

The Cutaway — Architectural Design Response
iNSW — Rev G — 31/08/23

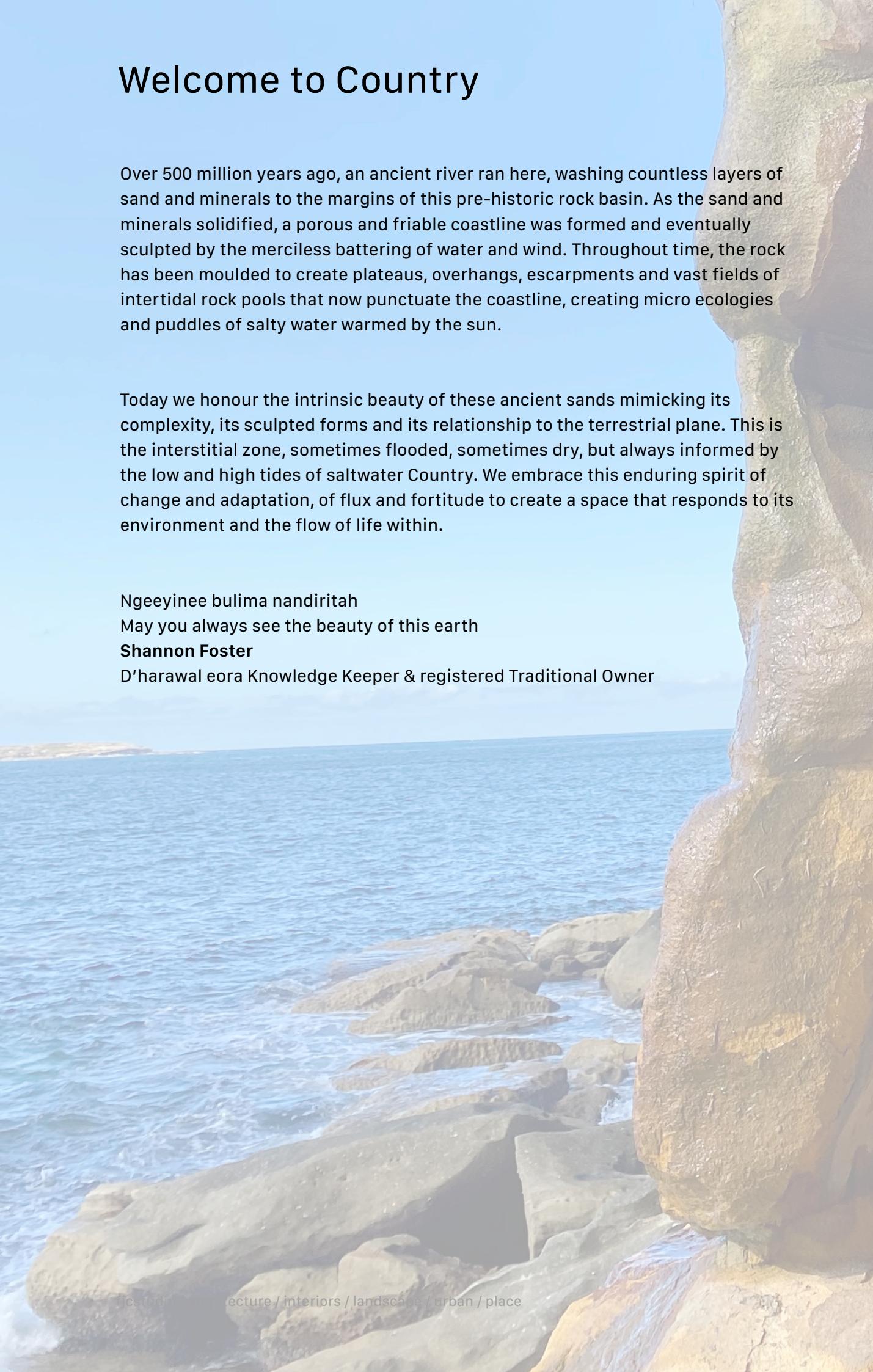
Project Name	The Cutaway		
Project Code	BCY		
Revision	Date	Comment	Approved
0	31/05/23	Draft Issue	EC
A	06/06/23	Issue for Review	EC
B	07/06/23	Final Issue	EC
C	14/06/23	Final Issue	EC
D	26/06/23	Final Issue	EC
E	21/07/23	Reissue for DPE	EC
F	27/07/23	Reissue for DPE	EC
G	31/08/23	Reissue for DPE	EC
H	08/09/23	Reissue for DPE	EC

Welcome to Country

Over 500 million years ago, an ancient river ran here, washing countless layers of sand and minerals to the margins of this pre-historic rock basin. As the sand and minerals solidified, a porous and friable coastline was formed and eventually sculpted by the merciless battering of water and wind. Throughout time, the rock has been moulded to create plateaus, overhangs, escarpments and vast fields of intertidal rock pools that now punctuate the coastline, creating micro ecologies and puddles of salty water warmed by the sun.

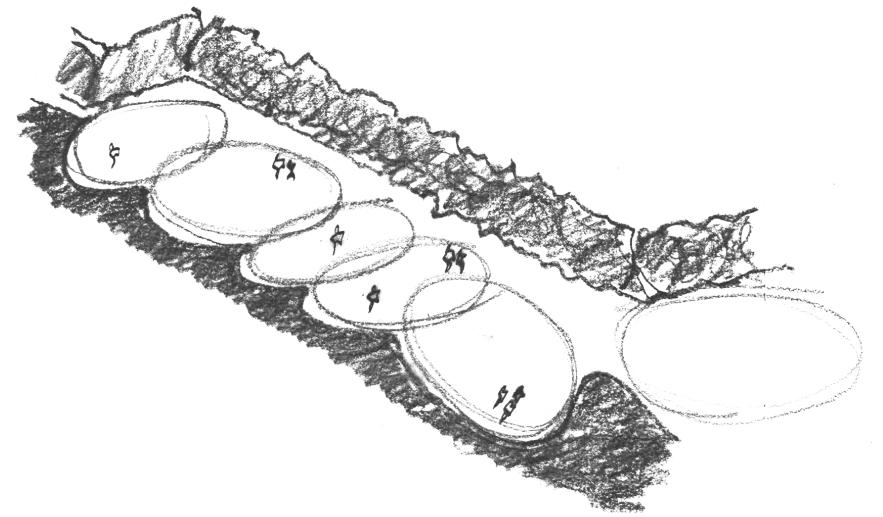
Today we honour the intrinsic beauty of these ancient sands mimicking its complexity, its sculpted forms and its relationship to the terrestrial plane. This is the interstitial zone, sometimes flooded, sometimes dry, but always informed by the low and high tides of saltwater Country. We embrace this enduring spirit of change and adaptation, of flux and fortitude to create a space that responds to its environment and the flow of life within.

Ngeeyinee bulima nandiritah
May you always see the beauty of this earth
Shannon Foster
D'harawal eora Knowledge Keeper & registered Traditional Owner



Contents

- Connecting with Country
- Sandstone & ventilation
- Skylights
- Landscape
- Materiality and details
- Miscellaneous
 - Public amenities
 - Spatial arrangements



Connecting with Country

Response

The following section will address —

DPE Key Issues Letter

SDRP advice 02 (01)

Clearly demonstrate how the space provides a sense of belonging for First Nations people including:

- a. Considering the outcomes of the draft ACH Assessment Report and ongoing consultation with the identified stakeholders, to better understand the intangible First Nations values and themes that have been identified.
- b. enabling living cultural practices, including healing ceremonies, to occur
- c. enabling inclusive and unrestricted access for participation in cultural practices

SDRP advice 02 (02)

Clarify the purpose of the entrance forecourt – it has been described as a hearth, ceremonial space, entrance to a cave and a gathering space, all of which have varying spatial considerations

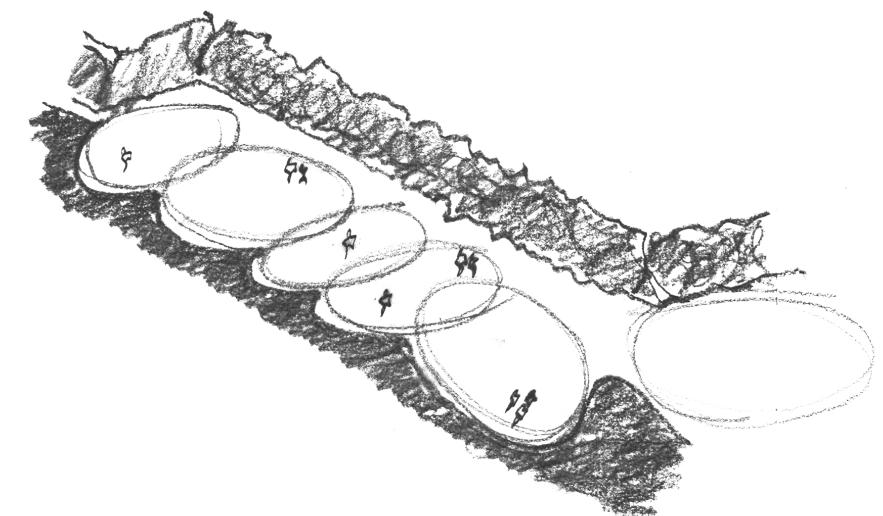
SDRP advice 02 (05)

In conjunction with items 2 and 5, review or confirm the need for the freestanding ‘marker tree’. Consider this element in terms of its relationship to landscape, scale and appearance from various vantage points and relationship to the smaller and currently more successful tree element.

City of Sydney

The co-design aspect of the proposal by FJC studio collaborating with Bangawarra and Jake Nash Design is supported by the City’s Public Art Policy which “embraces material and immaterial products and concepts emanating from the imaginative and creative thinking of artists.” Despite this, there is limited details in the submission on Jake Nash, the artist, and his involvement in the HCT interpretative structure. The submission proposal discusses the conceptual idea of a hearth at the entrance, involving the artist, but that this “experience” is still in development with Jake Nash and Bangawarra. Further detail is required.

Cutaway entrance – Despite strong advice from the State Design Review Panel (SDRP) to include “new trees at the Cutaway entry, rather than representation of trees to signify the entry” (Appendix 3 page 18), no living canopy trees are proposed. Instead, there are two entry marker “tree” sculptural forms that are approximately 13m tall in the forecourt, that will be visible in the park and Merriman Street.



Connecting with Country

Entry Sculptural Timber

It is important that the "sculptural timber elements" are understood as new insertions into the site, not unlike the new sandstone coastline which recalls the original coastal form but does not replicate it. The conceptual tree-like forms will provoke discussion and storytelling.

The design of the "sculptural timber elements" has been developed in direct collaboration with fjcstudio/ Bangawarra and Jake Nash and they are a visual representation of our ongoing collaboration with this team, at the prominent Cutaway entry point. The entry marker "sculptural timber elements" shelter the mouth of the 'Gibbagunya', whilst providing a protected meeting place for visitors to the Cutaway. This identity allows a presence on Nawi Cove as well as Stargazer Lawn, celebrates the entry point and provides a unique identity to an important landmark cultural destination.

The larger sculptural tree element has been removed and following completion of further investigations, a future entrance marker will be pursued via a separate approval process.



Connecting with Country

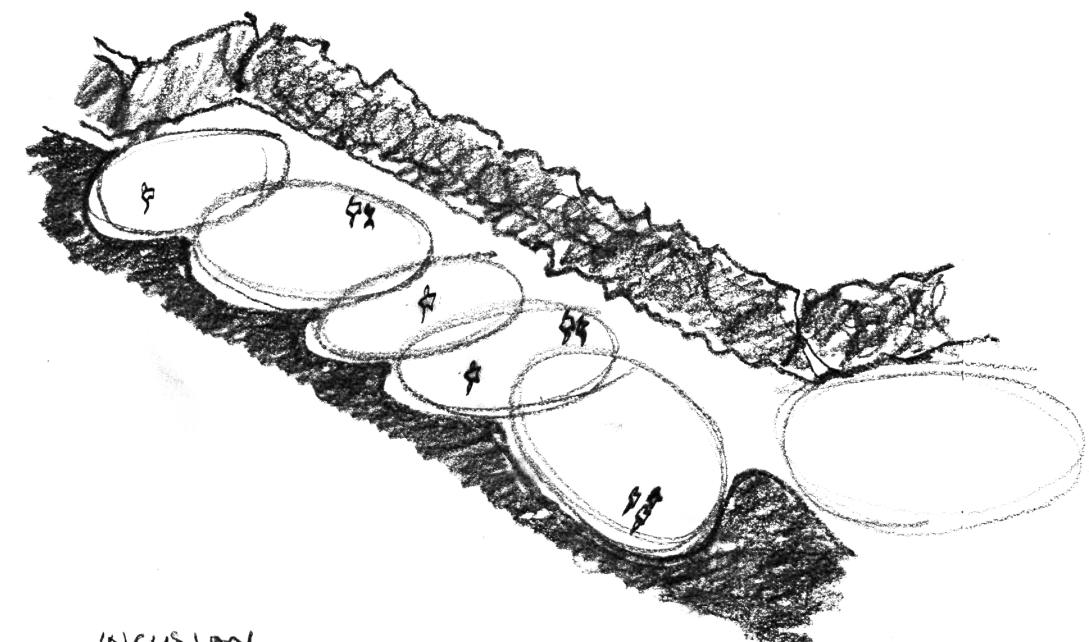
fjcstudio collaborating with Bangawarra and Jake Nash Design, established at the inception of the scheme, facilitated a design that is embedded with Country and a concept that embraces the natural landscape — attempting to heal the wounds left by past damage.

The intention of the Cutaway is for an inclusive and flexible facility that can accommodate a diverse range of uses, including cultural practices.

The design of the Entry Forecourt has been conceived as a flexible space which is not programmed, and is open to a variety of uses. The sculptural timber elements marking the entry are a visual representation of the continued collaboration with our First Nations designers, generated from the original conceptual idea for this project. Further information regarding the Entry Forecourt can be found on the following page.

The Waranara Room and Education Space located on Level 2 are also flexible spaces that can accommodate a diversity of use.

As per the recommendations in "7.2. Conclusions & Recommendations" of the ACHAR, the project team will continue to engage with the Registered Aboriginal Parties (RAPs) for the development and finalisation of the Entry Forecourt and sculptural timber, as well as any interpretive elements forming part of the design.



