



Issued under the Environmental Planning and Assessment Act 1979

Approved Application No. SSD-9794

Granted on the 8 May 2020

Signed [Signature]

Sheet No. 1 of 14

General Notes & Abbreviations

General Notes
The copyright of this design remains the property of H+E Architects. This design is not to be used, copied or reproduced without the authority of H+E Architects.

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.

D? ## Door (? : Level | ##: Number refer to schedule)
Dr Door
DA Development Application / Delayed action (door closer)

Proj Project
Prop Proposed
Prt Part / Partition
Qty Quantity

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.

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.

Demo Demolish and remove from site
Detail(s) Detail(s)
Dia Diameter

Recyc Demolish, stockpile and recycle into the works as req
Ref Reference, refer (to...)
Rem Remove, take care to avoid damage to substrate materials and structure, and dispose of

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.

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.

Ext Existing
Ext External / exterior
FCL Finished ceiling level

Reo Reinforced / reinforcement
Rep Replace, UNO to match ext
Req(s) Required / Requirement(s)

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.

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.

FLL Finished floor level
FG Fixed glazing
FGL Finished ground level

Schd(s) Schedule(s)
SDr Surface drainage
Sect Section

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.

Standard Abbreviations
AAP Acoustic access panel
Acst Acoustic
Adj Adjustable / adjacent

Gnd Ground
Hd Head
Hdl Handle

Serv(s) Services
SFL Structural floor level
SHS Square hollow section

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 detail to be provided by the Architect.

Incl Include / included / inclusive
Ind Indicator
Ins Insulation / Inside / Inside of...

TBC Tactile ground surface indicators
Tmb Timber
TO Top of...

Materials handling and storage
Unless noted otherwise material, fixtures and fittings are to be handled, stored and installed, commissioned and maintained as applicable in accordance with the Manufacturer's current written instructions.

Bldg Building
BOR Bottom of ramp
BOS Bottom of stair

TOG Top of gutter
TOK Top of kerb
Tol Tolerance

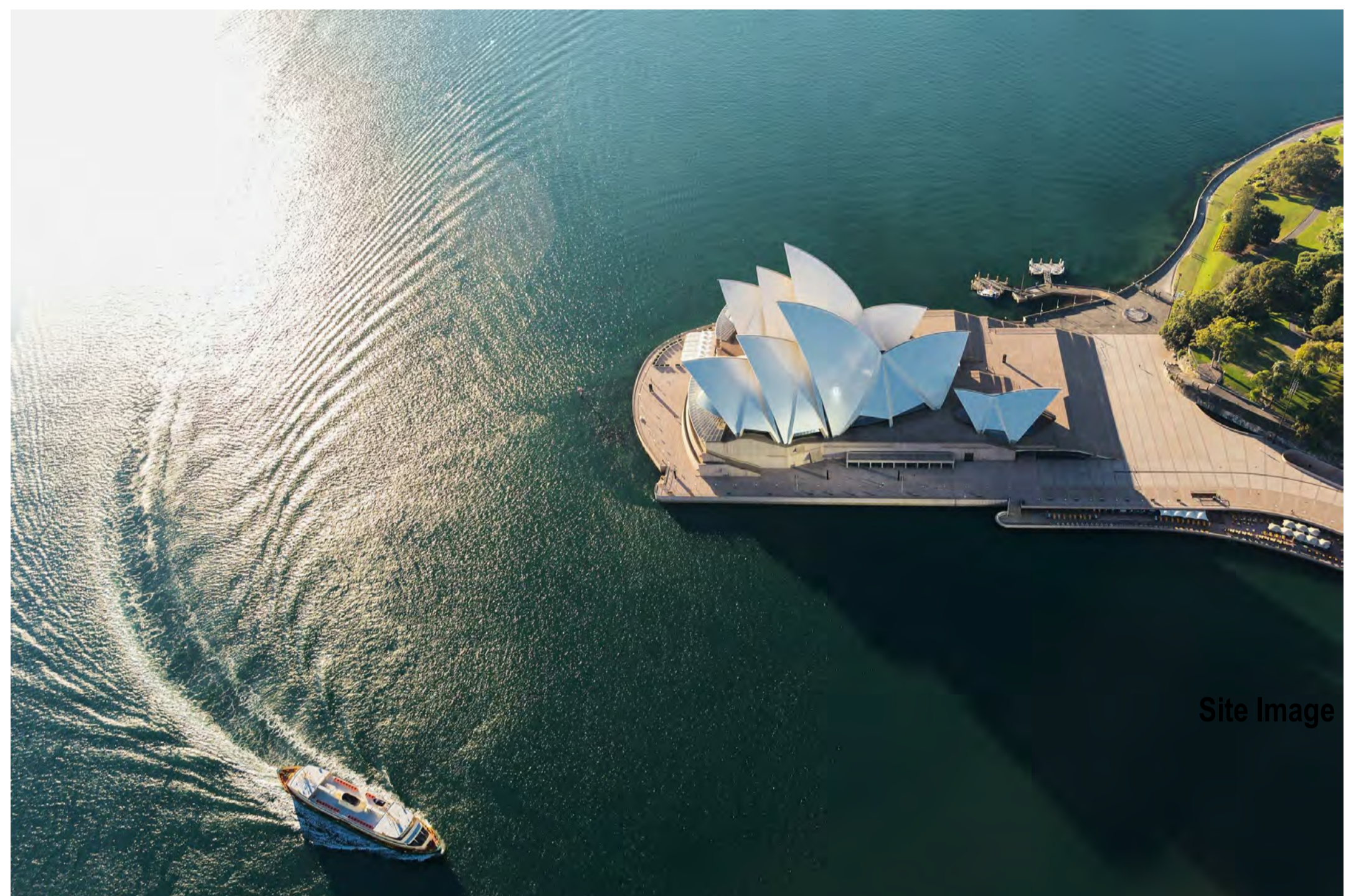
Typ Typical
UA Unequal angle
UB Universal beam

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.

CL Centre line
Clr Clear / Clearance / closer
Cnr Corner

Obs Obscure
OH Over head
Orig Original (building fabric)

W? ## Window, Glazing and/or Shop Front element (? : Level | ##: Number refer to schedule)
Win Window



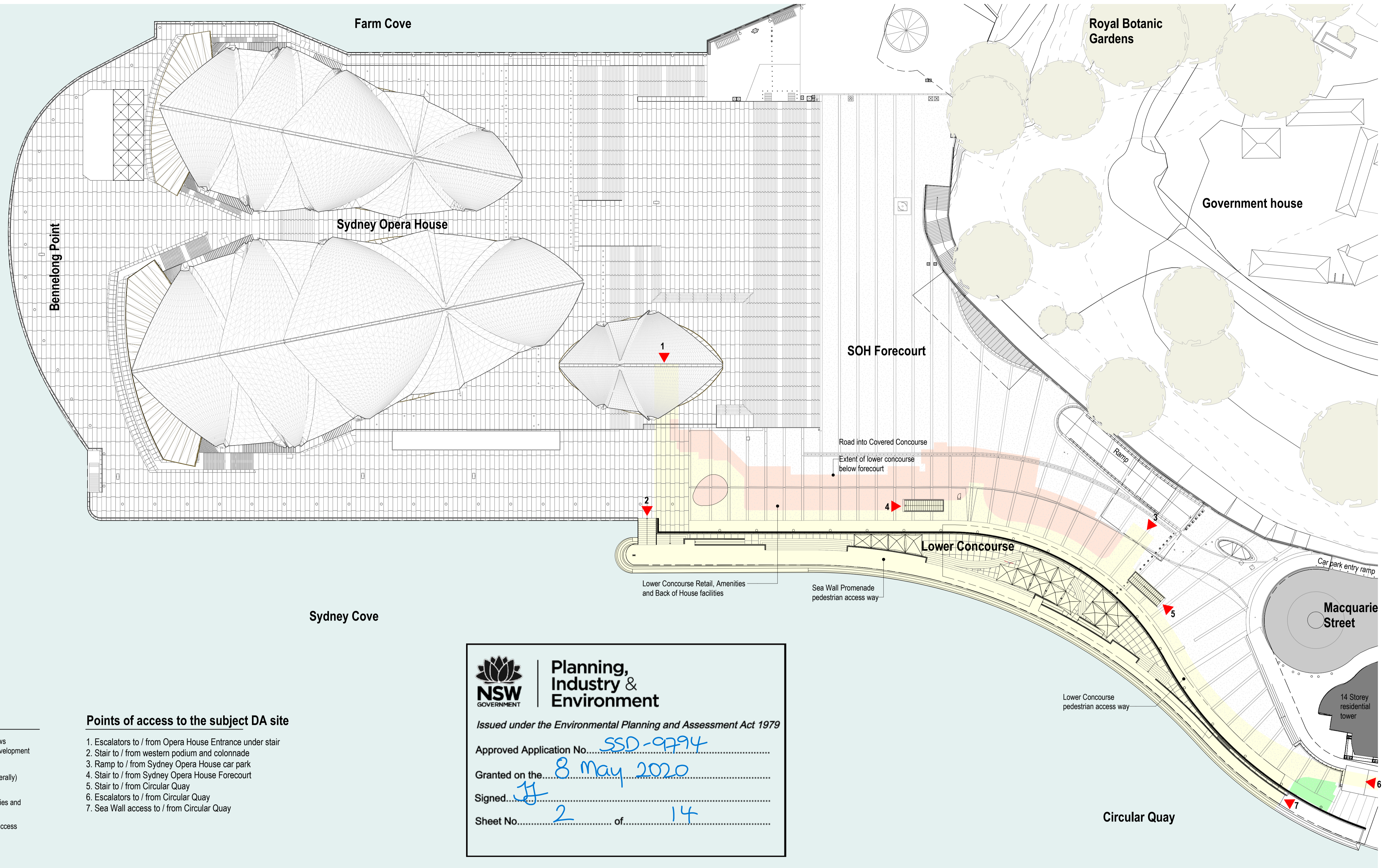
Site Image

Table with 4 columns: Sheet Number, Sheet Name, Revision, Revision Date. Lists drawing sheets like Title Sheet and Drawing List, Site Plan, etc.

