

MACQUARIE POINT MULTIPURPOSE STADIUM

Project of State Significance
Stadium Design Description

August 2024

COX+Cumulus and the wider Stadium Design Team acknowledge the traditional owners of this land, the muwinina people, and pay respect to those that have passed before us.

We acknowledge today's Tasmanian Aboriginal people, the palawa, their Elders, and their enduring custodianship of lutruwita/Tasmania.

Revision History

Rev.	Revision Date	Details	Approved	
			Name	Signature
H	27 August 2024	Issued for PoSS	Naomi Evans Cox Architecture	<i>Naomi Evans</i>



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INTRODUCTION

PURPOSE OF REPORT

COX Architecture and Cumulus Studio (COX + Cumulus) have prepared this document on behalf of the Macquarie Point Development Corporation in support of a development application for the Macquarie Point Multipurpose Stadium, Project of State Significance.

The purpose of this report is to address the requirements relating to the architectural and functional design, and to describe the Stadium as required by the Tasmanian Planning Commission's Guidelines for the Project of State Significance, dated 16 February 2024.

The relevant conditions addressed in this report are outlined in the tables adjacent. This report is intended to be read in conjunction with the accompanying architectural plans, sections, and elevations

COX has been engaged by the Macquarie Point Development Corporation as Lead Design Consultant to oversee the design of the new Multipurpose Stadium. The Stadium is proposed on the Macquarie Point site that is subject to the Mac Point Draft Precinct Plan (October 2023) which provides a blueprint for the future development of a mixed-use precinct.

This report focusses specifically on the Stadium building, the associated external concourse, and the historic Goods Shed which will be relocated to facilitate the development. Careful consideration has been given to the surrounding precinct and the sensitive interfaces that it presents, and more broadly, to the Sullivans Cove region and the Hobart waterfront.

We believe that the architectural response as represented in this report carefully balances the requirements of the Project Brief to deliver a highly functional, Multipurpose Stadium that demonstrates design excellence whilst respecting the heritage qualities of the adjacent streetscapes and waterfront, as well as the historic Cenotaph lookout.

COX Architecture and Cumulus Studio

No.	Clause	Page #
Proposal		
1.1	Description of and plans for the proposed project	
1.1.1 (partial)	The proposal for which approval is sought is the use and development related to the proposed project, including any incidental or associated use and development. The land related to the proposal is that on which any use or development is proposed (including any associated use or development), whether privately or publicly owned. If any such land is only part of land comprised in any title, then the whole of the land in that title is taken to be related to the proposal. The reports are to provide an overview description of and plans for the proposed project in addition to the detailed plans as outlined in section 1.3. The reports are to describe and provide plans of the proposed project that include all proposed use and development, including use and development related to: • the stadium building and uses within areas of the building; • people entering or queuing to enter the stadium; • open spaces associated with and to be delivered as part of the proposed project; • movement ways and safe places for people to use in the event of an evacuation; <i>refer Emergency Management Report by Intelligent Risks</i> • parking, loading/unloading and manoeuvring areas for service vehicles.	11-13 66-67 64 66-67 76
1.3	Proposed use and development	
1.3.1 (partial)	The reports are to provide full details and plans, including sections and elevations, of the proposed project. Plans are to relate to the full extent of the project site. The plans are to show all use and development that is necessary or convenient for the proposed implementation and operation of the project.	Appendix Drawings

No.	Clause	Page #
Proposal		
1.3.1 (partial)	Plans are to be detailed in design, drawn to scale and show clear dimensions and areas for key elements of the development. Plans are to be provided at a detailed design stage, where constructability, structural engineering and significant building code compliance issues have been adequately resolved and will not alter the proposed development. (Plans are not required to provide information or details of structural engineering or building code compliance matters). Without limiting the scope of the reports, the details and plans are to include: <i>Development</i> - the location, building footprint, floor plan layout and purpose of proposed buildings and associated open areas; - a contiguous ground floor plan showing the relationships of interior and exterior spaces, landscapes, access points and interfaces; - the building form, height, detailing and finishes of proposed buildings and works; - elevations and cross-sections of proposed buildings, including the relationship of the maximum elevations to existing ground level; - any demolition requirements and plans including details for the removal or relocation of any utility services; - landscaping plans including details of the treatment of open spaces, including their relationship to surrounding lands and linkages; <i>refer Urban Design Framework by COX+Cumulus</i> - details of how the proposed project connects to utility services and the capacity of these services; <i>refer Light and Utility Services Report by Introba</i> - details and plans of any proposed cut or fill; <i>refer Cut and Fill Report by WSP</i>	Appendix Drawings Appendix A20 series Appendix A20-0000 Appendix A30 series Appendix A30 series A40-0000 Appendix A15-1000 60-61

No.	Clause	Page #
Proposal		
1.3.1 (partial)	- details and plans of any public art proposed as part of the proposed project, including the proposed public art procurement strategy and management approach; <i>refer Art Strategy</i> 3D digital rendering of the proposed project in context; <i>Transport</i> - plans of any proposed vehicular and pedestrian access, roads and footpaths associated with the development, both within and outside of the project area; and - plans of proposed access arrangements for service vehicles, loading/ manoeuvring areas, car/vehicle parking or queuing areas within or outside of the building footprint.	Throughout 70-76 76
1.4	Design and management response	
1.4.3	any pedestrian or vehicular access ways in the adjacent and broader area;	64-76
1.4.3	existing solar access to the project site, surrounding properties and public spaces including footpaths;	102-106
Landscape and urban form		
4.2	Urban form of Sullivans Cove	
4.2.3 (partial)	- to what degree the formal modulation, articulation, architectural expression, pattern of fenestration, design details, materials and colours of the proposed project complement or detract from existing forms and reinforce and contribute to or detract from spatial patterns of Sullivans Cove; - how the proposed project relates to and affects the expression of the wall of the Cove and the Cove floor; - to what degree the proposed project contributes to or detracts from a continuous built wall edge to Evans Street, and details of any interface at Evans Street;	55-59

No.	Clause	Page #
Landscape and urban form		
4.2.3 (partial)	• to what degree the proposed project provides active street frontages, and their locations; <i>refer Urban Design Framework by COX+Cumulus</i> • whether any 'secondary spaces' are created on the project site and their pedestrian useability, and contribution to public benefit; • to what degree the proposed stadium building is designed to make an all-round spatial and visual contribution including through active frontage; • to what degree the design and placement of urban details such as steps, seats, planting, lights and external treatments integrate with and reinforce, or detract from, the character and form of spaces and buildings; <i>refer Urban Design Framework by COX+Cumulus</i> • to what degree the proposed project overshadows public areas.	102-106
Environmental quality and hazards		
8.2	Overshadowing	
8.2.1	The reports are to describe the existing solar access of the project site and adjacent area and analyse the effects of shadow impacts from the proposed project, including: • overshadowing of public open space; • overshadowing of roads, access ways, footpaths and open areas; • overshadowing of other buildings, private open space, and windows; • cumulative impact of overshadowing from the proposed project and surrounding development; • the effects on occupants of other buildings (including heating and cooling requirements of a building and impacts on existing solar panels);	102-106

No.	Clause	Page #
Environmental quality and hazards		
8.2.1	• the effects on the public and the usage and amenity of surrounding open spaces, including the total sun hours for affected public spaces at the Winter and Summer solstices and Spring Equinox; and • the effect on existing and proposed vegetation.	102-106
8.2.2	Without limiting the content of the reports, the reports are to include shadow diagrams that: • are drawn to scale; • clearly show location and orientation; • show the solar position and angle; • show the impacts of the proposed project at minimum at 9 am, 12 noon and 3 pm on the Winter and Summer solstices and Spring Equinox; and • separately show the cumulative impacts of the proposed project and adjacent development at minimum at 9 am, 12 noon and 3 pm on the Winter and Summer solstices and Spring Equinox.	104-106
8.2.3	The reports are to describe any measures to minimise negative overshadowing effects.	103



*View toward the relocated Goods Shed and
Multipurpose Stadium from the Northern Access Road*

01 | ARCHITECTURAL DESIGN

This chapter describes the architectural design proposed for the Multipurpose Stadium as part of an integrated response to the Macquarie Point Precinct.

DESCRIPTION OF PROPOSED PROJECT

The new Multipurpose Stadium will be the drawcard attraction at the future Macquarie Point. It will be the landmark destination north of Constitution Dock and will introduce public activation to a site that has previously been characterised by industrial uses.

The development of the Multipurpose Stadium will be a catalyst for future events in Tasmania. With a 23,000 seated capacity, the Stadium will offer all the hallmarks of a major city arena, whilst supporting a 'boutique' crowd experience that preserves atmosphere for a variety of events at a range of scales.

Without question, the defining feature of the new Stadium is the roof shell that bridges over the playing field. A feat of engineering, the 190-metre clear-span structure is believed to be the largest fixed roof over a natural grass oval anywhere in the world, and certain to draw international attention. This presents an incredibly exciting opportunity to pioneer a public building type that is ideally suited to host a broad range of sporting, cultural, and community events.

This proposal to deliver a new stadium at Macquarie Point will happen alongside the introduction of the Tasmania Devils Football Club to the Australian Football League (AFL). The granting of the 19th AFL license recognised the dedication of a footy-loving community that has long fought for the State's representation in the league. The announcement of the new Tassie Devils Footy Club has been met with great enthusiasm, and it's fitting that the new Club have an exemplary home ground that represents the latest innovation in sports architecture while being *Unmistakably Tasmanian*.

Whilst AFL football will be the anchor event throughout the winter season, the functional design has been developed purposefully to support the broadest possible suite of uses.

These include;

- Cricket (ICC and Cricket Australia)
- Rugby (World Rugby/ NRL)
- Football (FIFA/ Football Australia)
- Concerts
- Festivals
- Conferences and business events
- Functions and hospitality

The proposal to develop an enclosed stadium ensures the venue's ability to attract events and activities that might otherwise be deterred by a weather-exposed arena.

Made for Tasmania

Our new Stadium will be tailor-made for Tasmania with the following key design features:

- 23,000 seated venue with up to 1,500 additional standing for major sports events
- 31,500 patron capacity for major concert events
- 1,500 person Function Room with views toward kunanyi and the Wellington Range
- 159.5m x 128.5m oval field of play
- Fixed dome-shaped roof providing full overall coverage and engineered to incorporate locally grown and sourced timber
- At the centre of the dome, a maximum roof height externally at RL 54.0, and at RL 25.5 at the perimeter
- Translucent roof cladding
- Elevated 360 degree internal concourse with service zones underneath

- An intimate seating bowl that will bring crowds closer to the action
- A serviced grandstand on the western side with three (3) levels of functional space above the field
- Fully accessible external concourse with landscape treatments at entries



FORM AND SCALE SUMMARY

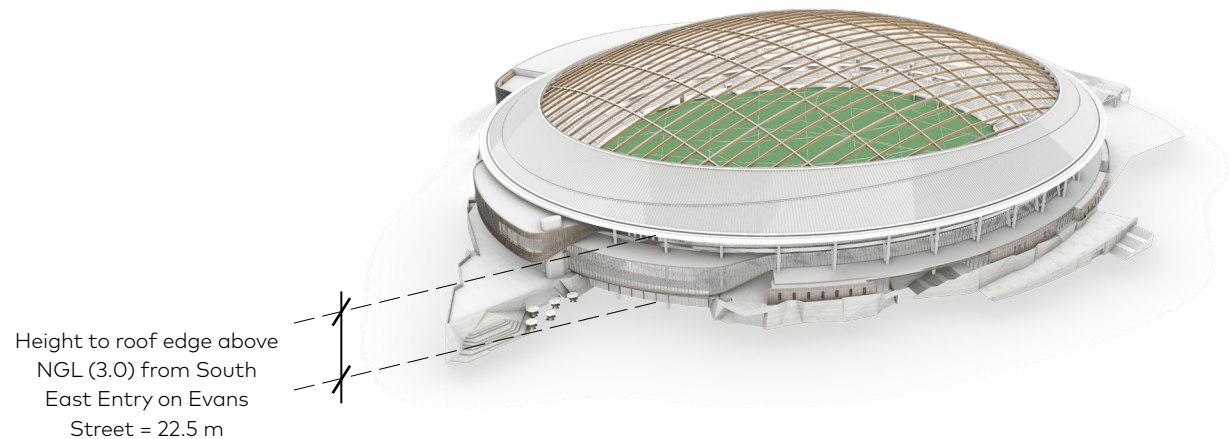
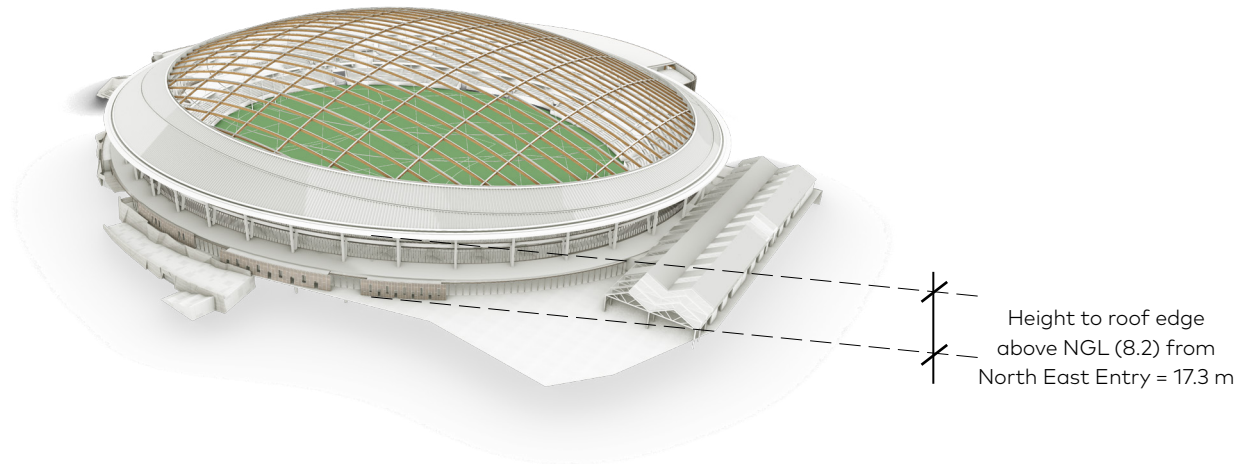
Form and Scale

The defining element of the new Stadium is the expansive roof that is required to span 190 metres across the field to safeguard the venue for events in all weather. The development of the roof has undergone an extensive options evaluation process to assess the various roof typologies against a range of design criteria. These criteria address both performance-based requirements as well as site considerations, and these needs in concert have driven an innovative engineering solution.

The design requirements include:

- A form and scale that respects views and vistas across Sullivans Cove, as well as sensitive interfaces with adjacent landmarks including the Cenotaph and historic Evans Street;
- 190 metre clear span over the field and seating areas;
- Minimum clear height over the centre of the field to accommodate international cricket competitions;
- Transparency of the roof system to admit filtered sunlight to support the natural grass surface;
- Impact of shadows cast on the field;
- Structural capability to support loads for suspended lighting and speakers;
- Mechanical and passive ventilation for thermal comfort;
- A design that can be all or partially delivered in Tasmania with consideration for local industry capability.

The design approach has adopted a dome-like, torus form. This allows the maximum height to be achieved at a central point from which the roof surface falls in every direction. The result is an overall form that minimises height where it's not required, and establishes a height at street interfaces that is comparable to the scale of existing buildings.



KEY DESIGN FEATURES

Capacity

23,000 seats plus
standing room for 1,500
patrons at major sports events

31,500 patron capacity
for major concert events

Hospitality

1,500 person Function Room
with views toward kunanyi and
the Wellington Range

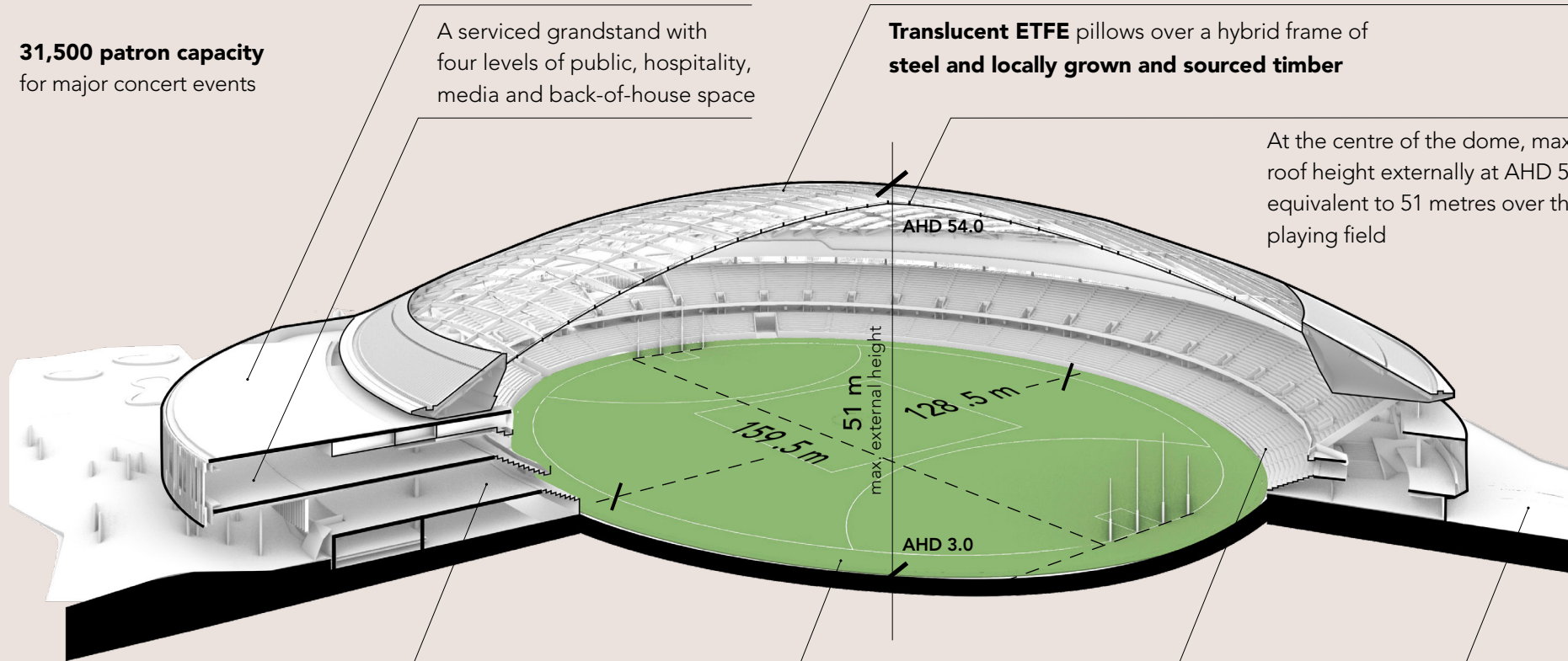
A serviced grandstand with
four levels of public, hospitality,
media and back-of-house space

Hybrid Timber and Steel Roof

Fixed dome-shaped roof that provides
full oval coverage to safeguard events
in all-weather

Translucent ETFE pillows over a hybrid frame of
steel and locally grown and sourced timber

At the centre of the dome, maximum
roof height externally at AHD 54.0,
equivalent to 51 metres over the
playing field



360° Internal Concourse

Elevated internal concourse
with **views over the field** and
service zones beneath

Multi-Sport Field

159.5m x 128.5m
Field boundary for AFL

Intimate Seating Bowl

Fans are **closer to the action**

External Concourse

Open concourse supporting
easy access and movement

UNMISTAKABLY TASMANIAN

Our design approach is focused on crafting a distinctly Tasmanian Multipurpose Stadium that will be the pride of the island, and will showcase timber technology to the world.

