestrian safety and lighting • BG confirmed that the briefing note will be submitted to CJP and Council • DK queried if there were any SOPA representatives in the meeting to provide any comment. VMC advise SOPA operation will advise when documents are received Actions: • Nil
4. Westmead Utility Relocation Works Overview - Nil report		• Nil report

Item		Overview / Action by	Actions
5.	Central Tunnelling Package (CTP) Works Overview - Nil report		Nil report
6.	Eastern Tunnelling Package (ETP) Works Overview - Traffic Plan Status - Pyrmont East and West Construction Sites – Loop Route HVLR		KV spoke to the tabled slides noting as follows: - Traffic Plan Status - Pyrmont West and East CTMPs are currently being reviewed to respond to comments - Pyrmont East and West Construction Sites – Loop Route HVLR - Pyrmont loop route proposed to be utilised in the event of incidents on site and when a vehicle is already on route to the site - Whilst there is a holding yard in The Bays, utilising the loop if a vehicle is already on route to Pyrmont, the loop route avoids the need for a vehicle to be sent back to the bays or stop on route - Alternate options (eg Via Wentworth Park Road) were discussed with the council, but this was not favoured - Proposed route to be used for 12.5m long vehicles - Anticipate a maximum of up to 10% of the site may use the loop (ie up to 2veh/h) and used as a contingency Questions from the Attendees - Nil Actions: - Nil
7.	Other Matters:	All	Nil other matters raised.
8.	Next Meeting		The next TCG meeting is scheduled for 19 October 2023 at 3:30 pm.

Appendix D Stakeholder Comments Review and CJP Approval

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-PYR-SN150-TF-PLN-069016	Sydney Metro West - ETP - Heavy Vehicle Local Road Report for Use of Local Roads - Pyrmont East and West Construction Sites – Loop Route	01.01	S3	01	20/10/2023	SCO		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-	Heavy Vehicle fleet should be managed appropriately so Heavy Vehicles leave the marshalling area at The Bays and arrive when access to the Pyrmont site is available.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-		Observation	Y
				01.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-	The loop road intention is that once the HV leaves The Bays marshalling yard on a call up. and he is unable to enter the site for any unplanned reasons, instead of parking on the street or returning to the marshalling yard, he simply uses the loop road to gain access to the site. If the site delays are substantial, the HV simply returns to the marshalling yard.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-		Observation	Y
				02	20/10/2023	SCO		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-	This route should only be used in unexpected or emergency situations.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-		Observation	Y
				02.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-	It is not planned or intended that every HV will be using the loop road. It will only be used as a contingency route during the unplanned incidents on site where the HV can not enter.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	General	-		Observation	Y
				03	23/10/2023	RMS	H	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	NA	NA	Have low clearances been checked along the route? There are many overhead bridges along the proposed route and at least three of them have low clearances. Please check for more and add an assessment for all overhead bridges with low clearances whether they would cause any issues for the HVs.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	NA	NA		Observation	Y
				03.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	NA	NA	The route will only be used by 12.5m HV with standard allowable loads. The route is not intended to be used by OSOM vehicles. The route has been inspected and there are no issues with the standard height limits.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	NA	NA		Observation	Y
				04	23/10/2023	RMS		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix-A	NA	There are various locations along the route where the swept paths encroach into adjacent lanes due to the presence of narrow lanes. Please note that the aim is to minimise the number of trucks looping around these busy and narrow roads. The vehicles call on arrangements should be managed from the marshalling area in The Bays in such a way that they would only have to loop in case of an emergency.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix-A	NA		Observation	Y
				04.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix-A	NA	It is not planned or intended that every HV will be using the loop road. It will only be used as a contingency route during the unplanned incidents on site where the HV can not enter.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix-A	NA		Observation	Y
				06	24/10/2023	SMD		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B	CTMF	I note the RSA acknowledges the steep grade in William Henry Street on approach to Wattle Street. Given that the circulating vehicles will be laden what driver precautions / instructions will be issued to reduce the risk of pedestrian and/or vehicle collisions near this intersection ? These should be acknowledged in the CTMP.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B	CTMF		Observation	Y

