

SYDNEY OPERA HOUSE

Shade Cover Improvements Sydney Opera House: Lower Concourse

Request for Secretary's
Environmental Assessment
Requirements to Accompany a State
Significant Development Application



PRELIMINARY ENVIRONMENTAL ASSESSMENT

SHADE COVER IMPROVEMENTS

SYDNEY OPERA HOUSE: LOWER CONCOURSE

REQUEST FOR SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS TO FACILITATE PREPARATION OF AN EIS AS PART OF A STATE SIGNIFICANT DEVELOPMENT APPLICATION

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1. INTRODUCTION AND OVERVIEW

1.1 Purpose of this Report

This Preliminary Environmental Assessment (“PEA”) has been prepared as part of a State Significant Development Application lodged pursuant to Section 78A(8A) of the *Environmental Planning and Assessment Act 1979* (“the Act”) for shade cover improvements on the lower concourse of the Sydney Opera House.

The purpose of this PEA is to seek Secretary’s Environmental Assessment Requirements (“SEARs”) for the Environmental Impact Statement (“EIS”) which will need to accompany the State Significant Development Application (“the SS DA”) for the proposed new shade cover improvements.

This PEA includes:-

- a description and analysis of the site and its context;
- a description of the proposed works;
- the statutory planning framework which applies to the proposed works and which establishes their permissibility;
- a preliminary identification and assessment of impacts associated with the proposed works;
- justification for the proposal; and
- supporting preliminary SS DA plans.

1.2 Overview of the Proposal

The proposal relates to land under the control of the Sydney Opera House Trust. The location of the proposed works is in the outdoor seating area on the lower concourse adjacent to Circular Quay. The approximate location of the works is illustrated in **Figures 1, 2, 3A and 3B**.

The proposal comprises removal of the existing umbrellas and their replacement with new purpose-built shade cover structures. The design intent is to provide better integrated and improved shade cover and weather protection generally for the outdoor seating area on the lower concourse.

The new umbrellas will have a maximum height of 3.34m and a minimum head clearance of 2.47m. The maximum height is generally equal to the top of the solid upturn along the western edge of the upper concourse (see photomontage in **Appendix 1**). This ensures that there will be minimal obstruction of views of the water for pedestrians using the upper concourse.

The new umbrellas will be equipped with the same heaters and speakers as are attached to the existing umbrellas. Each will have strip LED uplighting similar to existing. Each will also have drop-down screens to provide greater weather protection and acoustic attenuation when in place.

The colour, maximum height, shape and general configuration of the new umbrellas are all designed to minimise their visual impact, and their impact on views.

Preliminary SS DA plans are provided in **Appendix 1**.

Photomontage of Proposed Shade Structures



Source: Humphrey and Edwards Architects

(Note: In the above photomontage, proposed shade cover structures are illustrated only for the southern part of the outdoor seating area on the lower concourse. The photomontage still shows the existing umbrellas in the foreground over the outdoor seating area on the northern part of the lower concourse. Subsequent to the preparation of the above photomontage, it has been decided to also replace the umbrellas in the foreground with matching new shade cover structures as proposed for the southern outdoor seating area. An updated montage will be included in the EIS).

1.3 Approvals Framework

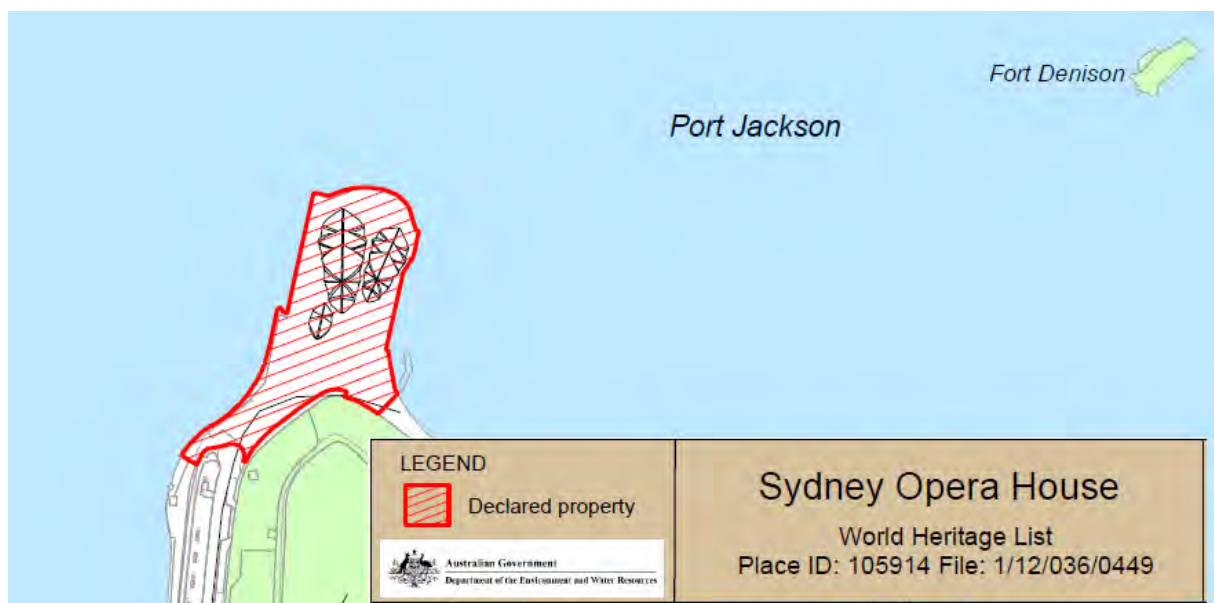
1.3.1 Federal

The Sydney Opera House was included on the National Heritage List on 12 July 2005 and inscribed on the World Heritage List on 28 June 2007.

The National and World Heritage listings nominate the same area and include the part of the site in which the proposed works are located.

The Commonwealth Environment Protection and Biodiversity Conservation Act, 1999 applies to World Heritage listed sites where they are significantly affected by proposed works. (That is not the case with this proposal – see Section 4.3.1 for further discussion).

Figure 1 – World Heritage Listing Map Extract



Source: Australian Government World Heritage Listing Map

1.3.2 State

Part 2, Clause 7 of SEPP (Major Development) 2005 refers to Schedule 3 which describes State Significant Sites. Part 1 of Schedule 3 identifies Sydney Opera House as a State Significant Site.

The provisions of Schedule 3 relating to the carrying out of development on a State Significant Site have effect. These provisions, however, solely relate to exempt development. The proposed shade cover improvements are not covered by any of the exempt development categories.

The Opera House is also designated as a State Significant Development Site under State Environmental Planning Policy (State and Regional Development) 2011 ("the SRD SEPP").

Pursuant to Clause 8 in Part 2 of the SRD SEPP, and to Item 1 in Schedule 2, all development identified as being within the Sydney Opera House site on the SSD map is State Significant Development ("SSD").

1.3.3 Regional

The site also has regional and local planning significance.

- To recognise and provide for the pre-eminent role of business, office, retail, entertainment and tourist premises in Australia's participation in the global economy.
- To provide opportunities for an intensity of land uses commensurate with Sydney's global status.
- To permit a diversity of compatible land uses characteristic of Sydney's global status and that serve the workforce, visitors and wider community.
- To encourage the use of alternatives to private motor vehicles, such as public transport, walking or cycling.
- To promote uses with active street frontages on main streets and on streets in which buildings are used primarily (at street level) for the purposes of retail premises.

2 Permitted without consent

Nil

3 Permitted with consent

Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Information and education facilities; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Tourist and visitor accommodation; Any other development not specified in item 2 or 4

4 Prohibited

Nil"

All types of development and all land uses are permissible with consent in the B8 Metropolitan Centre zone.

The site is identified as a Heritage Item in the LEP (see Figure 4C). The listing is as follows:-

Locality	Item name	Address	Property description	Significance	Item no
Sydney	Sydney Opera House including forecourt, seawall, platforms and interiors	Circular Quay East	Lot 5, DP 775888; Lot 4, DP 787933	World	I1712*

The provisions of Sydney Development Control Plan 2012 ("the DCP") also apply to the site, however, pursuant to Clause 11 of the SRD SEPP, DCP provisions do not apply to State Significant Development.

Illustrative figures containing extracts from the LEP and DCP maps which are applicable to the site are provided in **Figures 4A to 5B**.

1.3.5 Requirement for an EIS

Section 78A(8A) of the Act requires that a DA for SSD is to be accompanied by an Environmental Impact Statement ("EIS"). Therefore, as the development is nominated as SSD an EIS is required to be prepared to accompany the SS DA. Secretary's Environmental Assessment Requirements (SEAR's) for the EIS are sought by this PEA.



Through the operation of the SRD SEPP, the Minister is the consent authority for the SS DA.

2. SITE DESCRIPTION

The site comprises the peninsular on the eastern side of Circular Quay known as Bennelong Point (see **Figures 1, 2, 3A and 3B**). On the site is the Sydney Opera House and its associated forecourt area and concourses.

The site has the legal description of Lot 5 in DP 775888 and Lot 4 in DP 787933.

The Opera House comprises 3 iconic structures designed with its characteristic 'shell roofs' on Bennelong Point, those being, from largest to smallest:-

- The Concert Hall on the western side of Bennelong Point;
- The Opera Theatre on the eastern side; and
- The Bennelong Restaurant, to the south of the two main venues (see **Figure 3A**).

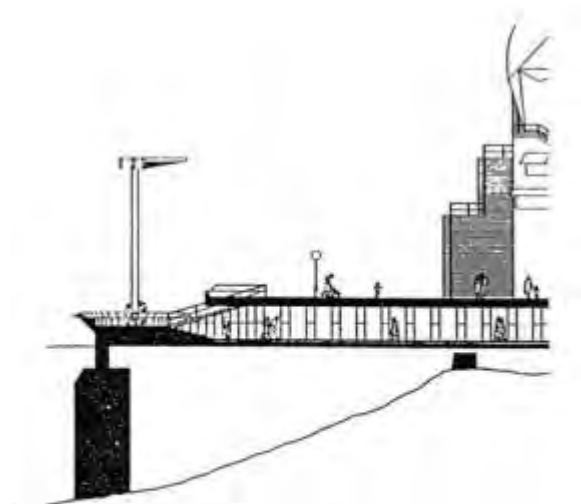
To the south of the above three structures are the main podium steps and the southern forecourt.

Vehicular access to the site is primarily via an access road to a covered area under the podium steps.

The proposed shade cover improvements are located on the outdoor seating area on the lower concourse in the area to the south-west of the Opera House adjacent to the eastern side of Circular Quay.

The Opera House was constructed between 1957 and 1973 generally to the design of Jørn Utzon. The lower concourse level was part of a bicentennial (1988) renovation of the Opera House. This program of works involved various repairs, alterations and additions to the Opera House and was completed in 1997.

Concourse Details from 1988 Plans



40. Section through the lower forecourt showing the 1988 'sea wall' profile and floodlight pylon. Plan by NSW Public Works and Hall, Bowe & Webber Pty Ltd, 1986.

Source: Sydney Opera House: A Revised Plan for the Conservation of the Sydney Opera House and its Site" (3rd edition 2003).



The lower concourse is below and to the western side of the upper concourse which forms the main pedestrian access to the site from Circular Quay and includes an undercroft area containing food and drink premises with their associated outdoor seating areas located between the undercroft and the sea wall.

Photographs of the lower concourse level (showing the existing umbrellas) are provided overleaf.

Photograph 1 – Existing Lower Concourse: View to the South



Source: Site Visit 10 November 2015

Photograph 2 – Existing Lower Concourse: View to the North



Source: Site Visit 10 November 2015

3. THE PROPOSAL

3.1 Overview

The proposal comprises removal of the existing umbrellas over the outdoor seating area on the lower concourse and their replacement with new purpose-built improved shade cover structures. The design intent is to provide better integrated and improved shade cover and weather protection generally for the outdoor seating area on the lower concourse.

The new umbrellas will have a maximum height of 3.34m and a minimum head clearance of 2.47m. The maximum height is generally equal to the top of the solid upturn along the western edge of the upper concourse (see photomontage in **Appendix 1**). This ensures that there will be minimal obstruction of views of the water for pedestrians using the upper concourse.

The new umbrellas will be equipped with the same heaters and speakers as are attached to the existing umbrellas. Each will have strip LED uplighting similar to existing. Each will also have drop-down screens to provide greater weather protection and acoustic attenuation when in place.

The colour, maximum height, shape and general configuration of the new umbrellas are all designed to minimise their visual impact, and their impact on views.

Plans, elevations and photomontages prepared by Humphrey and Edwards Architects are provided in **Appendix 1**.

The lower concourse is designated as a food and drink precinct within the Opera House site. The new shade cover improvements are associated with the use of this precinct and have been designed to complement and facilitate that use.

3.2 Demolition

No part of the existing building will be demolished. The only demolition involves removal of the existing umbrellas.