Tasmanians are known for their resilience, for being innovative, for growing and crafting quality products, and for creating welcoming places in their *quiet pursuit of the extraordinary*.

We approach the design development in full acknowledgement that the requirements of a contemporary Stadium must translate to a scale and form that is neither diminutive nor passive. In the words of community...

"if we're going to have a Stadium, it better be bloody good!"

Leveraging off this vision, the *continued* pursuit of the extraordinary will be a beacon to inspire a high-quality design that extends above and beyond the ordinary, and reaches to the remarkable.





View toward Gate 1 (South East Entry)

VISION

DESIGN PILLARS

The architectural response has drawn upon a series of pillars to guide the development of the design. These pillars articulate the qualities of place that will characterise the Project, beyond the requirements of the Brief. The intent is to drive a design outcome that is Unmistakably Tasmanian.

Culturally Informed

In addition to specific consultancies, consultation with the Tasmanian Aboriginal community, and cultural heritage investigations completed and underway, the concept design for the Multipurpose Stadium and surrounding landscape designs are being informed by Palawa community members Dean Greeno and Theresa Sainty to support the development of culturally informed designs. This will continue to be a focus during the detailed design process, including identifying opportunities for Tasmanian Aboriginal people to contribute artworks, opportunities to potentially highlight cultural practices and share stories, and to culturally inform the detailed design process as guided by consultation with community, and continuing to work directly with community members during implementation, including Theresa and Dean.

The new Stadium is first and foremost a gathering place where community can come together – around sport, music, entertainment, or reflection – to enjoy a collective experience in a venue for all Tasmanians. Overtime, new rituals will form around events at the Stadium... maybe through the arrival sequence, a shared walk, a shared song, or a common activity celebrated after the game. This tradition of gathering together has deep meaning in First Nations culture, and for all people, is intrinsic to our humanity.

Grounded in Place

The guiding principle for the Macquarie Point Multipurpose Stadium is that it will be *Unmistakably Tasmanian*. How does this inspire an architectural response? From the outset, the

form of the building is intended to accommodate all the functional requirements of a contemporary Stadium whilst being distinctly grounded in place. This means drawing on the built traditions of Sullivans Cove where buildings are expressed as legible forms on the Cove Floor and can be experienced from every aspect.

This principle also guides a design outcome that references the surrounding maritime uses as well as the industrial legacy of the site. The former Round House associated with the old Hobart Rail Yards established a precedent for round buildings at Macquarie Point from which to draw inspiration

The design of the Stadium has thoughtfully considered the placement of openings to introduce glimpses to the context beyond. Moreover, translucent cladding to the roof will allow kunanyi and the Cenotaph to be viewed from within the Stadium. This way, visitors in the stands will remain visually connected to their place, and will have an experience that can be nowhere other than Hobart.

Experience and Discovery

On listening to community, a recurring theme is an appreciation for places that are accessible and inviting. This may take the form of an architectural response that provokes intrigue, and beckons passers-by to come in and explore. Conversely, the prospect of a predictable, uniform Stadium building has been met with resistance. A commercial sameness in the presentation of the building is to be avoided, and instead, a range of authentic places and experiences is to be pursued.

The architecture will express a variety of distinctive spaces within and around the Stadium... some will be open and expansive; others will be intimate and characterful. The intent is to inspire a sense of discovery, as well as an unrivalled experience for fans inside a world-first Stadium where atmosphere is rich and resonant.

A Tasmanian Timber Story

The opportunity to celebrate Tasmania's renowned timber technology in this project of state significance is unmissable. The use of hardwood in the structural elements of the 190-metre clear-span roof will place locally grown and sourced timber prominently 'on show' and in the very heart of the Stadium. The intent is to use timber in such a way that is elemental to the working of the Stadium, and not simply decorative or trite.

The use of a material that is both prized for its quality and is locally available will enable the supply chain to remain within Tasmania and promote local industry and expertise. Harnessing a natural resource for a complex engineering brief will demonstrate the capability of our technology and drive innovation.

A Welcoming Design

Our commitment to a welcoming design will inform many of our design choices; from the placement of entries and movement pathways, to the selection of materials and finishes that feel warm and inviting. Our preference is for materials and construction techniques that are raw and honest and reflective of our Tasmanian character. Creative and unassuming resonates with who we are and what we like.

More particularly, the design intent for our new Stadium is to express an architecture that will be timeless and age well. A building that looks harmonious in its context and amongst natural elements... the escarpment, the river, the sky. The use of natural materials will characterise the building, and the expression of textures and finishes that will patina with time will convey a sense of permanence and belonging to its place.

TASMANIA'S MULTIPURPOSE STADIUM



Image Sources:

1. asd

2. asd

2. asd

3. asd



Culturally Informed

- › Working with palawa community members to support the development of Culturally Informed designs.

Grounded in Place

- › Belongs to this Place
- › Form and Materiality
- › Tasmanian Identity and Values
- › Visual Connections to Place (kunanyi, Cenotaph, Derwent River)

Experience and Discovery

- › Aspirational and Inviting
- › Authentic Fan Experience
- › Accessible and Adaptable for a Range of Experiences

A Tasmanian Timber Story

- › Local Expertise
- › Tasmanian Ingenuity
- › Raw Materials
- › Showcasing Locally Grown and Sourced Timber

A Welcoming Design

- › Raw, Honest, Timeless, Quiet and Humble
- › Creative and Unassuming
- › Could only be of this Place

PROJECT SCOPE

The Project of State Significance

The precinct as illustrated in this report represents an integrated proposal for the future Macquarie Point Site. It includes a range of infrastructure – some enabling works, and other future opportunities - that will support the operation of the Stadium and contribute to a vibrant, mixed-use precinct.

In October 2023, the proposal for a multipurpose stadium at Macquarie Point was defined as a Project of State Significance. A corresponding Macquarie Point Draft Precinct Plan was endorsed and illustrated how a stadium could be located on the site. The Draft Precinct Plan showed an outline around the Stadium and its associated external concourse, thereby designating the scope of the Project of State Significance (PoSS).

The Concept Design for the proposed Stadium as illustrated in this report has respected the designated boundary represented in the Draft Precinct Plan. However subsequent developments have prompted a recommendation that the extent of the works that are subject to the PoSS be expanded.

These developments include:

- The need to accommodate outdoor practice wickets to make provision for cricket competitions, and
- Relocation of the former Hobart Railway Goods Shed in response to its inclusion in April 2024 on the Tasmanian Heritage Register.

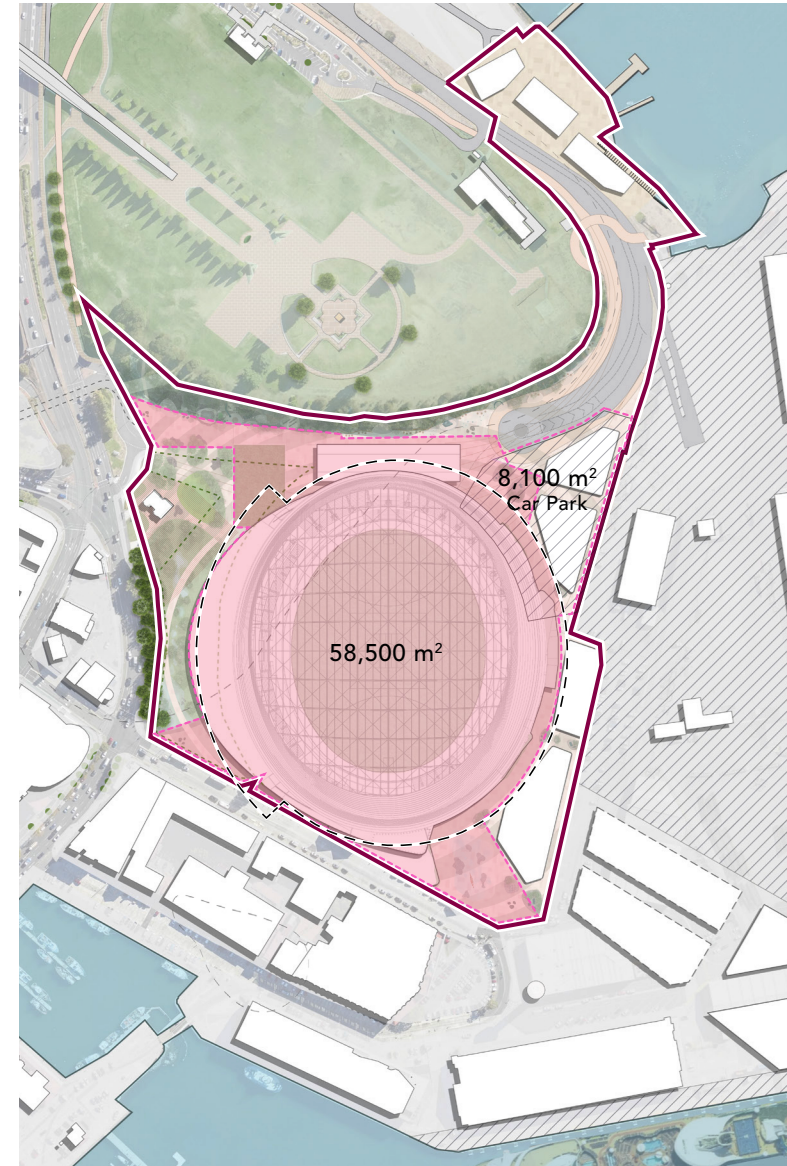
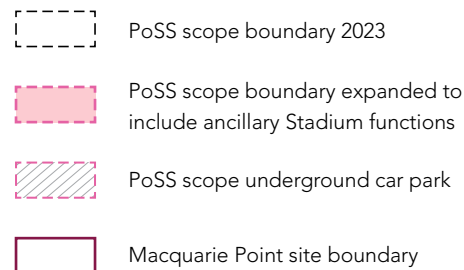
The recommendation of this report is that the extent of works to be considered as part of the PoSS be inclusive of the following:

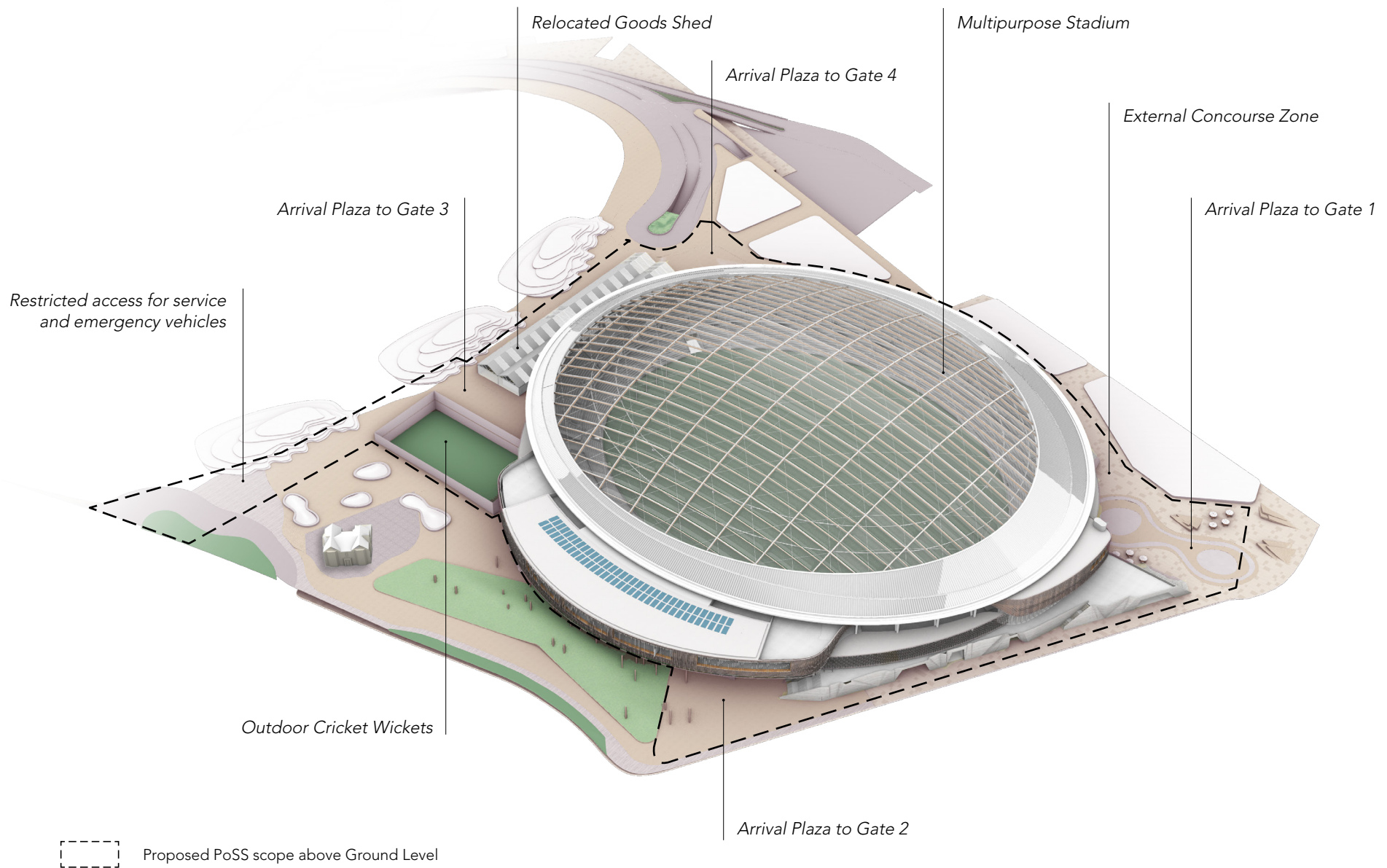
- The Stadium,
- External concourse zone,
- Arrival plazas in front of the four Entry Gates,
- Outdoor cricket wickets adjoining the Stadium,
- Underground car park, and
- The Goods Shed that will be relocated and integrated with the Stadium to the north.

The external concourse and arrival plazas associated with the Stadium provide important circulation space for the safe movement of large numbers of people. The area allocation of these spaces has been benchmarked against comparable venues to ensure they are suitably sized for the anticipated volume of people during peak arrival and departure times.

The extent of works subject to the PoSS will occupy an area of approximately 58,500m² above ground. The underground car park will occupy an area of approximately 8,100m² below ground.

This report provides a detailed description of the project subject to the PoSS as described above, and an accompanying Urban Design Framework prepared by COX+Cumulus addresses the landscape treatment of the open spaces, and the urban context and broader integration with the precinct.





ARCHITECTURAL COMPOSITION

The approach to the architectural composition can be understood *from ground up, and sky down*. The new Stadium is composed in three distinct strata; one ground based, one sky bound, and a central layer in the middle. Each layer is distinguished by its own materiality.

Folded Ground Plane

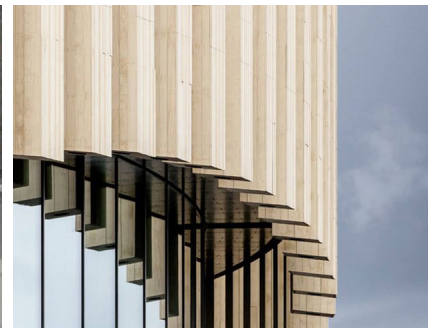
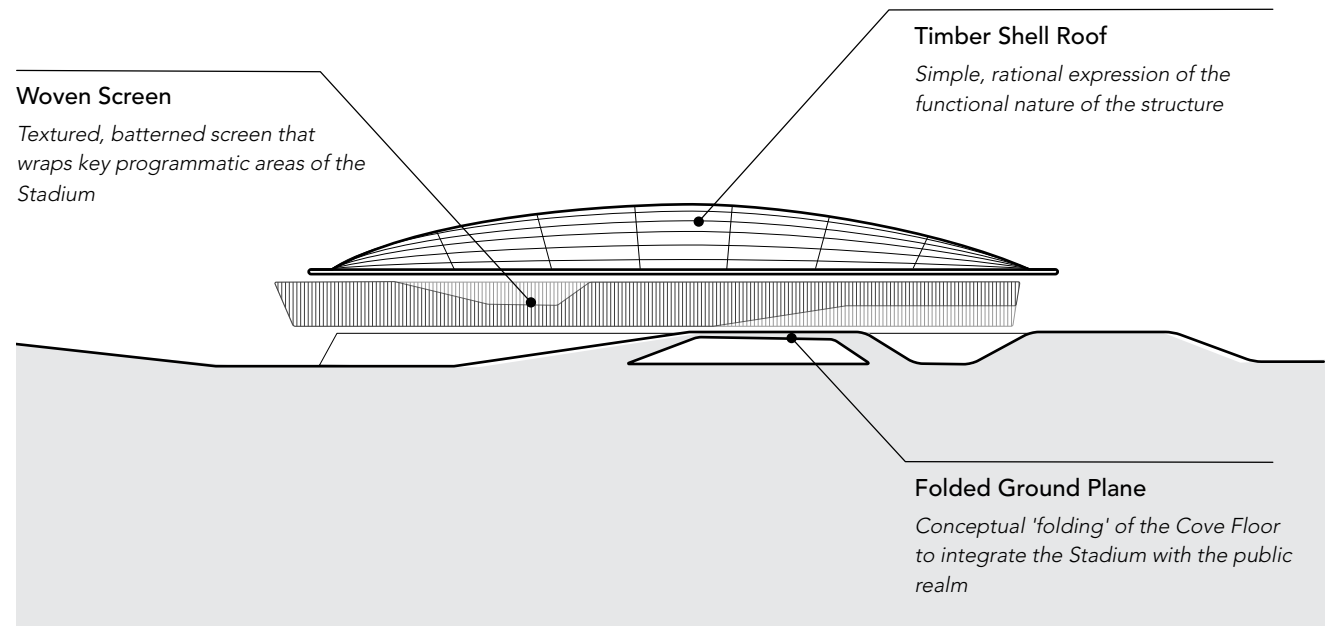
The folded ground plane is an expression of the base of the building at ground level and incorporates all elements of the development beneath the internal concourse at Level 1, as well as the lower seating terraces inside the Stadium. The Cove Floor will fold-up into a podium structure on which the Stadium sits. This maintains the pedestrian scale along Evans Street, and allows a consistent expression of materiality at ground level, in keeping with the Cove.