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				06.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B	CTMF	The HV that intended to be using the loop roads will be unloaded as they are entering the site to be loaded. Loaded vehicle will be exiting the site and depart to their tipping destination. There is no reason for the loaded HV to use the loop roads. All drivers will be project inducted and made aware of the haulage routes, specially of pedestrian and cyclist activities	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B	CTMF		Observation	Y
				07	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	1.3 Purpose and scope of this HVLR	NA	Suggest removing or rewording the third paragraph to focus on what the benefits of the loop are to local residents and other road users, especially pedestrians and cyclists. There are strong requirements around what behaviours drivers must exhibit and the risk of them not exhibiting the desired behaviours should be dealt through the required channels and not additional loop routes.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	1.3 Purpose and scope of this HVLR	NA		Observation	Y
				07.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	1.3 Purpose and scope of this HVLR	NA	Paragraph 1.3 updated to addressed the comment	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	1.3 Purpose and scope of this HVLR	NA		Observation	Y
				07.01.01	9/01/2024	TFN					Document updated, comment closed.	Observation	Y
												Observation	Y
				08	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.7 School zones	NA	As highlighted, the proposed loop route will need to travel through a school zone on Wattle St. The main benefit of the loop route is the amount of time saved, and this should not come at the increased road safety risk to other road users. Please give strong consideration to banning movements along this proposed route during school zone hours (8 to 9:30 and 2 to 3:30).	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.7 School zones	NA		Observation	Y
				08.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.7 School zones	NA	It is not planned or intended that every HV will be using the loop road. It will only be used as a contingency route during the unplanned incidents on site where the HV can not enter. All drivers will be project inducted and made aware of the haulage routes, specially of pedestrian and cyclist activities	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.7 School zones	NA		Observation	Y
				08.01.01	9/01/2024	TFN					Wording in section 2.9.3 updated to make it clearer that movements will be minimised in general resulting in lower chance of contingency route being needed. Please continue to monitor movements during these periods and consider further action if we are seeing unexpected movements occuring during this period. Thanks.	Observation	Y
												Observation	Y
				09	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA	There is a bicycle box located at the intersection of Ultimo Road and Harris Street - a treatment that is not widely used across our network. This may lead to road safety issues associated with blind spots, differential speeds of cyclists and vehicles on take off and the wide swept path for the heavy vehicle when making the turn. Any collision at this location between a cyclists and heavy vehicle is likely to result in serious injury outcomes. Please consider the risks involved and demonstrate how they will be managed So Far As Is Reasonably Practicable including things such as additional driver training on how to drive safely around bicycle boxes, and site specific awareness.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA		Observation	Y
				09.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA	All drivers will be project inducted and made aware of the haulage routes, specially of pedestrian and cyclist activitiesWhere the proposed haulage route crosses a pedestrian crossing facility along the proposed haulage route, truck awareness decals will be placed on the footpath on either side of the pedestrian crossings, subject to City of Sydney's approval.	Observation	Y

