



Construction & Environmental Management Plan

Harbourside, Darling Drive Sydney

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1 INTRODUCTION

This report supports a State Significant Development Application (SSDA 38881729) submitted to the Minister for Planning pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Following consent being granted for the Concept Proposal and Stage 1 demolition works, Mirvac Projects Pty Ltd (Mircvac) is now pursuing the next stage of planning approvals for the detailed design, construction, and operation of the redevelopment of the Harbourside Shopping Centre at Darling Harbour. Mirvac has divided these detailed design works across three related, but separate, SSDAs to ensure the efficient staged delivery of this large scale project.

This report is part of the first detailed SSDA application for bulk excavation works and construction of retaining structures. It more broadly forms part of the Harbourside Shopping Centre redevelopment that will deliver a world class mixed use retail, commercial and lifestyle precinct and contribute to the ongoing renewal and revitalisation of Darling Harbour.

1.1 BACKGROUND

Mircvac is pursuing the staged redevelopment of the Harbourside Shopping Centre, with the first key planning approval secured on 25 June 2021 (SSD 7874) establishing the relevant planning parameters, including building envelopes, maximum GFA limits, Design Guidelines and Design Excellence Strategy, and car parking rates to guide the future detailed design, construction, and operation of Harbourside under subsequent SSD applications. SSD 7874 also granted consent to the demolition of the existing shopping centre and associated structures to ground floor slab level.

To enable the efficient delivery of the project, Mirvac has divided the detailed design and construction works across separate SSDAs, comprising:

- SSDA 1: Bulk excavation works and construction of retaining structures.
- SSDA 2: Detailed design, construction, and operation of the new podium and tower building.
- SSDA 3: Construction and use of the public domain, and Guardian Square, including construction and use of the Murray Street and Bunn Street bridges.

This report forms part of the first detailed design application for bulk excavation works and construction of retaining structures (SSDA 1).

In due course, the CEMP will address the Development Consent conditions typically imposed by DPE and/or other statutory authorities in relation to construction of the development. The CEMP outlines the actions and staging of construction deemed necessary to address the concerns of neighbouring properties and authorities, whilst maintaining a safe and productive construction site.

Implementation of a CEMP is central to the successful completion of a project. The CEMP is a positive commitment by Mirvac to ensure that the statutory obligations are fulfilled and that the project is delivered to the highest Mirvac quality, safety, and environmental standards.

1.2 PURPOSE OF THIS REPORT

The objectives of this report are to:

- outline the proposed phases of construction works on site and assess Mirvac's impact and interaction with the surrounding community to minimise the impacts of construction activity to the community.
- examine and address the proposed site's sediment and erosion control measures to ensure minimal impact.
- adopt a waste management plan with the hierarchy of avoid > reuse > recycle > dispose.
- outlining sustainability initiatives, commitments, and targets on the project.
- examine and address the proposed site's likely impact on traffic and mitigating control measures to ensure minimal impact.
- guidelines to reduce potential noise and vibration impacts to nearby affected tenants, residents and asset owners during demolition, excavation and construction works.
- outline measures and procedures for the effective management of the environment in relation to air quality and hazardous materials.
- a commitment to providing a safe working environment.

The responsibility for the management of this document and the actions contained therein lies with the Mirvac Senior Management Team (SMT) for the project. The CEMP review procedure will be tracked and monitored throughout the project construction phase, with required amendments and updates considered when major site condition changes occur and/or as required to suit project requirements.

All construction activities will be undertaken in accordance with the relevant sections from the Building Code of Australia, Australian Standards, Place Management NSW Approvals, Workplace Health and Safety Act and Work Health and Safety Regulations.

All employees and contractors involved in the development will be inducted prior to commencement of works on site. Included in the induction will be health, safety and environmental requirements and all applicable conditions of consent. Any relevant training requirements will be carried out and monitored for currency throughout the project.

1.3 SITE DESCRIPTION

The Harbourside redevelopment site is located within the Darling Harbour Precinct inside the City of Sydney Local Government Area (LGA), at the south-western edge of the Sydney CBD. The precinct remains as Sydney's premier tourist and entertainment destination and accommodates varied recreation, tourism, entertainment, retail, residential apartments, and business land uses.

Specifically, the site occupies an area of approximately 2.05 hectares within the north western portion of Darling Harbour, in between Cockle Bay and the Pyrmont Peninsula. It is irregularly shaped and existing site improvements include the 2-3 storey Harbourside Shopping Centre – noting approval has already been granted for stage 1 demolition works. Indicative site boundaries are shown in Figure 1.



Figure 1 Harbourside Shopping Centre redevelopment site

1.4 OVERVIEW OF THE PROPOSED DEVELOPMENT

This report forms part of the first detailed design SSDA for Harbourside (SSDA 38881729), and seeks consent for the following works:

- Bulk earthworks to enable the construction of the redeveloped Harbourside Shopping Centre building, including demolition of the ground level slab; and
- Construction of retaining structures for the excavated site.

For more information, refer to the Environmental Impact Statement (EIS) prepared by Ethos Urban to which this report is attached.

1.5 PLANNING APPROVALS STRATEGY

State Environmental Planning Policy (Planning Systems) 2022 identifies development which is declared to be State Significant. The proposal is SSD as it is located within Darling Harbour and the proposed development has a Capital Investment Value (CIV) of more than \$10 million.

1.6 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

In accordance with section 4.39 of the Environmental Planning & Assessment Act 1979 (EP&A Act), Secretary's Environmental Assessment Requirements (SEARs) for SSD-38881729 have been issued. This report has been prepared to respond to the SEARs.

1.7 PROJECT DESCRIPTION

This DA seeks approval for:

- Removal of existing slab on ground.
- Basement retention structures including retention piles and capping beam.
- Bulk excavation works to facilitate basement construction
- Establishment of temporary access and environmental controls for this phase of works.

1.8 HOURS OF WORK

In accordance with typical consent conditions, the proposed hours for construction works are as follows:

- Between 7:00 am and 7:00 pm, Mondays to Fridays inclusive.
- Between 7:00 am and 3:30 pm, Saturdays.
- No work will be carried out on Sundays and Public Holidays.

It is proposed that internal works that will not exceed the applicable noise criteria, as outlined in the Council's Construction Code of Practice (1992), may occur 24 hours, Monday to Sunday inclusive. Any other work outside the above hours is subject to agreement and approval with Council (or the relevant approval authority).

1.9 CONTACT DETAILS

Contact details for key project personnel are provided below:

The Site Manager for the project is Paul Iann

Mobile 0411 125 635

Email paul.iann@mirvac.com

The Project Manager for the project is Stephen Chamberlain

Mobile 0458 748 199

Email stephen.chamberlain@mirvac.com

2 CEMP 'ACTION LIST'

The 'CEMP Action List' will form the basis of the Harbourside, Darling Drive Sydney Construction Environmental Management Plan. The Action List will be created in response to the series of DA/Approval conditions that are to be addressed prior to and during the construction phase of the project. They will further address any authority requirements as well as take into consideration the concerns of neighbouring building occupiers.

The Action List provides a means by which responsibilities of the project team can be readily identified and monitored.

In addition to the Action List are a series of attachments which will contain more detailed information in the form of checklists, registers, templates and reports. The attachments will contain the information and tools that must be implemented during the construction phase in order to close out the specific items and ultimately satisfy the DA/Approval conditions associated with the project.

3 SITE MANAGEMENT PLAN

3.1 INTRODUCTION

The following Site Management Plan has been developed to outline the proposed phases of demolition and construction works on site and assess Mirvac's impact and interaction with the surrounding community.

3.2 CONSTRUCTION PHASES

The works pertaining to the overall project can be broadly divided into the following phases:

- a. Site Establishment / Enabling Works
- b. Demolition
- c. Excavation, retention structures and site preparation (including any site remediation).
- d. Structure
- e. Facade
- f. Fit Out, Finishes & Services
- g. Landscaping & Public Domain Works

Note: The Structure, façade, fit-out, finishes and services, and Landscaping works will be addressed as part of the Stage 2 Main Works DA.

3.3 CONSTRUCTION STAGING

The below typically details the various activities to be undertaken during each of the phases of works:

Site Establishment & Enabling Works

The works to be completed include:

- Establishment of site perimeter hoardings and overhead protection
- Protection to adjacent buildings and structures if required
- Site accommodation, amenities and offices
- Temporary vehicle laybacks / loading zones
- Temporary construction and vehicle platforms

Demolition

The works to be completed include:

- Capping and termination of existing services
- Demolition of existing structures
- Temporary Works
- Waste Removal

Retention Structures and Bulk Excavation

The works to be completed include:

- Demolition and removal of existing concrete slab on ground
- Installation of retention piles
- Construction of capping beams
- Bulk excavation and temporary stockpiling
- Temporary Works including dewatering
- Spoil Removal

3.4 INTERACTION WITH SURROUNDING COMMUNITY

The following actions, which focus on minimising the impacts of construction activity to the community surrounding the project, will be implemented:

- Pre-commencement consultation with the existing tenants within the adjacent buildings, including Sofitel Hotel, 50 Murray Street, Novotel Hotel and International Convention Centre.
- Installation of hoardings & overhead protection to site boundaries to delineate the construction site from public areas (refer Appendix A). Protective devices will be in accordance with WHS laws, regulations or authority requirements;
- Monitor compliance of the Traffic Management Plan referring to section 5 and Appendix B of this document;
- Clear display of contact details on the fence/hoarding for community information and contact in case of emergency;
- Make arrangements for the notification to surrounding properties of activities which may affect their amenity, including the provision of a 24-hour contact point;
- Close community liaison with neighbours such as the Sofitel Hotel, ICC among others;
- Periodic Newsletter updating tenants and surrounding residents on construction works and upcoming activities or interactions; and
- Periodic meetings to discuss the progress of works and to address any concerns raised by the surrounding community.

3.5 FIRE PROTECTION MEASURES DURING CONSTRUCTION

Mirvac will comply with all requirements of the National Construction Code, BCA and Australian standards during construction related to fire protection measures. Additionally, during construction, Mirvac shall pursue communication and consultation with the local fire brigade in accordance with the varying stages throughout the project. Initial site setup will include temporary Hydrant Booster/s which will then be extended throughout the structure as the construction progresses. Internal fire safety measures will be progressively installed and reviewed at regular intervals. Signage will be displayed in prominent locations displaying site access locations, main switchboard and any fuel storage locations.

3.6 INFRASTRUCTURE ASSETS

Mirvac will liaise with the relevant utility providers throughout the design process prior to and during construction for approval of the design and proposed construction methodology to ensure compliance with Health, Safety and Environmental requirements, Network Standards and Codes of Practice. A detailed Risk and Opportunity Register and work method statements shall be completed following acceptance of the design principles.

3.7 TEMPORARY STRUCTURES

Mirvac will establish robust perimeter hoardings which will be a mixture of both A -Class and B- Class hoardings. The outline hoardings are referenced in the vehicle access and egress / hoarding plan which can be found in Appendix A of this report. Hoardings will be regularly maintained to clean and remove graffiti and the like. High quality artwork will be featured on the hoardings in keeping with Place NSW and City of Sydney Council requirements, ensuring visual impact is avoided and amenity is maintained.

Temporary sheds will be contained within the construction site and not elevated wherever possible to ensure minimal visual impacts.

3.8 SITE SECURITY

Mirvac will establish a site security management plan in consultation with PMNSW prior to commencement of the works. This plan will include the following as a minimum:

- After Hours Contacts
- Hoarding and site security strategy to prevent unauthorised access
- Shut down risk assessment process which details prevention of falls and the like to persons trespassing
- Ant-climb and security measures for tower cranes
- Secure storage areas and theft management
- Site CCTV camera locations
- Major event security protocols and requirements

3.9 PUBLIC DOMAIN

Note that if for some unforeseen reason works onsite need to be halted for a significant period then the following will be undertaken:

- Shut down risk assessment will determine what ongoing site management inspections and certifications are required.
- Perimeter hoarding inspection to ensure there are no risks to public who utilise the circulation space adjacent the site
- Perimeter public domain inspection to ensure all surrounding finishes are suitably in place to ensure no additional risks to public
- Environmental control measures in place to the full perimeter to prevent sediment runoff.
- Site security requirements determined by risk assessment.

4 EXCAVATION MANAGEMENT PLAN

4.1 INTRODUCTION

The purpose of the Excavation Management Plan is to detail how the physical works will be completed. It plans how the retaining structure and bulk excavation works will be undertaken on the site and how they will be conducted with consideration to program, safety and environment.

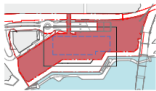
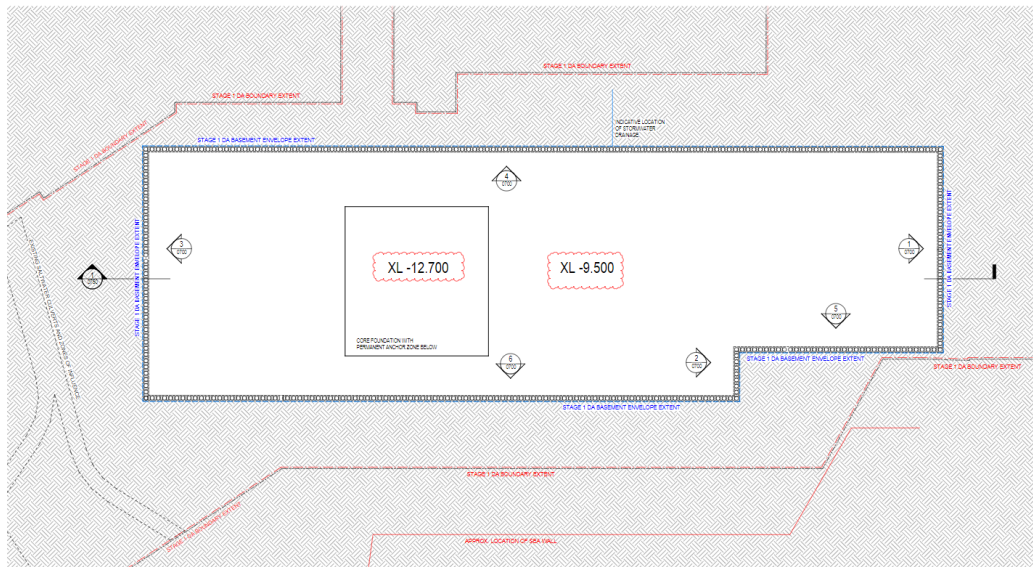
4.2 SCOPE

The retention structure and bulk excavation scope of works includes:

- Demolition and removal of existing concrete ground slab to the site.
- Installation of retention piles
- Construction of capping beams
- Bulk excavation and temporary stockpiling of excavated material
- Temporary Works including dewatering
- Spoil Removal
- Provide all sediment control measures to the site during excavation

LEGEND

- APPROX. LOCATION OF WALL BEHIND PROMENADE
- SECAH - DA BOUNDARY EXTENT
- SECAH - DA BOUNDARY EXTENT
- EXISTING SALT WATER COLLECTOR AND ZONES OF INFLUENCE
- PROPOSED DISCHARGE LOCATION
- PROLONGATION OF EXISTING SEAWALL
- FINAL EXCAVATION RELATIVE LEVEL



EXCAVATION PLAN
1/20

Harbourside Bulk Excavation Site Plan

4.3 METHOD OF EXCAVATION

General

All works will be performed in accordance with relevant Legislation, Australian Standards, Codes of Practice and Guidelines for excavation. As a minimum, NSW Workplace Health and Safety Act 2011 (WHS Act), Workplace Health and Safety Regulation 2017 and relevant Australian Standards

The site will be enclosed by suitable engineered A-Class and/or B-Class Hoardings along all perimeter boundaries.

Temporary power will be supplied to the area by portable generator or a temporary builder's supply with ELCB protection. All temporary electrical installations will comply with AS 3012-1990-Electrical Installations – Construction and Demolition Sites. All power tools and leads will be tagged and checked on a monthly basis and earth leakage protection shall be used.

Temporary poly pipes ring main will be installed along the perimeter of the site. This is to ensure there is water available on each floor for dust control if required.

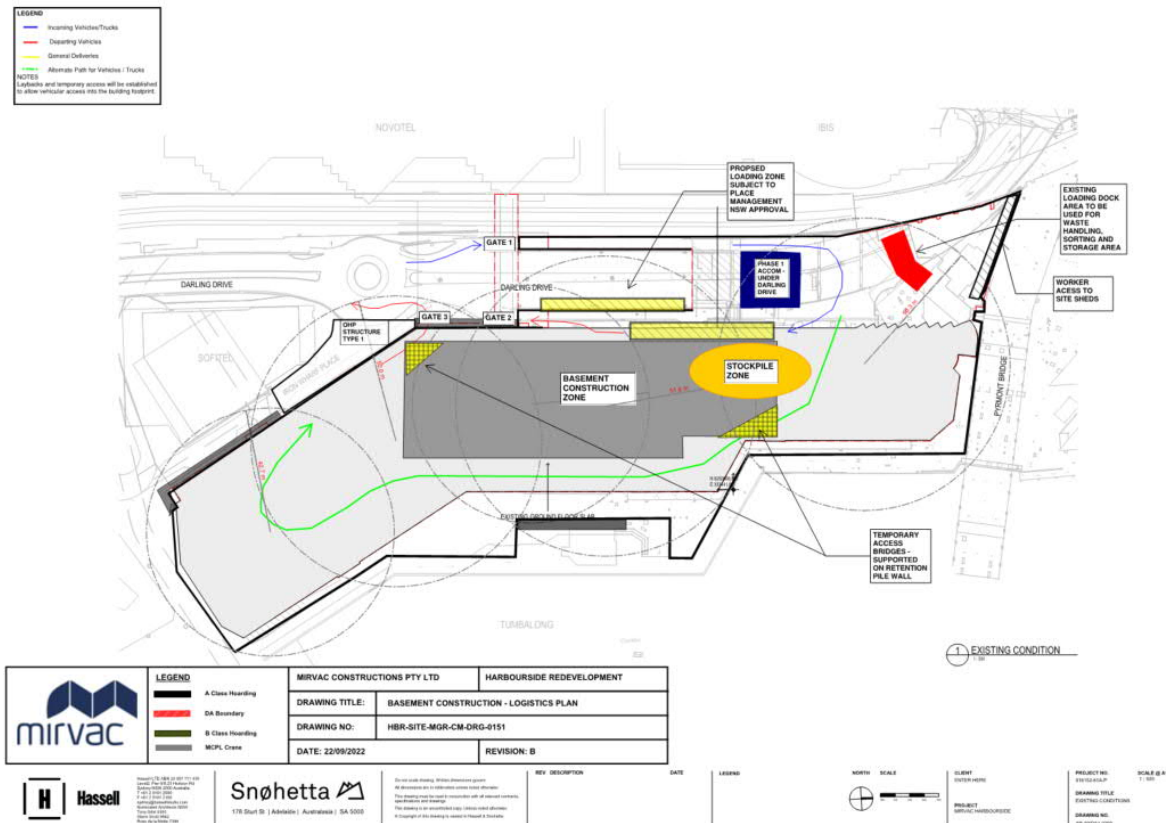
All work areas will be barricaded and warning signs posted to ensure access is restricted to the working crew only.

All employees will be inducted on the procedure of the Safe Work Method Statement and the general work procedures outlined in the site induction prior to commencing works on site. Workers will attend a pre-start toolbox talk on a daily basis outlining the activities for the day including hazard identifications and risk assessments.

The excavation area will be fenced off to all unauthorised personnel and signposted appropriately for excavation work to comply with regulations and to ensure segregation between moving plant and workers. Excavations will be appropriately benched or barricaded to ensure there is no risk of fall.

Hot works will be in accordance with the Excavation Contractor's procedure for oxy/acetylene use in the SWMS for oxy cutting. All oxy cutting will cease a minimum of one hour prior to the completion of work and carry out a 30m fire watch after use. An inspection will be carried out of the working floors prior to workers leaving the site and inspection records kept on site. Hot works permit to be obtained prior cutting.

Worker access will be suitably segregated from the works, with dedicated all weather access from the perimeter hoarding to the site amenities.



Harbourside – Excavation Access Plan

Excavation Works

Truck Access:

An entrance along the existing Western slip road area of the site will be utilised to access site for plant and vehicles including loading out of spoil generated by the excavation works.. All vehicles will enter and exit in a forward direction from Darling Drive. Refer to section 4.5 and the appended CTMP for further details.

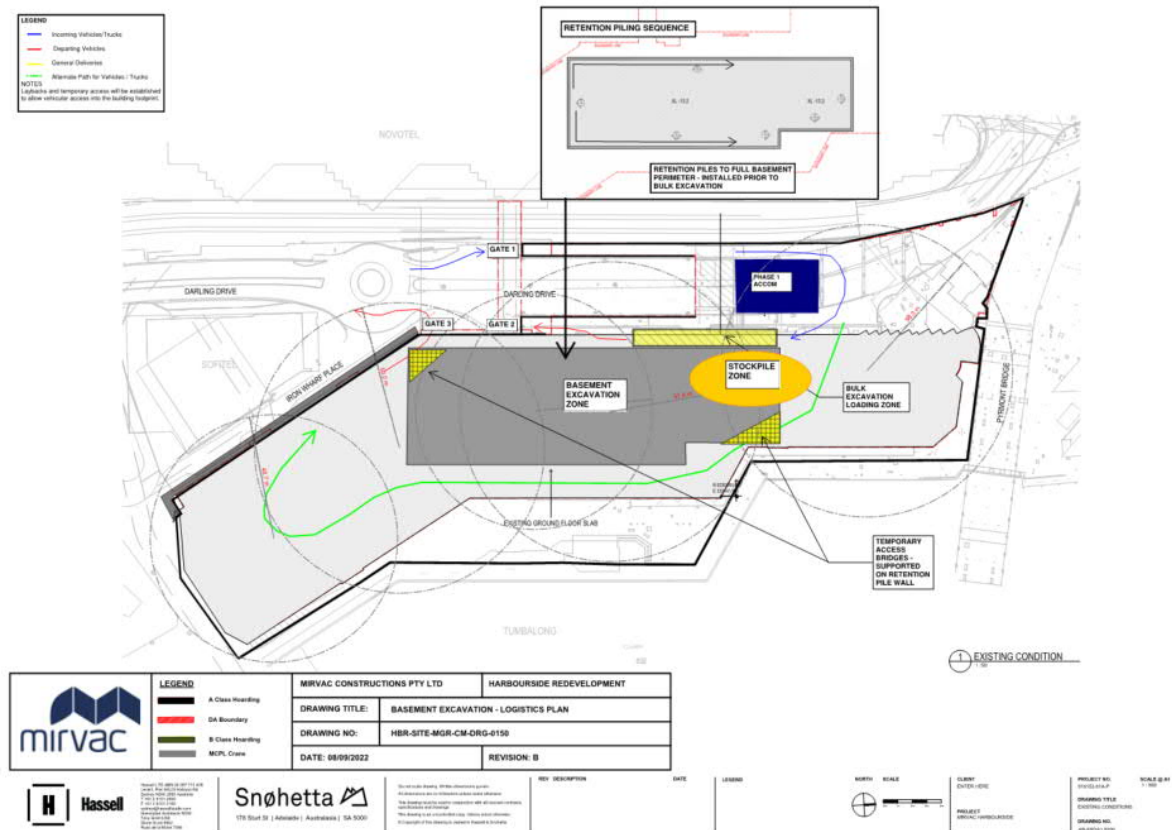
Retention Structure:

Piling rigs will be established onsite, along with line pumps, mobile crane and excavators to install the retaining structure piles. The piles will be progressed on two concurrent workfronts via two large piling rigs along with associated equipment. Continuous Flight Auger (CFA) piling method will be utilised. The wall will be made with alternating piles in a hit and miss sequence, via two runs of piles. The second piles are cut(or secanted) into the first run of preliminary piles. The sequence will move from the South to the North of the site as shown above.

Bulk Excavation and Removal Spoil:

Once the secant pile wall has progressed sufficiently to the South, the existing slab removal will be followed by the bulk excavation works. Large excavators and a Dozer will be used to excavate and stockpile the fill material. As the excavation progresses, temporary anchors will be installed to restrain the wall in the temporary condition. Once the excavation reaches natural rock level, the dozer will be used to rip the sandstone and stockpile, with excavators sawing the rock at the perimeter. Stockpiled material will be progressively loaded into trucks as the excavation continues.

Temporary access bridges will be installed to the corners to ensure site access is maintained. Dewatering will be undertaken from the base of the excavation, with water suitably treated before being discharged from the site.



Harbourside: Excavation Sequence Plan

4.4 EXCAVATION MATERIALS HANDLING AND DISPOSAL

Concrete and Brick

Concrete will be pulverised with the view to separate out the steel and also to achieve a maximum size of 600mm in any direction. Concrete will be separated from other debris and stockpiled. It will be loaded into trucks and then carted to a recycling yard.

Metals

Metals will be separated into their individual types and further into light gauge and heavy gauge. These will be stockpiled and then loaded into bins for removal to a scrap recycling facility.

Waste Management Plan

Estimated waste generated during bulk excavation works:

Waste	Total	% Recycled
Sandstone and VENM	76,500 t	100%
GSW	58,200t	Nil
GSW(S)	11,600t	Nil
General Solid Waste(Restricted)	7,700t	Nil

Note – all figures are approximate and subject to appropriate classification

4.5 EXCAVATION TRAFFIC MANAGEMENT PLAN

The Traffic Management Plan (TMP) for these proposed works will incorporate a Traffic Control Plans (TCP), incorporating Pedestrian Management Plans and Vehicle Movement Plans. The plan will identify and show the management of vehicle, pedestrian and plant movement around works. All TCP's and approvals will be attached and updated as necessary. All worksites and TCP's will be implemented by suitably qualified personnel as per authorised TCP for the particular stage of works.

- *Traffic flow:* All traffic will be managed by a TCP which will comply with AS 1742.3 and the RMS Traffic Control at Work Sites manual (TCWSM). Please refer to the Traffic Control Plans attached.
- *Access to Ausgrid substation:* Access is maintained along the Harbourside Slip lane Driveway
- *Access to Sydney Water Culvert:* Access maintained adjacent the taxi rank leading to Iron Wharf Place.
- *Pedestrian & cyclist movement:* All pedestrian & cyclist movement including entry, egress and movement around the work area will be in accordance with RMS TCWSM Section 9.3 – Pedestrians. All work areas will be secured with barriers and fencing to ensure that no unauthorised entry for pedestrians is possible.
- *Heavy Vehicle Access Route:* Access route for heavy vehicles over 3t GVM will be as set out in the Harbourside Redevelopment Traffic Management Plan outlined in Appendix B.
- *Neighbouring Property Access:* There will be no impact on neighbouring properties. Access for adjacent buildings will be maintained at all times.

Access/ Egress of Vehicles

All exiting trucks will be loaded to their prescribed weight limits, within the site boundary. All trucks will be covered by tarpaulin or like prior to exiting the site.

The excavation site will not interfere with any pedestrian movement other than at the access/egress points. Works will be carried out so that no impacts affect the surrounding buildings and roads.

Vehicles will access the site from the existing slip lane along Darling Drive and re-enter at the location to the existing entry at the roundabout or a new temporary entry adjacent the same location..

There will be no requirement to block any traffic lanes during the excavation works. Access to neighbouring properties will be maintained at all times.

The arrival and departure of trucks associated with the excavation works will be carefully managed and controlled by site personnel using two-way radios. There will be sufficient room for trucks to wait onsite to be loaded or for unloading activities.

Transport Vehicle Frequency

Transport Vehicles: All excavation spoil will be transported in suitable tipper trucks.

Transport Frequency: It is anticipated that there will be an average of 50 truckloads of material taken off the site each day over the project duration with a maximum of 100 truckloads per day.

Storage of Excavated Materials: All material generated from the excavation process will be progressively removed from site to avoid stockpiling. The material will be sorted in this area and transported off site.

We estimate approximately 140,000 tons of spoil will be generated for offsite disposal/reuse.

5 SOIL, WATER & GROUNDWATER MANAGEMENT

5.1 EROSION & SEDIMENT CONTROL PLAN

An Erosion and Sediment Control Plan (refer Appendix D) will be implemented on the project to provide site controls and mitigation measures during the project. The Erosion and Sediment Control Plan has been designed with a holistic approach in establishing, implementing and maintaining controls to minimise and trap sediment on the site.

The Erosion and Sediment Control Plan will be further developed and implemented on the project to provide site controls during the demolition, excavation and construction phases. Construction works will be undertaken in a manner to avoid erosion and sedimentation of the site onto the surrounding land or waterways. The plans will ensure the controls are established early during the project and maintained throughout the life of the project.

5.2 GENERAL PRINCIPALS FOR SEDIMENT & EROSION CONTROL

It is important to design and install measures that reduce the erosion hazard of any construction activity. Once this is achieved, run off water which carries the sediment must be controlled in such a way as to reduce the amount of sediment leaving the site. Site water and sediment management will be in accordance with EPA and Sydney Water Guidelines.

The following general items may be incorporated into the construction management of the site:

- Temporary holding area for excavated material within a temporary sediment fence to ensure erosion and sediment particles do not enter surrounding waterways. Demolished material held in this area will be appropriately covered to ensure colluvium erosion and sedimentation will not occur;
- Ingress of water due to periods of heavy rain will be managed through on-site detention. Excess surface water will be pumped into sediment holding tanks. These tanks will be cleaned, and the water will be pumped to stormwater following cleaning and treatment in accordance with the Principal Contractor's water quality discharge procedures, Environmental Protection Authority (EPA) and Sydney Water requirements;
- Appropriate stabilised site access and/or shaker grids will be installed at site access points;
- Vehicles leaving the site will secure and cover their loads. All trucks will be inspected prior to leaving the site (where applicable);
- All roads and pedestrian footways surrounding the site will be swept to remove any debris associated with the works on the site;
- Silt fences are designed to filter run-off (if any) leaving the site, trapping sediment and allowing filtered water to pass; and
- Discharge of site generated catchment water shall be managed in accordance with the Principal Contractor's Water Quality Discharge Procedure and EPA Guidelines.