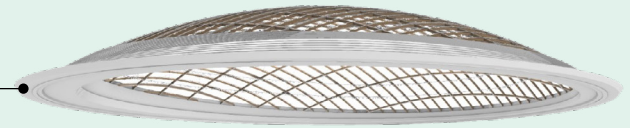
Woven Screen

The 'woven screen' layer is home to the hospitality spaces that support the Stadium, including food and beverage offerings that service the concourse, as well as the Function Room at Level 2 and associated bars. This central layer is a distinctive element of the building and cantilevers over the external concourse on the western side. The primary facade treatment for the 'weave' will be a battened screen with variable openings to allow views from glazing behind.

Timber Shell Roof

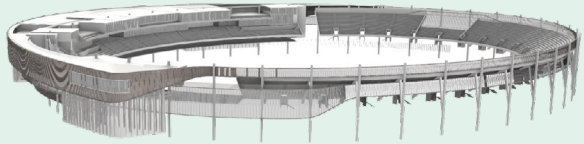
The expansive roof shell over the field is conceived as belonging to the sky. It is intended to be read as cloud-like with a translucent skin that admits light, views, and a sense of connection to the city, mountain, and waterfront beyond. Its timber structure is expressed on the underside, and the volume created underneath will inspire a moment of awe - an appreciation of the extraordinary - as you arrive inside.





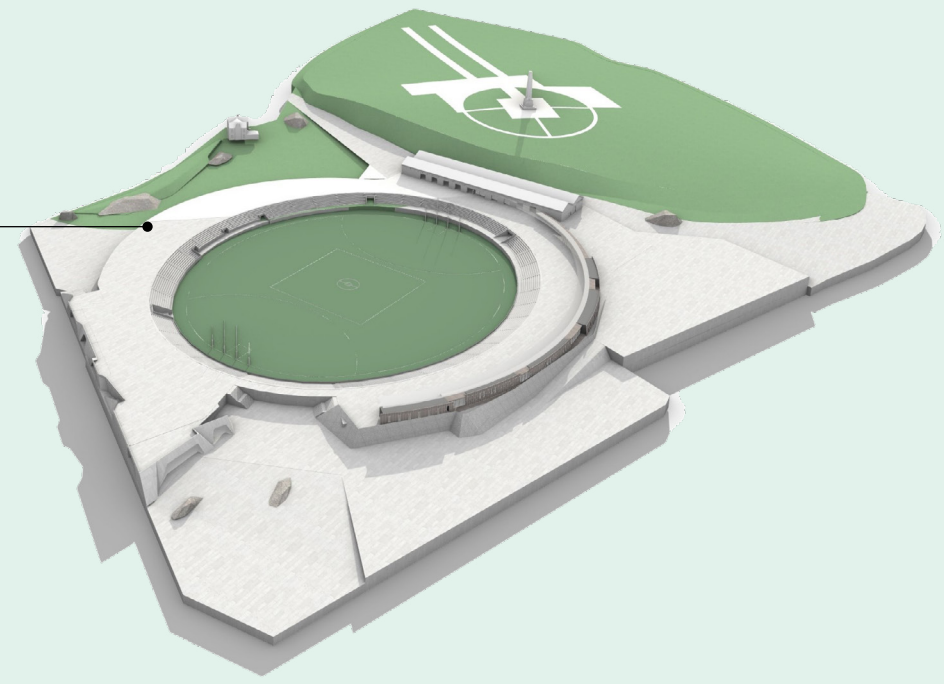
Timber Shell Roof

- › Steel and timber hybrid structure
- › Optimised engineering – doing more with less
- › ETFE transparent pillows



Woven Screen

- › Function Room with views to kunanyi
- › Weather protection to concourse
- › Shading and aspect



Folded Ground Plane

- › Revealing of the Cove Floor
- › Rediscovering original shoreline

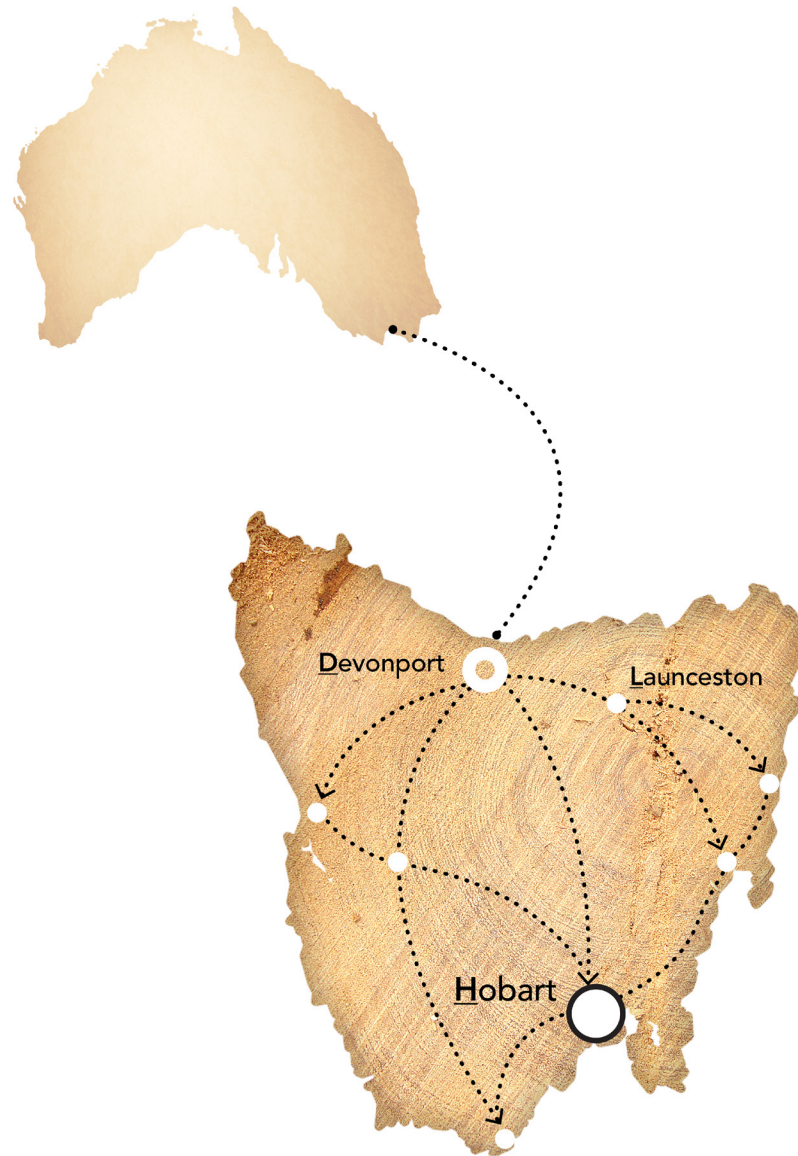
TIMBER TECHNOLOGY IN A WORLD-FIRST STADIUM ROOF

For our new Stadium, we are incorporating locally grown and sourced timber which will enable the supply chain to remain within Tasmania and promote local industry, expertise, and skills. Moreover, harnessing the natural properties of hardwood for a complex engineering brief will demonstrate the capability of our resources and technology, and will contribute to Tasmania's reputation for innovation in our quiet pursuit of the extraordinary.

The best locally grown and sourced timber for the job

The design development process has drawn on local expertise at the University of Tasmania (UTAS) as well as the Centre of Sustainable Architecture with Wood (CSAW). Together with leading engineering firms AECOM and Schlaich Bergermann Partner (sbp), we've developed a roof concept that will showcase timber in a way that is integral to the structure of the roof whilst representing an efficient use of material.

We will work with local industry to understand the supply options available. Sustainable sourcing practices will underpin the construction supply chain for the project, and all timber used on the Stadium will be independently certified.





Cricket inside the Stadium

FULL ROOF COVERAGE

Why a fully covered Stadium?

The spectators in the stands are at the heart of the design brief for the new Stadium. The decision to pursue a fully roofed venue is driven by a desire to provide shelter from the harsher elements of the weather, and to safeguard the venue for a variety of events in all-conditions.

The inclusion of the roof provides a particular advantage in that it allows live performance events to be staged on the field, and therefore maximises content opportunities for the Multipurpose Stadium.

Patron Comfort

Promoting patron comfort is a high-priority for the project, and reducing visual glare, providing protection from the wind, and optimising thermal comfort are all advantages that full-roof coverage presents. For this reason, the design brief required a fixed translucent roof over the Stadium to provide full coverage for patrons, players and performers. A decision made by the design team is to adopt locally grown and sourced timber for the structural components.

Optimised Light Locations and Reduced Light Spill

A significant advantage from a full coverage roof is that it provides an apparatus from which sports lighting can be suspended, negating the need for free-standing light towers (similar to the MCG or Adelaide Oval), or lights fitted to a roof edge further from the field. Light fittings can be fixed directly over the field and in closer proximity to the playing surface. The result of this configuration is that fewer light fittings are required, and light spill from the venue is reduced. Mitigating light spill presents a considerable benefit for neighbouring residential areas and existing activities on Evans Street.

The lighting design has considered the extent of the spill lighting, which is calculated to be minimal. A technical model was developed by lighting engineers for the purpose of providing a comparative assessment of the potential light spill from both an open roof scenario as well as full-roof coverage. With an open roof, 100% light transmission is expected as a conservative assessment. With full-coverage – even with a translucent ETFE roof – some absorption of light spill will occur.





Live performance inside the new Stadium

ROOF OPTIONS EVALUATION

The roof is the hardest working and most prominent element of the new Stadium. In addition to providing enclosure and comfort for spectators, the roof must also serve as an apparatus to support lighting, speakers and other equipment without imposing on the most important feature of the Stadium; the performance on the field below. Significantly, the challenge the roof presents is the need to introduce daylight to ensure the health of the natural grass playing surface.

The development of the roof has undergone an extensive options evaluation process to assess various roof typologies against a range of design criteria. These criteria address both performance-based requirements as well as site considerations, and these needs in concert have driven an innovative engineering solution.

The design requirements include:

- A form and scale that respects views and vistas across Sullivans Cove, as well as sensitive interfaces with adjacent landmarks including the Cenotaph on Regatta Point and historic Evans Street;
- 190 metre clear span over the field and seating areas;
- Minimum clear height requirements to support football, and exceed existing benchmarks for indoor cricket;
- Transparency to admit filtered sunlight to support the natural grass surface;
- Structural capability to support loads for suspended lighting and speakers; and
- Mechanical and passive ventilation for thermal comfort.

At the commencement of the design process, COX+ Cumulus together with leading engineers AECOM and schlaich bergemann partners (sbp) undertook extensive development of options to analyse the various different roof typologies that could support the Brief. In addition to the above listed core requirements, other attributes have been considered in the evaluation process for the optimal roof design.

Closed Roof or Openable

The relative value of a fixed, closed roof in comparison to an openable roof has been assessed. Openable roofs require additional structure and mechanisms to support the operational

components of the roof system, which can result in a deeper structural zone beneath the roof surface which drives a higher roof profile.

A traditional, sliding panel roof also requires additional area for the panels to overhang when in an open configuration.

Roof Profile

The optimal roof profile will take into account several factors including height, structural stability, and overall form. Arched forms and domes will have variable height, with a central peak and a lower perimeter. They are also known for their inherent compressive strength which reduces reliance on additional structural members. Domes also promote efficient air circulation that will offer improved internal comfort.

By comparison, flat profile roofs have a generally consistent height, but over large spans will require more and deeper structural members to prevent the structure sagging.

Sunlight Permeability for Grass Health

Adopting a roof structural design that minimises visual obstructions will also support maximum sunlight filtration to the playing field to promote grass health. The adoption of ethylene tetrafluoroethylene cladding (or ETFE, a high-strength polymer with high light transmission) will achieve the desired transparency.

ETFE pillows have been adopted, in preference to single skin ETFE. The pillow form has its own structural stability and therefore reduces reliance on additional structural framing. The selection of ETFE pillows will reduce the number and size of structural elements required and allow for increased sunlight permeability.

Shadow Casting

The impact of shadows cast on the field by both the roof and the seating bowl is an important consideration, as shadows can adversely impact both the performance on the field, as well as the quality of any broadcast. The extent, clarity and complexity of shadows cast by the roof are all factors to be considered.

To mitigate the impact of shadows, a key design principle is to minimise the quantum and depth of structural members. A lighter structural system will yield the most desirable outcome, and this is best achieved with a structural form with inherent stability, such as a dome.

Increasing light diffraction as it passes through the roof will also lessen the impact of shadows. Diffraction occurs when a light wave passes through a barrier and bends or spreads out, resulting in softer shadows. The ETFE pillows on the roof will provide excellent light transmission, but due to the curved form of the pillows there will also be significant light diffraction (light waves bending as they pass through the surface).

Additionally, alignment of the primary structural beams in a north-south direction will provide optimal orientation with respect to the passage of the sun, and will minimise sunlight obstruction and adverse shadows.

Local Construction Capability

A design that aligns with our vision to be *Unmistakably Tasmanian* should be able to be delivered by local industry. The design and engineering of the roof has therefore taken into account the capability of Tasmanian-based fabricators and local supply of resources. This in turn informs material selection.

Incorporation of Timber Elements

In response to the aspirations of the Brief - and the cultural and industrial associations of Tasmania with timber - there is a strong preference for a roof form that can incorporate timber in a way that is integral to the structural system. This aspiration needs to be balanced with a structural design that can still be lightweight and highly efficient.

Expansion Strategy

Futureproofing the Stadium to allow for adaptability is another important consideration. The ability of the roof design to efficiently accommodate the possible future expansion of the seating bowl has been taken into account as part of the options evaluation.

BALL TRAJECTORY STUDY

Cricket Ball Trajectory Study

The cricket ball trajectory is a key consideration in establishing the clear height required under the roof. The Brief stipulates minimum clear heights to support football, and exceed existing benchmarks for cricket in covered venues. This would suggest a relatively flat profile to the roof which would require deeper structural members to support the span.

To refine the design development, we have reviewed data available from Hawk-Eye camera systems that visually track and map the trajectory of a ball. This reveals typical patterns of play in a cricket match, and indicates the likelihood of a ball coming into contact with adjacent structures.

The section below illustrates the cricket ball trajectory informed by Hawk-Eye data, and how it is accommodated under the proposed roof form.

In addition to responding to ball movements, the underside of the roof needs to make allowance for structural elements as well as suspended lighting, speakers, and fans to support the patron experience within the Stadium.

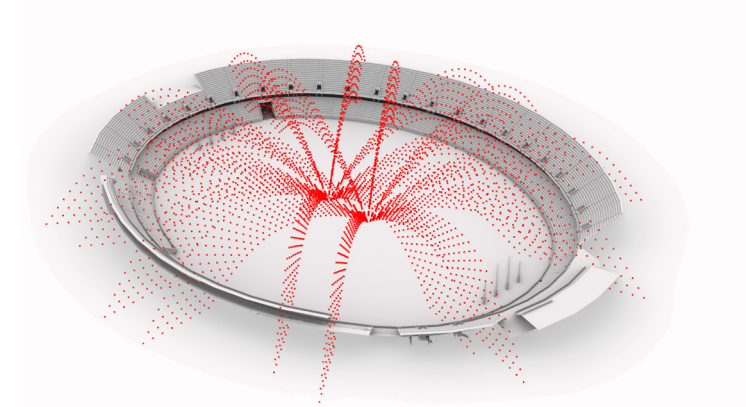


Figure 1: Hawk-Eye modelling of cricket ball trajectory

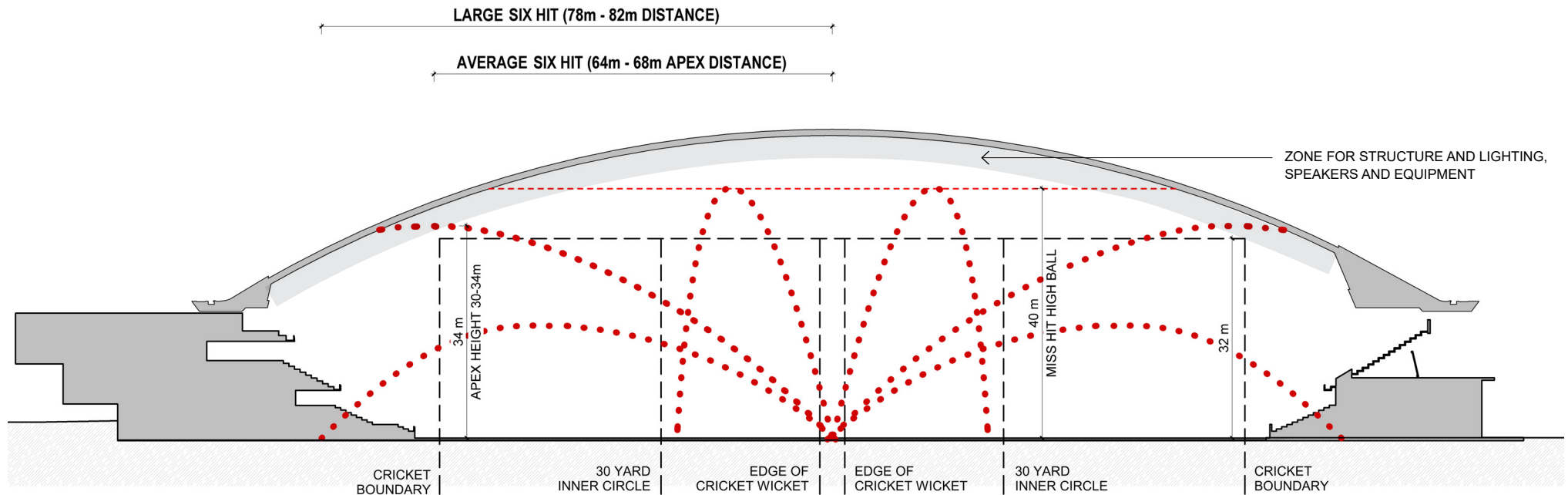


Figure 2: Section study of cricket ball trajectory

THE GRID-SHELL ROOF

A Grid-Shell

Curved structures can span large distances with minimal material use. Of the suite of geometric, three-dimensional forms, the dome demonstrates greatest structural stability.