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-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA		Observation	Y
				09.01.01	9/01/2024	TFN					Response noted, however appears generic and doesn't really focus on the specific and unique risk that bicycle boxes present. Please update document to include reference to specific driver training around bicycle boxes and general pedestrian and cyclist awareness along the route. Also recommend referring to the HV safety features that are mandated on the project such as blind spot mirrors that will assist drivers in maintaining visual awareness of bicycle riders in front of and to the side of the vehicle. Happy to close comment with further confirmation that these points will be incorporated into the document. Available to discuss further.	Observation	Y
												Observation	Y
				09.01.01.01	11/01/2024	TFN					Meeting with Keith Varga and Sean Clarke on Jan 10th to discuss concerns further. Keith confirmed that all drivers will have specific awareness training on this location, and that all vehicles will be fitted with Class V and VI mirrors that allow them to observe cyclists to the side of the vehicle and in front, and also that any accessories that restrict forward vision have been removed. Email confirmation provided later on Jan 10 from Steve Harris further confirming this: ----- Hi Keith, Mirrors in PCCS are as below: A combination of direct and/or indirect devices to eliminate or minimise front, side and rear blind spots, including: A. Class V and Class VI mirrors as per ADR 14/02 where blind spots cannot be permanently eliminated; and B. The prohibition of accessories that restrict the forward field of view, including opaque or chrome bug deflectors. ----- Based on this, satisfied that risk is being minimised SFAIRP and comment can be closed. Thankyou.	Observation	Y
												Observation	Y
				10	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.3 Construction traffic volumes - Figure 15	NA	Figure 15 does not appear to align with the text as it shows heavy vehicle numbers remaining at their highest level throughout the afternoon school period (2 to 2:30). Please update the figure, or as suggested in my previous comment please give consideration to not using the loop route for heavy vehicles during school zone hours.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.3 Construction traffic volumes - Figure 15	NA		Observation	Y
				10.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.3 Construction traffic volumes - Figure 15	NA	It is not planned or intended that every HV will be using the loop road. It will only be used as a contingency route during the unplanned incidents on site where the HV can not enter. All drivers will be project inducted and made aware of the haulage routes, specially of pedestrian and cyclist activities.Paragraph 2.9.3 updated to addressed the comment	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.3 Construction traffic volumes - Figure 15	NA		Observation	Y
				10.01.01	9/01/2024	TFN					Document updated to make it clearer that movements will be minimised during these periods, comment closed.	Observation	Y
												Observation	Y
				11	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix A - Swept path Ultimo Road to Harris St	NA	A cyclist travelling along Ultimo Road and arriving at the intersection with Harris Street mid green phase, may attempt to make the right turn onto Harris St at the same time that a heavy vehicle is turning right. The swept path indicates that the heavy vehicle will take up both lanes, which may surprise a cyclist and lead to a side swipe crash as the cyclist runs out of room during the turn. These incidents have led to fatal outcomes across the network. Please consider this risk and demonstrate how it can be managed So Far As Is Reasonably Practicable, including awareness to cyclists of the risks associated with trucks turning.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix A - Swept path Ultimo Road to Harris St	NA		Observation	Y
				11.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix A - Swept path Ultimo Road to Harris St	NA	JCGJV will develop and implement a similar truck awareness signposting for Cyclist as we did for pedestrians in the CBD.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix A - Swept path Ultimo Road to Harris St	NA		Observation	Y

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				11.01.01	9/01/2024	TFN					Response noted. The treatment has potential - however will we be able to view the proposed treatment prior to endorsing this route being used? And in what document will it be included (CTMP, HVLR?)? Any signage will need to be outside the cycle lane so as to not present an obstruction, and also succinct enough to allow a cyclist to read the message while moving past at speed and warn them of the vital need to give way to a turning HV. Available to discuss further. Thanks.	Observation	Y
												Observation	Y
				11.01.01.01	11/01/2024	TFN					As referenced in comment 9 there was a meeting with Keith Varga and Sean Clarke on Jan 10th to discuss concerns further. Keith confirmed that all drivers will have specific awareness training on this location, and that all vehicles will be fitted with blind spot mirrors to maximise visibility of other road users. Signage type and location discussed and agreed upon, with Keith providing further email confirmation that day that approval from other stakeholders will be sought to add a warning sign to the TCS post stating "Cyclist look out for turning trucks". Based on this, satisfied that risk is being minimised SFAIRP and comment can be closed. Thank you. Email wording: Hi Sean and Luke, Thanks for your time today, much appreciate it. I have followed up the two outstanding issues as we discussed today. Please see attached emails in response. The stated mirror category is compulsory to have on this project on all HV. Furthermore, I will arrange to have a warning sign placed on the TCS post for cyclist stating, "Cyclist look out for turning trucks". Or if you prefer other wordings, let me know. Hope this will assist you with closing out the comments. If any further information is required, please contact me. Regards Keith	Observation	Y
												Observation	Y
				12	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA	There is a pub located at the intersection of Harris Street and William Henry St, whereby intoxicated pedestrians are likely to present a higher road safety risk. Please ensure this site specific awareness is included for drivers so they take additional care at this intersection.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA		Observation	Y
				12.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA	Where the proposed haulage route crosses a pedestrian crossing facility along the proposed haulage route, truck awareness decals will be placed on the footpath on either side of the pedestrian crossings, subject to City of Sydney's approval.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	2.9.2 Pedestrian and cyclist safety management	NA		Observation	Y
				12.01.01	9/01/2024	TFN					Decals expected to provide less benefit to intoxicated pedestrians, however satisfied with previous responses regarding additional driver training and site specific awareness. Comment closed.	Observation	Y
												Observation	Y
				13	24/10/2023	TFN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B - Road safety audit	NA	Risk 1 highlights the steep decline along William Henry Street on the approach to Wattle Street, however the response focuses on light vehicles cutting the corner and showing poor lane discipline. Can you please provide details within the response on how the risk of vehicles approaching the intersection, or making the turn too quickly and increasing the risk of a number of crash outcomes will be managed So Far As Is Reasonably Practicable	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B - Road safety audit	NA		Observation	Y
				13.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B - Road safety audit	NA	Vehicles travelling in the William Henry Street westbound through lane are unlikely to encroach the right turn lane when another vehicle is in the right turn lane. The through lanes can fully accommodate vehicles proceeding along these lanes. When the traffic signal is green for the right turn movement from William Henry Street to Wattle Street, there are no conflicting movements. Therefore, the right turn movement encroaching two lanes would not impose safety issues. Straddling across two lanes.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix B - Road safety audit	NA		Observation	Y