3.3 Use

The proposed shade cover structures will facilitate the continued but improved use of the outdoor seating areas on the lower concourse in association with, and ancillary to, the two food and drink premises of which they form part.

3.4 Heritage

A Heritage Impact Statement "HIS" will be submitted with the EIS.

The works comprise relatively minor and readily removable elements which because of their careful and well-considered design, their location on the lower concourse, and taking into account the umbrellas they will replace, will not diminish the significant and permanent fabric of the main Opera House buildings, its upper concourse, podium steps and southern forecourt.

However, the location of the lower concourse in the foreground of views of the Opera House from the southern pedestrian approaches off the northern end of East Circular Quay (a significant view corridor) have required a high level of attention to detail in the design of the new shade structures. Their colour, shape, maximum height, and general configuration are a response to their sensitive location in this view corridor. As is evident from the photomontage in **Appendix 1**, showing the appearance of the new shade structures when seen from the south, no significant impacts will arise on the setting of the Opera House.



A detailed consideration of the heritage impacts of the proposal, including its impacts on the setting of the Opera House, will be provided in the HIS which will form part of the EIS.

4. LEGISLATIVE FRAMEWORK

4.1 Environmental Planning and Assessment Act, 1979

The EP&A Act establishes the assessment framework for SSD and identifies the Minister for Planning as the consent authority (pursuant to Section 89D of the Act). Section 78A (8A) of the Act requires that a DA for SSD is to be accompanied by an EIS. This PEA seeks the Secretary's environment assessment requirements for the EIS.

4.2 State Environmental Planning Policies

4.2.1 State Environmental Planning Policy (Major Development) 2005

Schedule 3 of this SEPP lists the State Significant Sites and sets out clauses relevant to each site. The Opera House is listed in Part 1 of Schedule 3 as a State Significant Site.

Division 2 in Part 1 of Schedule 3 of the SEPP lists different types of exempt development on the Opera House site. The proposed shade structures are not exempt, therefore they comprise State Significant Development.

4.2.2 State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (the SRD SEPP) declares certain development of a particular class or description to be State Significant Development ("SSD").

Clause 8 of the SRD SEPP states:

"8 Declaration of State significant development: section 89C

(1) Development is declared to be State significant development for the purposes of the Act if:

(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and

(b) the development is specified in Schedule 1 or 2.

(2) If a single proposed development the subject of one development application comprises development that is only partly State significant development declared under subclause (1), the remainder of the development is also declared to be State significant development (except so much of the remainder of the development as the Director-General determines is not sufficiently related to the State significant development).

(3) This clause does not apply to development that was the subject of a certificate in force under clause 6C of [State Environmental Planning Policy \(Major Development\) 2005](#) immediately before the commencement of this Policy.

Note. *Development does not require consent under Part 4 of the Act merely because it is declared to be State significant development under this clause. Any such development that, under an environmental planning instrument, is permitted without consent may be an activity subject to Part 5 of the Act or State significant infrastructure subject to Part 5.1 of the Act. Any such development that is permitted without consent may become State significant*

development requiring consent if it is part of a single proposed development that includes other development that is State significant development requiring consent (see section 89E (4) of the Act and subclause (2))."

Schedule 2 identifies the Opera House as follows:-

"1 Sydney Opera House

All development on land identified as being within the Sydney Opera House Site on the State Significant Development Sites Map."

Therefore, regardless as to the scale or value of the development, if development consent is required for development on the Opera House site that is not exempt, it is State Significant Development.

4.2.3 State Environmental Planning Policy No. 55 (Remediation of Land)

State Environmental Planning Policy No. 55 (Remediation of Land) ("SEPP 55") aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspects of the environment by specifying certain considerations to be had in determining development applications in general, by requiring that remediation work meets certain standards.

As no excavation is proposed SEPP 55 is not relevant to the assessment of the application.

4.3 Other Legislation

4.3.1 Commonwealth Environment Protection and Biodiversity Conservation Act, 1999

Works that significantly affect the significance of World Heritage sites require approval under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

The works proposed involve no major works or alteration to significant fabric of the Opera House and are minor in terms of their scale and intent. It is considered that the works do not require a separate approval under this Act. This Act does, however, require an assessment of any works in respect to their impacts on the fabric, setting, significance and cultural function of the World Heritage Listed Property. As required by the relevant "Matters of National Environmental Significance Significant Impact Guidelines" the proposal will be referred to the Minister for the Environment (Cth) in this regard.

4.3.2 Heritage Act (NSW) 1977

Although an SSD approval means that separate approval is not required under the Heritage Act 1977, the Management Plan for Sydney Opera House (see Section 4.4.1 below) requires a Section 60 approval to be obtained.

4.3.3 Environmental Planning and Assessment Regulation, 2000

Section 288 of the Regulation provides for the following specific provisions in respect to the Opera House:-

"288 Special provision relating to Sydney Opera House

- (1) *To the extent that any development that is to be carried out at the Sydney Opera House is development to which Part 4 of the Act applies, the provisions of the Management Plan for the Sydney Opera House are prescribed for the purposes of section 79C (1) (a) (iv) of the Act as a matter that must be taken into consideration by the consent authority in determining a development application in respect of that development.*

- (2) *To the extent that any development that is to be carried out at the Sydney Opera House is a project to which Part 3A of the Act applies, the Secretary's report under section 75I of the Act in relation to the project must include:*
- (a) *the provisions of the Management Plan for the Sydney Opera House that are relevant to the carrying out of the development, and*
 - (b) *advice as to the extent to which the project is consistent with the objectives of that Management Plan.*

Note. Section 75J (2) of the Act requires the Minister to consider the Secretary's report (and the reports, advice and recommendations contained in it) when deciding whether or not to approve the carrying out of a project.

- (3) *In this clause:*

Management Plan for the Sydney Opera House means the management plan that relates to Sydney Opera House that has been approved by the Minister administering the Sydney Opera House Trust Act 1961 and published in the Gazette.

Sydney Opera House means the land identified on Map 1 to Schedule 3 to State Environmental Planning Policy (Major Development) 2005."

These provisions in effect require the provisions of the Management Plan for the Sydney Opera House to be taken into consideration as part of the consideration of any DA for State Significant Development on the site – see Section 4.4.1 of this PEA.

Further to the above requirements of the Regulation, the EIS to accompany this DA will need to be prepared in accordance with the requirements of Schedule 2 "Environmental Impact Statements".

4.3.4 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The site is within the Sydney Harbour Catchment Area designated in the SREP. It is within the Foreshores and Waterways Area and City Foreshore Area designated as a Strategic Foreshore Site. It is also nominated as a Heritage Item and is in the SREP.

The SREP contains the following provisions that are relevant to the assessment of this proposal, those being:-

1. Division 2: Matters for Consideration;
2. Part 5: Heritage Provisions; and
3. Division 3A: Sydney Opera House.

These provisions will be fully considered in the EIS, however primarily concern:-

- the visual impacts of the shade structures when viewed from the foreshore and from the Harbour and the impact on the visual, aesthetic and cultural qualities of Sydney Harbour; and
- the impacts on the heritage significance of the Sydney Opera House and of the Harbour.

4.3.5 Sydney Local Environmental Plan 2012 and Sydney Development Control Plan 2012

The site is zoned B8 Metropolitan Centre in the LEP. The works are permissible in this zone and are consistent with the zone objectives that concern protecting and promoting Central Sydney's role as a global City.

The site is also an identified Heritage Item in the LEP (see **Figure 4C**) and the provisions of Clause 5.10 Heritage Conservation will apply to the development. These provisions are, in intention and purpose, similar to those required to be considered under the site is SREP heritage listing and will be fully considered in the EIS proposal. A detailed Heritage Impact Statement is in the process of being prepared for the proposal and will be submitted with the EIS.

In relation to the DCP, Clause 11 of the SRD SEPP provides that DCP's do not apply to State Significant Development.

4.4 Site Specific Policies

4.4.1 Management Plan for the Sydney Opera House

The Management Plan for the Sydney Opera House was prepared by the Sydney Opera House Trust and the NSW Government in 2005 and it has a formal policy status given the requirements of the Regulation.

The Management Plan is a process-orientated document that does not contain specific regulatory requirements for specific parts of the Opera House such as the lower concourse. Rather, it describes the regulatory requirements affecting development and activities for the Opera House site. It also requires a Section 60 approval under the NSW Heritage Act, 1977 to be obtained for works requiring approval.

Importantly the Management Plans has various appendices that provide for more detailed companion documents that must also be considered as part of any proposed SSD for the site. Those documents are:-

- **Appendix A:** "Sydney Opera House: A Revised Plan for the Conservation of the Sydney Opera House and its Site" (3rd edition 2003). This document provides an understanding of the place and its history. It also assesses the significance of the place, and provides conservation policies based on the identified heritage values of the Sydney Opera House. This is the Conservation Management Plan for the site.
- **Appendix B:** Utzon Design Principles (2002). This document provides statements and design principles from the architect of the Sydney Opera House, Jørn Utzon, for best practice to guide the future management and development of the Sydney Opera House.
- **Appendix C:** Statement of the National Heritage values of the Sydney Opera House.

The relevant matters, arising from each of the above documents, are discussed below.

4.4.2 Sydney Opera House: Conservation Management Plan

The proposed shade structures are to be installed in the outdoor seating area on the lower concourse (or lower forecourt). The relevant extract from the Conservation Management Plan (CMP) concerning this area is provided below.

"The forecourt and lower forecourt

The creation of an uncluttered, granite-paved, forecourt and "invisible" covered pedestrian approach to the Opera House through a shopping concourse was a major bicentennial enhancement of the setting of the building. It eliminated the existing bitumen-paved car park and pedestrian covered way from the immediate approach to the building and also provided access to the underground car park when it was completed in 1993.

The considerable extent and irregular shape of the forecourt determined the choice of granite setts, or cobbles, laid in a fan pattern between strips of granite with a sawn finish

which were in turn parallel to and designed “to respond to the powerful horizontal element of the [podium] steps” (Hall, SOH, 65). The granite was South Australian: Siena for the setts and Calca for the slabs. Both were supplied by Monier and laid by Melocco (ibid, 64). The same materials were used on the lower forecourt except that the setts were confined to the sea wall promenade and the concourse itself was laid with slabs of solid granite.

Policy 15.1 The fan pattern granite setts or cobbles and the high quality solid granite strips and paving on the forecourt and lower forecourt should be retained and conserved.

The roadway of granite setts is not wearing well. There are three reasons: first, the material on which the setts were laid was too thin to provide a firm foundation; second, some cobbles are of irregular form and small dimension and are too loosely laid to provide the mutual support necessary for a long wearing surface; and, last, the roadway is subject to relatively heavy traffic including buses and service and construction vehicles. Remedial action is needed.

Policy 15.3 Any scheme for providing facilities under the Forecourt should:

- ***retain the existing level of the Forecourt;***
- ***co-ordinate and minimise above ground intrusions;***
- ***record the surviving nineteenth century fabric of the storm water drain before diversion;***
- ***provide for paving designed to be consistent with the character of adjacent Podium and Boardwalk paving as well as accommodating changed structural requirements.”***

The proposed shade structures are consistent with the relevant policies in the CMP. Nevertheless, a Heritage Impact Statement for the proposal will be included in the EIS to be submitted with the SSD application.

4.4.3 Utzon Design Principles

This document sets out the general architectural philosophy for the Opera House and of its designer Jørn Utzon. It deals with alterations and additions to the buildings, materials, colours and furniture style. These matters will be relevantly addressed in the EIS.

4.4.4 Statement of the National Heritage values of the Sydney Opera House

This document describes the heritage significance of the Opera House and details its history as a structure. Its focus is construction of the main buildings on the design of Jørn Utzon that took place between 1957 and 1973. It does not directly reference the lower concourse. Nevertheless, the relevant provisions of this document will also be considered in the EIS.

5. Consultation

The nature of proposal does not require consultation at this stage of the process. The consultation with relevant stakeholders that will be required when the EIS is submitted is considered sufficient.

6. PRELIMINARY IMPACT ASSESSMENT

6.1 Overview

Pursuant to Section 89H of the Act, Section 79C applies to SSD Applications. The likely impacts of the proposed development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality are discussed (in preliminary fashion) below to assist in the preparation of the Secretary's Environmental Assessment Requirements for the EIS.

6.2 Impacts on the Natural Environment

The proposal will have no impacts on the natural environment, as it relates only to the replacement of existing umbrellas in the outdoor seating area on the lower concourse with new better designed shade structures that will provide improved shade cover and weather protection generally.

6.3 Impacts on the Built Environment

6.3.1 Heritage impacts

The proposal will be the subject of a HIS which will be submitted with the EIS. For the reasons set out in Section 3.4, and noting that this will be addressed in detail in the HIS, the proposed new shade structures, because of their careful and well-considered design will not result in any significant impacts on the setting of the Opera House, including when seen from the southern pedestrian approaches to the Opera House off the northern end of East Circular Quay.