For the new Stadium, the roof surface is described as part of a torus; a slice from the top of a doughnut lying on its side. To create a lightweight and transparent structure, this toroidal surface is achieved by arrays of longitudinal and transverse arches, yielding a regular grid. The chosen grid size represents the 'sweet spot' between the number of nodes required and economy of individual spans. The primary grid, made from welded box sections, is further subdivided using glued-laminated beams made from locally grown and sourced timber. Transparent, rectangular ETFE cushions are mounted to the roof structure to seal the envelope.

Loads acting on the structure are transferred bidirectionally to the perimeter via arches. The cable bracing of the arches ensures that the grid behaves like a shell structure. To avoid the need for extensive foundations, the horizontal forces of the arc are not directly introduced to the ground. Instead, it is short-circuited by the perimeter beam, which acts as a tension ring. Under self-weight, all horizontal forces are in equilibrium and only vertical forces are transferred to the columns and into the compact foundations.

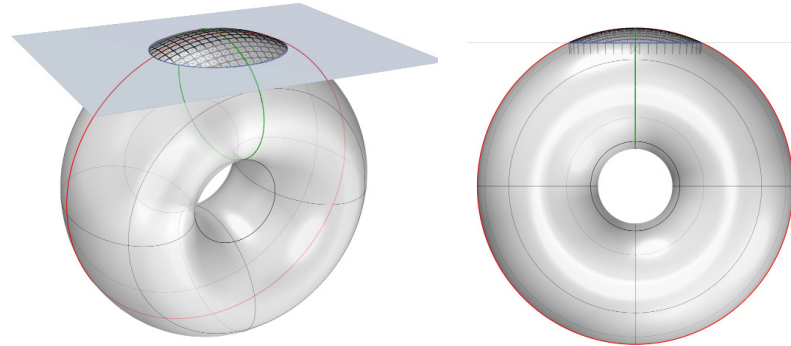


Figure 3: (Left) The elliptical footprint dome geometry results from slicing a torus with a plane

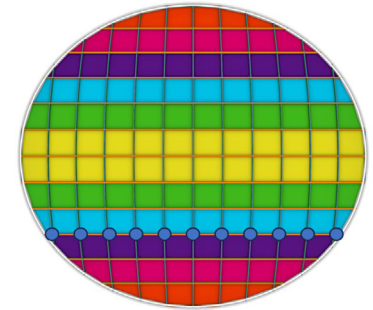


Figure 4: (Right) Plan view of the grid. Each row of the grid has identical, planar quadrangles and identical nodes

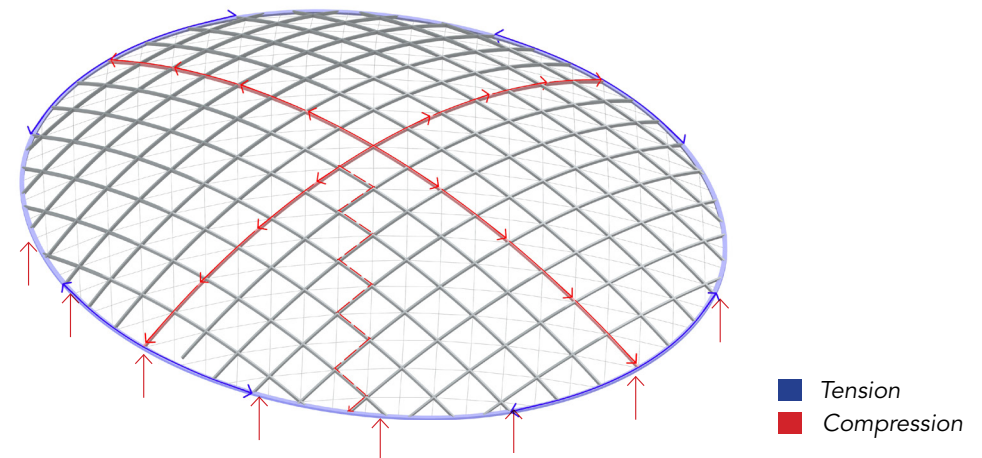


Figure 5: Structural diagram: Under self weight, horizontal forces are in equilibrium, only vertical loads are transferred to the columns (many load paths exist)

THE 'STADIUM STACK'

North-South oriented ETFE pillows

Metal deck to roof annulus

GLULAM timber secondary elements

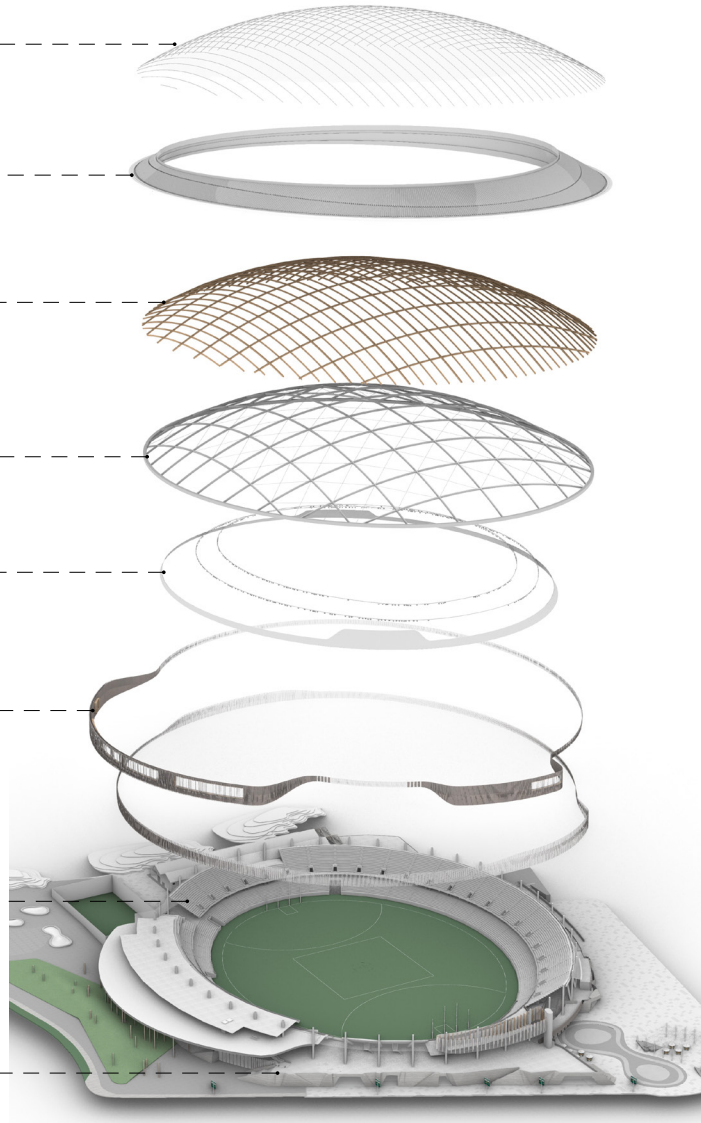
Steel primary elements

Lighting, speakers, and video boards

Battened screen to mid-level facade

Seating bowl

Concrete plinth to Ground Level



ROOF OUTLINE BRIEF

Clear Height Requirements

The dome geometry reduces the height of the Stadium where it interfaces with the urban context while providing the required clear-height over the playing field. With the height maximised toward the centre of the field, the likelihood of conflicts between ball and roof are greatly reduced.

Sports Lighting (Roof mounted vs Towers)

The sports lighting is integrated in the dome surface, avoiding the need for additional tall and light-polluting towers. The LED lighting is designed to the requirements of international standard sporting events and minimises glare and shadows.

Performance Requirements for Field of play

The membrane cladding of the roof is highly transparent to promote grass growth on the pitch through natural lighting. The transparent surface of the roof is oriented toward true north (rather than on axis with the centre line of the Stadium) to ensure daylight reaches the grass even when the sun is low.

Shadows

The lightness of the structure above the playing field minimizes shadows cast on the ground. The regularity of the roof structure translates into uniform lighting conditions at ground level.

The ETFE pillows increase the light diffraction as it passes through the roof and support softer shadows on the playing surface. At the perimeter, the roof is opaque above the stands to provide shade and keep spectators cool.

Roof Composition

The roof skin is composed of ETFE (Ethylene tetrafluoroethylene) pillows mounted to a dome-shaped hybrid steel and timber structure.

ETFE Roof Cladding

ETFE is a high-strength polymer with high light transmission.

ETFE pillows have been adopted, in preference to single skin ETFE. The pillow form has its own structural stability and therefore reduces reliance on additional structural framing. ETFE pillows also increase light diffraction which has a softening impact on shadow casting.

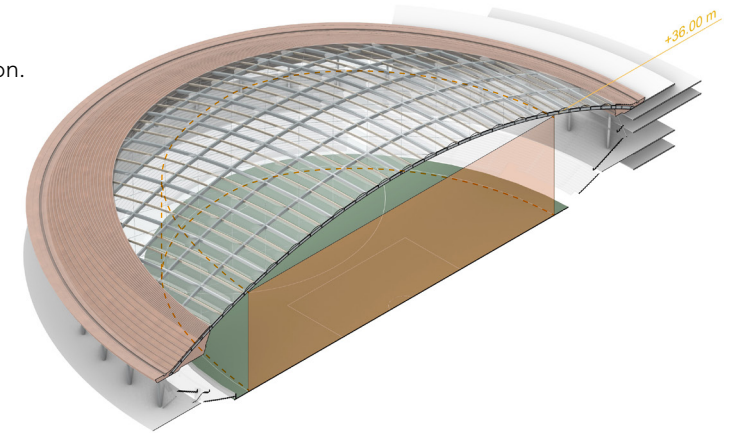


Figure 6: High-ball clear height envelope and roof shape

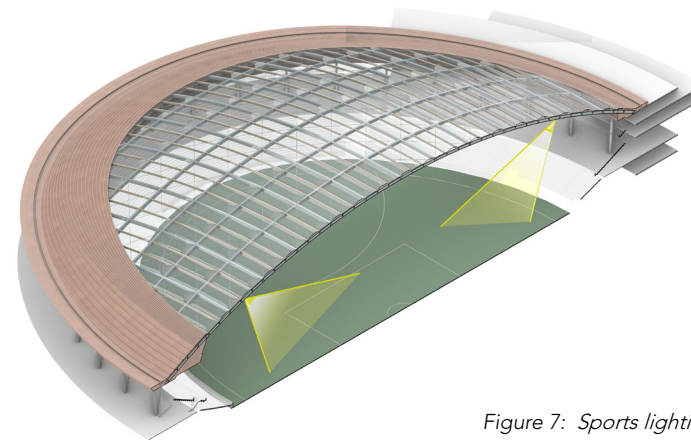


Figure 7: Sports lighting integrated in roof plane

SAFETY, CONSTRUCTION, ACCESS AND LIGHTING

A Safe Structure

Given the significant economic, social, and environmental impacts that would arise in the event of a structural failure, the design complies with the criteria established in AS 1170.0 for major structures with Importance Level 3. The shell structure ensures even load distribution across the entire roof and enhances its overall strength. The interconnected nature of the gridshell provides redundancy, allowing multiple load paths to compensate individual element failure. The structure is robust and capable of sustaining localized damage from accidental events without undergoing disproportionate or progressive collapse.

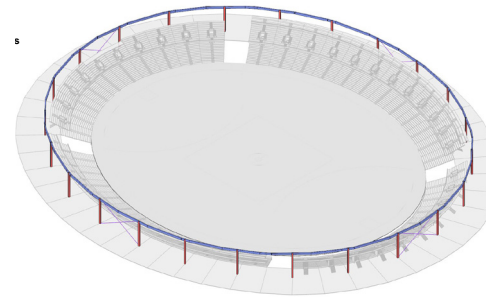
Serial Production and Rapid Construction

The roof is designed as a kit of parts with numerous identical elements and details. The components are prefabricated off-site, where controlled environments and serial production ensure greater quality control. The large degree of prefabrication and 'just-in-time' delivery to site of components allows for timely and safe delivery of the roof while minimising noise pollution and disruption to the local traffic. The involvement of regional contractors keeps transportation distances short.

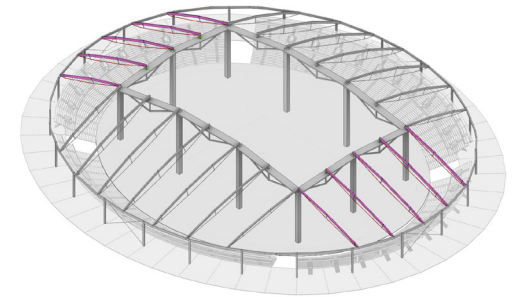
Roof Access and Lighting

Roof maintenance and a roof walk will be provided by discrete access hatches and ladders to safely traverse the surface as required. A discrete static line system will be used to get access to 100% of the roof. Sports lighting to accommodate a range of sporting and event activities within the venue will be provided to suit international standards. The sports lights will be deliberately and specifically focussed on the pitch to limit the light spill to neighbouring residents. LED lights will be used which will incorporate feature lighting for branding opportunities and house lighting.

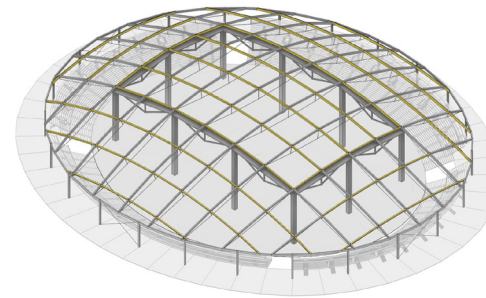
Schematic Construction Sequence Framing Principles



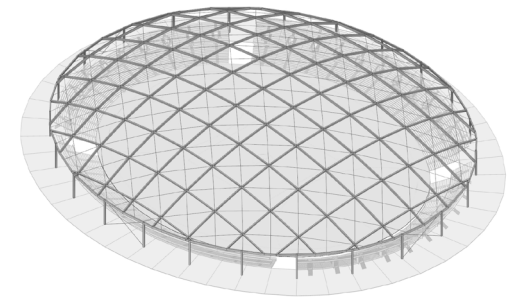
1. Columns and tension ring



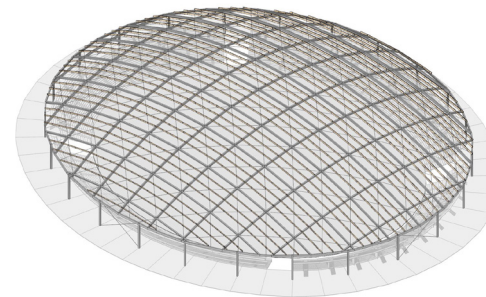
2. Primary arch segments on temporary supports



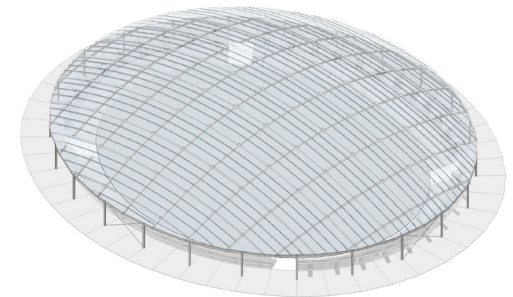
3. Primary arch segments in longitudinal direction



4. Installation and pre-stressing of bracing



5. Timber secondary beams



6. ETFE cushions

SOLAR ACCESS AND REFLECTIVITY

Solar Access and Shadows

The roof design for the Stadium has considered the impact of shadows cast onto the field. The intent is to minimise the extent of shadows altogether and thereby maximise solar access to the natural grass field. An additional benefit will be improving the quality of broadcast footage with balanced lighting across the playing surface.

The engineering for the roof has been able to adopt a comparatively light structural framing system because of the inherent stability of the dome form. If a flat profile roof was to be proposed, the quantum and/or depth of structural framing members would typically increase and impose shadows on the field that are more defined. The alignment of the primary structural beams in a north-south direction will provide optimal orientation with respect to the passage of the sun, and will minimise sunlight obstruction and adverse shadows.

