

Construction Management Plan

Sydney Opera House Lower Concourse Improvements

Lower Concourse, Bennelong Point, Sydney
Project Number: 1314

Revision: B

Date: 6/03/2026

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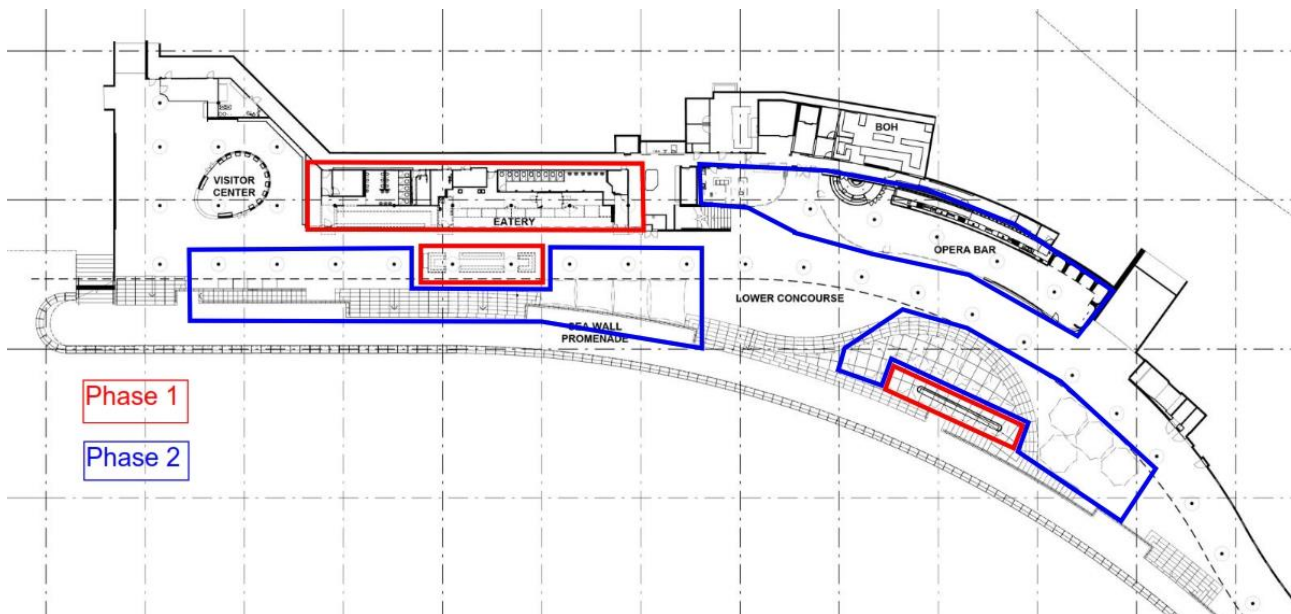
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1 Introduction:

This Construction Management Plan (CMP) is a primary document for the management of work during the fit-out of the Opera Bar and Eatery.

The aim of the plan is to ensure that appropriate measures have been considered for site access, egress, storage and the operation of the site during all phases of the construction process in a manner that respects the UNESCO World Heritage listing restrictions, adjoining owner's property rights, maintains public safety, minimises disruption to pedestrians and vehicular traffic within this locality and protect services.

2 Construction site layout



This shows the entirety of the sea wall promenade, lower concourse and back of house areas. Promena works will be undertaken specifically in the Opera bar, Opera bar Alfresco, Eatery and external lease line. This will be followed by the replacement of the 16 existing shade structures.

3 Scope of works:

The Project is located at Sydney Opera House, Lower Concourse Level, Sydney NSW 2000. The works for this project involve upgrades and alterations to the Opera Bar and Eatery. A complete new fit-out will be carried out in both areas, including all related service reticulation.

Phase 1: Internal and external fit-out of the Eatery/Winnies and Alfresco Opera Bar.

Phase 2: Opera Bar main works, followed by the replacement of the shade structures, joinery and furniture within the external lease line.

4 Heritage Listings

- Opera Bar and House Canteen sit within the Sydney Opera house site boundary, and therefore fall within statutory heritage protection under the following listings:
- World Heritage List (UNESCO) - 28 June 2007. In 2007, the Sydney Opera House was inscribed on UNESCO's World Heritage List (WHL) for its Outstanding Universal Value and as a "masterpiece of human creative genius"
- National Heritage List (Australian Government) – 2005. The following is the Summary Statement of Significance of the National Heritage values of the Sydney Opera House:
- Register of the National Estate (Australian Government).
- State Heritage Register (NSW Government) – 2003. The following is the Statement of Significance of the State Heritage values of the Sydney Opera House:
- State Environmental Planning Policy (Major Development) 2005 (NSW Government)
- State Regional Environmental Plan (Sydney Harbour Catchment) 2005 (NSW Government)
- Sydney Local Environmental Plan 2005 (City of Sydney Council)

Specific items and materials within the fit-out area are as follows:

- **Unpainted and unobscured concrete 'mushroom' columns** – Wherever demolition or construction work is to take place around these structures, they will be wrapped in protective sheeting to prevent damage.
- **Paving, steps and walls of solid granite** – Footpaths in highly trafficked areas within the construction hoarding shall have Honcho protective sheeting laid down before work commences. Wall coverings will be protected by structural timber sheeting and purpose made protective plastic sheeting.
- **Open bronze rail system to parapet edge of forecourt** – Since deliveries are planned to take place from the SOH forecourt and craned down over these rails, Structural timber protection shall be erected at the point of slew to remove the risk of contact between the load and the heritage rail.
- **Bronze framed poster vitrines and doors** – These are to be removed prior to demolition works by Promena's contractors and stored in a safe location by SOH.

5 Roles and Responsibilities

Project team:

The following table identifies the project team members and their role on the project.