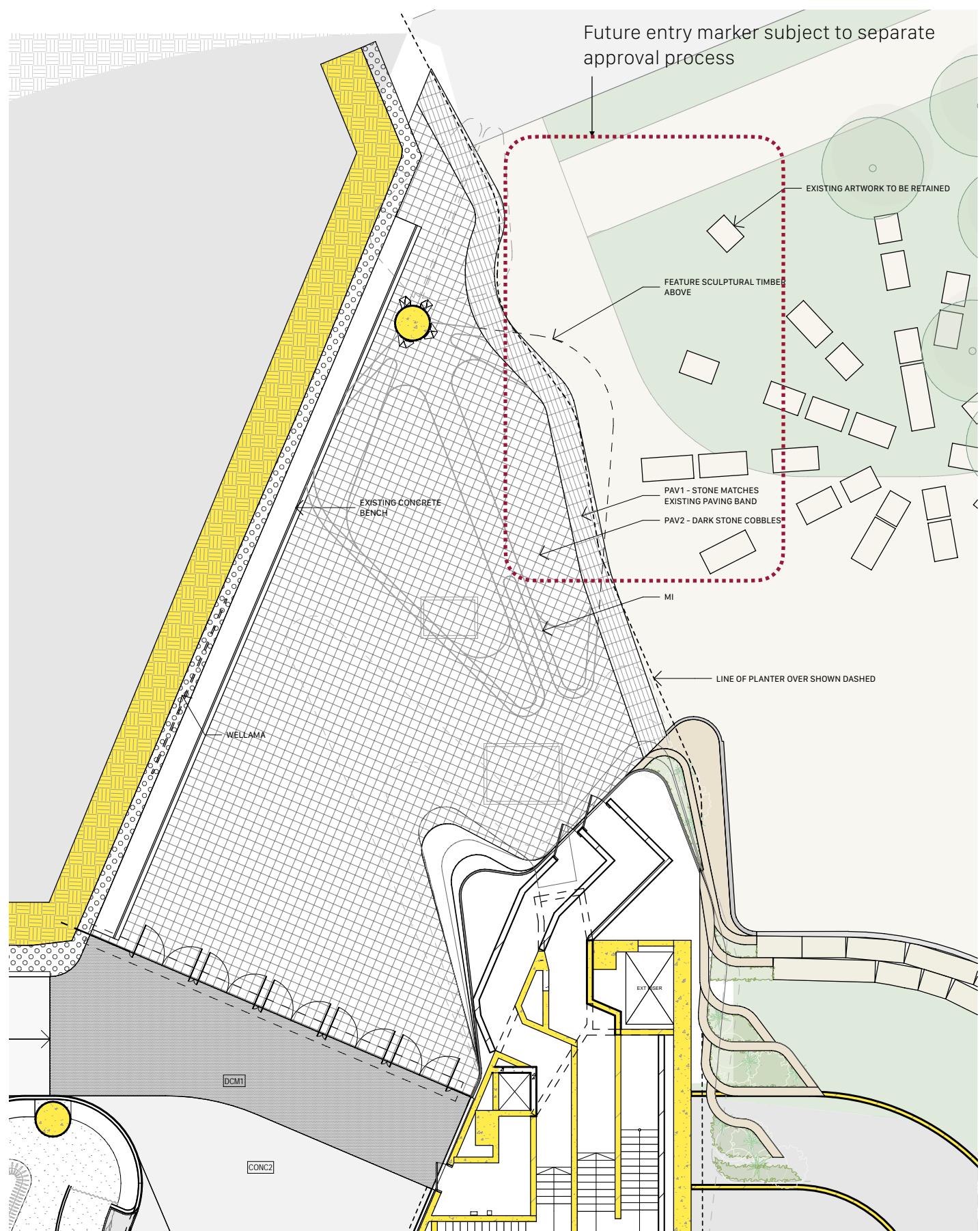
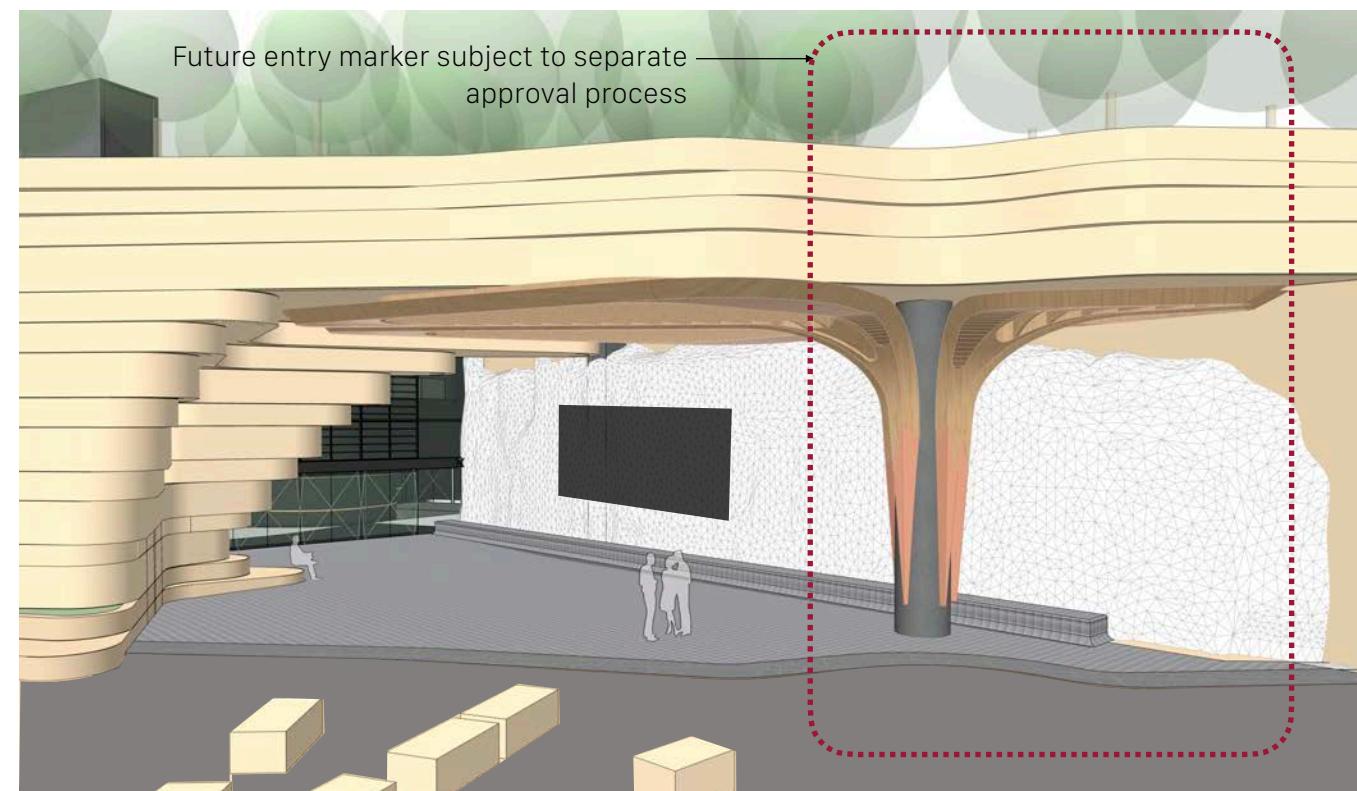
Connecting with Country

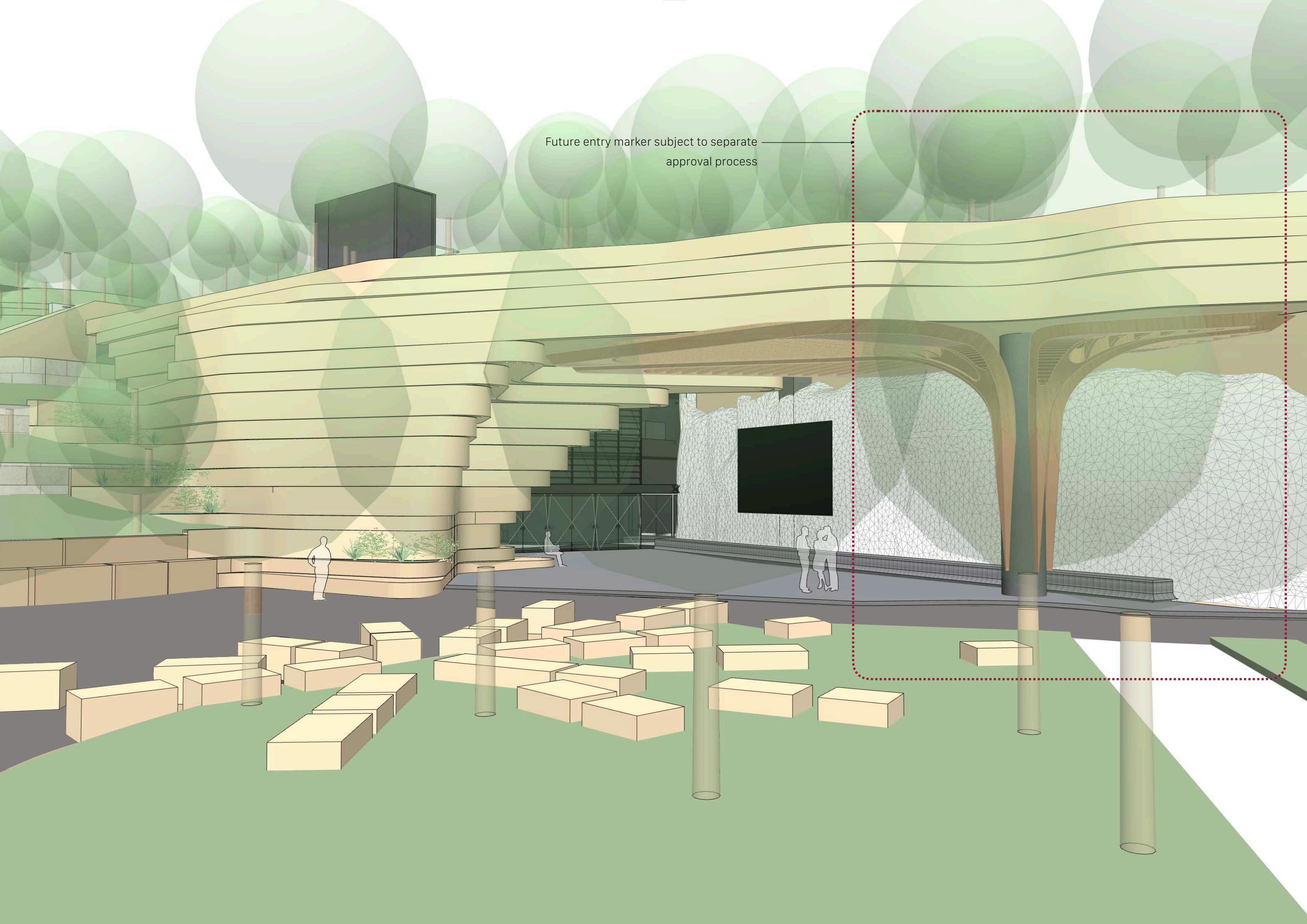
Entry Forecourt

The intention of the fjcstudio, Jake Nash and Bangawarra Team is that the experience upon crossing the threshold into the Cutaway is inclusive and welcoming. The concept of the 'hearth' is a welcoming symbolic gesture, which provides an informal threshold and gathering space. This space is not programmed, however it can be used for a diverse range of events and cultural practices.

The experience, developed in collaboration with Jake Nash and Bangawarra, will celebrate the existing sandstone entry wall and the concept of 'welcome' and 'healing'. The area of the existing forecourt remains unchanged, however, the articulation around the edges has been reconfigured to provide a more welcoming and inclusive entrance into the Cutaway and to provide a stronger, more compelling connection with the interior space. The undulating cladding elements enhance the natural, cave-like qualities of the space. Although not a space to be officially programmed, it will act as an informal threshold and gathering space. The following elements will enhance the experience of the threshold:

- a curved sandstone seat is incorporated into the base of the western masonry landscaped feature which provides a natural sitting edge using the natural sandstone.
- the new paving will gently curve up to meet the existing sandstone wall to the east, providing a softer and more welcoming response to the base of the wall and concealing the existing rectilinear concrete beam.
- a subtle etching/insertion of brass within the paving provides a shadow of the profile of the "sculptural timber" canopy above (coded MI on the plan)
- engraved words and symbols of meaning will be incorporated into the timber base of the "sculptural timber elements"
- the "sculptural timber elements" will provide an indication of shelter and filtered light indicating refuge and welcome.





Future entry marker subject to separate
approval process

Sandstone & Ventilation

Response

The following section will address —

DPE Key Issues Letter

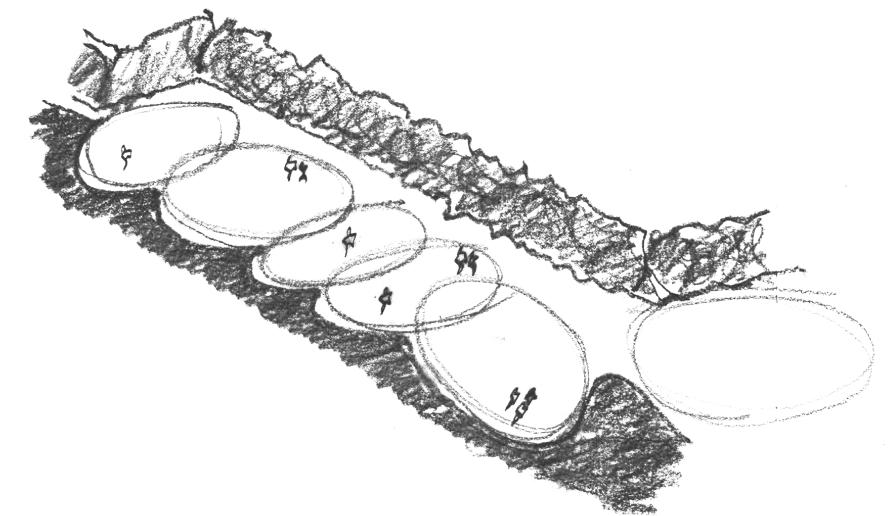
SDRP advice 02 (03)

Proposal to permanently seal off existing skylights will break the sense of connection to the outside and alter the experience for users of the space. The venue needs to be able to both 'breathe' and be fit-for purpose for events as needed

SDRP advice 02 (10)

While the specifications of the original Brief to ensure operational integrity of the space are noted, further opportunities to maintain some of this unique character should be investigated. During design development consider options, including a mixed mode system, that can assist with adequate air flow, ventilation and air quality to give users the experience of fresh air meeting and mixing with the wall face - particularly in non-event mode.