Additionally, the proposed new shade structures will be removable. They will be placed on top of and with minimum intervention to existing structural fabric, in lieu of the existing umbrellas on the lower concourse. Significant fabric such as the Harbour retaining walls and the associated bench seating on the sea wall will not be altered in any way by the proposal.

6.3.2 Urban design impacts

The new shade structures will be purpose-built, better shaped to suit the configuration of the outdoor seating area and their colour will complement their immediate context. This will be an improvement on the existing umbrellas and will improve the overall design cohesion of the outdoor seating area on the lower concourse level.

The maximum height of the new umbrellas (3.34m) is slightly less than the maximum height of the existing umbrellas. As is evident from the photo-montage in **Appendix 1**, the new umbrellas will have a high quality design and appearance which will enhance the lower concourse.

6.3.3 View impacts

The lower concourse is located below the main pedestrian approach to the Opera House and its upper concourse and forecourt areas. It forms part of a significant view corridor as noted above in Section 6.3.1.

Significant views to and from the Opera House, Circular Quay, the Harbour Bridge, the northern shore of the Harbour and Harbour in general will not be adversely affected by the proposed new shade structures.

The configuration of the new umbrellas, and their limited height above the lower concourse ensures that they will not interrupt water views available from the upper concourse. This is evident from the photo-montage in **Appendix 1**.

6.3.4 Amenity impacts

The new shade structures are intended to provide improved shade cover and weather protection generally with a view to providing better amenity to users of the outdoor seating areas without diminishing the amenity of other visitors to the Opera House precinct.

6.4 Social and Economic Impacts

Better designed weather protection with a more cohesive design will enhance the use and enjoyment of the outdoor seating areas on the lower concourse.

6.5 Construction Impacts

Replacement of the existing umbrellas with the improved shade cover structures which are proposed will be able to be carried out with minimal impacts on the public's use of the lower concourse.

Access to the Opera House will be uninterrupted by the required minor construction activity associated with installation of the new shade structures.

7. CONCLUSION

The proposal is supportable for the following reasons:-

- The lower concourse is used for food and drink premises with their associated outdoor seating areas – no change is proposed to this arrangement.
- The proposal will result in the replacement of existing umbrellas over the outdoor seating areas with new shade structures to a bespoke design uniquely suited to the lower concourse.
- The new improved shade cover and weather protection generally will provide better amenity for users of the outdoor seating areas on the lower concourse without diminishing the amenity of other visitors to the Opera House precinct.

Secretary's Environmental Assessment Requirements are now requested to inform the preparation and content of the EIS.



FIGURES

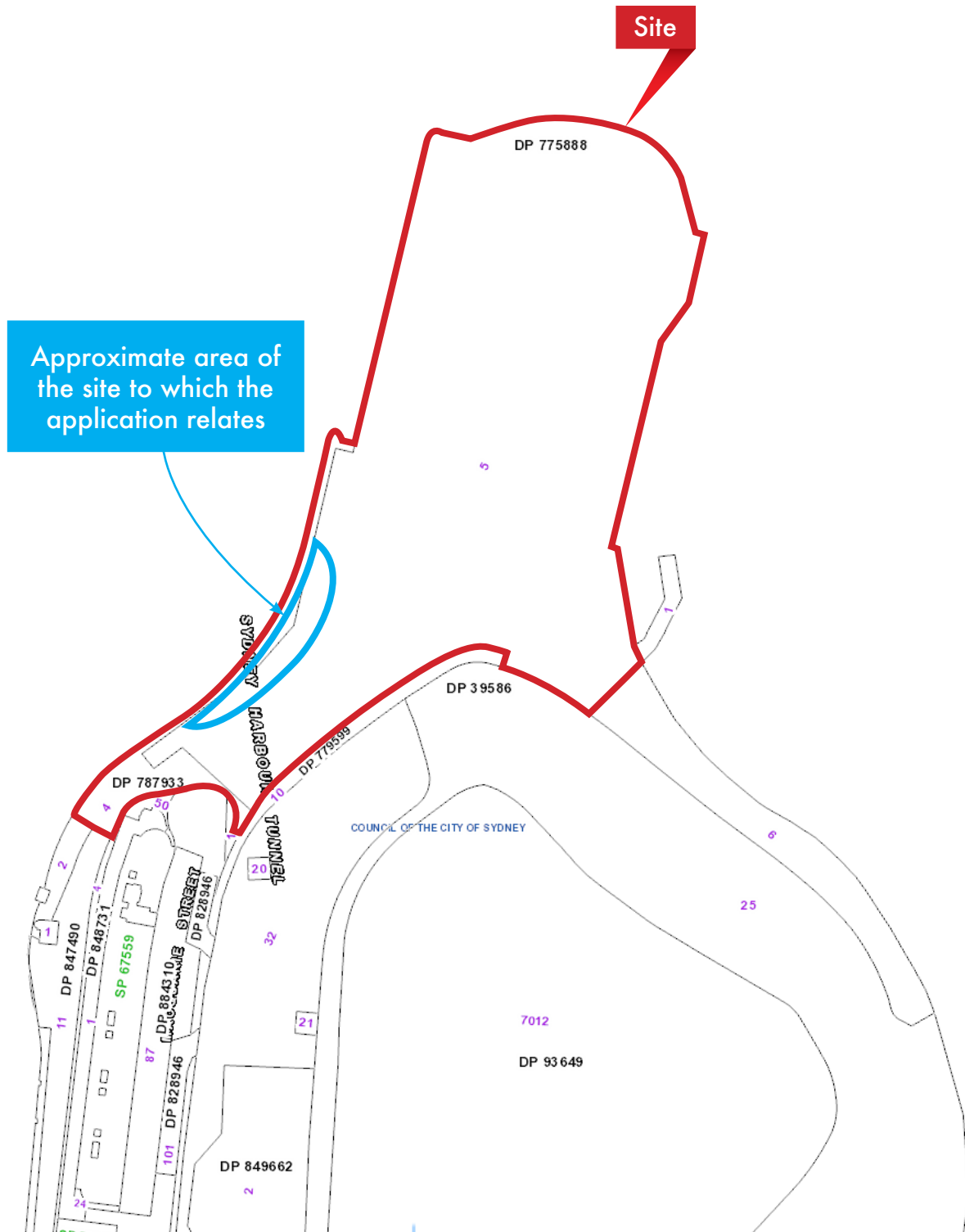


Source: <http://maps.six.nsw.gov.au>



PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS
Sydney Opera House: Lower Concourse

FIGURE 1
Location



Source: <http://maps.six.nsw.gov.au>

PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS
Sydney Opera House: Lower Concourse

FIGURE 2
Site



Source: NearMap 2015

PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS
Sydney Opera House: Lower Concourse

FIGURE 3A
Aerial Photo - Detail



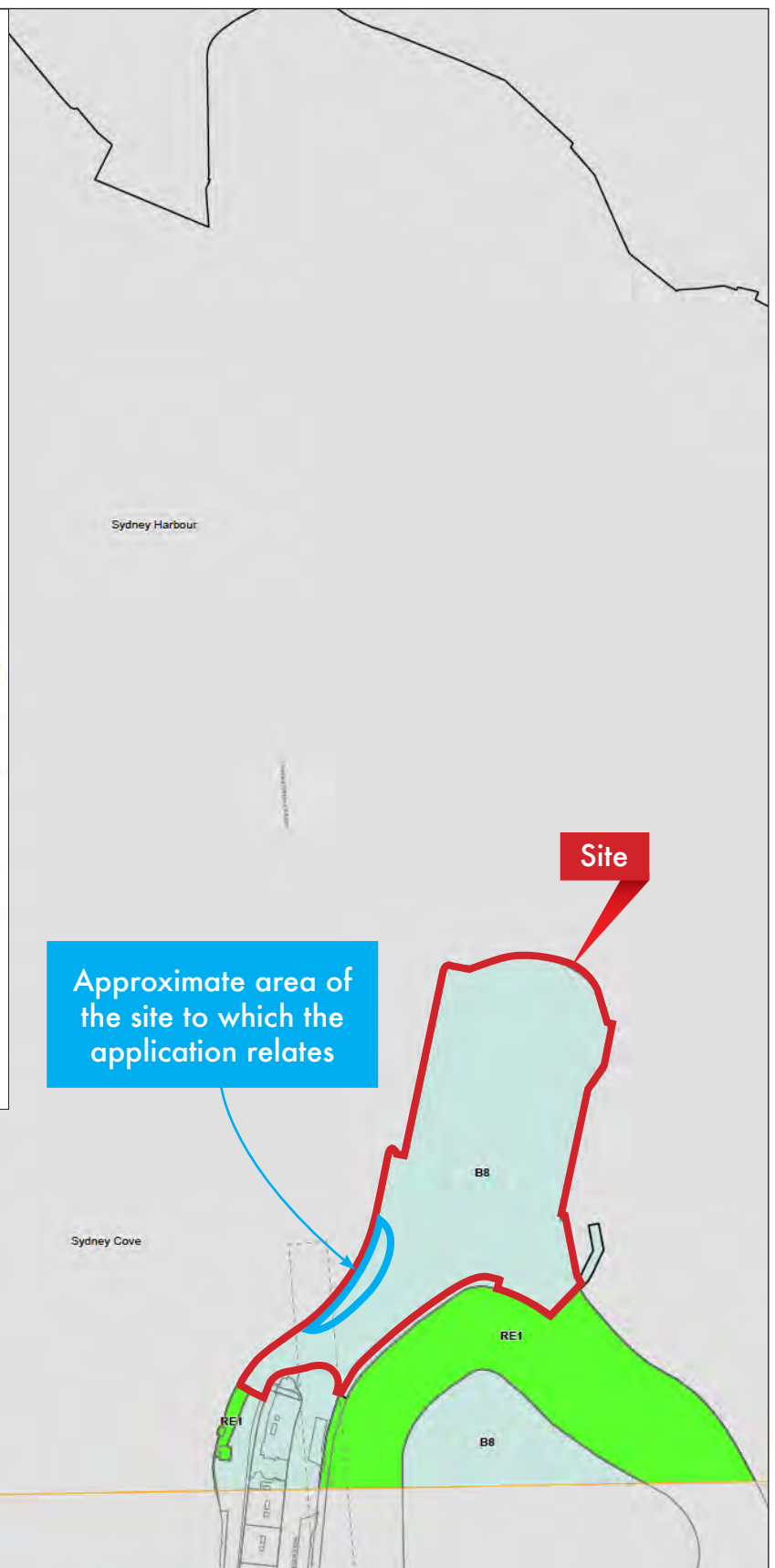
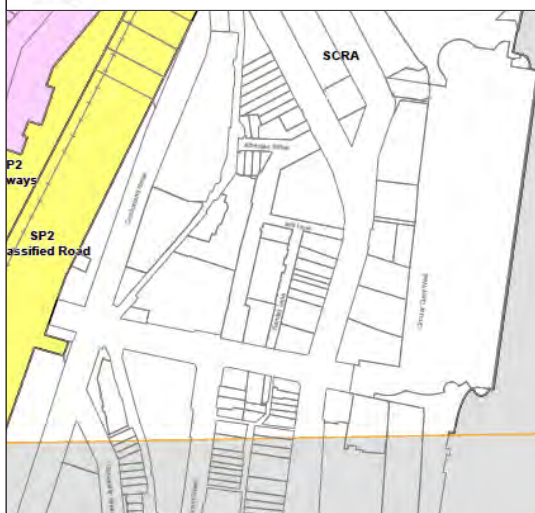
Source: NearMap 2015

PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS
Sydney Opera House: Lower Concourse