5.3 STORMWATER MANAGEMENT

The objective is to ensure compliance with Place Management NSW and City of Sydney Councils requirements. The purpose of the management plan is to mitigate and/or address discharge of stormwater off the site and to ensure that the environmental values of receiving waters are maintained or enhanced.

The Stormwater Management Plan provided as an annexure to this report will be developed and regularly assessed to ensure adequate controls are in place throughout the various stages of construction works. (Refer Annexure F). Mirvac's standard systems and procedures includes regular external audits to assess the adequacy of the stormwater, sediment and erosion controls in place on the site.

6 CONSTRUCTION WASTE MANAGEMENT PLAN

6.1 INTRODUCTION

Mirvac Constructions Pty Ltd aims to reduce the amount of waste to landfill by adopting the waste management hierarchy of *avoid > reuse > recycle > dispose* throughout the main works construction phase.

Appendix E contains the site-specific Mirvac Construction Waste Management Plan (WMP).

In accordance with the Waste Management Plan it is the workplace managers responsibility to ensure the targets of the plan are met, along with ensuring waste dockets are retained.

Waste targets for this Business Unit are >95% diversion of waste from landfill by recycling, reusing designing or other methods. Waste Materials generated on site are to be managed such that recycling is maximised and the volume of waste transported to landfill is minimised.

A specialist Waste Management Contractor will be engaged to coordinate waste recycling, recovery and disposal of all waste during all stages of the project.

The figure below details the general principles for prevention of waste.



Figure 3: Waste Prevention Methodology

7 SUSTAINABILITY

The Principal Contractor's target is to achieve consistent level of environmental and social outcomes throughout the project by committing to establishing new initiatives where possible. Exploring alternative sustainable options outside of the legislative requirements and implementing them will make a significant contribution to the physical environment and the local community.

By exercising the sustainability values depicted in Figure 4 and recognising the benefits of social, environmental and economic sustainability, Harbourside will promote a balanced lifestyle for its future occupants and wider community which will be reflected in the development and throughout the construction phases.





Figure 4: Mirvac's Sustainability Values

7.1 STRATEGY

Adherent with Mirvac's commitment to sustainability, an integrated approach "This Changes Everything" is focused on the responsibility Mirvac has to the environment, wider community and to its investors. With the engagement from relevant stakeholders Mirvac seeks to deliver a culture that fosters sustainability and having a lasting impact. The six aspects of this strategy include:

1) Climate Change:

- Mirvac aims to generate more energy than we consume. In management practices, the principal contractor will invest in opportunities such as renewable energy onsite and assess suppliers in their involvement to sustainability.

2) Natural Resources:

- We have made a commitment to achieve net positive water and zero waste to landfill by 2030. Through efficient use of resources, the principal contractor will reduce consumption of natural resources and operate in manner which will achieve a minimum 95% recycling.

3) Our Community:

- Mirvac has a target to triple our community investment by 2022 and create a net positive legacy. Each Mirvac project has a role to play.

4) Social Inclusion:

- Mirvac has a target to spend \$100 million in the social sector by 2030 to help other organisations that are purpose-driven. This includes spending money with Indigenous businesses and social enterprises.

5) Our People:

- Mirvac has a target to have a highly engaged, capable and diverse workforce

6) Trusted Partner:

- Mirvac has a target to be the most trusted owner and developer.

7.2 PERFORMANCE CRITERIA

The following criteria will be monitored during construction to measure overall performance in addressing sustainability targets:

Environmental Management System

Implement a Workplace Risk Management Plan that is certified to AS/NZS ISO 14001, which establishes clear environmental objectives & targets for the site works.

Community / Sensitive Receivers

Provide opportunities for the local community to learn about the projects and the impact on the wider community. As well as this, hold information sessions on the health and safety programs to engage and build a rapport with the relevant agencies. Have email updates on the progress and any other media coverages.

Energy

Examine opportunities to reduce electricity and water consumption and the use of alternative systems implemented for site amenities.

Sustainability Induction

Construction staff will be educated on the sustainability initiatives planned for the project and encouraged to innovate and find sustainable solutions through site induction, tool box talk's process and site Health, Safety and Environmental Committee weekly meeting/inspections providing feedback.

Innovation

Ongoing review of project planning and development to explore innovative options to promote sustainability on the project.

8 TRAFFIC MANAGEMENT PLAN

8.1 INTRODUCTION

A Construction Traffic Management Plan (CTMP) has been prepared for the excavation stage of this project. The Traffic Management Plan addresses the site in context with its surrounding environment, location and road network as well as traffic flows in line with the overall principles of traffic management and the proposed working hours.

Refer to Appendix B for the Construction Traffic Management Plan by the Parking and Traffic Consultant PTC. All Traffic Control Plans will be submitted to the authority prior to construction commencing.

8.2 ADJOINING ROAD NETWORK

Darling Drive

Darling Drive is a major road in the Western Darling Harbour precinct and runs in a north-south direction from Pyrmont Bridge Rd in the North to Ultimo Rd in the South. Darling Drive is located along the Western frontage of the subject site. Darling Drive facilitates two way traffic and features a bike lane on the Southern Lanes past the subject site. Refer to Figure 5 below.



Figure 5: Darling Drive

Pymont Bridge Road

Pymont Bridge Rd is a local and state road and runs in an east-west direction from Darling Drive in the East to Past the Western Distributer and into the inner western suburbs in the West. Pymont Bridge RD facilitates access to Darling Drive from the West. Refer to Figure 6 below.



Figure 6: Pyrmont Bridge Rd

Western Distributor off-ramp to Pyrmont Bridge Road

Western Distributer is a state road in the Western Darling Harbour precinct and runs in a Southerly direction from The Western Distributer to the West to Pyrmont Bridge Rd in the East. The Western Distributer off Ramp facilitates access to Pyrmont Bridge Road. Refer to Figure 7 below.



Figure 7: Western Distributor off-ramp

Iron Wharf Place

Iron Wharf Place is a minor shared zone road that runs East-West and runs in an east-west direction from Darling Drive in the West. Iron Wharf Place is adjacent the South-Western frontage of the subject site. Iron Wharf Place facilitates access to the Sofitel, egress from the adjacent taxi rank, along with pedestrian access to the waterfront and to the ICC. Refer to Figure 8 below.



Figure 8: Iron Wharf Place

Wattle Street

Wattle Street is a State road and runs in a north-south direction from Pyrmont Bridge Rd in the North to Broadway in the South. Refer to Figure 9 below.



Figure 9: Wattle Street

8.3 VEHICLE ROUTES

The routes for all construction vehicles proceeding to and exiting from the project have been identified in the CTMP. The routes have been determined by assessing travel and turning paths at the intersections and to minimise the impact of construction traffic on local streets and highly activated pedestrian frontages.

Dedicated construction routes have been devised to use the arterial road network as much as possible. The nominated construction routes to and from the site are shown below and in the CTMP Section 3.7 of Appendix B. It is proposed to have two main northern approach routes to the site and two southern departure routes from the site.

Site entry signage will be installed to direct all deliveries to the correct areas. All vehicles upon entry to the site for the first time must complete a truck driver's declaration or complete a site induction to ensure compliance with the site rules.



Figure 10: Indicative Construction Vehicle Routes

8.4 ACCESS AND EGRESS TO SITE

Construction Vehicles

For the duration of the project, construction traffic will enter the site via dedicated gates on the existing slip lane from Darling Drive, acting as the primary construction access point. The proposed gates along the two existing slip lane driveways will serve as the construction vehicle access and egress for all material handling purposes. There will be secondary egress path from the Southern end of the site to Darling Drive. The proposed site access and egress layout is shown in Figure 11 below:

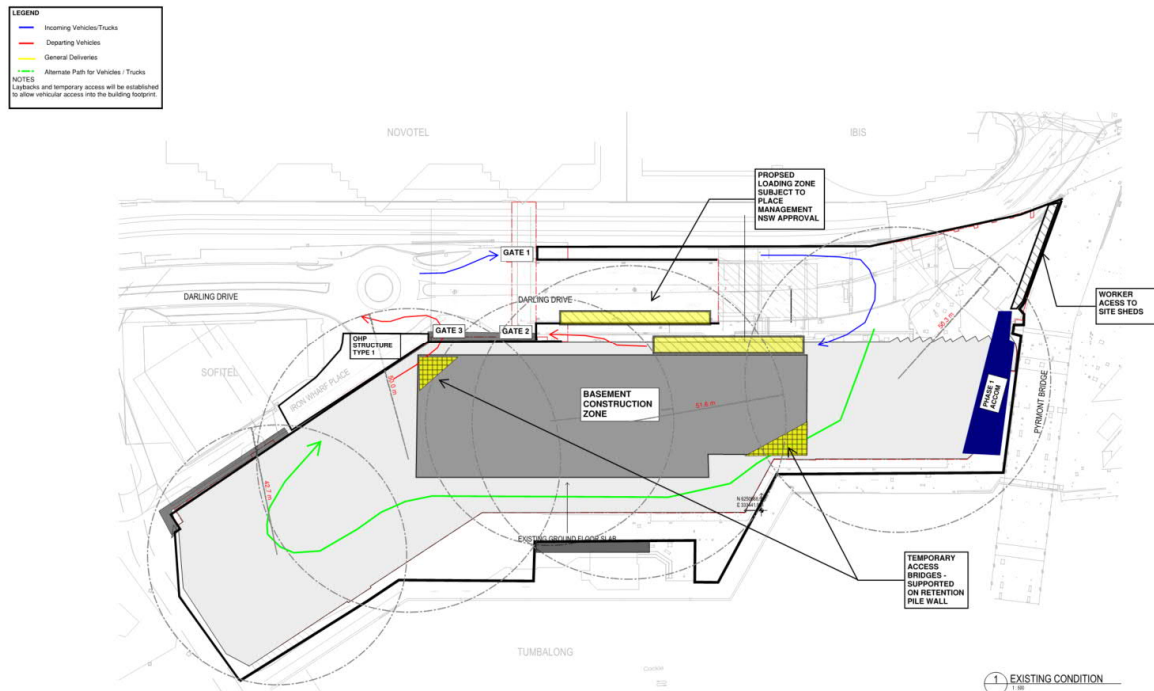


Figure 11: Proposed site access & egress plan. Refer also to Appendix A.

The following will be implemented for site access and egress points:

- The entry / exit gates will be manned by qualified traffic controllers during working hours when required. These will be responsible for managing vehicular, pedestrian and cyclist traffic movements. Mirvac shall ensure that clear access is maintained to facilitate any emergency access/evacuation.
- All entering and exiting of vehicles to work zones shall be in accordance with an approved Pedestrian & Traffic Management Plan and supplementary Traffic Control Plans (TCPs). Traffic flow to all lanes of traffic shall remain as open as possible in accordance with DA requirements.
- Installation of suitable engineered hoardings to the full site perimeter to allow pedestrians to safely use the public footpath.
- Relevant statutory signage shall be erected defining the vehicle entry and exit points at all stages of construction.

8.5 SITE SPECIFIC ISSUES

Road Closures

Temporary restrictions /Road closures are required only for the establishment of the hoarding over the shared laneway between Sofitel and Harbourside. Consultation will be undertaken with Sofitel/ Place Management NSW to ensure this is undertaken at a time which causes least impact to their operations.

A road closure will be necessary for the removal of the existing pedestrian bridge over Darling Drive. A separate application will be submitted to Place Management NSW /City of Sydney/TFNSW in accordance with the Temporary Full Road Closure process for approval prior to any works and this will detail the traffic management measures and access arrangements once the dates for road closure are known.

8.6 TRAFFIC FLOW IMPACT

The entry and proposed work zone will be utilised for construction deliveries which will be managed by authorised traffic control personnel at all times. Trucks and vehicles will not be permitted to stop or wait in any street prior to entering site. As such, it is envisaged that there will be no interruption to traffic flow of surrounding areas.

Truck movements will be for the delivery of construction product with all non-critical deliveries being scheduled outside restricted and or peak traffic periods. The number of trucks will vary depending on the stage of the construction process, however, the estimated number of truck movements are as follows:

Darling Drive

Stage	Vehicle Types	Average Vehicle Trips Per Day	Estimated Peak Vehicle Trips Per Day
Demolition	HRV (12.5m), Truck and Dog Trailer (19.0m), Articulate Vehicle (19m)	25	50
Retaining Structures, Bulk Excavation and Site Preparation Including any site remediation)	HRV (12.5m), Truck and Dog Trailer (19.0m), Articulate Vehicle (19m)	50	100

Figure 12: Estimated vehicle trips per day – Darling Drive.

From the CTMP prepared, it has been determined that within the context of the broader road network around the site, the estimated construction traffic, which will be spread throughout each day, will not cause notable impact on the capacity or operation of the road network.

8.7 PLANT & EQUIPMENT

The following is a summary of the types of plant and equipment that will be utilized on the project:

- Articulated flatbed truck for delivery of site sheds and hoarding materials.
- Articulated float / low loader for delivery of earth moving equipment such as excavators, dozers, dump trucks and piling rigs.
- Truck and trailers for the exportation of excavated material off site.
- Concrete trucks for delivery of ready mix concrete.
- Mobile cranes, of various size, for erection of site amenities, tower cranes and miscellaneous lifting.
- Prime mover and enclosed flatbed trailer for delivery of materials.
- Medium rigid vehicles, small rigid vehicles, vans and couriers to deliver smaller materials.
- Tower: Multiple tower cranes erected during the detailed excavation phase and early structure phase. Man / material hoists to be erected during the basement and tower structure works.
- Podium: Tower crane erected during the detailed excavation phase and early structure phase. Man / material hoists to be erected during the podium structure works.

8.8 LOADING AND UNLOADING OF MATERIALS

Retention and Bulk excavation works deliveries and the loading / unloading of materials is proposed to be undertaken within the site itself with entries and exits from the site shown in Appendix A.

Other measures to be incorporated include:

- Statutory and directional signage to be installed and maintained throughout construction;
- All loading and unloading operations are to comply with Work Safe and relevant authorities' requirements;
- Physical barrier separation between work zone and cycleway.
- No materials will be stored on public footpaths, roads or shared access ways;
- Should any lane closures be required, a relevant traffic management plan will be issued along with any required permits and if deemed required, a local resident warning.

8.9 TRAFFIC & PEDESTRIAN MANAGEMENT

For the duration of the project, pedestrians will be able to continue to safely use the public footpaths adjacent to site. Prior to the works commencing, suitable engineered hoardings will be established around the building perimeter.

All site workers and visitors shall enter and exit the site via designated pedestrian access points around the site. Statutory and directional signage will be established at all site entry and exit points to alert pedestrians and other drivers to the movement of construction traffic. Authorised Traffic Control personnel will control the movement of all vehicles to and from the site and work zones. All visitors to the site will be required to be escorted at all times by Mirvac site staff and will be provided with a defined entry path from the point of entry. All locations, traffic flow and entry points will be outlined in the final Construction Traffic Management Plan.

Refer Appendix A for proposed site establishment / access provisions. All hoarding, work zone and other applications related to various construction phases will be submitted in accordance with Place Management NSW guidelines and policies.

8.10 WORKER AND STAFF PARKING

There will be no parking available on the construction site. All site workers and all personnel related to the site will be actively encouraged to utilise public transport to access the site. Convention Light Rail train station is approximately 100m from the site with Town Hall train station approx. 750m from the site. Workers will be encouraged not to park in neighbouring streets to minimise the impact of the development to surrounding areas.

8.11 SITE SAFETY PLAN

A Site Specific Workplace Risk Management Plan (WRMP) and a Risk and Opportunity register, will be developed and be reviewed monthly by Site Management Team to reflect the current stage of site works. See further detail in Section 11 of this report.

All works throughout the construction process will be required to comply with the Traffic Management Plan, Statutory Requirements, and the WRMP.

8.12 MAJOR EVENT MANAGEMENT PLAN

Due to the locality of the site, a Special Event Management Plan has been incorporated within the CTMP. The plan outlines an overview for access and egress during a Major Event, detailing road closures and potential impacts during construction activities. The establishment of a robust site perimeter hoarding solution, including maintaining the agreed external circulation space, is essential to ensure that the construction activities do not adversely affect the surrounding entertainment and recreation uses within the Darling Harbour Precinct.

The perimeter of the site will be regularly inspected to ensure that all hoardings and the like are in a suitable condition for public accessibility and safety around the perimeter of the site. Suitable lighting levels and integrity of the surrounding public domain areas will also be regularly inspected. Existing camera sightlines will also be reviewed prior to establishment and movement of any hoarding structures.

Dependant on the nature of the major event, consultation and risk identification will be undertaken with PMNSW to determine if there are additional requirements such as attendant security required. Regular site perimeter and public domain safety inspections will also be undertaken, with any items raised addressed as soon as practicable.

9 SYDNEY LIGHT RAIL INFRASTRUCTURE

It is acknowledged that the proposed redevelopment of Harbourside is adjacent to the light rail at the Western edge of the site. The light rail corridor and associated Sydney Trains 33kV high voltage cable will be delineated from the site along the entire Western Boundary via an engineered A-Class Hoarding. Refer to Appendix A for Site Hoarding Plan.

We refer to Appendix C for our detailed Excavation Noise and Vibration Management Plan which outlines the necessary requirements and vibration limitations to ensure there are no impacts on the adjacent Sydney Light Rail Infrastructure. We specifically refer to Section 6.3.5 for assessment and summary of vibration levels to prevent impacts to the light rail infrastructure. Refer to Section 11 of the report which provides recommendations for vibration monitoring. Final locations of the monitoring will be discussed and agreed with TfNSW/TRANSDEV prior to installation.

10 NOISE AND VIBRATION MANAGEMENT PLAN

10.1 INTRODUCTION

A detailed update of the Construction Noise and Vibration Management Plan (CNVMP) for the project will be prepared prior to a construction certificate being issued. This management plan will provide guidelines to reduce potential noise and vibration impacts to nearby affected tenants, residents and asset owners during demolition, excavation and construction works. The NVMP primarily deals with the potential issues of vibration and noise generating activities associated with the project.

The NVMP will be in accordance with the targets and guidelines of the NSW Interim Construction Noise Guideline (DECC, 2009) and through consultation with neighbouring land owners. The NVMP will also address the requirements of Development Application consent conditions.

In addition, the Noise and Vibration Monitoring Plan details specific criteria for noise and vibration targets and monitoring methodology relative to the neighbouring properties, assets and infrastructure. Mirvac and Mirvac's Contractors will comply with the obligations provided in the Noise and Vibration Monitoring Plan and also commits to the Noise and Vibration Control Measures detailed within this section of the CEMP.

10.2 PLAN OBJECTIVE

The principal objectives of the Noise and Vibration Management Plan are:

- Identification of the noise and vibration standards which will be applicable to this project.
- Formulation of a strategy for excavation to comply with the standards identified in the above point.
- Development of a monitoring programme to measure and regulate noise and vibration associated with the project.
- Liaise with Principle Certifying Authority (PCA) and neighbouring property owners when required.

10.3 NOISE CRITERIA

The criteria for noise from construction activities on this project will ensure acceptable levels are maintained within the site and limit impact on surrounding properties. The noise criteria will be outlined in the Construction Noise and Vibration Management Plan.

Further to this, specific criteria relating to noise control limits, extent of works and monitoring shall be developed in consultation between Mirvac and the adjacent Landowners. These specific criteria will be included within the Noise and Vibration Monitoring Plan.

10.4 VIBRATION CRITERIA

The criteria for vibration from construction activities on this project will ensure acceptable levels are maintained within the site and limit impact on surrounding properties. The vibration criteria will be outlined in the NVMP.

Further to this, specific criteria relating to vibration control limits, extent of works and monitoring shall be developed in consultation between Mirvac and the adjacent Landowners and these will be included within the NVMP.

10.5 CONTROL OF CONSTRUCTION NOISE AND VIBRATION

As part of the NVMP, a detailed review will be undertaken of each of the proposed activities which will occur as a part of the construction works on this project prior to commencement. The execution of this work will confirm the effectiveness of ongoing noise control strategies for this project. In addition, the site working hours will be strictly enforced and all works carried out in accordance with approved DA consent conditions, Council and Regulatory codes, practices and Mirvac Noise Control Policy (refer to Appendix F).

10.6 NOISE AND VIBRATION CONTROL METHODS

The determination of appropriate noise control measures are dependant on the particular activities and construction plant. This section provides an outline of the proposed methods:

Substitution by Alternative Process

Where a particular activity and/or construction appliance exceeds noise criteria, it may be possible to select an alternative process.

Engine Silencing

Where construction plant / appliances exceed noise criteria, the use of silencing devices may be possible. These may take the form of engine shrouding, or residential class mufflers fitted to exhausts.

Emission Restrictions

During the construction process, noise emission will be checked for specified plant and equipment. The implementation of random noise monitoring will ensure equipment remains within the specified limits.

Equipment Locations

The location of equipment will be considered during construction to ensure plant and equipment is located in suitable positions from noise sensitive areas, optimising attenuation effects from topography, natural and purpose built barriers and material stockpiles.

Equipment Maintenance

To determine the requirement for silencing devices on machinery it is proposed to undertake regular noise checks. Noise levels of all machines on site will be monitored for each equipment type. Items such as mufflers and engine shrouds will be maintained to ensure they are in good working order.

10.7 ESTABLISHMENT OF DIRECT COMMUNICATION WITH AFFECTED PARTIES

Continual communication is required between all parties that may be affected, the builder and the regulatory authority. This establishes a dynamic response process which allows for the adjustment of control methods and criteria for the benefit of all parties.

Informing local residents is typically a critical aspect in reducing complaints regarding construction noise. The objective in undertaking a consultation process is to:

- Inform and educate the groups about the project and the noise controls being implemented.
- Increase understanding of all acoustic issues related to the project and options available.
- Identify group concerns generated by the project, so that they can be addressed.
- Provide advice about the time and duration of potential noisy activities.
- Ensure that concerned individuals or groups are aware if and have access to the site complaints register which will be used to address any demolition noise related problems, should they arise.

10.8 NOISE COMPLAINT PROCEDURE

Mirvac has in place a specific procedure in relation to the handling of noise related issues. When a noise related complaint is brought forward, the specific details will be recorded on the Mirvac community contact register form. The details will then be reviewed by the site manager. The site manager then makes an assessment of the complaint against our construction guidelines in relation to approved working hours, development consent conditions, noise levels and any other relevant items relating to the matter. Mirvac will close out accordingly within 48 hours.

If a breach of the guidelines and restrictions is found then further action will be taken to resolve the issue. If a suitable outcome cannot be achieved then a suitable acoustic and vibration engineer will be consulted to review and respond to the noise complaint. Further notification will then be provided to the complainant of the course of action to be taken to resolve the matter. A copy of Mirvac's noise control policy can be found in Appendix F – Mirvac Group Policies for the Community Contact Register form.

11 AIR QUALITY CONTROL

Where required, any measures for dust, smoke, fume and odour control will be in line with the Protection of the Environment Operations Act 1997. Any complaints that may eventuate from neighbouring properties will be actioned in accordance with the Community Contact register requirements (refer to attached in Appendix F– Mirvac Group Policies and Procedures).

11.1 DUST

Dust created by construction related activities typically become more prominent during windy conditions, and will be dealt with by way of water suppression and select work procedures. Visual monitoring is to be undertaken throughout the construction phases of the project. A site specific Dust and Odour Management Plan will be incorporated into this CEMP prior to construction works commencing on site.

The implementation of the below dust mitigation measures shall be incorporated to reduce the likelihood of potential issues occurring.

- The construction site will be maintained and kept clean. Where suitable, the use of mechanical sweepers and covered waste bins will be utilised;
- Completed surfaces will be kept clean;
- Controlled site access will be maintained with vehicle wash down / clean down facilities to be established to maintain access roads;
- All materials transported from site in trucks will be appropriately covered.
- The site perimeter will be encapsulated with hoardings to minimise the egress of dust at the boundary of the site
- Water points will be located around the perimeter of the site and will be used during specific activities as required.

11.2 ODOUR

Odours may be controlled such that they are minimised as far as practical / feasible at the boundary of the site during construction. Odours shall be detected solely on the sense of smell. The following odour control procedures can be undertaken if required.

- Use of appropriate covering techniques to cover excavation faces or stockpiles
- Use of fine mist sprays
- Use of hydrocarbon mitigating agent used on the impacted areas/materials
- Adequate maintenance of equipment and machinery to minimise exhaust emissions.

As the majority of the site excavation is within sandstone rock, odours from organic soil is expected to be of low probability. Where isolated areas of potential Acid Sulphate soils are to be excavated, they will be handled and promptly treated in accordance with the Acid Sulphate Soils Management Plan.

12 HAZARDOUS MATERIALS

12.1 SITE SURVEY

A hazardous material inspection survey and report shall be completed for all areas within the project boundary.

The survey shall involve a visual inspection of representative construction materials, on-site testing of suspected materials and the collection and analysis of additional unidentified suspected asbestos-containing materials (ACM) in order to update the hazardous materials register for the site.

12.2 HAZARDOUS MATERIALS CONTROLS AND MONITORING

Prior to commencement, asbestos monitoring devices will be established to the site boundary if required.

Removal of any hazardous materials will be in strict accordance with Codes of Practice for the safe removal of the relevant hazardous materials. All hazardous materials removal works will be completed by licensed contractors.

All hazardous materials disposal will be recorded. All records will include vehicle details, material type, when it was removed, and where it was disposed.

12.3 DUST EMISSION MONITORING

Dust monitoring devices will be established to the perimeter of the site and adjacent properties, in locations to be agreed with the stakeholder / building owner / manager as required.

12.4 HAZARDOUS MATERIALS CLEARANCE

Air monitoring results and clearance certificates shall be provided at regular intervals (minimum weekly) by Mirvac during any hazardous materials and remediation phases should they be necessary. All certification shall be provided by a NATA accredited consultant. Construction works will not commence until hazardous materials clearance has been received.

12.5 GROUND CONTAMINATION

Mirvac shall implement a Remedial Action Plan (RAP) to identify and manage the remediation process on site, obtain a Remediation and Validation Report and Site Auditor sign off prior to completion.

12.6 GOODS STORED ON SITE DURING CONSTRUCTION

During construction, Mirvac will implement a hazardous materials register as part of the Work Risk Management Plans and audit procedures. The hazardous materials register will include the following materials / procedures:

- Fuels required for running of plant and equipment, these fuels will include: unleaded petrol, diesel and gas. All fuel will be contained and bounded as required under EPA guidelines, Department of Environment Climate Change and Work Cover requirements;
- Re-fuelling procedures and designated re-fuelling areas will be implemented and allocated to eliminate risks associated with spills and will also identify procedures to contain spills;
- Spill kits and adequate training will be provided to relevant construction staff and at locations identified as storage and refuelling zones.

Dangerous goods to be stored on site will also include; oxyacetylene, bonding agents etc. and as per the fuels listed above, these will also be stored as required under relevant Australian Standards, EPA guidelines, the Department of Environment Climate Change and Water, Work Cover requirements and Industry codes of practice.

Hazardous substances and dangerous goods will be stored in secure well ventilated areas. At all times, Mirvac will have regard to the storage and hazardous materials and their proximity of neighbouring properties.

Mixed class gas cylinders, e.g. oxy and acetylene, will be separated from other hazardous substances or flammable goods by a minimum distance of 3 metres as detailed in AS4332 Storage and Handling of Gases in Cylinders. The exception to this requirement is minor storage situations (a total capacity of all cylinders in the store of less than 2,000 litres) where both oxygen and acetylene can be stored together.

Storage of dangerous goods that 'exceed' the amounts outlined in the Mirvac Group Dangerous Goods Storage Guidelines require the premises (workplace) to be licensed under dangerous goods legislation and associated regulations. To minimise workplace risk and eliminate the need for licensing, except in exceptional circumstances, it is a Mirvac Group requirement that maximum volumes of Dangerous Goods do not exceed those quantities outlined in the abovementioned guidelines.

The storage area for hazardous substances and dangerous goods shall be constructed with an impervious floor and bunded with a minimum capacity of 110% of the largest container in the store, e.g. a store consisting three 20 litre substance containers requires a bunding capacity of 22 litres.

Mirvac will maintain a dangerous goods register and material safety data sheets for each product listed as well as having a procedure to deal with potential spills.

All relevant firefighting equipment, first aid facilities and relevant authorities contact details i.e. Fire, EPA will be displayed at prominent locations and included at site inductions.

13 WORKPLACE RISK MANAGEMENT

13.1 INTRODUCTION

Mirvac is fully committed to providing a safe working environment.

Each Work Place Risk Management Plan (WRMP) requires that equipment, workplaces and practices comply with relevant regulations and standards. Regular and ongoing reviews of these standards will be conducted and where higher standards are practical and desirable, they will be adopted. In addition, the company will:

- a) Provide adequate resources to satisfy this policy;
- b) Identify, control and reduce work-related hazards and risks that may produce injury, illness or asset damage;
- c) Identify, quantify and control to safe levels, those chemicals and physical agents in the workplace capable of causing ill health;
- d) Promote the Environmental, Health, Safety and Welfare of employees and subcontractors while respecting the privacy of individuals;
- e) Provide information, instruction and training for employees to increase their personal understanding of workplace hazards, promote safe working practices and ensure contractors are aware of and satisfy the Groups HSE expectations (refer to Appendix F – Mirvac Group Policies and Procedures);
- f) Consult employees and contractors in environmental, health and safety to reduce workplace hazards and risks;
- g) Consult with clients, industry bodies and others in the development of appropriate standards, control strategies and monitoring techniques, which comply, with the requirements of statutory authorities;
- h) Set short and long term goals in work health and safety management, and review performance against these goals.

