

# **CIRCULATE** 2025



**POPULOUS®**





## CIRCULATE 2025

### ACKNOWLEDGEMENTS

Circulate 2025 is a collaboration between QUT and Populous, Blaklash and McGregor Coxall.

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## CIRCULATE 2025

### CONTENTS

Studio Description	8
Declan Ferguson	10-13
Lilly Schwarzenecker	14-17
Emily Marshall	18-21
Tori Manning	22-25
Jake Guiver	28-31
Jeremy Zhao	32-35
Jingze Zhao	36-39
Matthew Wood	40-43
Aidan Ashford	44-47
Lachlan Wilson	48-51
Canna Nitimanta	52-55



STUDIO DESCRIPTION

This 4th year Master Design Studio seeks to embed the circular economy principles of waste elimination, materials circulation and nature regeneration into the architectural design process with a particular emphasis on reuse of construction materials.

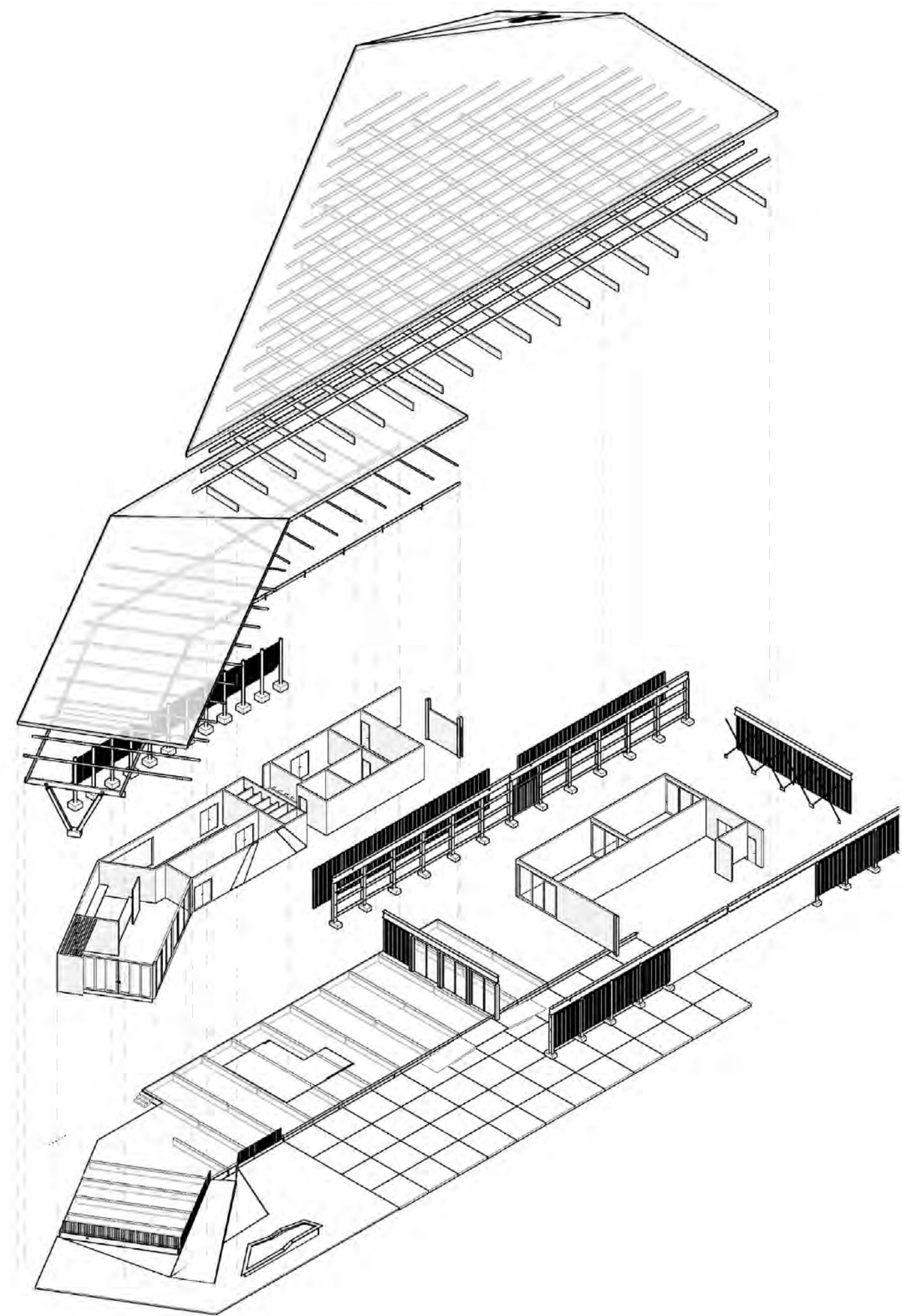
The studio asks:

- \_How do we document materials and components found in existing buildings?
- \_How do we design new buildings constrained to a limited repository of existing materials and components?
- \_How can we leverage digital technologies such as new scanning methods, computational design tools, digital platforms and fabrication techniques to optimise resource management and enable circular construction?
- \_How do we design new buildings so that they can be disassembled in future and the materials and components used again for yet another future project?

The studio began by documenting a series of existing buildings slated for demolition in South Bank, Brisbane and developing a ‘Material Bank’, a repository of existing building materials and components. The studio explored ways in which to design new objects or structures using the limited repository of materials and components, culminating in the development of design proposals for an Information and Exhibition Centre for the Brisbane 2032 Olympic and Paralympic Games using only the materials and components of the Material Bank.

Populous, Blaklash and McGregor-Coxall architects, landscape designers, and designers provided their expertise and led dedicated workshops throughout the semester from the Populous Brisbane studio to enrich the learning experience of the students.

Design Brief: Design an Information and Exhibition Centre for the Brisbane 2032 Olympic and Paralympic Games using a series the ‘South Bank Piazza’, ‘Flowstate’ and ‘Pavilions’ as the Material Bank. This facility will be crucial for disseminating real-time updates, event schedules, transportation details, and emergency communications to athletes, officials, media, and spectators. The Centre will additionally feature pavilions and exhibition spaces that celebrate First Nations Communities contributions to Art, Sports and Culture, the history of the Olympics and feature the Councils that form the Council of Mayors (SEQ) that were key in bringing the Olympics to Brisbane. The Centre should function for at least 5 years post the event and should be planned for disassembly, reuse and/or end of life.