Name	Role	Contact
Joseph Gordon	Construction Director	0420 302 263 jgordon@promena.com.au
Bryan Darragh	Operations Director	0402 411 089 bdarragh@promena.com.au
Charlie Baker	Project Manager	0499 371 874 cbaker@promena.com.au
Bayden Riley	Contract Administrator	0488 587 655 briley@promena.com.au
Joe Fletcher	Site Manager	0473 418 937 jfletcher@promena.com.au

Role	Responsibility
Construction Director	• The Construction director will assume ultimate responsibility for the project • Head contract draft and amendments • CC and OC certification
Project Manager	• Construction Programme • Design consultant management. • Budget control • Head contract progress claims • Variations • Regulatory and authority coordination
Site Manager	• Environmental and hazard management • Subcontractor scheduling and day to day labour management. • Permits and licenses. • Deliveries and waste removal • Site security • Set out.
Project Administrator	• Procurement • Document request, review and control • Subcontractor documentation and certification

Role	Responsibility
	• Document and contract registers • Meeting minutes

Project Consultants

Name	Company	Role	Contact
Client			
Hamish Watts	Applejack Hospitality	Director	hamish@applejackhospitality.com.au 0419 744 016
Ben Carroll	Applejack Hospitality	Director	ben@applejackhospitality.com.au 0408 432 722
Project Manager			
Lachlan Croft	Propel Property Advisory	Senior Project Manager	Lachlan.croft@propelprop.com.au 0421 413 409
Mitch Futcher	Propel Property Advisory	Director	mitch.futcher@propelprop.com.au 0414 569 696
Architect			
Stuart Krelle	Luchetti Krelle	Principal Architect	Stuart@luchettikrelle.com 0409 369 991
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Services Engineer			
Greg Chambers	Jones Nicholson	Director	gregc@jn.com.au 0409 205 029
Scott McLaughlin	Jonas Nicholson	Director	scottmc@jn.com.au 0425 883 157
Tony Qi	Jones Nicholson	Senior Electrical Engineer	tonyq@jn.com.au 02 8973 2000
Jordon Gaplin	Jones Nicholson	Associate Hydraulic Engineer	jordong@jn.com.au 02 8973 200
Kitchen Design			
John Thomas	Sangster	Director	john@sangsterdesign.com.au 02 9659 4314
Ashleigh Thomas	Sangster	Senior Design Consultant	ashleigh@sangsterdesign.com.au 0426 917 290
Structural Design			
Linh Nguyen	Arup	Structural Engineer	Linh.nguyen@arup.com.au 02 9320 99879
Xavier Nuttal	Arup	Structural Engineer	
BCA/PCA/DDA			
Shane Berry	Group DLA	Technical Director	sberry@groupdla.com.au 0448 566 606
Planning Consultant			

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Heritage consultant			
Alan Croker	Principal	Design5	alancroker@design5.com.au 02 9319 1855
Matthew Byrnes	Director	Design5	matthewbyrnes@design5.com.au 02 9319 1855
Sydney Opera house			
Ryan O'Keefe	Head of Business Management	Sydney Opera House	ryan.okeefe@sydneyoperahouse.com
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Kya Blondin	Exec Director – People and Gov	Sydney Opera House	kblondin@sydneyoperahouse.com.au
Department of Planning, Housing and Infrastructure			
Cameron Sargent	Team Leader – Key Sites	DPHI	cameron.sargent@planning.nsw.gov.au
Rodger Roppolo	Senior Planning Officer	DPHI	Rodger.roppolo@planning.nsw.gov.au

6 Construction management

6.1 Existing utilities and providers:

In the event that any service is required to be shut down, the direct contact for these is the Sydney Opera House Building Operations who are available on 02 9250 7979.

6.1.1 Power:

Power to the SOH has recently been upgraded inclusive of a new 11kva substation and main switchboard.

The chamber substation is owned by Ausgrid and power reticulation is managed and operated by SOH.

The reticulation within the SOH precinct and is metered to all of the various tenants

Temporary power boards will comply with AS 3012:2010 – Electrical installations – construction and demolition sites, and AS 3000 – Wiring rules. TPB's will be installed by a licensed contractor, positioned where easily accessible and protected from physical damage, and feature adequate

earthing. Circuits will be protected by RCD's, which will be tested regularly and documented.

The power feed to the TPB's will be fed directly from the SOH distribution switchboards.

6.1.2 Water:

The incoming main is owned by Sydney water. The reticulation of water supply is managed and operated by SOH.

Hot Water Supply:

By tenant. HWS located in PR 30.

SOH central hot water supply is not available in Lower concourse

Potable Water:

Refer to SOH BSS.

Each tenancy has a metered potable water supply from SOH low pressure ring main

6.1.3 Gas:

The incoming main is owned by Jemena. The reticulation of gas supply is managed and operated by SOH.

Location of meters in PR30 (access next top FHR).

6.1.4 Telecommunications Providers:

Telecommunications reticulation is managed and operated by SOH.

Telecommunications the SOH comes into a central MDF where it is then distributed to the various users.

Promena to confirm design intent of tenancy comms reticulation and infrastructure. Any new connections or modifications to SOH infrastructure must be approved and configured by SOH Technology team.

6.1.5 Sewer:

The outgoing sewer main is owned by Sydney water. The discharge of sewer and trade waste is managed and operated by SOH.

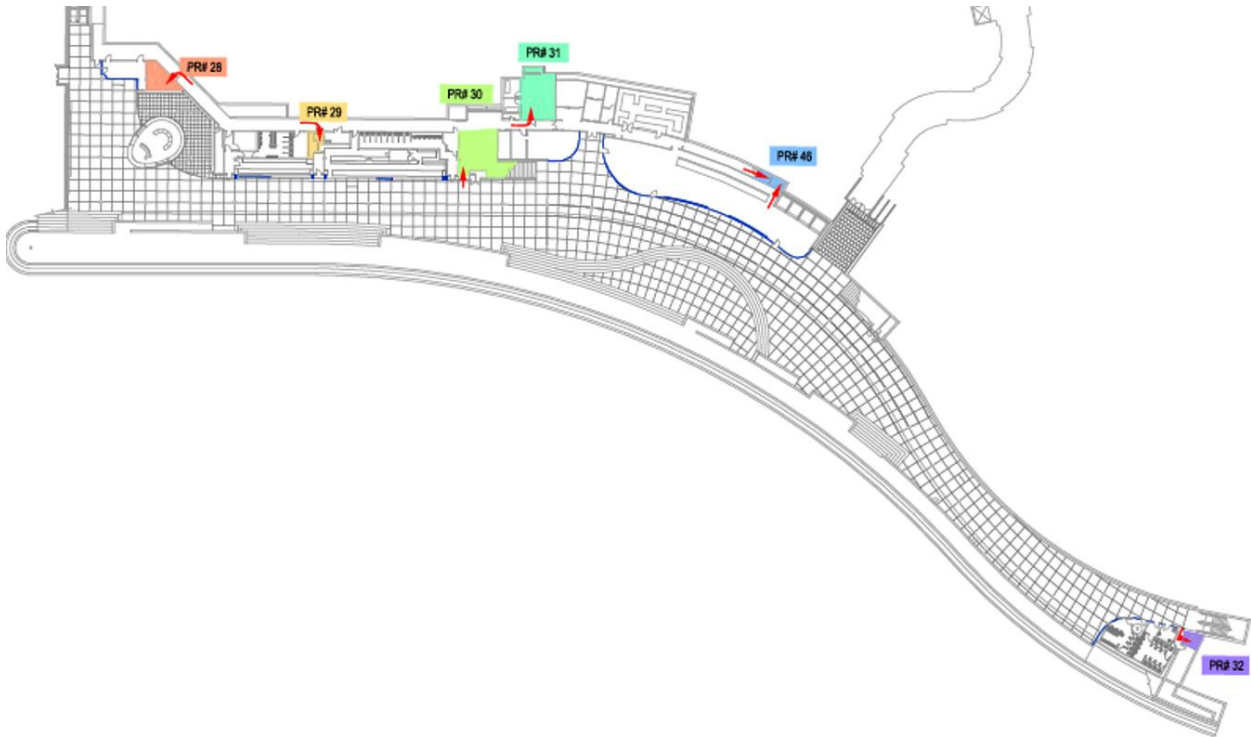
The existing sewer system goes to a number of pumping stations.