Mirvac Management is responsible for highlighting the responsibilities of all workers and workplace safety whilst achieving a safe and healthy work environment. Mirvac employees and all other workers on the premises or site are responsible for working towards achieving and maintaining a healthy and safe workplace. The intent of this policy is to foster a culture within Mirvac employees and its subcontractors, raising health and safety awareness, and promoting active participation in the Health Safety and Environment (HSE) program and Work Life Balance.

13.2 SAFETY PLANS AND SAFE WORK METHOD STATEMENTS

The preparation, implementation and continued improvement of both Mirvac's Workplace Risk Management Plan and Job Safety Environmental Analysis is the key success in the management of the Project's Safety.

This plan includes:

- A description of the work to be undertaken;
- An identification of the hazards associated with the works; and
- A description of the hazard control measures to be used.
- Nominated persons responsible to ensure all persons are consulted into the safe work method statement and ensure controls are implemented.

A detailed Site Specific Workplace Risk Management Plan will be implemented by Mirvac prior to commencement of works and updated as required.

13.3 ACCOUNTABILITY OF KEY PERSONNEL

All Mirvac personnel have a role and are responsible for the environmental management of the project.

The key personnel accountable for the environmental management are as follows:

Workplace Managers

- Manage all reported hazards and environmental impacts in an appropriate and timely manner.
- Provide suitable supervision, instruction and facilitate training, to provide employees or service providers with the knowledge and skills required to undertake their work duties safely and in a manner which minimises risk to the environment.
- Establish the development of a Workplace Risk Management Plan in accordance with the Mirvac Group Health Safety Environment Management System and the objectives of the Health Safety Environment Policy.
- Facilitate the development of a workplace specific Induction and workplace rules in accordance with the Mirvac Group Health Safety Environment Management System.
- Verify that health safety and environment conditions stipulated in the contract are formally evaluated in the award of tendered or high risk contracts.
- Facilitate the review of Service Provider health safety and environment plans or procedures for specific work contracts including HSE Management Plan and Job Safety Environment Analysis or equivalent documentation using Mirvac Group form Service Provider Permit for Works to Proceed prior to the contractor commencing work at the workplace.
- Establish control methods and procedures for the reduction of noisy plant and equipment as outlined in the Mirvac Group Noise Management Procedure.
- Facilitate regular workplace inspections by the foreman or other area supervisors using the Mirvac Group Workplace Health Safety Environment Inspection and implement corrective action where deficiencies are identified.
- Secure areas such as flora or fauna habitats identified for environment protection.
- Record community contact by stakeholders affected by the project on Mirvac Group Community Contact Register and instigate action within 48 hours including a response to the initiator of the contact.
- Facilitate the resolution of any disputes which may arise over workplace health safety environment issues.

HSE Officer's:

- Undertake HSE duties as directed by the Workplace Manager consistent with the requirements of the Health Safety Environment Management System
- Identify work activities which have the potential for significant (material harm) impact on the environment and ensure they are planned and executed to minimise risk to the environment.
- Ensure a Community Contact Register is maintained and that any contact is recorded and corrective action implemented with a response to the community member within 48 hrs.
- Facilitate the dissemination of health safety environment information to all relevant personnel.
- Assist the Workplace Manager in developing a written corrective action plan to eliminate any deficiencies identified from any workplace audit by an internal or external third party. The time frame for

rectification of issues raised in any inspection, audit or other appraisal shall be determined by the Division/Regional HSE Manager but shall not exceed 30 days.

HSE Representative:

- Report on health safety environment performance.
- Assist in the development of a workplace specific Induction and workplace rules in accordance with the Mirvac Group
- Health Safety Environment Management System.

Site Supervisor:

- Develop appropriate and timely remedial action for reported hazards & environmental impacts.
- Provide suitable supervision, instruction and facilitate training, to provide employees or service providers with the knowledge and skills required to undertake their work duties safely and in a manner which minimises risk to the environment.

13.4 EMERGENCY RESPONSE AND EVACUATION

The Workplace Manager, or a nominated representative, in conjunction with other appointed Mirvac personnel will develop emergency procedures for the workplace including an emergency contact list to be displayed on the workplace notice board and at other prominent locations. The Emergency Response Contact Information Table is completed by the Workplace Manager or a nominated representative.

Each workplace has a stand-alone documented Emergency Response Plan (ERP) prepared in accordance with the Mirvac WRMP.

Group Emergency Response Procedure and tested regularly. Where an Ambulance is called to attend a workplace injury, a Standby Person has been nominated and positioned at the main entry to the workplace to assist Ambulance Officers to locate and attend the injured person as required by the Mirvac Group Emergency Response Procedure. A completed Mirvac Group Emergency Call procedure is displayed in the workplace which provides a summary of information required when making an emergency call.

14 COMMUNITY CONSULTATION

14.1 INTRODUCTION

Consultation will be made with the local community and relevant agencies at an appropriate time and setting by a Mirvac representative and our community engagement consultant Ethos Urban. The objectives of the consultation is to outline all major activities, operations and environmental performance of the project which may affect their amenity.

Through the use of sound management practices, positive engagement with stakeholders, authorities or customers can be achieved. Members of the community who are involved in Mirvac business can expect opportunities for discussion and feedback. Mirvac upholds high regards and is sensitive to social amenity and the lifestyle impacts of its business undertakings and mirrors it in response.

Commitment to community consultation will be achieved by:

- Community Information Sessions
- A dedicated Community Liaison Officer
- Weekly works meetings to highlight activities with potential impacts on neighbours
- A project newsletter
- Advance notification of higher impact works i.e. noisy or disruptive operations and the estimated durations
- A project email
- Dedicated Project Website
- Regular contact of neighbouring properties
- Individual stakeholder meetings on request
- Fortnightly reporting
- Site signage with 24 hour contacts

15 DISPUTE RESOLUTION

Mirvac acknowledges the potential for disruption as a result of the development, and proposes that a complaint procedure / complaint register be developed. Should a complaint or infringement occur, the following procedures are to be adopted in accordance with the Mirvac group wide standard systems:

- All complaints and infringements are to be brought to the attention of the Mirvac Site Manager immediately upon receipt;
- The Mirvac Site Manager shall investigate the complaint and ensure appropriate action is taken to address the complaint or infringement within the time frame HSE Objectives and Targets for Community Contact Issues detailed within the Mirvac Construction HSE Management Systems Manual;
- A Community Contact Notification form shall also be completed for all complaints and enquiries (refer to Appendix F – Mirvac Group Policies and Procedures);
- A copy of this documentation is to be filed within the site office.

The contact details of the Site Manager will be permanently shown on the site noticeboard to be displayed in a prominent location at the site entry as an emergency 24 hour contact.

16 APPENDICES

16.1 APPENDIX A – VEHICLE ACCESS & EGRESS PLAN / SITE HOARDING PLAN

LEGEND

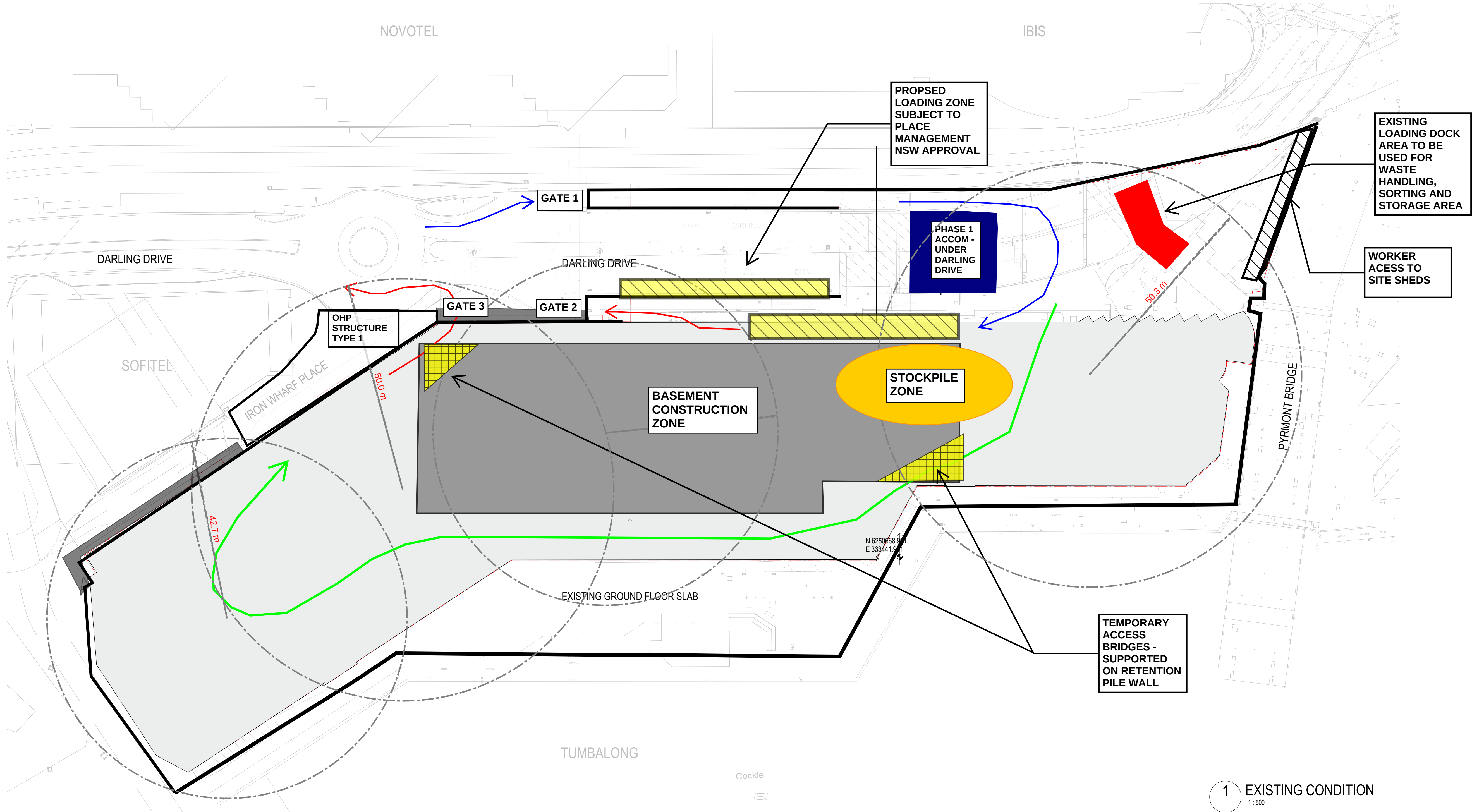
Incoming Vehicles/Trucks

Departing Vehicles

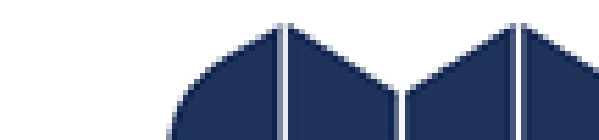
General Deliveries

Alternate Path for Vehicles / Trucks

NOTES
Laybacks and temporary access will be established to allow vehicular access into the building footprint.



1 EXISTING CONDITION
1 : 500

	LEGEND		MIRVAC CONSTRUCTIONS PTY LTD		HARBOURSIDE REDEVELOPMENT	
		A Class Hoarding	DRAWING TITLE:		BASEMENT CONSTRUCTION - LOGISTICS PLAN	
		DA Boundary	DRAWING NO:		HBR-SITE-MGR-CM-DRG-0151	
		B Class Hoarding	DATE: 22/09/2022		REVISION: B	
		MCPL Crane				

Hassell LTD ABN 24 007 711 435
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sydney@hassellstudio.com
Nominated Architects NSW:
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Glenn Scott 6842
Ross de la Motte 7398

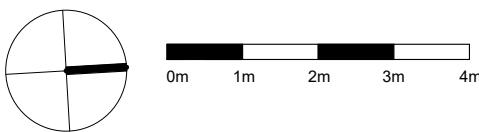
178 Sturt St | Adelaide | Australasia | SA 5000

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All dimensions are in millimeters unless noted otherwise
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REV DESCRIPTION DATE

LEGEND

NORTH SCALE



CLIENT
ENTER HERE

PROJECT
MIRVAC HARBOURSIDE

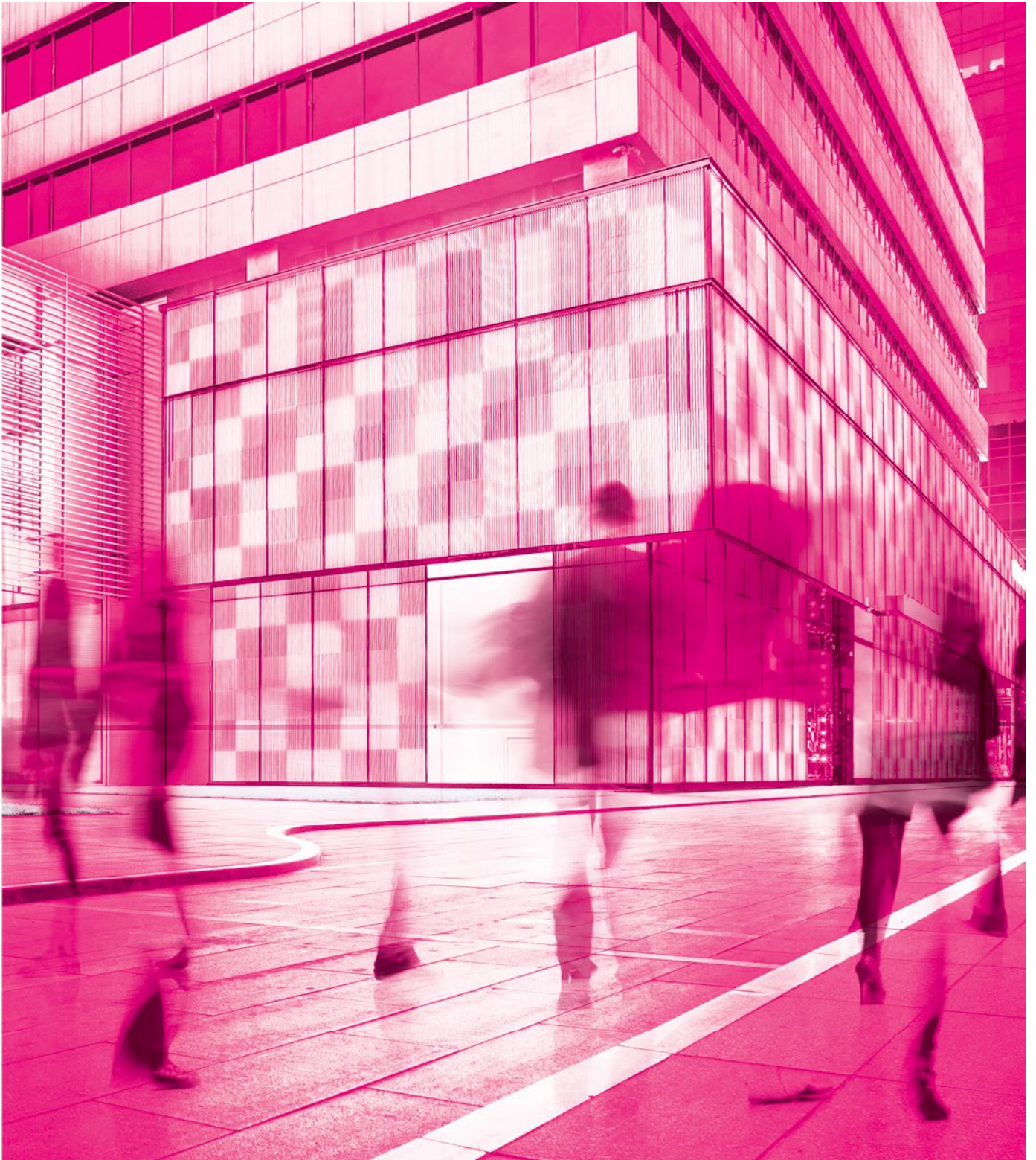
PROJECT NO.
016152-61A-P

DRAWING TITLE
EXISTING CONDITIONS

DRAWING NO.
AR-SSDA1 0200

SCALE @ A1
1 : 500

16.2 APPENDIX B – CONSTRUCTION TRAFFIC AND PEDESTRIAN MANAGEMENT (PARKING & TRAFFIC CONSULTANTS)



Construction Pedestrian and Traffic Management Plan;

**Harbourside Shopping
Centre (Demolition &
Excavation)**

For Mirvac

9th November 2022

**parking;
traffic;
civil design;
wayfinding;
ptc.**

Document Control

Harbourside Shopping Centre (Demolition & Excavation), CPTMP

Issue	Date	Issue Details	Author	Reviewed	For the attention of
1	07/03/2022	WIP Issue	JAJ/HL	AM	Anne Ng (Mirvac)
2	15/03/2022	Final	JAJ/HL	DB/AM	Anne Ng (Mirvac)
3	17/03/2022	Amendments	JAJ/HL	DB/AM	Anne Ng, Stephen Chamberlain
4	13/04/2022	Final	JAJ/HL	SW	Anne Ng, Stephen Chamberlain
5	15/06/2022	Final with Amendments	JAJ/HL	DB	Anne Ng, Stephen Chamberlain
6	19/07/2022	TfNSW Comments	JAJ	AM	Anne Ng, Stephen Chamberlain
7	28/07/2022	TfNSW Comments	JAJ	DB	Anne Ng, Stephen Chamberlain
8	09/11/2022	FINAL	JAJ	AM	Anne Ng, Stephen Chamberlain

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1. Introduction

1.1 Response to Initial TfNSW Comments

Council Comment	Relevant Section
<i>Bicycle NSW, other cycling groups and council may be consulted in relation to the impact to the cycle lane.</i>	section 3.18
<i>Document makes reference to road closures, if the road closures are along Darling Drive then the proponent will need to ensure it is on days that do not impact on rail replacement operations.</i>	section 3.14
<i>Partial and full lane closures subject to separate review, taking into account cumulative impact of other works (Sydney Metro West)</i>	section 3.13
<i>Approval from relevant forum would be required for any changes to kerb side parking arrangements and Works Zone</i>	section 3.12
<i>Existing CPTMPs for developments within or around the development site may be referenced in the CPTMP to ensure that coordination of work activities are managed to minimise impacts on the surrounding road network.</i>	Section 3.24
<i>Please describe clearly any potential impacts with mitigation measure to general traffic, public transport, cyclists, pedestrians, taxi zone and parking spaces within the vicinity of the site from construction vehicles.</i>	sections 3.12.1, 3.14, 3.17, 3.18
<i>Loss of parking spaces and taxi zone may have significant impacts for users. Could you please include no of spaces, details of impacts, discussion with key stakeholders/users/taxi groups/council and mitigation measures in CTMP. It is requested that efforts may be made where possible to avoid/minimise the potential impacts</i>	section 3.12.1
<i>Have the businesses in the vicinity /relevant stakeholders been consulted?</i>	section 3.5
<i>It is mentioned on plan (Darling Drive) access through existing columns tight for AV. Proper risk assessment may be done and satisfactory measures should be taken.</i>	section 3.11
<i>Is the timing of the truck arrivals and departures generally be outside of the commuter peak periods</i>	section 3.9, 3.10
<i>Details of specific measures to ensure the arrival and departure of construction vehicles do not cause additional queuing on public roads.</i>	section 3.9, 3.10, 3.11
<i>Has Traffic Guidance Scheme been developed for the proposed traffic management plan?</i>	Section 5

1.2 Project Summary

ptc. has been engaged by Mirvac to prepare a Construction, Pedestrian and Traffic Management Plan (CPTMP) for submission to Place Management NSW, Transport for NSW and the Department of Planning and Environment (DPE) in relation to the demolition and subsequent bulk excavation of the existing Harbourside Shopping Centre located at 2-10 Darling Drive, Sydney.

Harbourside Shopping Centre currently accommodates 114 retailers including food and beverage restaurants, retail, and entertainment outlets.

The proposal to demolish and replace Harbourside is a critical component of the Pyrmont Peninsular urban renewal program.

In addition to improved retail space as well as new commercial and residential units, the proposed project will also deliver a widened waterfront boulevard with more seating, a new pedestrian bridge connecting to Pyrmont and a north-facing public plaza. The location of the subject site is outlined in Figure 1.1.



Figure 1.1 – Site Location (Source: MetroMap)

1.3 Site Context

Harbourside Shopping Centre lies on Place Management NSW property on the western foreshore of Cockle Bay, Darling Harbour, Sydney. The general vicinity of the site comprises some RE1 Public Recreation areas and B4 land use zones. The surrounding land uses are illustrated in Figure 1.2.



Figure 1.2 – Local Land Use Map (Source: NSW Planning Viewer)

1.4 Development Site

The proposed development relates to the site at 2-10 Darling Drive, Sydney which is illustrated in Figure 1.3. The site is bordered by Darling Drive on the west, and the Darling Harbour foreshore to the east. A private access road for Sofitel Sydney Darling Harbour lies on the southern side of the site.

The site has a land area of approximately 14,500m² with a site frontage of approximately 200m along Darling Drive to the east, and a similar frontage to the east with the foreshore walkway.

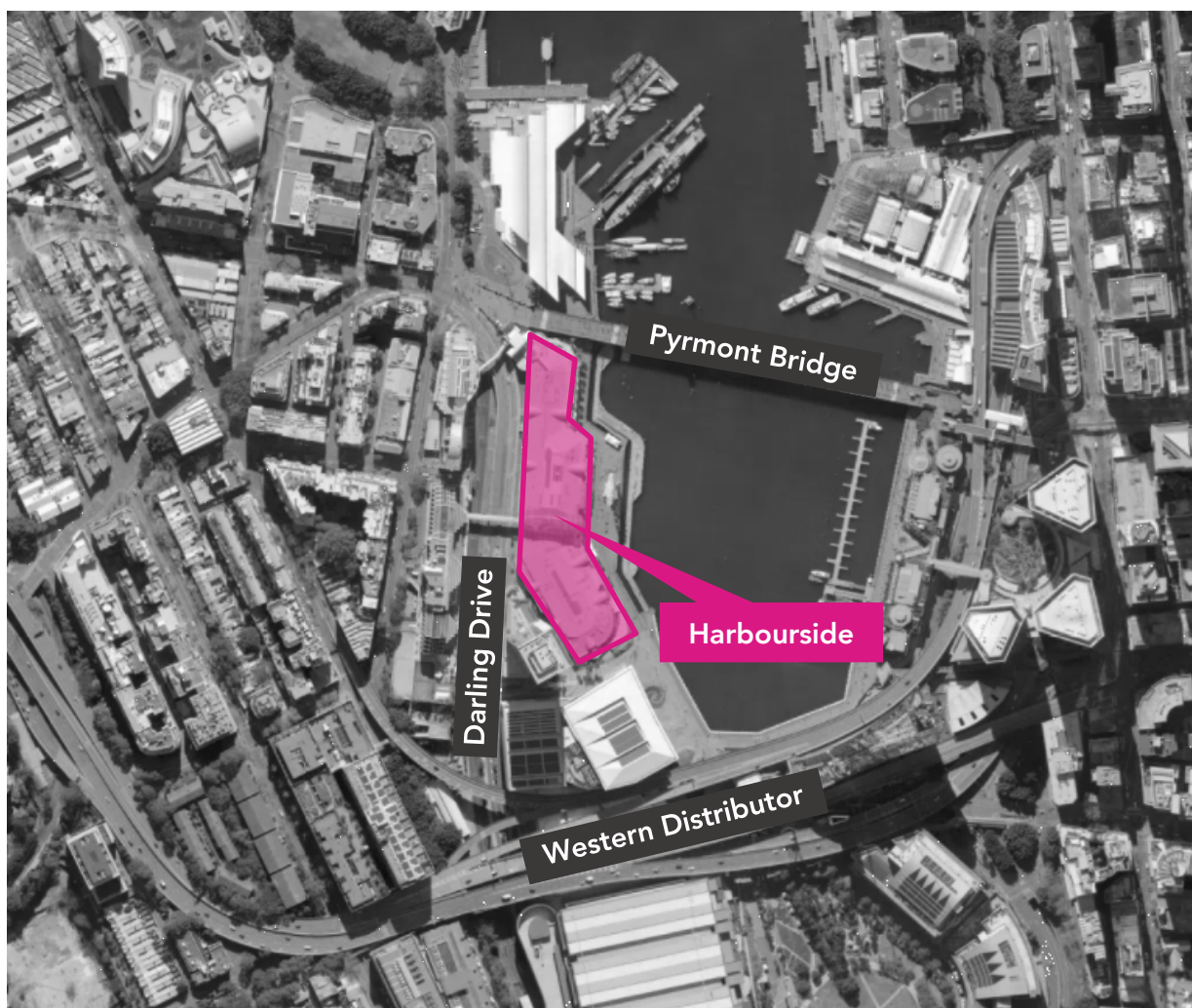


Figure 1.3 – Aerial View of Subject Site & Surrounds (Source: Nearmap)

1.5 Development Proposal

The Harbourside development proposal is a critical component of the Pyrmont Peninsular urban renewal program. In addition to increased retail space as well as new commercial and residential units, the project will also deliver a widened waterfront boulevard with more seating, a new pedestrian bridge connecting to Pyrmont and a north-facing public plaza.

1.6 Purpose of this Report

This CPTMP addresses the potential construction activity associated with the Harbourside development, including:

- Location of any proposed Work Zones, site boundary, and any site office, crane locations, material and waste storage area and other components as necessary;
- Haulage routes and predicted construction traffic;
- Construction vehicle access arrangements;
- A heavy vehicle swept path assessment, demonstrating feasibility of any proposed Works Zones or site access;
- Proposed construction hours;
- Estimated number of construction vehicle movements;
- Construction program;
- Any potential impacts to general traffic, cyclists, pedestrians, and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works; and
- Measures proposed to mitigate any associated general traffic, public transport, pedestrian, and cyclist impact.

In view of the above, included as Attachment 1, is a copy of the Standard Conditions which apply to all construction projects in the City of Sydney. These conditions have also been considered in the preparation of this CPTMP.

This CPTMP is a live document that requires ongoing review and updating of information as it becomes available or changes occur. The information presented in this document at the time of publication is the most recent and relevant information available. Traffic Guidance Schemes (TGS) will be added once the Traffic Control company has been engaged. These TGS must be included as part of this continuously updated CTMP.

1.7 Draft DA Conditions of Consent

This CPTMP also addresses the following Draft DA Conditions of Consent issued by the City of Sydney, as outlined in Table 1.1. The Draft DA Conditions of Consent also incorporate requirements for the CPTMP raised by TfNSW.

Table 1.1: Draft DA Conditions of Consent

Condition		Report Reference
2: Traffic Management and Access	An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety	Sections 3.13 to 3.18
	An assessment of road safety at key intersections and locations subject to heavy vehicle construction traffic movements and high pedestrian activity	Section 2.3 and 2.3.1
	An assessment of impacts on the Sofitel Hotel and the ICC and program	Section 3.11 and Section 3.23
	Details of construction program detailing the anticipated construction duration and highlighting significant and milestone events during the construction process	Section 3.7
	Details of anticipated peak hour and daily construction vehicle movements to and from the site	Section 3.9
	Details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site	Section 3.22
	Details of temporary cycling and pedestrian access during construction	Section 3.18
	Emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times).	Section 3.15
	Measures to reduce reliance on private vehicle travel for construction works	Section 3.14 and Section 3.22
	Proposed management and mitigation measures to address any impacts on traffic, pedestrian and cycling networks	Section 3.17 and Section 3.18 and Section 3.26

1.8 ptc Response to Comments (CoS and Public Submission)

Comment	Relevant Section
Draft Suggested Conditions of Consent Items	
"Details of specific measures to ensure the arrival of construction vehicles to the site do not cause additional queuing on public roads;"	See Section 3.9 and 3.9.1
"Details of the monitoring regime for maintaining the simultaneous operation of buses, light rail and construction vehicles on roads surrounding the site"	See Section 3.14, 3.14.1, 3.14.2
City of Sydney Items	
"Safety of Intersections Section 2.3 of the preliminary CPTMP sets out the historical crash data for the identified key intersections. However, it doesn't benchmark it or provide any commentary or context to help understand if these numbers are particularly high or noteworthy in any way Further clarification is sought to understand how many, if any, of the crashed involve pedestrians given that Pyrmont Bridge Road is a high pedestrian area, particularly the eastern end"	See updated Section 2.3, 2.3.1
"Construction vehicle routes Construction traffic should be minimised on Pyrmont Bridge Road, particularly if the construction timeline overlaps with the Pyrmont Metro construction. The City's preferred ingress route from the west is via Harbour Street and Pier Street. However, detailed comments on vehicular construction routes can be made when a formal CPTMP is submitted"	See Section 3.10, 3.10.1
"Types of vehicles Section 3.8 of the Preliminary CPTMP outlines that 12.5 metre vehicles are the largest expected vehicles while Section 3.11 states 19 metres. Clarification should be provided, noting that the City will not accept articulated vehicles."	See Section 3.8. Section 3.19 details special deliveries requiring larger vehicle use
"Cycling on Darling Drive Cyclists should be advised of disruptions ahead of time via Variable Messaging Signs (VMS) and given information about alternative routes for example through Tumbalong Park in this instance."	See Section 3.18, 3.18.1
"Work Zones The City makes note that Figure 3.3 of the preliminary CPTMP is missing the yellow route, which should show the path vehicles take for general deliveries. This should be clarified."	See Section 3.12 This issue has been clarified.