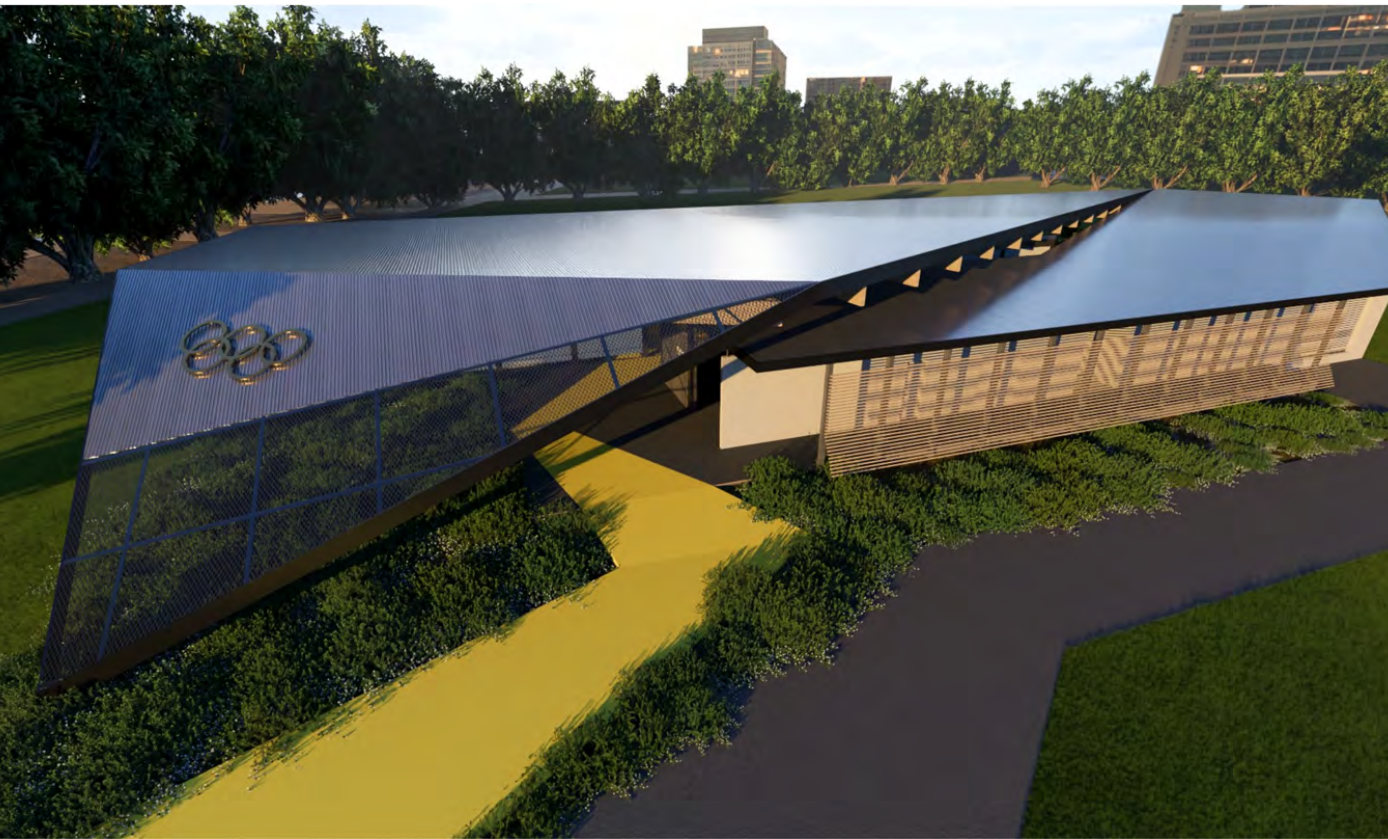
DECLAN FERGUSON

PROJECT STATEMENT

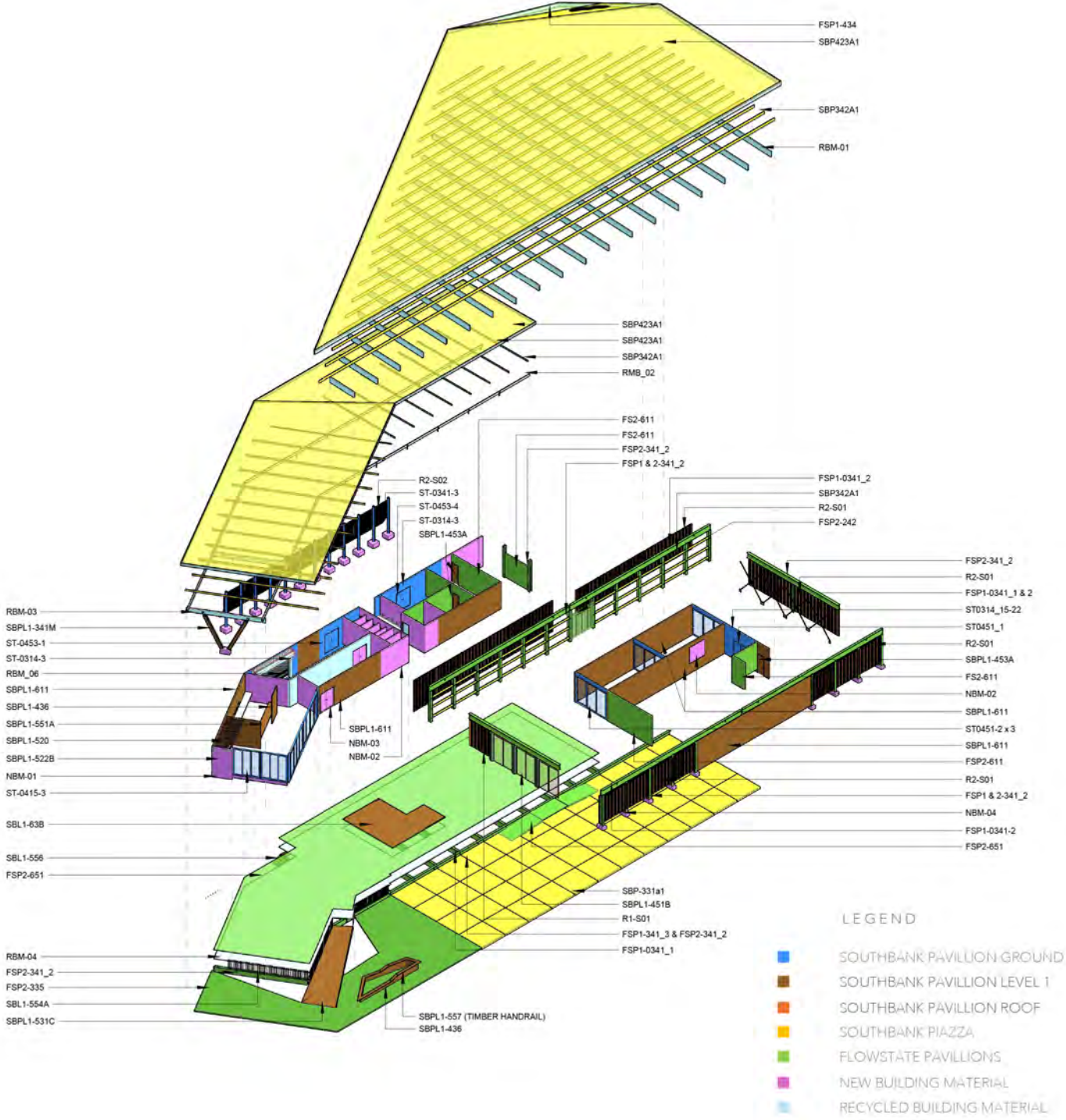
The Brisbane 2032 Olympic and Paralympic Games present a unique architectural opportunity to pioneer sustainable, adaptable, and culturally integrated designs that reflect Australia’s commitment to circular economy principles and First Nations heritage. This project will see the proposal of a 750m² Information and Exhibition Centre, designed for the Brisbane Games, to be constructed within the City Botanic Gardens- an established cultural hub in Brisbane’s CBD. The public centre will serve as a key location within the Olympic Masterplan, crucial for disseminating information to athletes, officials, media and spectators.

At its core, the Information and Exhibition Centre will be a demonstration of sustainability-driven design. The facility will align with Brisbane’s commitment to a circular economy by repurposing existing materials sourced from the Southbank Flowstate Structures, the Southbank Piazza and the Southbank Pavillion. Thoughtfully designed with a circular economy approach, the design aims to support long-term adaptability and planned