Consider options to retain the connection of the Cutaway with the external environment and allow natural ventilation in non-event mode.



Sandstone & Ventilation

The existing sandstone wall will be left untouched and will be allowed to "breathe". We note the current gravel drain to the base will be maintained to enable the sandstone to naturally exfoliate and seep moisture, whilst draining away any excess at the bottom. To provide a high level of amenity a mixed mode system is used, and, in many instances, natural ventilation can be activated. Whilst in air-conditioned mode, a 100% fresh air system is used with CO2 monitors.

The natural ventilation and mixed-mode systems are being designed in coordination with Arup ESD, Aurecon Mechanical and FJC. The current intent consists of low-level air intake via the entry doors and a louvred transfer across the top of the FOH amenities. Hot air will rise and air movement generated via stack-effect to be relieved outside via the high-level return air system.

In order to meet both the project brief and the various applicable standards, the fitted-out facility is to be fully enclosed. To align, however with the brief requirements, a natural ventilation strategy has been included in the design. Please refer to the following information provided by the ESD Consultant, Arup:

Natural Ventilation

Significant reductions in operational energy use are a key project aspiration, aligning with the Carbon Neutral Barangaroo Climate Positive Principle and targeting Green Star Energy credit points. These reductions may be achieved through maximising natural ventilation in the main event spaces so that air-conditioning is not required unless specific events call for it. It is proposed that natural ventilation can be utilised for at least 80% of the time as event modes are varied and sporadic, typically centred around weekends or lunch times.

The spaces accommodate a variety of functional uses, with varying occupant numbers and ventilation requirements. The mechanical systems in the large event spaces will be sized for events with large occupant numbers and high heat loads. It is proposed that this is "right sized" so targeted to the banquet mode. For other modes such as concert mode the design is targeted to be able to provide sufficient fresh air but not comfort conditioning. However, these events will be few during the year, therefore it is not appropriate for the mechanical systems to be running to continually maintain conditions. Naturally ventilating these large event spaces will allow sufficient ventilation and comfort to be provided for most events held with lower capacity. To accommodate for a greater number of event types, most spaces are proposed to be mixed-mode, i.e. have the capability of being either fully mechanically ventilated or fully naturally ventilated.

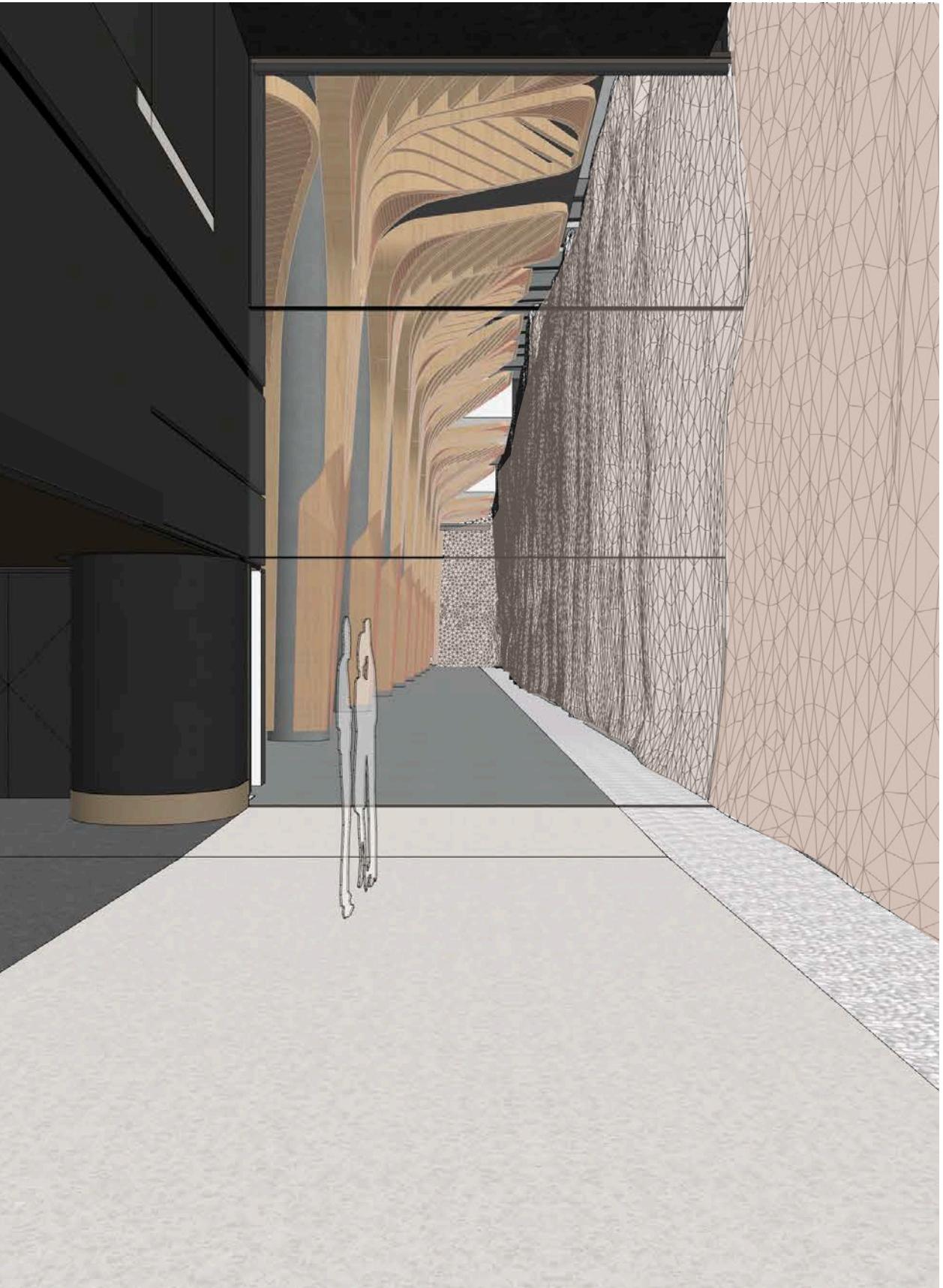
The spaces proposed as mixed-mode ventilated are:

- Ground Level – Entry Foyer, Ticket office, Cloak Room, Pre-Function Space, Event Hall
- Level 1 – Gallery Lobby
- Level 2 – Education Space

The following spaces are being considered as fully naturally ventilated:

- Level 2 – Precinct Management Reception (public-facing area), Café, Café Dining, Waranara Room

In both mechanical ventilation and natural ventilation modes, CO2 sensors will be placed in appropriate locations to ensure that compliant ventilation levels are being provided to occupants and used to automate ventilation dampers.



Skylights

Response

The following section will address —

City of Sydney

The infill skylights' top surface is to be set no higher than the asphalt surface of Merriman Street to minimise the skylights visual impact on the streetscape and heritage terraces

Retention or reinstatement of existing palisade fences at edges of the infill skylights is not shown in the architectural drawings

Skylights – The proposed skylight design includes a maintenance hatch and smoke exhaust plenum design to the western edge, that may potentially vent to the trees and landscaping. The exact zone of works, fences, and the skylight and mechanical design impacts on the park and existing trees in Barangaroo Reserve is not clear. There is no tree survey, concise scope of works plan and the submitted report states that "all trees will be protected and replaced if affected by works to the skylights". Any tree removal is not supported.

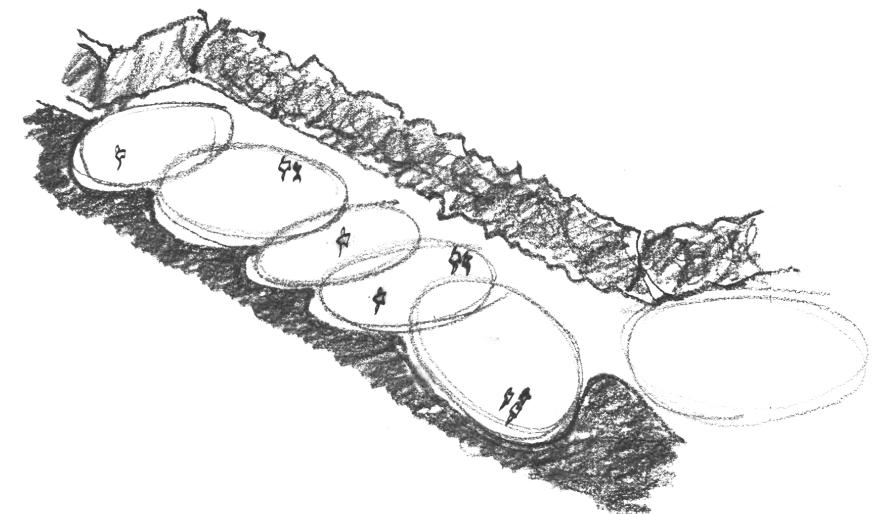
Heritage NSW

As recommended by GML Interpretation Plan, the existing concrete sign on Merriman Street should be retained and integrated with a permanent interpretive device for the purpose of interpreting the HCT.

PMNSW

Consider the location of service risers and their impact on the overall spatial layout, skylights, and public domain above.

It is noted that many services are located under the skylights, therefore matters such as waterproofing, visual impact, ventilation, and maintenance must be resolved.



Skylights

In order to meet both the project brief and the noise requirements, the Cutaway venue is to be sealed and the skylights will provide a waterproof enclosure.

To meet the brief requirements for a multipurpose facility, it is important that the environment can be controlled due to not only the acoustic requirements but also to maintain the investment of the highly technical equipment required to service the multipurpose function. The existing sandstone wall will be left untouched and will be allowed to "breathe". We note the current gravel drain to the base will be maintained to enable the sandstone to naturally exfoliate and seep moisture, whilst draining away any excess at the bottom.

To provide a high level of amenity a mixed mode system is used, and, in many instances, natural ventilation can be activated. Whilst in air-conditioned mode, a 100% fresh air system is used with CO₂ monitors. The sky can be viewed through the skylights when desired.

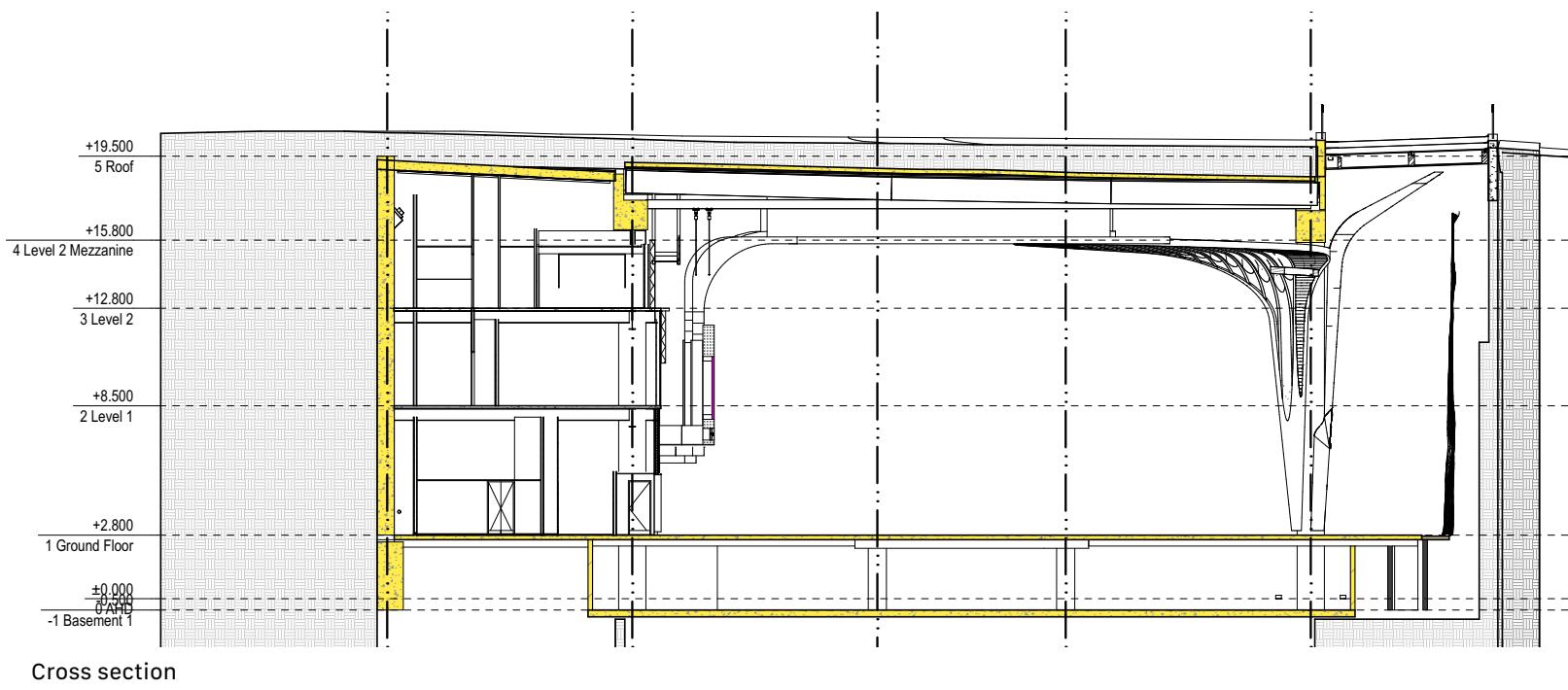
Please also refer letter from Arup Acoustics with further commentary on the above.

The skylight works are concentrated in the existing roof voids only, and do not require the removal of any existing trees. The very localised works occurring around the northernmost skylight, do not require any trees to be removed. The existing Harbour Control Tower concrete sign around this area on Merriman Street will be retained as part of the works, and the existing palisade fence will be removed and reinstated.