6.1.6 Mechanical:

Toilet and kitchen exhaust reticulates into PR31

PR46 equipment by SOH supporting tenancies. All other HVAC by Tenant.

Maximum allowable kitchen exhaust for both venues is 4,400 l/s (exhaust plenum located in Wilson Carpark grille next to Tarpean Wall).



7 Contamination and Hazardous Materials Risk Assessment.

The original SOH construction between 1959 and 1973, and some subsequent utilised a number of building materials and products containing asbestos, PCBs, lead and chromate paints, which have since been outlawed. In 2015, Hibbs & Associates conducted a survey of the SOH to identify typical locations where these materials may still be present, and outlined the restrictions to modify, and any requirements for their safe removal.

This construction management plan is to be read in conjunction with the Hibbs & Associates documentation in the report appendices.

8 Quality Management.

The term quality refers to not just the quality of the end product produced but the level of detail and control that is undertaken throughout the entire procurement process. Promena Projects uses comprehensive internal systems to ensure that the highest level of quality possible is instilled into all projects. These systems track key aspects of the project through set date reviews which are specifically tailored to cover all project aspects.

Total quality control is implemented and monitored throughout; from tender period through to the final completion stage and rectification of any defects should they occur. Standard review meetings and quality checklists are used internally to ensure the smooth and precise flow of information throughout Promena and other interested parties.

All building shall comply with SOH Building Services Standard (SOHBSS). Any deviations will be approved in writing before proceeding.

The following review periods are used to maintain total quality control throughout the entirety of the project:

8.1 Tender Conversion Form

This review is used by the Directors and Estimator to allocate responsibilities to team members during the tendering process. Specific tasks are listed to guarantee that all tenders are undertaken in a complete and uniform manner, ensuring that no critical aspects are overlooked that could ultimately affect the Project if the tender is awarded and proceeds to construction phase.

8.2 Project Establishment Form

This review is used by the Project Manager to allocate responsibilities to team members appropriately ensuring that all areas are covered at the initiation and all information used in the tender preparation is converted through to the contract documentation. Critical areas such as Head Contract details, project contacts, statutory/ regulatory requirements and internal project startup checklists as outlined on the project establishment form are covered in this review meeting.

8.3 Mid Project Evaluation Form

The Mid Project review is used to evaluate the project at 50% of contract program. This review takes into account all areas of the project both internally and externally. All quality items are controlled through the establishment of defects and incomplete works list required for this meeting. A review of subcontractor progress is incorporated into this review which will flag any issues or areas of concern that need to be addressed in order to maintain project quality.

8.4 Final Project Review Form

At the completion of the project a detailed evaluation and check of all current project procedures is undertaken. This review concludes the works as a project team and finalises project control by clarifying completion on all aspects of the project. Important follow up dates are flagged on calendars and all critical members of the project team, such as subcontractors, clients and Promena members are assessed for reference in future projects.

In addition to these three project control reviews, other standard checks are undertaken throughout the life of the project, such as weekly site manager checks and monthly project manager checks.

8.5 ITP's

Promena uses a series of documents called ITP's (Inspection Test Reports) to monitor the work of each individual trade throughout the project. These begin with a pre-work checklist and end with the signoff from the contractor and management.

The sections within each ITP include:

- Documentation check – Ensuring the drawings to be worked off are current and correct.
- Health and Safety
- Quality control – Specific checklists tailored to each individual trade to ensure the standard of the finished product.
- Adherence to building codes and compliance with Australian Standards
- Adherence to specifications.
- Commissioning and testing.
- Certification and warranty
- Contractor, management and follow up trade signoff.

These reports are referred to throughout the project, requiring photos for evidence of each item within. All parties can access the ITP's at any time, and only when Promena are satisfied will the report be signed and filed.

All Promena personnel involved on each project are trained to manage the processes put in place for quality control.

8.6 Commissioning and Handover

Commissioning is the verification process which tests the functionality and performance of each system against specified criteria. This process begins during design completion, continues through installation and culminates in final witness acceptance tests. These tests focus on system integration, safety and energy efficiency.

The systems subject to commissioning and witness testing include:

- Mechanical systems
- Hot water systems
- Fire mode testing
- Electrical
- General lighting controls
- Emergency and exit lighting
- Security systems
- Hydraulic systems
- Fire protection systems

Sydney Opera house will be included in all witness testing and receive certificates for works that impact systems itemised in the AFSS, or are fire system/fire engineering related.

9 Site Management

9.1 Site Facilities:

Lunch facilities will be provided in the green room of the Opera House for head contractors. Facilities for subcontractors shall be requested from SOH by Promena.

Toilet Facilities will be provided by SOH for the use of Promena staff and sub-contractors. The nearest facilities to the work site will be detailed within the project induction.

First Aid Facilities will be provided by Promena at the Site Manager's desk as well as SOH's facilities detailed within the site induction.