disassembly, ensuring its continued contribution to the city’s urban fabric and community beyond the Games. By embedding sustainability at every stage- from material sourcing to construction, operation, and decommissioning- the project challenges conventional Olympic architecture and sets a precedent for regenerative and resource-conscious design.

Strategically located at the heart of Brisbane City, the proposed Information and Exhibition Centre will be a contextually responsive design that harmonises with the natural landscape, ensuring minimal environmental disruption while enhancing public engagement with the Botanic Gardens. It will prioritise low-impact construction, passive climate strategies and an architectural language that responds to the site’s ecological and cultural significance.









LILLY SCHWARZENECKER

PROJECT STATEMENT

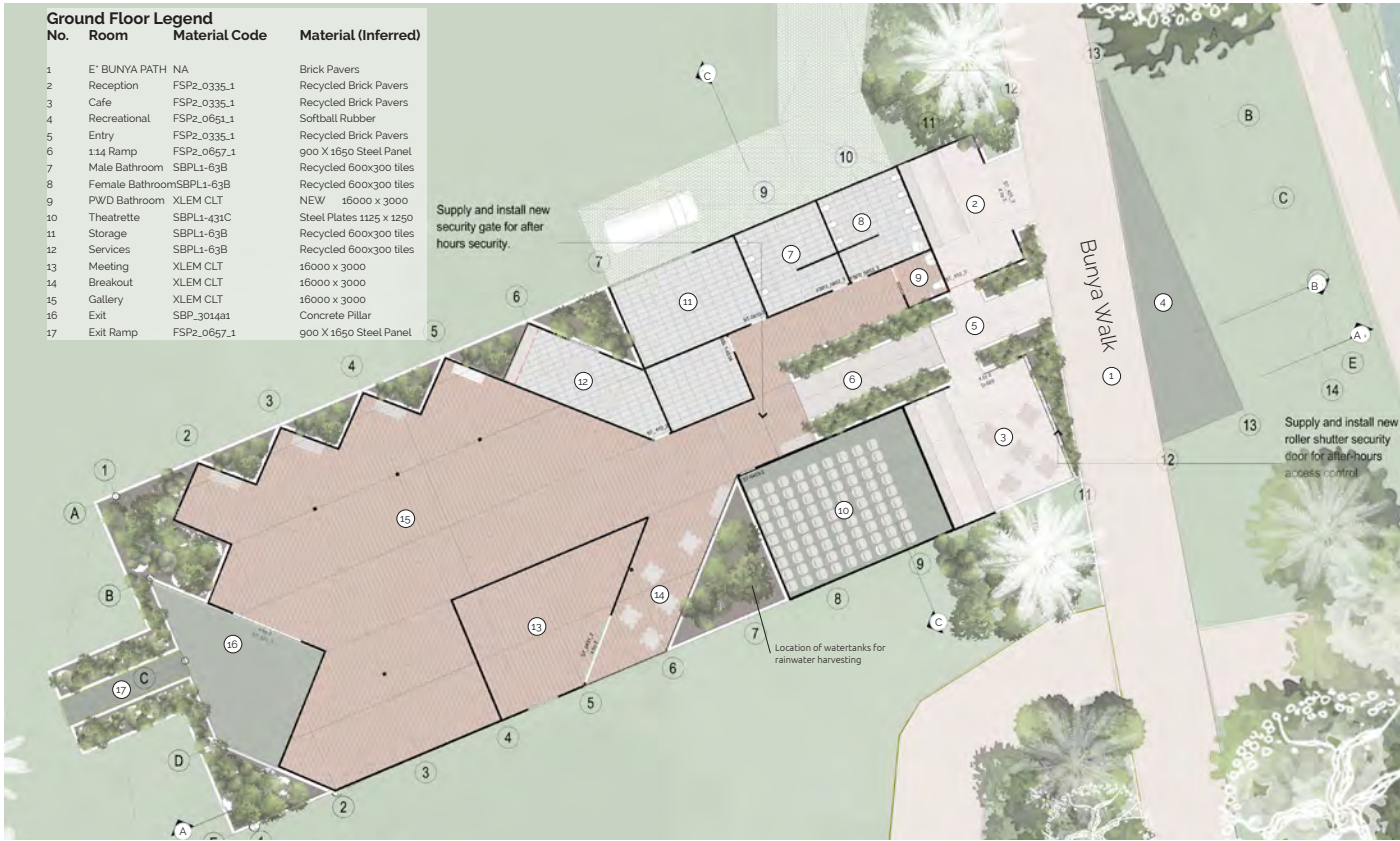
This project proposes a temporary Information & Exhibition Centre designed for the Brisbane 2032 Olympic and Paralympic Games. Located within the Brisbane City Botanic Gardens, the project embodies a circular design ethos that prioritises disassembly, material recovery, and ecological respect.