Public Submission Items	
"The intersection of Darling Drive, Murray St and Pyrmont Bridge Rd is already subject to heaving vehicle and pedestrian traffic. The use as the major thoroughfare for trucks (estimated 100 loads per day) to and from the development site will exacerbate this issue. There have been significant pedestrian accidents and narrow escapes on this intersection. The Traffic Management Plan only seems to deal with pedestrian access around the site, not impact to pedestrians in the area."	See Section 2.3 and 2.3.1 for information regarding crash data and intersection safety. See Section 3.17, 3.18 for pedestrian and cyclist management strategies
"Pedestrian and cycle traffic during peak hours to Pyrmont Bridge is intense in both directions. The plan does not seem to address this."	See Section 3.17, 3.18 for pedestrian and cyclist management strategies. See Section 3.9 for details of truck movements outside of peak hours

2. Transport Environment

2.1 Road Hierarchy

Harbourside is located in the City of Sydney Local Government Area (LGA) and is serviced by a mix of state, regional and local roads as presented in Figure 2.1.

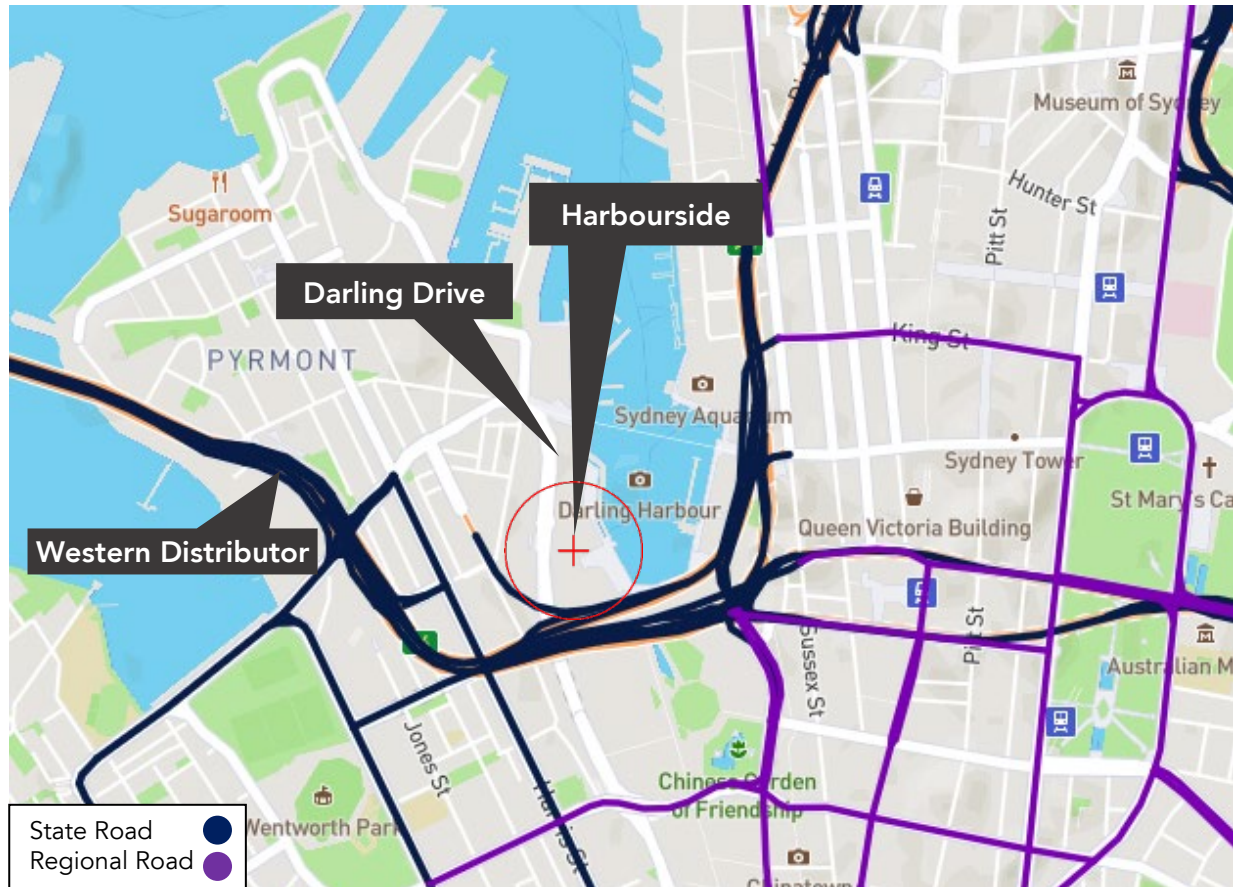


Figure 2.1 – Road Hierarchy (Source: TfNSW State and Regional Roads)

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy:

- State Roads: Freeways and Primary Arterials (TfNSW managed);
- Regional Roads: Secondary or sub-arterials (Council managed, partly funded by the State);
- Local Roads: Collector and local access roads (Council managed/Place Management NSW managed).

Darling Drive

Road Classification	Local Road (Place Management NSW)
Alignment	North – South
Number of Lanes	Varies
Carriageway Type	Divided
Carriageway Width	Varies
Speed Limit	50km/hr
School Zone	No
Parking Controls	Parking not permitted
Forms Site Frontage	Yes



Figure 2.2 – Darling Drive (Southbound)

Pymont Bridge Road

Road Classification	Local and State Road
Alignment	East – West
Number of Lanes	Varies
Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	40km/hr
School Zone	No
Parking Controls	Parking not permitted
Forms Site Frontage	No

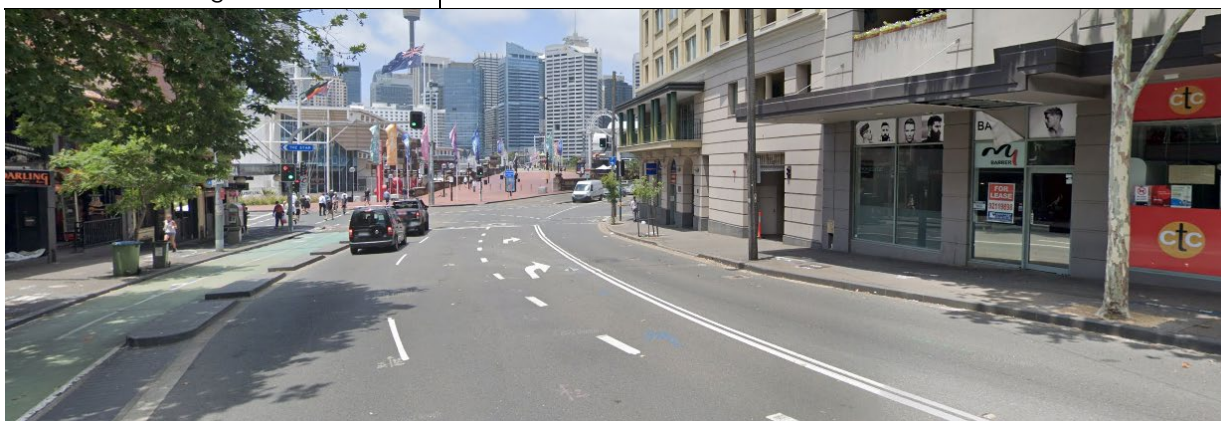


Figure 2.3 – Pymont Bridge Road (Westbound)

Western Distributor off-ramp to Pymont Bridge Road

Road Classification	State Road
Alignment	South
Number of Lanes	2
Carriageway Type	Undivided
Carriageway Width	6m
Speed Limit	60km/hr
School Zone	No
Parking Controls	Parking not permitted
Forms Site Frontage	No



Figure 2.4 – Western Distributor off-ramp (Southbound)

Iron Wharf Place

Road Classification	Local
Alignment	East - West
Number of Lanes	1
Carriageway Type	Divided
Carriageway Width	3.8m
Speed Limit	Shared Zone
School Zone	No
Parking Controls	No Parking
Forms Site Frontage	No

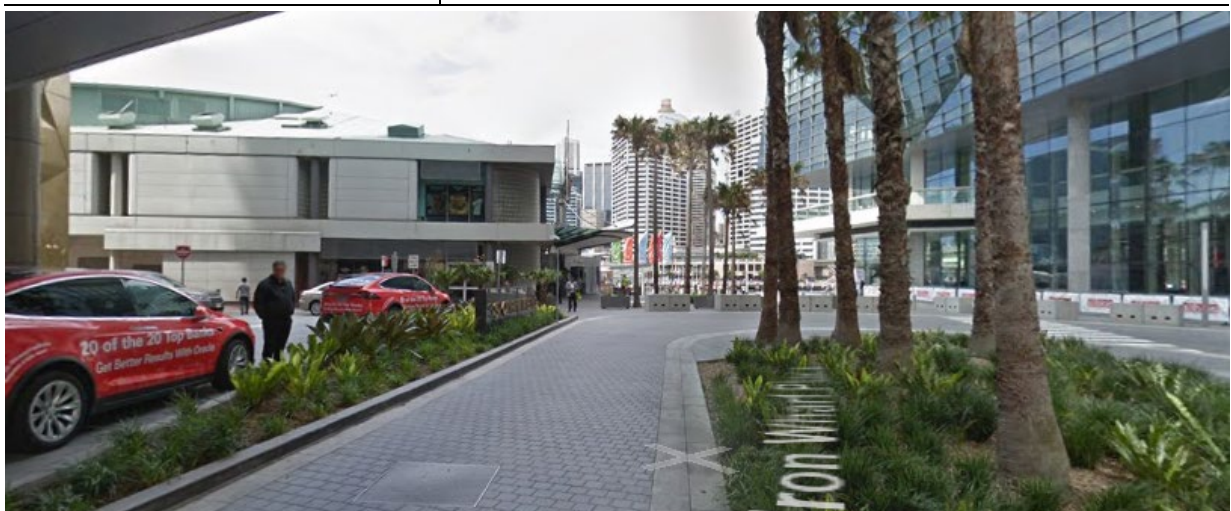


Figure 2.5 – Iron Wharf Place (Eastbound)

Wattle Street

Road Classification	State
Alignment	North – South
Number of Lanes	2
Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	40km/hr
School Zone	No
Parking Controls	No Parking
Forms Site Frontage	No



Figure 2.6 – Wattle Street (Northbound)

2.2 Key Intersections

The key intersections in the vicinity of the development site and their characteristics are listed below:

- | | |
|--|---------------------------------------|
| 1. Wattle Street / Pyrmont Bridge Road | 4-arm signalised intersection; |
| 2. Western Distributor Off-ramp / Pyrmont Bridge Road | Priority slip-lane; |
| 3. Pyrmont Bridge Road / Pyrmont Street | 4-arm signalised intersection; |
| 4. Pyrmont Bridge Road / Darling Drive / Murray Street | 4-arm signalised intersection; |
| 5. Darling Drive / Iron Wharf Place Access Road | 3-arm priority controlled roundabout; |

The key intersections are illustrated in Figure 2.7.

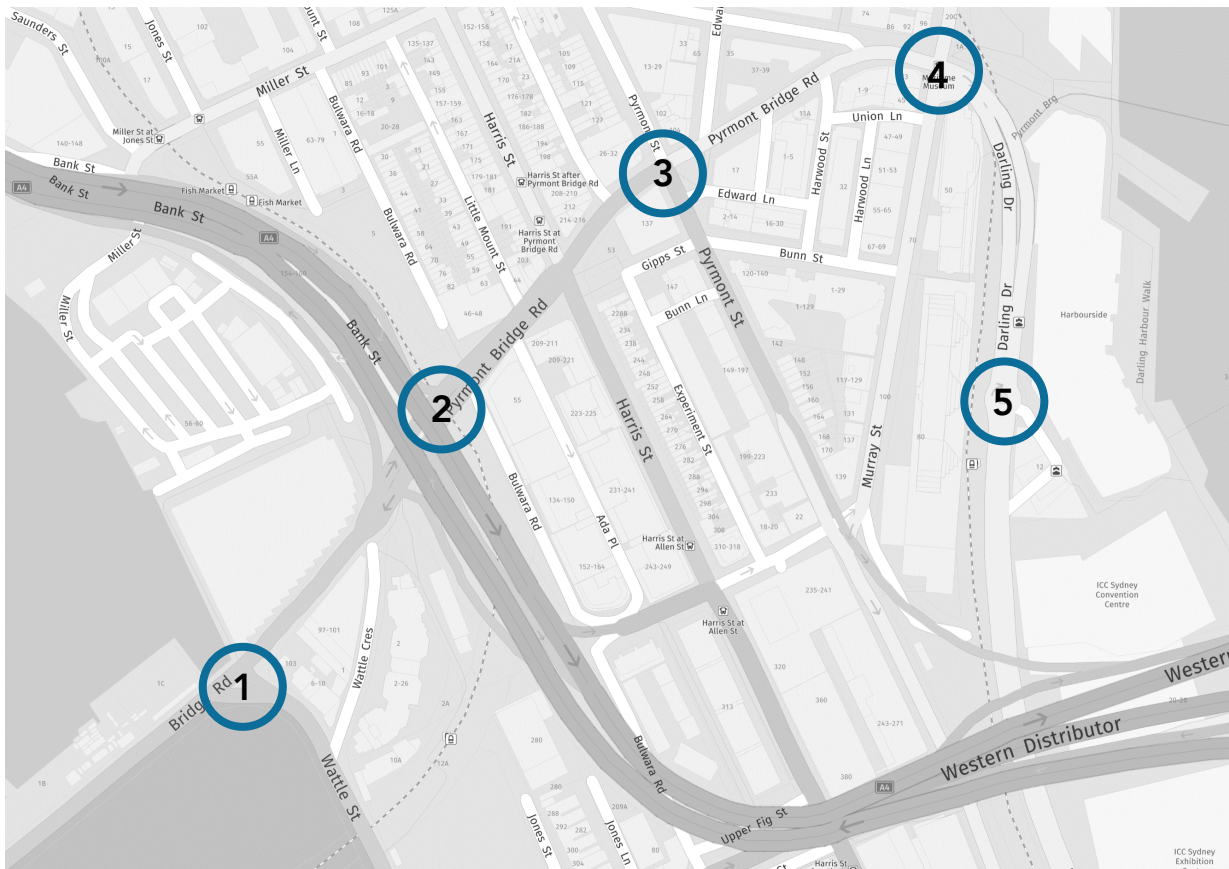


Figure 2.7 – Key Intersection Locations (Source: HERE WeGo)

2.3 Crash Statistics

Crash statistics data for the key intersections mentioned in Section 2.2 is shown in the following figures and provides detail regarding the road safety of these intersections.

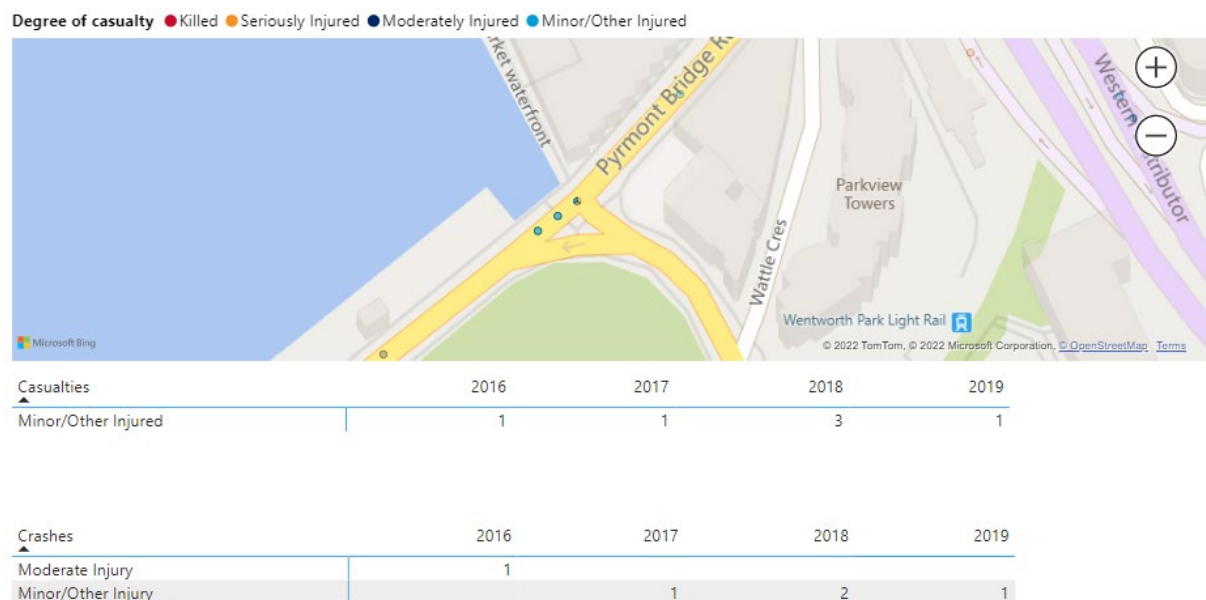


Figure 2.8 – Pymont Bridge Road / Wattle Street

A total of 6 minor casualties and 5 minor to moderate crashes at this intersection since 2016.

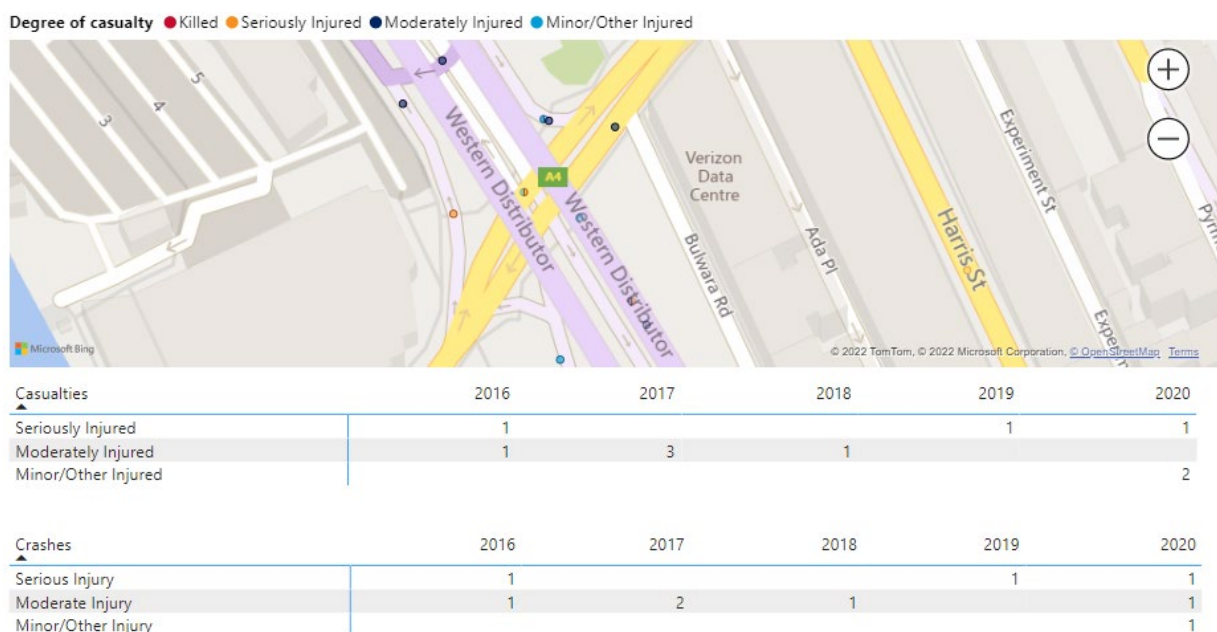


Figure 2.9 – Pymont Bridge Road / Western Distributor

A total of 2 minor casualties, 5 moderate casualties, and 3 serious casualties, as well as 1 minor, 5 moderate, and 3 serious crashes at this intersection since 2016.

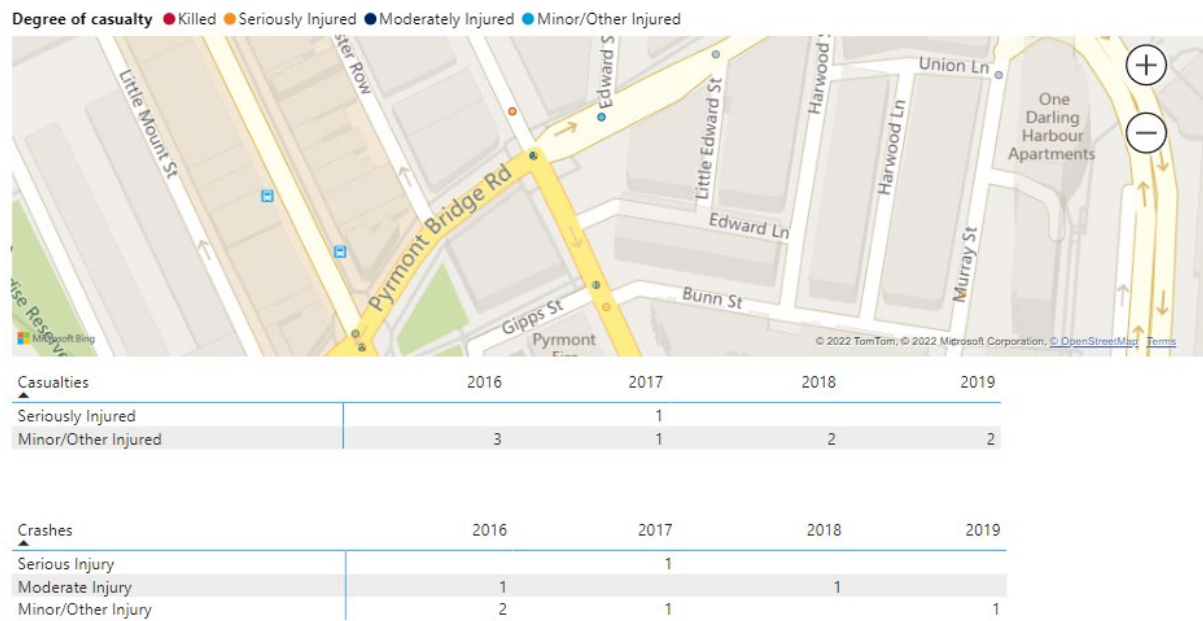


Figure 2.10 – Pymont Bridge Road / Pymont Street

A total of 8 minor casualties, and 1 serious casualty, as well as 4 minor, 2 moderate, and 1 serious crash at this intersection since 2016.

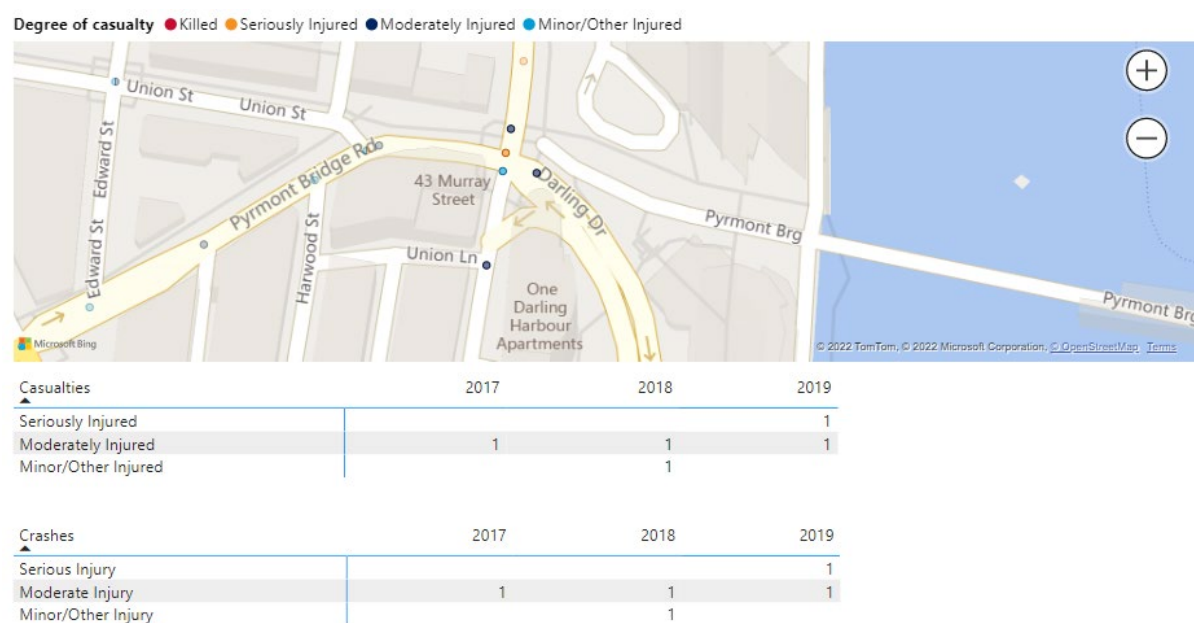


Figure 2.11 – Pyrmont Bridge Road / Darling Drive / Murray Street

A total of 1 minor casualties, 3 moderate casualties, and 1 serious casualty, as well as 1 minor, 3 moderate, and 3 serious crashes at this intersection since 2017. Surrounding intersections have similar, or even worse crash statistics than the intersection of Darling Drive and Murray Street.

In comparison to other intersections along the truck route, the intersection of Murray Street and Darling Drive has a relatively low accident rate. It is noted that most of these incidents were recorded in hours of darkness, and therefore mostly outside of the construction hours when trucks would be passing through the intersection.

Given that the Harbourside centre will be closed during demolition, it is expected that far fewer pedestrians will be active in the area. Truck movements related to the site works are to occur outside the peak traffic hours, and as the centre is closed, any truck activity that would typically occur due to the operation of the centre will cease. Overall, the impacts of construction traffic on the intersection, particularly in terms of safety, are minimal and do not bring about concern.

Despite the comparatively lower incident history and expected reduction in pedestrian and cyclist traffic around the site, mitigation measures in Sections 3.17 and 3.18 for pedestrians and cyclists are employed as further control measures.

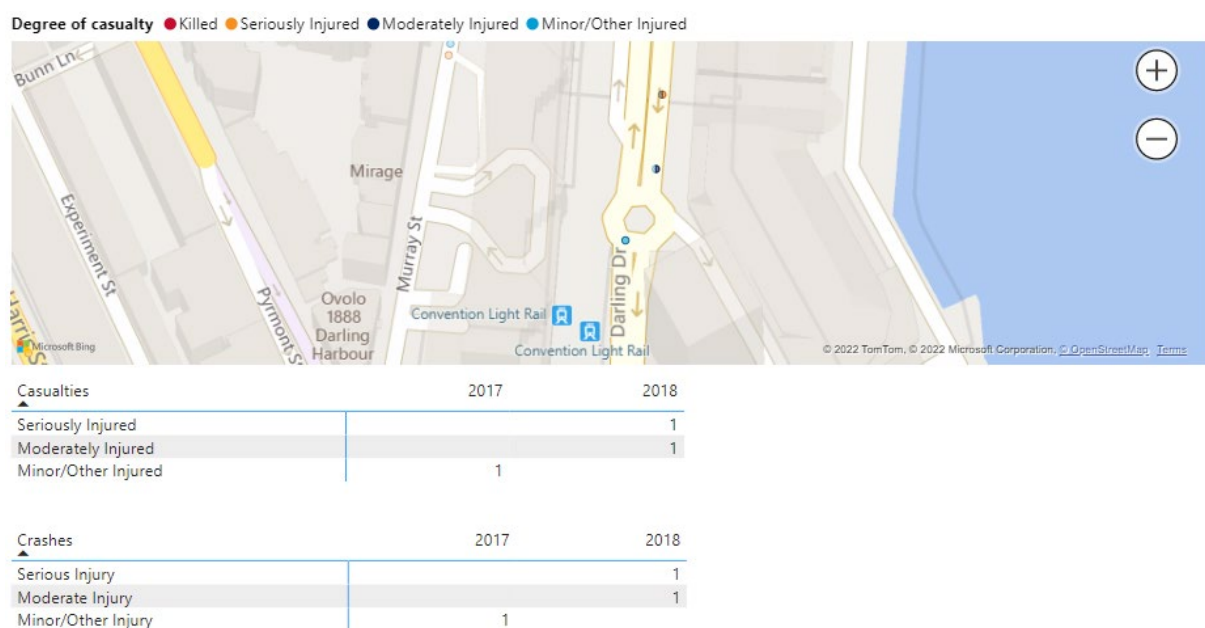


Figure 2.12 – Darling Drive

A total of 1 minor, 1 moderate, and 1 serious casualty, as well as 1 minor, 1 moderate, and 1 serious crash at this intersection since 2017.

2.3.1 Intersection Safety and Crash Statistic Summary

As shown in Figure 2.8 through Figure 2.12, the majority of accidents occurring are minor to moderate in severity, and over a 5 year period, the recording of these accidents does not bring about concern for the safety of the key intersections. All construction vehicles are constrained to the carriageway and are to follow the road rules and intersection controls. All construction traffic is to occur outside the peak hours of traffic, and thus impacts are minimised. These intersections are not deemed to be of significant risk to pedestrians or cyclists, based on the analysis presented above.

Further suggested mitigation measures to reduce vulnerable traffic (pedestrian and cyclists) along Darling Drive and at the Darling Dr / Pymont Bridge intersection are detailed in Section 3.17 and 3.18.

2.4 Public & Active Transport

The locality has been assessed in relation to the available public transport options that may serve the various users of the subject development. This assessment considered the *NSW Planning Guidelines for Walking and Cycling (2004)*, which suggests that a distance of 400-800m is a walkable catchment and 1,500m is a suitable cycling catchment when the development is within proximity to public transport. Figure 2.13 presents the catchment within 800m radius of the site.