FIGURE 3B
Aerial Photo - Wider Area

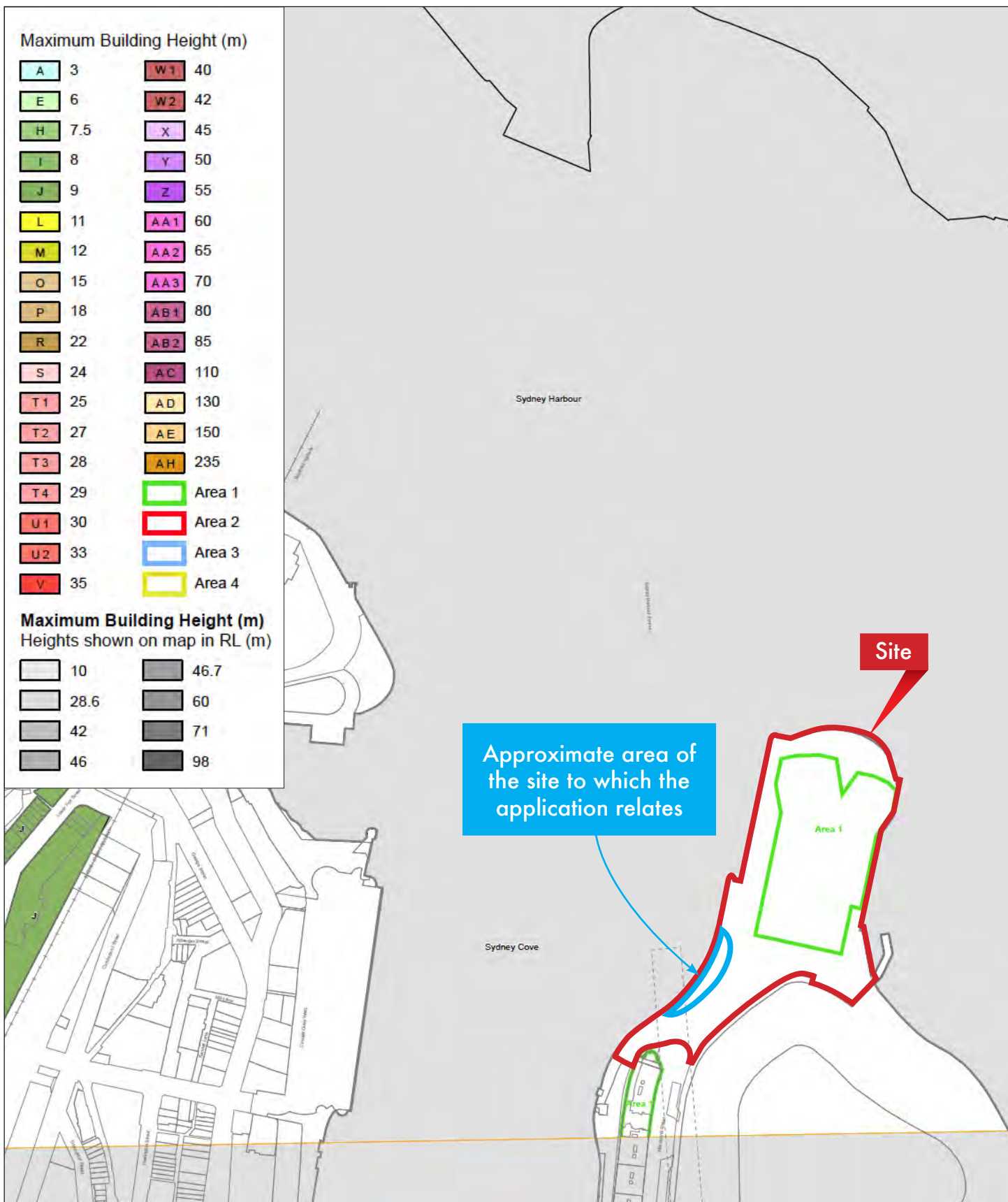
Zone

B1	Neighbourhood Centre
B2	Local Centre
B3	Commercial Core
B4	Mixed Use
B5	Business Development
B6	Enterprise Corridor
B7	Business Park
B8	Metropolitan Centre
IN1	General Industrial
IN2	Light Industrial
R1	General Residential
R2	Low Density Residential
RE1	Public Recreation
SP1	Special Activities
SP2	Infrastructure
CW	SREP 26 City West
DH	Darling Harbour Development Plan No.1
GAHP	Sydney LEP (Glebe Affordable Housing Project) 2011
GS1	South Sydney LEP 1998 and City of Sydney Planning Scheme Ordinance
GS2	South Sydney LEP 1998 and South Sydney LEP 114
HP	Sydney LEP (Harold Park) 2011
MD	SEPP Major Development 2005
MPS	SEPP 47 Moore Park Showground
SCRA	Sydney Cove Redevelopment Authority Scheme
SHC	SREP Sydney Harbour Catchment 2005
SLEP	Sydney LEP 2005
SS	South Sydney LEP 1998
WB	SREP 16 Walsh Bay
UL	Unzoned Land



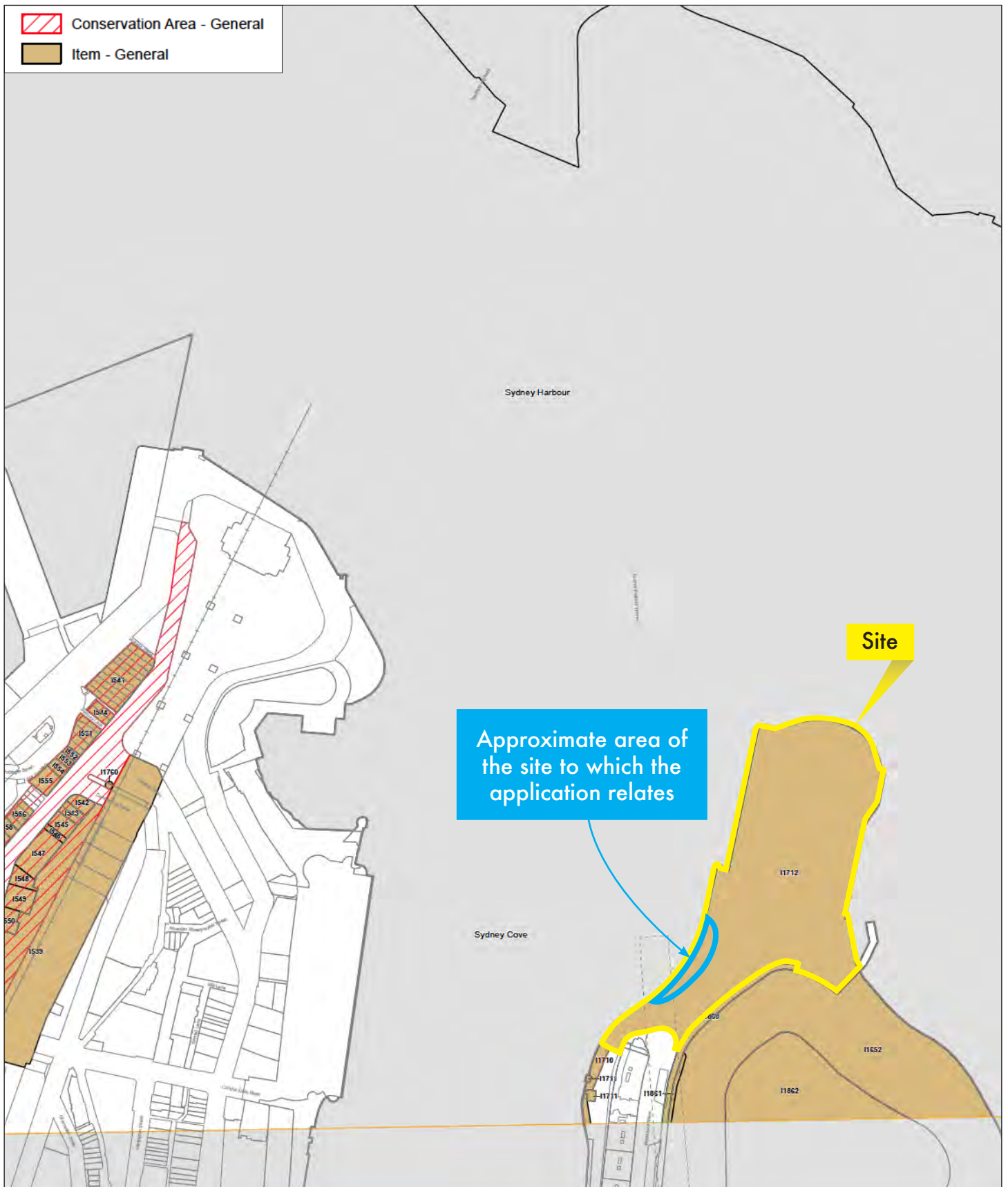
PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

FIGURE 4A
Zoning Map - Sydney LEP 2012



PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS
Sydney Opera House: Lower Concourse

FIGURE 4B
Height of Buildings Map - Sydney LEP 2012

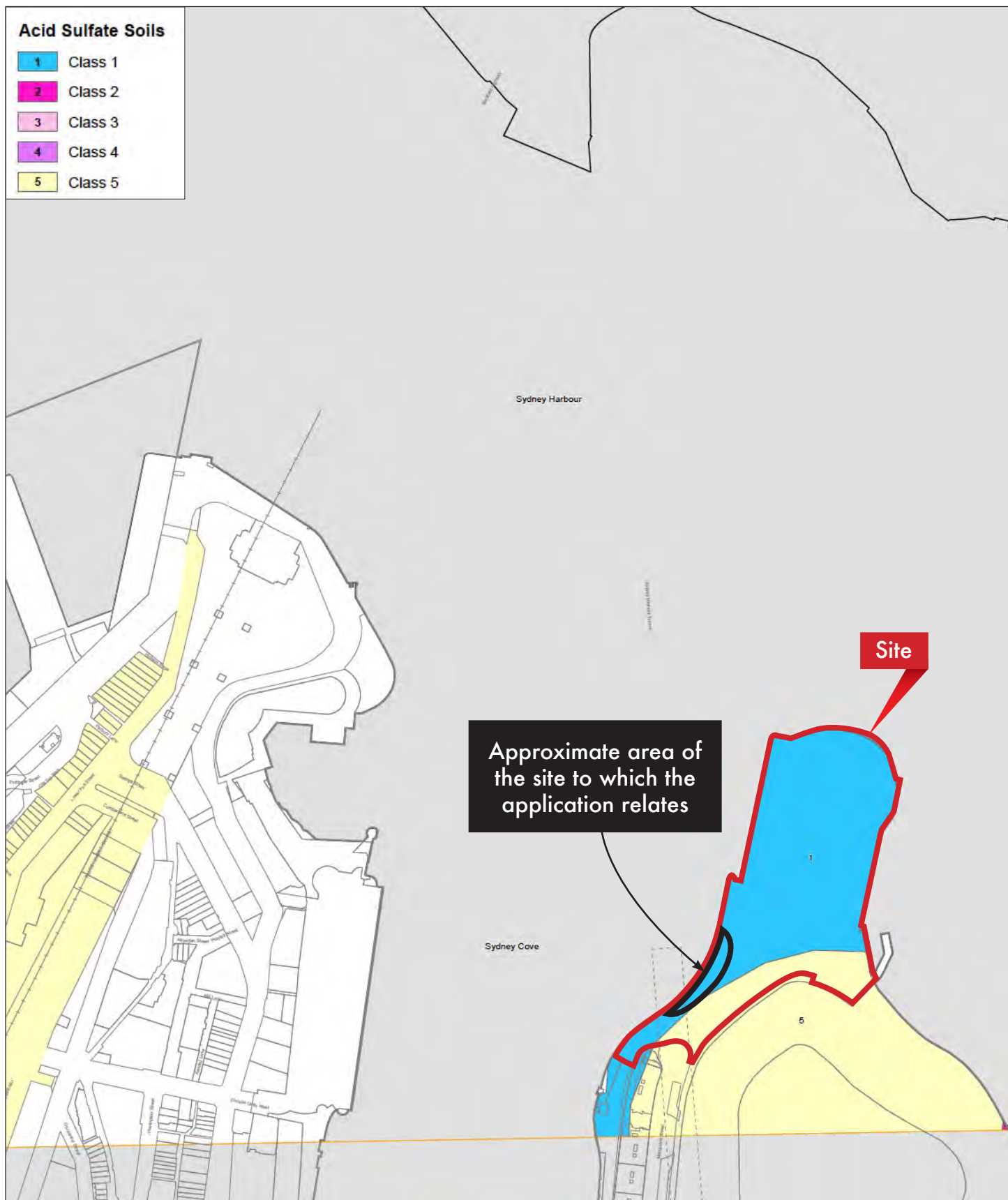


PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS
 Sydney Opera House: Lower Concourse