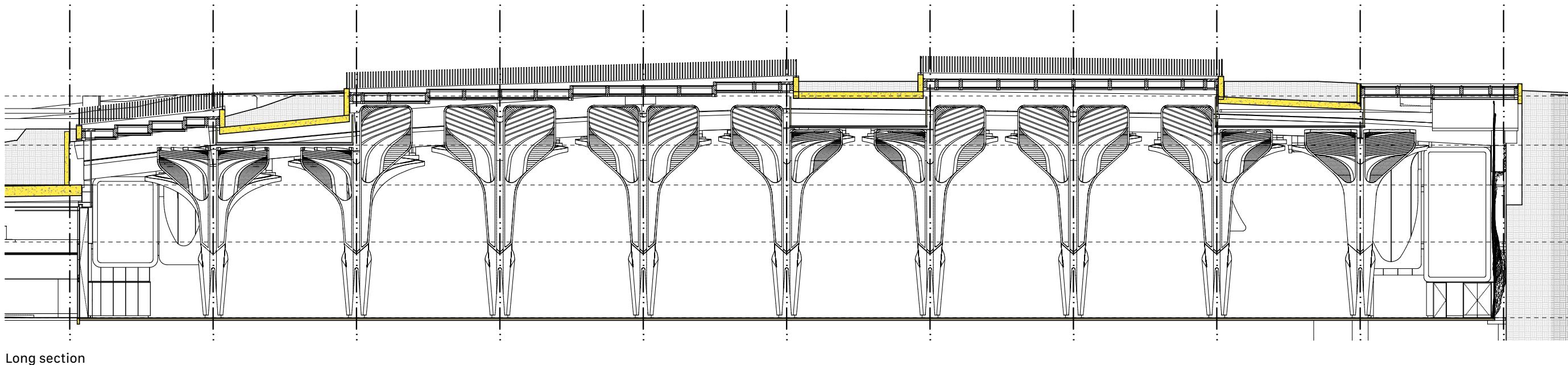
There are no service risers as part of the skylight design that will extend beyond the asphalt of Merriman Street — any services below the skylight internally have been integrated with the architecture. Please refer to the sections on the following page for the developed skylight design.



Skylights



Cross section



Long section

Landscape

Response

The following section will address —

DPE Key Issues Letter

SDRP advice 02 (04)

Prepare a detailed landscape plan of the site, showing trees and planting to be removed and new planting proposed.

SDRP advice 02 (05)

Coordination between Sydney Metro and INSW to ensure that:

a. areas outside the project boundary can be reinstated with suitable tree cover and appropriate soil depths.

b. the overall layout is integrated with the forecourt design

SDRP advice 02 (07)

Further develop the following:

a. Drawings showing how the curved masonry terraces will terminate in the existing landscaped planter beds.

b. indicate which elements are sandstone and which are masonry — detail colours and finishes of all materials

c. Refine the planting strategy — consider shade tolerant species for the south facing terraces

Provide elevation plan/s that show the entry area to the Cutaway and associated landscaping.

Provide a landscape plan which denotes any trees and planting that are proposed for removal, replacement planting and where new planting is proposed, including the species type.

Demonstrate how landscaping at the entrance of the Cutaway will integrate with the Sydney Metro site, including evidence of consultation with Sydney Metro.

Consider the ability for planted tree/s to replace the sculptural timber elements at the entrance to the Cutaway.

City of Sydney

There are no landscape plans and there is insufficient information to assess the suitability and feasibility of the landscape works, impacts on existing trees and if the design responds to the site's microclimate, wind impacts and sunlight. There is absent clarity for the extent of works and how the proposal integrates with the existing entrance forecourt to the Cutaway, landscape, walls, and the tiered embankment, and any impacts on trees within the public domain and Barangaroo Reserve (the park). The following is to be addressed.

Insufficient information -

o Appendix 1: The submitted architectural drawings do not include landscape plans to assess the suitability of the proposal, landscape design "make good", works to the entrance to disguise the cladding, and any impact on the reserve. Proposed sections do not show existing trees and context

o Appendix 2: The existing survey does not include existing landscape, trees, fences, walls and features, and levels, making it difficult to assess the impact of proposed sculptural "tree" form, skylights and "making good".

o Appendix 3: The submitted architectural design report does not include landscape plans and states that "the new landscaping for the Cutaway will only be located at the main entrance and the Harbour Control Tower Interpretation. FJC studio landscape will be integrating seamlessly with the existing planting and material palette as set by PWP (Peter Walker Partnership)"

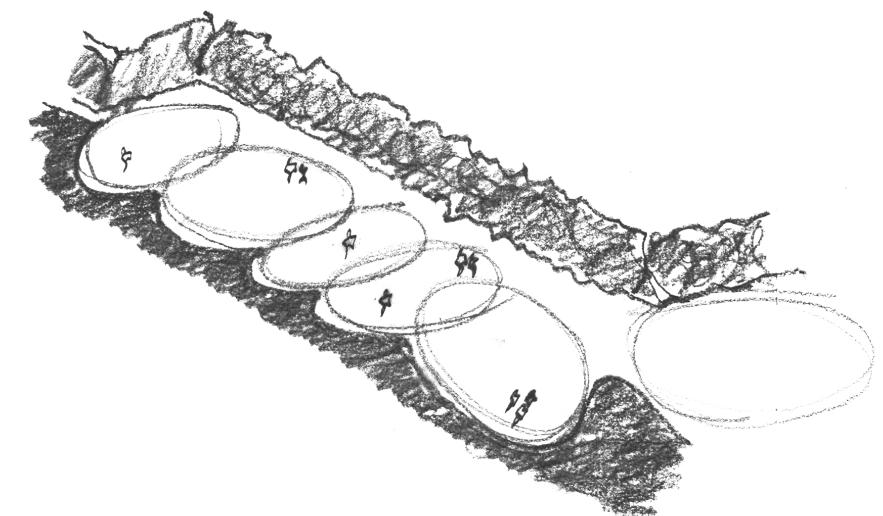
Cutaway entrance – Despite strong advice from the State Design Review Panel (SDRP) to include "new trees at the Cutaway entry, rather than representation of trees to signify the entry" (Appendix 3 page 18), no living canopy trees are proposed. Instead, there are two entry marker "tree" sculptural forms that are approximately 13m tall in the forecourt, that will be visible in the park and Merriman Street.

Landscape works to the entrance are stated as "make good" using species determined by the PWP design and excludes the tied embankment. However, submitted photomontages indicate extensive landscaping to disguise the concrete shell by planting at the slab edge. There is insufficient information for the cladding planter design and how this will be accessed and maintained

PMNSW

All trees are retained and protected during construction and operation.

Any vegetation removed is replaced equally in the new landscape plan, ideally with Indigenous plantings.



Landscape

Strategy

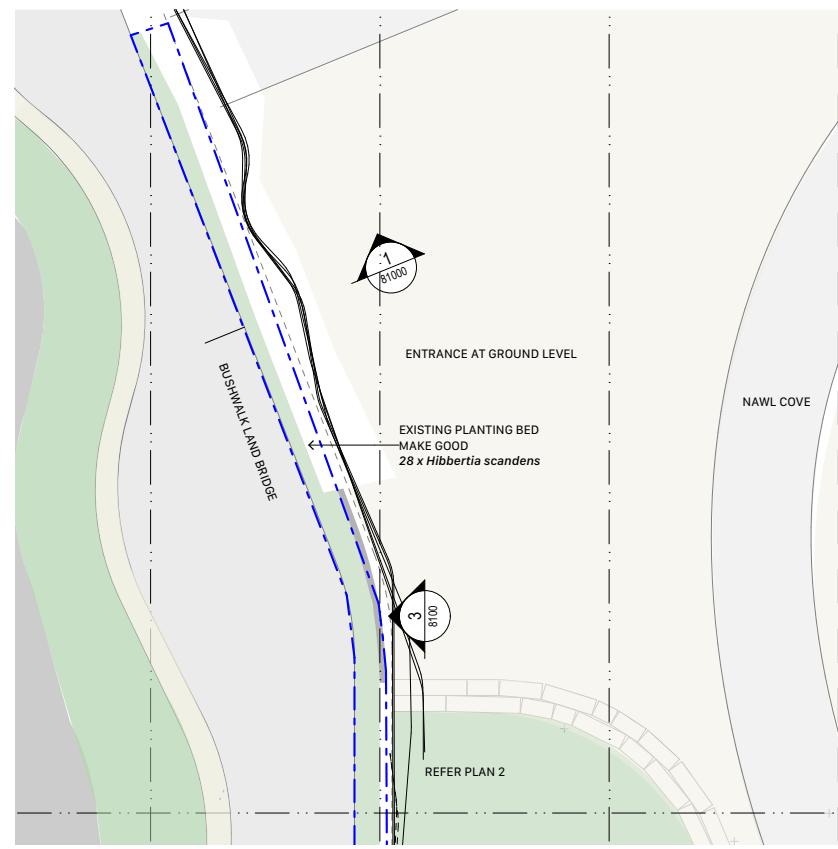
The landscaping scope is concentrated around the southern entry to the Cutaway and the interface with the existing landscape.

fjandscape have weaved the new cladding elements into the existing terraced embankment, tying in with the existing concrete retaining walls — shown in yellow on the plan. We have carefully considered the transition, and allowed for the soft landscaping to spill over and further soften the area.

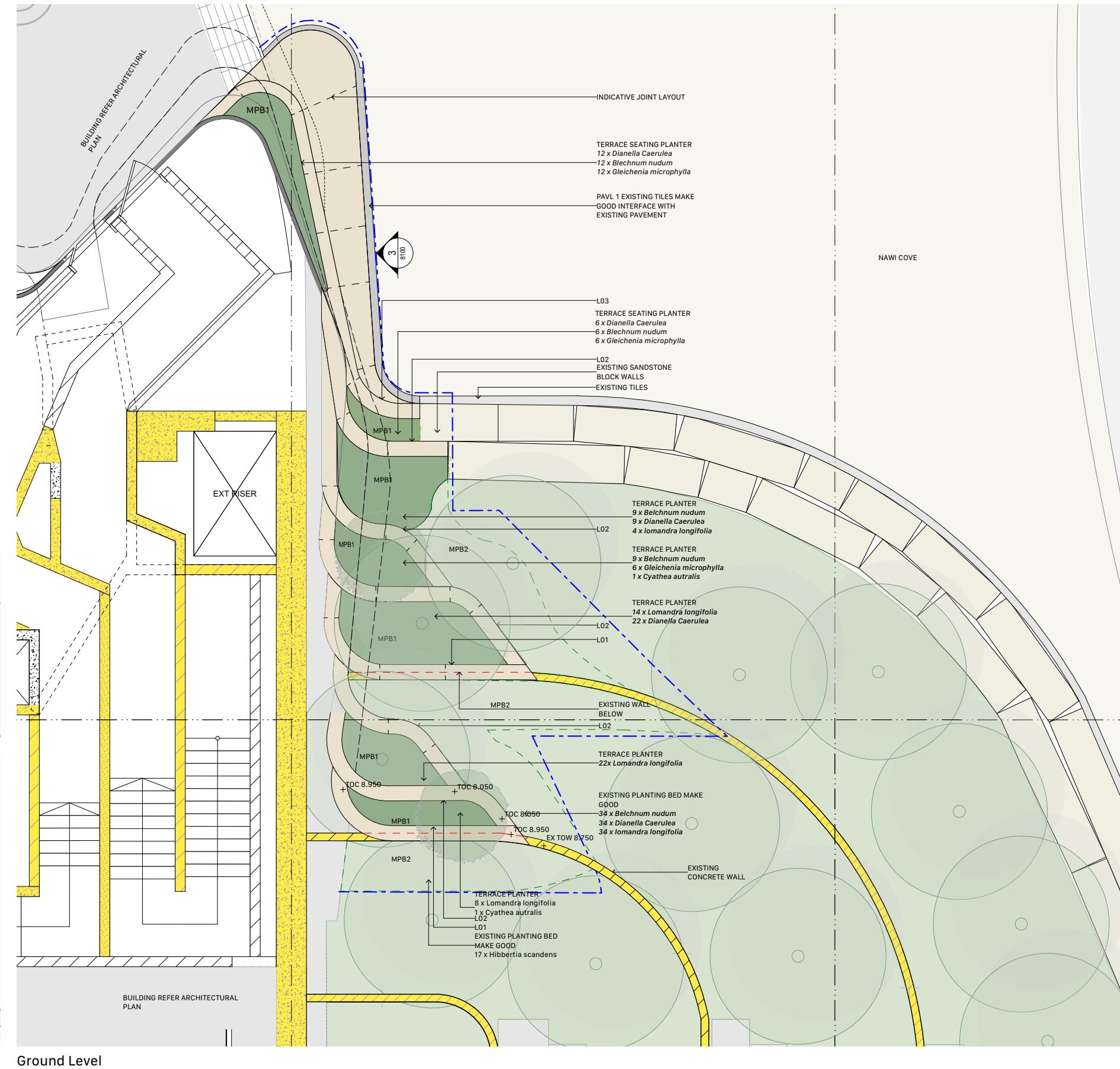
The fjandscape team have conducted multiple site inspections to assess the condition of the current planting, and have proposed plants from the existing palette which are currently growing well on the south facing terraced embankment. The proposed species are shade tolerant.

Any trees that need to be removed for the works will be reinstated in their current location.

The landscape works occurring on Level 1 are simply complementing the existing condition, using the same plants that are currently growing in that area.