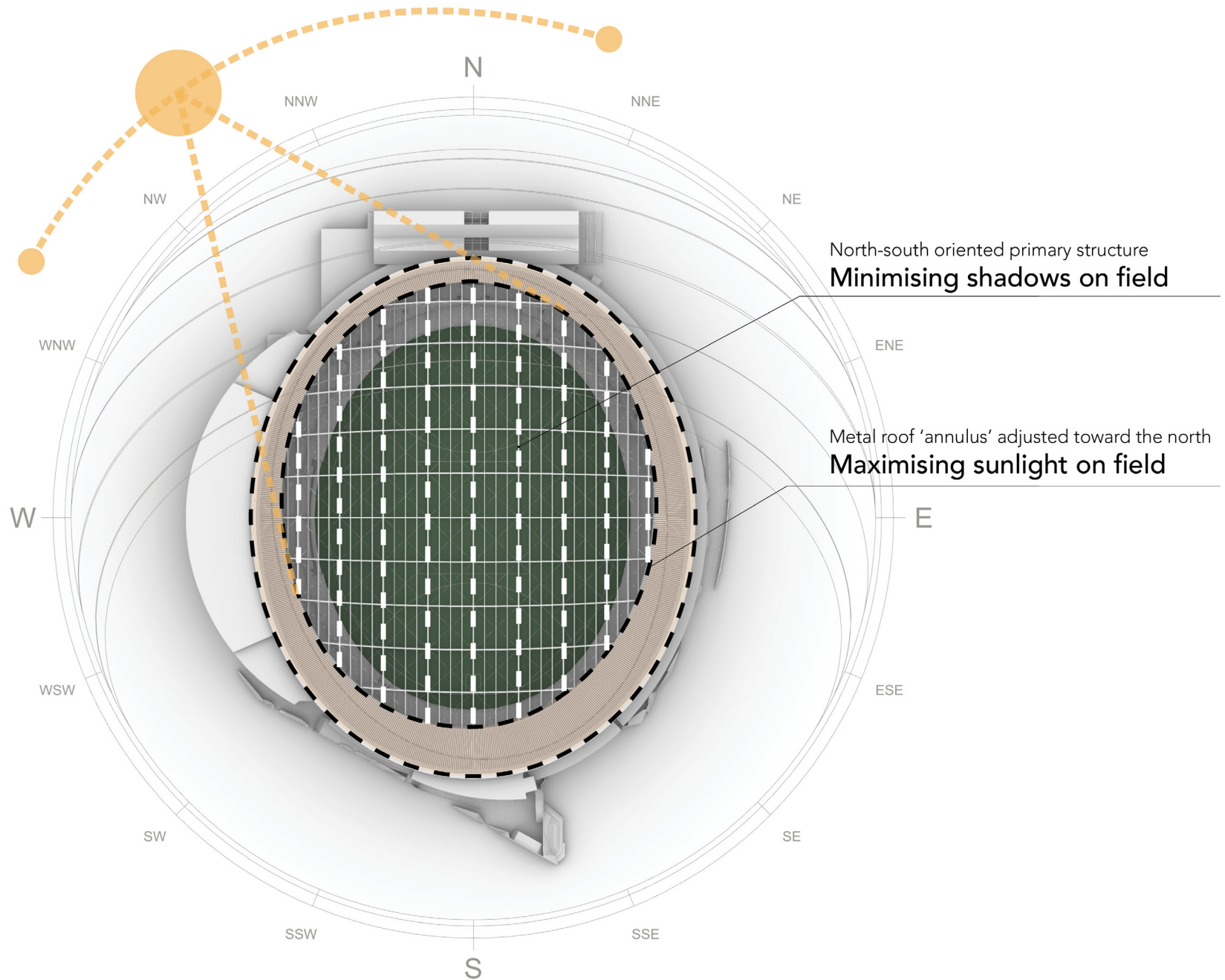
The high translucency of the ETFE pillows that clad the roof will provide excellent light transmission. The curved form of the pillows will also increase the light diffraction, meaning light waves will bend as they pass through the surface which has a diminishing effect on shadows. The shaping of the metal 'annulus' to the roof perimeter has responded to solar orientation with reduced extent of metal cladding facing north.

The collective impact of the lightweight structural grid, the ETFE pillows causing light diffraction, and the consistent composition of the roof system over the field will result in shadow casting that is unlikely to have a significant impact on the playing field or broadcasting.

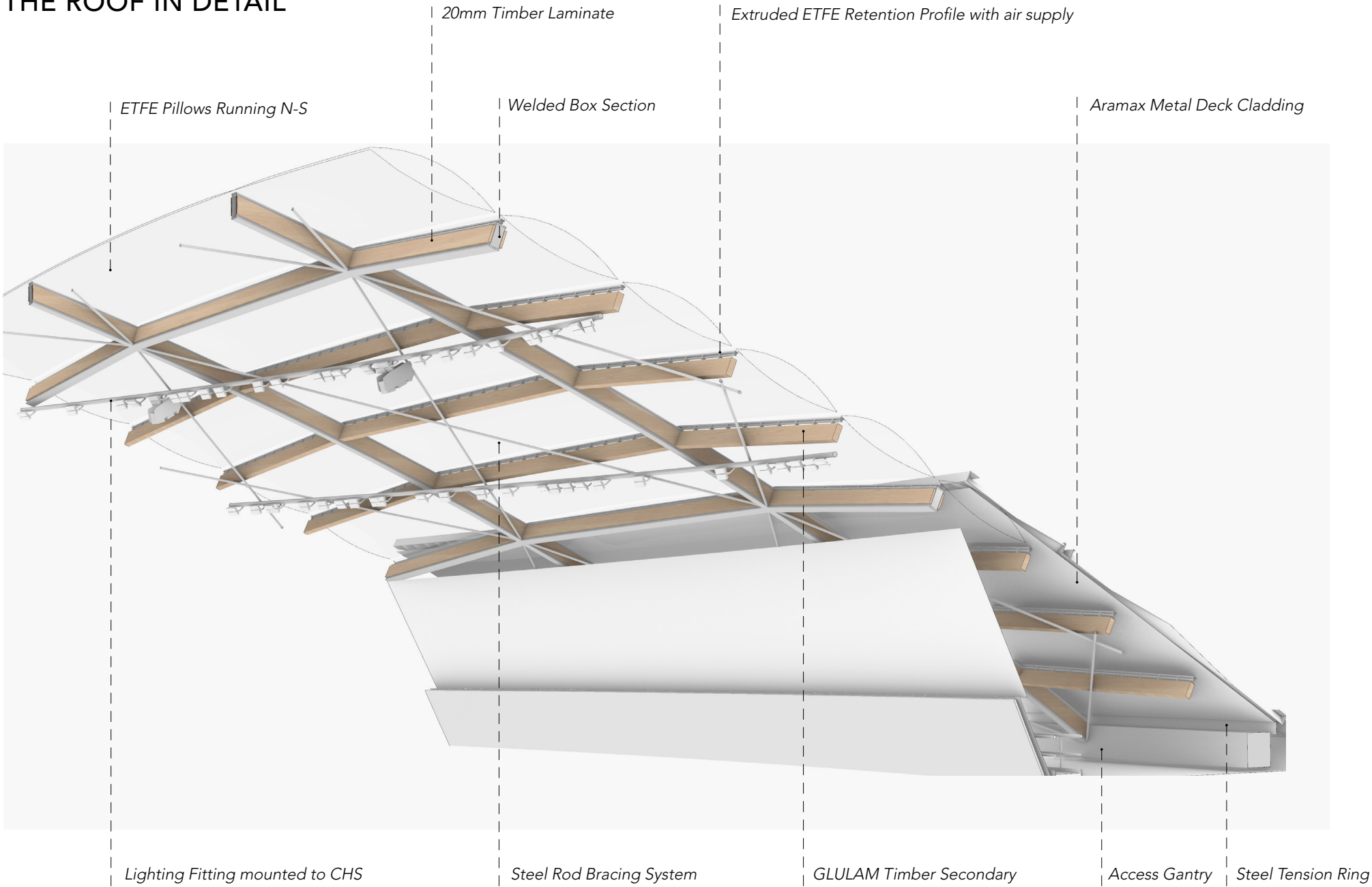
Light Reflectivity

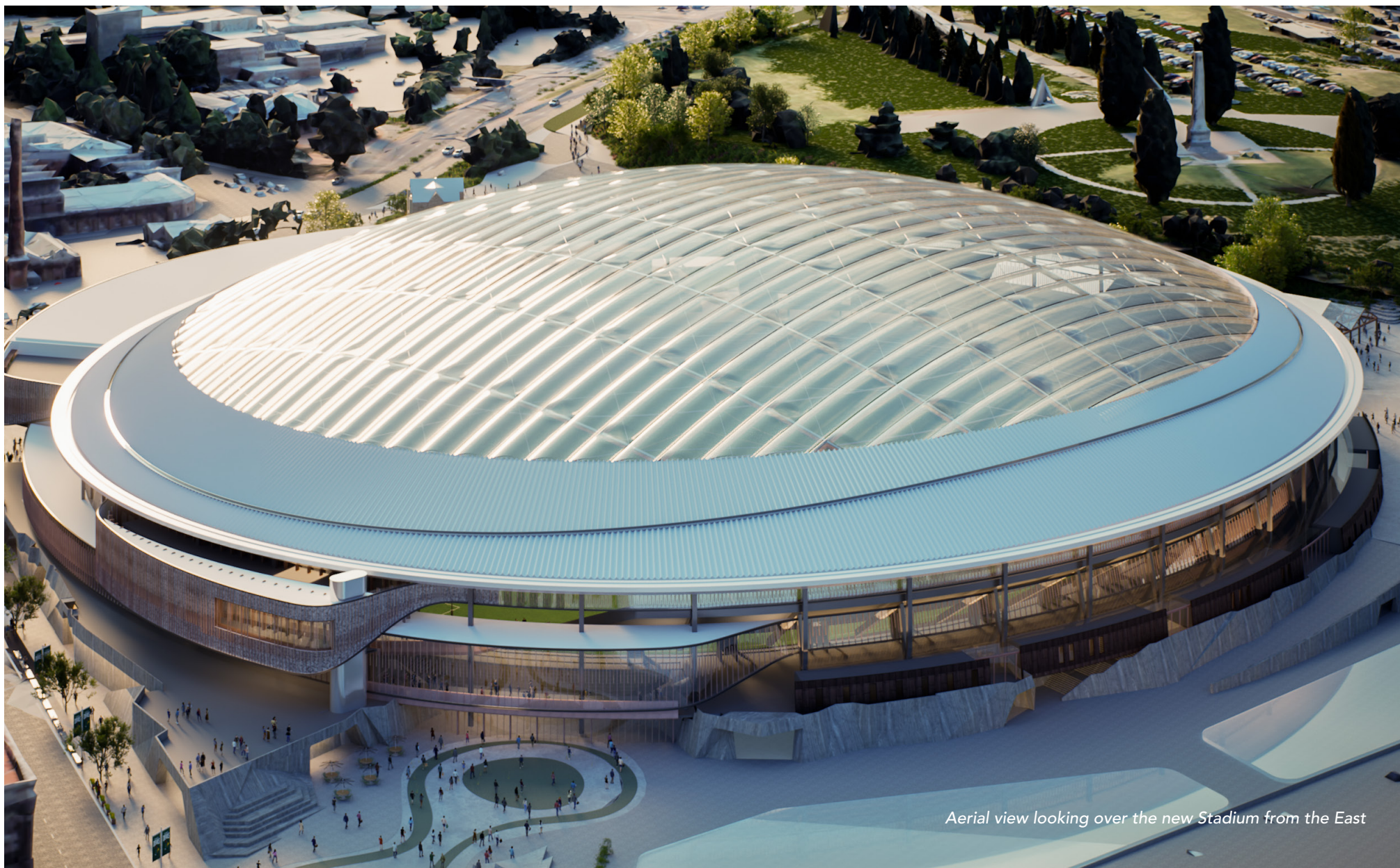
The primary materials of the roof and facade have been selected to limit solar reflections off the building where they could represent a risk to passing traffic, or a nuisance to adjacent users. Whilst both metal cladding and ETFE on the roof will present some light reflectivity, the height, orientation, and location of the roof in relation to other buildings and traffic means any reflection will not be significant. Where metal is featured on the roof or facade, a low gloss finish will be applied.

Highly reflective elements such as glass have been limited in their application and are not located where they could impose problematic reflections on adjacent uses.



THE ROOF IN DETAIL





Aerial view looking over the new Stadium from the East

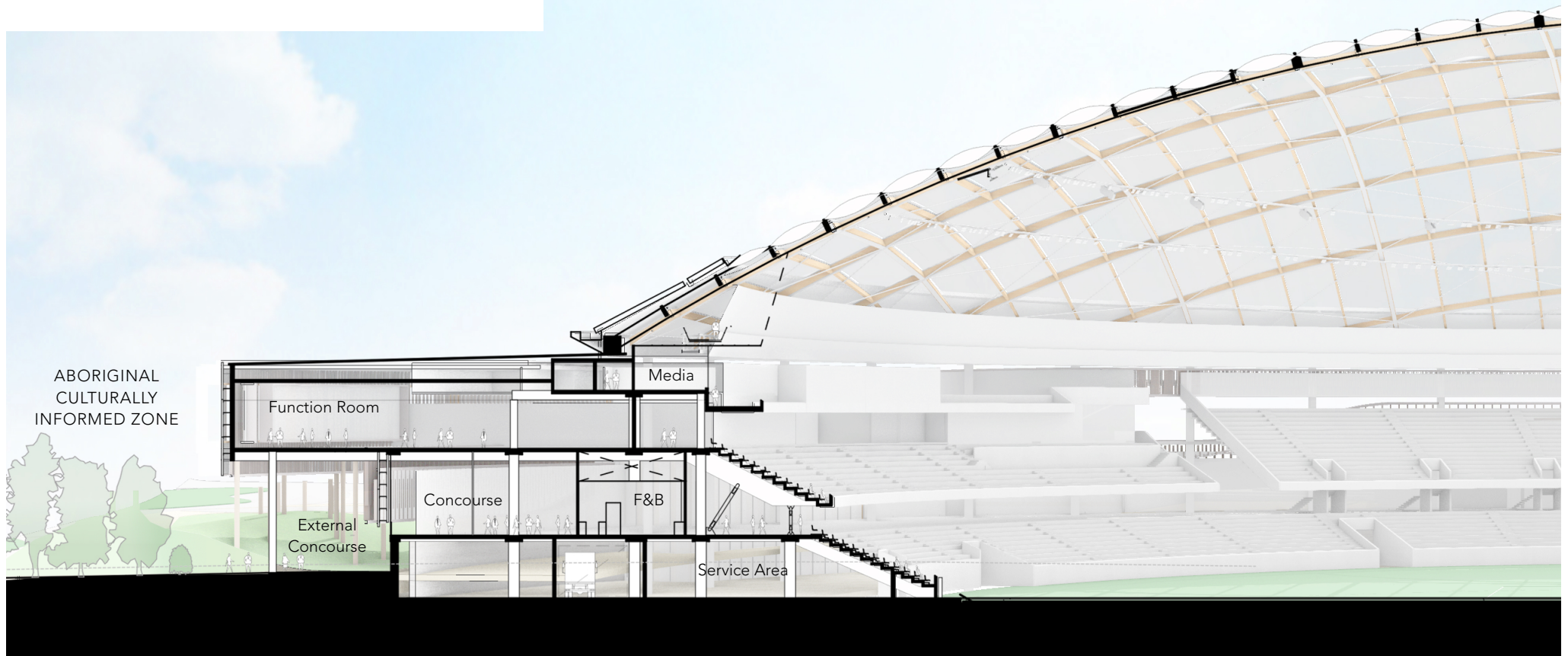




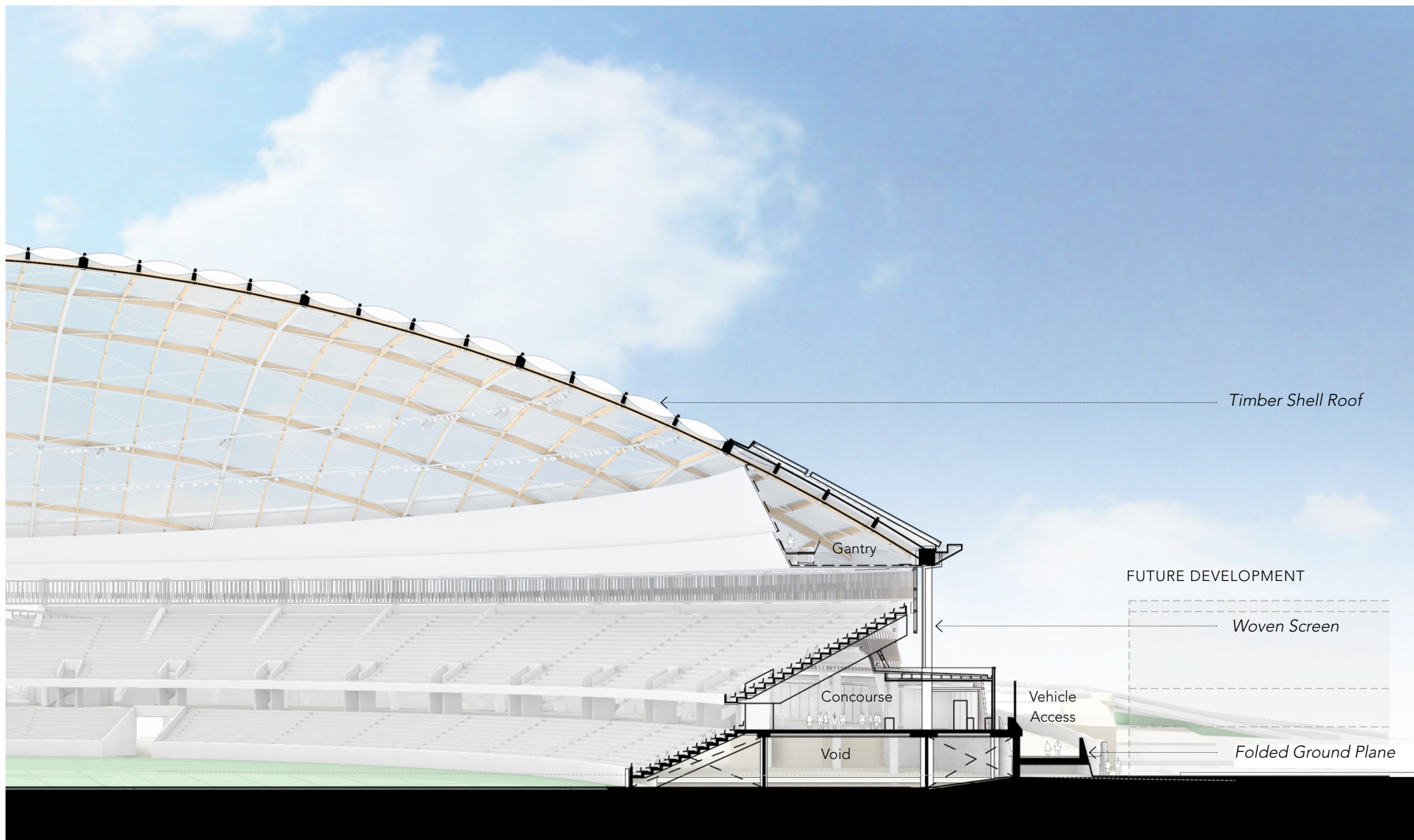
View toward the Stadium looking east from the corner of Davey Street and Evans Street

BUILDING SECTIONS

The following sectional studies show the configuration of the Stadium stands on the West, East, Northern, and Southern sides. A continuous internal concourse provides 360 degree connectivity to the seating bowl.