FIGURE 4C
 Heritage Map - Sydney LEP 2012

Acid Sulfate Soils

- 1 Class 1
- 2 Class 2
- 3 Class 3
- 4 Class 4
- 5 Class 5



PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

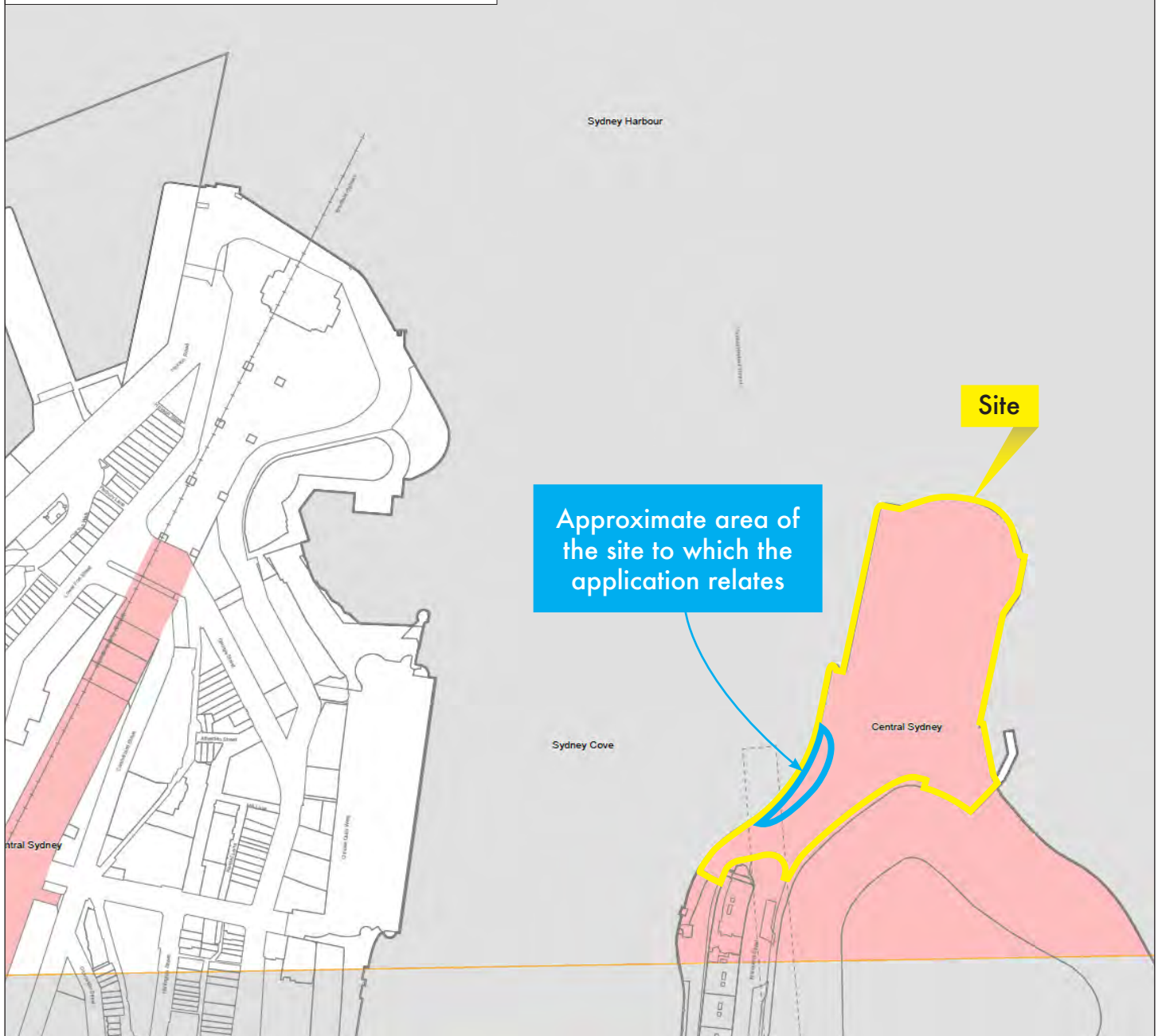
FIGURE 4D
Acid Sulfate Soils Map - Sydney LEP 2012

Locality and Site Identification Map

- Central Sydney
- Green Square
- Ultimo-Pymont
- Land Affected by Cross City Tunnel Ventilation Stack
- Refer to Schedule 1