Table with 2 columns: Rev Date, Amendments. Lists revision history from 01/02/2019 to 13/08/2019.

H+E ARCHITECTS logo and contact information: Suite 35 Level 2 94 Oxford Street, Darlinghurst NSW 2010 Australia.

Development Application summary box containing scale, project issue date (16/03/2015), sheet issue date (13/08/19), project no (2466), zone (LC), drawing no (49HE001-0001), and discipline (F).



**Site Plan Legend**

The extents of the plan hatched as follows represents the physical scope of this Development Application.

- Proposed new building fabric (generally)
- Lower Concourse Retail, Amenities and BOH facilities
- Sea Wall Promenade pedestrian access way and external seating area
- Lower Concourse WC

**Points of access to the subject DA site**

1. Escalators to / from Opera House Entrance under stair
2. Stair to / from western podium and colonnade
3. Ramp to / from Sydney Opera House car park
4. Stair to / from Sydney Opera House Forecourt
5. Stair to / from Circular Quay
6. Escalators to / from Circular Quay
7. Sea Wall access to / from Circular Quay

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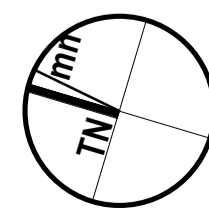
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Sheet No. 2 of 14



**Development Application**

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Rev	Date	Amendments
A	14/08/19	Development Application

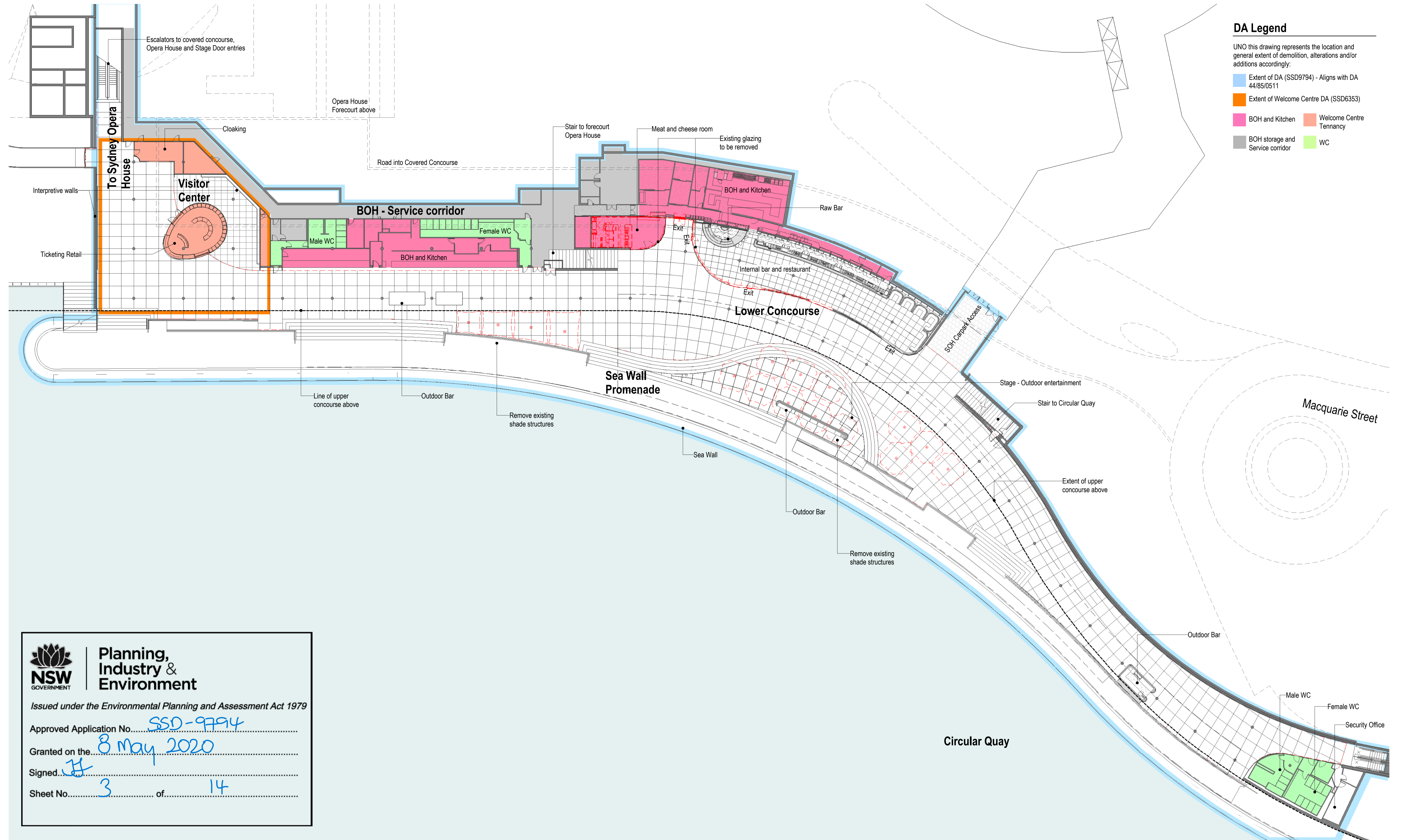
Rev	Date	Amendments

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 PO Box 490 Darlinghurst NSW 1300  
 Humphrey & Edwards Pty Ltd | ABN 8905663227  
 Nominated Architect: Glenn Cunningham #5415

Project  
**Sydney Opera House Lower Concourse Improvements**  
 Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**  
 Drawing  
**Site Plan - Proposed**

Scale @ A1	1:500	Drawn by	KR	Checked by	GC
Scale @ A3	1:1000				
Project Issue Date	16/03/2015	Sheet Issue Date	14/08/19		
Project No.	2466	Zone	LC	Discipline	
Drawing No.	49HE001-0503	Revision	A		



- DA Legend**
- UNO this drawing represents the location and general extent of demolition, alterations and/or additions accordingly:
- Extent of DA (SSD9794) - Aligns with DA 44/85/0511
  - Extent of Welcome Centre DA (SSD6353)
  - BOH and Kitchen
  - BOH storage and Service corridor
  - WC
  - Welcome Centre Tenancy

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Sheet No. 3 of 14

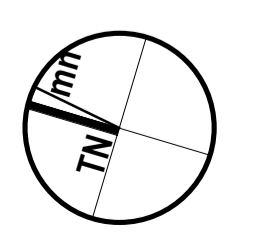


**Development Application**

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Rev	Date	Amendments
01	02/04/19	For information
02	27/05/19	Preliminary
03	25/06/19	Development Application
D	26/06/19	Development Application Issue
E	13/08/19	Development Application Issue

Rev	Date	Amendments

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 Nominated Architect: Glenn Cunningham #5415

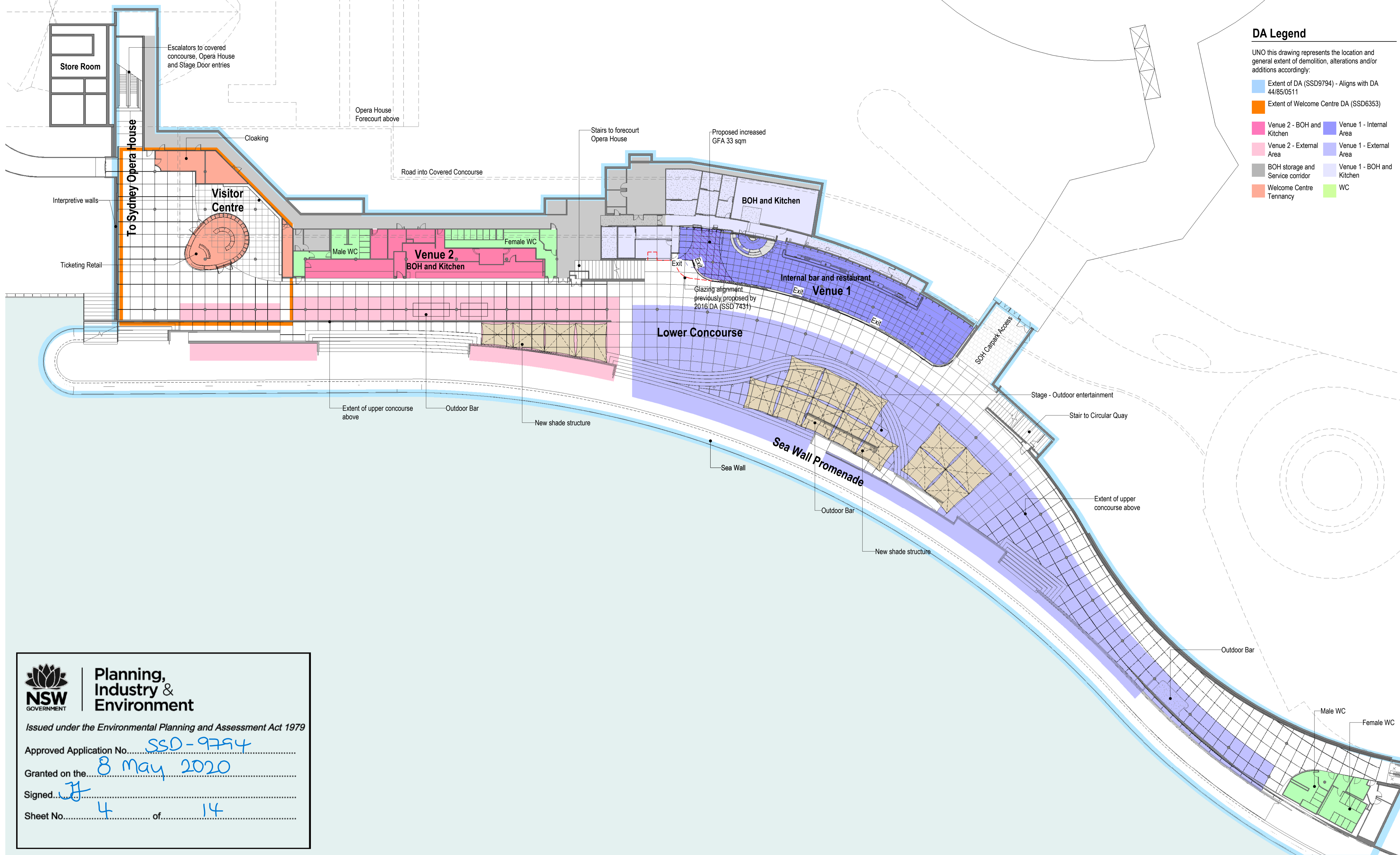
Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**General Arrangement Plan - Lower Concourse - Existing & Demo**