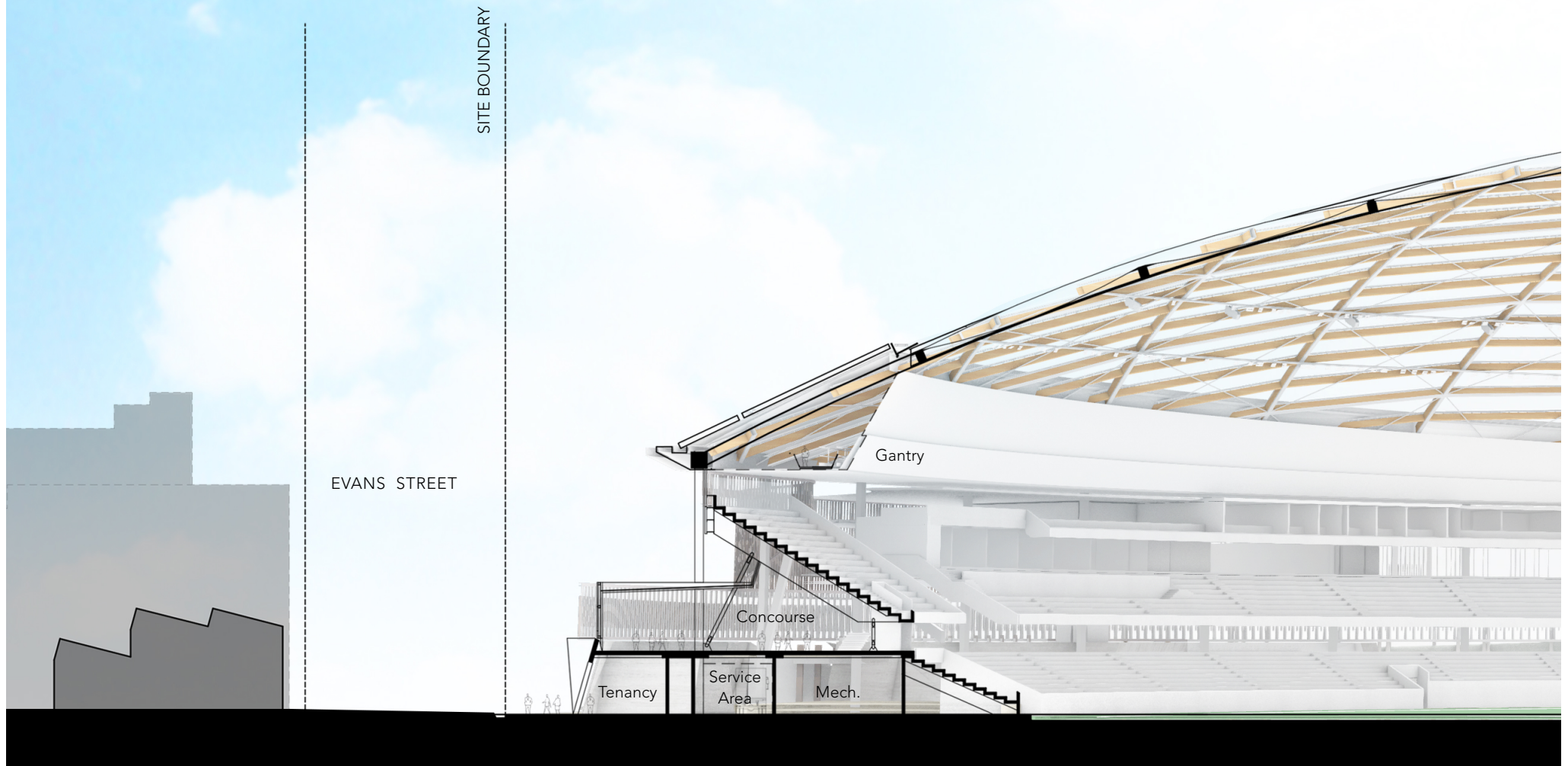


Section through Western Stand



Section through Eastern Stand

BUILDING SECTIONS



Section through Southern Stand and Evans Street



Section through Northern Stand and the Goods Shed

EXTERNAL FINISHES

Approach to Materials

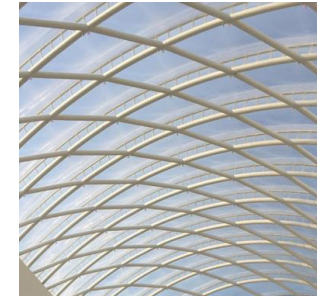
In keeping with our commitment to a raw and honest design expression, the material palette is composed of finishes that have a natural quality, are low maintenance and timeless. The intent is to express textures that are raw and natural and in-keeping with a site adjacent to a working port.

At the base of the building, a circumferential 'concrete apron' folds up the Stadium and grounds it in place. This draws on the built traditions of Sullivans Cove where buildings are expressed as legible forms on the Cove Floor and can be experienced from every aspect. The use of concrete and stone within gabion walls will convey a sense of permanence and solidity.

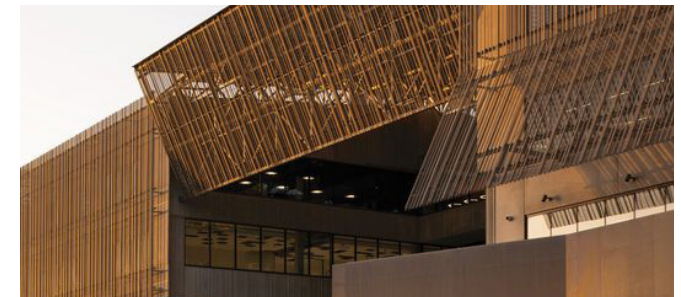
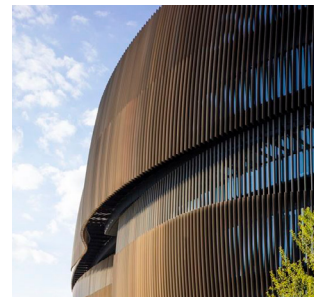
Between the floating roof and the ground plane, the mid-section of the building accommodates a series of hospitality spaces that support the Stadium, including food and beverage offerings and the Function Room at Level 2.

The expression of the mid-section is as a quiet interlayer nestled beneath the roof. The language of a 'woven screen' has inspired the treatment of the facade, and could be composed of weathered metal or timber battens.

The roof, on the other hand, is the hardest-working and defining element of the Stadium. Its impressive structural design will be put 'on-show' and is intended to be read both externally and internally. A hybrid steel and timber frame will support a cladding of translucent ETFE pillows, and the structure as a whole will express a sense of lightness and weightlessness.



RT01 ETFE roof skin with hybrid steel and timber structure

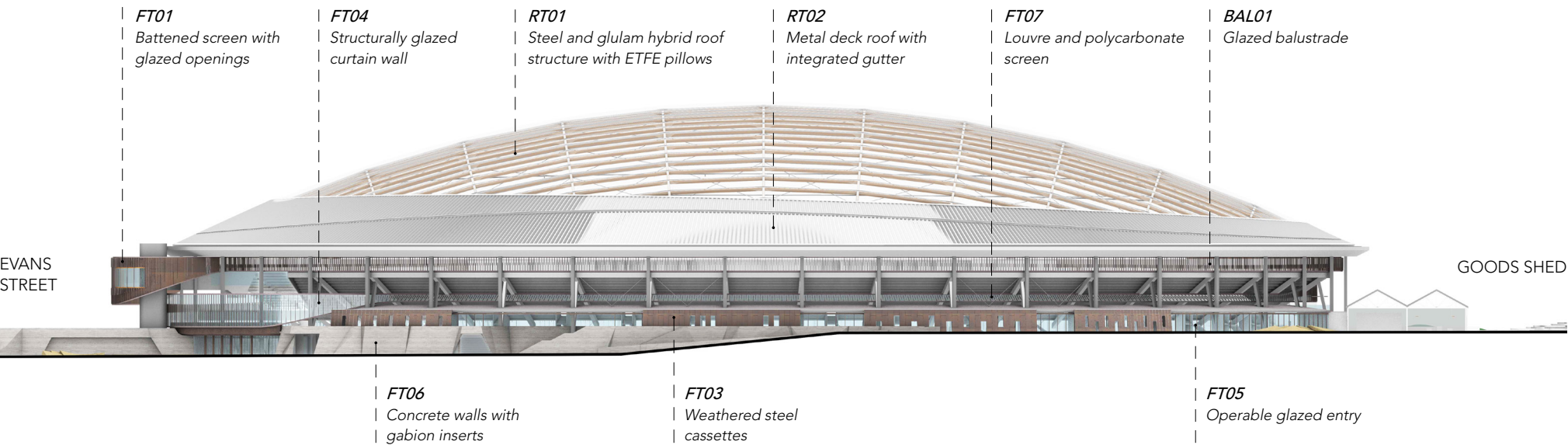


RT01 Battened screen examples (aluminium, timber, and weathered steel)

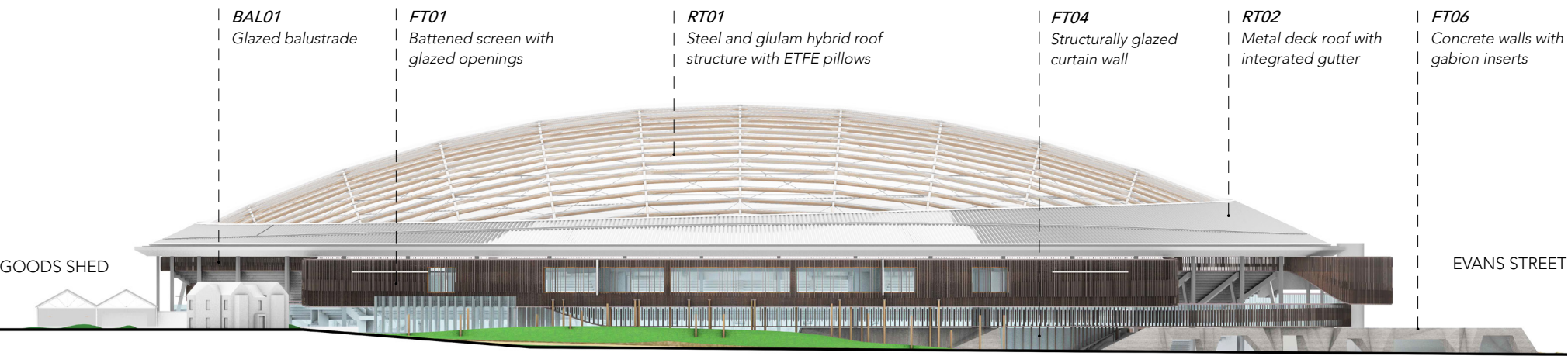


FT06 Concrete walls with gabion inserts

EXTERNAL FINISHES

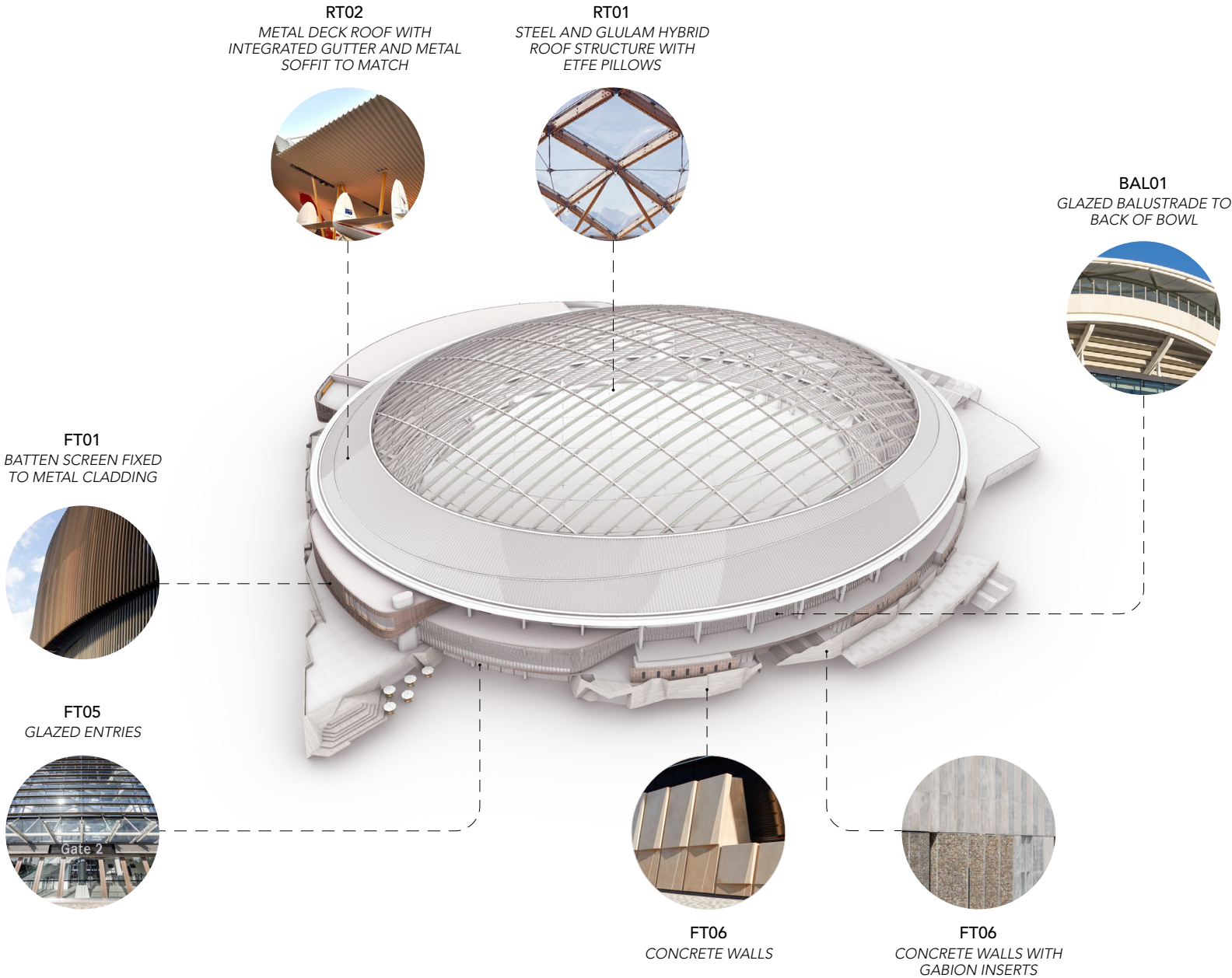


Eastern Elevation



Western Elevation

FACADE TREATMENT



The Woven Screen

The screening element to the mid-section of the Stadium draws inspiration from the Tasmanian Aboriginal cultural practice of weaving. A continuing practice, and a symbol of people coming together. The intention for the screen is to represent a woven element; a veil composed of many threads.

Allowing the roof to be the hero, the screen is an integrated facade element that will weave in and out from under the roof. It will wrap the perimeter of the Stadium and unify the various aspects of the program.

Whilst the roof is a formal element, the screen will be a feature of the facade that adds texture, playfulness, and visual appeal in the overall composition. It is also highly functional, providing solar protection to large, glazed areas behind and will introduce framing elements to direct outward views.



THE GOODS SHED RELOCATION

The historic Goods Shed will be an enduring reminder of the site's industrial past and the historic rail yards. Originally located at the terminus of a former rail line, the Shed's design allowed trains to pull up and unload onto concrete platforms situated either side of the track.

As part of the Stadium development, it is proposed that the Goods Shed will be carefully relocated to the northern side of the site. In this location, the Shed will be aligned to another former rail line in a similar location to where the Train Maintenance shed once stood, as part of the Hobart Rail Yards. In this location the Shed will retain its original relationship to rail tracks, and will continue to be a part of the site's story. While no longer present on the site, the intention is to interpret the former rail tracks through inlays and details in the paving on the northern plaza.

The Shed structure will be celebrated as part of the northern entry to the Stadium. It will be distinct and clearly identifiable adjacent to the Stadium, and accessible as a unique event space. It will provide new hospitality uses to support Stadium patrons on Event Day, and will also be available for functions throughout the week. By integrating the Stadium and the Goods Shed, new purpose will be ascribed to the historic Shed and promote greater engagement from users who may not otherwise visit the building. The alternative - complete separation of the Shed - could compound its redundancy on the site.