Foreshore Building Line Map

- Foreshore Area
- Foreshore Building Line

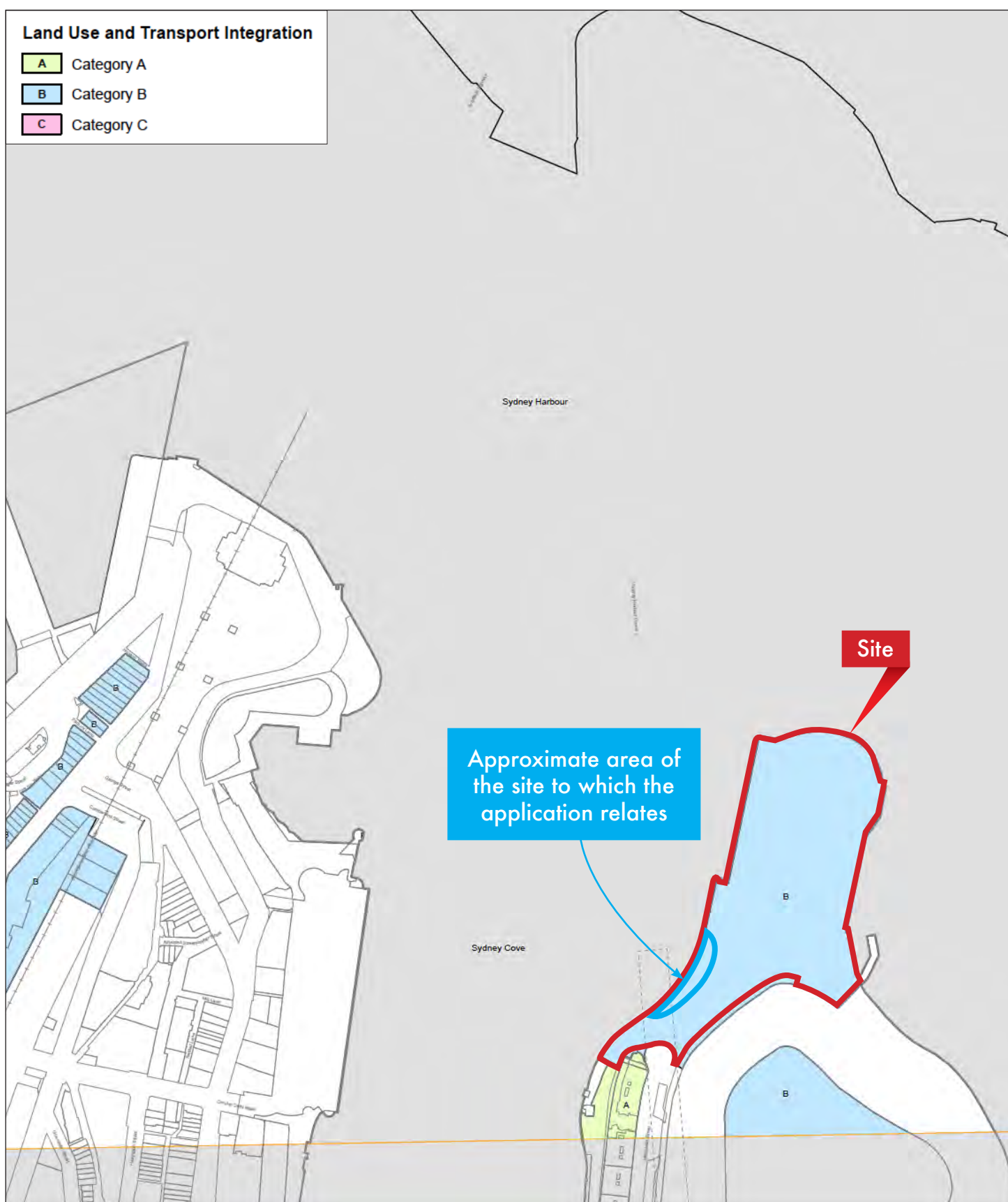


PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

FIGURE 4E
Locality and Site Identification Map - Sydney LEP 2012

Land Use and Transport Integration

- A Category A
- B Category B
- C Category C

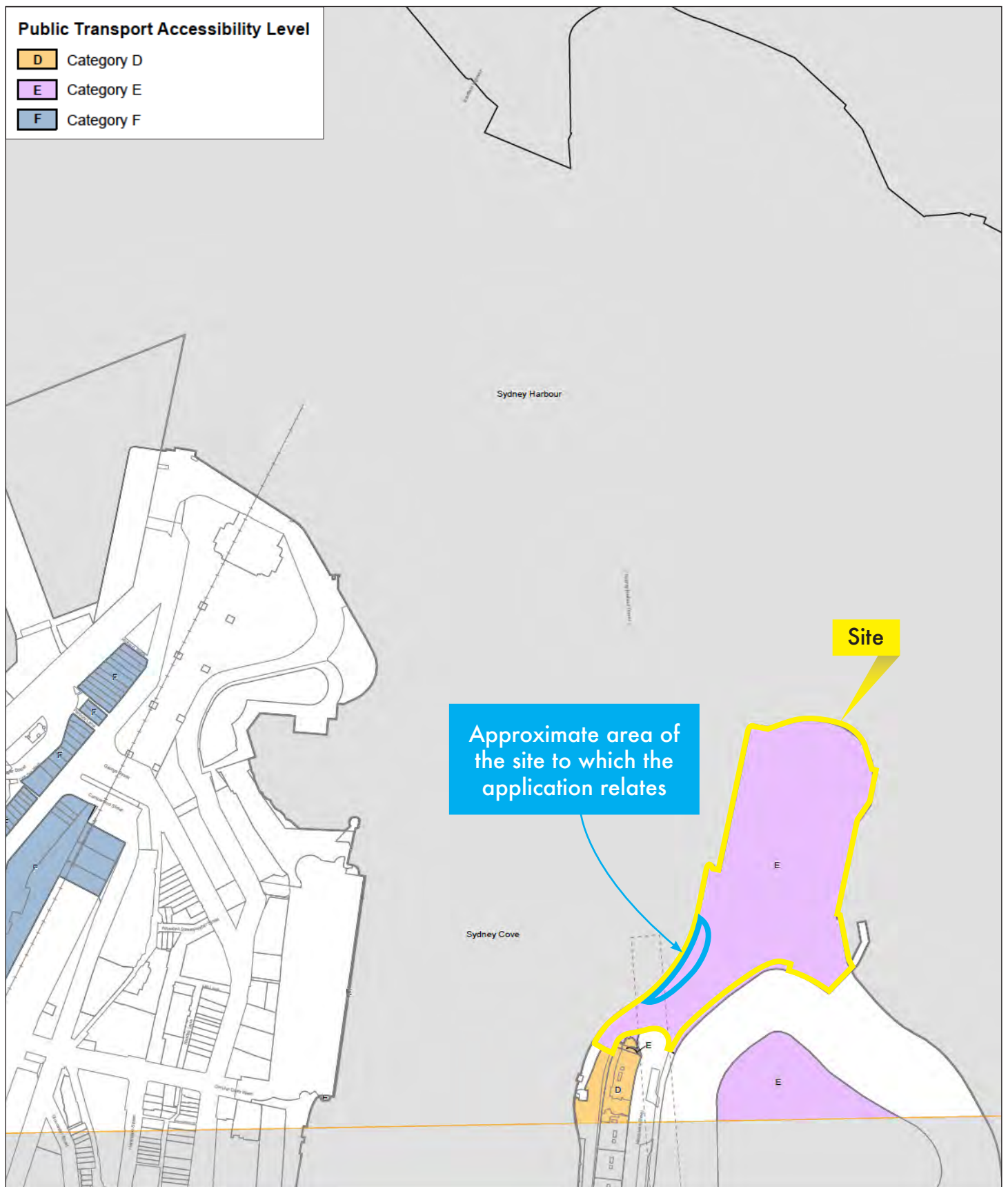


PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

FIGURE 4F
Land Use and Transport Integration Map - Sydney LEP 2012

Public Transport Accessibility Level

- D** Category D
- E** Category E
- F** Category F

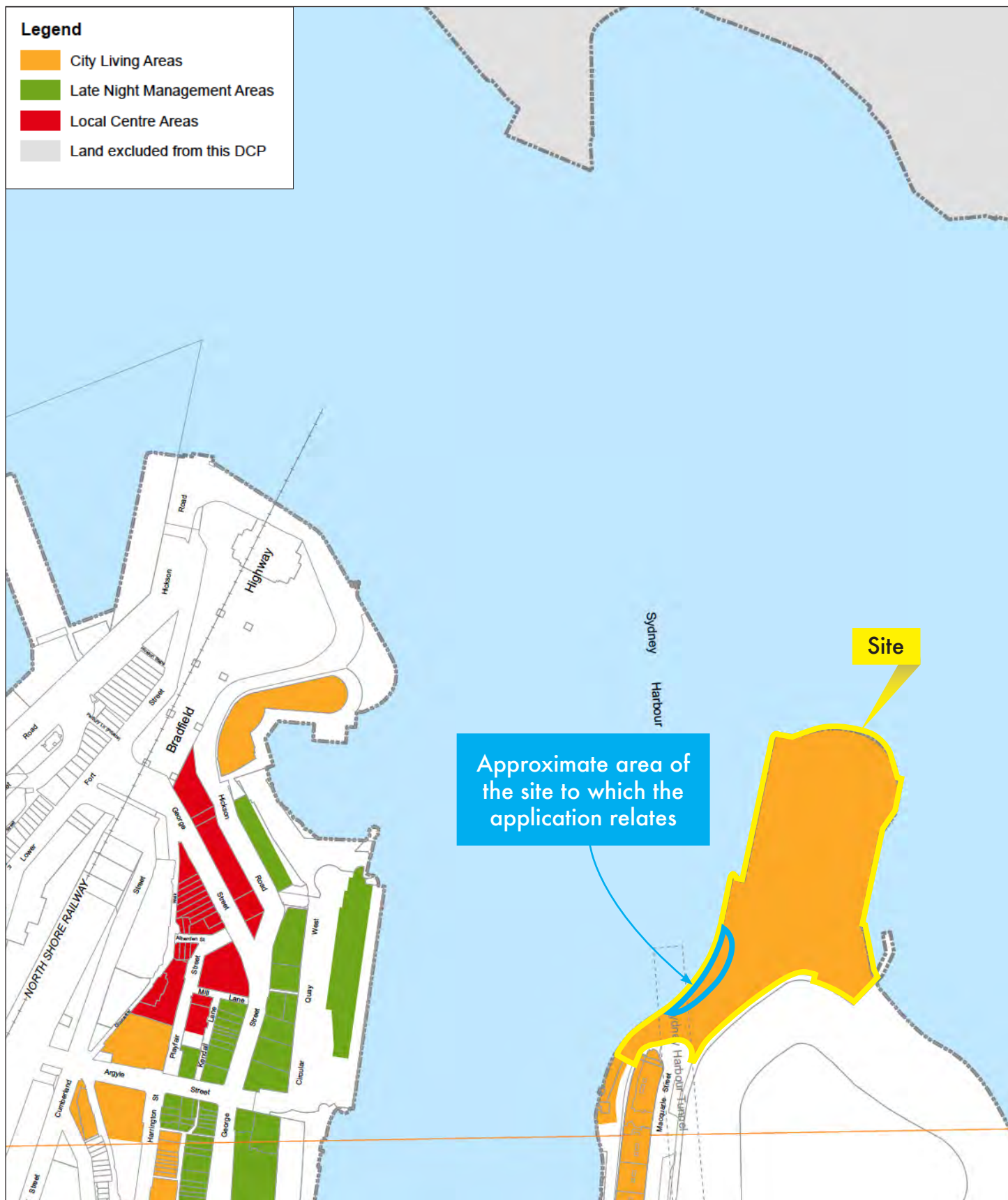


PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

FIGURE 4G
Public Transport Accessibility Level Map - Sydney LEP 2012

Legend

- City Living Areas
- Late Night Management Areas
- Local Centre Areas
- Land excluded from this DCP

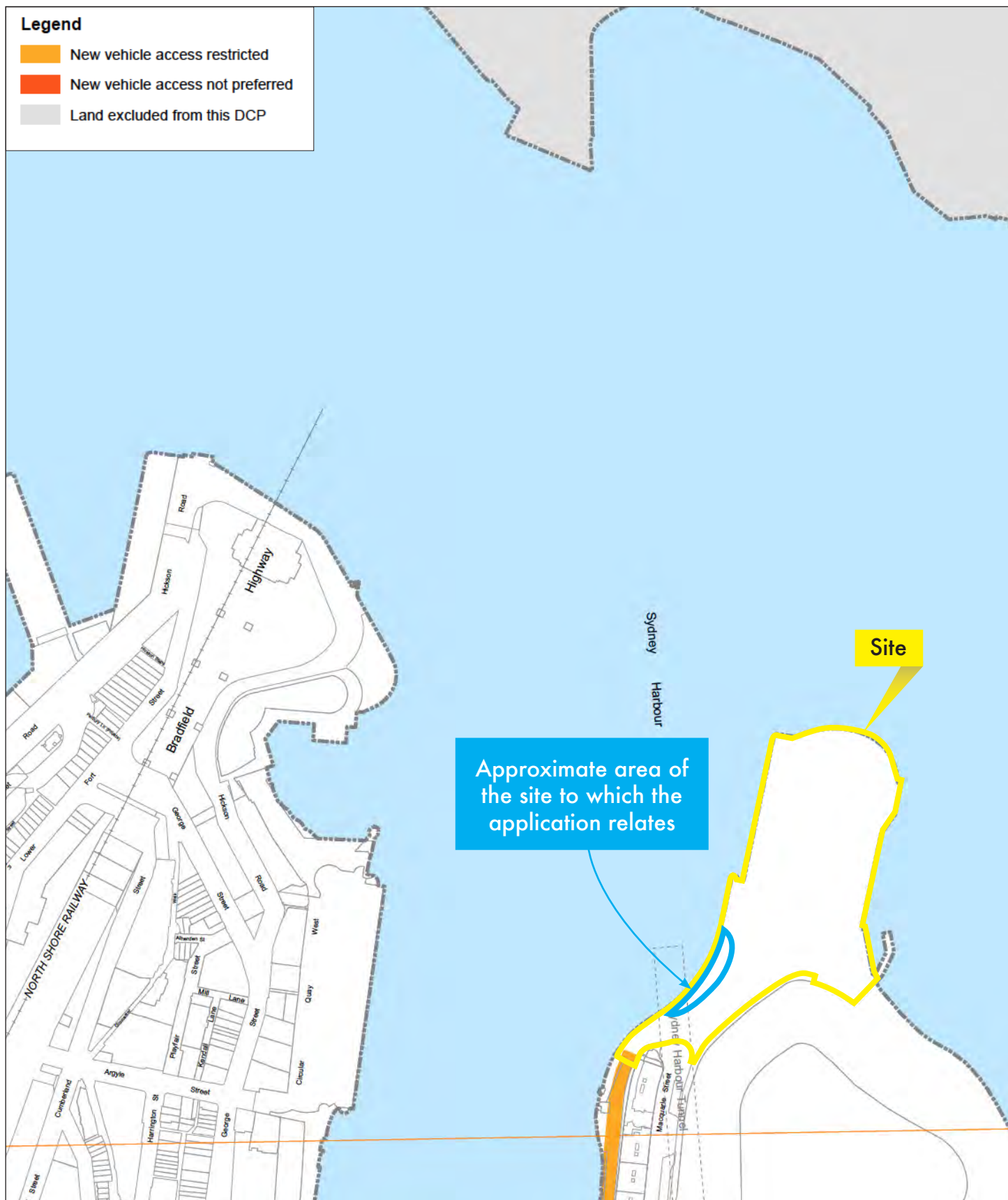


PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

FIGURE 5A
Late Night Trading Areas Map - Sydney DCP 2012

Legend

-  New vehicle access restricted
-  New vehicle access not preferred
-  Land excluded from this DCP



PRELIMINARY ASSESSMENT REPORT - SHADE COVER IMPROVEMENTS Sydney Opera House: Lower Concourse

FIGURE 5B
Pedestrian Priority Map - Sydney DCP 2012



APPENDICES



APPENDIX 1

Preliminary architectural and photomontages

Opera Bar Refurbishment Stage 2

SOH Lower Concourse - Shade cover improvement

SEAR's Environmental Assessment

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Coordination

Where applicable refer to and coordinate information contained in the architectural drawings, and the documentation of other consultants. Notify discrepancies between architectural and/or other consultant's documentation for direction prior to proceeding with the affected part of the works.

Specifications and Schedules

Where applicable refer to and coordinate with relevant Specifications and Schedules. Written specifications and schedules take precedence to the extent of any discrepancy. Notify discrepancies between documents for direction prior to proceeding with the affected part of the works.

Detail Drawings

Unless noted otherwise, refer to detail drawings for set-out information. Drawings at larger scales take precedence over drawings at smaller scales to the extent of any discrepancy. Notify discrepancies for direction prior to proceeding with the affected part of the works.

Execution of the works (Standards)

Execute the works in compliance with the current edition of the Building Code of Australia (as amended), current editions of relevant Australian and other applicable published Standards and the relevant requirements of Local and Statutory Authorities.

Units of measurement

- Unless noted otherwise:
- Dimensions are shown in millimetres; and
- Levels are shown in meters

To detail

Where a notation refers to an item as "...to detail" the applicable item is to be in accordance with the relevant Architect's detail.

Materials handling and storage

Unless noted otherwise material, fixtures and fittings are to be handled, stored and installed in accordance with the Manufacturer's current written instructions.

Structure

Foundations, footings, reinforced concrete, slabs, retaining walls, framing, bracing, tie-down and other structural elements are to be designed and constructed in accordance with the Structural Engineer's details and specifications.

Hydraulics

Stormwater drainage, waste water drainage, fresh water, gas supply and other hydraulic services are to be designed and constructed in accordance with the Local Authority, Statutory Authority, Hydraulic and/or Civil Works Consultant's requirements.

Erosion & Sediment Control

Apply erosion and sediment control measures in accordance with the Local Authority and, where applicable, Hydraulic or Civil Works Consultant's requirements to avoid erosion, sedimentation and/or contamination of the site, surrounds and stormwater drainage system. Apply measures to ensure that the site remains free of water and to prevent water flow over the new work. Erosion & sediment control measures are to be effective from commencement of the works (including demolition) and maintained throughout the course of the works until the site is fully stabilised.

Services (existing & proposed)

Confirm location of existing under and above-ground services and coordinate with the relevant service authority to ensure that services are handled in accordance with the relevant authorities instructions prior to commencement of demolition, excavation and/or construction works.

Levels

Levels shown are consistent with the datum and benchmarks shown on the associated detail survey. In most instances the surveyed levels will be indicated relative to Australian Height Datum. However the existing site levels and datum are to be confirmed on site with reference to the site survey documents.

Falls

Finish surfaces typically to fall as required to facilitate effective drainage.

Interpretation

"Provide" means to supply and install.

"Required" means required by the contract documents or by the Local or Statutory Authorities.

"Proprietary" means identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.

Standard Abbreviations

AAP Acoustic access panel
Acst Acoustic
Adj Adjustable / adjacent
AFFL Above finished floor level
Agmt Arrangement
Amnd(t) Amend(ed) / Amendment
AP Access Panel
Aprv(d) Approved / Approval
Aprx Approximate
Arc Architrave
Arch Architect
AS Australian Standard
Avg Average
AW Accordance with
Awn Awning
Bal Balustrade
Bat Battens
BCA Building Code of Australia
Bdy (Property) Boundary
Bhd Bulkhead
Bldg Building
CC Construction certificate
Celing Ceiling
CF Core filled
CF## Ceiling finish ##
Chg(d) Change / changed
Chk Check
Chnl Channel
CJ Control / construction joint / Ceiling joist
CL Centre line
Clr Clear / Clearance / closer
Cnr Corner
Col Colour / Column
Con Consultant(s)
Cont(s) Consultant(s)
Cont(s) Contractor(s), Building Contractor(s)
Cor Corrugated / Cornice
COS Check / confirm on site
CP Cover plate
Cts Centres
Csk Countersink
CT## Ceiling type (## refer to schedule)
Ctr Centre / contour
DIDr Door
DA Development Application / Delayed action (door closer)
Det(s) Detail(s)
Dia Diameter
Dim Dimension
Doc(s) Documentation, documents
Dp Downpipe
DPC Damp proof course
Drw Drawer
Dwg(s) Drawing / drawings
EA Equal angle
EJ Equal joint
Elec Electrical
Elev Elevation
Eng(s) Engineer(s)
Eq Equal
Est Estimated
Ex From / out of... or existing when referring to building elements
Exst Existing
Ext External / exterior
FCL Finished ceiling level
FE Fire escape / Fire extinguisher
FF## Floor finish ##
FFL Finished floor level
FG Fixed glazing
FGL Finished ground level
FH Fire hydrant
FHR Fire Hose Reel
Fix Fixing / fixings
FJ Floor joist
Fla Flashing
Flr Floor
FR Fire rated
FR Fire rated
Frm Frame / framing
FT## Floor type (## refer to schedule)
Fur Furring (channel)
Fxd Fixed
GA General Arrangement
Gd Grid...
Gla Glass / Glazing
Gnd Ground
Hd Head
Hdl Handle
Hor Horizontal
HR Hand Rail
Ht Height
Hyd Hydraulic
Incl Include / included / inclusive
Ind Indicator
Ins Insulation / Inside / Inside of...
Inst Instruction(s)
Int Internal
Lev Level
Lvr Louvre / louvred
Man(s) Manufacturer(s)
Max Maximum
Mech Mechanical
Mech Mechanical
Min Minimum
MR Mirror reverse / moisture resistant
Mtr Mitre / Mitred