Scale @ A1	1:250	Drawn by	Checked by
Scale @ A3	1:500	KR	GC
Project Issue Date	16/03/2015	Sheet Issue Date	13/08/19
Project No.	2466	Zone	LC
Discipline		Revision	E
Drawing No.	49HE001-1100		



**DA Legend**

UNO this drawing represents the location and general extent of demolition, alterations and/or additions accordingly:

- Extent of DA (SSD9794) - Aligns with DA 44/85/0511
- Extent of Welcome Centre DA (SSD6353)
- Venue 2 - BOH and Kitchen
- Venue 2 - External Area
- BOH storage and Service corridor
- Welcome Centre Tennancy
- Venue 1 - Internal Area
- Venue 1 - External Area
- Venue 1 - BOH and Kitchen
- WC

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Sheet No. 4 of 14

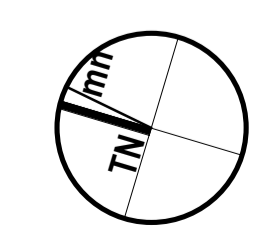


**Development Application**

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Rev	Date	Amendments
01	02/04/19	For information
02	27/05/19	Preliminary
03	25/06/19	Development Application
D	26/06/19	Development Application Issue
E	30/07/19	Development Application Issue
F	13/08/19	Development Application Issue
G	05/05/20	Development Application Issue: Plan amended to indicate Venue areas

Rev	Date	Amendments

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Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**General Arrangement Plan - Lower Concourse - Proposed**

Scale @ A1	1:250	Drawn by	Checked by
Scale @ A3	1:500	KR	GC
Project Issue Date	3/16/2015	Sheet Issue Date	05/05/20
Project No.	2466	Zone	LC
Discipline			
Drawing No.	49HE001-1101	Revision	G



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Circular Quay

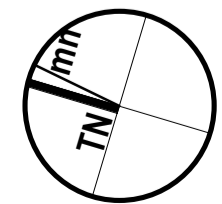


Development Application

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E	30/07/19	Development Application Issue

Rev	Date	Amendments



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Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**General Arrangement Plan - Upper Concourse - Proposed**

Scale @ A1	1:250	Drawn by	Checked by
Scale @ A3	1:500	KR	GC
Project Issue Date	16/03/2015	Sheet Issue Date	30/07/19
Project No.	2466	Zone	LC
Discipline		Revision	E
Drawing No.	49HE001-1103		



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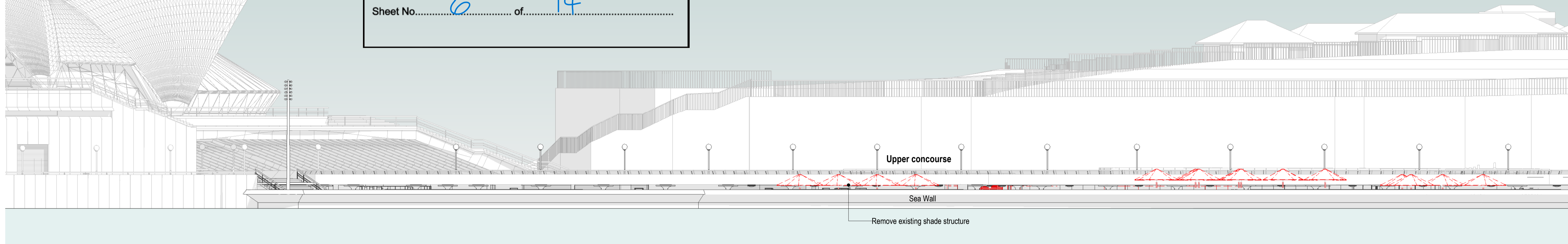
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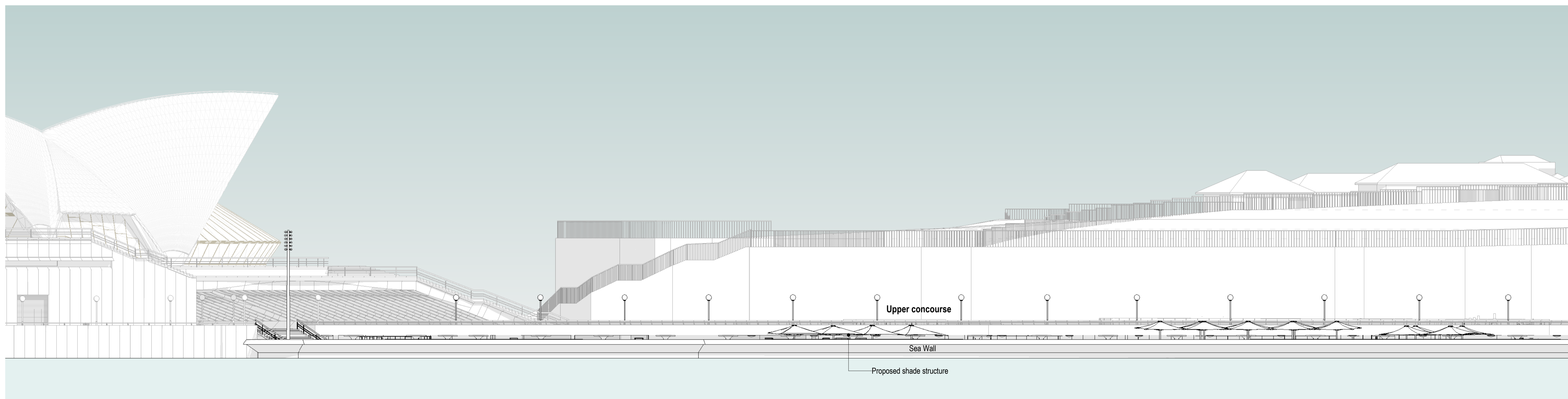
Signed [Signature]

Sheet No. 6 of 14



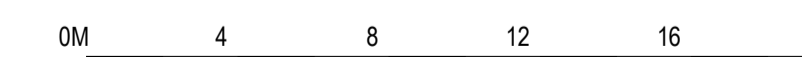
**2 Western Elevation (From Circular Quay) - Existing and Demo**

1:200



**1 Western Elevation (From Circular Quay) - Proposed**

1:200



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E	30/07/19	Development Application Issue

**Rev Date Amendments**



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Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**General Arrangement Elevation**

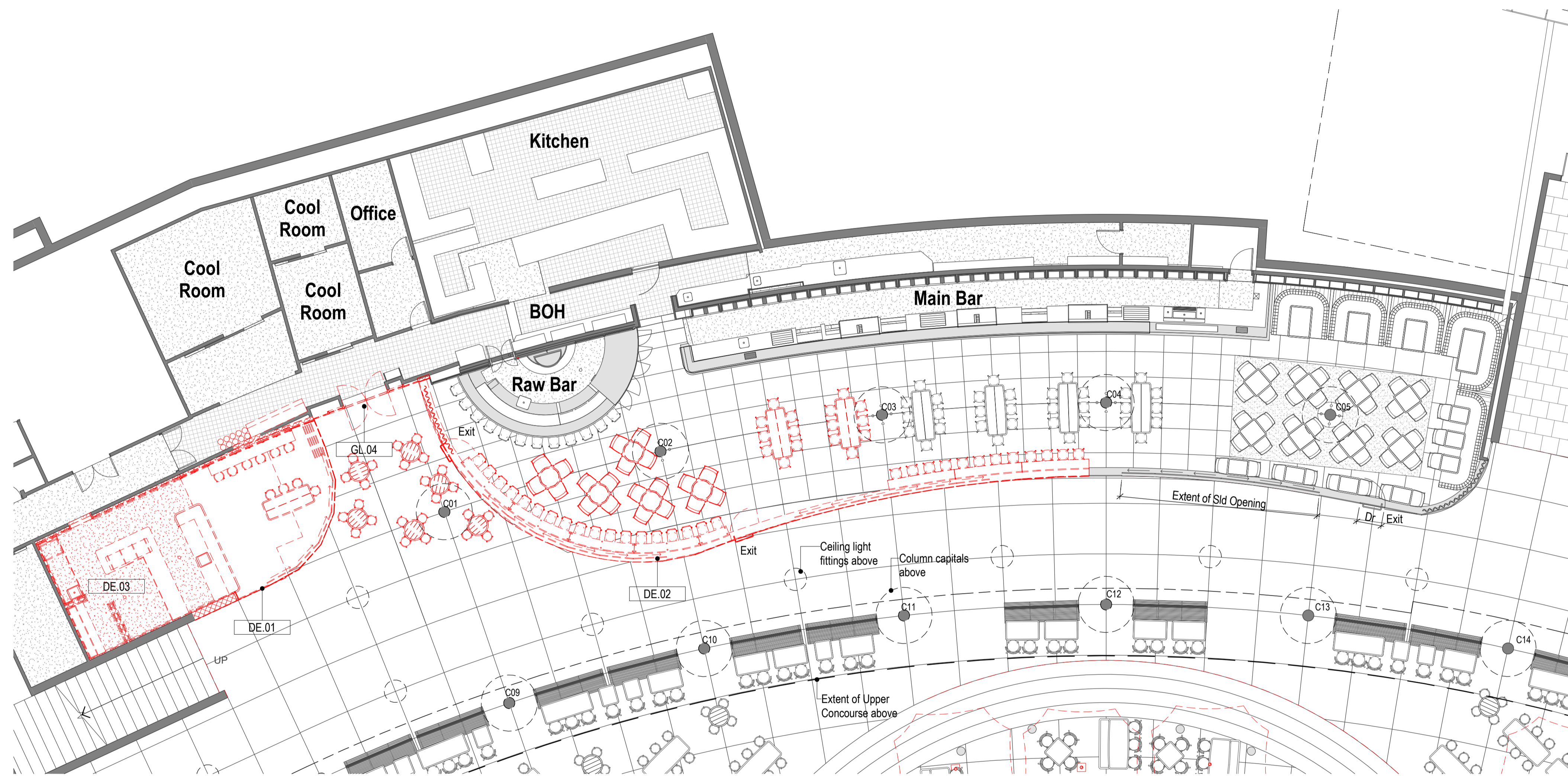
Scale @ A1	1:200	Drawn by	Checked by
Scale @ A3	1:400	KR	GC
Project Issue Date	16/03/2015	Sheet Issue Date	30/07/19
Project No.	2466	Zone	LC
Drawing No.	49HE001-3100	Revision	E