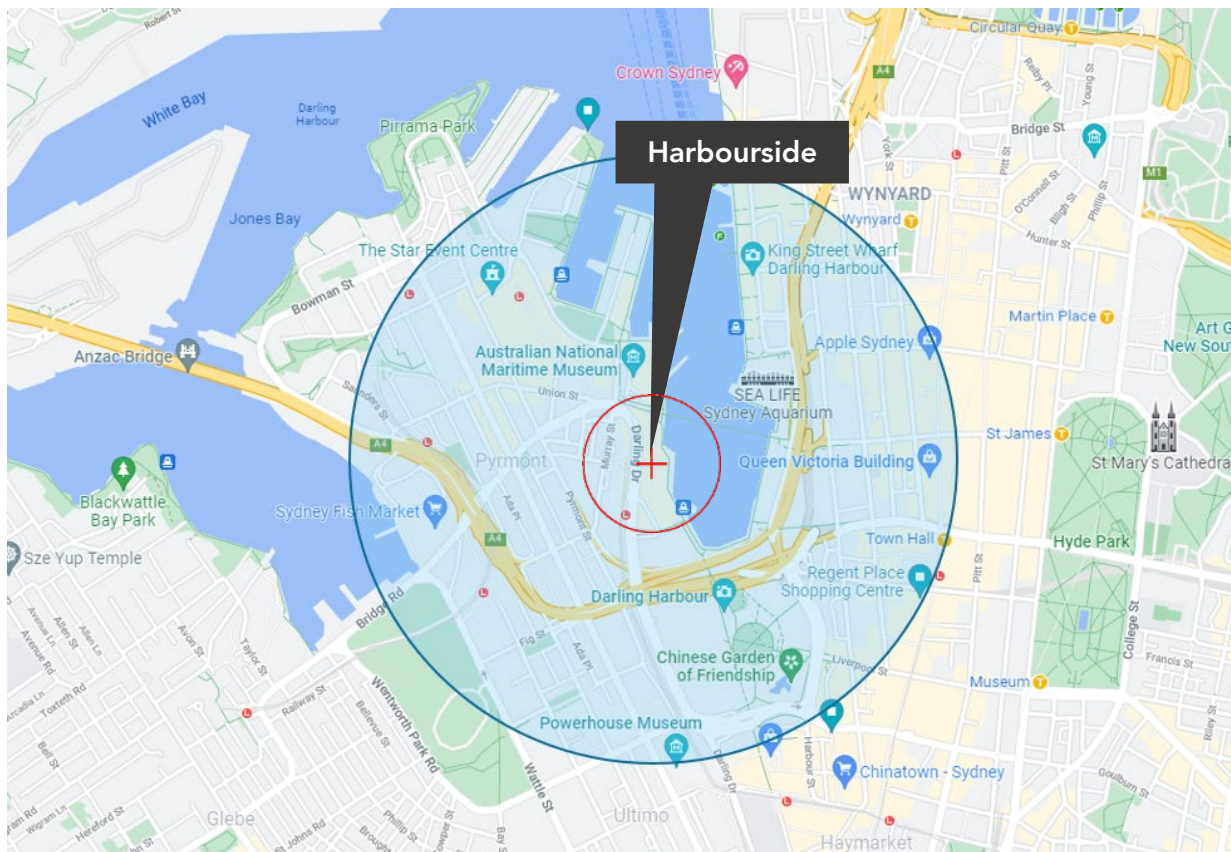


Figure 2.13 – 800m Walking Catchment surrounding the Subject Site

Given that the subject site is located near to the Sydney CBD, there is abundant public transport facilities within close proximity, all of which provide high frequency services throughout each day, including train services, bus routes, ferry and light rail options, as outlined in the following sub-sections.

2.4.1 Bus

The site is serviced by the 389 bus service, within the 800m walking catchment and provides bus connection to the city and further public transit modes. A summary of the available bus routes is illustrated in Figure 2.14.

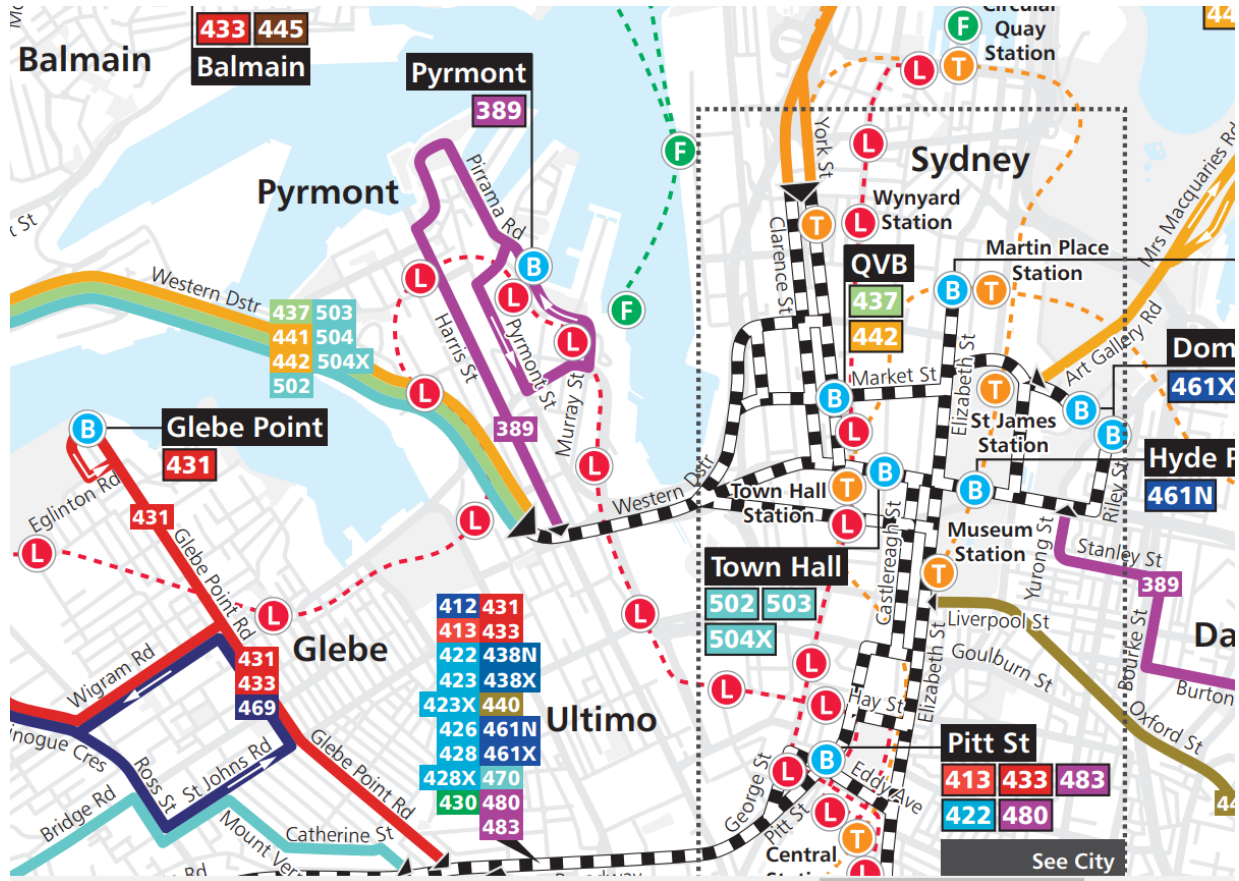


Figure 2.14 – Surrounding Bus Routes (Source: TfNSW)

2.4.2 Train

Harbourside is located 800m (12 minutes' walk) from Town Hall Station, and less than a 20-minute walk to Wynyard and St James stations. These railway stations provide access to extensive train services connecting to the Sydney Metropolitan area, providing frequent services seven days a week.

Train Line	Station	Coverage (to and from, and vice versa)	Approximate Frequency
T4	Town Hall	Bondi Junction to Waterfall or Cronulla	Every 4-10 minutes during peak hours Every 10-15 minutes during off-peak
T8	Town Hall	City to Macarthur via Airport or Sydenham	Every 3-15 minutes during peak hours Every 10-20 minutes during off-peak
T9	Town Hall	North Shore to Hornsby via City	Every 6-15 minutes

In summary, the train services at Town Hall Station are frequent and provide excellent connection throughout the broader Sydney Trains network.

2.4.3 Ferry

The development site is 450m walking distance from Pyrmont Bay Wharf. Due to the proximity of the ferry wharf, it is anticipated that the ferry services provide a convenient transport option for construction workers, site employees and visitors. The Pyrmont Bay Wharf provides direct access to Circular Quay, or access to Parramatta via Barangaroo. Figure 2.16 presents the layout of the ferry service areas.

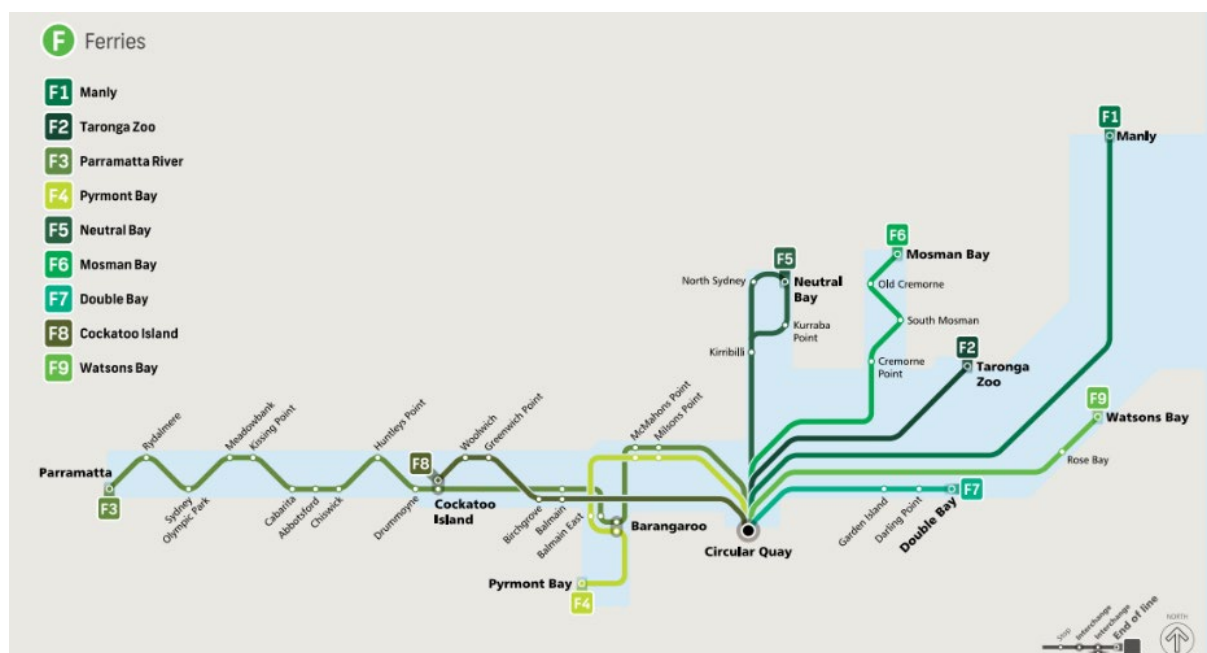


Figure 2.16 – Ferry Service Map

A summary of the ferry services is presented in Table 2.2.

Table 2.2: Summary of Ferry Services

Route No.	Coverage	Frequency
F4	Pyrmont Bay to Circular Quay	Every 20-30 minutes at peak from Mon-Fri Every 15-30 minutes on weekends

2.4.4 Light Rail

The Sydney light rail network provides connectivity between the Dulwich Hill, Circular Quay, Randwick, Kingsford and Central stations. The Pyrmont Bay and Convention light rail stations are located within 200m (approximately 3-minute walk) from the site, thus providing convenient access to high frequency light rail services which operate every 15 minutes.

The Sydney Light Rail network map is illustrated in Figure 2.17.

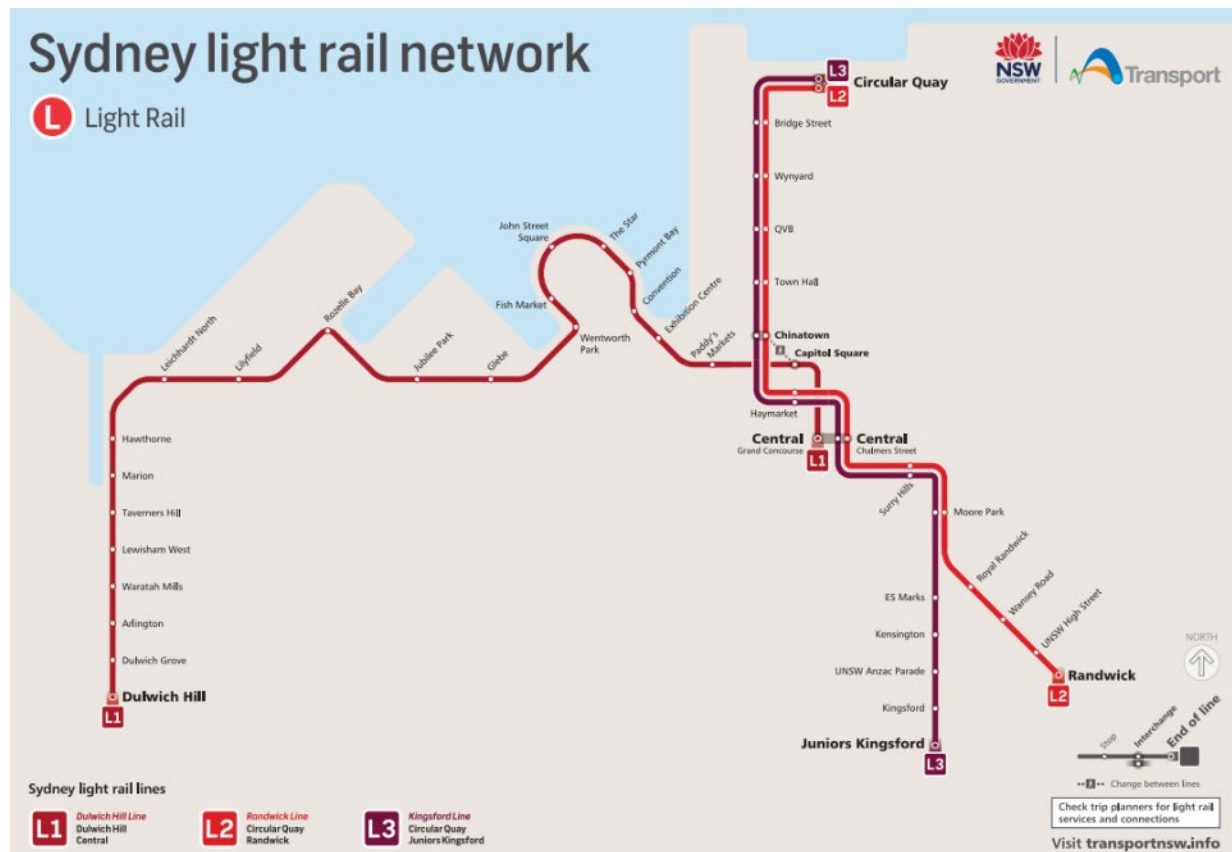


Figure 2.17 – Sydney Light Rail Network Map (Source: TfNSW)

2.4.5 Car Share

In addition to the public transport options, there are car share facilities available in the vicinity of the site for those who wish to access a vehicle. Figure 2.18 presents the nearby car share facilities of the popular car share provider GoGet.

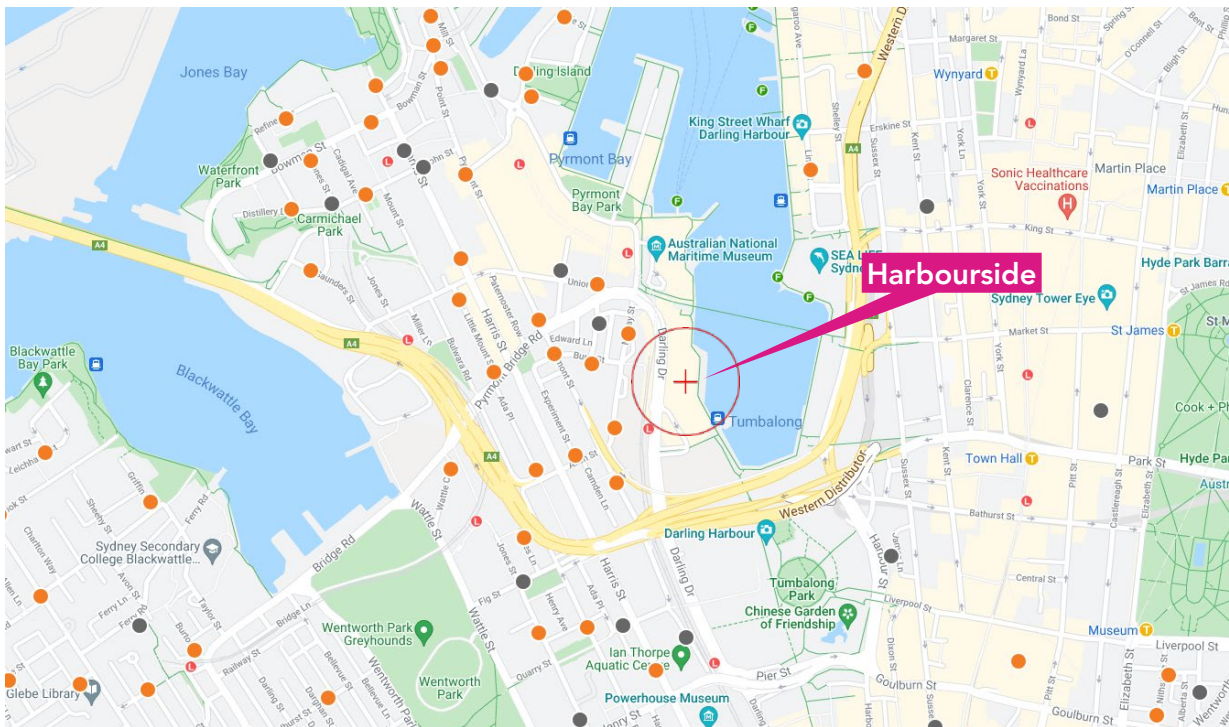


Figure 2.18 – Car Share Facilities in the vicinity of the Site (Source: GoGet)

2.4.6 Cycling

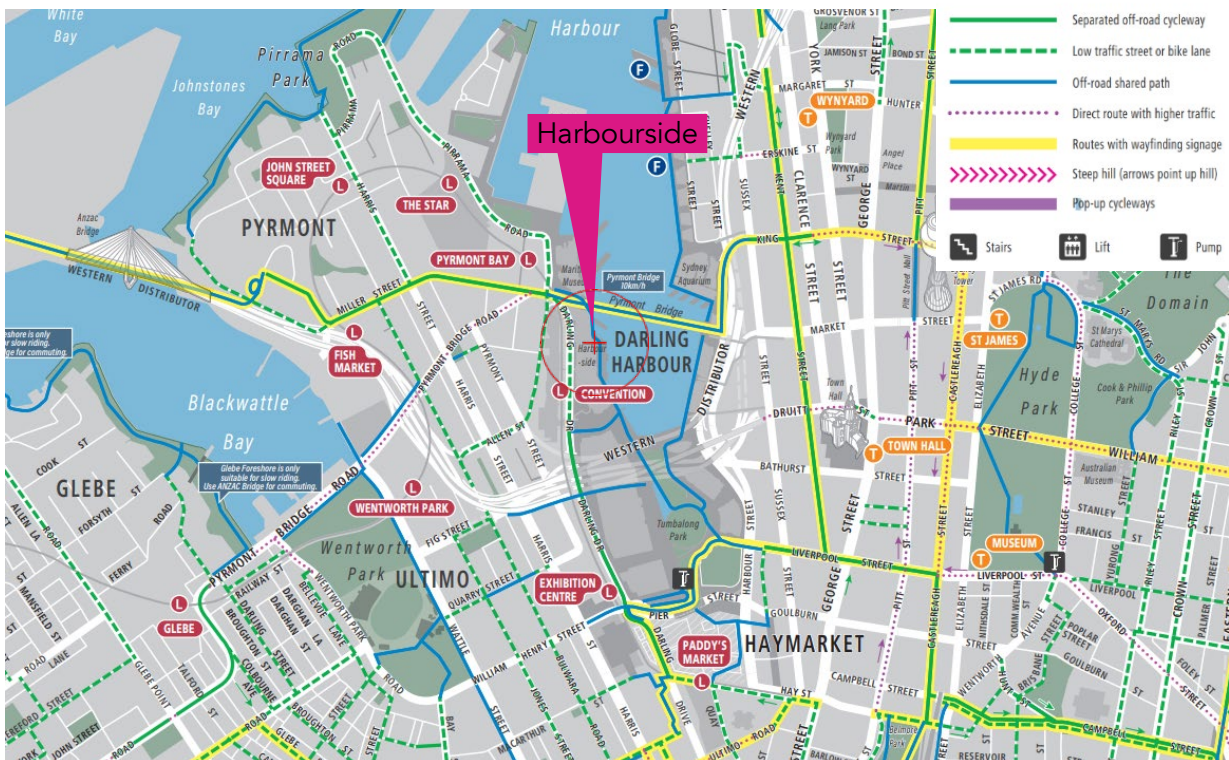


Figure 2.19 – Sydney Cycling Map (Source: City of Sydney)

3. Construction Traffic Management Plan

The following sections outline the proposed construction activity, anticipated timeline as well as the proposed management measures relating to vehicular access, pedestrian access and other key considerations for the delivery of the project.

3.1 Objectives

The traffic management plan associated with the construction activity aims to ensure the safety of all workers and road users within the vicinity of the construction site and the following are the primary objectives:

- To minimise the impact of the construction vehicle traffic on the overall operation of the road network;
- To ensure continuous, safe and efficient movement of traffic for both the general public and construction workers;
- Installation of appropriate advance warning signs to inform users of the changed traffic conditions;
- To provide a description of the construction vehicles and the volume of these construction vehicles accessing the construction site;
- To provide information regarding the changed access arrangement and also a description of the proposed external routes for vehicles including the construction vehicles accessing the site; and
- Establishment of a safe pedestrian environment in the vicinity of the site.

3.2 Traffic Management Planning Process

Temporary Traffic Management (TTM) for the project has been planned in accordance with Transport for NSW, *Traffic control at work sites – Technical Manual, Issue No.6.0*, 14 September 2020 (TCAWS). The process is shown in Figure 3.1.

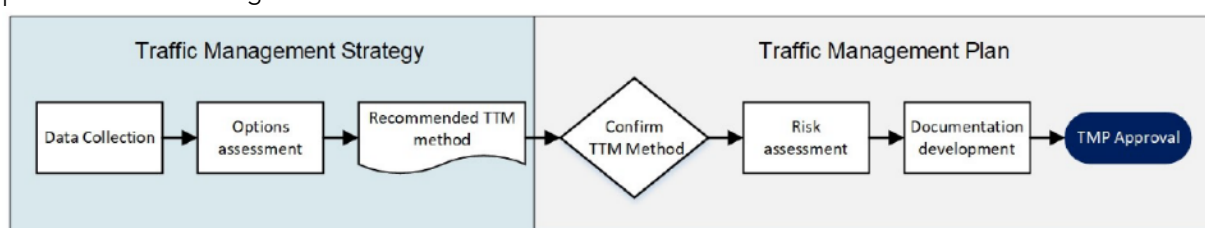


Figure 3.1 – Traffic Management Planning Process

An iterative process is being adopted in collaboration with relevant stakeholders to adopt the most appropriate traffic management approach and develop the associated documents for the work.

3.3 Traffic Management Strategy

A traffic management strategy has been chosen to support the appropriate allocation of time, funds and resources for the project, and allow for consultation in determining the safest and most efficient way for road users to interact with the work site. The following have been considered in determining the TTM method:

Detour Options

Detours are necessary or proposed by the client during the removal of the existing pedestrian bridge on Darling Drive. This detour and road closure will coincide with the existing closure required for Light Rail servicing carried out by TfNSW and Transdev.

Site Location

The site of the works contains existing parking and infrastructure that may obstruct signs and devices needed for certain strategies.

Work Area

The area needed to safely perform the work does not require the full closure of sections of road with the exception of during the removal of the existing pedestrian bridge which will require a road closure of Darling Drive. This detour and road closure will coincide with the existing closure required for Light Rail servicing carried out by TfNSW and Transdev.

Vulnerable Road Users

Desire lines of pedestrians, cyclists, motorcyclists do impact on works or create undesired interaction between these road users and traffic. In particular, the existing cycleway on Darling Drive presents a potential conflict point between cyclists and the works.

Community Facilities and Needs

The presence of the Sofitel Sydney Darling Harbour in the vicinity of the site does create conflict with the work.

3.4 Decision of TTM Method

After considering the factors in Section 3.3 and the recommendations of the client, the TTM method will be a combination of the "Past (isolating or engineering)" and "Around (elimination)" methods. Specifically, the TTM method for Darling Drive is "Past (isolating or engineering)" as traffic will be separated from the work area, except in the instances during the pedestrian bridge removal, where "Around (eliminate) TTM method, including a detour, will be utilised.

Traffic Control may be required for trucks to return safely to the road from site gates given the potential for sight limitations below the Darling Drive ramp and in the nearby vicinity of the roundabout

Road closures and detours will require traffic controllers and traffic guidance schemes, as well as appropriate wayfinding signage.

3.5 General Requirements

In accordance with TfNSW (formerly RMS) requirements, all vehicles transporting loose materials will have the entire load covered and/or secured to prevent any large items, dust or dirt particles depositing onto the roadway during travel to and from the site. All subcontractors must be inducted by the Principal Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. The Principal Contractor will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicles operating to and from and within the site shall do so in a manner, which does not create unnecessary noise or vibration.

No tracked vehicles will be permitted or required on any paved roads except for delivery and collection where suitable protection is to be used. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances. No construction vehicles are permitted to double park, or park on the public road.

The application/contractor is required to follow and abide by the specific standard requirements for construction management as set out within the City Standard Requirements for a Construction and Pedestrian Traffic Management Plan. These standard requirements are attached as Attachment 1.

Stakeholders and businesses in the local vicinity shall be consulted by the principal contractor, Mirvac, to ensure clear communication of the ongoing works and impacts, as well as mitigation measure, that will ensue.

3.6 Hours of Work

All works associated with the demolition and excavation works, and activities in the vicinity of the site generating noise associated with the preparation for the commencement of work (e.g. loading/unloading of goods, transferring of tools etc.) in connection with the proposed development will be limited to the permitted work hours outlined in the DA Conditions of Consent when issued.

The following work hours are aligned with the Mirvac CEMP;

3.6.1 Demolition Stage Hours of Work:

- Monday to Friday 7am to 6pm
- Saturdays 8am to 1pm
- Sundays & Public Holidays No work to be undertaken without prior approval from City of Sydney Council / TfNSW

3.6.2 Excavation Stage Hours of Work:

- Monday to Friday 7am to 7pm
- Saturdays 7am to 3:30pm
- Sundays & Public Holidays No work to be undertaken without prior approval from City of Sydney Council / TfNSW

Notwithstanding the above, the use of a crane for special operations including the delivery of materials, hoisting of plant and equipment and erection and dismantling of onsite tower cranes which warrant the on-street use of mobile cranes outside of the above hours can occur, subject to a separate application being submitted to and approved by Council under Section 68 of the Local Government Act 1993 and Sections 138/139 of the Roads Act 1993.

3.7 Construction Staging

The delivery of the project will be undertaken in the following key stages and phases outlined in Table 3.1.

Table 3.1: Construction Staging Summary

Stage	Phase	Approximate Duration	Description of Works
Stage 1	Demolition	6-8 months	Demolition of the existing Harbourside Retail shopping centre
Stage 2	Bulk Excavation and Retention	7-9 Months	Installation of retaining structures (piled walls) and subsequent bulk excavation and removal of material from site.

3.8 Construction Vehicle Types

It is anticipated that the works will involve the use of the following vehicle types:

- 12.5m Heavy Rigid Vehicles
- 8.8m Medium Rigid Vehicles
- Various smaller vehicles for miscellaneous deliveries

Any oversized vehicles (including the use of mobile cranes) that are required to travel to the project or into the vicinity of the site will be dealt with separately, with the submission of required permits to and subsequent approval by TfNSW's Customer Journey Planning (CJP) and the City's Construction Regulation Unit prior to any delivery being undertaken. Any road closures associated with the use of a mobile crane must be applied to the City in advance as it requires Local Pedestrian, Cycling and Traffic Calming Committee (LPCTCC) approval. All Oversize Overmass (OSOM) applications must be submitted via the National Heavy Vehicle Regulator (NHVR) portal.

Refer to Section 3.19 for further details regarding special deliveries.

3.9 Construction Traffic Volumes

The delivery of materials to and from the site will result in some generated traffic activity associated with the works.

3.9.1 Mitigation of Truck Queuing

At all times where possible, deliveries and construction traffic movements are to be scheduled to occur outside of the peak commuter periods to minimise any impacts on the public roads.

Ongoing communication with and organisation of construction vehicles shall be undertaken by the principal contractor, Mirvac, to ensure that truck arrivals and departures do not cause additional queuing on public roads. Arrivals and departures of construction vehicles shall be staggered appropriately to ensure that construction traffic is managed on the surrounding road network.