Level 1

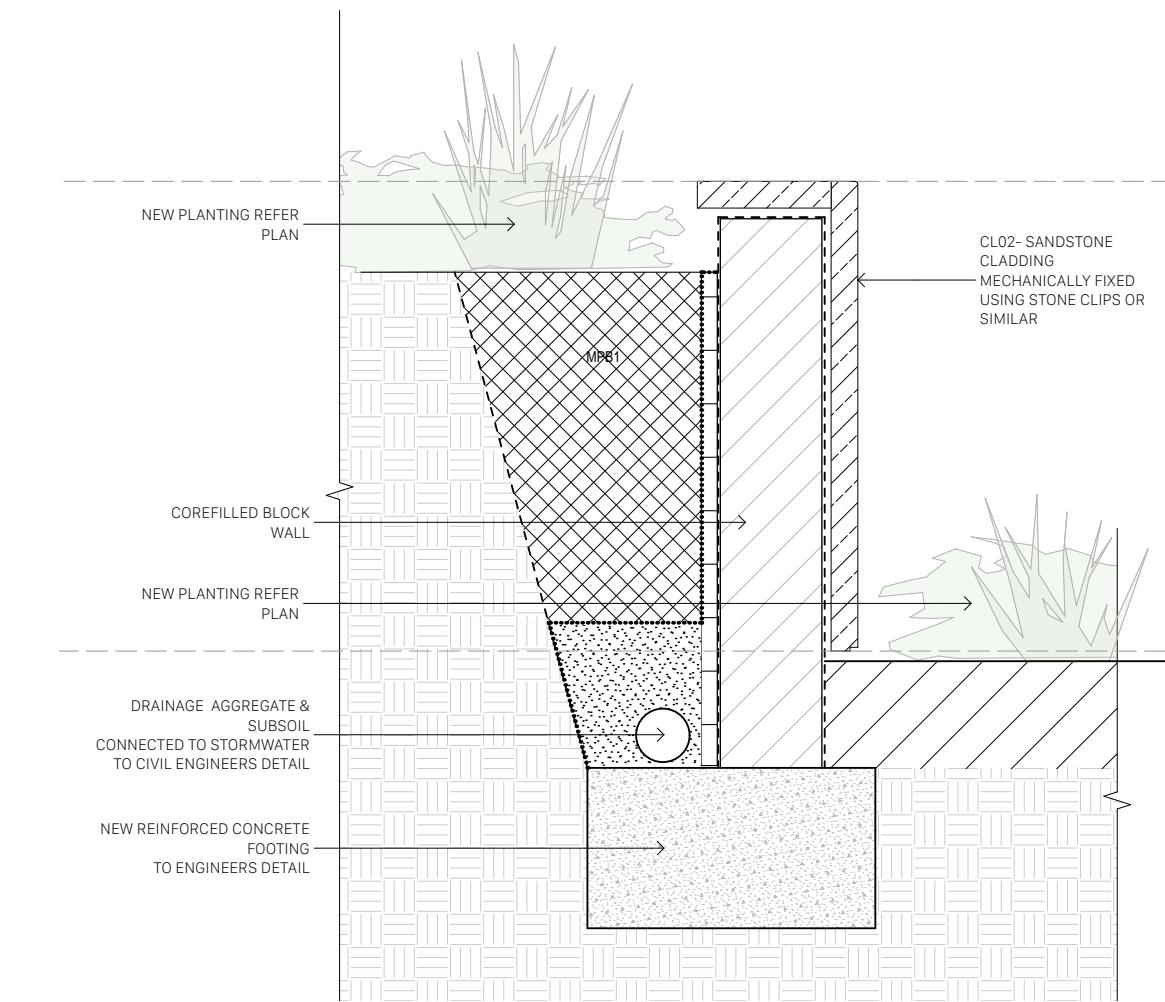
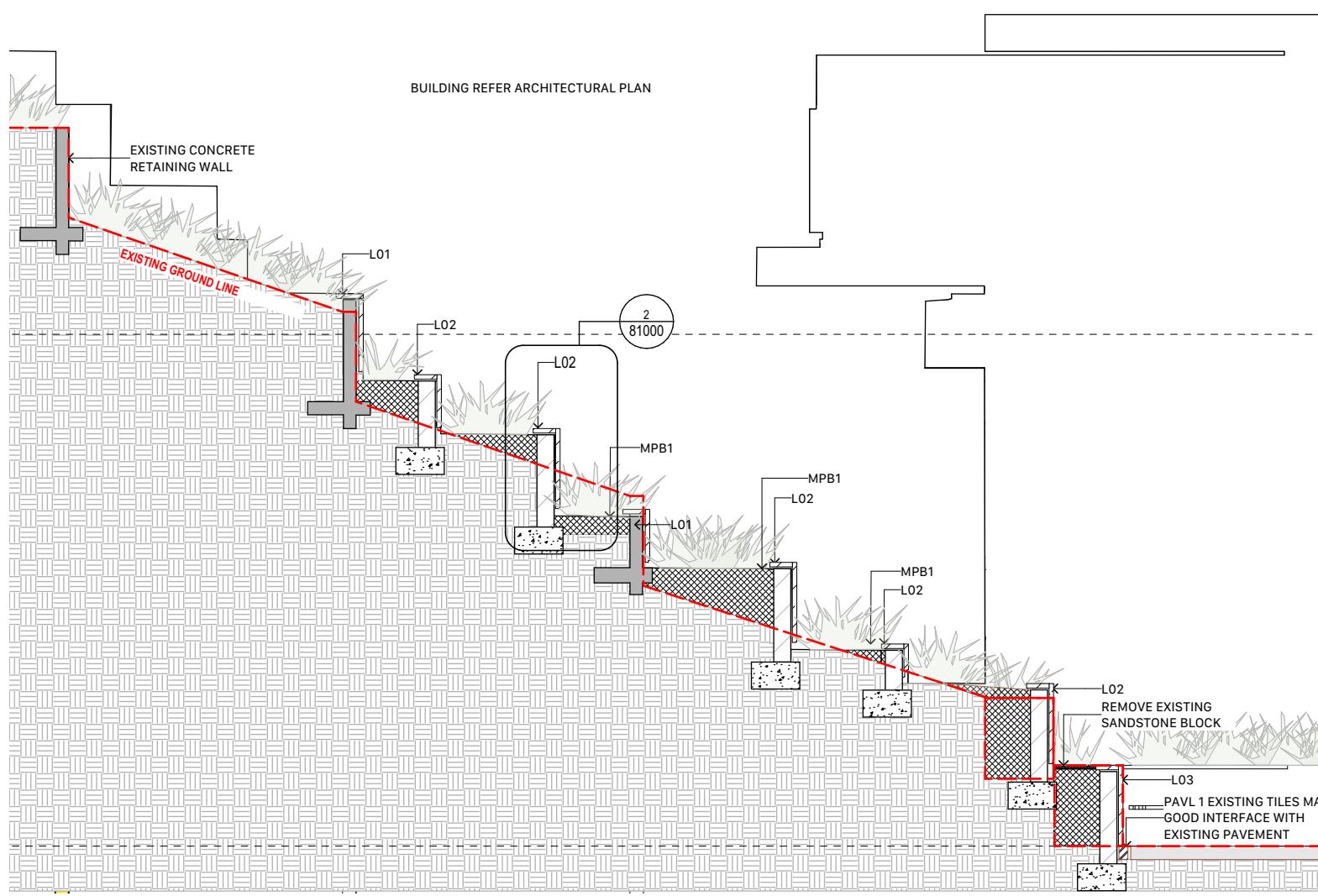
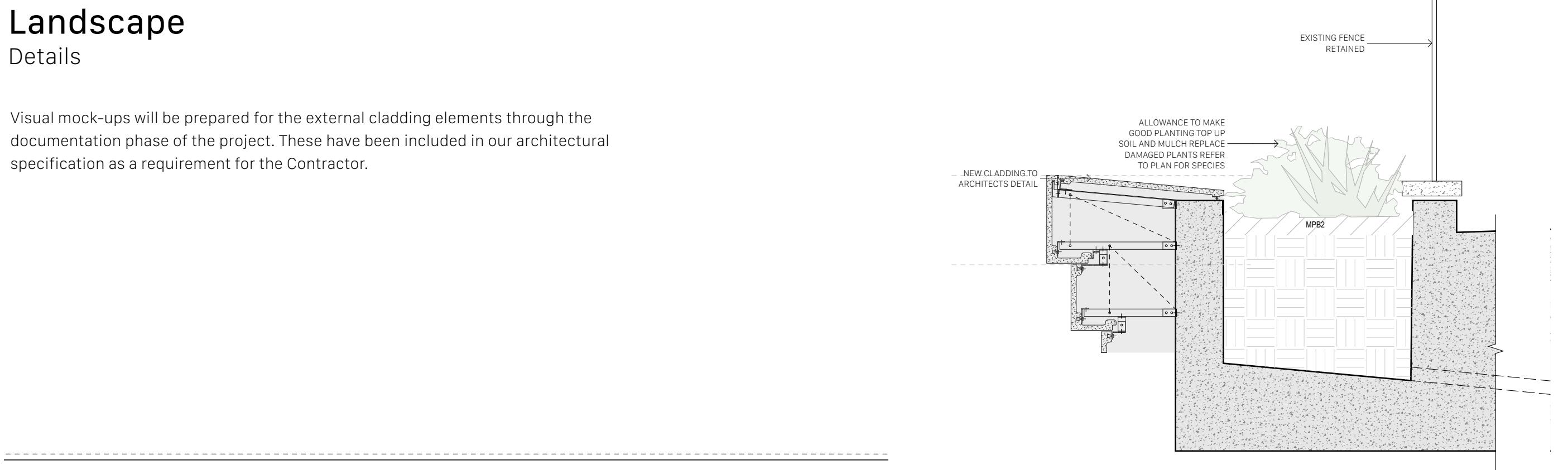


Ground Lev

Landscape

Details

Visual mock-ups will be prepared for the external cladding elements through the documentation phase of the project. These have been included in our architectural specification as a requirement for the Contractor.



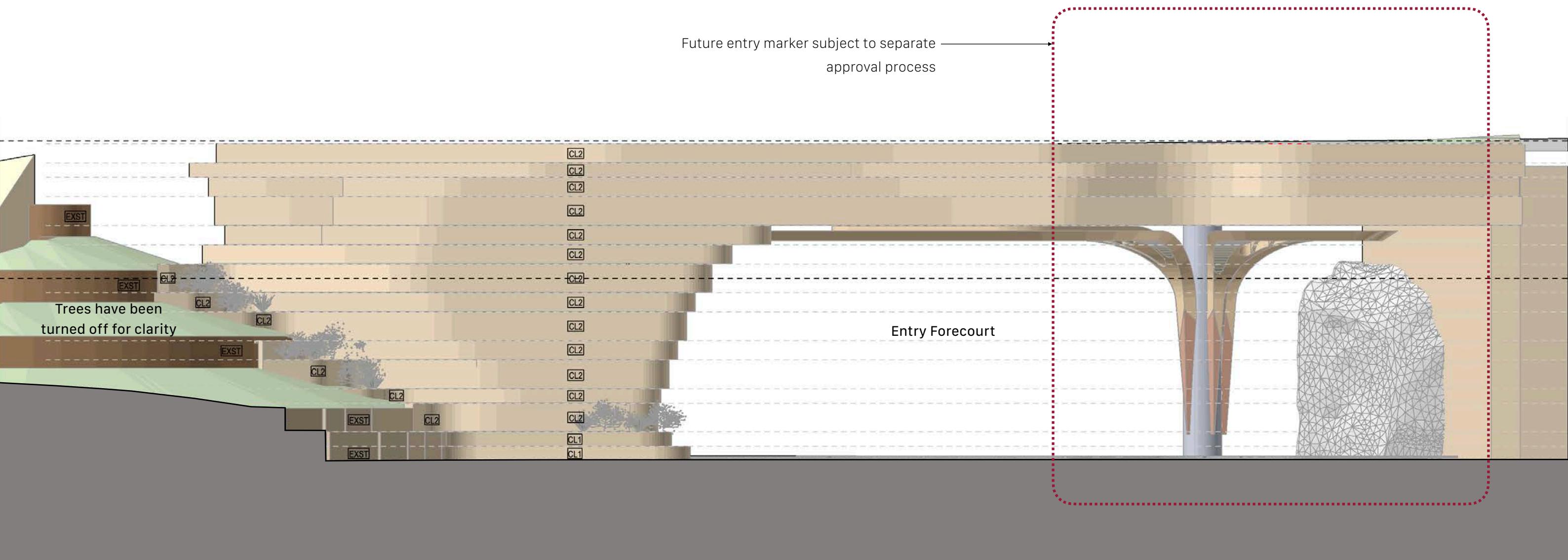
Landscape

Elevation

CL1 — sandstone cladding

CL2 — GRC cladding, sandstone coloured

EXST — existing wall



Landscape

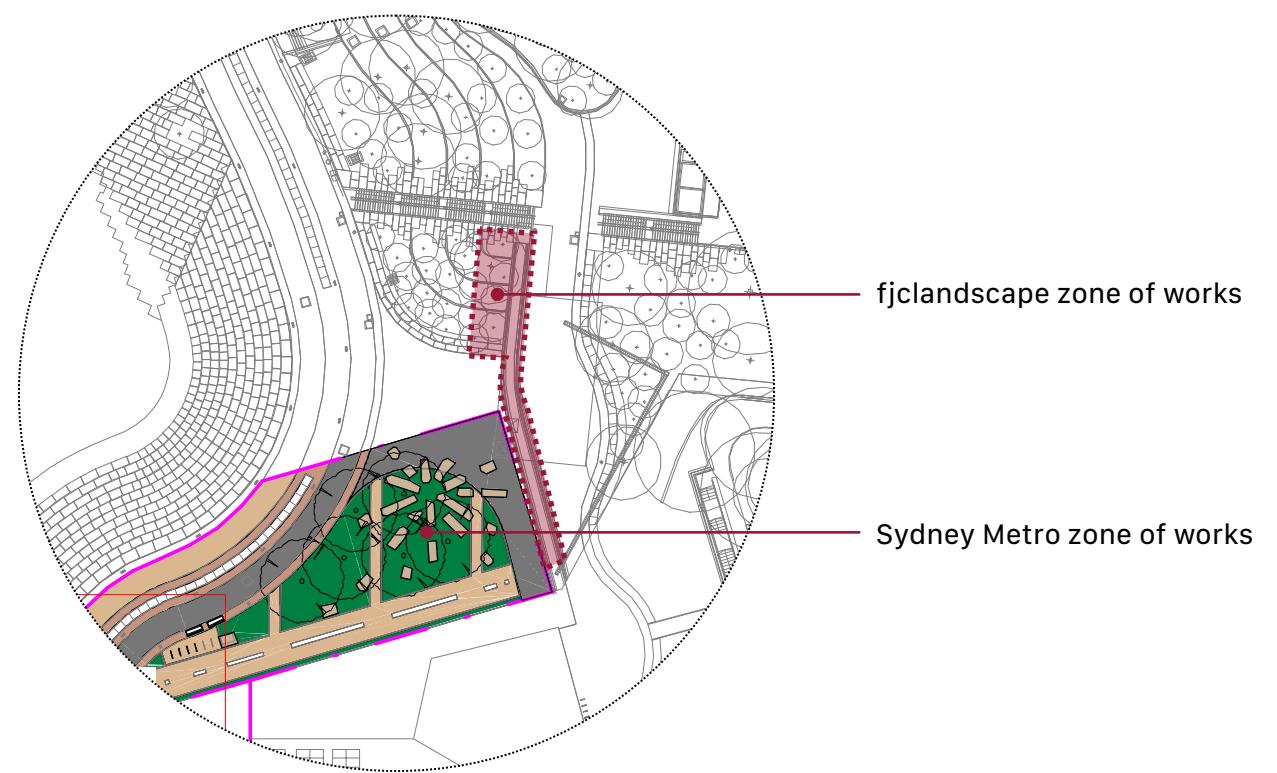
Sydney Metro Coordination

On the 24th of May, 2023 the fjcstudio team met with Sydney Metro to discuss and coordinate the interface between the two projects.