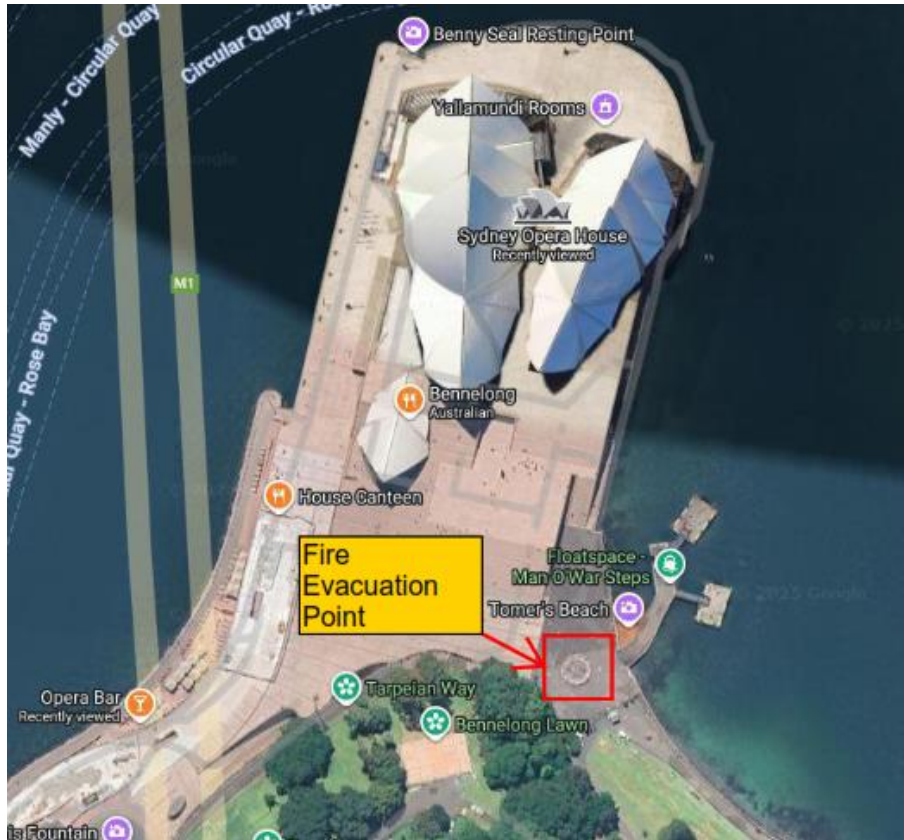
When arriving on site for the first time, management, trades and visitors will be required to complete two inductions;

- Sydney Opera House Induction Training.
- Promena BreadCrumb Safety Induction.

The individual will be shown all relevant facilities, safety points (first aid kits, fire extinguishers etc) and fire evacuation points.

The above list of people relevant to the project will be on the wall of the site office.

9.2 Fire Evacuation Point

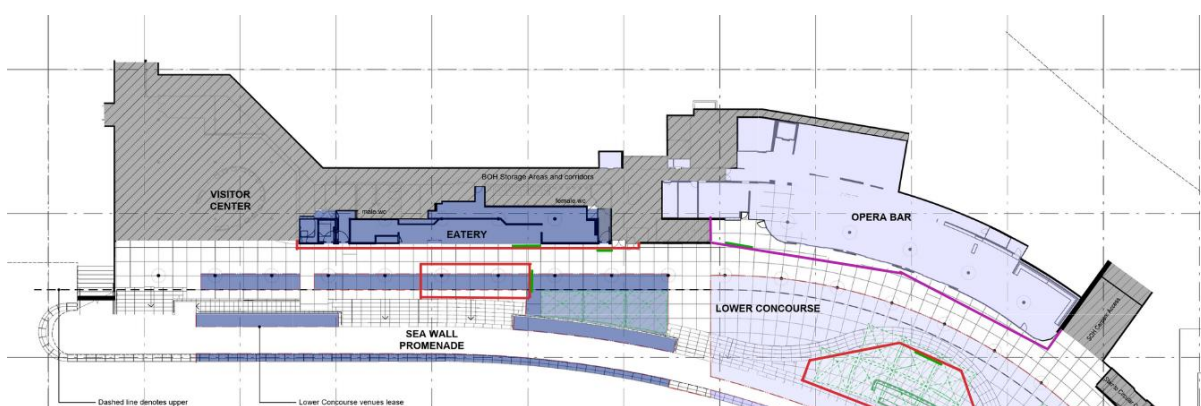


The FEP will be behind Tomer's Beach, approximately 180 metres East of the site.

To access from the lower concourse, climb any of the staircases leading up to the upper opera house forecourt. Walk East towards the botanical gardens until you are at the other side of the opera house steps behind Tomer's beach.

The FEP location may be updated during special events. SOH to advise dates of change and new location.

10 Hoardings and Site Fencing:



The above is then plan of the positions of the hoarding walls and access points which will be erected for both phases of Promena's works. These are designed for minimal intrusion into pedestrian walkways and seating. No third-party advertising is permitted to be displayed on any hoarding. Promena will remove any graffiti from any construction hoarding within the construction area within 48 hours of its application.

An additional hoarding plan will be submitted once the new shade structure layout is confirmed.

Hoarding will be constructed from marine grade structural ply cladding on H3 timber frames. These will be fixed together and anchored using 50 kg concrete blocks.

TBC – Hoarding contractors to send specific materials when finalised.

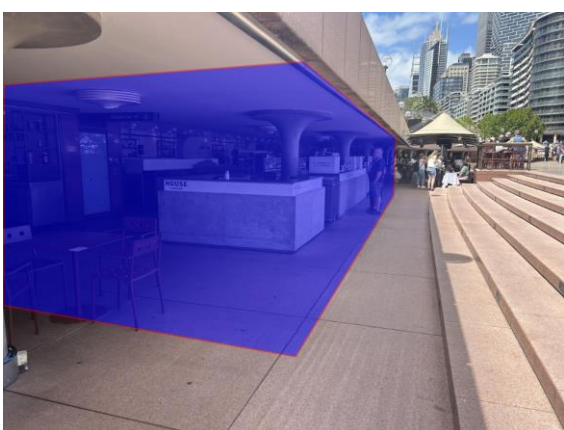
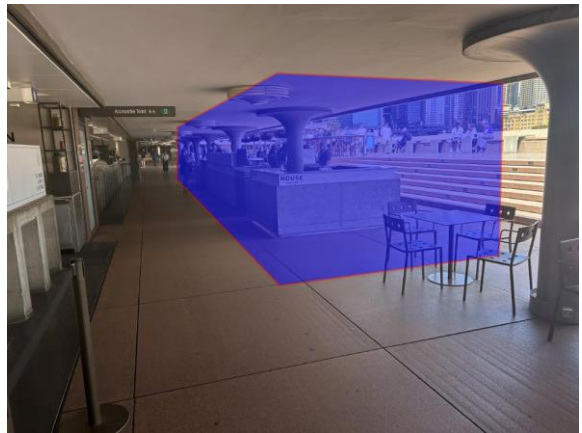
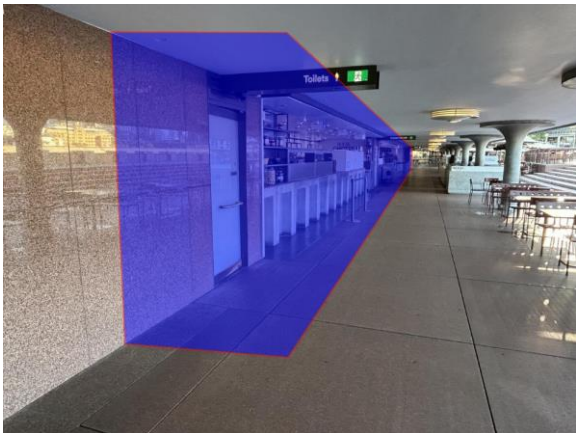
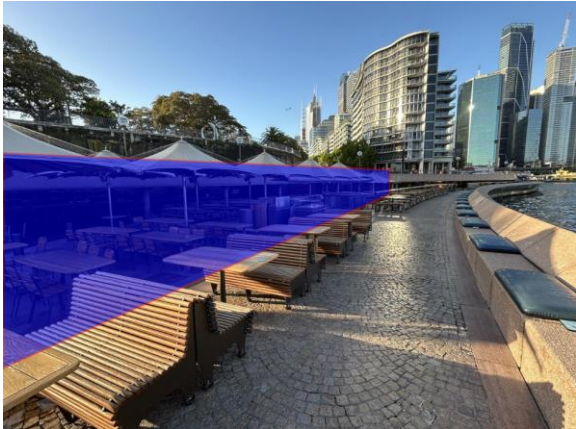
The hoarding external face will be painted in the colour 'coconut husk' specified by SOH. The Opera house will design the graphics for vinyl signage to cover entirety of the walls, which Promena will then get manufactured and installed.