As construction traffic will be entering the site from the Darling Drive slip lane, any minor queuing or waiting that may occur will be separated from the public roadway, and thus have minimal impact on local traffic.

The expected vehicle types and estimated construction traffic volumes during each phase of the works is outlined in Table 3.2.

Table 3.2: Estimated Construction Vehicle Volumes

Phase	Estimated Average No. of Trucks per Day	Estimated Peak No. of Trucks per Day
Site Establishment / Enabling Works / Demolition	25	50
Excavation / Site Preparation (including any site remediation) and Shoring	50	100

3.10 Construction Vehicle Routes

The site is located in close proximity to the Sydney CBD and the proposed construction vehicle routes have regard for the surrounding traffic arrangements in the vicinity of the site. No queuing or marshalling of trucks is permitted on any public road and all loading and unloading of materials will be undertaken wholly within the site.

All vehicle routes to site are constrained to existing public roads that have the physical geometry to accommodate the turning movements. In terms of the broader road network, the site is accessible from the north/west via the Western Distributor (ANZAC Bridge), south/east via Wattle Street, as shown in Figure 3.2.

3.10.1 Justification of the Proposed Truck Route

The proposed construction vehicle route makes use of the most suitable and direct roads available, while avoiding local streets in the Haymarket, Ultimo and Glebe areas. By accessing the site from the Western distributor (ANZAC Bridge), only a short section of the route makes use of local roads (Pymont Bridge Road).

The intersections travelled through on the route are signalised and provide suitable geometry for construction vehicles, thus making the proposed route safe and efficient, all while minimising time spent on local roads.



Figure 3.2 – Construction Vehicle Routes

3.11 Construction Vehicle Access

During the works, access and egress will be provided for vehicles up to and including 12.5m HRV. Site access will be via the slip road that passes underneath Darling Drive, accessed from the roundabout.

The Applicant must apply to the City's Construction Regulations Unit to organise appropriate approvals for temporary driveways, cranes and barricades etc. The locations of the gates are shown in Figure 3.3.

All vehicles must enter and exit the site in a forward direction.

To mitigate the potential for queuing, deliveries are to be scheduled in a staggered manner to allow for sufficient headway between vehicles to arrive on site, complete any required loading/unloading of materials and subsequently exit the site prior to another construction vehicle arriving on site.

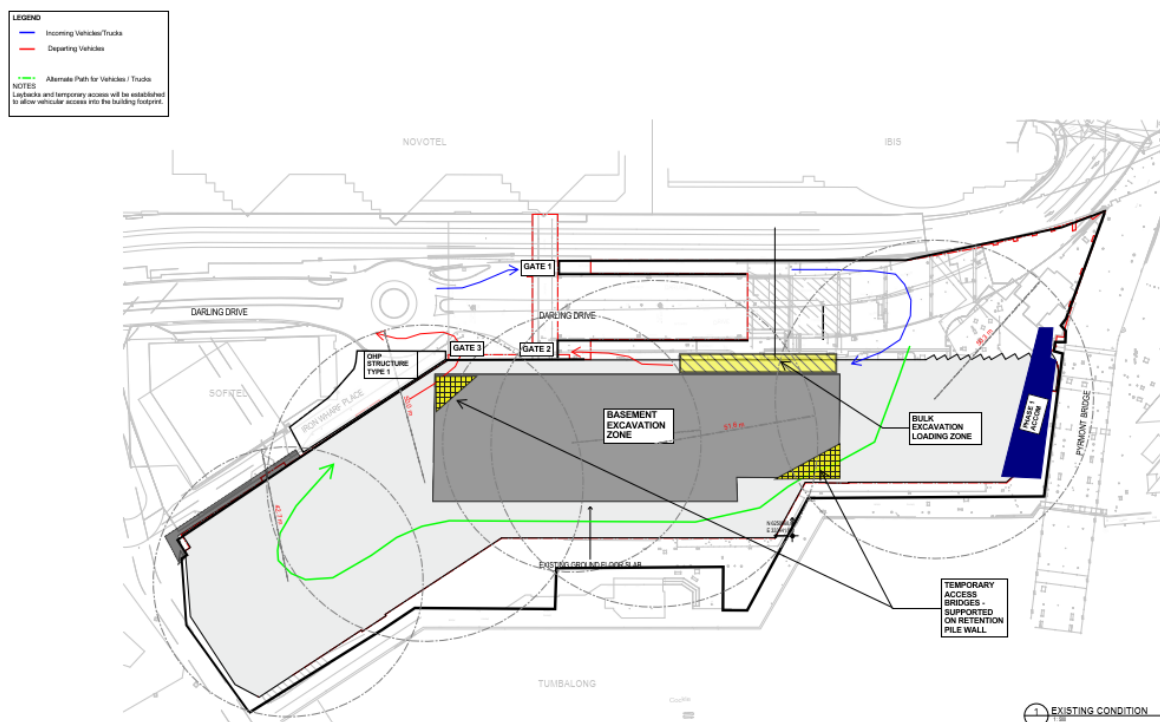
Access via Darling Drive and the slip road that passes underneath the Darling Drive overpass for 12.5m HRVs is assessed further in Attachment 2.

3.12 Work Zones

It is proposed that the Work Zones will be utilised for loading and unloading of deliveries. While reviewing the need for a Work Zone, the following matters have been considered:

- Pedestrian and public safety;
- To ensure no construction vehicles queue in nearby public roads; and
- Providing clarity to pedestrians and the general public of the approved designated construction activity zone.

The locations of the proposed Works Zones are illustrated in Figure 3.3. Figure 3.4 shows the positioning of a Works Zone on the southbound side of the Darling Drive ramp in the existing Taxi Zone. Existing on-street signage will need to be amended to accommodate the Works Zone, subject to Council approval.



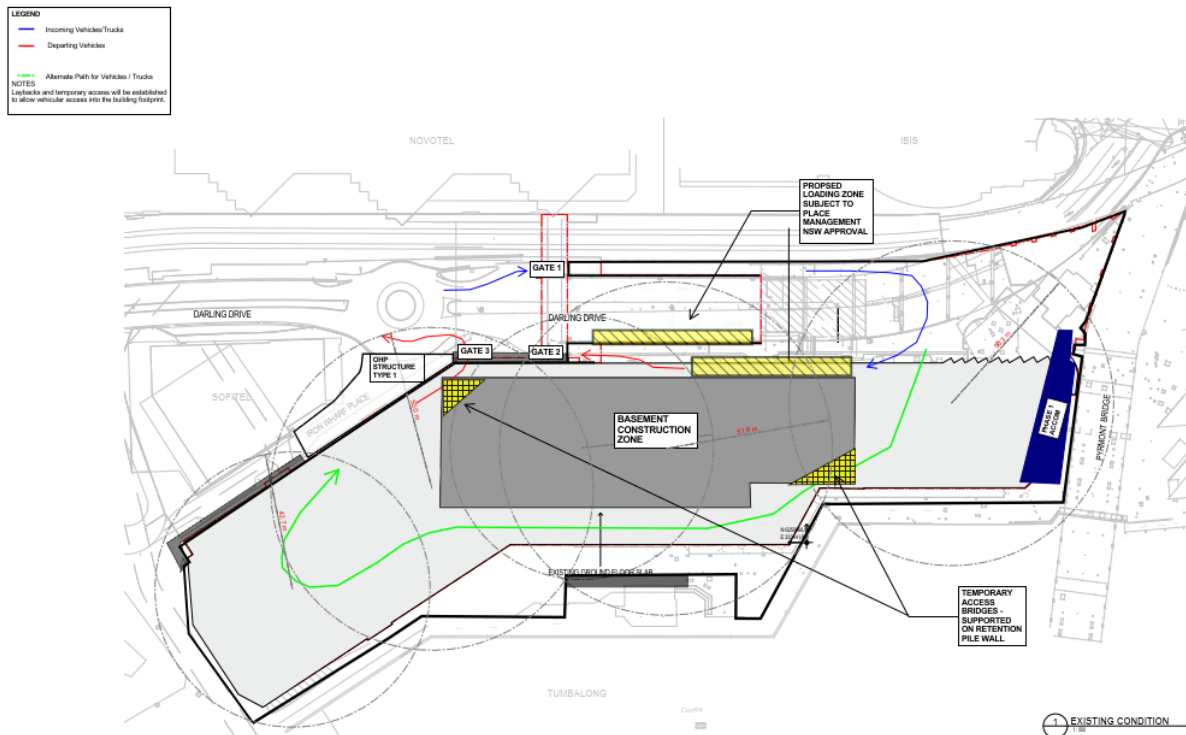


Figure 3.4 – Proposed Loading / Works Zones

If the loading / unloading of large goods is anticipated to impinge on adjacent traffic lanes, prior approval from the City's Construction Regulation Unit and the Transport Management Centre (TMC) will be required. Notwithstanding this, any proposed Works Zones will require approval from the City of Sydney and TfNSW.

The Applicant must apply to the Transport for NSW's Transport Management Centre for approval of any road works on State Roads or within 100m of traffic signals and receive an approved Road Occupancy Licence (ROL). A copy of the ROL must be provided to the City.

3.12.1 Impact of Works Zone

Implications of this Works Zones along Darling Drive include the loss of 5 taxi rank bays. Discussion with key stakeholders shall be undertaken by the principal contractor.

It is noted that a taxi rank exists on Iron Wharf Place and services both Sofitel and the ICC buildings. This taxi rank is much closer to the Sofitel main entryway and is deemed a more practical and pedestrian safe option for taxi connections to sites in the vicinity.

3.13 Road Closures

Road closures are required only for the establishment of the hoarding over the shared laneway between Sofitel and Harbourside. Consultation will be undertaken with Sofitel/ Place Management NSW to ensure this is undertaken at a time which causes least impact to their operations.

A road closure will be necessary for the removal of the existing pedestrian bridge over Darling Drive and the installation of the new pedestrian bridge.

In order to establish the hoarding along the site frontages, temporary road closures are proposed. A separate application will be submitted to City of Sydney in accordance with the Temporary Full Road Closure process for approval prior to any works and this will detail the traffic management measures and access arrangements once the dates for road closure are known.

3.14 Impact to Public Transport

Mirvac is to monitor and engage in ongoing evaluation of any potential impacts the demolition and excavation works may have on public transport in the vicinity of the site. Should any disruptions become evident, mitigation measures are to be put in place to rectify any disruptions in the future.

3.14.1 Light Rail

Work will be coordinated with maintenance activities on the light rail line, at this stage the schedule is not known. Once Transdev release information, coordination can be undertaken. Any road closures required shall be coordinated to avoid impact on light rail activities, including replacement services (bus) along Darling Drive.

3.14.2 Bus

Mitigation measures to disruptions of bus network (389 route) during road closure works are to be provided by Mirvac. Truck and bus routes do not overlap and given route 389 is the only bus route in the area, the road closure is not anticipated to have impact on the bus network.

3.15 Emergency Vehicle Access

Any emergency vehicles requiring access to the project site and neighbouring properties will continue to do so via Darling Drive. This shall be ensured by Mirvac.

3.16 Traffic Control Measures

Traffic Guidance Schemes (TGS) (previously known as 'Traffic Control Plans' or TCPs) outline the proposed traffic management measures to inform road users of the changed traffic conditions in the vicinity of the works site. Traffic control measures are required as trucks will be turning into the site intermittently at various access points around the construction site.

Traffic management and control measures will be required along Darling Drive, specifically at the roundabout as larger trucks will interfere with the cycle lane. Concept TGSs have been prepared and included in Attachment 3.

It is noted that detailed TGSs are to be prepared by the appointed traffic management contractor prior to commencement of works and submitted to Council and TfNSW for approval. All TGSs associated with the CTMP must comply with the Australian Standards and the *TfNSW Traffic Control at Work Sites Technical Manual* (TCAWS). Any traffic controllers shall be appropriately qualified and SafeWork NSW accredited.

Traffic control shall be established in accordance with the requirements of the TCAWS and gate controllers are to be stationed at site access gates to manage access and egress to the site.

Traffic Controllers are NOT to stop traffic on the public street(s) to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - the vehicles already on the road have right of way.

3.17 Pedestrian Management

The general public will not be allowed access to the site. Mirvac will ensure that the proposed hoardings are maintained in a clean, well illuminated and safe manner at all times, throughout the duration of the project.

The site perimeter boundaries consist of an A and B class hoarding, installed during the various construction phases. These hoardings will be established immediately following site possession and fitted with appropriate public directional signage.

Pedestrian footpaths and travel routes will be maintained at all times. It is part of the licence agreement to ensure it is maintained throughout construction.

Figure 3.8 shows the location of the hoardings as well as the control measures for closure to pedestrians.

It should be noted that Traffic Controllers are NOT to stop general traffic, pedestrians and cyclists on the public street(s), to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site. Vehicles already on the road and pedestrians on the footpath have right of way.

Pedestrians may be held only for very short periods to ensure safety when trucks are leaving or entering BUT the contractor must NOT stop pedestrians in anticipation i.e. **at all times the pedestrians have right-of-way on the footpath, not construction vehicles.**

The Applicant must apply to the City's Building Approvals Unit to organise appropriate approvals for hoarding prior to commencement of works. Physical barriers to control pedestrian or traffic movements need to be determined by the City's Construction Regulations Unit prior to commencement of work.

3.17.1 Temporary Closure of Murray Street Footbridge

During construction periods where the Murray Street Footbridge is temporarily closed, a sign and map shall be provided on the hoardings to advise pedestrians of the closure details as well as identify alternate routes that they can take.

3.17.2 Pedestrian Volumes

Given that the Harbourside Shopping Centre will be closed during demolition and construction works, it is expected that much of the associated pedestrian (and to an extent cyclist) traffic in the area will be dissipated or reduced. As such, any impacts to the temporary closure of the footbridge or concerns for the safety of pedestrians around the construction site are lessened. Furthermore, management strategies detailed in Section 3.17 and 3.18 are available should they be deemed necessary.

3.18 Cyclist Management

As a potential additional measure to reduce the interaction between cyclists and construction vehicles around the site, a possible alternate cycle route is shown in Figure 3.5. This route makes use of the existing cycleways through Tumbalong Park and the Darling Harbour foreshore areas.

This route is only a suggested alternative to the use of Darling Drive. With the existing mitigation measures in place detailed throughout this report, and the assessment of the Darling Drive/Murray Street Intersection concluding it is comparatively safe, it is not expected that any unnecessary risks or dangers are presented to cyclists as a result of construction activity. However, should concerns remain or it be deemed necessary at a later stage, static signage may be provided to give improved wayfinding to cyclists and the use of the suggested alternate route. Signage shall only be necessary for the duration of construction works.

Given the duration of construction work, static signage is deemed the most appropriate, should any be required. The provision of any signage or alternate route would require significant consultation with Council, Place Management NSW and other relevant authorities.

Should signage be deemed valuable or necessary in the future, a breakdown of each suggested location is detailed below.

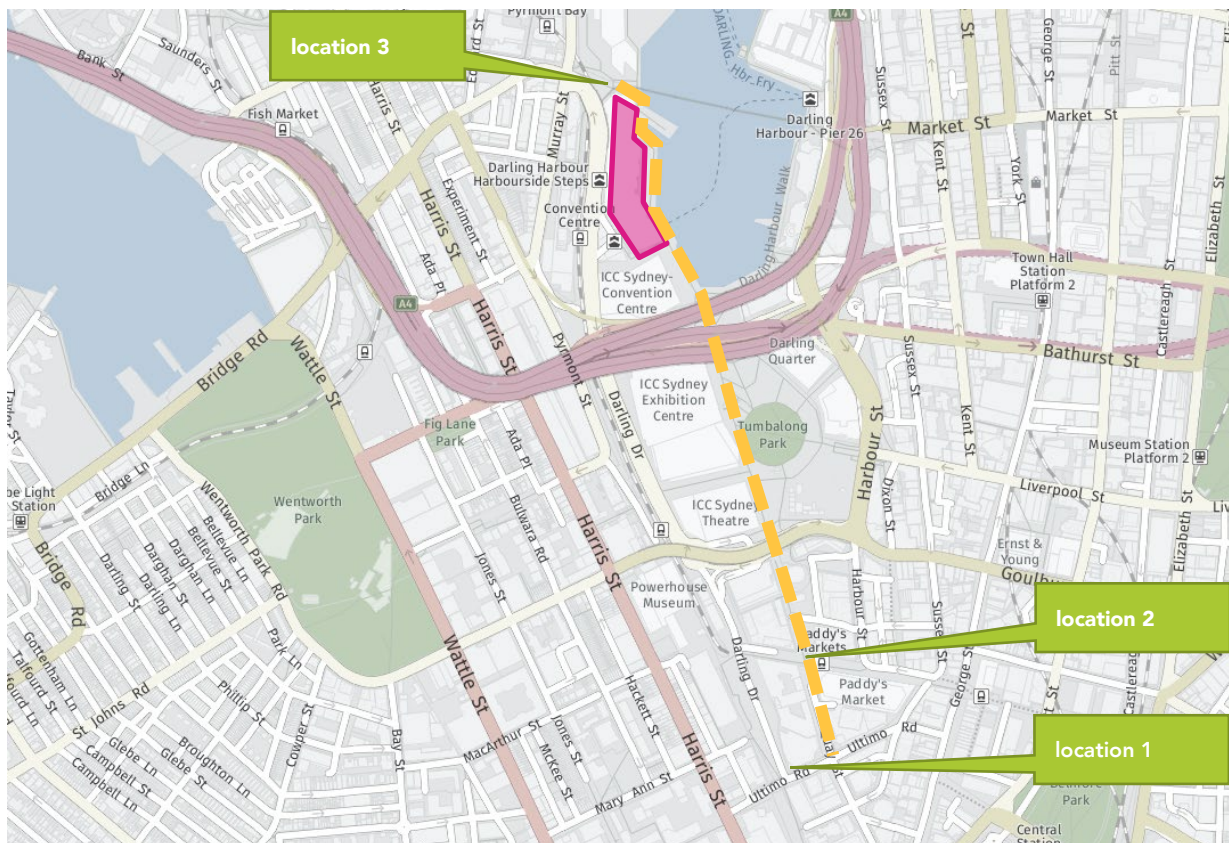


Figure 3.5 - Alternate Cyclist Route and Suggested Signage Locations

Location 1: Darling Drive / Ultimo Road

This location will capture cyclists approaching Darling Drive from the south and west, to direct them onto the alternate route.

Location 2: Hay Street / Tumbalong Boulevard

This location will direct cyclists along the existing Tumbalong Boulevard, towards the Darling Harbour foreshore areas.

Location 3: Pyrmont Foot Bridge / Darling Drive

This location will capture cyclists approaching from the east, north and west, and direct them around to the northern side of the footbridge, past the Maritime Museum, before passing under the Pyrmont footbridge and then along the Darling Harbour foreshore areas. There are no stairs located along this route.

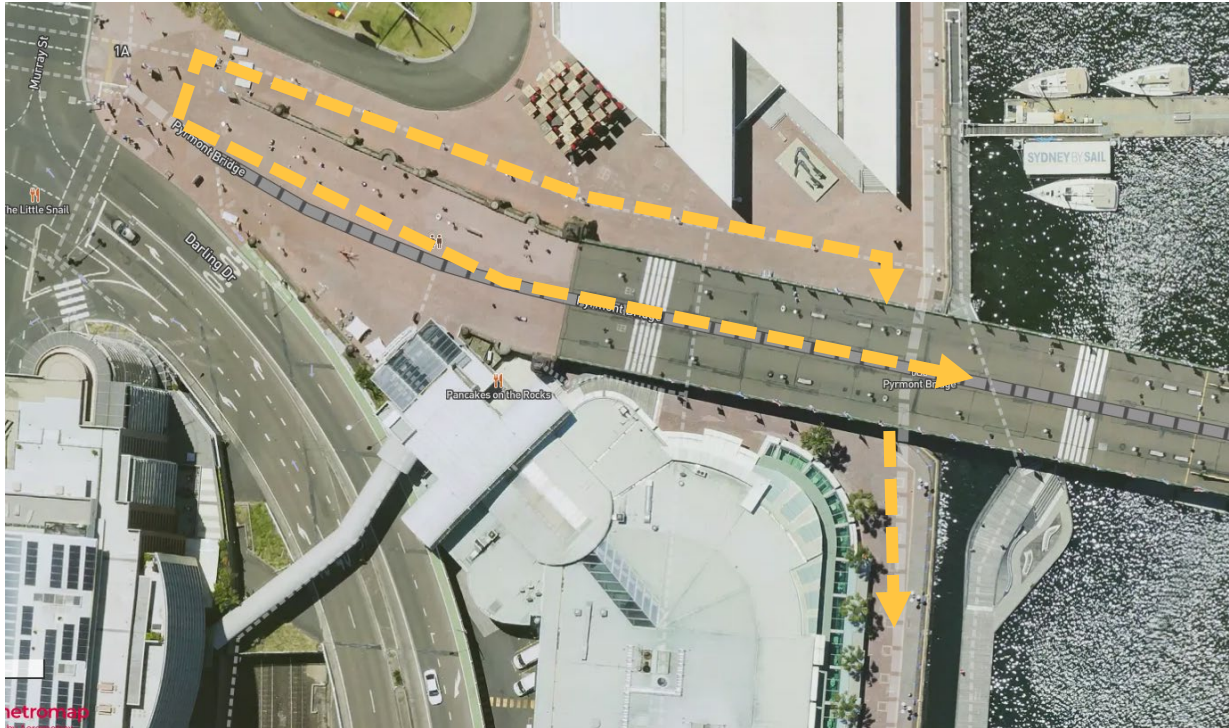


Figure 3.6 - Location 3, Cycling Route

3.18.1 Darling Drive Cycleway

There are existing cycleways along Darling Drive which may be a conflict point between cyclists and construction vehicles, should any cyclists not make use of the alternate route proposed in Section 3.18. Figure 3.7 shows the extents of existing cycleways. Swept paths analysis demonstrates that construction vehicles will require use of the full road width (including cycleways) to perform a U-turn manoeuvre at the roundabout to gain access to the site. This is detailed in Attachment 2.

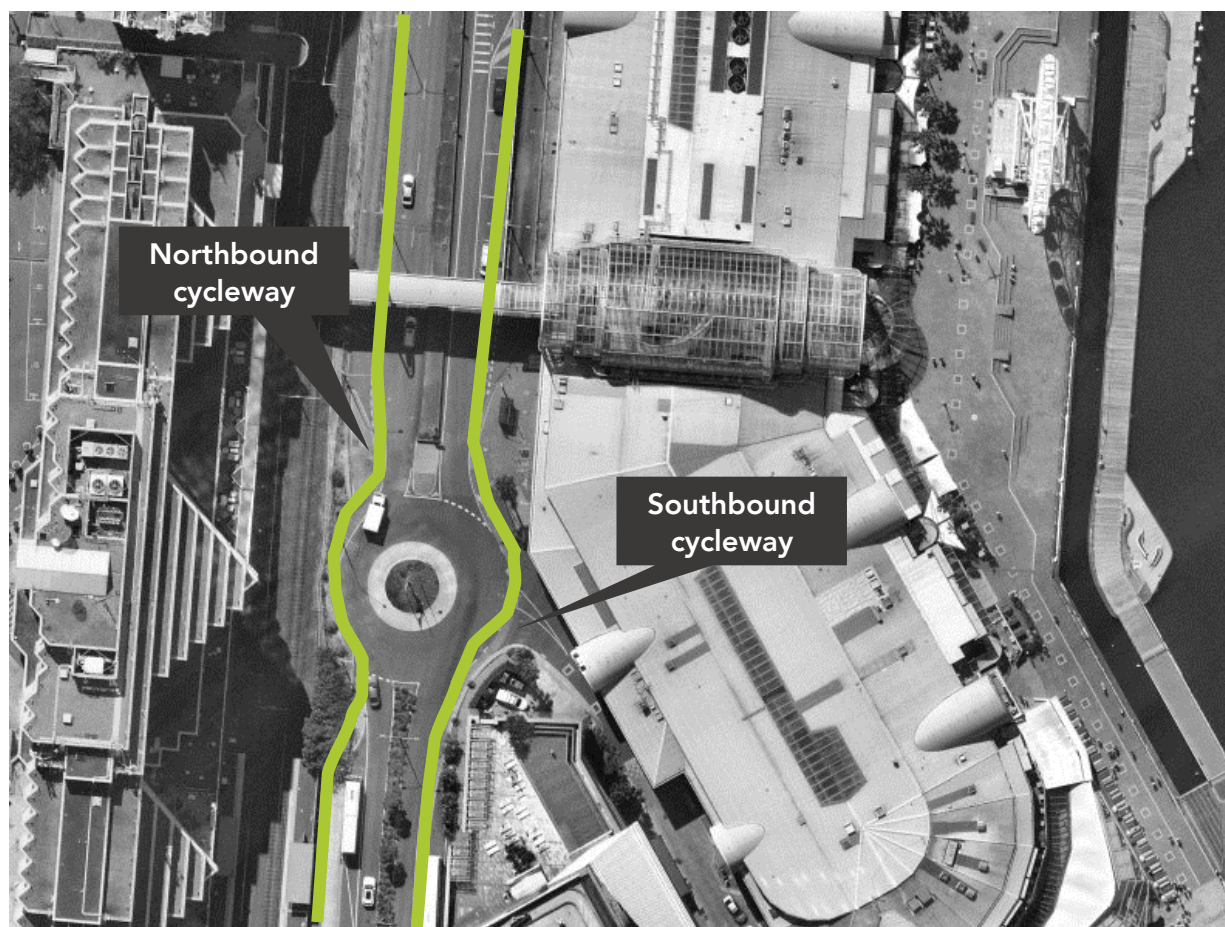


Figure 3.7 – Cycleways along Darling Drive

Advance warning signage along Darling Drive shall be provided to advise cyclists of construction vehicles in the vicinity. Conversely, construction vehicles shall be warned of nearby cyclists with appropriate signage.

Consultation with Bicycle NSW, council and other relevant cycling groups shall be undertaken by the contractor to ensure suitable outcomes for both cyclists and construction operations.

3.19 Special Deliveries

It is anticipated that the works will require a limited number of special deliveries conducted by mobile crane, such as for the erection of the tower cranes onsite.

It is understood that oversize and over-mass vehicles are generally not allowed to travel on Local Roads unless approval for a one-off occasion is obtained from the National Heavy Vehicle Regulator (NHVR) and the City. Requests to use these vehicles must be submitted to the NHVR 28 days prior to the vehicle's scheduled travel date. For more information, please contact the NHVR on 1300 696 487 or www.nhvr.gov.au.

Should the contractor require a partial road closure on State, Regional and/or Local Roads, or carry out work within 150m of traffic signals, an application will be made to the relevant authority to obtain their approval.

3.20 Work Site Security

To provide security to the works site and protection to the general public, it is proposed that the site perimeter boundaries consist of A class and B class hoarding, installed during the various construction phases. These hoardings will be established immediately following site possession and fitted with appropriate public directional signage.

All gates are securely locked outside of working hours. Mirvac will maintain a site entry register requiring all visitors to sign in upon entry. All visitors are required to wear appropriate PPE at all times while on site and will be escorted by Mirvac, the appointed Principal Contractor.

The Applicant must apply to the City's Building Approvals Unit to organise appropriate approvals for hoarding prior to commencement of works.

A summary of the proposed hoarding and works zone establishment arrangements provided by Mirvac are outlined in Table 3.3 and the following figures.

Table 3.3: Hoarding & Works Zone Summary (Source: Mirvac)

Stage	Description of Hoarding / Works Zone Arrangements
Stage 1 – Demolition Works	- Hoardings to be progressively installed around the site prior to commencement of demolition. - Loading zone proposed on Darling Drive ramp in existing taxi zone, and at the edge of the site along the slip road (see Figure 3.4 and Figure 3.8). Temporary construction works not to be established until post demolition.
Stage 2 - Bulk Excavation and Retention	Hoardings to be maintained from Stage 1 Minor changes to gates and overhead protection between Sofitel and Harbourside once demolition is complete

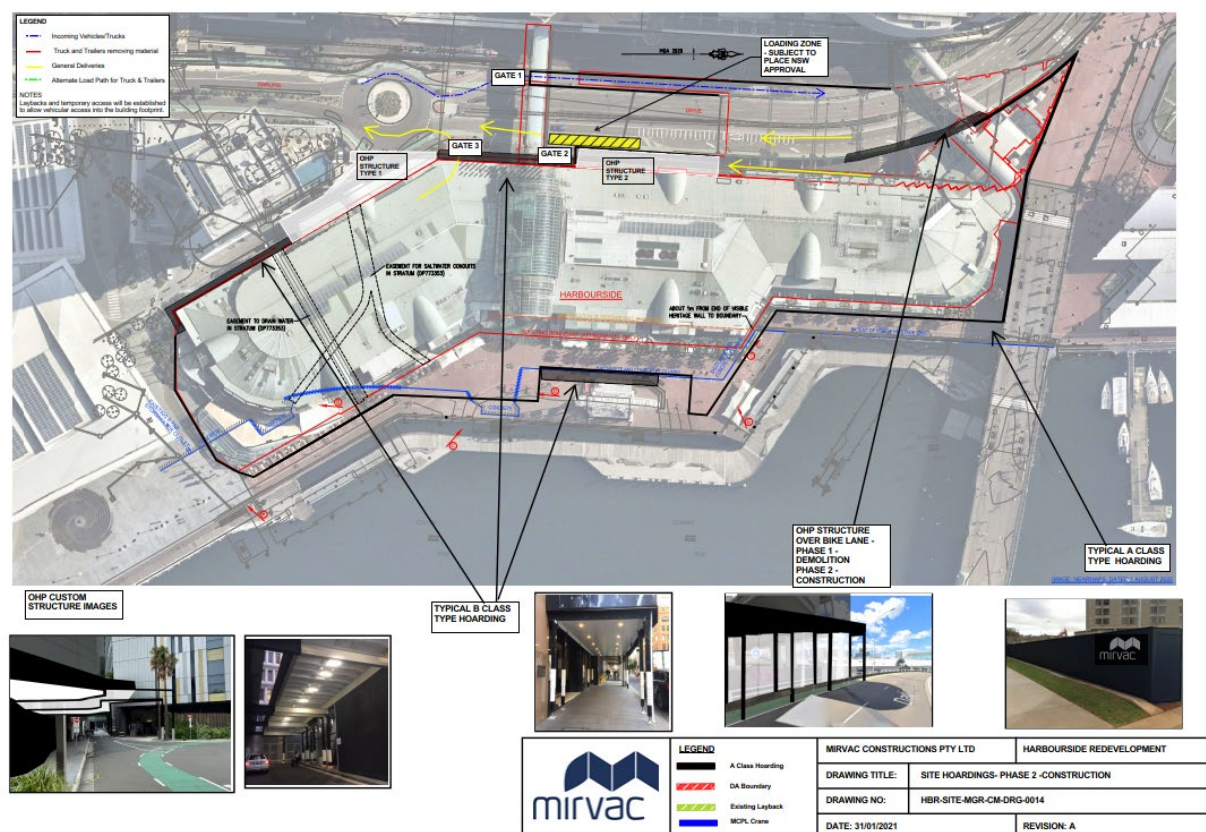


Figure 3.8 – Hoarding Arrangements (Source: Mirvac)

3.21 Plant/Equipment Management

At the commencement of construction, plant and equipment, including construction hoarding/scaffolding material, site sheds, mobile cranes and machinery will be required to be delivered to the site. The delivery and removal of plant and equipment to and from the site will be undertaken from the on-site materials handling/loading area, via the use of machine floats.