Note: Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

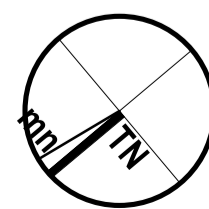
Specification Legend

Ref	Specification
DE.01	Demolish existing "Meat and Cheese Area" glazing line.
DE.02	Partially demolish part of the existing Main Bar area glazing.
DE.03	Demolish meat and cheese area fitout.
GL.04	Refurbish and modify existing bronze service door for new fire exit. Provide new matching frame to suit proposed configuration.



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Rev Date Amendments

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D	26/06/19	Development Application Issue

Rev Date Amendments



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Project  
Sydney Opera House Lower Concourse Improvements

Client  
Sydney Opera House Trust

Location  
Lower Concourse, Sydney Opera House, Bennelong Point, Sydney

Drawing  
Detail Plan - Opera Bar Glazing Line - Existing & Demo



Development Application

Scale @ A1	1:100	Drawn by	Checked by
Scale @ A3	1:200	KR	GC
Project Issue Date	16/03/2015	Sheet Issue Date	26/06/19
Project No.	2466	Zone	LC
Discipline		Revision	D
Drawing No.	49HE001-3200		



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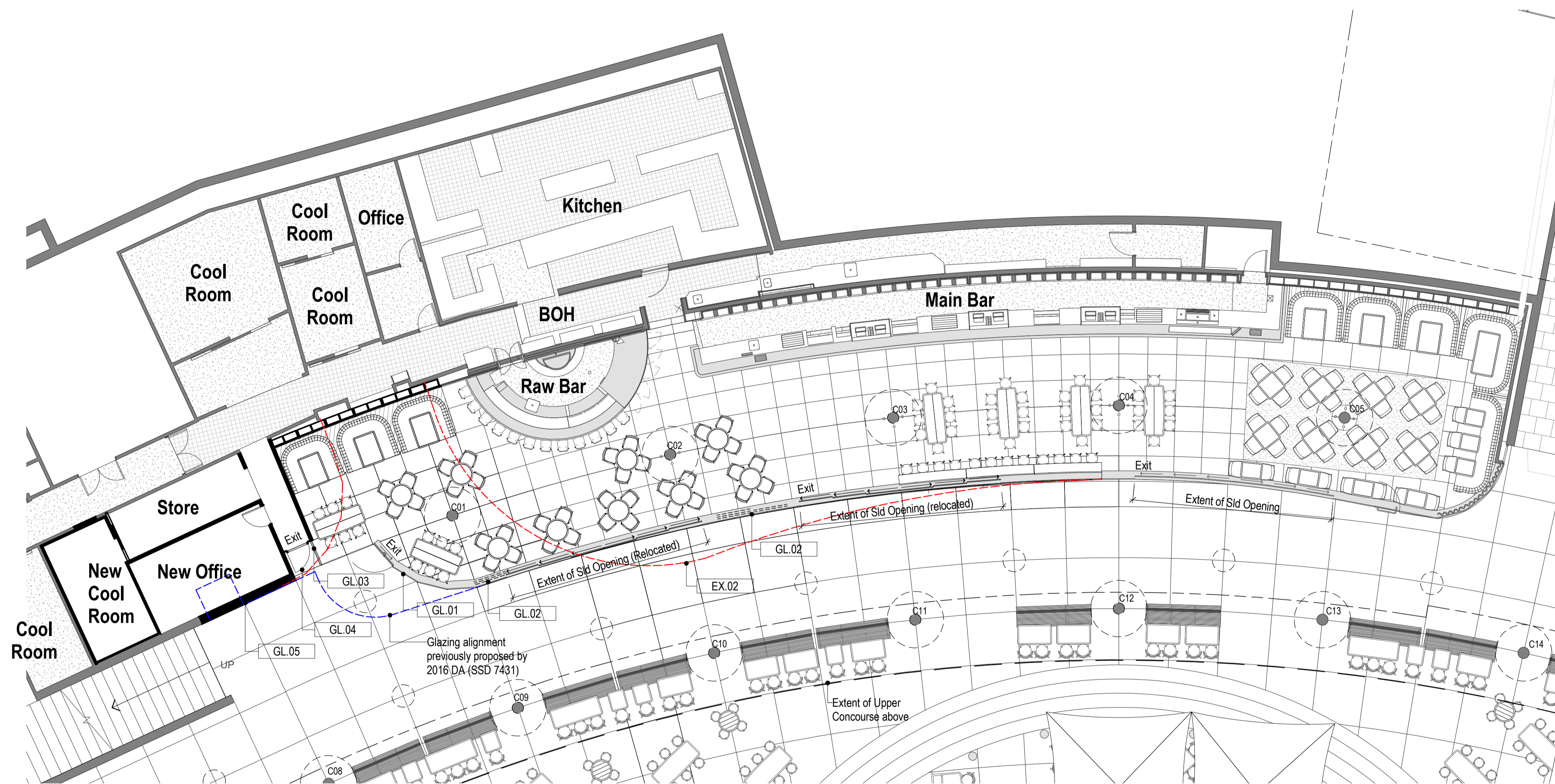
Signed [Signature]

Sheet No. 8 of 14

**Note:**  
Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

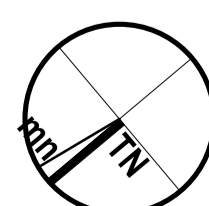
**Specification Legend**

Ref	Specification
EX.02	Existing glazing line
GL.01	Proposed glazing line
GL.02	Stacking location for sliding glass panels (similar to existing)
GL.03	Extend full height glazing to match existing and return to solid brass door repositioned from existing fire exit
GL.04	Refurbish and modify existing bronze service door for new fire exit. Provide new matching frame to suit proposed configuration.
GL.05	Clad new wall in stone to match existing (full height) and return into fire door



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Rev	Date	Amendments



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Project  
**Sydney Opera House Lower Concourse Improvements**  
Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**  
Drawing  
**Detail Plan - Opera Bar Glazing Line - Proposed**

Scale @ A1	<b>1:100</b>	Drawn by	<b>KR</b>	Checked by	<b>GC</b>
Scale @ A3	<b>1:200</b>				
Project Issue Date	<b>16/03/2015</b>	Sheet Issue Date	<b>26/06/19</b>		
Project No.	<b>2466</b>	Zone	<b>LC</b>	Discipline	
Drawing No.	<b>49HE001-3202</b>	Revision	<b>D</b>		





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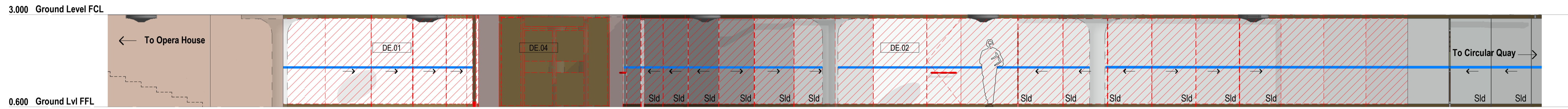
Signed [Signature]

Sheet No. 9 of 14

Note: Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

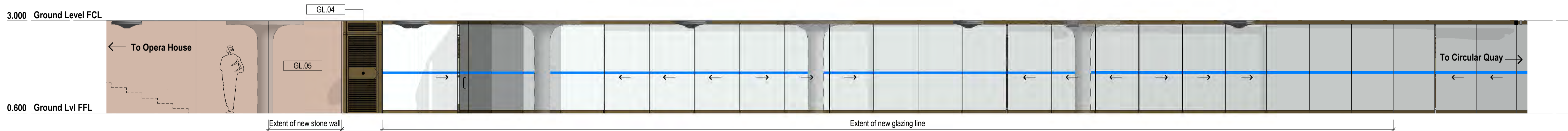
Specification Legend

Ref	Specification
DE.01	Demolish existing "Meat and Cheese Area" glazing line.
DE.02	Partially demolish part of the existing Main Bar area glazing.
DE.04	Remove, salvage and protect from damage existing bronze doors and vents.
GL.04	Refurbish and modify existing bronze service door for new fire exit. Provide new matching frame to suit proposed configuration.
GL.05	Clad new wall in stone to match existing (full height) and return into fire door



1 Detail Elevation - Glazing Line - Existing and Demo

1:50



2 Detail Elevation - Glazing Line - Proposed

1:50



Development Application

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Rev	Date	Amendments
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Project: Sydney Opera House Lower Concourse Improvements. Client: Sydney Opera House Trust.