10.1 Phase 1

Hoarding for the eatery will run from the DDA bathroom at the northern end of the eatery to the far side of the entrance to the female toilets at the south end. The walls will be built to run parallel at 600 mm from the eatery wall. This will allow more than the minimum 2 m passing space in accordance with AS1428.1 (Design for Access and Mobility).

For the OB alfresco bar, the hoarding will follow the line of the top step of the curved staircase leading down to the lower concourse level. It will then run along the back of the bar, ensuring it does not impede the disabled access ramp.

The walls around the island bar will extend north and south from the ends of the bar up to 2 m. From the eastern and western edges they will extend up to 600 mm.





Out of hours works will be requested from SOH and the City of Sydney. These hoardings will be built out of hours, between 4.00 am and 12.00 pm, so as to cause minimum disruption to public foot traffic.

During the construction, temporary exclusion zones will be established around the area of work. These will be made up of temporary fences and exclusion tape.

Then design and materials used to build the hoardings will be approved by a structural engineer. This will ensure they comply with statutory requirements including wind loadings and providing sufficient noise, dust and odour separation between the construction site and public areas.

Traffic controllers will be on site to guide in trucks delivering hoarding panels and concrete footing blocks. These will be craned over from the upper concourse to the lower concourse.

Trucks delivering materials to site will pull up close to the western rail of the upper concourse. HIAB cranes on the trucks will lift the materials over the rail and land it on the lower concourse below.

Fork lift trucks may be used where necessary. They will not leave the confines of the exclusion zone.

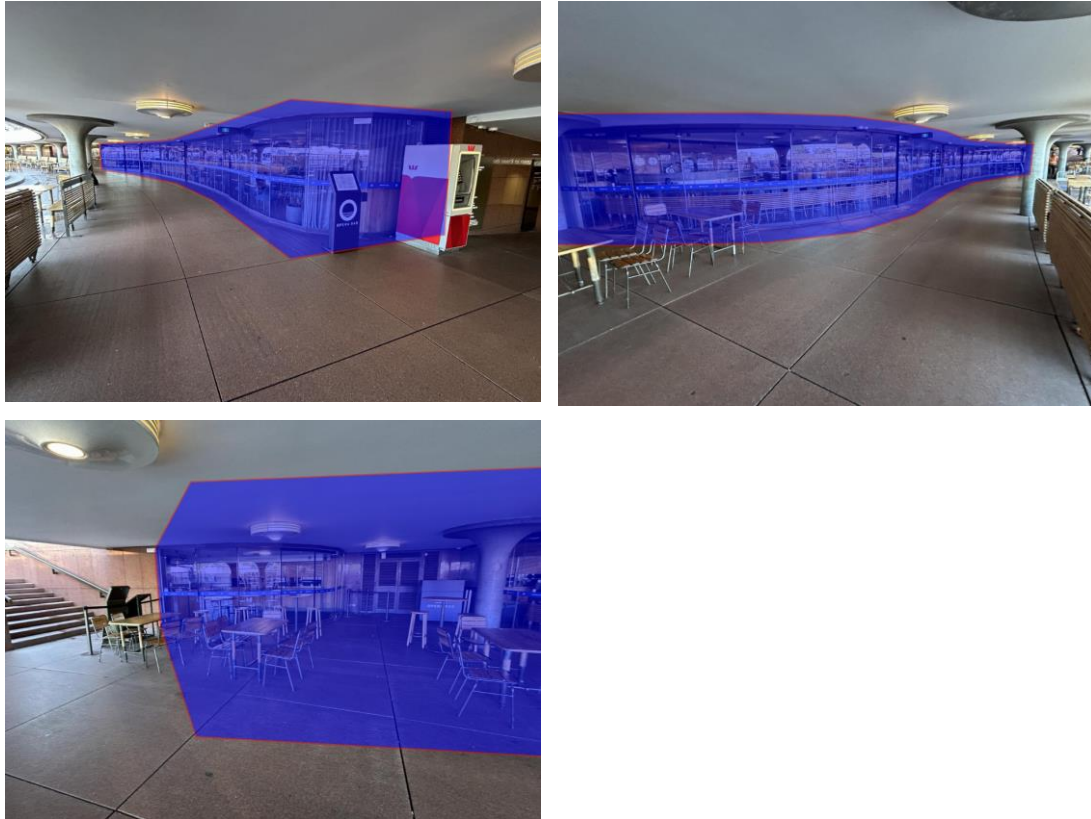
The breakdown and removal of phase 1 hoarding will be carried out concurrently with the construction of phase 2 hoarding.

The hoarding to the eatery will commence on 9/3/26, allowing the male and female amenities to remain open. This hoarding will then be extended from 7/4/26, closing the amenities, during this time the alfresco bar hoarding will also be installed.

The island bar will remain open during phase 1 works, and have the hoarding installed during phase 2 works on 1/7/26, for demolition to commence, once the alfresco bar has re-opened.

10.2 Phase 2

Opera bar hoarding will run along the lower concourse in line with the current glass partitions. It will continue that line towards the steps up to the upper concourse, and turn in front of the meet and cheese room to allow enough room at the bottom of the stair case.



As stated above, the construction of phase 2 hoarding will be carried out at the same time as phase 1 breakdown.

Phase 1 hoarding materials will be reused wherever possible to minimize the deliveries needed.

The access points to these hoarded areas will be secured with coded locks, the codes of which will be changed twice per week. They will also feature Ring door cameras, the feeds of which will be directed to Promena staff members who can then allow contractors access remotely when necessary.

The phase 2 hoarding will commence from 24/6, following the completion of phase 1 works, and VIVID.