Following this, Sydney Metro have advised the following with regard to the existing trees adjacent the Cutaway entry:

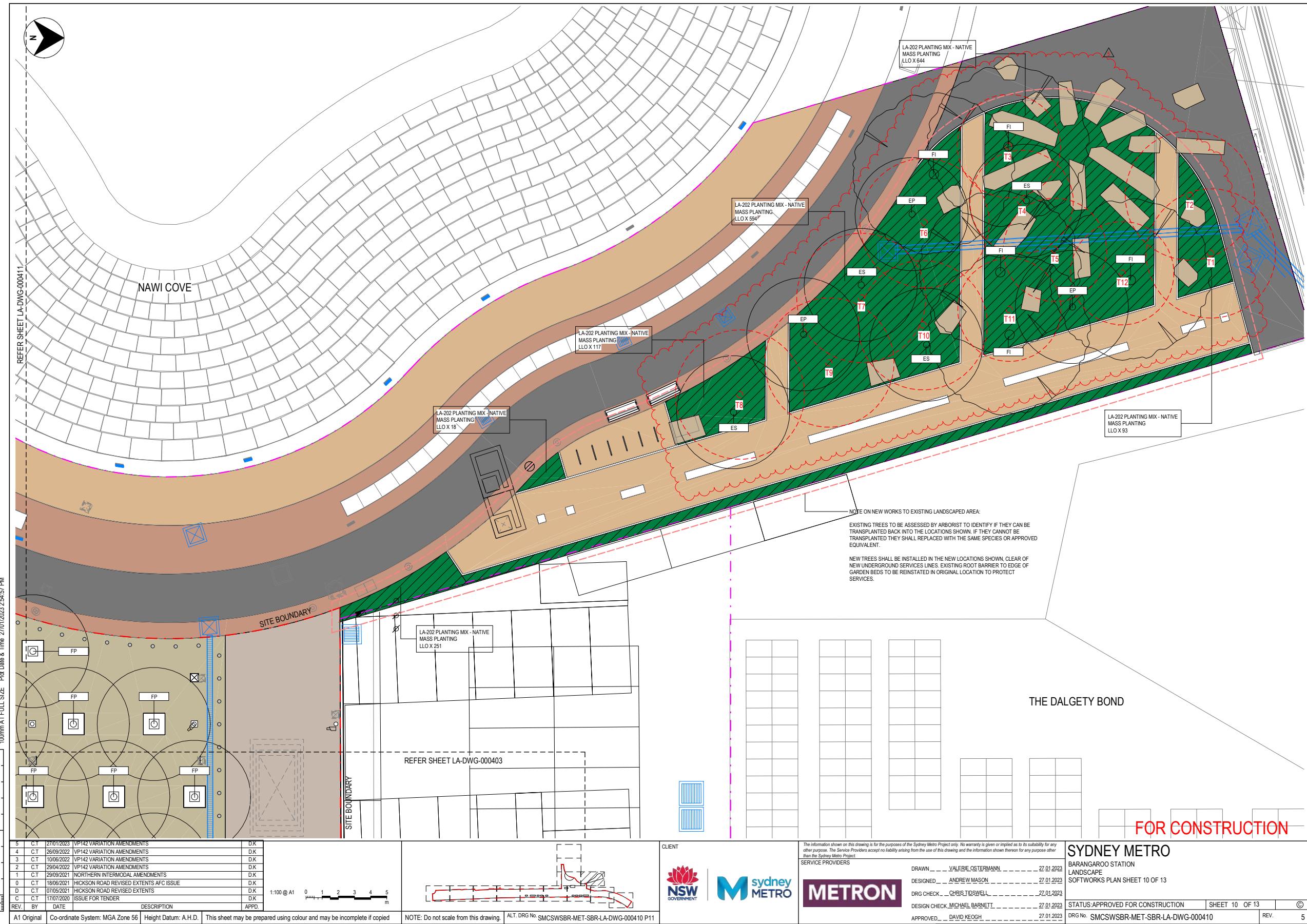
- Whilst the reinstated trees match the quantity and species of the original plantings, they will not be going back into the original pre-Metro locations:
- We placed the reinstated trees following discussions with both the Sydney Metro civil design team (Joe Heydon) and the NSW arborist (Stuart Pittendrigh)
 - Civil: we identified that there will be reduced soil depth at the northern end due to new chilled water pipe
 - Arborist: we understood that they believed that the original northern-most trees were not performing well due to overshadowing from the Headland Park / Cutaway

As per the above, it is not recommended to reinstate 'real trees' close to the Cutaway entry. Please refer to the planting plan on the following page as received from the Sydney Metro team.



Landscape

Sydney Metro Coordination



Materiality & Details

Response

The following section will address —

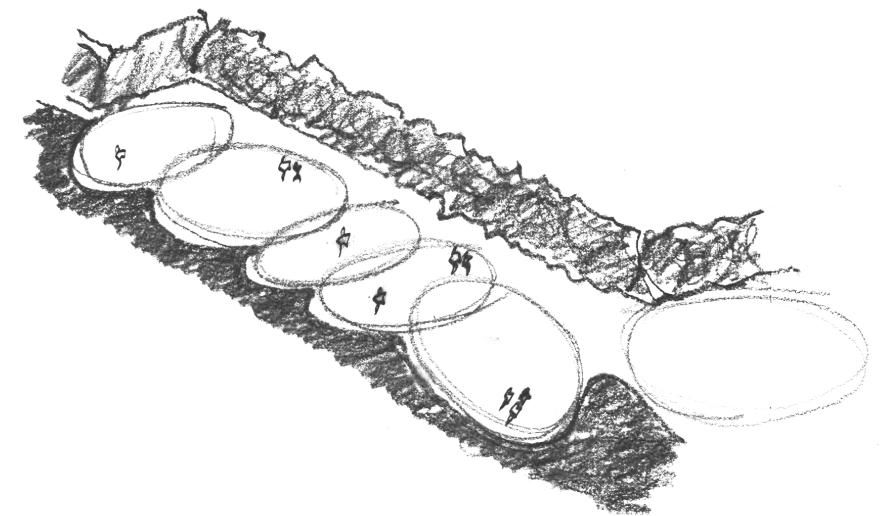
DPE Key Issues Letter

SDRP advice 02 (11)

Ensure that visual mock-ups (VMU's) are prepared for the various sculptural elements, including the internal timber and external masonry/GRC entry wall designs.

City of Sydney

Regarding the 'marker' tree structures at the entrance, as per the HCT interpretive structure; the materiality and construction of these elements at the Cutaway entrance are not described adequately to be satisfied of the longevity of the proposal and its suitability for exposure to the elements in the public domain. Further detail is required.



Materiality & Details

Entry Timber

We have refined and developed the detailing of the sculptural entry timber. We are using a combination of timbers to highlight various elements of the tree, to address different functions and to concentrate more durable species around the ground plane where it is more susceptible to damage and vandalism.

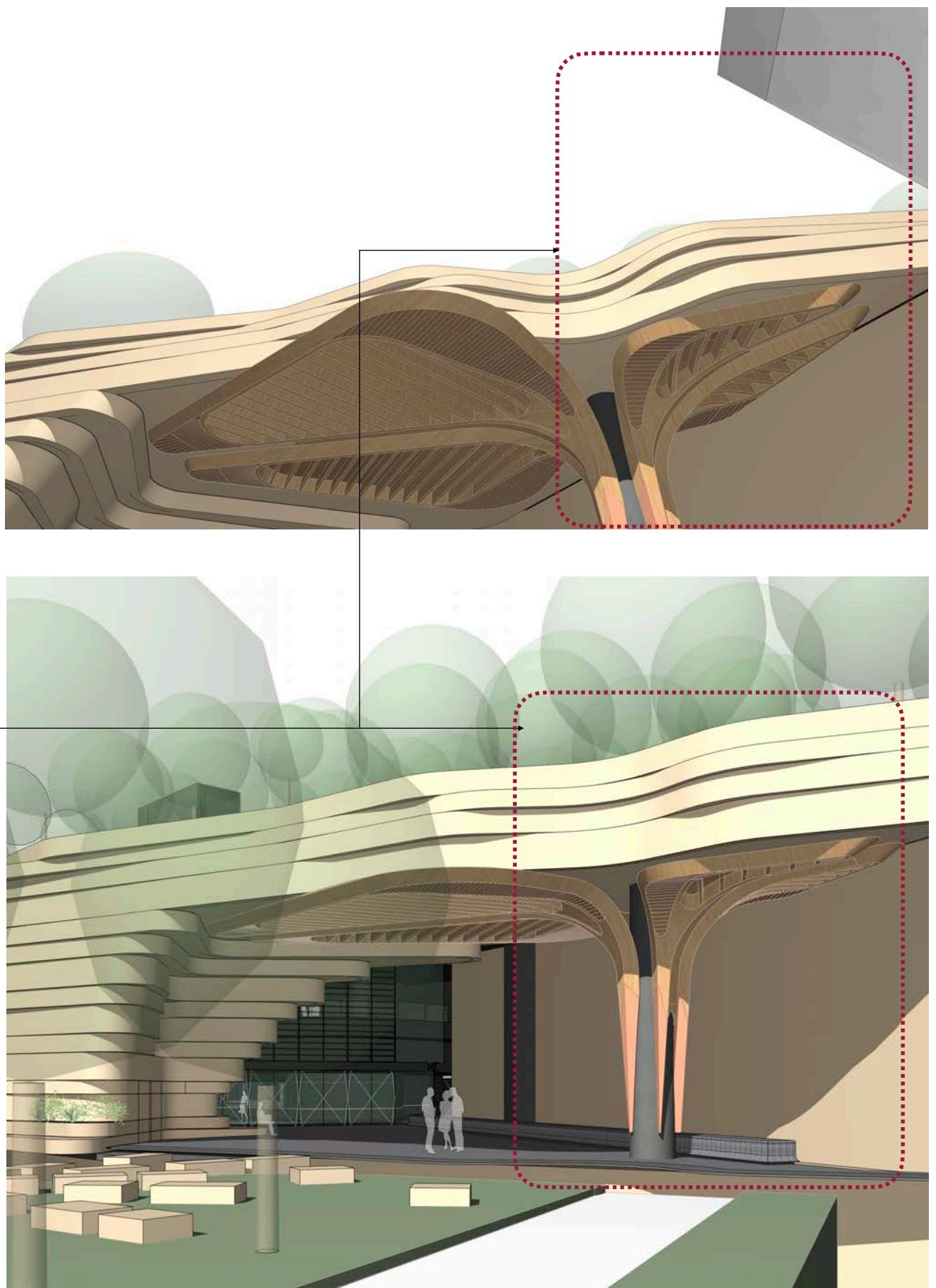
We have specified timbers which are appropriate and durable for the exposure and climate — this has been worked through with a specialist timber consultant.

The edges have been carefully detailed to ensure water will not sit on the timber. The inclined edge beam also assists with shedding water off the structure.

Engraved words of meaning will be incorporated into the base of the structure, which will be designed in collaboration with Jake Nash.

Please refer the following page for specific material types.