NA Not applicable
NCC National Construction Code
Nom Nominal
NTS Not to scale
OA Overall
Obs Obscure
OH Overhead
Orig Original building fabric
OS Outside / Outside of... / On site
Own Owner | Proprietor | Principal
OA Overall
Obs Obscure
OH Overhead
OH Original building fabric
OS Outside / Outside of... / On site
Own Owner | Proprietor | Principal
PA Project Administration
Pav Paving
PCA Principal certifying authority
PFC Parallel flange channel
Plt Plate
PM Project Manager
Prelm Preliminary
Proj Project
Prop Proposed
Prt Part / Partition
Qty Quantity
Rad Radius
RCP(s) Reflected Ceiling Plan(s)
Rdb Rebate
Ref Reference, refer (to...)
Reo Reinforced / reinforcement
Rep Replace, UNO to match exst
Req(s) Requirement(s)
Rev Revision
RHS Rectangular hollow section
RI Rough in (cap and/or terminate as req for future service connection)
RL Reduced / relative level
RL Relative Level (to Datum)
RT## Roof type (## refer to schedule)
S96 Section 96 Application to amend a Development Consent
Schd(s) Schedule(s)
SDr Surface drainage
Sect Section
Sel Selected... typically referring to a finish to be selected by the archt, client, PA or PM
Serv Services
SFL Structural floor level
SHS Square hollow section
Sk Sketch
Skt Skirting
SI Seal / sealant
SL Surface level / Shadow-line
Sld Sliding
Smk Smoke
SN Stair nosing
Sof Soffit
Spec Specification
Spec(s) Specification(s)
SR Service(s) riser
SSD Sub-surface drainage
SSL Structural slab level
Std Standard
Std Standard
Struct Structure / Structural
TBA To be advised (unless stated otherwise, generally by the Project Administrator, Architect and/or Owner)
TBC To be confirmed (unless stated otherwise, generally by the Contractor)
TBD To be demolished
TBR To be removed
TCSI Tactile ground surface indicators
Tmb Timber
TO Top of...
TOG Top of gutter
TOK Top of kerb
Tol Tolerance
TOW Top of wall
Tr Tree
Typ Typical
UA Unequal angle
UB Universal beam
UC Universal column / under cut
UG Under ground
UNO Unless noted otherwise
US Underside
VB Vapor barrier
Vert Vertical
W With
W/Win Window
WF## Wall finish
WO Without
WP Water proof
WPM Water proof membrane
WR Water resistant
WT## Wall type (## refer to schedule)

Drawing List - Development Application 2

Sheet Number	Sheet Name	Revision	Rev Date
DA2-001	Shade cover improvement - Title Sheet and Drawing List	03	01/12/15
DA2-100	Shade cover improvement - GA Ground Level Plan - Existing and Demolition	03	01/12/15
DA2-101	Shade cover improvement - GA Ground Level Plan - Proposed	03	01/12/15
DA2-105	Shade cover improvement - Detail Proposed RCP - Outdoor Umbrellas	03	01/12/15
DA2-520	Shade cover Improvement - Detail Plan - Outdoor Umbrellas	03	01/12/15
DA2-521	Shade cover Improvement - Detail Plan - Outdoor Umbrellas Opera Kitchen	03	01/12/15
DA2-525	Shade cover improvement - Detail Section - Proposed Outdoor Bar	02	01/12/15
DA2-900	Shade cover improvement - 3D View - Planning Presentation Images	03	01/12/15
DA2-956	Shade cover improvement - 3D View - Planning Presentation Images	03	01/12/15

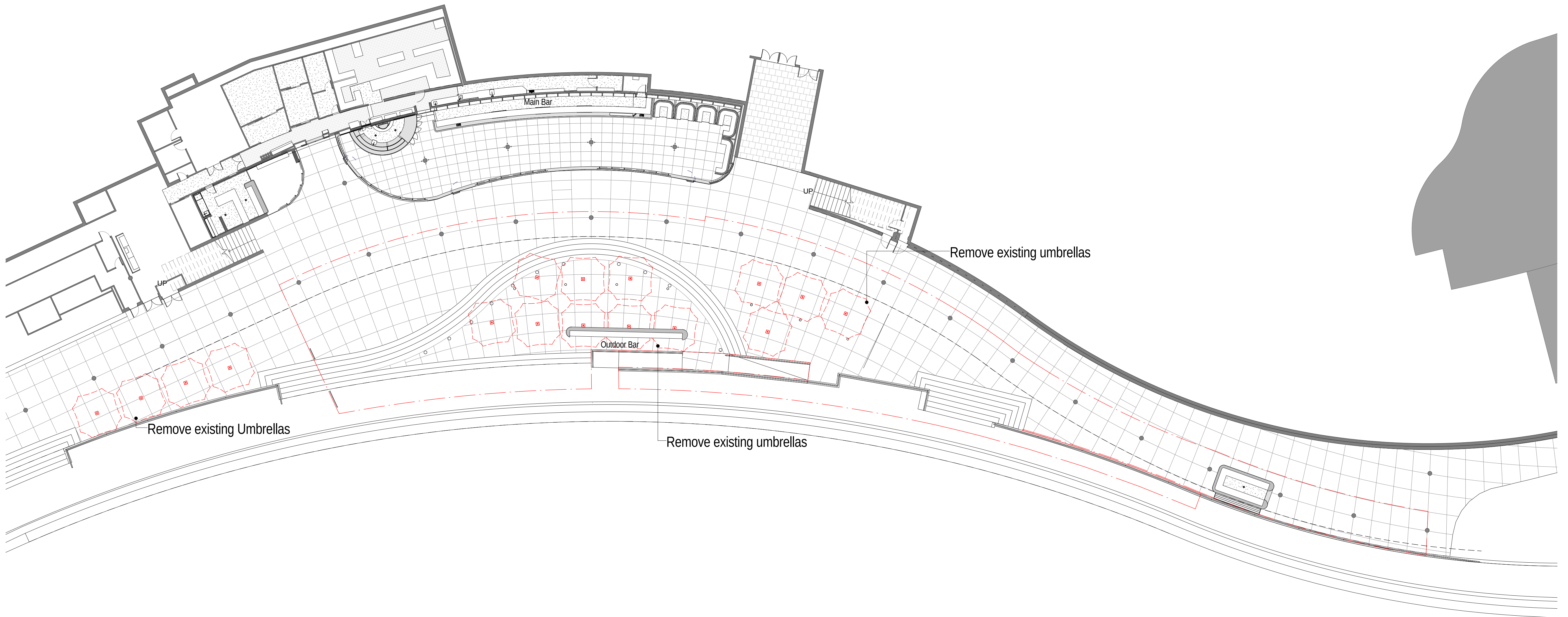


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Rev	Date	Amendments
01	23/11/15	Director General Requirements
02	30/11/15	DGR Application
03	01/12/15	SEAR's Environmental Assessment

Scale @ A1	Drawn by	Checked by
Scale @ A3		
Project Issue Date	Sheet Issue Date	
16/03/2015		01/12/15
Project Number	Drawing Number	Revision
2268	DA2-001	03



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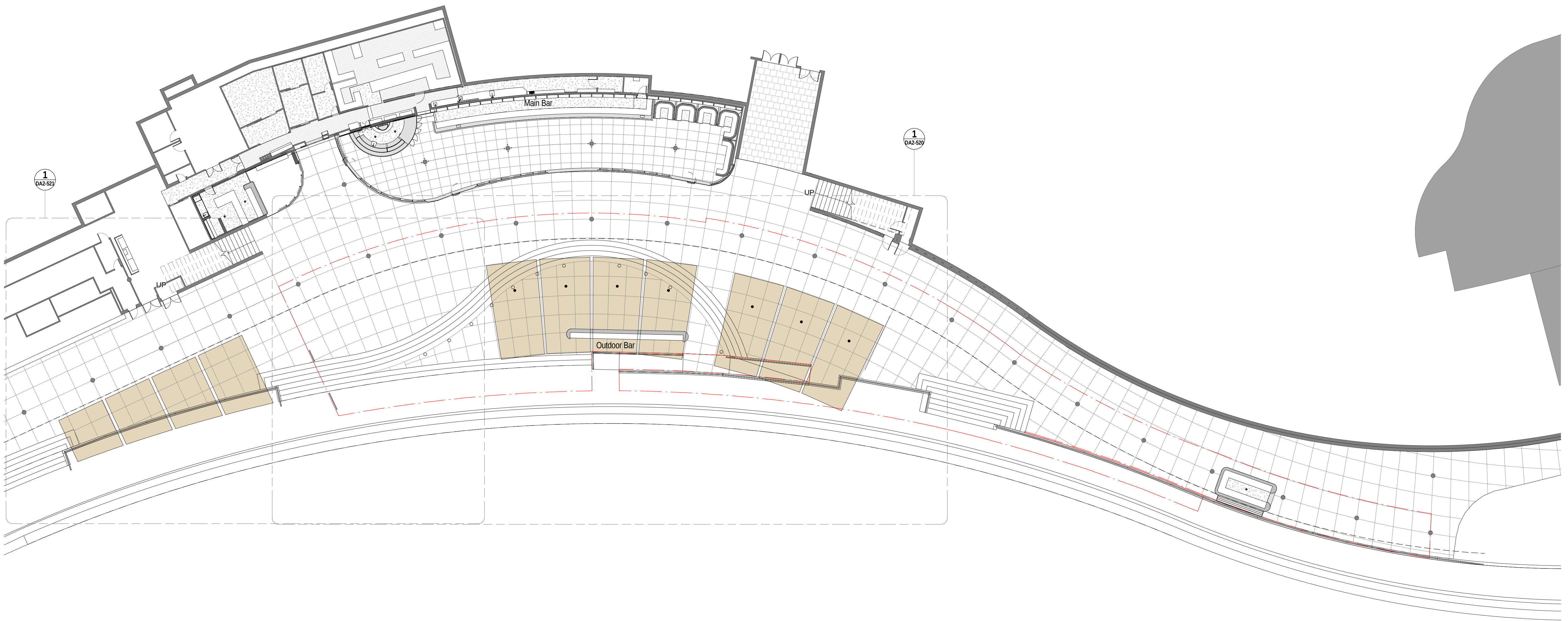
Rev	Date	Amendments

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Project	Opera Bar Refurbishment Stage 2
Location	SOH Lower Concourse - Shade cover improvement
Client	
Drawing	Shade cover improvement - GA Ground Level Plan - Existing and Demolition

SEAR's Environmental Assessment

Scale @ A1	1:200	Drawn by	Checked by
Scale @ A3	1:400		
Project Issue Date	16/03/2015	Sheet Issue Date	01/12/15
Project Number	2268	Drawing Number	DA2-100
		Revision	03



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Rev	Date	Amendments

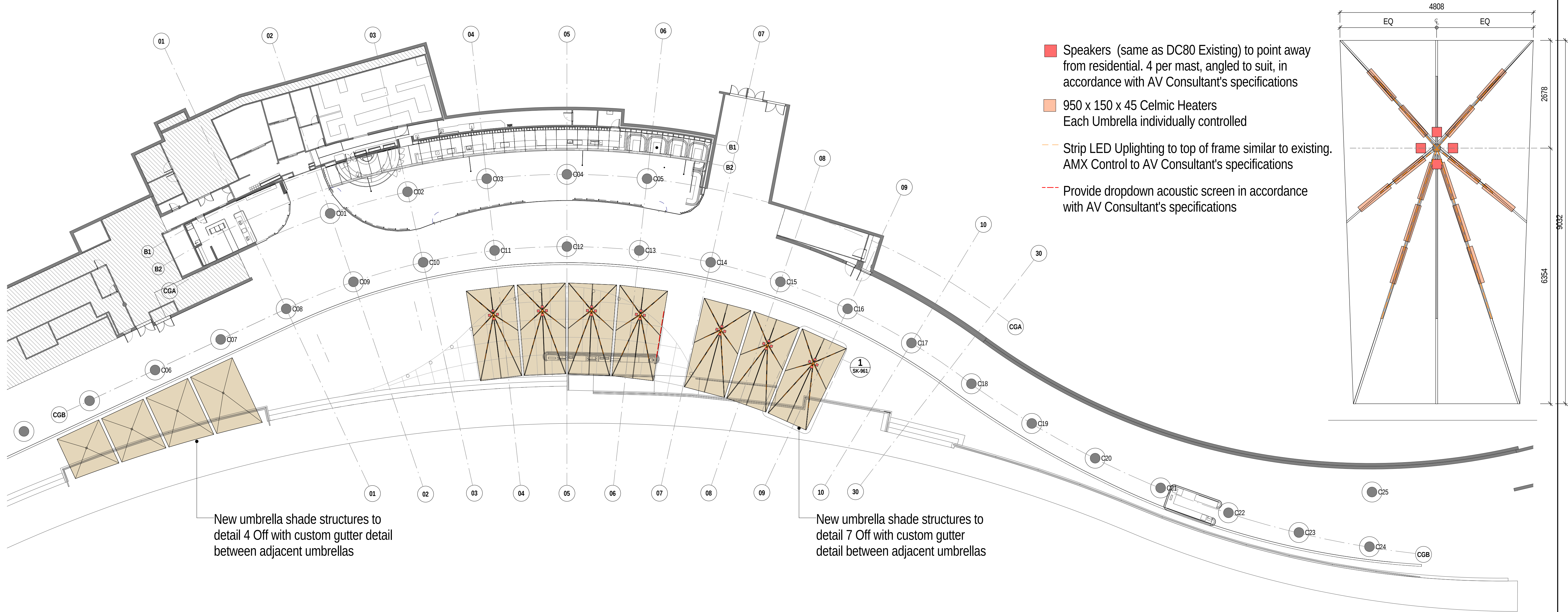
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Project	Opera Bar Refurbishment Stage 2	
Location	SOH Lower Concourse - Shade cover improvement	
Client		
Drawing	Shade cover improvement - GA Ground Level Plan - Proposed	