11 Site Security

The access points to these hoarded areas will be secured with coded locks, the codes of which will be changed twice per week. They will also feature Ring camera door cameras, the feeds of which will be directed to Promena staff members who can then allow contractors access remotely when necessary.

Promena employees will have SOH access passes assigned to them by BOPS. Their passes will prevent their access to restricted areas of the house. If they are required to obtain access to an area which their pass does not unlock, they will liaise with the Security Team Leader through the appropriate SOH Contract Manager. They will need to provide photo identification in addition to their current SOH access pass for any admission to locked areas request. Upon completion of the works, the area will be resecured by a member of SOH security services.

Contractors will be required to check in at stage door every morning when arriving on site. They will then make their way down to the relevant hoarding access point where they will contact a Promena staff member via the Ring camera door bell for access.

12 General Protection

12.1 Dilapidation

A dilapidation report, including photos, will be undertaken prior to the commencement of work. This is to ensure that there is evidence of the condition of all areas in which Promena and its contractors will be working. Any existing damage, wear and defects will be identified and recorded. These will be compiled into a report and submitted to the SOH team, who will be asked to review and sign the report.

12.2 Public Safety and Pedestrian Protection

Promena will make use of solid construction hoardings to enclose the areas of work. All measures will be taken to ensure minimal obstruction to the pedestrian walkways on the sea wall promenade and lower concourse.

Clear warning signage and lighting will be used to warn members of the public of any hazards, and to guide them around the areas of work. Any cables or pipes running to stand alone areas of hoarding will be raised above ground level, or hidden under protective ramps.

During deliveries and waste removal, exclusions zones will be established around the routes which will be taken by the vehicles. Traffic controllers will ensure the safe entry and exit of any trucks accessing the SOH forecourt to access site.

12.3 Protection of Existing Structures

All finishes to existing floors, walls, doors, handrails and supports, which are not to be altered during Promena's works, are to be protected as comprehensively as possible.

Areas of high contractor traffic will receive particular attention, such as door ways, entrance and exit step ups and staircases.

Any lifts used for access during contractor load out/deliveries will have their walls and floor protected with solid HONCHO protection systems.

Stairways will also have their treads and risers covered with slip resistant coverings to ensure no damage is made.

12.4 Environmental Protection Methods

Promena will endeavour to implement environmental protection measures wherever possible. These will be designed to prevent pollution, minimise impacts on surrounding land and waterways and comply with council EPA and WHS requirements.

The area of works to be undertaken is in an area of high pedestrian traffic, as well as being adjacent to the water of Sydney harbour. As such, special implementations must be undertaken to ensure no damage is caused.

The key aspects of environmental protection which will be relevant to the works within our scope will be:

12.5 Dust Control

Adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood during construction. In particular, the following measures should be adopted:

- Physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions
- Earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed.
- All materials shall be stored or stockpiled at suitable locations and stockpiles shall be maintained at manageable sizes which allow them to be covered, if necessary, to control emissions of dust and/or VOCs/odour.
- The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs.
- All vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material.
- All equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays.
- Gates shall be closed between vehicle movements and shall be fitted with shade cloth.
- Cleaning of footpaths and roadways shall be carried out regularly.

12.6 Waste Water Management

The areas of work along the lower concourse are directly adjacent to Sydney harbour. Every precaution possible must be taken to ensure no activity causes pollution to the water.

The existing stormwater drains within the proposed area of work discharge directly into Sydney harbour. As such:

- All contractors will be prohibited from washing out directly into drains which feed directly into the existing stormwater. Any waste water will be stored in dedicated wash out bays, then removed from site and disposed of safely. Waste liquids may also be disposed of at sewer discharge points approved by the SOH Principal.
- Existing stormwater pits will be protected either by being covered completely, or with the installation of inlet filters.
- Measures will be taken to divert clean stormwater around the areas of work using temporary piped diversions and interceptor pits.
- At the end of each day, the areas of work shall be cleaned up thoroughly using wet vacs to make sure there is no waste that is at risk of being washed into the harbour water.

12.7 Noise & Vibration Management

Noise and vibrations are identified as key construction risks at the Sydney Opera House and its surrounding areas. This is primarily due to three factors:

- Ongoing Opera House operations – Shows and performances within the SOH building, guided tours etc.
- Public access and events – The opera house forecourt, lower concourse and foreshore are accessible to members of the public at all times. In addition, events are often held on the SOH forecourt.
- Heritage fabric sensitivity – Many of the materials used to build the surrounding areas constructed are original and irreplaceable materials. Some of these may be sensitive to excessive vibration caused by construction work.

Promena will also comply with the NSW Noise Policy for Industry (2017).

Key methods for ensuring the minimisation of noise and vibration issues include:

- All works will be limited to the approved construction hours listed in the working hours section of this document.
- Wherever possible, activities which generate high noise level will be sequenced to minimize their duration.
- Temporary acoustic barriers, such as composite acoustic curtains and purpose built barriers will be erected where achievable.
- Low noise equipment will be used where possible and practical.
- The granite slabs which make up the lower concourse have limited tolerance for vibration. They are also prone to shifting with excessive vibration and foot traffic. If this occurs, they must be lifted and

reinstated in accordance with SOH procedures. (See item 1 in the “considerations for the lower concourse eatery fit-out” document).

Promena will employ equipment to constantly monitor the noise levels on site and within the surrounding area. If noise levels exceed those outlined in the NSW Noise Policy for Industry (2017), or are discovered to be affecting any SOH operation, work will cease until a modified action plan is conceived and implemented.

12.8 Hazardous Materials and Spill Control

Promena acknowledges the presence of hazardous materials within the existing building fabric, including Asbestos, Lead based coatings and PCB containing components. As such, a Contamination and Hazardous Materials Risk Assessment will be undertaken by a qualified environmental and hazardous materials specialist.

Methods to be employed by Promena and its contractors to mitigate the risk of hazardous materials and spills include:

- Fuels, oils, paints and chemicals will be contained in bunded storage containers to prevent leaking. These will be stored away from any drainage paths which might lead to the waters of Sydney Harbour. All SafeWork requirements will adhered to, and all chemicals and dangerous goods will be labelled with the appropriate MSDS information.
- Spill kits will be positioned at intervals around the work area and also close to storage areas.
- Procedures for immediate clean up of spills will be written and included in the site induction.
- Any contaminated materials will be identified and disposed of safely in accordance with the waste management plan.

12.9 Waste Management

- Construction waste will be managed generally in accordance with the EPA’s brochure entitled “Know your responsibilities: managing waste from construction sites” and the EPA’s Waste Classification Guidelines Part 1.
- All waste generated by the development shall be treated and/or disposed of at a facility that has sufficient capacity to and may lawfully accept that waste;
- Waste (including litter, debris or other matter) is not caused or permitted to enter the waters of Sydney Harbour.