Future entry marker subject to separate approval process



Materiality & Details

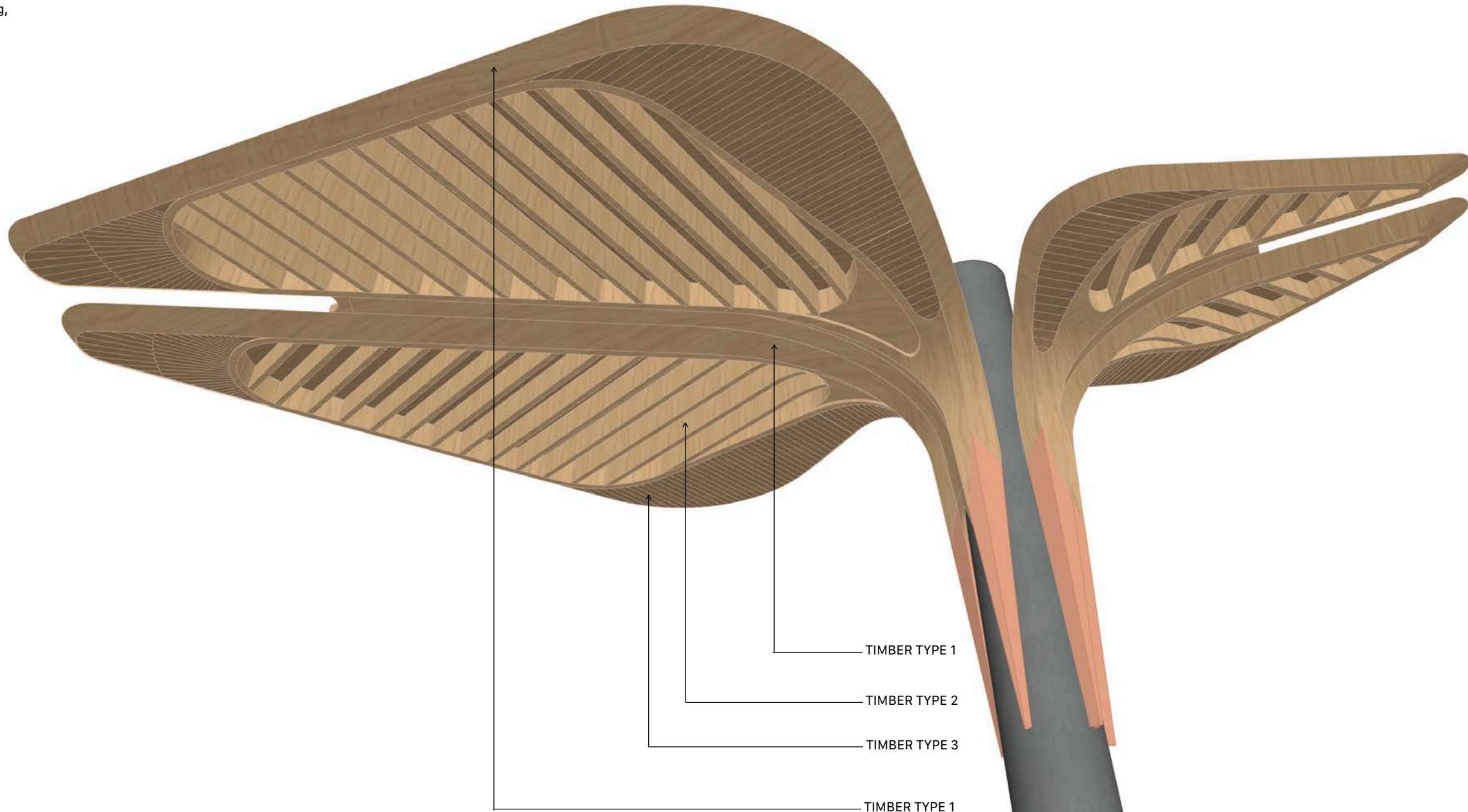
External Entry Timber

TIMBER LEGEND

TIMBER TYPE 1 — Solid glulaminated timber,
softwood, coated

TIMBER TYPE 2 — Solid timber, hardwood,
coated

TIMBER TYPE 3 — Solid timber cladding,
softwood, coated



Materiality & Details

Internal Timber

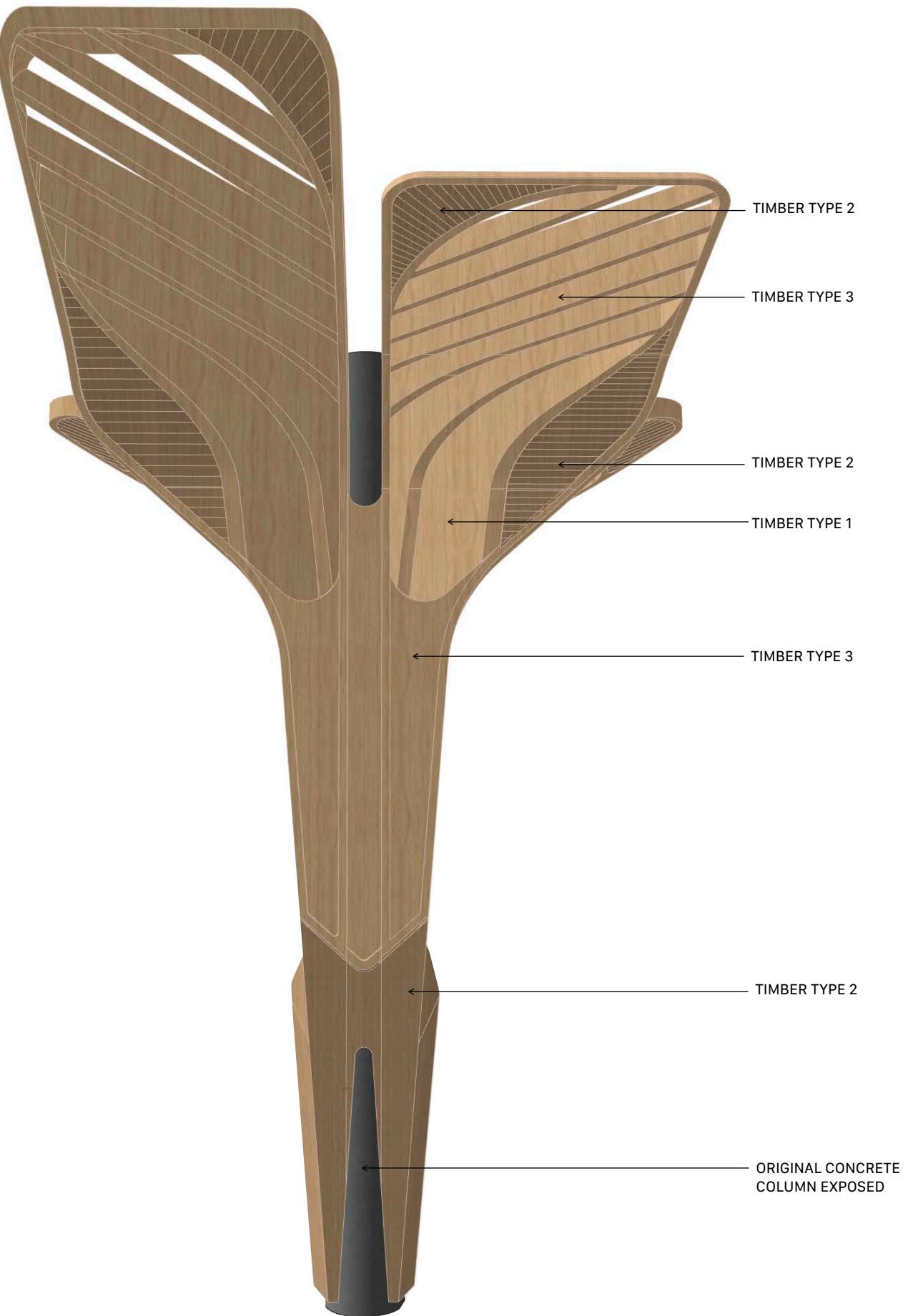
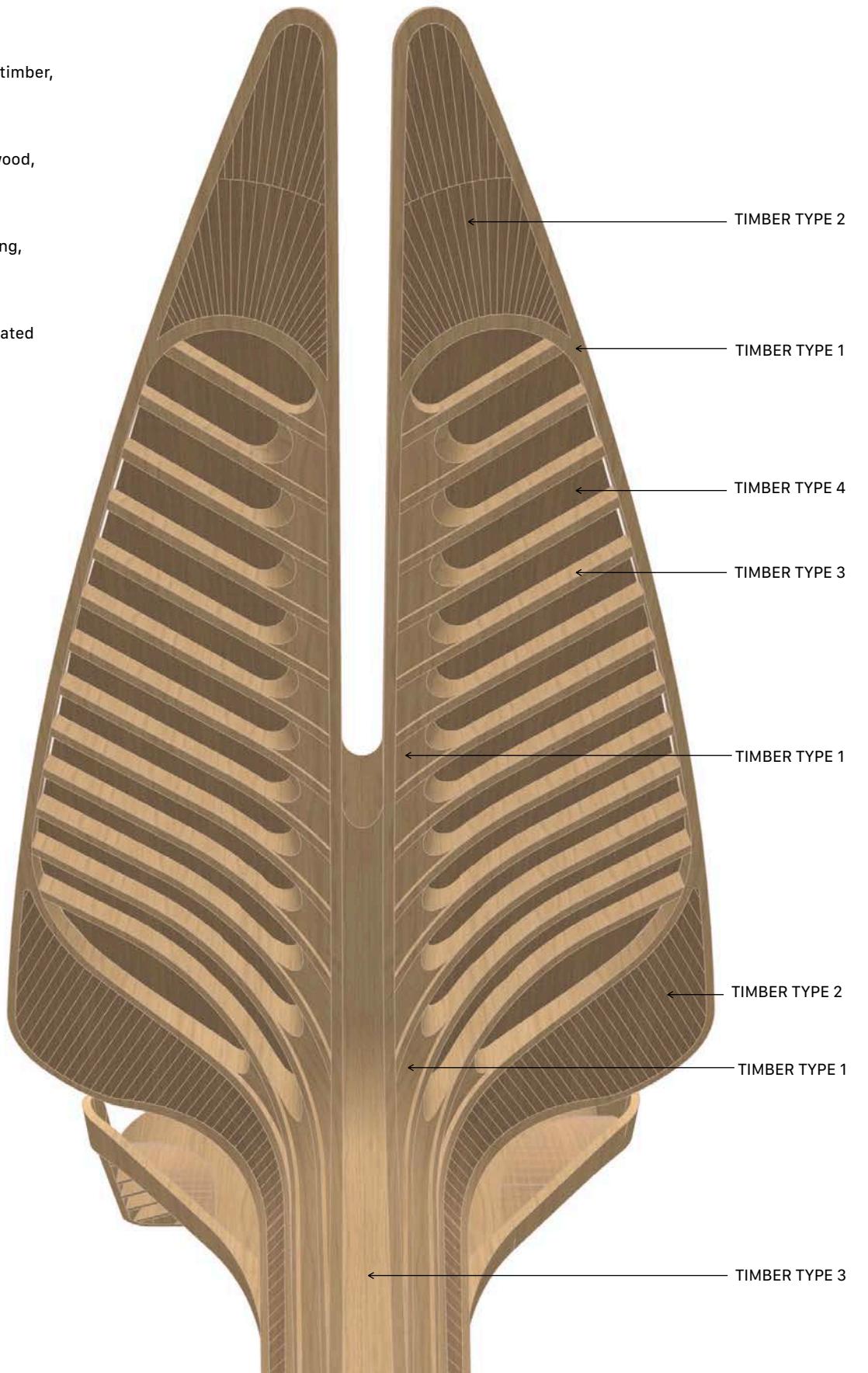
TIMBER LEGEND

TIMBER TYPE 1 — Solid glulaminated timber,
softwood, coated

TIMBER TYPE 2 — Solid timber, hardwood,
coated

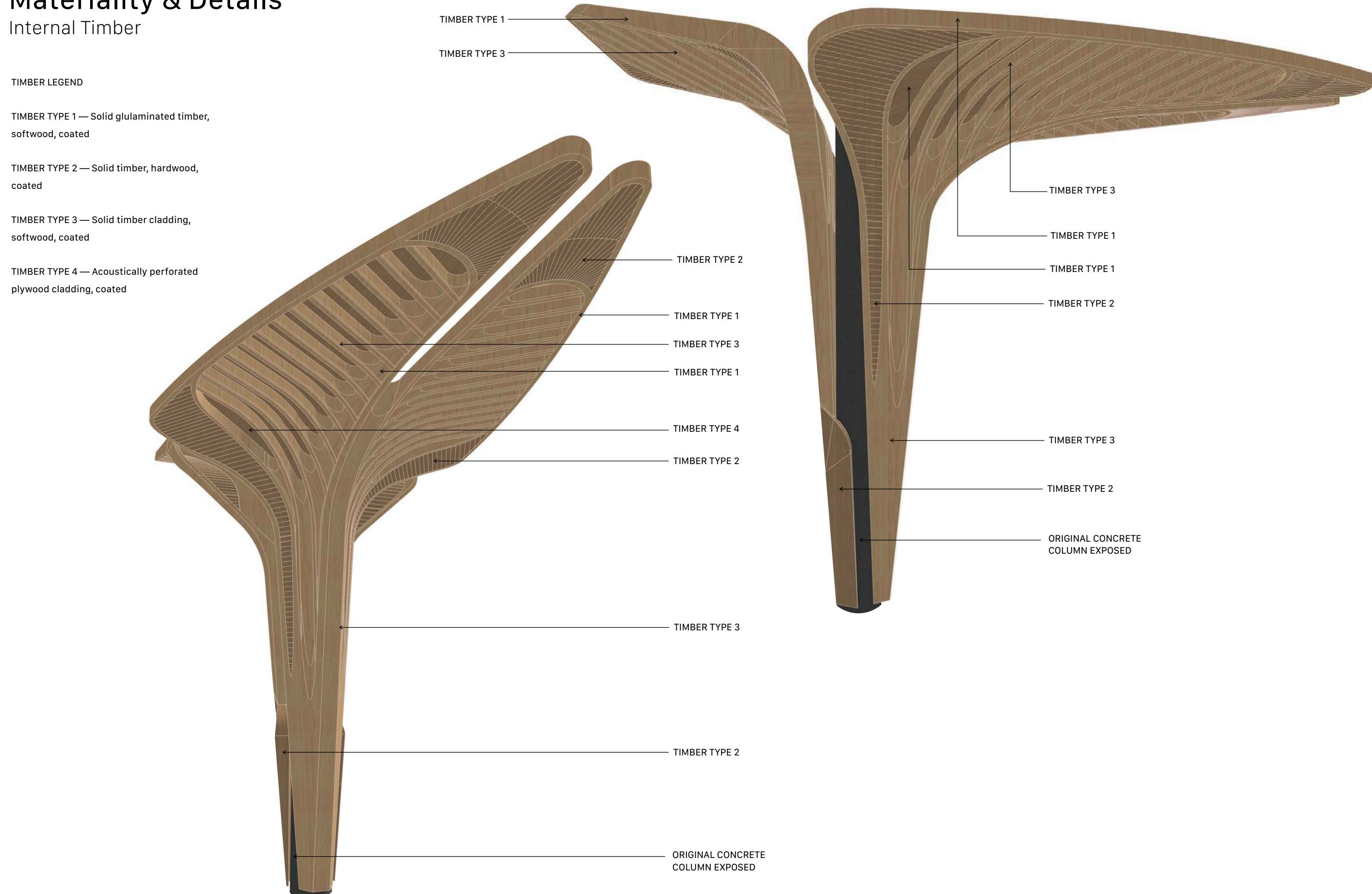
TIMBER TYPE 3 — Solid timber cladding,
softwood, coated

TIMBER TYPE 4 — Acoustically perforated
plywood cladding, coated



Materiality & Details

Internal Timber



Miscellaneous

Response

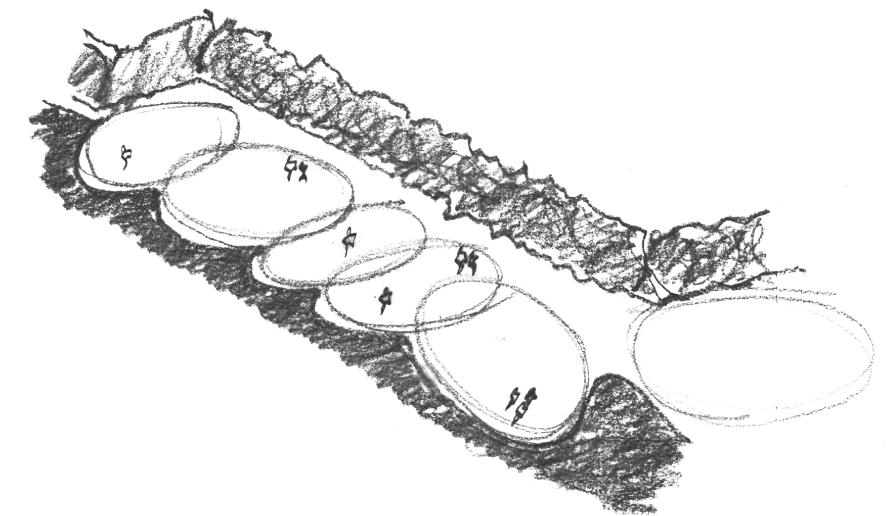
The following will address —

PMNSW

Provision of public amenities in accordance with BCA standards is to be reviewed to ensure appropriate facilities are provided, including Accessible Adult Change Facilities and ambulant toilet have compliant clearances.