Sourcing materials from the Material Bank Repository, the Centre reuses steel, cladding, and fixtures recovered from structures slated for demolition. including Flowstate Pavilions, the Southbank Piazza, and other existing built assets. Modular components are designed for efficient assembly, disassembly, and future redeployment beyond the Centre’s five-year lifespan.

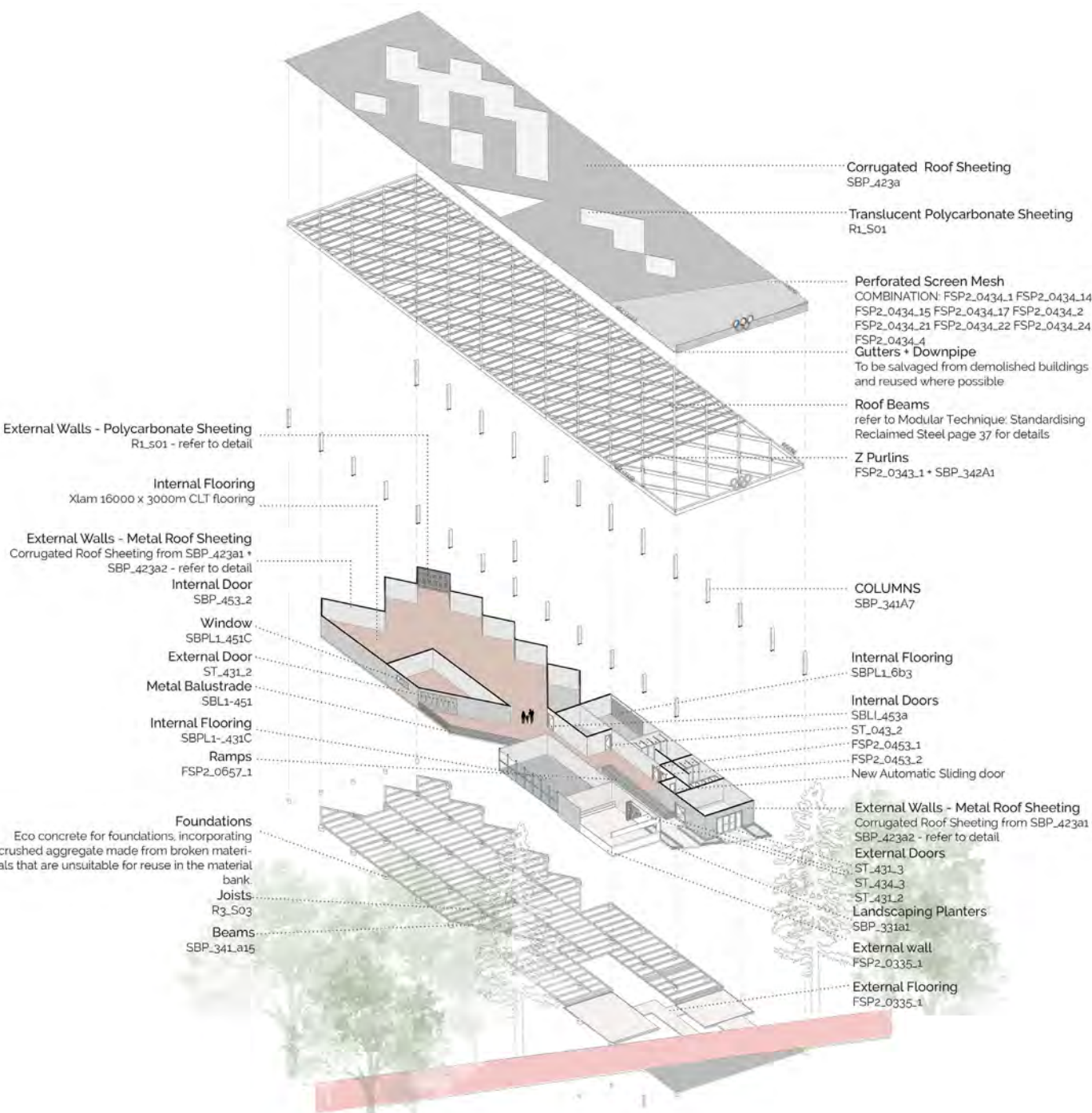
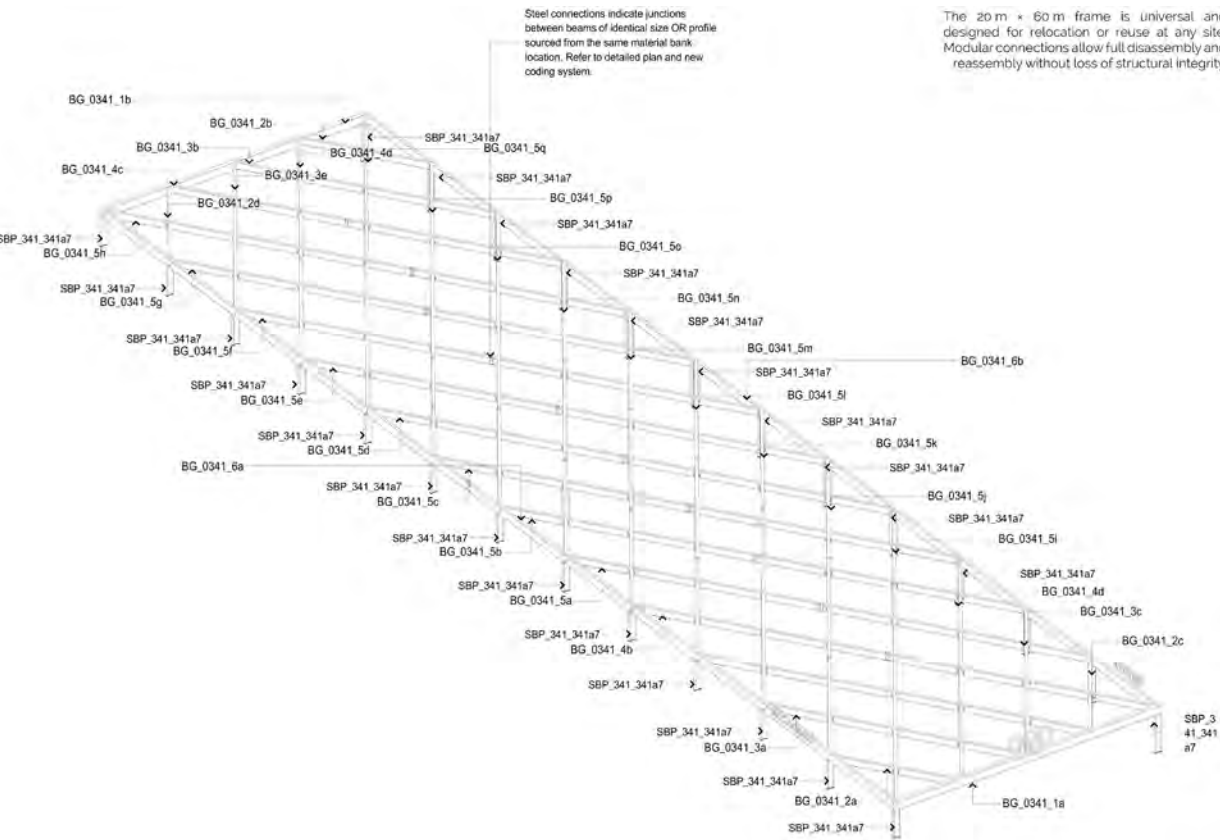
Elevated above the ground plane, the building lightly touches the landscape, avoiding excavation and protecting mature tree root systems underneath. It follows the path of the Bunya Walk, acknowledging its cultural, historical and ecological importance. Semi-transparent polycarbonate cladding, perforated dark steel, and low-carbon materials blend the architecture with the surrounding landscape, creating a pavilion that sits quietly and blends in within Country.