- Any vehicle used to transport waste or excavation spoil from the site shall be covered before leaving the premises.
- The wheels of any vehicle, trailer or mobilised plant leaving the site will be cleaned of debris prior to leaving the premises.
- Concrete waste and rinse water will not be disposed of on the site and shall not be caused or permitted to enter the waters of Sydney Harbour.

12.10 Permits

Permits are available from level B2 BOPS office and include:

- Hot and dusty works
- Fire system isolation
- Electrical isolation
- Confined space entry
- Structural penetrations and fixings
- Impairment notices (unlikely but available through BOPS)

Any isolations of services infrastructure fed from SOH (switchboards, water, gas etc) will be recorded in the Tag Out Register. All lock out tags will state the date of isolation as well as the contact number of the contractor.

Electrical isolations must be carried out by a licensed electrician. Prior to the removal of lock out tags, the contractor must provide all certification for the works prior to re-energising. SOH must be present for any works at G67.

13 Working hours:

Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:

- . Between 7.00 am and 7.00 pm, Mondays to Fridays inclusive; and
- . Between 7.30 am and 5.00 pm, Saturdays.

Activities may be undertaken outside of these hours if required:

- . The works are internal and undertaken within the wholly enclosed building;
- or

- . The delivery and removal of vehicles, plant or materials is via the underground loading dock within the Subject Site (in which case it may be

undertaken on a 24-hours-a-day, 7-days-a-week basis during the construction of the development); or

. The delivery and removal of vehicles, plant or materials (not via the underground loading dock under condition C4(b)) is required outside these hours by the Police or other public authorities, or it is determined that it would be hazardous to the general public (i.e. tourists, patrons or events in the forecourt/boardwalks), provided it is undertaken outside scheduled performance times at the Sydney Opera House (including not within 30 minutes before or after scheduled performances); or

(d) required in an emergency to avoid the loss of life, damage to property or to prevent environmental harm.

14 Storage of Material and Waste

14.1 Material Storage

All materials will be stored within the site boundaries. The Promena Site Manager will allocate sub-contractors specific storage areas depending on what other activities are being carried out on the site that day.

SOH will provide a storage space in the old loading dock area. This is where Promena will stage most of their larger equipment and materials.

14.2 Waste Management

All construction waste will be disposed of by Promena staff and contractors will load all waste materials to the designated areas.

Each day, rubbish will be loaded into Bulka bags or wheeled bins and craned from the lower concourse to the SOH fore court, where they will be loaded into a waste disposal truck.

Smaller rubbish will be loaded into wheely bins and taken through the back of house to the SOH loading dock where trucks will take it away.

15 Deliveries

All scheduled deliveries must be booked in using the Mobiledock booking process at least 48 hours before arrival. A weekly delivery schedule will be submitted to ensure deliveries are co-ordinated with all other site and SOH loading dock deliveries.

All deliveries will be accepted in person at the dock by a Promena staff member and escorted by traffic controllers to the craning position on the forecourt.

Materials will be craned over the upper concourse rail onto the lower concourse. They will be landed within the hoarded off exclusion zones.

Promena are to request permission from SOH to place a storage unit on the upper concourse. This will be for any materials that cannot be craned directly over from the delivery vehicle. They can then be walked down to the hoarded areas at an appropriate time.

16 Traffic and Pedestrian Management

Due to the high levels of pedestrian foot traffic in the area and close vicinity of neighbouring properties, the following precautions will be taken.

- Work zones will be established on the north, east and west broadwalks, Vehicle Concourse, central passage and within the operational basement loading dock;
- The main access into site will be via Macquarie Street.
- Truck movements are restricted to designated truck routes to the basement and across the broadwalk;
- Access to neighbouring properties will be maintained at all times;
- Traffic controllers will be in place to direct construction traffic to and from the site; and
- All signage fencing, overhead protection, safety barriers and line marking details will be in accordance with Australian Standards and the Roads and Maritime Services' Manual for Traffic Control at Work Sites.
- No construction vehicles or materials will obstruct pedestrian walkways adjacent to the site;
- Access from Macquarie Street, Central Passage will be maintained;
- Temporary wayfinding signage will be established and maintained throughout the construction phase where pedestrian routes are adjusted;

17 Road Access Limitations and Overhead Hazards

Promena shall notify SOH in writing of the intent to bring delivery and rubbish removal vehicles onto the forecourt a minimum of one week prior to arrival. A Mobiledock booking will be submitted at least 48 hours before arrival. Vehicle loads will be checked against the maximum loading requirements in the outdoor loading plan.

A Promena staff member will meet the vehicle at the gatehouse and traffic controllers will escort it through barricaded areas to the offloading point. Areas of forecourt flooring will be protected before the load offloaded, handrails on the edge of the upper concourse will be protected before the load is craned over to the lower concourse.

18 SOH Event Loading Diagrams and crane lifts

Outdoor Event Guide.



Outdoor Event Guide.



Figure ELD2 : Event Loading Diagram - Ground Level
as at April 2019



Outdoor Event Guide.