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				13.01.01	9/01/2024	TFN					Response noted and also response to another comment where it outlines that vehicles will be unloaded and therefore able to come to a stop quicker. Comment closed.	Observation	Y
												Observation	Y
				14	26/10/2023	SMD		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix C	N/A	Suggest to include a copy of the TCG Meeting 59 presentation	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix C	N/A		Observation	Y
				14.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix C	N/A	TCG Meeting #59 minutes included in Appendix C	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Appendix C	N/A		Observation	Y
				15	26/10/2023	SMD		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Figure 8	N/A	Suggest provide a legend on figure for clarity	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Figure 8	N/A		Observation	Y
				15.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Figure 8	N/A	Legend added	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Figure 8	N/A		Observation	Y
				18	6/11/2023	CSC		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	Loop route reporting - Metro should record the number of uses of William Henry Street and the report the figure to CoS quarterly. The City believes usage of the route should be minimised as much as possible.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A		Observation	Y
				18.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	As discussed at our meeting, the loop road will only be used as a contingency route construction access routes that will be used by heavy vehicles up to 12.5m (HRV) for looping between and around Pymont East and Pymont West sites when they cannot access the site for any unplanned reasons. These HV would have left the marshalling yard from The Bays and have arrived within the Pymont precinct. If for any reasons, the site can not be accessed for longer than one loop around, the HV will be instructed to return to the marshalling yard at The Bays. All construction vehicles movements on the project are real time monitored and are using the call up system to the sites.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A		Observation	Y
				19	6/11/2023	CSC		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	Communication - Metro should ensure their logistics coordinators are kept in frequent communication with all vehicles on approach to the site.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A		Observation	Y
				19.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	All construction vehicles movements on the project are real time monitored and are using the call up system to the sites.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A		Observation	Y
				20	6/11/2023	CSC		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	Reducing repeated loops - the loop route should only be used if there is confidence that the site will be accessible on second attempt. Where this is not the case, drivers should use the approved turnaround point on Darling Drive to return to the marshalling yard. Drivers using the loop route should be communicated with prior to reaching the Western Distributor on-ramp and diverted towards the marshalling yard if the site is inaccessible on second attempt.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A		Observation	Y

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				20.01	27/12/2023	JCG		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	As discussed at our meeting, the loop road will only be used as a contingency route construction access routes that will be used by heavy vehicles up to 12.5m (HRV) for looping between and around Pymont East and Pymont West sites when they cannot access the site for any unplanned reasons. These HV would have left the marshalling yard from The Bays and have arrived within the Pymont precinct. If for any reasons, the site can not be accessed for longer than one loop around, the HV will be instructed to return to the marshalling yard at The Bays.All construction vehicles movements on the project are real time monitored and are using the call up system to the sites.	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A		Observation	Y
				21	9/01/2024	SMD					No Comments		Y
													Y
				22	17/01/2024	SCO		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	N/A	CJP Approval Email	Observation	Y
								SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	N/A	N/A		Observation	Y