SEAR's Environmental Assessment

Scale @ A1	1:200	Drawn by	Checked by
Scale @ A3	1:400		
Project Issue Date	16/03/2015	Sheet Issue Date	01/12/15
Project Number	2268	Drawing Number	DA2-101
		Revision	03



New umbrella shade structures to detail 4 Off with custom gutter detail between adjacent umbrellas

New umbrella shade structures to detail 7 Off with custom gutter detail between adjacent umbrellas

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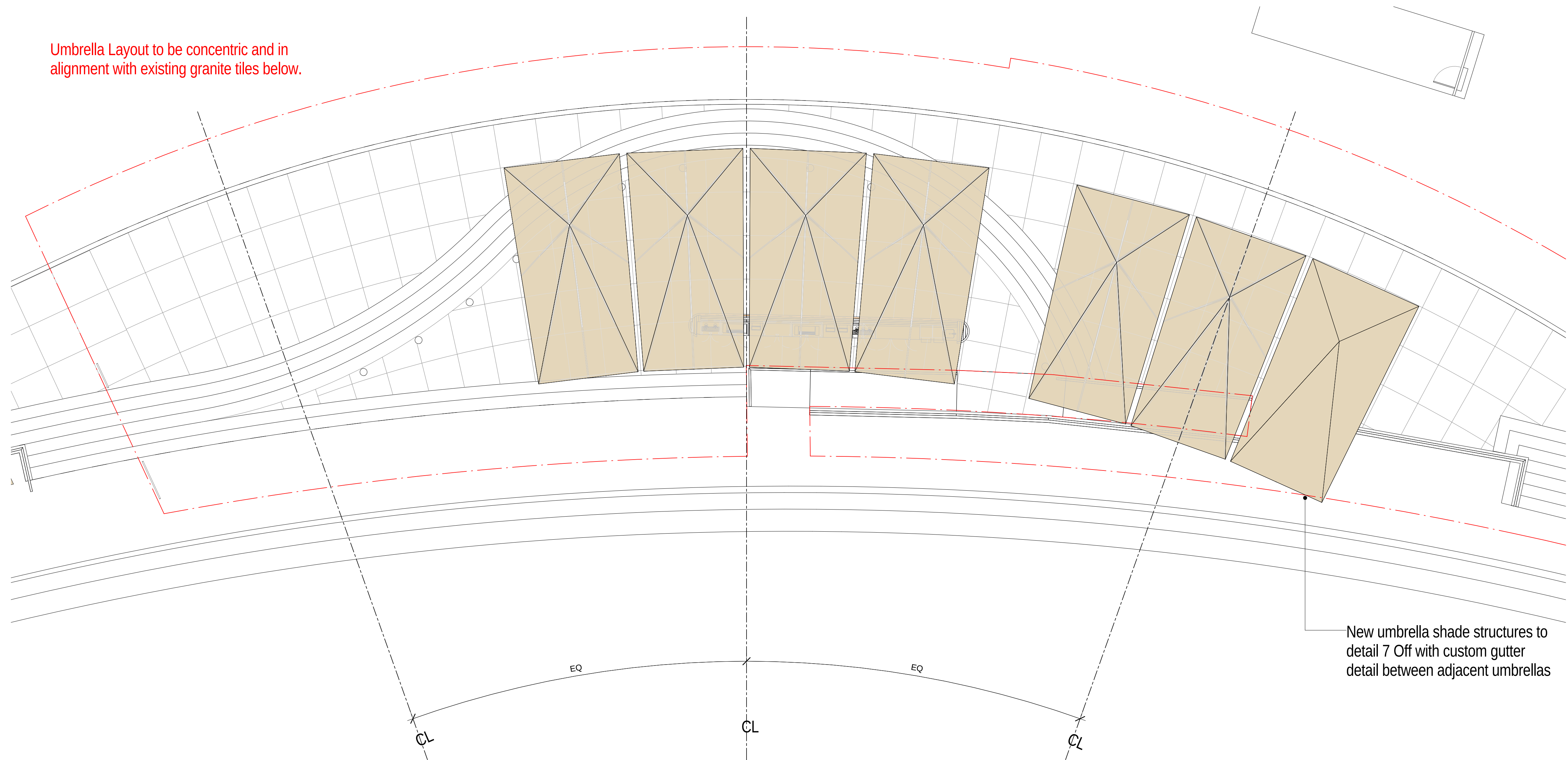
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Rev	Date	Amendments

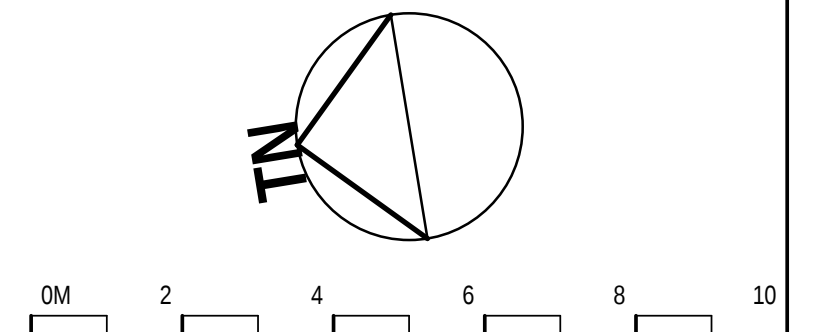
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Project	Opera Bar Refurbishment Stage 2		
Location	SOH Lower Concourse - Shade cover improvement		
Client			
Drawing	Shade cover improvement - Detail Proposed RCP - Outdoor Umbrellas		

Scale @ A1	As indicated	Drawn by	Checked by
Scale @ A3	As indicated		
Project Issue Date	16/03/2015	Sheet Issue Date	01/12/15
Project Number	2268	Drawing Number	DA2-105
		Revision	03



1 Detail Plan - Outdoor Umbrellas - DA2 Works
1:100



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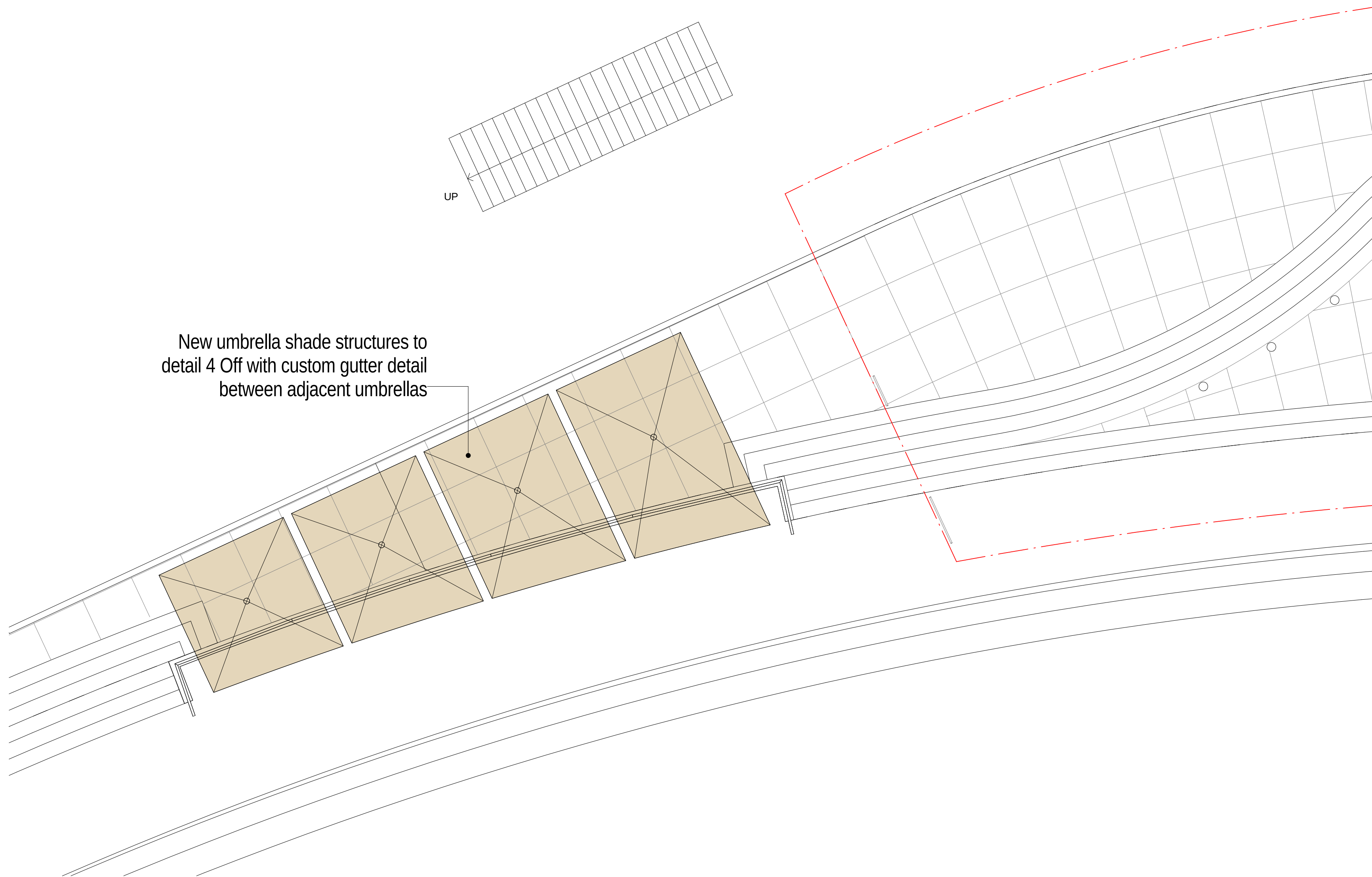
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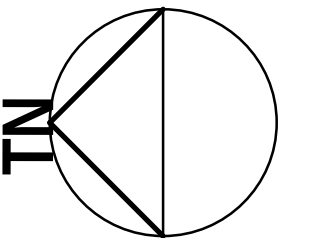
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Project	Opera Bar Refurbishment Stage 2		
Location	SOH Lower Concourse - Shade cover improvement		
Client			
Drawing	Shade cover Improvement - Detail Plan - Outdoor Umbrellas		

Scale @ A1	1:100	Drawn by	Checked by
Scale @ A3	1:200		
Project Issue Date	16/03/2015	Sheet Issue Date	01/12/15
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2268	DA2-520	03	



1 Detail Plan - Outdoor Umbrellas - DA2 Works
1 : 100



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Project	Opera Bar Refurbishment Stage 2		
Location	SOH Lower Concourse - Shade cover improvement		
Client			
Drawing	Shade cover Improvement - Detail Plan - Outdoor Umbrellas Opera Kitchen		

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Scale @ A1	1:100	Drawn by	Checked by
Scale @ A3	1:200		
Project Issue Date	16/03/2015	Sheet Issue Date	01/12/15
Project Number	Drawing Number	Revision	
2268	DA2-521	03	



Proposed Outdoor Bar and Backbar

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Project	Opera Bar Refurbishment Stage 2
Location	SOH Lower Concourse - Shade cover improvement
Client	
Drawing	Shade cover improvement - Detail Section - Proposed Outdoor Bar

SEAR's Environmental Assessment					
Scale @ A1	1:20	Drawn by	Checked by		
Scale @ A3	1:40	Project Issue Date	16/03/2015	Sheet Issue Date	01/12/15
Project Number	2268	Drawing Number	DA2-525	Revision	02



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Project	Opera Bar Refurbishment Stage 2
Location	SOH Lower Concourse - Shade cover improvement
Client	
Drawing	Shade cover improvement - 3D View - Planning Presentation Images

SEAR's Environmental Assessment

Scale @ A1	Drawn by	Checked by
Scale @ A3		
Project Issue Date	16/03/2015	Sheet Issue Date 01/12/15
Project Number	Drawing Number	Revision
2268	DA2-900	03



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Rev	Date	Amendments
01	23/11/15	Preliminary Issue
02	30/11/15	DGR Application
03	01/12/15	SEAR's Environmental Assessment

Rev	Date	Amendments

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Project	Opera Bar Refurbishment Stage 2
Location	SOH Lower Concourse - Shade cover improvement
Client	
Drawing	Shade cover improvement - 3D View - Planning Presentation Images

SEAR's Environmental Assessment

Scale @ A1	Drawn by	Checked by
Scale @ A3		
Project Issue Date	16/03/2015	Sheet Issue Date 01/12/15
Project Number	Drawing Number	Revision
2268	DA2-956	03