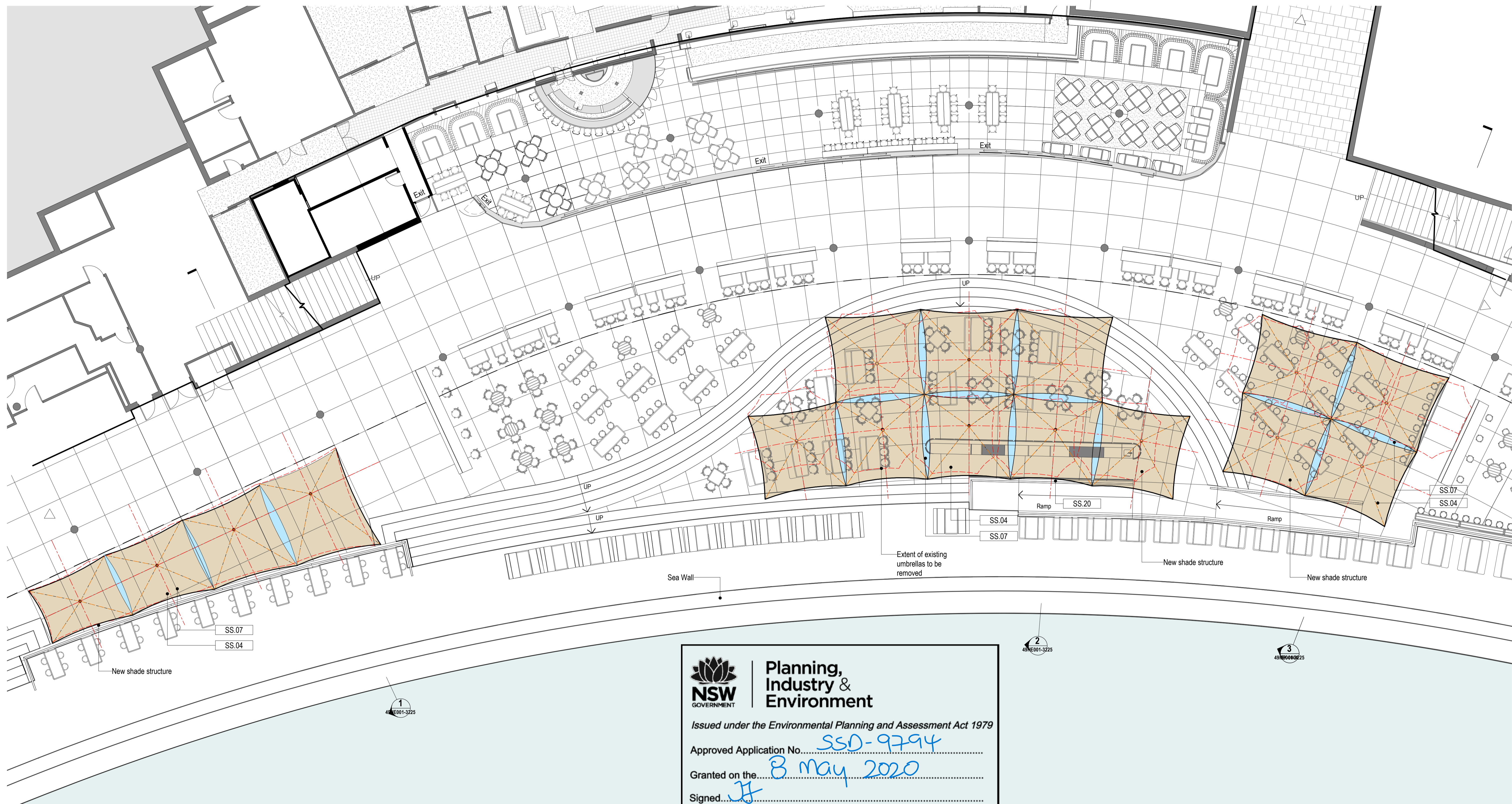
Location: Lower Concourse, Sydney Opera House, Bennelong Point, Sydney. Drawing: Detail Elevation - Opera Bar Glazing.

Scale @ A1	1:50	Drawn by	Checked by
Scale @ A3	1:100	KR	GC
Project Issue Date	16/03/2015	Sheet Issue Date	26/06/19
Project No.	2466	Zone	LC
Discipline		Revision	D
Drawing No.	49HE001-3205		

**NOTE:**

Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

Ref	Specification
SS.04	Tensile fabric equal to Serge Ferrari Soltis, colour closest approved match to Dulux Coconut Husk, to be designed and installed to approved details.
SS.07	Tensile fabric, Serge Ferrari 402, Translucent infill between umbrella elements as indicated on plan.
SS.20	Free standing Pull-up Shade Screen, Design to future detail in consultation with the DAP



**NSW GOVERNMENT** | **Planning, Industry & Environment**

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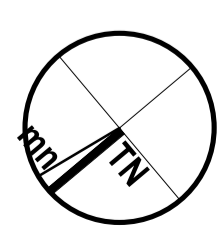
Signed JH

Sheet No. 10 of 14



**Development Application**

**General Notes**  
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Rev	Date	Amendments
01	02/04/19	For Information
02	27/05/19	Preliminary
03	25/06/19	Development Application
D	26/06/19	Development Application Issue
E	30/07/19	Development Application Issue

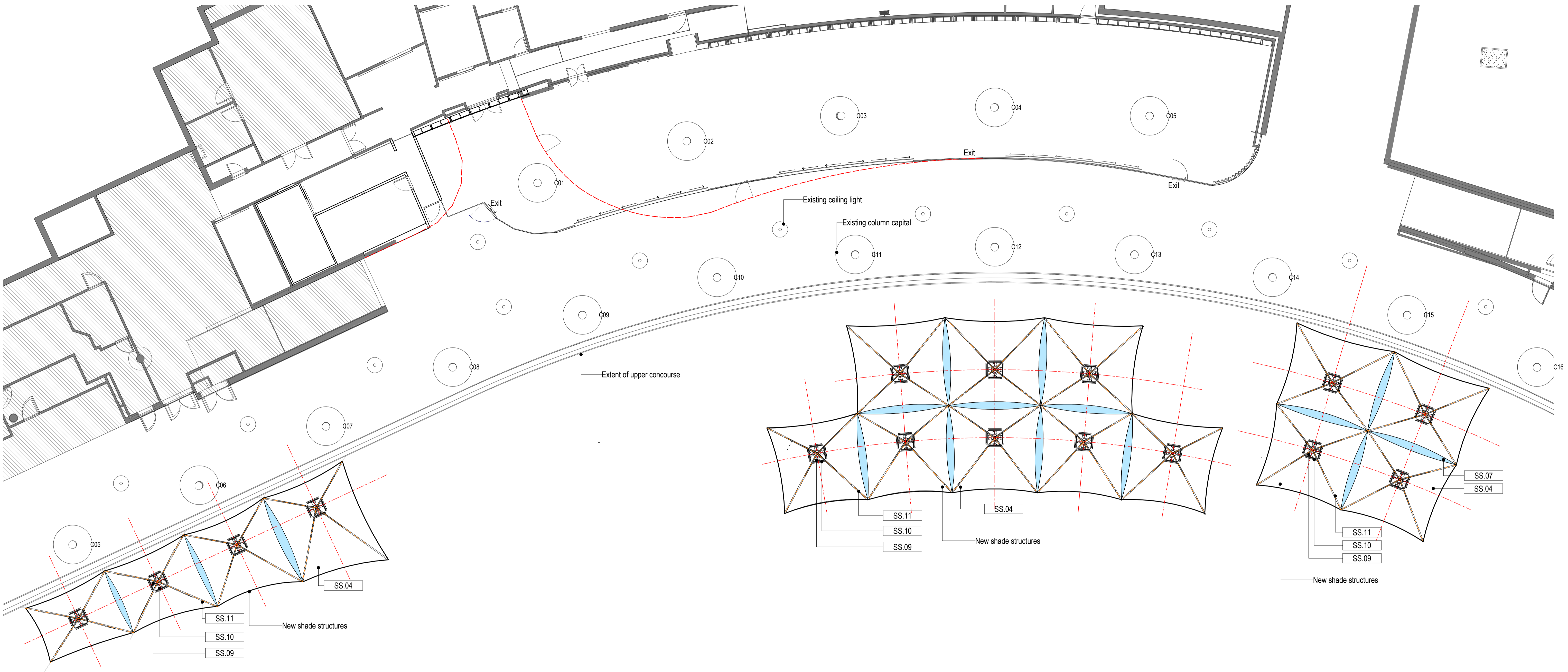
Rev	Date	Amendments

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PO Box 490 Darlinghurst NSW 1300  
Humphrey & Edwards Pty Ltd | ABN 8905663227  
Nominated Architect: Glenn Cunningham #5415

Project  
**Sydney Opera House Lower Concourse Improvements**  
Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**  
Drawing  
**Detail Plan - Shade Structure**

Scale @ A1	1:100	Drawn by	KR	Checked by	GC
Scale @ A3	1:200				
Project Issue Date	16/03/2015	Sheet Issue Date	30/07/19		
Project No.	2466	Zone	LC	Discipline	
Drawing No.	49HE001-3220	Revision	E		



**Specification Legend**

Ref	Specification
SS.04	Tensile fabric equal to Serge Ferrari Soltis, colour closest approved match to Dulux Coconut Husk, to be designed and installed to approved details.
SS.07	Tensile fabric, Serge Ferrari 402, Translucent infill between umbrella elements as indicated on plan.
SS.09	Indicative speaker locations. Speaker similar to void indigo 6 pro with colour matched finish (to dulux "coconut husk" with adjustable mounting brackets. Location, specification and configuration TBC with acoustic and audio-visual consultants. Speakers are to generally be directed away from residential apartments to the south and downwards from their mounting position towards patrons.
SS.10	Infra-red electric radiant heating with variable control and zoned wiring. Specifications and configuration TBC, with experienced contractors.
SS.11	Strip led up-lighting to the underside of the shade structure fabric fabricated from proprietary suitably weather-proof strip led fitted within proprietary aluminum housing with integrated acrylic diffusers to effect even distribution of light over the underside of the canopy. Fit led strip in 2 or 3 independently controlled sections to facilitated graduated illumination of the underside of the fabric to compensate for the variable proximity of the strip light to the fabric.