Key spaces include a reception, gallery, café, theatrette, and back-of-house areas. The project extends beyond the Games, serving as a demonstration of circular construction in action, and as a respectful model for building within historically and ecologically sensitive sites.

By embedding circularity, cultural sensitivity, and resource consciousness, the Brisbane 2032 Information & Exhibition Centre establishes a legacy of architecture that gives more than it takes.





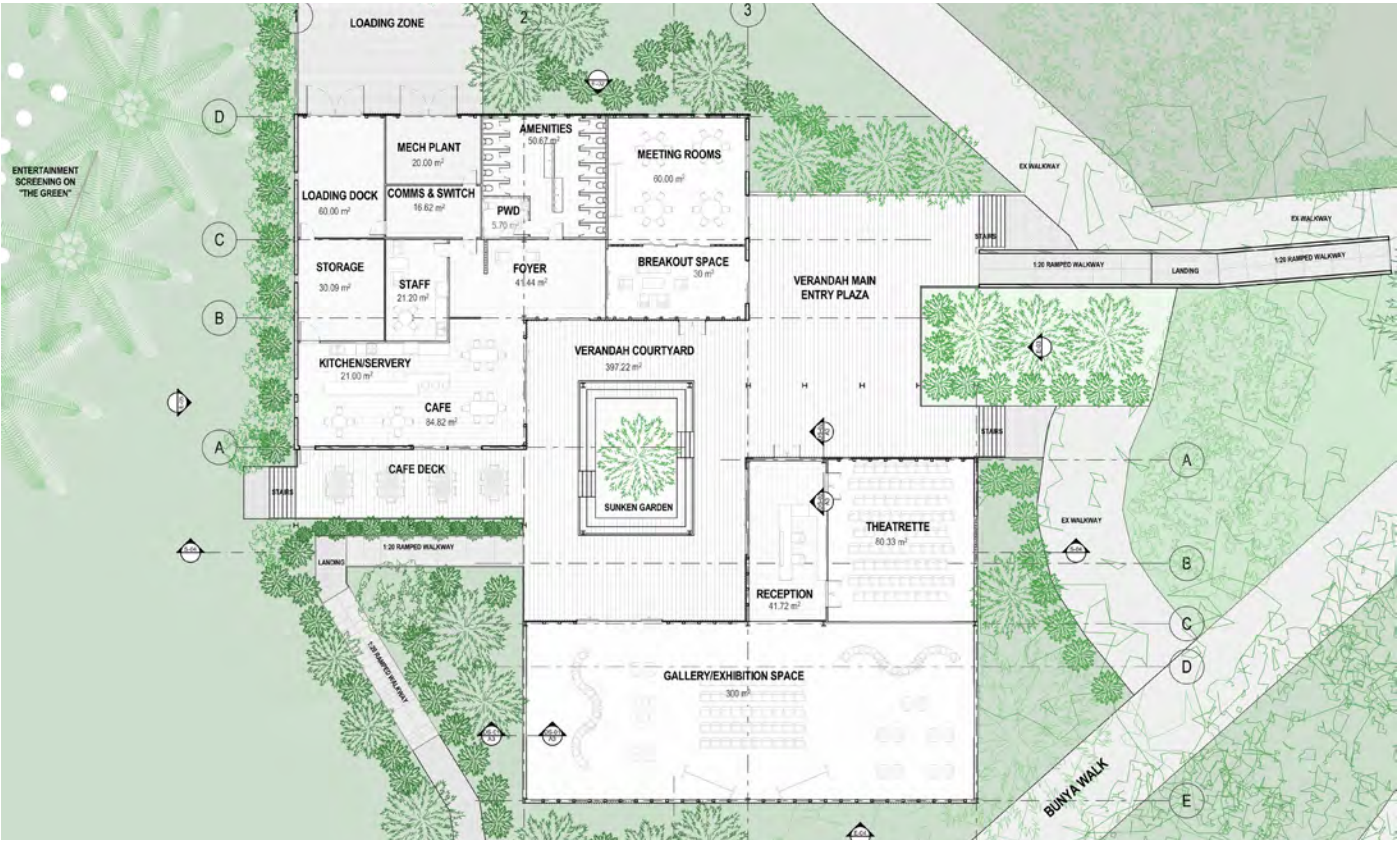




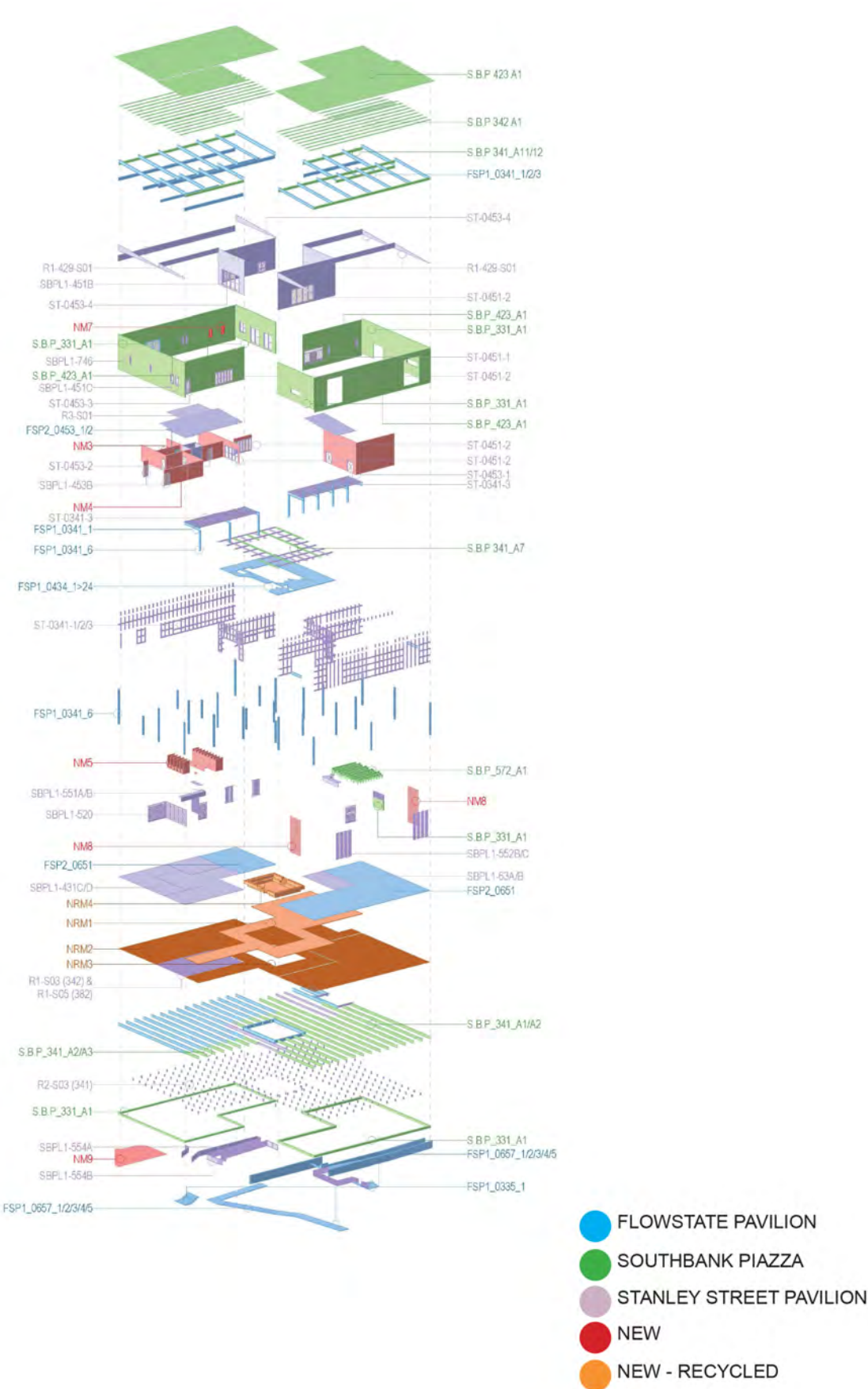
EMILY MARSHALL

PROJECT STATEMENT

This design proposal presents preliminary design concepts for a 836.90m2 Information and Exhibition Centre tailored for the Brisbane 2032 Olympic & Paralympic Games. This facility will be the central hub for sharing event schedules and updates, transportation details, emergency communications for athletes, officials, media and spectators. This establishment will feature communal access to Pavilions and Exhibition spaces, celebrating first nations communities, art, sports, culture, Olympic History and the SEQ Council of Mayors - all notions which contributed significantly to bringing the Olympics to Brisbane. The proposal's building design is strongly underpinned by the concept of "designing for disassembly", factoring in principles of cradle to cradle, circular economy and core principles of sustainability. The building has been specifically designed to be constructed using a limited material bank, locally sourced from two Southbank Flow State Pavilions, Southbank Piazza and two buildings located at Southbank's Stanley Street Plaza. Through taking advantage of the limited material bank, the building is almost entirely constructed using material bank elements, with minimal new and recycled materiality. Designed to function for minimum 5 years post event, the building integrates building techniques and technologies tailored for ease of future disassembly. Constructed using mostly bolted and screw junction connections throughout, ensures materials and components can be deconstructed and cyclically reused in future projects. Maximising use of the limited material bank, allows for creation of an encapsulative building form which draws the attention of passers-by to enter and occupy the space, both internally and externally. Situated in the Brisbane CBD Botanic Gardens, enables the information centre to be a point of convergence, connecting key axial nodes - The Brisbane City, Botanic Gardens & River. This design proposal will facilitate a prime tourism hotspot, promoting a place of gathering for both locals and tourists to live, work, visit and play in, effectively connecting people to the heart of the city and Brisbane River.