Consider how access to public amenities is retained in different event layout configurations. Some test layouts contained in Appendix 3 – SSDA Architectural Design Report block amenity access, such as catwalk seating (p.51) and theatre seating bank and flat floor seating (p.52).

Consider how back of house arrangements function when the performance area is oriented towards the eastern side of The Cutaway.



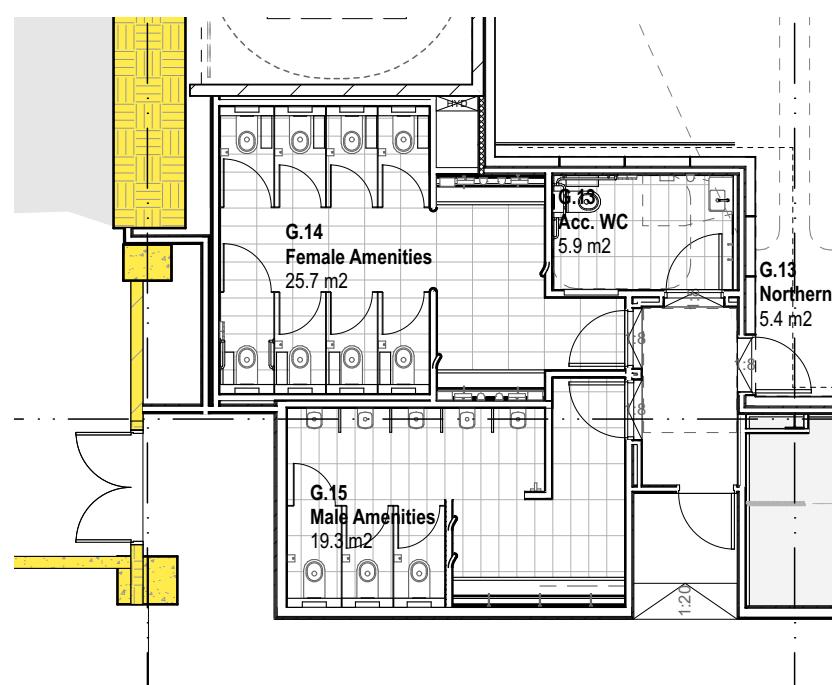
Miscellaneous

Public Amenities

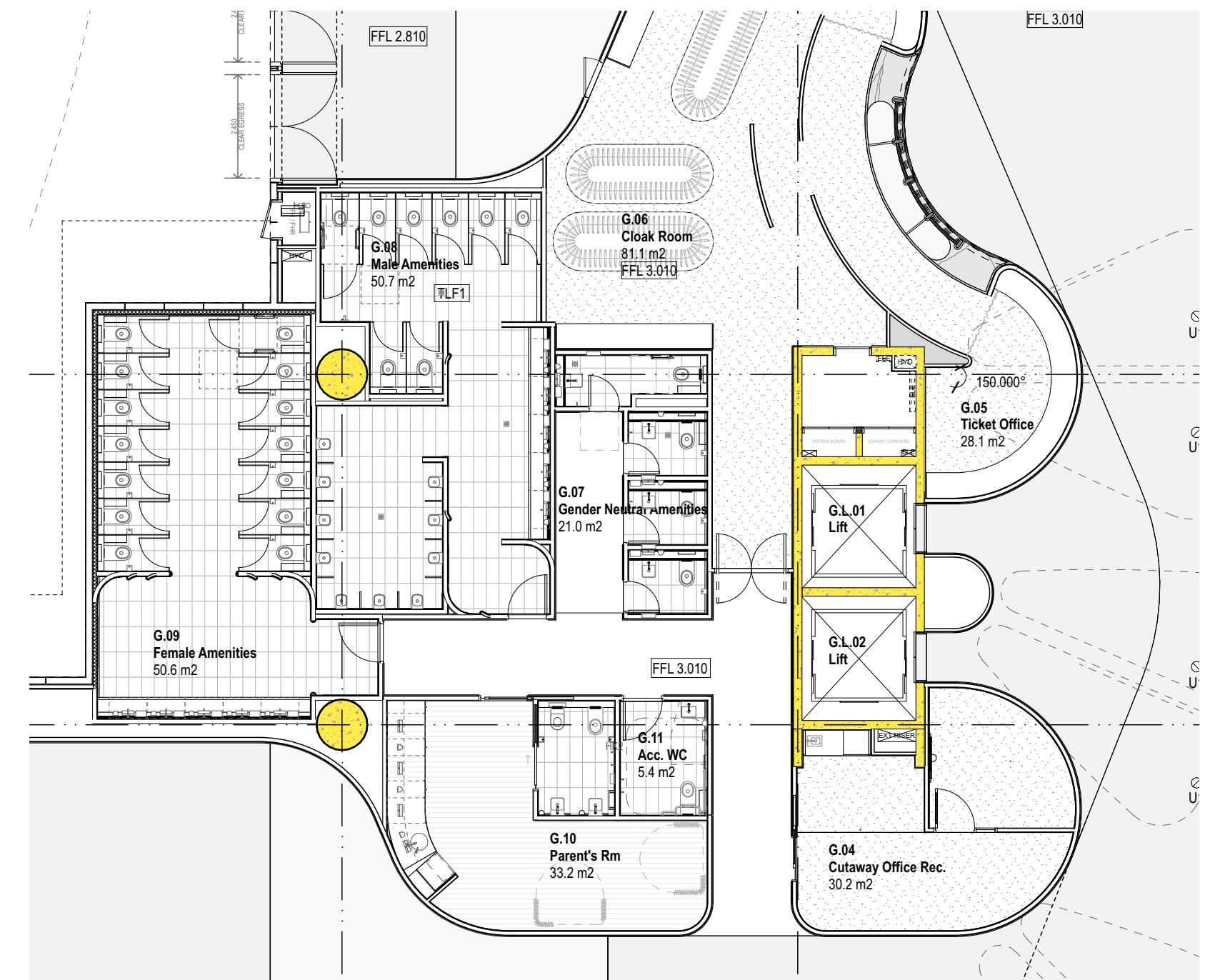
We have provided public amenities in excess of the BCA requirements for servicing the Event Hall — please refer to the latest plans shown below.

We have designed a space which is open and flexible, and can address multiple event configurations. As such, temporary event layouts can be adjusted to suit the base conditions.

Locating amenities at either ends of the space allows for flexibility in access during different event modes.



Ground floor - northern amenities plan



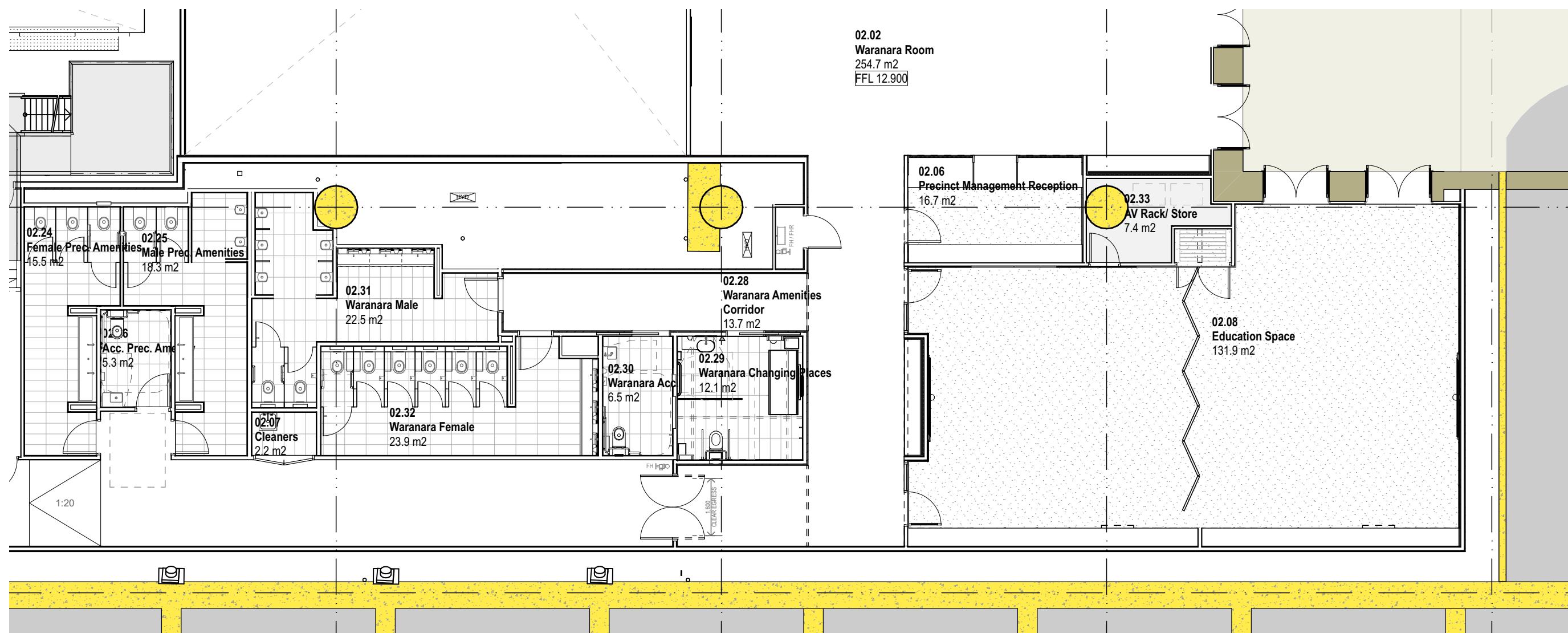
Ground floor - southern amenities plan

Miscellaneous

Public Amenities

On Level 2 (Waranara) we have provided public amenities accessible to the Cafe and Waranara Terrace to the BCA code — please refer plans below.

We have also provided a Changing Places facility for users of the Cutaway as shown below.



Level 2 - Waranara amenities plan

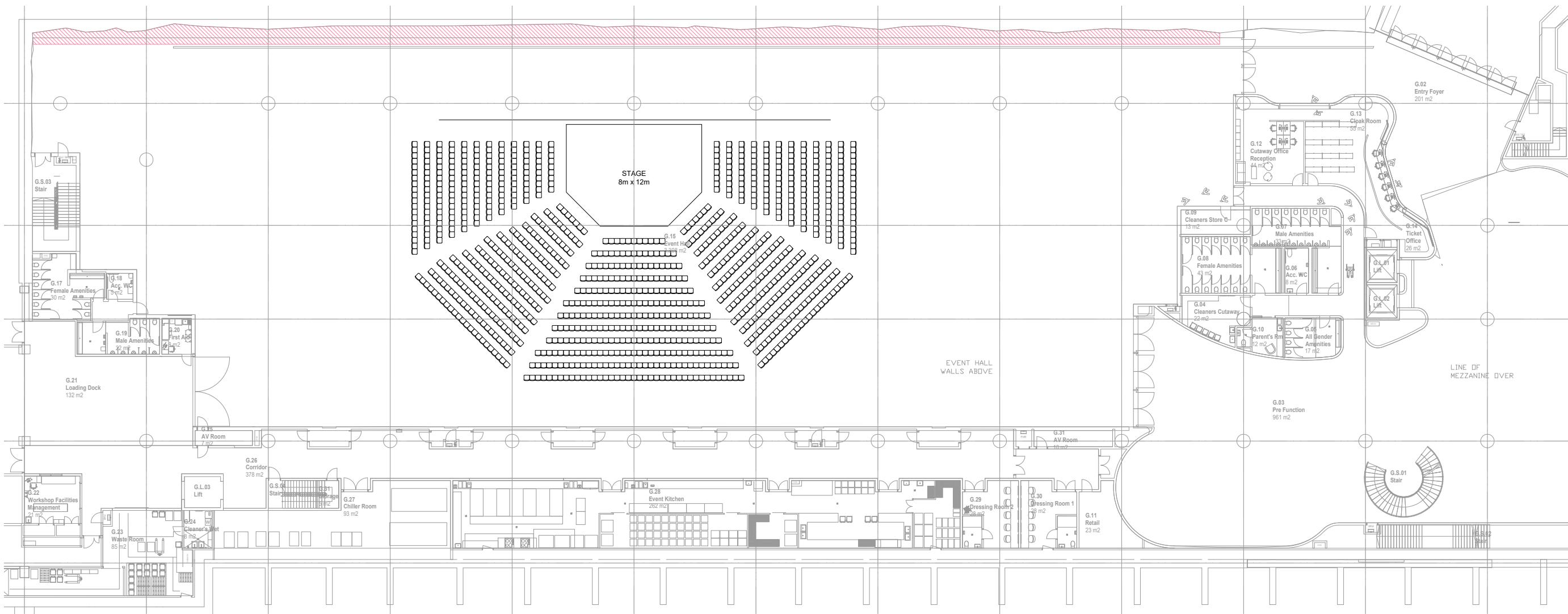
Miscellaneous

Spatial Arrangements

We have designed a space which is open and flexible, and can address multiple event configurations. As such, temporary event layouts can be adjusted to suit the base conditions.

In an east stage layout such as the configuration below, it is envisaged the sandstone wall would be the major backdrop 'feature', and performers would filter through from the north and south. Temporary back of house areas could also be arranged to the northern and southern areas of the Cutaway.

Additionally there is a zone of approximately 5m between the eastern most column line and sandstone wall, which could be used for performer access.



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