The delivery and removal of plant and equipment that requires a wide or long load vehicle will be subject to a separate application/permit and separate prior approval from City of Sydney and other relevant authorities. In order to minimise traffic disruption during the delivery of the plant and equipment, it is proposed to undertake this work during the evening/early morning period. All plant and equipment deliveries will be carried out in accordance with Council/TfNSW requirements and the NSW Police regulations.

3.22 Staff Induction

All staff and subcontractors of the Principal Contractor are required to undergo a site-specific induction which outlines the construction procedures and management framework specific to the project. The induction is aimed at instilling in each person a common-sense approach to safety, to ensure they employ the responsible environmental practices and awareness needed to deliver the project in accordance with the relevant regulations and standards.

The induction will include a description of the available transport options and the policy towards site access (there is no parking available on-site), parking at nearby car parks, and the storage of tools at the site to reduce the need to bring vehicles to site.

The induction will include permitted access routes to and from the construction site for all vehicles, as well as standard environmental, OH&S, driver protocols and emergency procedure. Additionally, the Principal Contractor will discuss TMP requirements regularly as part of toolbox talks and advise workers of public transport and carpooling opportunities.

3.23 Access to Adjoining Properties

Access to all adjoining properties will be maintained throughout the works. The adjacent landowners will be notified of works via letter box distribution and road signage to advise of anticipated truck movements in operation with access to adjoining properties being maintained at all times.

3.24 Cumulative Construction Traffic Activity

The contractor shall liaise with Council and any nearby construction sites to ensure that minimal cumulative effects are introduced into the road network.

Consideration for nearby construction works including the development of the Pyrmont Metro Station is to be taken by the principal contractor, Mirvac, to ensure that the cumulative effects of nearby construction are minimised. Discussion between Mirvac Harbourside and surrounding sites shall be undertaken on a regular basis to determine effective truck staggering, arrival and departure times, and vehicle routes to avoid cumulative effects on the local traffic network.

Truck routes have been proposed to avoid passing the Sydney Fishmarkets development on Bridge Road and thus minimise any cumulative impacts of construction traffic.

3.25 Occupational Health and Safety

Any workers required to undertake works or traffic control within the public domain shall be suitably trained and will be covered by adequate and appropriate insurances. All traffic control personnel will be required to hold SafeWork NSW accreditation in accordance with Section 8 of Traffic Control at Worksites.

The comprehensive Work Health & Safety Management Plan will be prepared by the Principal Contractor and shall be constantly reviewed as the design and construction methodology progress.

3.26 Consultation and Method of Communicating Traffic Changes

Traffic Guidance Schemes (TGSs, previously known as 'Traffic Control Plans' or TCPs) in accordance with Australian Standards (*AS 1742.3 – Traffic Control Devices for Works on Roads*) and *TfNSW Traffic Control at Work Sites Manual* will advise motorists of upcoming changes in the road network.

During construction the contractor shall each morning, prior to work commencing, ensure all signage is erected in accordance with the TGSs and clearly visible. Each evening, upon completion of work, the contractor is to ensure signage is either covered or removed as required. Sign size is to be size "A".

Any variation to the layout of the TGSs on site is to be recorded and certified by authorised SafeWork NSW accredited personnel. The associated TGS road signage will inform drivers of works activities in the area including truck movements in operation. Any modifications to the TGSs must also be approved by Council and/or TfNSW prior to implementing any changes.

Prior to commencement of works on site the contractor is to inform neighbouring properties of proposed works and provide site contact information by means of a letter box distribution. Throughout the construction process, the Principal Contractor shall inform the local businesses and residents about construction updates by monthly communications.

3.27 Hazard and Risk Identification

All construction projects entail a set of risks—from a transport perspective—that may need to be mitigated. Some of these hazards and risks are related to:

- Moving traffic;
- Queued traffic;
- Site vehicle access and egress points;
- Highly vulnerable road user activity;
- Other construction activity or roadworks in close proximity to the proposed work site; and
- Reduced lane and shoulder widths.

This is appropriate for the construction of the development because of the following:

- Moving traffic could spill from Iron Wharf Place as traffic accessing the Sofitel Sydney Darling Harbour could be held up by construction vehicles.

Risk Matrix Reference: R1

- Queued traffic could pose safety and manoeuvrability issue for trucks turning into and out of the site, prolonging and delaying the construction process and impacting on surrounding on-street parking.

Risk Matrix Reference: R2

- The existing cycleway on Darling Drive could pose a safety risk to vulnerable road users (cyclists) due to proximity to the work site.

Risk Matrix Reference: R3

As there is no guarantee that the contractor responsible for implementing the TGSs are fully aligned with the intention of this traffic report, this remains a risk to be assessed. As such, a risk matrix has been prepared as shown in Table 3.4 using the following definitions:

Risk Rating

- Very High (VH)
- High (H)
- Medium (M)
- Low (L)

Consequence

- Insignificant: Illness, first aid or injury not requiring medical treatment. No lost time.
- Minor: Minor injury or illness requiring medical treatment. No lost time post medical treatment.
- Moderate: Minor injuries or illnesses resulting in lost time.
- Major: 1 to 10 serious injuries or illnesses resulting in lost time or potential permanent impairment.
- Severe: single fatality and/or 11 to 20 serious injuries or illnesses* resulting in lost time or potential permanent impairment.
- Catastrophic: multiple fatalities and/or more than 20 serious injuries or illnesses* resulting in lost time or potential permanent impairment.

Likelihood

- Almost certain: expected to occur multiple times (10 or more times) during any given year.
- Very likely: expected to occur occasionally (1 to 10 times) during any given year.
- Likely: expected to occur once during any given year.
- Unlikely: expected to occur once every 1 to 10 years.
- Very unlikely: expected to occur once every 10 to 100 years.
- Almost unprecedented: not expected to occur in the next 100 years.

Table 3.4: Risk Matrix

Likelihood	Consequence						
		Insignificant C6	Minor C5	Moderate C4	Major C3	Severe C2	Catastrophic C1
	Almost certain L1						
	Very likely L2	R1, R2					
	Likely L3						
	Unlikely L4						
	Very unlikely L5			R3			
	Almost unprecedented L6						

Some recommended risk mitigation measures include:

- Traffic controllers utilised to ensure no conflict between vulnerable road users such as cyclists and trucks, particularly at the roundabout on Darling Drive. Signage and alternate cyclist routes are proposed.
- Provide overhead protection (e.g. in the form of B Class hoarding) for cyclists and pedestrians along the frontages of the work site. In particular, the changed traffic conditions should be clearly communicated to road users through appropriate signage and pavement markings.
- Gate controllers at the work site will need to ensure that there are no approaching cyclists prior to allowing a construction vehicle to enter or exit the site. Retractable gates may be used to temporarily prevent pedestrian/cyclist access across the proposed vehicular crossovers when a construction vehicle is entering or exiting the site.
- Preparation of TGSs to communicate to road users within the vicinity of the work site of the changed traffic conditions.
- Coordination with Site Managers of neighbouring sites to ensure that deliveries can be managed to be spread out across the day rather than have all deliveries arriving at the same time to relieve pressure on the surrounding road network.
- Consult with the local businesses and tenancies to notify them of the potential impact on their access driveways. This can be done by the Construction Manager or a Traffic Engineer within the City of Sydney Council. Consultation letters can be prepared and drafted accordingly.
- Provision of alternate routes for cyclists, including advance warning, to mitigate some of the risks associated with sharing routes with construction vehicles.

3.28 Contact Details for On-Site Enquiries and Site Access

The Principal Contractor is Mirvac and all on-site enquiries can be addressed to:

Name: Stephen Chamberlain

Role: Senior Project Manager

Phone: 0458 748 199

3.29 Maintenance of Roads and Footpaths

The roads and footpaths along the route of travel will be kept in a serviceable state at all times. A dilapidation survey of existing roads and footpaths will be carried out prior to proposed truck movements commencing. Any damage clearly demonstrated as not already existing and as being caused by the project truck movements will be treated / repaired by the Principal Contractor at no cost to Council.

4. CPTMP Approval, Monitoring and Review

This CPTMP has been reviewed and endorsed by the designer's one-up manager who holds a current Prepare Works Zone Traffic Management Plan qualification. This approved CPTMP has been used to inform the development of all TGSs for the work.

Regular monitoring and review are to be conducted throughout the life of the project to ensure that the CPTMP remains current and addresses all risks at the work site for the duration of the project or activity.

To ensure that this CPTMP is kept up to date, the activities identified in Table 4.1 will be undertaken to facilitate review and continuous improvement.

Table 4.1: Monitoring Activities

Stage	Activity	Purpose	Qualification	Tools and checklists
Planning	TGS verification	To ensure that the TGS selected or designed is suitable for the works and location.	ITCP or PWZTMP	TCAWS Appendix E.2 TGS verification checklist
During TTM	Weekly TTM inspections (includes preopening inspection)	To ensure that the CPTMP and relevant TGS are appropriate and operating safely, effectively and efficiently	PWZTMP	TCAWS Appendix E.3 Weekly TTM inspection checklist
	Shift TTM inspections	To ensure that the TGS is implemented as designed. This includes at a minimum, twice per shift and when: - A TGS is installed, changed or updated. - At regular frequency afterwork commences, recommended every 2 hours; and - Once after care arrangements have been installed if required	ITCP or PWZTMP	TCAWS Appendix E.4 Shift / Daily TTM inspection checklist
	CPTMP review	To ensure that CPTMP controls are achieving the required outcomes.	PWZTMP	Not provided
	Client inspections	Verification of TTM through the Transport Traffic Engineering Services, Work Health and Safety Branch, Surveillance Officers or other client representatives.	Divisionally determined	Not provided

Stage	Activity	Purpose	Qualification	Tools and checklists
Post Completion	Post-completion inspection	To ensure that the site has been demobilised as planned and is safe for opening to traffic	ITCP or PWZTMP	Appendix E.5 Post completion inspection checklist

All relevant changes must be considered and recorded in the CPTMP with any changes made by an appropriately qualified person. A copy of all documentation relating to the endorsement of the changes must be available to be accessed, either electronically or in hard copy, by the person responsible for the works.

5. TGS Confirmation and Approval

The Traffic Guidance Schemes (TGSs) shall be designed for the proposed traffic management scheme to inform road users of the changed traffic conditions in the vicinity of the works site. The TGSs must be set out in accordance with Issue 6.1 of the Traffic Control at Work Sites Technical Manual, Feb 2022 (TCAWS).

It is noted that any changes to the existing parking restrictions will require a minimum fourteen (14) days notification to adjoining property owners prior to the implementation of any temporary traffic control measures.

Any revisions or additional TGSs must be prepared by a SafeWork NSW qualified person upon engagement of the traffic management contractor and prior to commence of works on site.

As further information is made available regarding the site works, a high-level preliminary TGS shall be developed. Any TGS that shall be developed as part of this CPTMP is indicative only, and a detailed TGS is to be developed by the principal contractor.

5.1 TGS Verification

A TGS verification must be undertaken to confirm the selected or designed TGS is fit for purpose. A TGS verification must be completed in accordance with Section 8.1.2 TGS verification by an ITCP or PWZTMP qualified person. TGS verification must include an inspection of the work site where the TGS will be implemented.

5.2 TGS Approval

The SafeWork NSW qualified person who designs or modifies the relevant TGS, approves the TGS for use. Approval of the TGS includes:

- Review of the relevant TMP, risk assessment and associated TTM specific documentation;
- Design, redesign or modification of the TGS must be in accordance with the requirements of TCAWS;
- Confirmation that the TGS provides the relevant information for the ITCP person to safely implement on-site.

The one up manager of the SafeWork NSW qualified person will approve the TGS, including:

- Any non-standard or unaccepted signs or devices;
- Any departures from the requirements of TCAWS;
- If a manual traffic controller is proposed for use.

6. Conclusion

This CPTMP has been prepared to outline the construction traffic measures to improve site safety to the public and workers and the construction process.

With the measures described in the CPTMP in place, the demolition activity is anticipated to have minimal disruption to the daily activities within the vicinity of the site.

It is envisaged that this document will be continually reviewed and amended if required, due to changes in design, TfNSW, Place Management NSW, the City or any other authority requirements. Should any changes be made, they will need to be reviewed and approved by the Place Management NSW, City and TfNSW.

Attachment 1 City of Sydney Standard CPTMP Requirements

The City of Sydney Standard Requirements for Construction Traffic Management Plan

The Applicant or contractor undertakes to follow and abide by the following requirements at all times during the demolition, excavation and construction works.

1. Details of routes to and from site and entry and exit points from site – site specific

Refer to Section 3.10

2. Details of roads that may be excluded from use by construction traffic i.e. roads with load limits, quiet residential streets or access/turn restricted streets – site specific

Refer to Section 3.10

3. The approved truck route plan shall form part of the contract and must be distributed to all truck drivers.

Refer to Section 3.10

4. All vehicles must enter and exit the site in a forward direction (unless specific approval for a **one-off occasion** is obtained from the City's Construction Regulation Unit).

Refer to Section 3.11

5. Trucks are not allowed to reverse into the site from the road (unless specific approval for a **one-off occasion** is obtained from the City's Construction Regulation Unit).

Refer to Section 3.11

6. The Applicant must provide the City with details of the largest truck that will be used during the demolition, excavation and construction.

Refer to Section 3.8

NOTE: No dog trailers or articulated vehicles (AV) to be used (unless specific approval for a **one-off occasion** is obtained from the City's Construction Regulation Unit).

7. Oversize and over-mass vehicles are not allowed to travel on Local Roads (unless approval for a **one-off occasion** is obtained from the City's Traffic Operations Unit). Requests to use these vehicles must be submitted to the City 28 days prior to the vehicle's scheduled travel date. For more information please contact the National Heavy Vehicle Regulator (NHVR) on 1300 696 487 or www.nhvr.gov.au.

Refer to Section 3.8 and 3.19

8. No queuing or marshalling of trucks is permitted on any public road.

Refer to Section 3.10

9. Any temporary adjustment to Bus Stops or Traffic Signals will require the Applicant to obtain approval from the STA and RMS respectively prior to commencement of works.

No changes to bus stops or traffic signals are proposed.

10. All vehicles associated with the development shall be parked wholly within the site. All site staff related with the works are to park in a designated off-street area or be encouraged to use public transport and not park on the public road.

Refer to Section 3.10 and 3.22

11. All loading and unloading must be within the development site or at an approved "Works Zone".

Refer to Section 3.12

12. The Applicant must apply to the City's Traffic Works Co-ordinator to organise appropriate approvals for Work Zones and road closures.

Refer to Section 3.12

13. The Applicant must apply to the City's Construction Regulations Unit to organise appropriate approvals for partial road closures.

Refer to Section 3.13, 3.14

14. The Applicant must apply to the Transport for NSW's Transport Management Centre for approval of any road works on State Roads or within 100m of Traffic Signals and receive an approved Road Occupancy Licence (ROL). A copy of the ROL must be provided to the City.

Refer to Section 3.12 and Section 3.13

15. The Applicant must apply to the City's Construction Regulations Unit to organise appropriate approvals for temporary driveways, cranes and barricades etc.

Refer to Section 3.11

16. The Applicant must comply with development consent for hours of construction.

Refer to Section 3.6

17. All Traffic guidance schemes associated with the CTMP must comply with the Australian Standards and Roads and Maritime Services (RMS) Traffic Control At Work Sites Guidelines.

Refer to Section 3.16 and 5

18. Traffic Controllers are NOT to stop traffic on the public street(s) to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to

assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - **the vehicles already on the road have right-of-way.**

Refer to Section 3.16

19. Pedestrians may be held only for very short periods to ensure safety when trucks are leaving or entering BUT you must NOT stop pedestrians in anticipation i.e. **at all times the pedestrians have right-of-way on the footpath not the trucks.**

Refer to Section 3.17

20. Physical barriers to control pedestrian or traffic movements need to be determined by the City's Construction Regulations Unit prior to commencement of work.

Refer to Section 3.17

21. The Applicant must obtain a permit from the City's Construction Regulation Unit regarding the placing of any plant/equipment on public ways.

Refer to Section 3.21

22. The Applicant must apply to the City's Building Approvals Unit to organise appropriate approvals for hoarding prior to commencement of works.

Refer to Section 3.20

23. The CTMP is for the excavation, demolition and construction of building works, not for road works (if required) associated with the development. Any road works will require the Applicant or the contractor to separately seek approval from the City and/or RMS for consideration. Also, WorkCover requires that Traffic guidance schemes must comply with Australian Standards 1742.3 and must be prepared by a Certified Traffic Controller (under RMS regulations).
24. Please note that the provision of any information in this CTMP will not exempt the Applicant from correctly fulfilling all other conditions relevant to the development consent for the above site.

Attachment 2 Construction Vehicle Swept Paths



comments

A3

- Access Route
- Egress Route
- Works Area

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REV	DATE	COMMENT / DESCRIPTION	DRAWN	REVIEWED
P5	07/10/22	FOR INFORMATION	JAJ	DB/SW
P4	13/04/22	FOR INFORMATION	JAJ	SW
P3	15/03/22	FOR INFORMATION	JAJ	AM / DB
P2	07/03/22	FOR INFORMATION	JAJ	AM
P1	10/02/22	FOR INFORMATION	HL / JAJ	DB/AM



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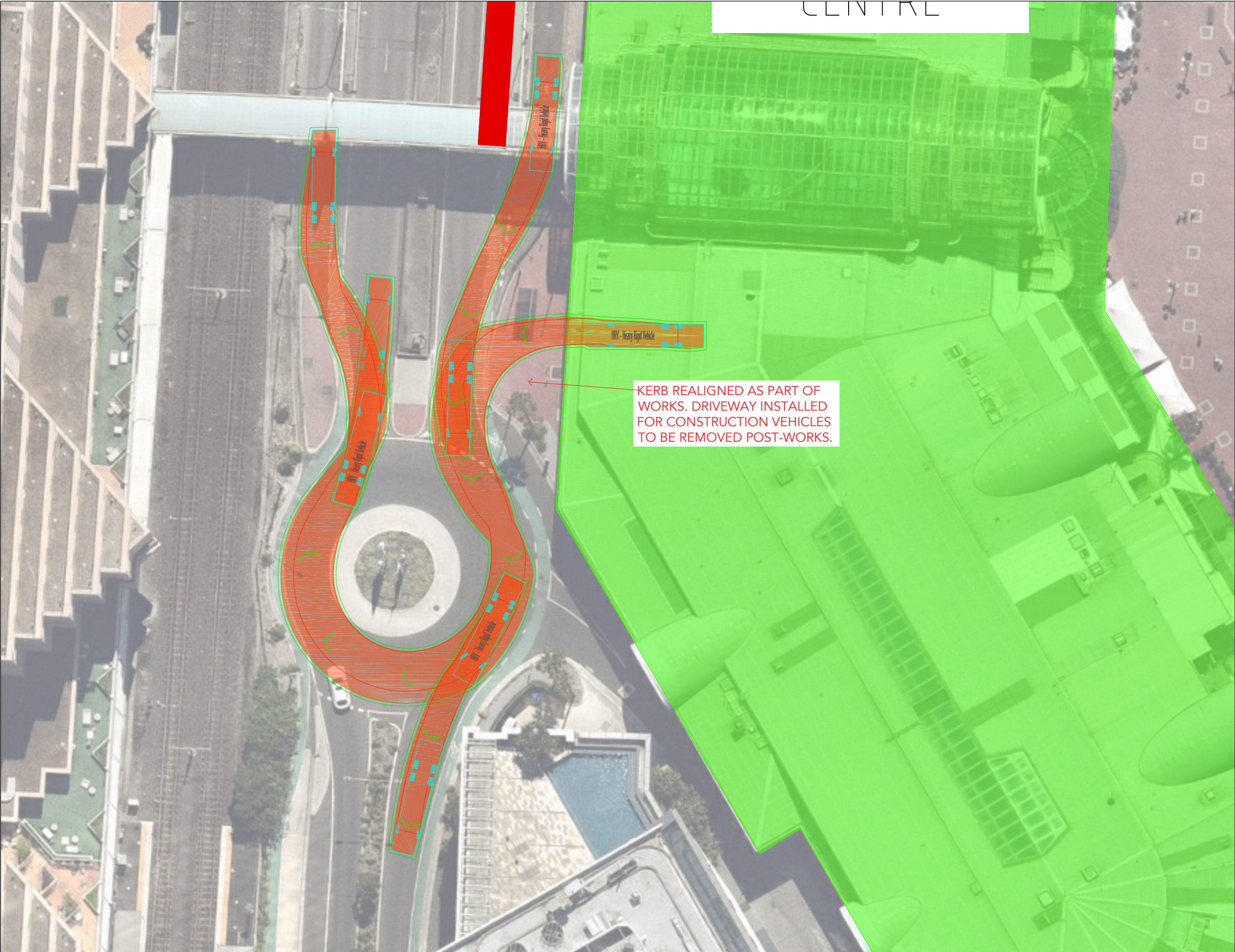
DRAWING TITLE
TRUCK ROUTE DIAGRAM

CONSTRUCTION VEHICLE ACCESS &
EGRESS ROUTES

CLIENT
MIRVAC
DRAWING #
PTC-TRD001
PROJECT #
22-0036
SCALE
NTS

PRELIMINARY

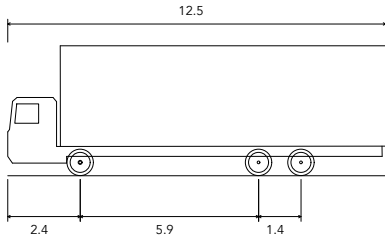
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CENTRE

comments

A3



HRV - Heavy Rigid Vehicle
Overall Length 12.500m
Overall Width 2.500m
Overall Body Height 4.300m
Min Body Ground Clearance 0.417m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

KERB REALIGNED AS PART OF WORKS. DRIVEWAY INSTALLED FOR CONSTRUCTION VEHICLES TO BE REMOVED POST-WORKS.

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P3	15/03/22	FOR INFORMATION	JAJ	AM / DB
P2	07/03/22	FOR INFORMATION	JAJ	AM
P1	10/02/22	FOR INFORMATION	HL / JAJ	DB/AM



PROJECT
HARBOURSIDE SHOPPING

DRAWING TITLE
HEAVY RIGID VEHICLE ACCESS TO SITE
FROM DARLING DRIVE

CLIENT MIRVAC
DRAWING # PTC-HRV001
PROJECT # 22-0036
SCALE 1 : 400 @ A3

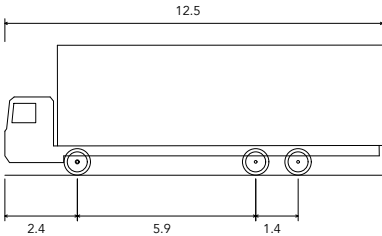
PRELIMINARY

REV P5



comments

A3



HRV - Heavy Rigid Vehicle
Overall Length 12.500m
Overall Width 2.500m
Overall Body Height 4.300m
Min Body Ground Clearance 0.417m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

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P1	10/02/22	FOR INFORMATION	HL / JAJ	DB/AM



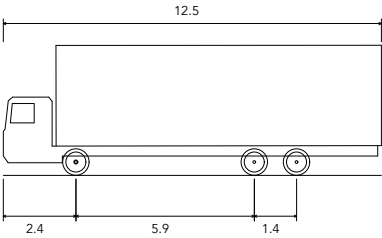
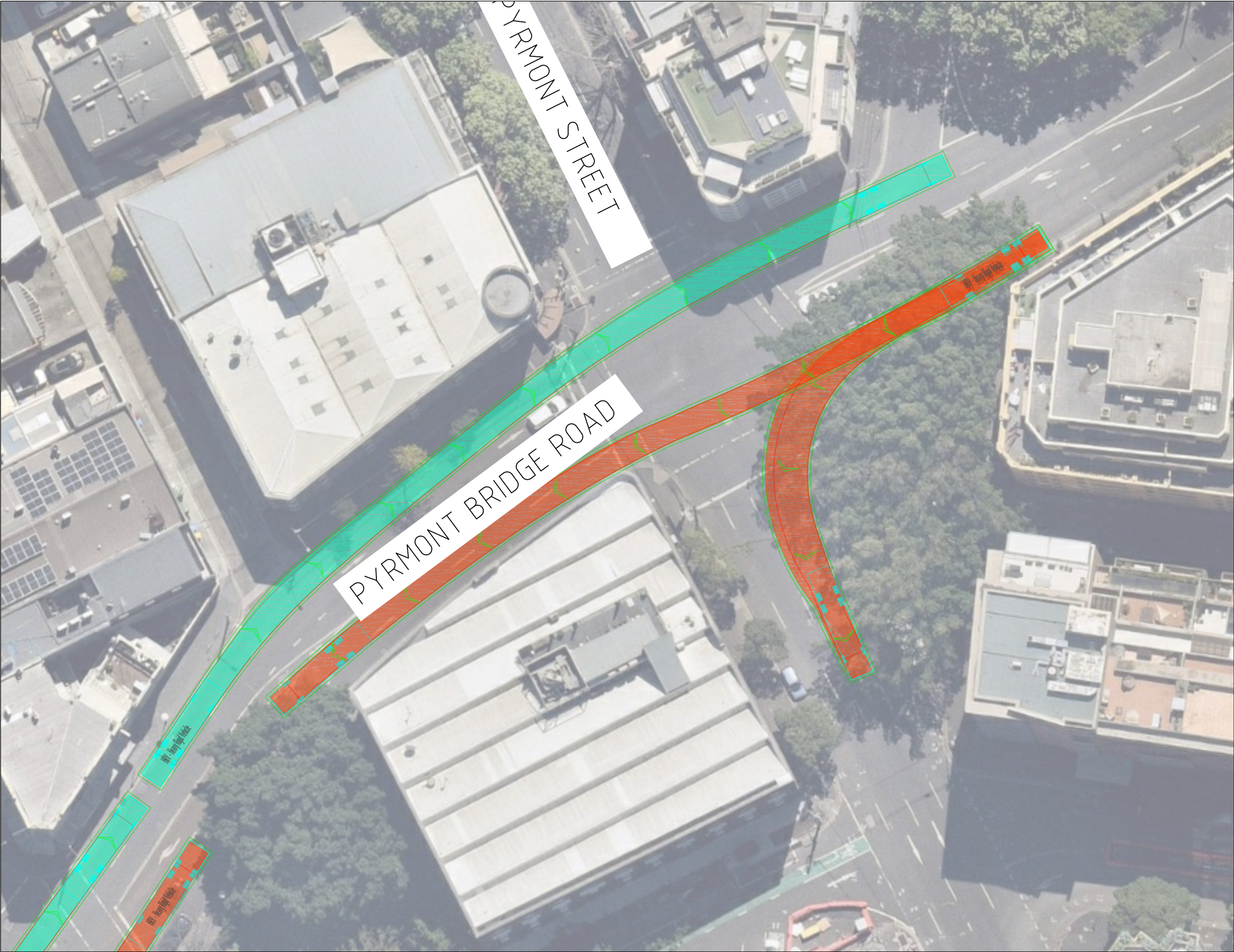
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DRAWING TITLE
HEAVY RIGID VEHICLE INGRESS AND
EGRESS ALONG DARLING DRIVE - UNION
STREET

CLIENT MIRVAC
DRAWING # PTC-HRV002
PROJECT # 22-0036
SCALE 1 : 400 @ A3

PRELIMINARY

REV P5



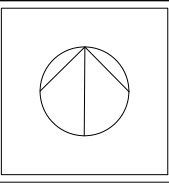
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Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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P2	07/03/22	FOR INFORMATION	JAJ	AM
P1	10/02/22	FOR INFORMATION	HL / JAJ	DB/AM