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Approved Application No. SSD-9794

Granted on the 8 May 2020

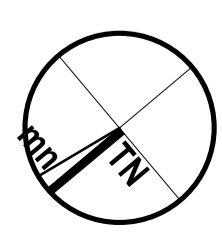
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Sheet No. 11 of 14



**Development Application**

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E	30/07/19	Development Application Issue

Rev	Date	Amendments

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 Humphrey & Edwards Pty Ltd | ABN 8905638227  
 Nominated Architect: Glenn Cunningham #5415

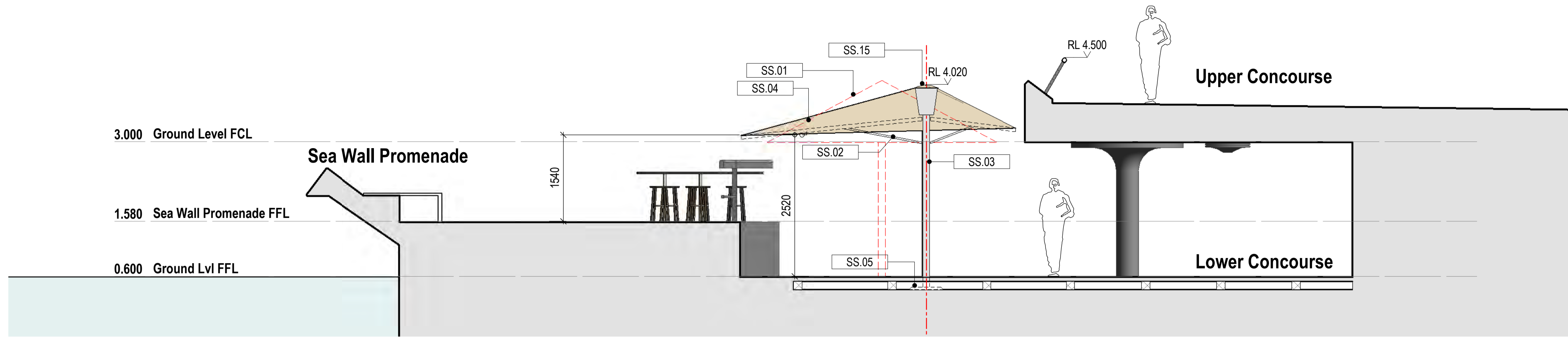
Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

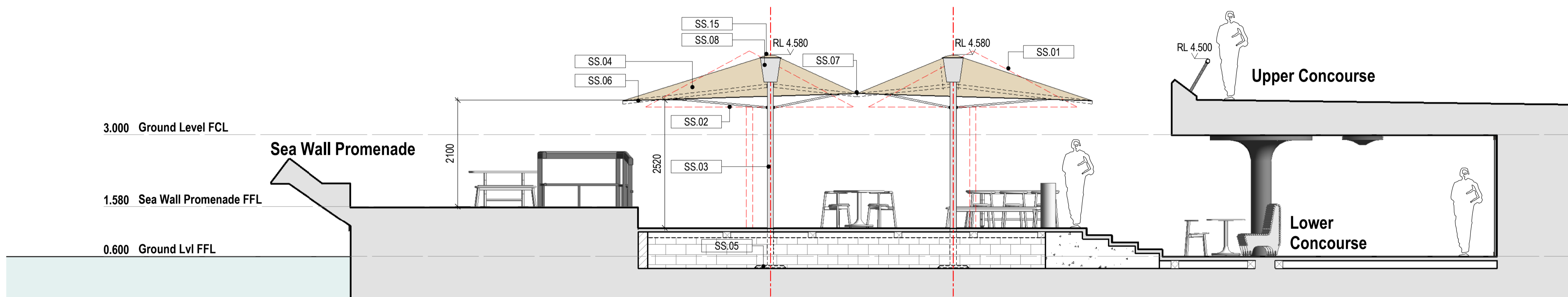
Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**Shade Structure - Reflected Ceiling Plan**

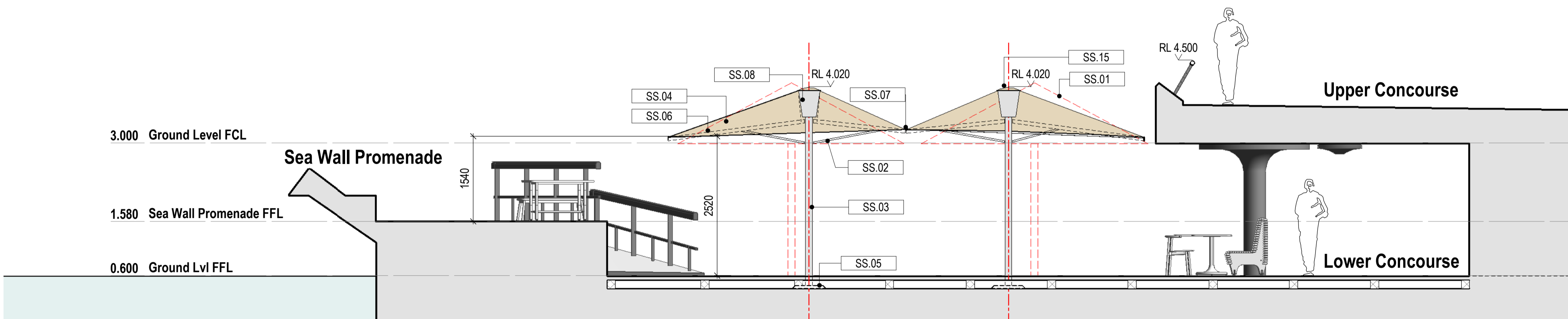
Scale @ A1	<b>1:100</b>	Drawn by	<b>KR</b>	Checked by	<b>GC</b>
Scale @ A3	<b>1:200</b>				
Project Issue Date	<b>16/03/2015</b>	Sheet Issue Date	<b>30/07/19</b>		
Project No.	<b>2466</b>	Zone	<b>LC</b>	Discipline	
Drawing No.	<b>49HE001-3221</b>	Revision	<b>E</b>		



**1 Shade Structure Section 1**  
1:50



**2 Shade Structure Section 2**  
1:50



**3 Shade Structure Section 3**  
1:50

**Note:**  
Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

**General Notes Detail Shade Structure:**  
All metal works to be No.4 finished 'inished' Stainless Steel consistent with an approved sample.

**Specification Legend**

Ref	Specification
SS.01	Existing umbrellas to be removed. Patch and repair ex pavers where fixings are removed to an approved standard.
SS.02	SS Shade structure struts designed and fabricated to approved detail.
SS.03	SS shade structure masts designed and fabricated to approved detail.
SS.04	Tensile fabric equal to Serge Ferrari Soltis, colour closest approved match to Dulux Coconut Husk, to be designed and installed to approved details.
SS.05	SS base plate and fixing in accordance with the structural engineer's design and specification
SS.06	SS shade structure outriggers designed and fabricated to approved detail. Powder coat finished. Colour: closest approved match to dulux coconut husk.
SS.07	Tensile fabric, Serge Ferrari 402, Translucent infill between umbrella elements as indicated on plan.
SS.08	Removable approved perforated stainless sheet panels with discreet secure SS fixings designed to conceal services infrastructure including GPS table location system, wifi extenders, lighting drivers, speaker connections, CCTV connections, heater junctions etc as required. Design to facilitate the installation and provide access for the ongoing maintenance of services.
SS.15	SS column cap to manufacturers detail with integrated structural connection to columns. Powder coat finish colour: closest approved match to dulux 'coconut husk'.

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Approved Application No. SSD-9794

Granted on the 8 May 2020

Signed JH

Sheet No. 12 of 14



**Development Application**

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02	27/05/19	Preliminary
03	25/06/19	Development Application
D	26/06/19	Development Application Issue

Rev	Date	Amendments

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Nominated Architect: Glenn Cunningham #5415

Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

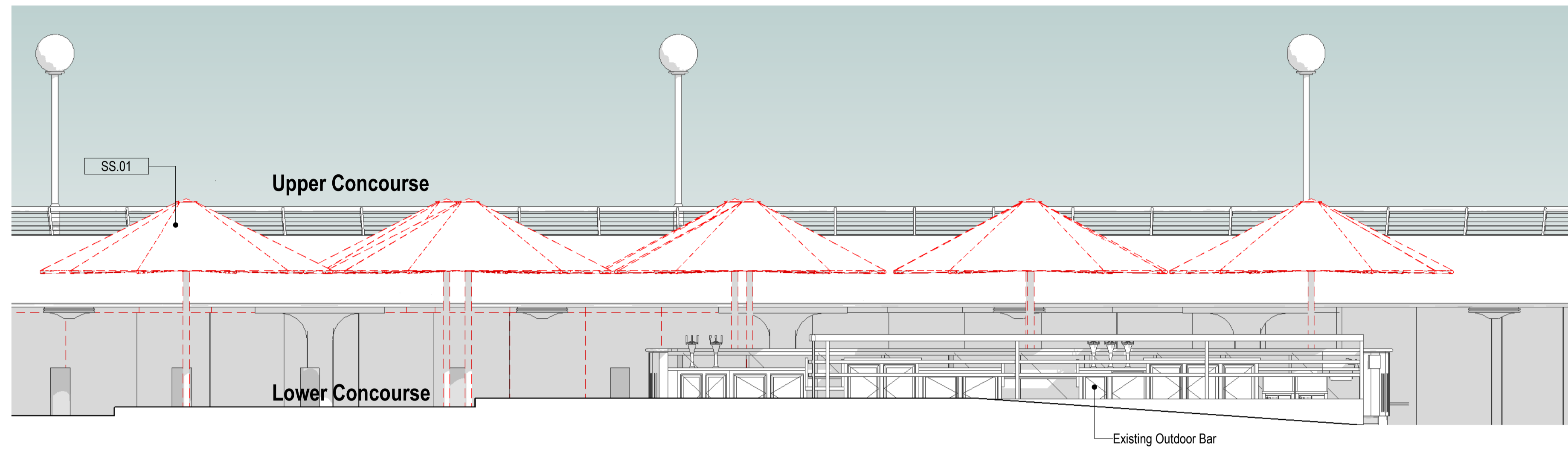
Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**Detail Section - Shade Structure**