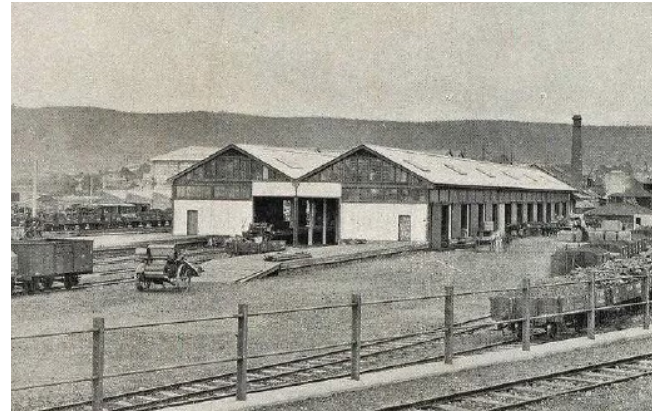
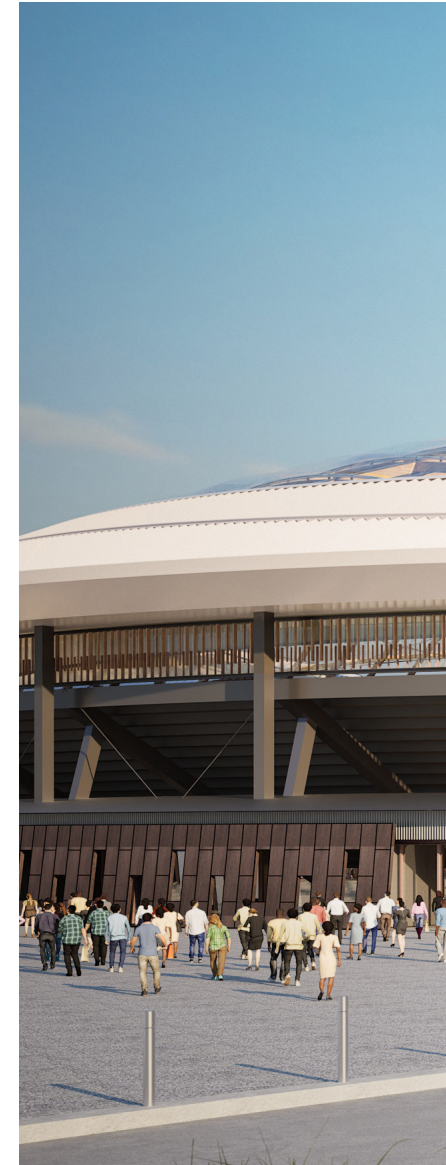
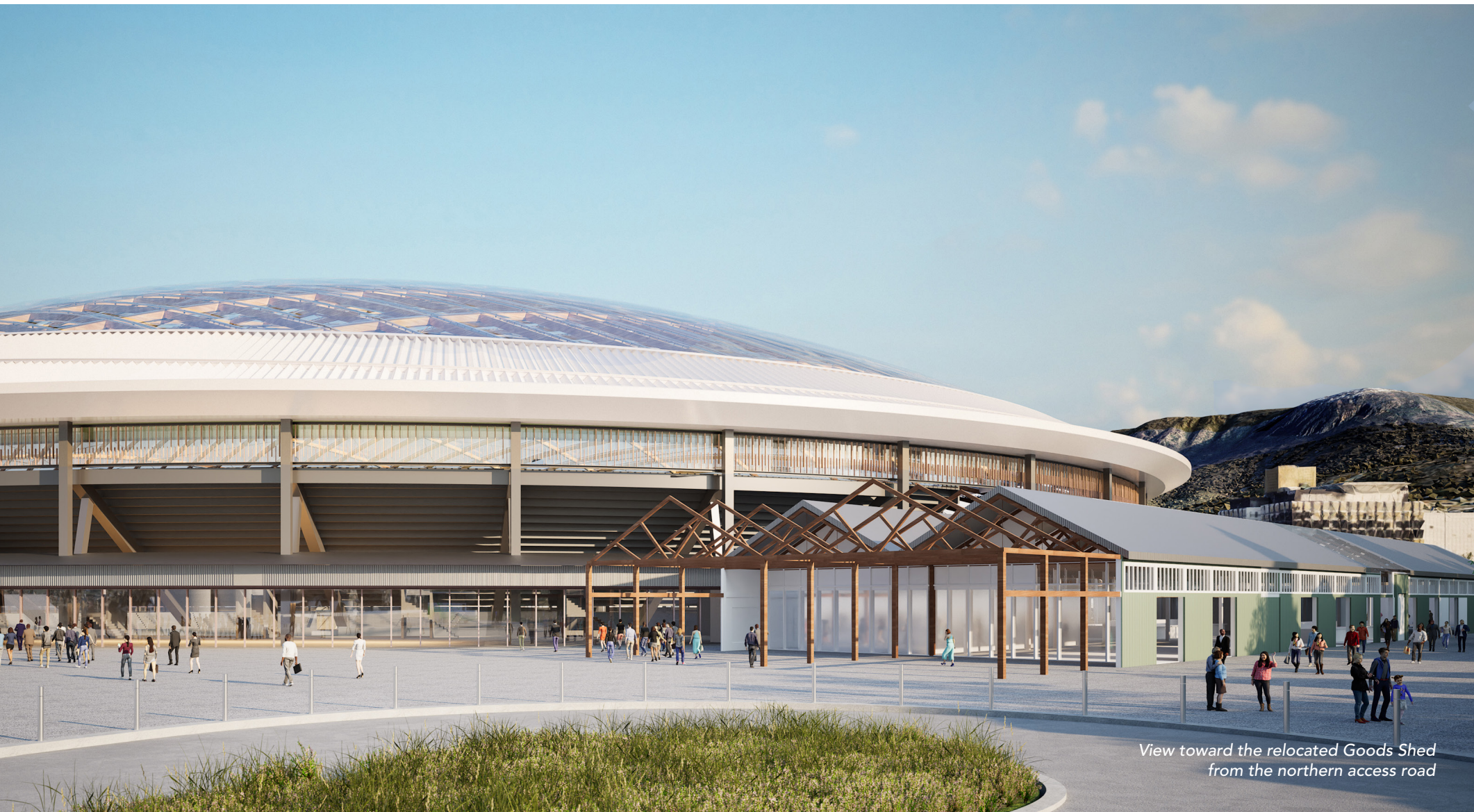


Figure 8: 1915: 'Improvements At Hobart Railway Station. New Goods Shed.' *Weekly Courier*, 23 December 1915, p.23





*View toward the relocated Goods Shed
from the northern access road*



*Hobart Railway
Goods Shed*

The Round House

*Train Maintenance
Shed*

*Hobart Yards in the 1960s
Uncredited, source Stations of Tasmania*

The image contains two architectural drawings for the Goods Shed at Hobart.

Plan (Top): A detailed floor plan of the Goods Shed. It shows a large rectangular building with an "Outwards Platform" and an "Inwards Platform". The plan includes various rooms such as "Clerks (Outward)", "Porters", "Clerks (Inward)", "Goods Agent", "Office", and "Docks". Dimensions are given for various sections, such as "12'-0\" and "12'-6\". A note at the top right states: "Note! Foundation Piles are shown by dotted circles and are already driven." Another note at the bottom right says: "Plan. Scale 1/16 = 1'-0\".

Side Elevation (Bottom): A side elevation of the Goods Shed. It shows the building's profile with various windows and doors. A note at the top right states: "All roofs to be covered with Gal. Corrugated No 24 B.W.G." Another note at the bottom right says: "Side Elevation Scale 1/16 = 1'-0\".

Detail A (Bottom Left): A detailed view of a section of the building, showing the "Capping" and "Braces". A note at the bottom left states: "Detail A For Capping."

MACQUARIE POINT MULTIPURPOSE STADIUM / PROJECT OF STATE SIGNIFICANCE

THE GOODS SHED RELOCATION

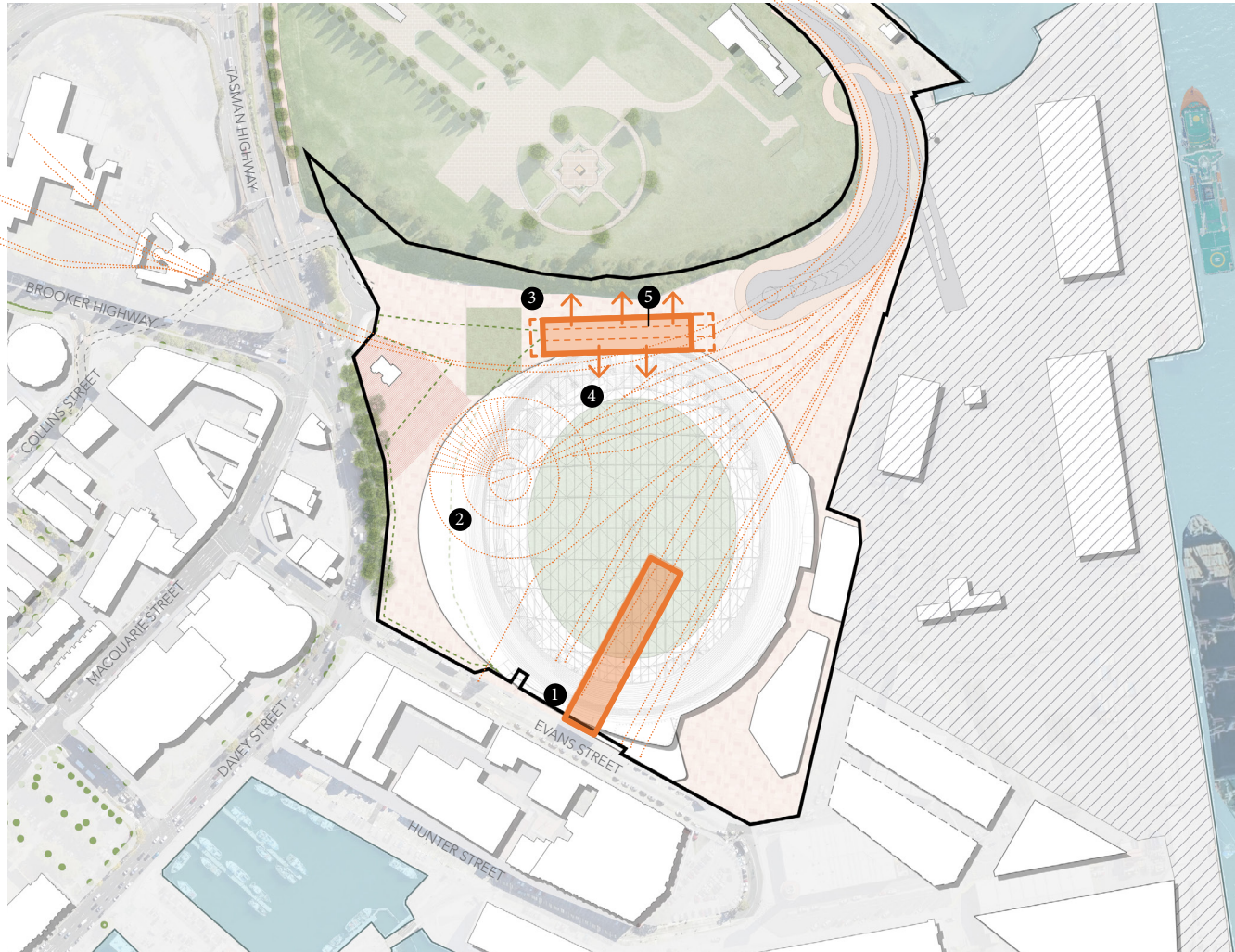


Figure 10: The Goods Shed Relocation

- ① Existing Goods Shed site
 - ② Outline of original roundhouse location (no longer present)
 - ③ Proposed Goods Shed located on the existing maintenance shed site
 - ④ Reintroduction of original service openings to north and south facades of Goods Shed
 - ⑤ Location of rail pit in Goods Shed and interpretation of historic tracks
- Historic railway tracks (no longer present)

Principals of the Goods Shed Relocation

- › preservation and connection to place and original use
- › stand alone and legible
- › retains relationship to former rail track
- › use allows for original facade openings to be reinstated
- › evolution of purpose
- › continuity of use

THE GOODS SHED IN OPERATION

Throughout the week, the venue will continue to provide a space for local events, markets, and live performances that will attract residents and tourists alike. The seamless integration of the old and new not only breathes new life into the Goods Shed but also strengthens the cultural and social fabric of Hobart, offering a unique and engaging space that celebrates both its heritage and its future.

The form of the Goods Shed will be legible and appear detached from the Stadium, whilst providing a concealed threshold to allow connection between the two buildings. Its strategic location makes it an ideal venue for pre and post-game gatherings, and the reestablishment of the original loading bay openings along the northern side of the Shed will create a vibrant, sunny destination for the community.

The design respects the architectural integrity of the original structure, preserving its distinctive features while integrating contemporary elements that cater to the dynamic needs of a bustling social hub. The interior design of the Shed will blend the original, industrial fabric with contemporary insertions to provide thoroughly modern amenities whilst retaining the charm of the original architecture.

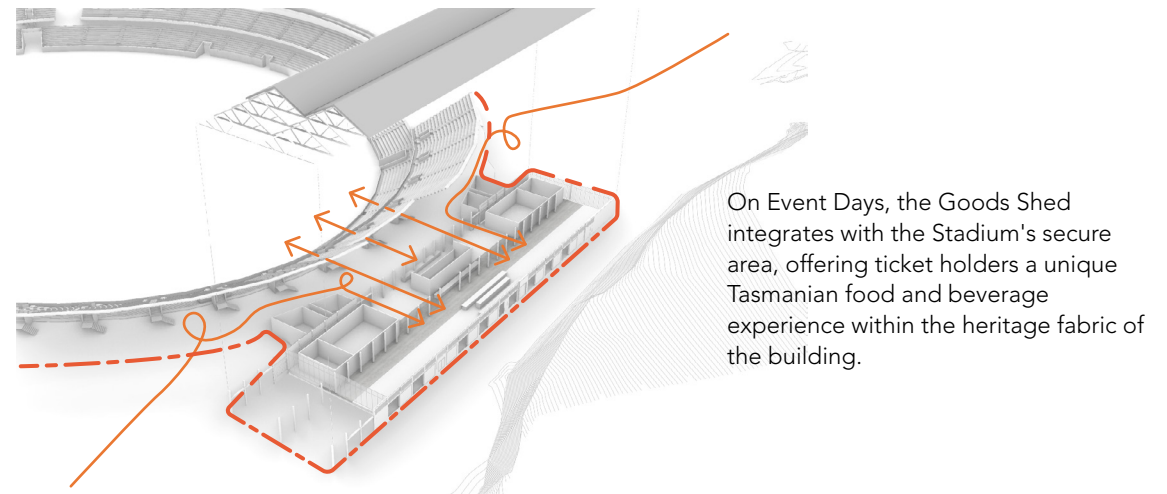


Figure 11: The Goods Shed access on Event Day

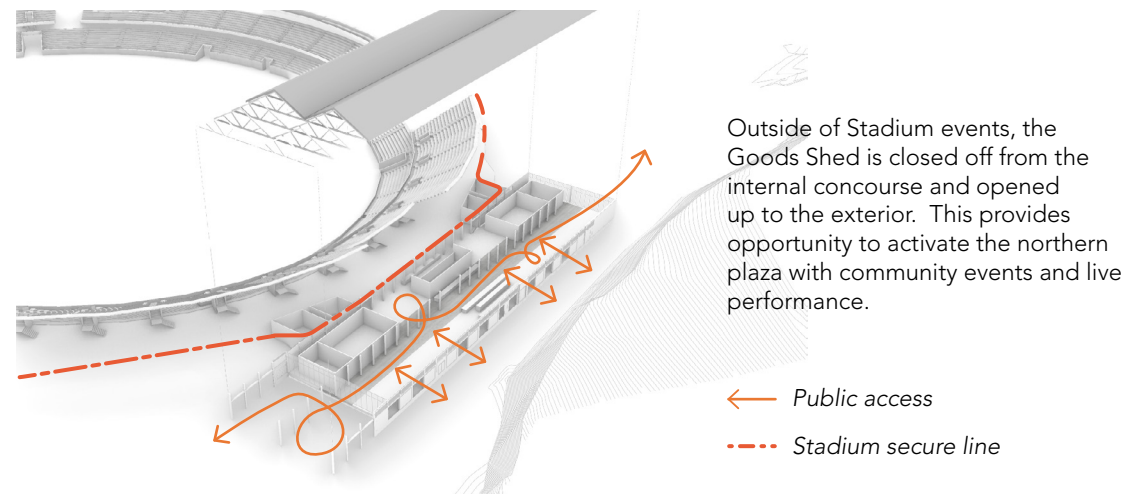


Figure 12: The Goods Shed access on non-Event Day

THE GOODS SHED INSIDE

Views out from the Goods Shed

Transparent insertions to the roof of the relocated Goods Shed will frame new views from the event space within. Toward the north, a new visual link to the escarpment and Cenotaph beyond will be established, as shown on the page opposite. This could provide opportunities for events supporting the Cenotaph and related commemorations and services.

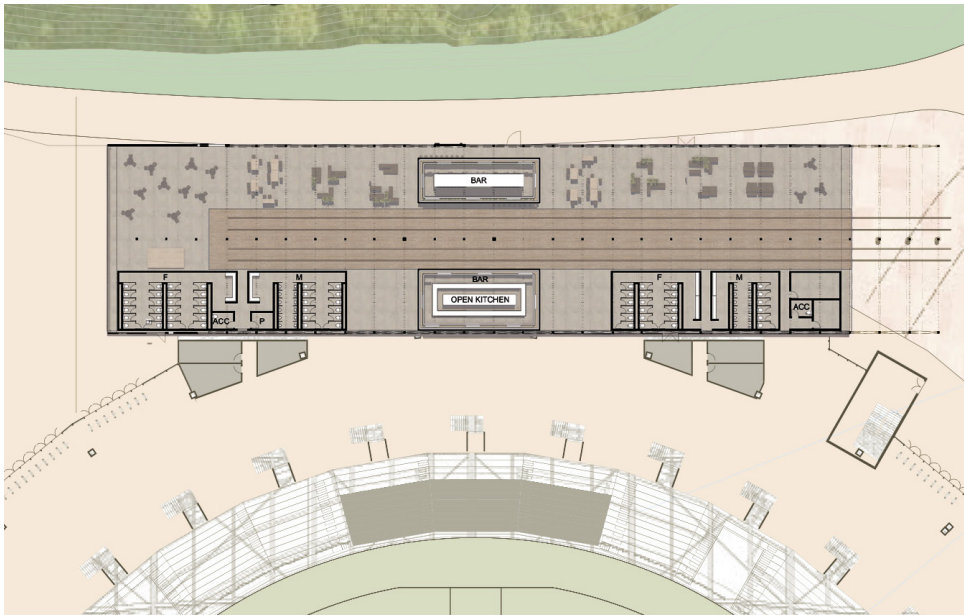


Figure 13: Plan of the relocated Goods Shed interfacing with the Stadium concourse



Figure 14: The Goods Shed re-activated



The interior of the relocated Goods Shed with hospitality fitout and view of the Cenotaph beyond



02 | LANDSCAPE AND URBAN FORM

This chapter addresses the design approach for the Stadium in the context of Macquarie Point and the wider Sullivans Cove precinct.

URBAN FORM OF SULLIVANS COVE

Sullivans Cove is known for its distinctive character. The area is notable for its historic waterfront, encompassing an active port, heritage buildings, parks, Parliament House, university and research facilities. It serves as the city's vibrant cultural, artistic, and festive center.