PROJECT
HARBOURSIDE SHOPPING

DRAWING TITLE
HEAVY RIGID VEHICLE INGRESS AND
EGRESS ALONG PYRMONT BRIDGE ROAD

CLIENT	MIRVAC
DRAWING #	PTC-HRV003
PROJECT #	22-0036
SCALE	1 : 400 @ A3

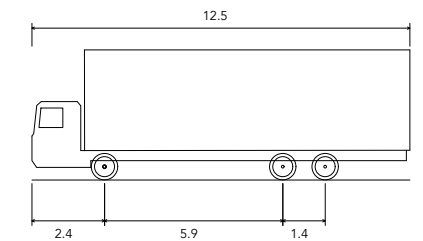
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REV P5



comments

A3



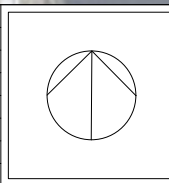
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Track Width	2.500m
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Curb to Curb Turning Radius	12.500m

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PROJECT
HARBOURSIDE SHOPPING

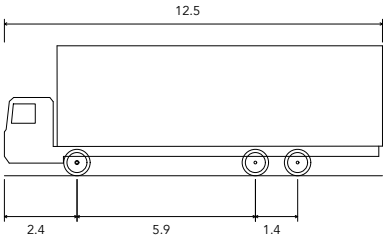
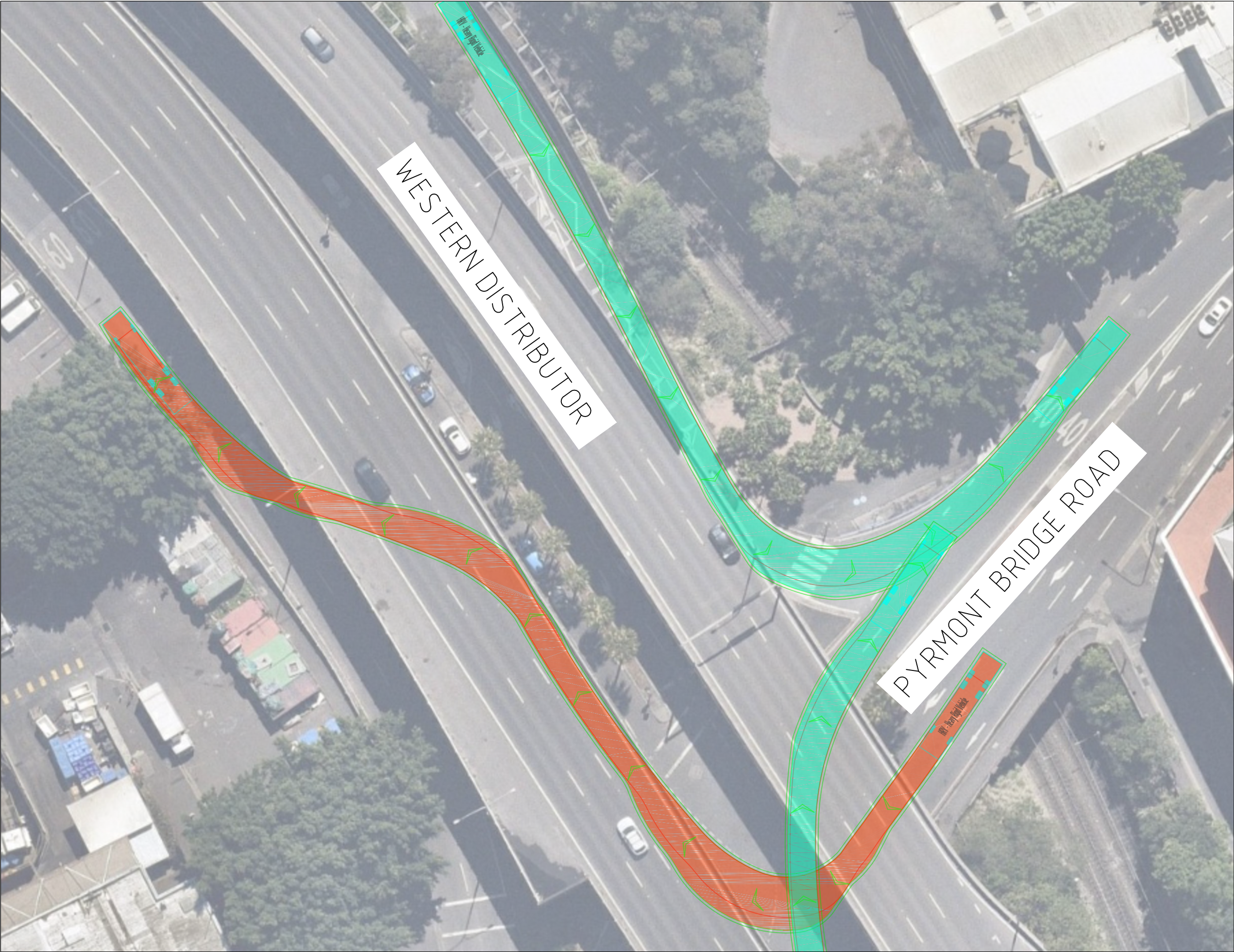
DRAWING TITLE

HEAVY RIGID VEHICLE INGRESS AND
EGRESS ALONG PYRMONT BRIDGE ROAD

CLIENT	MIRVAC
DRAWING #	PTC-004
PROJECT #	22-0036
SCALE	1 : 400 @ A3

PRELIMINARY

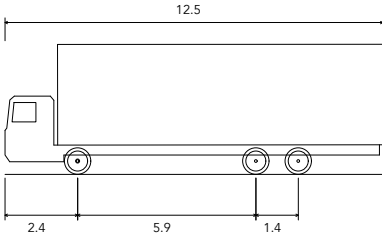
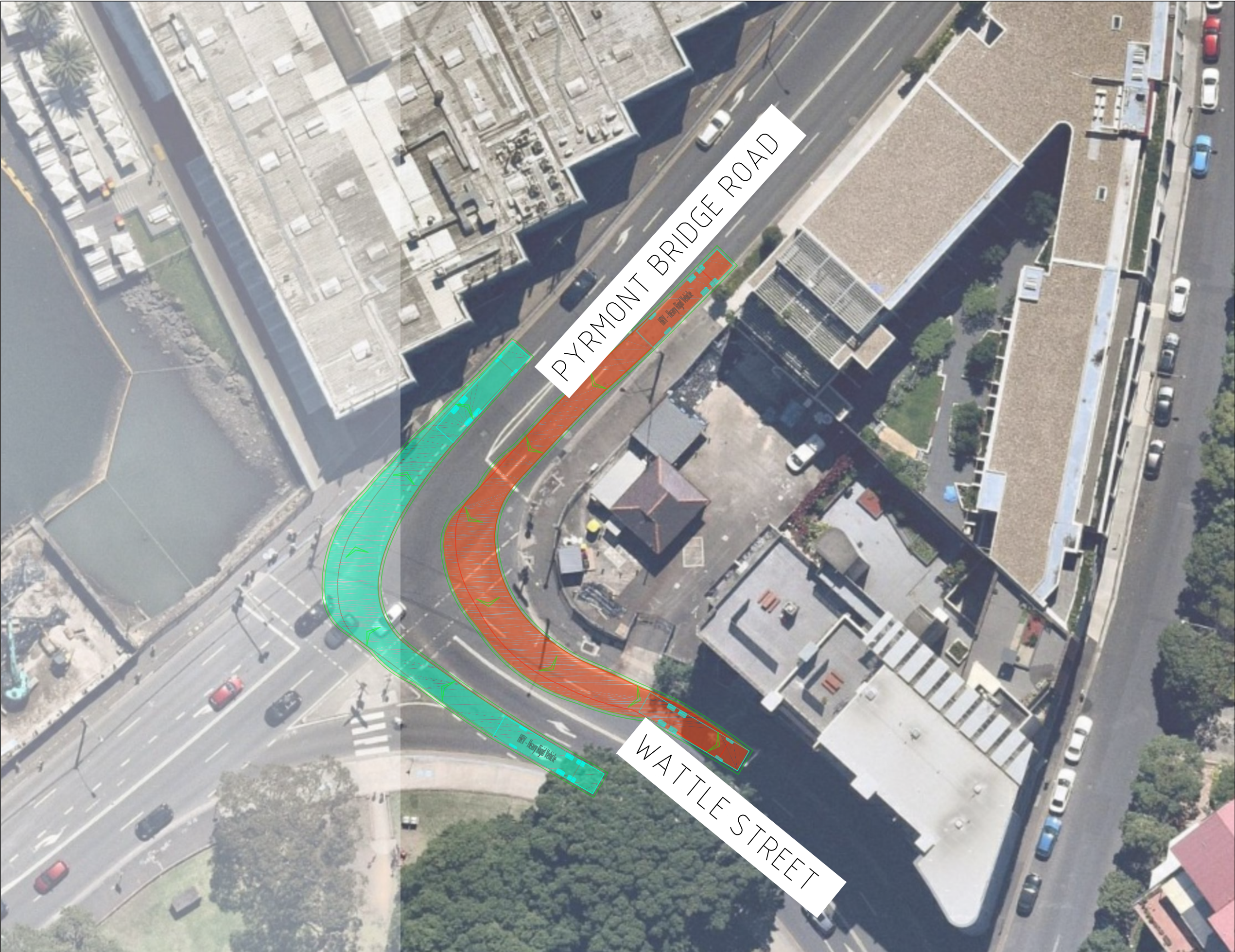
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Lock-to-lock time	12.500m
Curb to Curb Turning Radius	

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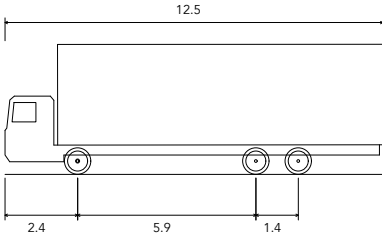
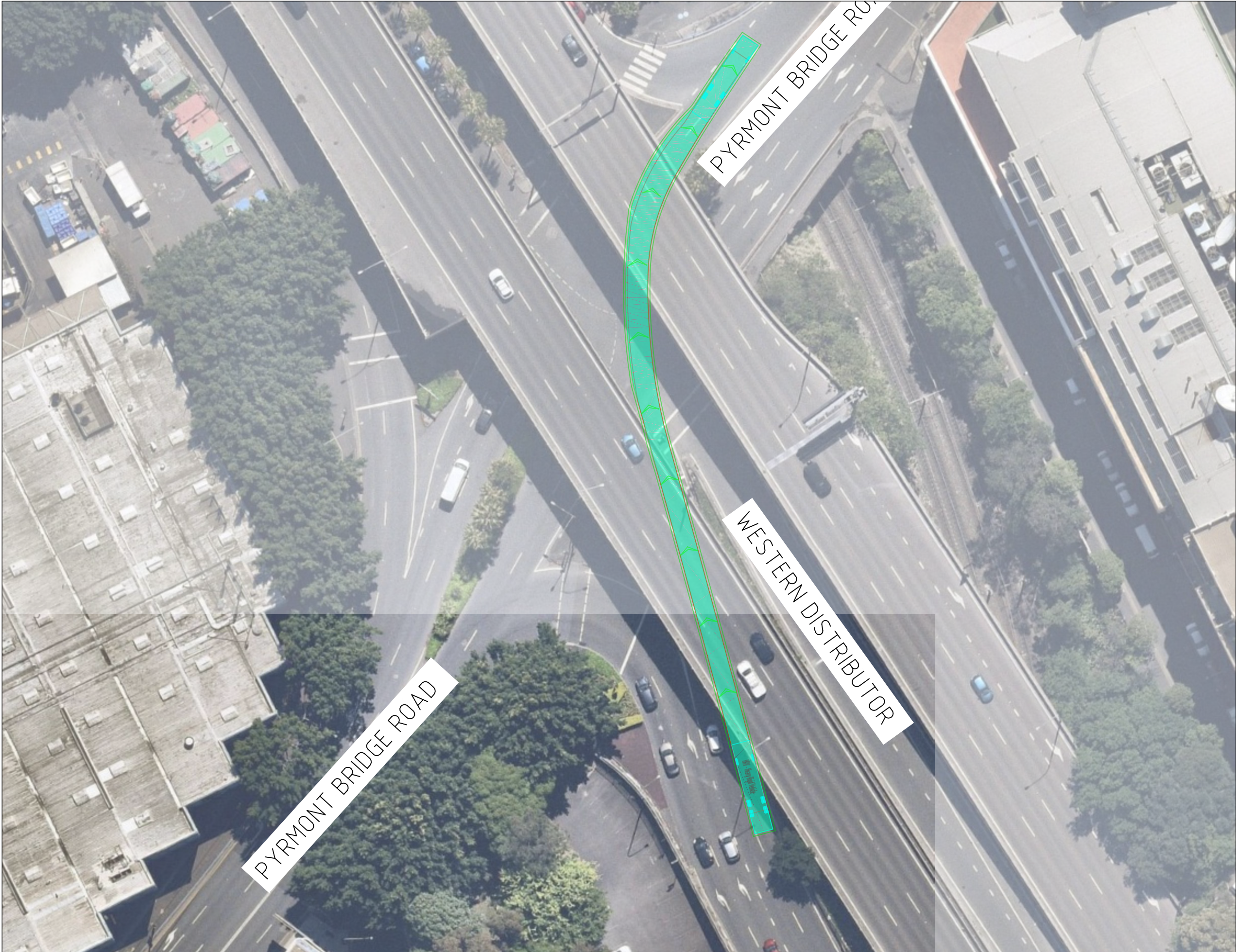
ptc. Suite 502, 1 James Place North Sydney NSW 2060 t +61 2 8920 0800 ptcconsultants.co	REV	DATE	COMMENT / DESCRIPTION	DRAWN	REVIEWED		PROJECT HARBOURSIDE SHOPPING	DRAWING TITLE HEAVY RIGID VEHICLE INGRESS AND EGRESS - WESTERN DISTRIBUTOR	CLIENT	MIRVAC	PRELIMINARY
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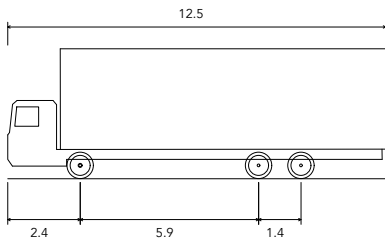
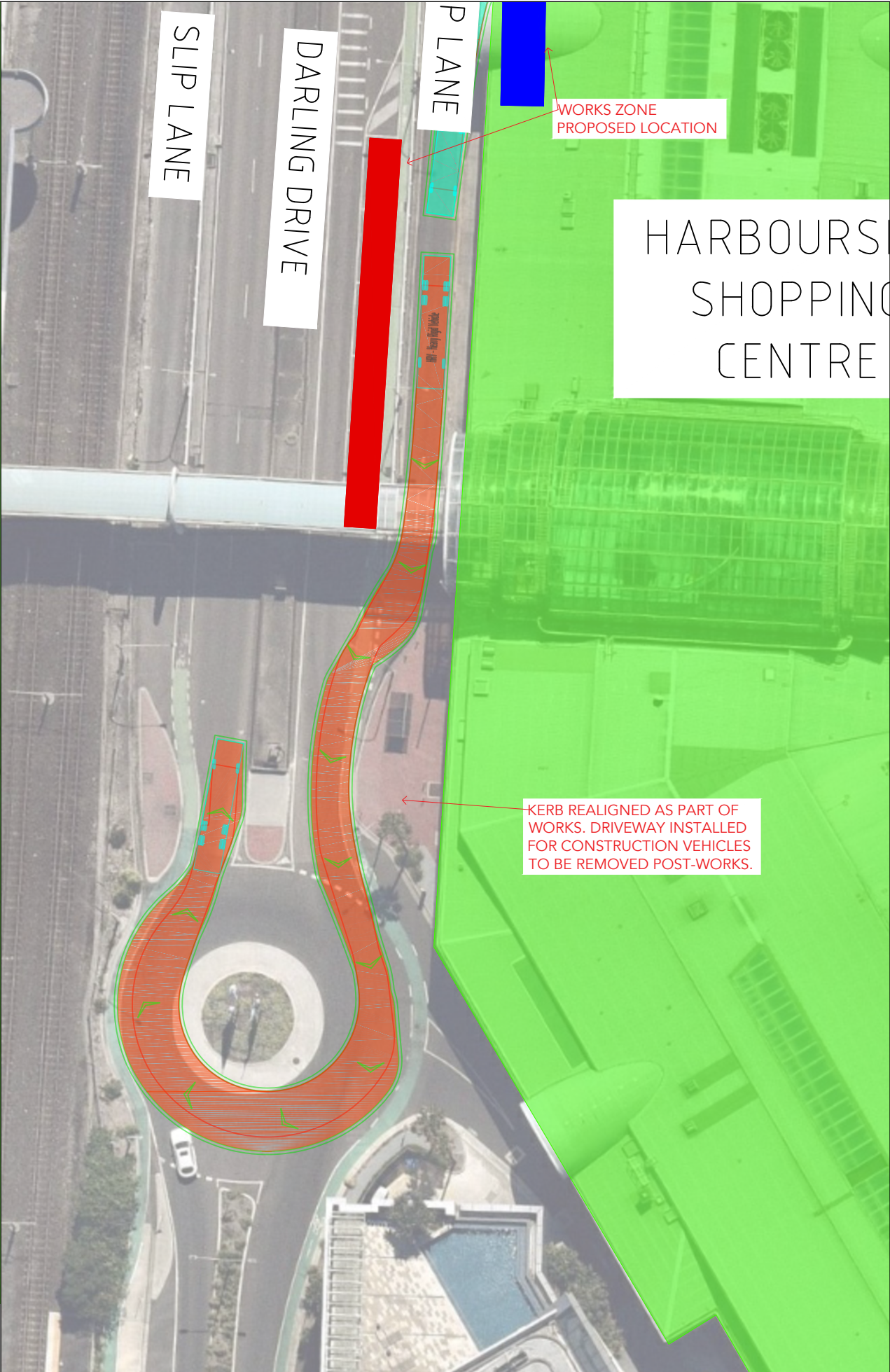
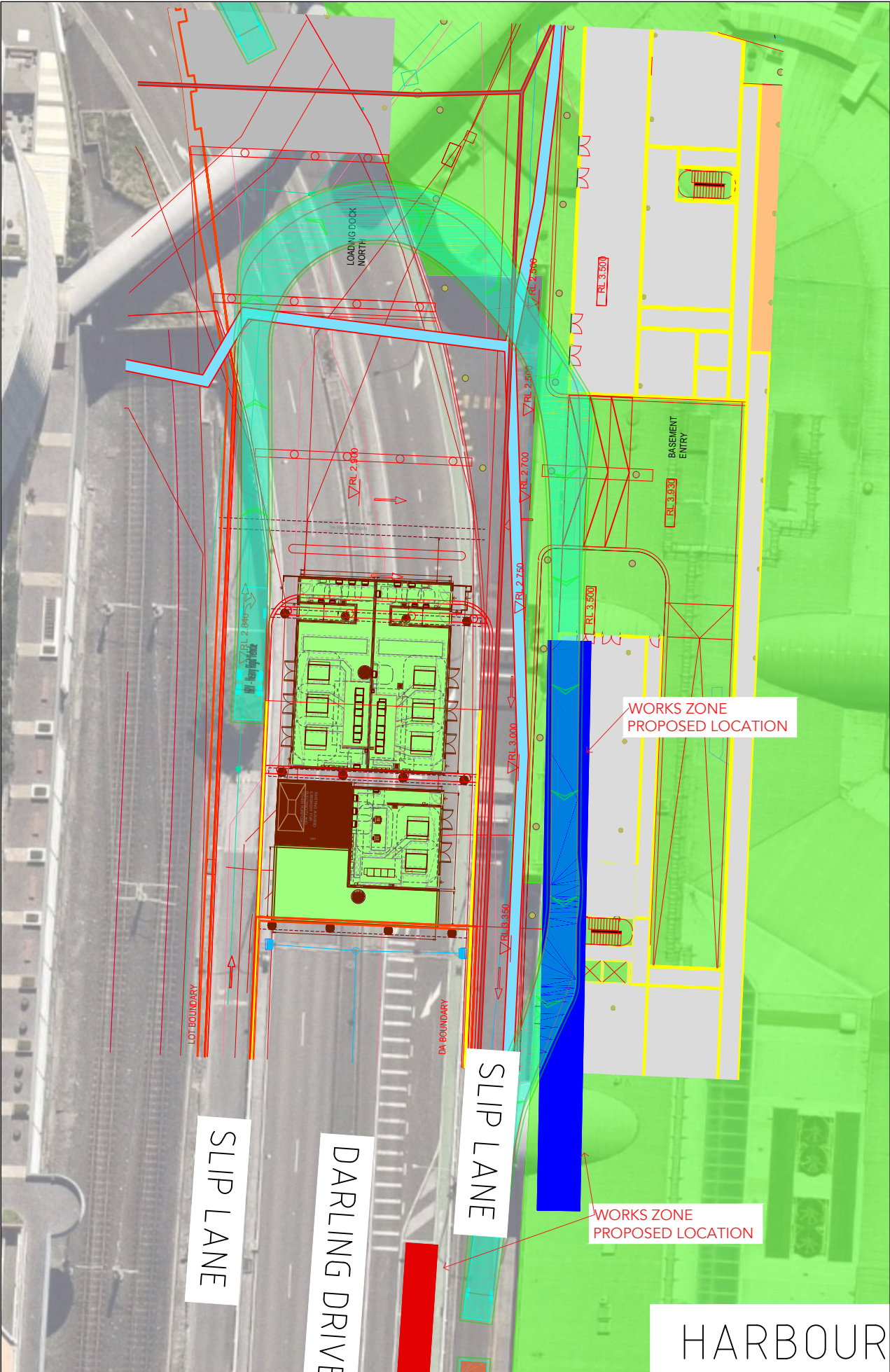
ptc. Suite 502, 1 James Place North Sydney NSW 2060 t +61 2 8920 0800 ptcconsultants.co	REV	DATE	COMMENT / DESCRIPTION	DRAWN	REVIEWED		PROJECT HARBOURSIDE SHOPPING	DRAWING TITLE HEAVY RIGID VEHICLE INGRESS AND EGRESS PYRMONT BRIDGE ROAD - WATTLE STREET	CLIENT	MIRVAC	PRELIMINARY
	P5	07.10.22	FOR INFORMATION	JAJ	DB/SW				DRAWING #	PTC-HRV006	REV P5
	P4	13/04/22	FOR INFORMATION	JAJ	SW				PROJECT #	22-0036	
	P3	15/03/22	FOR INFORMATION	JAJ	AM / DB				SCALE	1 : 400 @ A3	
	P2	07/03/22	FOR INFORMATION	JAJ	AM						
	P1	10/02/22	FOR INFORMATION	HL / JAJ	DB/AM						



HRV - Heavy Rigid Vehicle	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

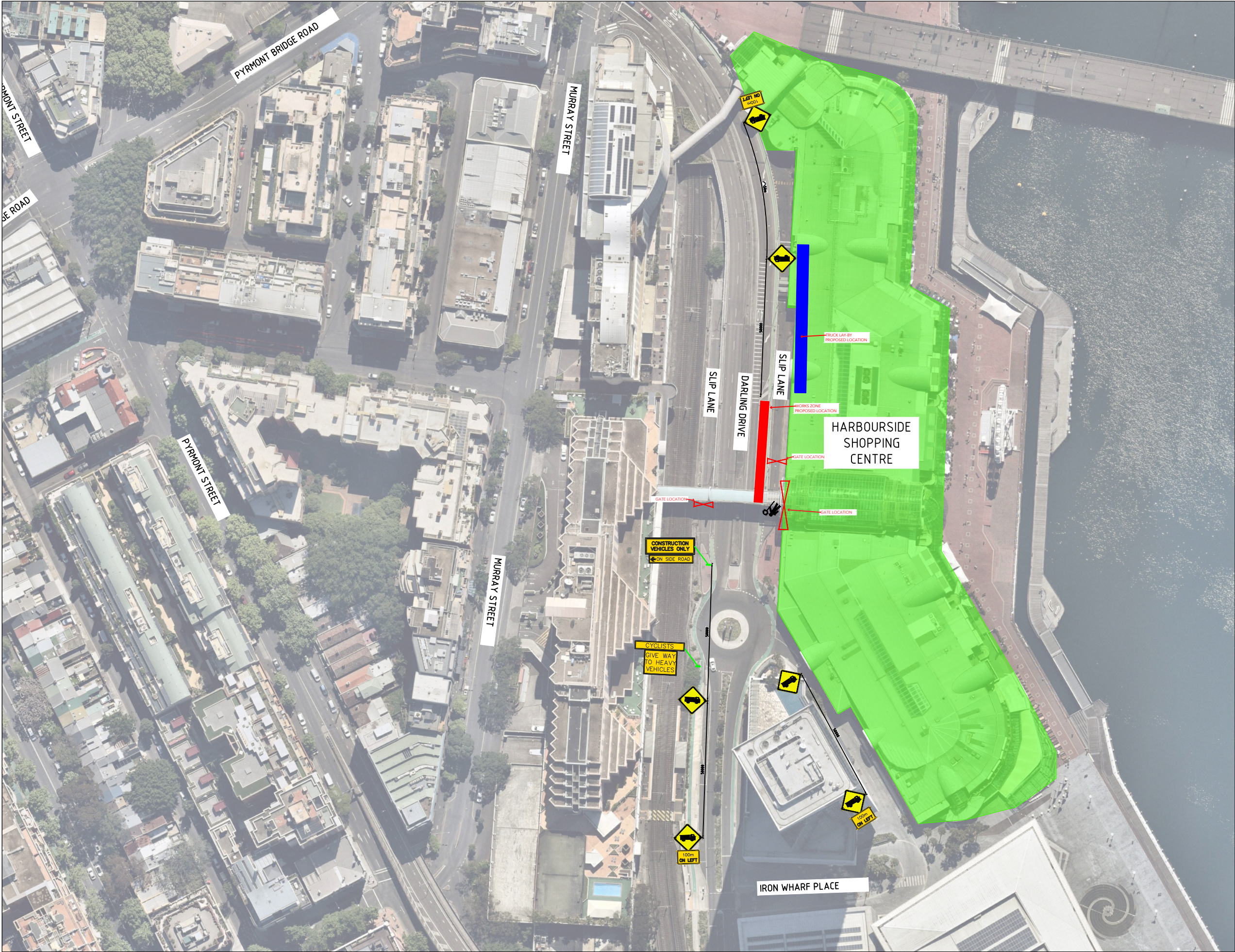
The turning paths illustrated in this drawing have been prepared using the Autotrack vehicle modelling software in conjunction with AutoCAD. The vehicle model was prepared by Analytica Pty Ltd based upon vehicle data provided by Austroads. While this modelling represents a conservative assessment of the vehicles ability, it is not possible to account for all vehicle types/characteristics or driver ability.

ptc. Suite 502, 1 James Place North Sydney NSW 2060 t +61 2 8920 0800 ptccconsultants.co	REV	DATE	COMMENT / DESCRIPTION	DRAWN	REVIEWED		PROJECT HARBOURSIDE SHOPPING	DRAWING TITLE HEAVY RIGID VEHICLE INGRESS AND EGRESS PYRMONT BRIDGE ROAD - WESTERN DISTRIBUTOR	CLIENT	MIRVAC	PRELIMINARY	
									DRAWING #	PTC-HRV007	REV P5	
	P5	07.10.22	FOR INFORMATION	JAJ	DB/SW				PROJECT #	22-0036		
	P4	13/04/22	FOR INFORMATION	JAJ	SW				SCALE	1 : 500 @ A3		
	P3	15/03/22	FOR INFORMATION	JAJ	AM / DB							
	P2	07/03/22	FOR INFORMATION	JAJ	AM							
	P1	10/02/22	FOR INFORMATION	HL / JAJ	DB/AM							



HRV - Heavy Rigid Vehicle
Overall Length 12.500m
Overall Width 2.500m
Overall Body Height 4.300m
Min Body Ground Clearance 0.417m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

Attachment 3 Indicative Traffic Guidance Scheme (TGS)



comments

A3

- GENERAL NOTES:
1. All information provided regarding traffic guidance schemes (TGS) is indicative
 2. Detailed TGS are to be developed by the appointed traffic control company
 3. All TGS revisions or adjustments must be made by a suitably accredited person with the appropriate safework NSW licence
 4. This drawing is not to scale and is to be used for reference purposes only
 5. All signage is to be in accordance with TCAWS v6.1 (2022) and set up in visible and appropriate locations
 6. The role of traffic controllers is to hold construction vehicles within the site until it is safe for them to leave the site. They are not permitted to stop traffic to enable truck movements.

- SITE SPECIFIC NOTES:
1. The Darling Drive slip lane is to be considered part of the active construction site. gate access as shown will control vehicular access to construction vehicles only.
 2. Based on construction vehicle swept paths, cyclists approaching from the south require warning of turning trucks.

ptc. Suite 502, 1 James Place North Sydney NSW 2060 t +61 2 8920 0800 ptcconsultants.co	REV	DATE	COMMENT / DESCRIPTION	DRAWN	REVIEWED		PROJECT HARBOURSIDE SHOPPING	DRAWING TITLE INDICATIVE TRAFFIC GUIDANCE SCHEME (TGS) DRAWN BY: Jake A Jansen, TCT1027562 (PWZ) REVIEWED BY: Dan Budai, TCT0016805 (PWZ)	CLIENT	MIRVAC	PRELIMINARY
									DRAWING #	PTC-TGS001	REV P5
									PROJECT #	22-0036	
									SCALE	NOT TO SCALE	
	P1	19.09.22	INDICATIVE TRAFFIC GUIDANCE SCHEME	JAJ	DB						