Scale @ A1	1:50	Drawn by	Checked by
Scale @ A3	1:100	KR	GC
Project Issue Date	16/03/2015	Sheet Issue Date	26/06/19
Project No.	2466	Zone	LC
Drawing No.	49HE001-3225	Discipline	Revision
			D

**Note:**  
Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

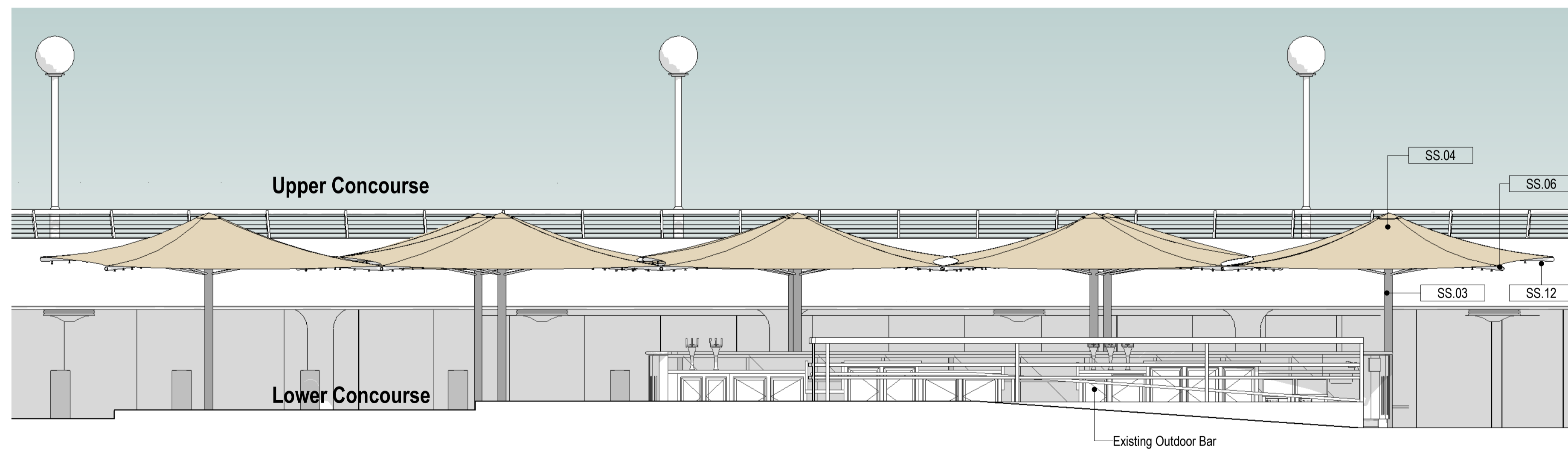
**General Notes Detail Shade Structure:**  
All metal works to be No.4 finished 'finished' Stainless Steel consistent with an approved sample.



**1 Elevation - Shade Structure - Existing**  
1:50

**Specification Legend**

Ref	Specification
SS.01	Existing umbrellas to be removed. Patch and repair existing pavers where fixings are removed to an approved standard.
SS.03	SS shade structure masts designed and fabricated to approved detail.
SS.04	Tensile fabric equal to Serge Ferrari Soltis, colour closest approved match to Dulux Coconut Husk, to be designed and installed to approved details.
SS.06	SS shade structure outriggers designed and fabricated to approved detail. Powder coat finished. Colour: closest approved match to dulux coconut husk.
SS.12	Misting nozzles. Misting runs within framing only. All connections made in accessible locations. Nozzles protrude through outriggers.



**2 Elevation - Shade Structure - Proposed**  
1:50

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Approved Application No. SSD-9794

Granted on the 8 May 2020

Signed [Signature]

Sheet No. 13 of 14



**Development Application**

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01	02/04/19	For Information
02	25/06/19	Development Application
C	26/06/19	Development Application Issue

Rev	Date	Amendments
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Nominated Architect: Glenn Cunningham #5415

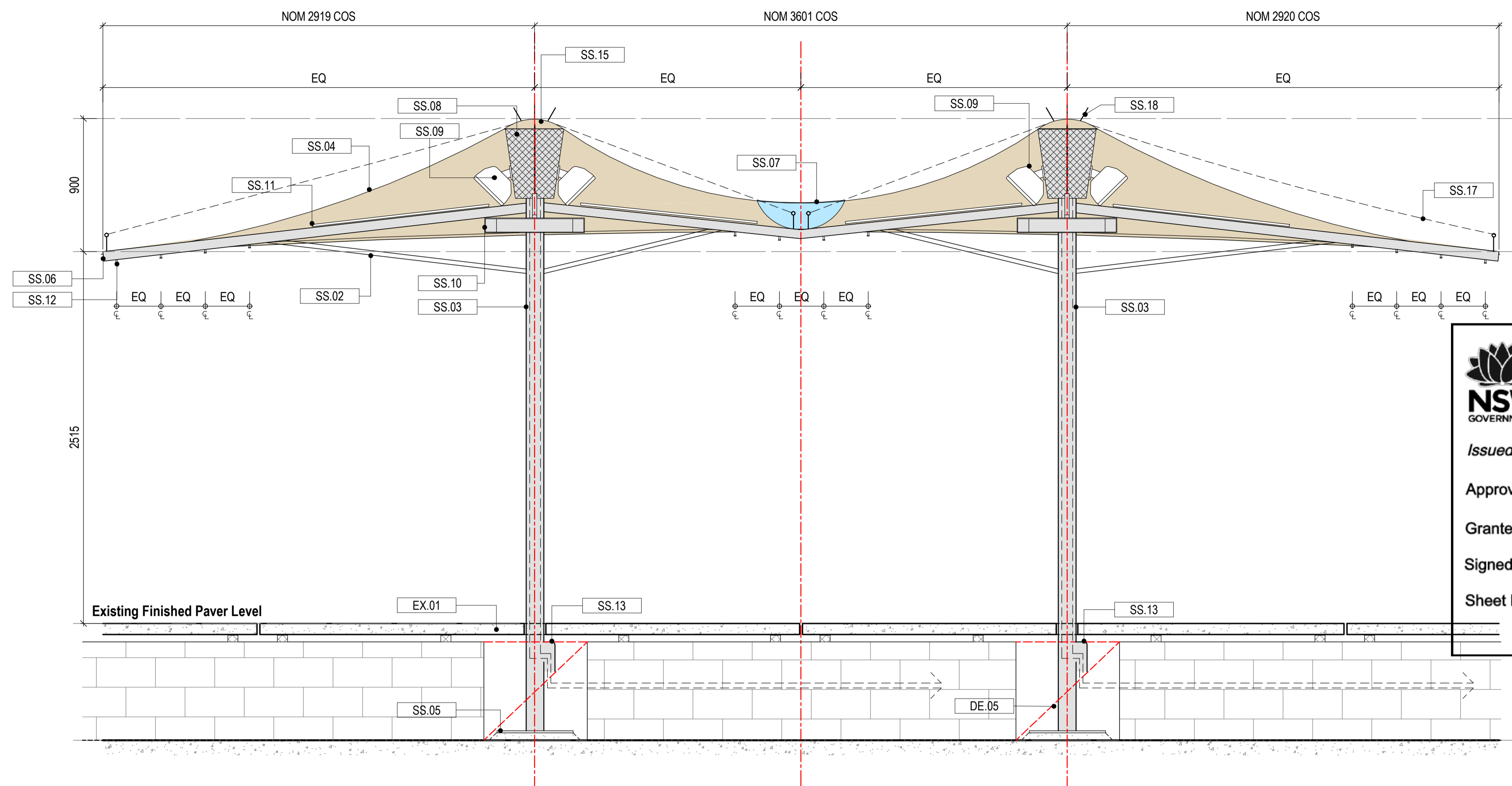
Project  
**Sydney Opera House Lower Concourse Improvements**

Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**

Drawing  
**Detail Elevation - Shade Structure**

Scale @ A1	1:50	Drawn by	KR	Checked by	GC
Scale @ A3	1:100				
Project Issue Date	16/03/2015	Sheet Issue Date	26/06/19		
Project No.	2466	Zone	LC	Discipline	
Drawing No.	49HE001-3230	Revision	C		