TORI MANNING

PROJECT STATEMENT

The Olympic Exhibition Centre is a forward-thinking, adaptable landmark that embodies the enduring legacy of the Games while celebrating the identity of Brisbane. Rooted in circular design principles and inspired by the city’s vernacular architecture, the centre reimagines the traditional Queenslander, an emblem of Brisbane’s cultural memory as a contemporary civic pavilion that bridges local heritage with global dialogue.

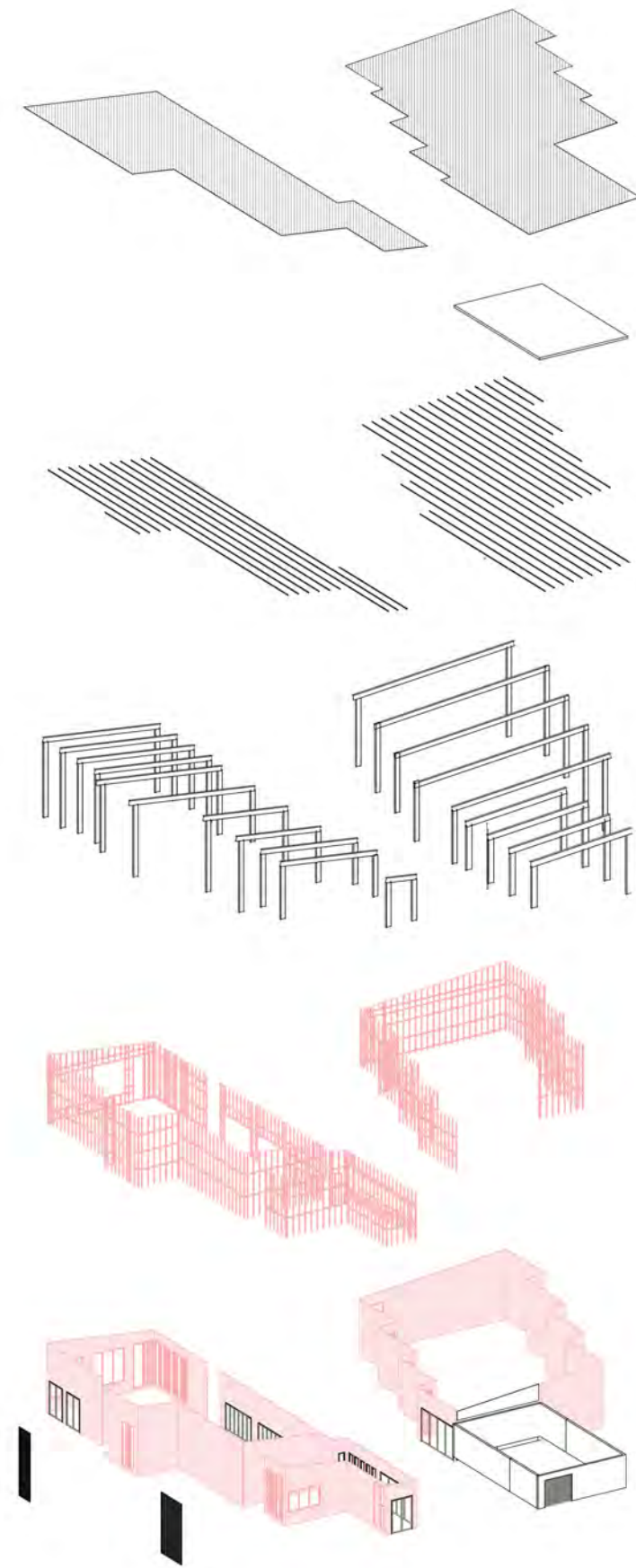
This design draws from the Queenslander’s defining elements; the iconic veranda, to shape a building that is both contextually grounded and future oriented. The veranda, traditionally a space for pause, outlook, and community, is reinterpreted through a centralised public gathering space that invites interaction, reflection, and cultural exchange.

Sustainability and longevity underpin every design move. The structure prioritizes disassembly and reuse, with a modular steel and timber frame system that allows components to be repurposed, relocated, or reassembled post-Games. Materials are reclaimed, recyclable, and locally sourced where possible, reinforcing an ethic of environmental stewardship. Passive design strategies, natural ventilation, daylighting, and minimal site disturbance ensure energy efficiency and climate responsiveness.

Designed for transformation, the centre functions as an exhibition venue during the Olympics and adapts to future community use beyond the event. It offers a lasting asset for Brisbane’s urban fabric, an elevated, accessible, and inclusive space that reflects the city’s identity while championing innovation in sustainable event infrastructure. Through this approach, the Olympic Exhibition Centre contributes meaningfully to Brisbane’s legacy: a civic landmark that honours place, supports community, and proves that temporary venues can be timeless in impact.