General Correspondence

Reference No: SMWSTETP-SMD-GEN-000258
Project Title: Sydney Metro West Project Delivery
Contract No: ETP - 00013/13102 - Eastern Tunnel Package
Sub Contract: -
Orig Ref No:
DLM:

Date: 17 January 2024, 05:41 PM

Response required by:

From:

To:

Cc:

Subject: **RE: Sydney Metro West - ETP - Pyrmont East and West Construction Sites (Loop Route) - Heavy Vehicle Local Roads Report for Use of Local Roads - Rev 01 - Approval from Customer Journey Planning (CJP)**

This mail item is received via EMAIL from Nicole Johnson on 17-01-24 05:35:00 PM +10:00 and processed by Nicole Johnson of Sydney Metro on 2024-01-17 5:40:06 PM +11:00.

From: Nicole Johnson<Nicole.Johnson@transport.nsw.gov.au>

Sent: Wednesday, 17 January 2024 05:35 PM +11:00

To: Hedio Masanga<hildelita.masanga@jcgjv.com.au>

Cc: Frank Van den brink<Frank.Vandenbrink2@transport.nsw.gov.au>; Ash

Jarvis<Ash.Jarvis2@transport.nsw.gov.au>; Sean Clarke (GHD)<Sean.Clarke@transport.nsw.gov.au>; Revel

Bihnam<Revel.Bihnam@transport.nsw.gov.au>; Shome Sikdar<Shome.Sikdar@transport.nsw.gov.au>;

<SMWST1@tbupload.com>

Subject: RE: Sydney Metro West - ETP - Pyrmont East and West Construction Sites (Loop Route) - Heavy Vehicle Local Roads Report for Use of Local Roads - Rev 01 - Approval from Customer Journey Planning (CJP)

References:

- (1) Contractor's Transmittal no SMWSTETP-JCG-TX-002028 – 05 January 2024.

Please see below the approval from Customer Journey Planning.

Will issue the formal acceptance via transmittal.

Kind Regards,

Document Control

Eastern Tunnel Package (ETP)
Sydney Metro West



I am sending this email at a time which is convenient to me. Please do not feel obliged to read or reply outside of your working hours.



I acknowledge the traditional owners of the land on which I work and pay my respects to their Elders, past and present.

OFFICIAL

Pymont East and West Construction Sites (Loop Route) - Heavy Vehicle Local
Roads Report for Use of Local Roads - Rev 01 - Issued for Review & Comment Close Out (additional distribution)

Hi

Transport for NSW, Customer Journey Planning, Project & Service Changes hereby approve the following Construction Traffic and Transport Management Plan:

Project:	Sydney Metro West – Eastern Tunnelling Package
----------	--

Title:	Pymont East and West Construction Sites (Loop Route) - Heavy Vehicle Local Roads Report for Use of Local Roads
Document Number:	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016
Revision:	01

This approval is subject to the following requirements being met:

- CJP notes that the proposed loop route will be used as contingency only in case of unexpected or emergency situations. The Contractor must manage the heavy vehicle fleet appropriately so heavy vehicles leave the marshalling area at The Bays and arrive when access to the Pymont site is available;
- Should the impacts be worse than anticipated, this approval will be withdrawn; Apply to and obtain approval from TMC for ROLs for any required lane closures and/or Speed Zone Authorisations as part of the ROL;
- All temporary lane closures to be implemented in accordance with Transport for NSW Traffic Control at Worksites Technical Manual Issue No.6;
- Conduct a Road Safety Audit post implementation of the road closure and address any issues identified in the Road Safety Audit and Risk Assessment;
- Regularly monitor the implemented traffic arrangements, traffic queues and road conditions along the adjacent road network, to identify any operational/safety issues and rectify in consultation with stakeholders, including CJP and CJM as required;
- Approval of this CTTMP does not constitute approval of the Traffic Guidance Schemes therein;
- Ensure close liaison with CJP post implementation of the road closures to allow for a coordinated management of traffic impacts;
- Ensure the requirements of the Communication Strategy in the TMP, in consultation with CJP, are fulfilled prior to the implementation of the TMP.
- Addressing any issues raised by Council, Buses, Taxi Council, residents/businesses or Emergency Services in the CTMP approval process;
- Addressing the requirements arising as an outcome of the Local Traffic Committee meeting.