The Sullivan's Cove Planning Scheme (SCPS) sets up a relationship between what is called the 'Cove Wall' and the 'Cove Floor' or concrete Apron. The Cove Floor condition features a "hard, flat fill surface floor" and encourages 'regular spacing of elements'. In secondary Cove Floor spaces, a '*modest, irregular utilitarian character*' is promoted.

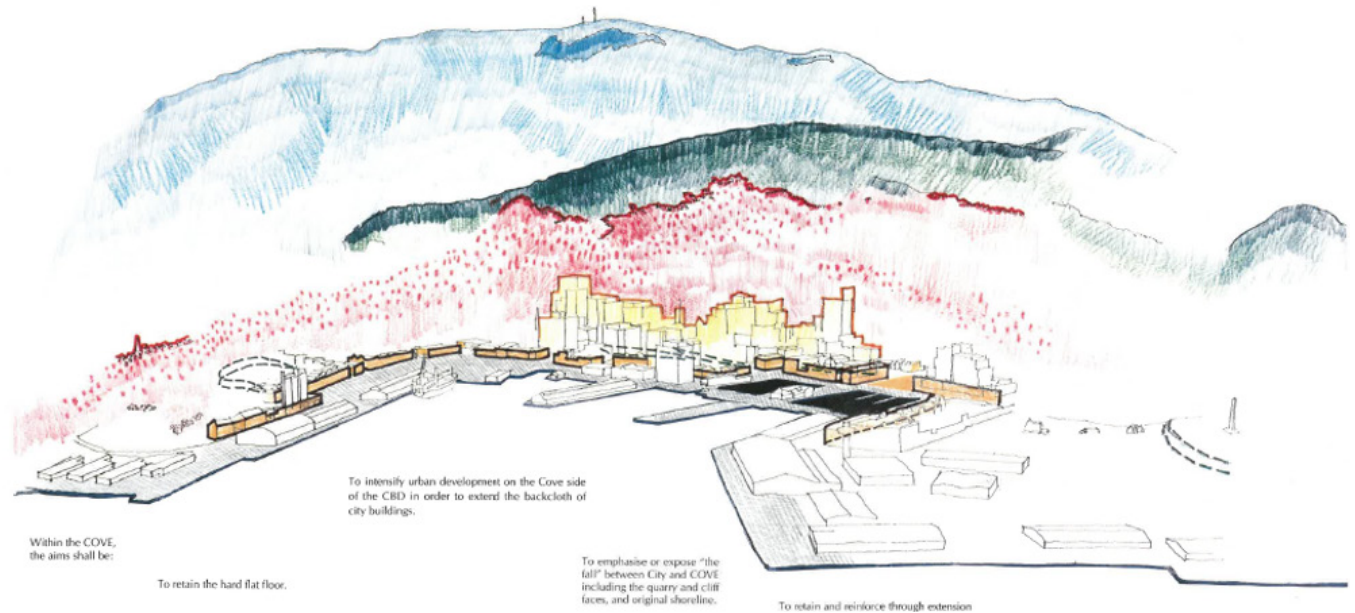
Within the Cove there are two predominate and perhaps contrary building types - those within the wall are largely historic, conjoined and can be read as part of the urban pattern of the city.

In contrast to this structures within the Cove Floor or Apron are stand alone, industrial, maritime buildings that have sufficient curtilage to be read in the round. These buildings are singular in character.

Within the Cove Floor's geometric precedent has been set

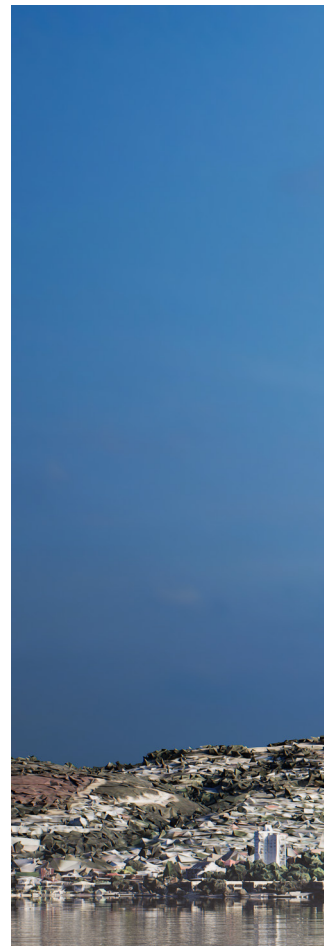
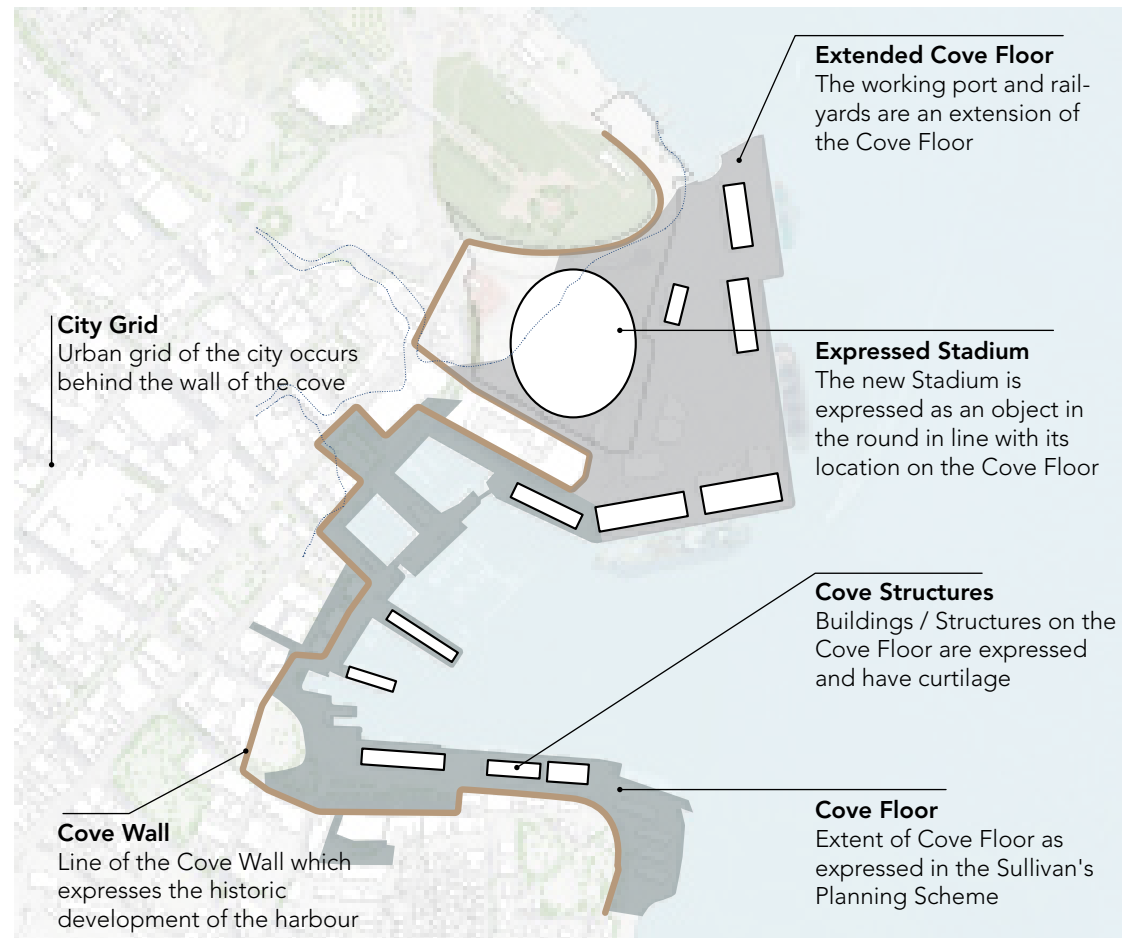
for two formal typologies, the gable, such as the Goods Shed and the torus or toroidal shape, such as the watchtower and the original roundhouse. The watch tower and the round house are useful precedents in conceptualising and positioning the stadium, although both toroidal, one has an outward focus and the other inward. A contrasting condition of focus.

The high-character attributes of the site has inspired an approach to the Stadium that looks both inwards and outwards. Simultaneously, it will engage with both the place outside, and the play within. The Stadium positively contributes to the Cove Floor's historic lineage of singular buildings, scaled appropriately for their use and positioned to be read in the round.



EXPRESSION OF FORM

Conceptually, the Stadium sits as a utilitarian form on the 'concrete apron' of the Cove Floor. Unashamedly contemporary in its architecture, the Stadium is expressed in a similar way to other structures in the cove with its form legible from every side. In this way, it contrasts with the prevailing urban pattern of Hobart behind the Cove Wall.





SITE CONSIDERATIONS

The waterfront location of the site represents a great asset to any future development at Macquarie Point. Together with the 19th century wharf buildings along Evans Street, the site presents high character attributes against the backdrop of the Wellington Range.

Whilst these features will enhance the landmark potential of the future Macquarie Point Multipurpose Stadium, they also represent sensitive interfaces and will need to be treated with careful consideration.

Macquarie Point is a 9.3-hectare site composed of largely reclaimed land and nestled between Hobart's CBD and the Port of Hobart. It connects the CBD to the green heart of the city on the Queen's Domain, the Hobart Cenotaph and to the intercity cycleway and Tasman Bridge.

Site Interfaces

The COX+Cumulus team identified several critical features at the interface of the development site. These have been thoughtfully considered through the Concept Design phase for the new Stadium, and include:

- Tas Ports restricted waterfront areas: Inaccessible waterfront areas along Macquarie Wharf and the Domain Slipway.
- Publicly accessible waterfront areas: Locations at Sullivans Cove and Regatta Point providing direct pedestrian access to the waterfront.

- Evans and Hunter Street: Heritage listed road surfaces and buildings. Vehicle access to Macquarie Wharf is currently permitted along Evans and Hunter Streets, with the opportunity to increase pedestrian activity along these roads.
- Davey Street and the Tasman Highway: key arterial roads running adjacent to the site. These facilitate high-volume vehicle access.
- The Cenotaph: Heritage listed and significant sites situated above the precinct that hold significant cultural value and require preservation of the character of these places.
- Queens Domain: The Queens Domain is the city's green heart and connection to important recreational spaces, including tennis, cricket, swimming, athletics, and soccer facilities.
- Significant views: Managing building massing and orientation to ensure the preservation of key views across the Cove Floor at Macquarie Point.

On Site Assets

Present on the site are several existing buildings and structures with heritage value. The Royal Engineers Building facing Davey Street was constructed in 1847 and is a fine example of sandstone construction in the Victorian Tudor style. The building is an attractive asset on the site and should be given prominence in any future development.

Also present is the Goods Shed from the former Hobart Railyards. The Goods Shed has been listed on the Tasmanian Heritage Register in recognition of its contribution to the development of rail transport in Tasmania post World War 1, and its association with place, which will continue.

A further consideration is the future Aboriginal Culturally Informed Zone on the western side of the site. Whilst this Zone is still pre-design, the new Stadium must anticipate the creation of this space.

In-Ground Conditions

The Consultant Team has undertaken several geotechnical investigations on the site and have a comprehensive understanding of its complexities. Earthworks on the site will need to address the following challenges:

- Construction of a foundation system on reclaimed land with a sloping underlying rock
- Consideration of tidal impacts and rising sea levels
- Residual environmental conditions
- Finding the optimum balance to set levels between the existing height constraints and avoiding costly excavation.

Synthesising this suite of issues is required to support the best civil and geotechnical outcomes to ensure the cost-effective design of foundations and bulk earthworks.

INTERFACE CONSIDERATIONS

Infrastructure

Northern Access Road

Queens Domain and the Cenotaph

Views to and from

Heritage Interfaces

Goods Shed

Royal Engineers Building

Aboriginal Culturally Informed Zone

The Wapping District

Part of Hobart's cultural, arts, hospitality and accommodation district, and also includes some residential

Major Arterial Roads

Davey Street

Tasman Highway

Transport Infrastructure

Bus Interchange

Taxi Drop-off

Car Parking

Tas Ports

Restricted waterfront areas
Maintaining Port access

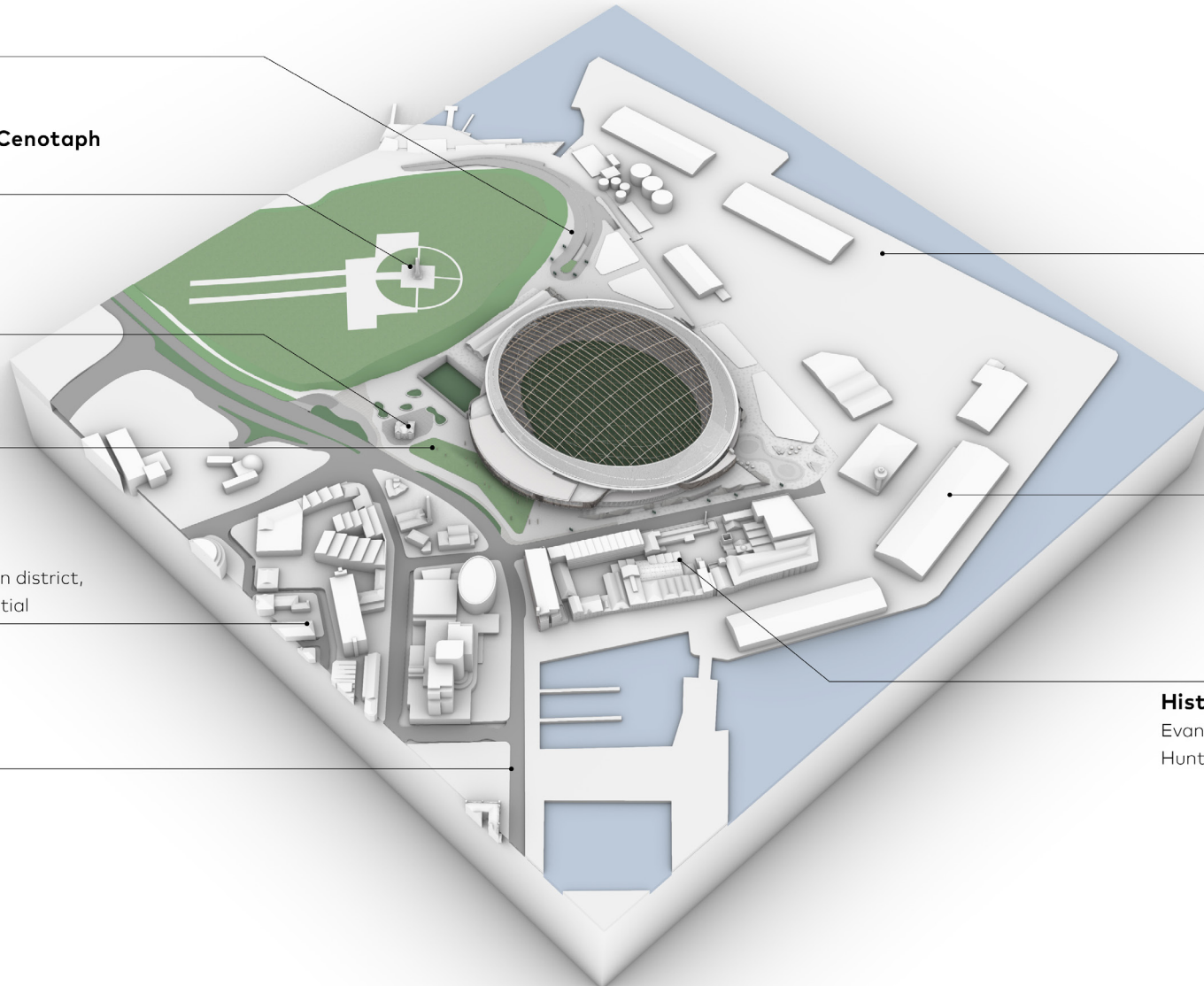
Cruise Terminal

Primary arrival point for international cruise ships

Historic Waterfront Buildings

Evans Street

Hunter Street



An aerial site plan of a stadium complex. The stadium is a large, oval-shaped building with a green roof, located in the center. To its north is a large green field, possibly a practice field or another sports field. The stadium is surrounded by various buildings, including a large white building to the west and several smaller buildings to the east. A body of water is visible to the south and east, with a few ships docked. The entire site is outlined in black. The text "SITE PLAN" is in the top left corner.

SITE PLAN

The Stadium positively contributes to the Cove Floor's historic lineage of singular buildings, scaled appropriately for their use and positioned to be read in the round.

The high-character attributes of the site has inspired an approach to the Stadium that looks both inwards and outwards. Simultaneously, it will engage with both the place outside, and the play within.

LANDSCAPE DESIGN APPROACH

The following landscape design approach has been informed through collaboration with a landscape architect and palawa community member, Theresa Sainty. It outlines a concept only, and the activation of the Aboriginal Culturally Informed Zone will be informed by engagement with the Tasmanian Aboriginal community.

Situated on a sensitive landscape, the precinct will reveal foundational geological features and highlight the original shoreline and the ecologies that once thrived here.

The site is understood as two distinct halves; one defined by the pre-colonial condition, and the other delineated by the original shoreline. To the west, groves of endemic Casuarina and eucalyptus forest occupy undulating slopes, evoking the natural ground of the past. To the north of the Stadium, the design of the public space adjacent to the escarpment anticipates that it will be activated for community occupation and enjoyment.

In contrast, the public space on the east side incorporates a restrained planting palette and extends the concrete of the Cove Floor. This design references the working wharfs and industrial histories of the site, creating a stark yet harmonious contrast with the western half.

The continuation of palawa cultural knowledge, practice, and ingenuity is a fundamental aspect of the site as a whole. Banded paving radiates from the Stadium in reference to

the calcium layers of an oyster shell. Shell aggregates in the paving symbolize the abundance of traditional seafood that once collected along the water's edge. Glass aggregates reference the ingenuity of the muwinina, who applied expert skill in crafting tools out of remnant glass from European settlement.

The industrial legacy of the Cove Floor is revealed through the use of robust materials and large furnishings. The rail lines that once traversed across the site can be traced as paving inlays, serving as a tangible reminder of the site's industrious past.

The Stadium's public realm is a place where history, culture, and nature converge. By intertwining the ancient landscape with cultural narratives and industrial heritage, the design offers an immersive experience where contemporary civic life can flourish.