Anup M. Cook - Rev 1 - 4 September 2017							
Zone	Underlying structure and surfacing/finishes	Vehicle Mass (t)	Axis Load (t)	Wheel Load (t)	Point Load (kN)	UDL (kPa)	Notes
R - Heavy Vehicle Loading							
R1	Forecourt Finishes: Granite Setts/Colic Roads (bedded)	45	12	6	80	15	
A	Sub on ground	60	12	6	100	30	150*
B	Lower Concourse roof structure*	45	12	6	80	15	
C	VAPS roof structure*	45	12	6	100	15	
D	Screening train structure*	45	12	6	100	15	
E	RV pit structure*	45	12	6	100	15	
F	Music, Pitt and gate covers overlain by 200mm thick slab	45	12	6	100	15	Class B Covers
R2	Vehicle Concourse Finishes: Asphalt	45	12	6	80	15	
A	Sub on ground	60	12	6	100	30	150*
C	VAPS roof structure	45	12	6	80	15	
D	Screening train structure Finishes: Asphalt	45	12	6	80	15	
A	Sub on ground	45	12	6	80	30	150*
C	VAPS roof and platform structures	45	12	6	80	15	
D	Screening train structure	45	12	6	80	15	
E	RV pit structure	45	12	6	80	15	
R4	Western Broadwalk Finishes: Precast pavers type H7 (spanning)	45	12	6	80	15	
B	Western Broadwalk structure	45	12	6	100	15	10 tonne GVM crane - subject to condition inspection
R5	Northern Broadwalk Finishes: Precast pavers type H7 (spanning)	45	12	6	80	15	
A	Sub on ground	60	12	6	100	15	
B	Northern Broadwalk structure	45	12	6	100	15	No stopping zone. Subject to condition inspection. Structure loading capacity not calculated
C	East roof structure	45	12	6	100	15	
D	Roading on ground	45	12	6	100	15	
R7	Scenery Dock Finishes: Concrete	45	12	6	80	15	150*
A	Sub on ground	45	12	6	80	15	150*
RH - Restricted Heavy Vehicle Loading							
RH7	Central Passage and Scenery Dock Finishes: Concrete	25	9	6	80	12.5	
B	Central Passage (N) floor structure	25	9	6	80	12.5	12 tonne axle loads subject to Engineers approval
C	Central Passage (S) floor structure	25	9	6	80	12.5	12 tonne axle loads subject to Engineers approval
D	Scenery Dock	25	9	6	80	12.5	Gate support beams restrict load capacity
S - Special Event Loading							
S1	Carpark Air Shaft Grille Finishes: Aluminium Grilles	-	-	-	4.5	5	
S2	VAPS Car Park Air Grille structure Finishes: Precast pavers type H7 (spanning)	-	-	-	100**	10**	** Refer to diagram for detailed requirements
S3	Podium - Loggia Roof Finishes: Precast pavers type H7 (spanning)	-	-	-	10	7.5	
S4	Podium - Loggia Roof structure	-	-	-	10	7.5	
L - Light Vehicle Loading							
L1	Forecourt Finishes: Granite Setts/Colic Roads (bedded)	20	6	3	30	10	
A	Sub on ground	28	6	3	60	20	Setts/bedding in poor condition
B	Lower Concourse roof structure	20	6	3	30	10	
L2	Vehicle Concourse Finishes: Precast pavers type P/T (spanning)	20	6	3	30	7.5	
A	Sub on ground	60	12	6	100	60	Paver and support type not verified
B	Central Passage floor structure	28	6	3	30	15	Structure loading capacity not calculated
C	VAPS roof structure	45	12	6	80	15	
L3	Western Forecourt Finishes: Asphalt	20	6	3	30	10	
B	Scalation roof structure	20	6	3	30	10	Structure loading capacity not calculated
C	VAPS Substation access path	20	6	3	30	10	Path through to be Class A or B - not known.
L4	Western Broadwalk Finishes: Precast pavers type P/T (spanning)	20	6	3	30	7.5	
B	Western Broadwalk structure	20	6	3	30	7.5	Paver and support type not verified
E	Western Square structure	25	9	6	80	12.5	Structure loading capacity subject to condition inspection
P - Pedestrian Loading							
P0	Lower Concourse Finishes: Local Pavers (spanning)	-	-	-	4.5	5	
B	Lower Concourse floor structure	-	-	-	4.5	5	Structure loading capacity not calculated
P1	Forecourt Finishes: Local Pavers (bedded)	-	-	-	4.5	5	
B	Lower Concourse roof structure	-	-	-	4.5	5	Structure loading capacity not calculated
P2	Vehicle Concourse Finishes: Precast pavers type P (spanning)	-	-	-	4.5	5	
A	Sub on ground	-	-	-	80	15	Structure loading capacity not calculated
P3	Western Forecourt Finishes: Asphalt/Air Grilles	-	-	-	4.5	5	
A	Sub on ground	-	-	-	30	5	governed by Air Grilles
C	VAPS Platform structure	-	-	-	80	15	Surcharge restricted adjacent to Sea Wall
P4	Western Broadwalk Finishes: Precast pavers type P (spanning)	-	-	-	4.5	5	
B	Western Broadwalk structure	-	-	-	4.5	5	governed by Pedestrian type pavers under Loggia
D	Colonade structure Finishes: Precast pavers type P (spanning)	-	-	-	4.5	5	Structure loading capacity subject to condition inspection
P5	Northern Broadwalk Finishes: Precast pavers type P (spanning)	-	-	-	4.5	5	Structure loading capacity subject to condition inspection
B	Northern Broadwalk structure	-	-	-	4.5	5	Structure loading capacity subject to condition inspection
P6	Western Broadwalk Finishes: Precast pavers type P (spanning)	-	-	-	4.5	5	
B	Western Broadwalk structure	-	-	-	4.5	5	Structure loading capacity subject to condition inspection
P7	Podium Finishes: Precast pavers type P (spanning)	3	1.8	0.8	4.5	5	8 tonne GVM as per AECOM advice
B	Podium structure	3	1.8	0.8	4.5	5	subject to adequate support of pavers/roads
Notes							
Type P = Pedestrian loading; 1000 kg support system (normal and roof top)							
Type H7 = Heavy Pedestrian loading; 1000 kg support system							
Type P/T = Heavy Pedestrian loading & support system (normal and roof top)							
Type RH = Restricted Heavy Vehicle loading; 8 tonne GVM support system (normal and roof top)							

Figure ELD3 : Event Loading Diagram - Loading Schedule

Sydney Opera House

Promena to engage Arup for any loading plan approvals in particular active loading from truck/crane/HIAB as not to exceed capacities during slew

Promena to engage Arup to verify granite flooring and podium loading capacities in Lower Concourse

Arup approvals to be submitted to SOH 48hrs prior to commencing works'

19 Appendices and Additional Management Plans:

This Construction Management plan is to be read in conjunction with the following separate management plans and appendix documentation:

[1314 Opera Bar PCCP 190226.pdf](#)

[1314 SiteSafetyPlan 3226.pdf](#)

[T1024 DOCU 14 01 20191029 KEYLAN - SOH Opera Bar \u0026 Restaurant EIS 051125.pdf](#)

[T1024 DOCU 14 App 04 Appendix 5 HIS Lower concourse.pdf](#)

[T1024 DOCU 14 App 06 Appendix 7 Noise Impact Assessment.pdf](#)

[T1024 DOCU 14 App 07 Appendix 8 Access & Building Code of Australia Statement.pdf](#)

[T1024 DOCU 14 App 12 Appendix 13 Construction WMP.pdf](#)

[T1024 DOCU 17 01 Considerations for the Lower Concourse Eatery fitout 04-09-2025 201125.pdf](#)

[T1024 DOCU 18 01 SOH CMP 271125.pdf](#)

[T1024 DOCU 22 02 SOH Outdoor Event Loading Diagrams V17.02 \(RevG\) 201125.pdf](#)

[T1024 DOCU 24 01 25. Sydney Opera House Premises Requirements 030226.pdf](#)

[T1024 DOCU 25 01 HMMP Opera Bar.pdf](#)

[T1024 DOCU 27 01 EGA CEMP-01 190226.pdf](#)

[T1024 DOCU 27 02 EGA UFP-01 190226.pdf](#)