Regards,

I acknowledge the traditional owners and custodians of the land on which I work, and pay my respects to Elders past, present and emerging.

From:
Sent: Friday, 5 January 2024 11:07 AM
To:
Subject: Sydney Metro West - ETP - Pyrmont East and West Construction Sites (Loop Route) - Heavy Vehicle Local Roads Report for Use of Local Roads - Rev 01 - Issued for Review

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West

Document Transmittal

Transmittal No:	SMWSTETP-JCG-TX-002028
Contract No:	ETP - 00013/13102 - Eastern Tunnel Package
Sub Contract:	ETP
Date:	05 January 2024, 11:06 AM

Issued	Name
By	

Issued	Name
To	Ari Stypel (Sydney Metro) ; Philip Brogan (Sydney Metro) ; Sean Clarke (Sydney Metro) ; Shome Sikdar (Sydney Metro)
Cc	(

Reason for Issue	Issued for Review
Subject	Sydney Metro West - ETP - Pyrmont East and West Construction Sites (Loop Route) - Heavy Vehicle Local Roads Report for Use of Local Roads - Rev 01 - Issued for Review
Dear Sydney Metro, Please see attached the HVLR Pyrmont East and West Construction Sites – Loop Route (SMWSTETP-JCG-PYR-SN150-TF-PLN-069016) - Rev 01. The document is submitted for approval. Kind regards, Sydney Metro West – Eastern Tunnelling Package John Holland CPB Ghella Joint Venture Sent on behalf of	

[Click here to download all Transmittal files.](#)

Item	Document No	Title	Rev	Sts	Type	Design Package No.	Alt Doc No
1	SMWSTETP-JCG-PYR-SN150-TF-PLN-069016	Sydney Metro West - ETP - Heavy Vehicle Local Road Report for Use of Local Roads - Pyrmont East and West Construction Sites – Loop Route	01.01	S3	PLN		SMWSTETP-JCG-PYR-SN150-TF-PLN-069016

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TeamBinder Transmittal Reference: {6249F0D3-0F89-473A-9150-CF9F2E5E0B6C}

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Discipline:	Design Package Group:	Location:
Sub Discipline: -	Design Package No.:	Sub-Location: -

Our ref: SSI-19238057-PA-110

Director Environment, Sustainability & Planning
Sydney Metro
PO Box K659
HAYMARKET NSW 1240

Attention:
25/3/2024

Subject: Sydney Metro West, Eastern Tunnelling Package – Request for Approval of ‘Heavy Vehicle Local Road Report for Use of Local Roads, Pyrmont East and West Construction Sites, (Loop Route)’, Revision 02, dated 18 January 2024.

Dear

Thank you for submitting the ‘Heavy Vehicle Local Roads Report for Use of Local Roads, Pyrmont East and West Construction Sites, (Loop Route)’, Revision 02, dated 18 January 2024 (the HVLR) on 12 February 2024.

I note the HVLR:

- has been prepared in consultation with stakeholders including the City of Sydney Council, Transport for NSW and Customer Journey Planning.
- 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 conditions 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 additional contingency haulage route to provide a loop between the sites, as detailed in the HVLR.

To ensure the works are undertaken in accordance with the commitments outlined in your proposal and supporting documents, I make the following direction for use of the contingency loop route under condition A5 of SSI 19238057:

Direction 1 : Heavy vehicle movements from the project on the local roads nominated below must be limited to a maximum of 3 movements in any one hour period during peak periods and a maximum of 4 movements in any one hour period during off-peak periods.

The nominated roads under this direction are:

- **Darling Drive between Pier St and Ultimo Road**
- **Ultimo Road between Darling Drive and Harris St**

Please ensure that the relevant Construction Traffic Management Plan is updated with reference to the HVLR and that the HVLR is made publicly available on the project website as soon as possible.

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

If you wish to discuss the matter further, please contact _____, at _____

Yours sincerely

Infrastructure Management

As nominee of the Planning Secretary