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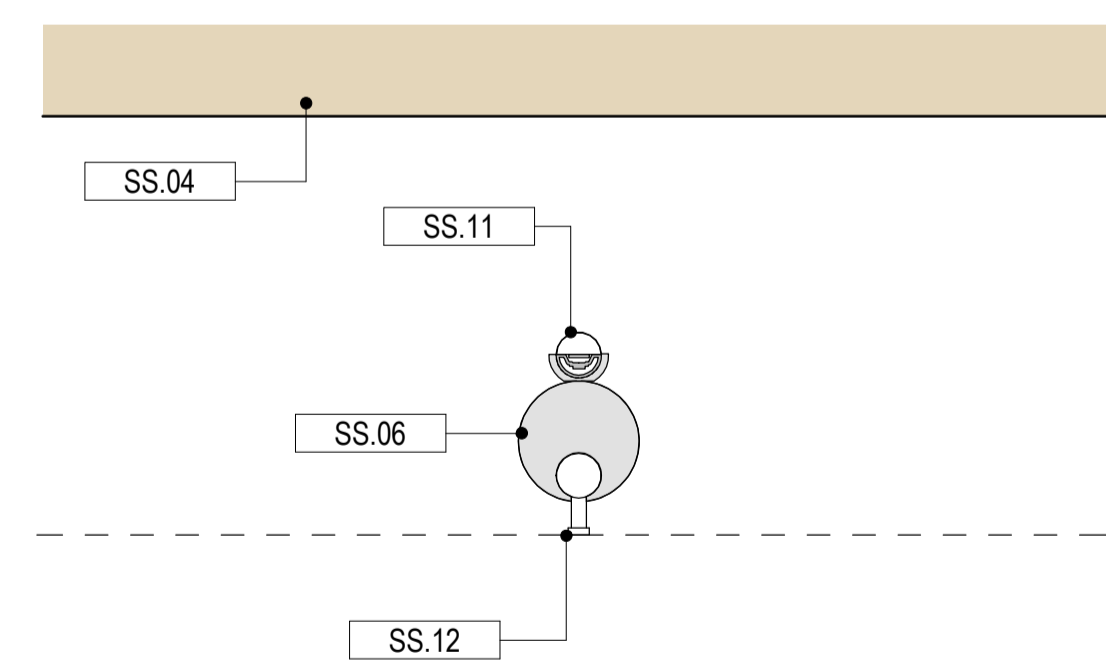
Sheet No. 14 of 14

**Note:**  
Structure and sub-frame layout to be concentric and in alignment with the geometric set out of the existing granite pavers below. All structure to be in accordance with structural engineer's design and specification, in accordance with applicable codes and standards and to the approval of the Sydney Opera House Structural Engineers.

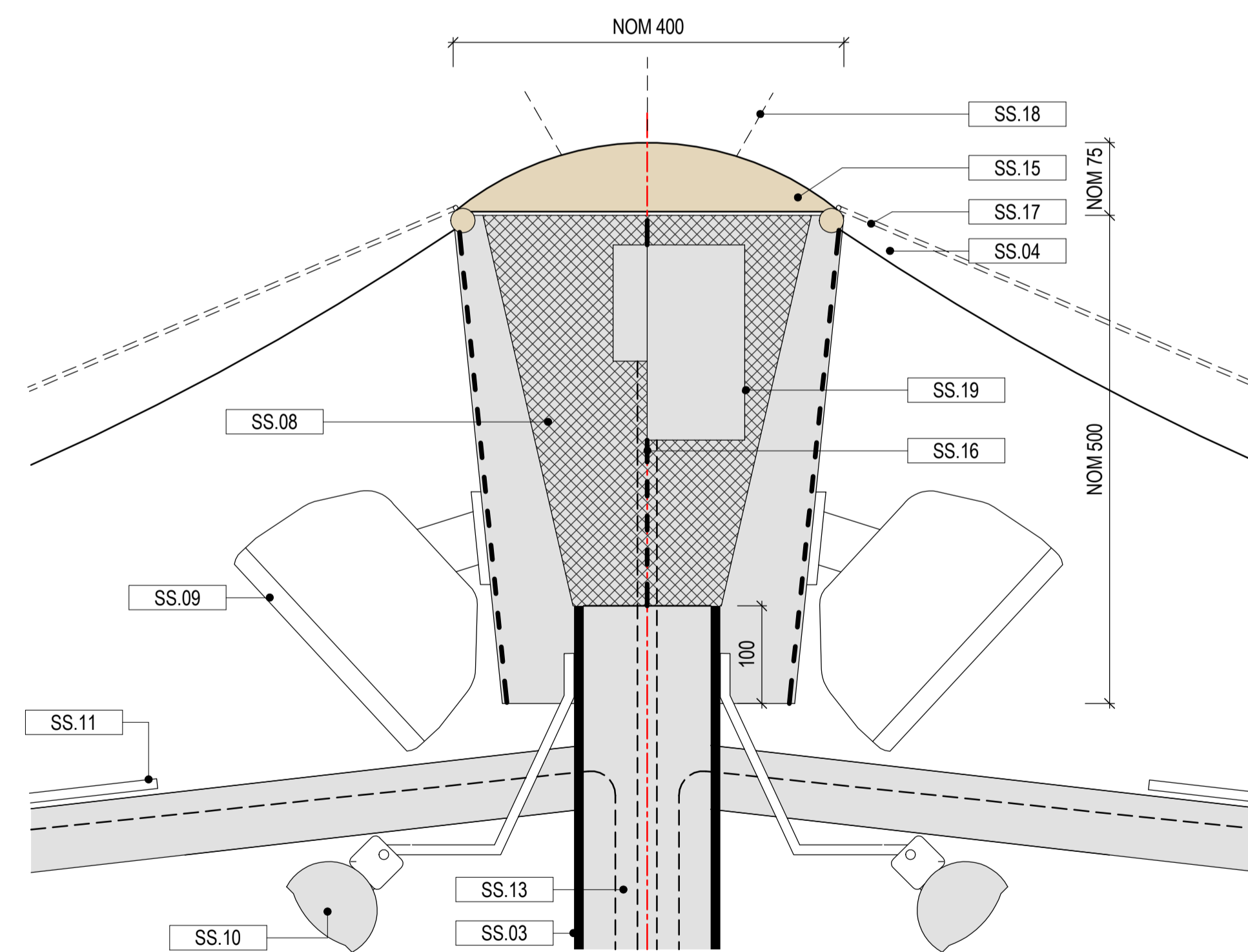
**General Notes Detail Shade Structure:**  
All metal works to be No.4 finished 'finished' Stainless Steel consistent with an approved sample.

Ref	Specification
DE.05	Cut section of granite paving and block wall out as required to facilitate fixing for shade structure columns
EX.01	Existing granite pavers to remain in situ. Neatly cut around shade structure columns providing consistent clearance
SS.02	SS Shade structure struts designed and fabricated to approved detail.
SS.03	SS shade structure masts designed and fabricated to approved detail.
SS.04	Tensile fabric equal to Serge Ferrari Soltis, colour closest approved match to Dulux Coconut Husk, to be designed and installed to approved details.
SS.05	SS base plate and fixing in accordance with the structural engineer's design and specification
SS.06	SS shade structure outriggers designed and fabricated to approved detail. Powder coat finished. Colour: closest approved match to dulux coconut husk.
SS.07	Tensile fabric, Serge Ferrari 402, Translucent infill between umbrella elements as indicated on plan.
SS.08	Removable approved perforated stainless sheet panels with discreet secure SS fixings designed to conceal services infrastructure including GPS table location system, wifi extenders, lighting drivers, speaker connections, CCTV connections, heater junctions etc as required. Design to facilitate the installation and provide access for the ongoing maintenance of services.
SS.09	Indicative speaker locations. Speaker similar to void indigo 6 pro with colour matched finish (to dulux 'coconut husk' with adjustable mounting brackets. Location, specification and configuration TBC with acoustic and audio-visual consultants. Speakers are to generally be directed away from residential apartments to the south and downwards from their mounting position towards patrons.
SS.10	Infra-red electric radiant heating with variable control and zoned wiring. Specifications and configuration TBC, with experienced contractors.
SS.11	Strip led up-lighting to the underside of the shade structure fabric fabricated from proprietary suitably weather-proof strip led fitted within proprietary aluminum housing with integrated acrylic diffusers to effect even distribution of light over the underside of the canopy. Fit led strip in 2 or 3 independently controlled sections to facilitated graduated illumination of the underside of the fabric to compensate for the variable proximity of the strip light to the fabric.
SS.12	Misting nozzles. Misting runs within framing only. All connections made in accessible locations. Nozzles protrude through outriggers.
SS.13	All service connections to run under pavers in accordance with service consultants requirements with weather proof penetration to shade structure in accordance with shade structure manufacturers details.
SS.15	SS column cap to manufacturers detail with integrated structural connection to columns. Powder coat finish colour: closest approved match to dulux 'coconut husk'.
SS.16	Perforated SS gusset to facilitate the mounting of service infrastructure
SS.17	Stainless Steel bird wire to approved details
SS.18	Stainless Steel bird spikes to approved details
SS.19	Indicative equipment within SS gusset. Equipment including GPS table location system, wifi extenders, lighting drivers, speaker connections, CCTV connections, heater junctions etc.

**1 Detail Section - Shade Structure Services**  
1:20



**2 Detail Section - Service bracket**  
1:5



**3 Detail Section - Shade Structure Services**  
1:5



**Development Application**

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02	25/06/19	Development Application
C	28/06/19	Development Application Issue

Rev	Date	Amendments
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Project  
**Sydney Opera House Lower Concourse Improvements**  
Client  
**Sydney Opera House Trust**

Location  
**Lower Concourse, Sydney Opera House, Bennelong Point, Sydney**  
Drawing  
**Detail Section - Shade Structure Services**

Scale @ A1	<b>1:5, 1:20</b>	Drawn by	<b>KR</b>	Checked by	<b>GC</b>
Scale @ A3	<b>1:10, 1:40</b>				
Project Issue Date	<b>16/03/2015</b>	Sheet Issue Date	<b>26/06/19</b>		
Project No.	<b>2466</b>	Zone	<b>LC</b>	Discipline	
Drawing No.	<b>49HE001-3231</b>			Revision	<b>C</b>