MATERIAL BANK  
REUSED MATERIALS







JAKE GUIVER

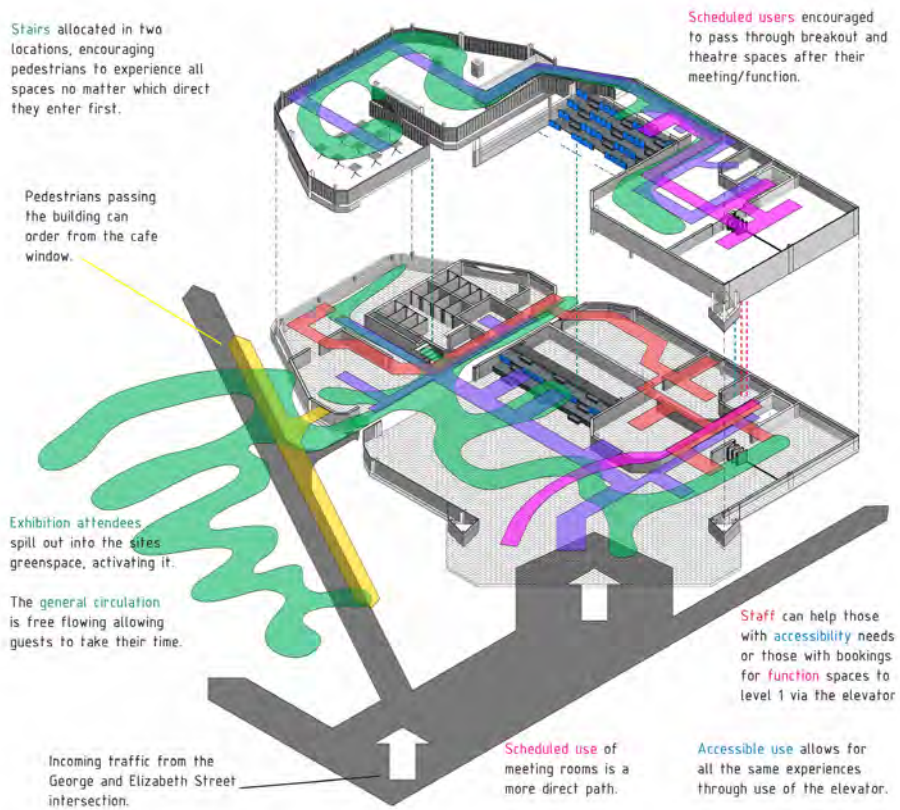
PROJECT STATEMENT

Located in Brisbane’s historically significant Queens Gardens, the 2032 Olympic and Paralympic Information and Exhibition Centre embraces circular economy principles at every scale. The building achieves an ambitious 85% reuse rate of materials from deconstructed South Bank structures, documented through a material passport system that enhances traceability and life cycle planning.

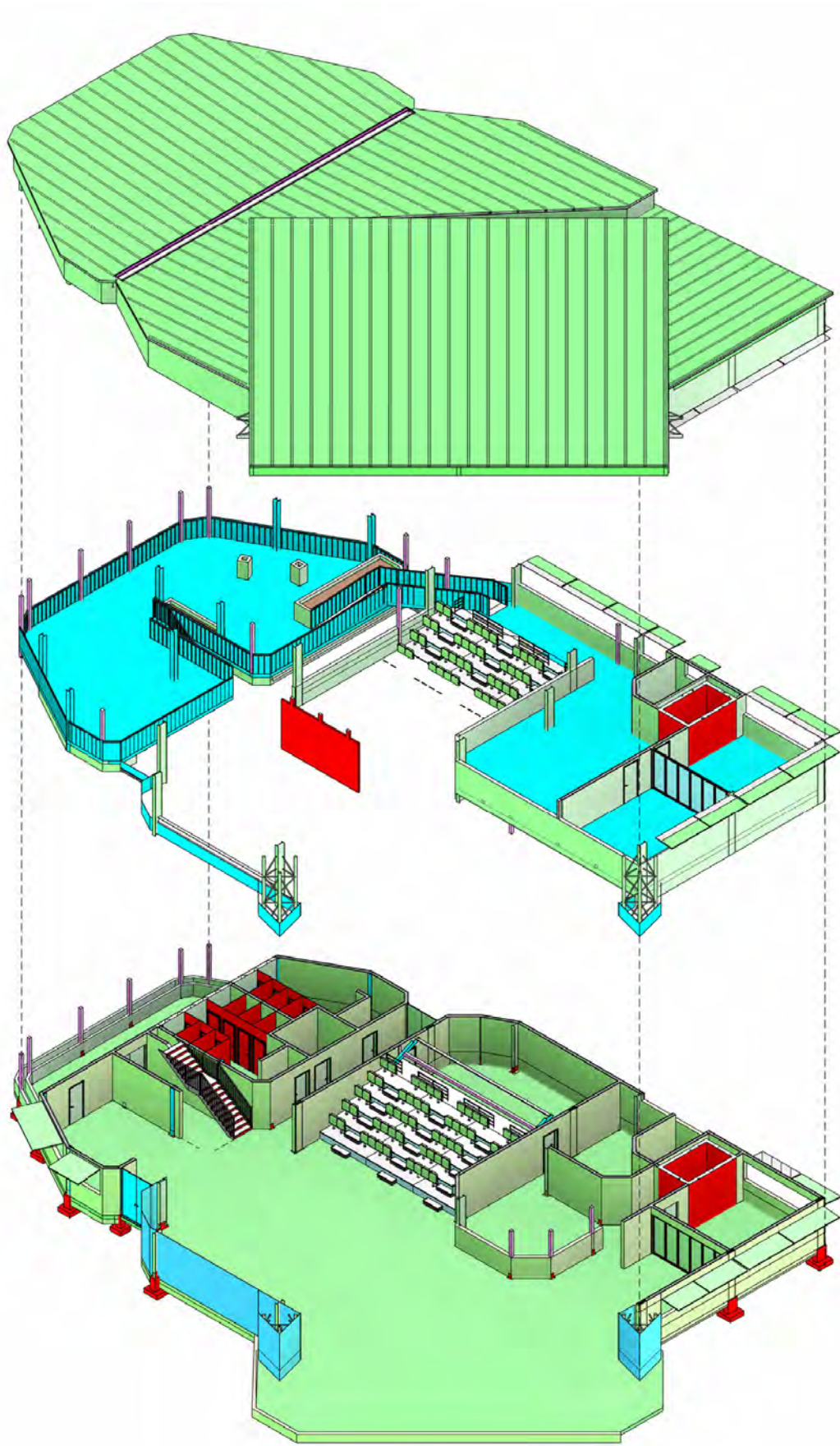
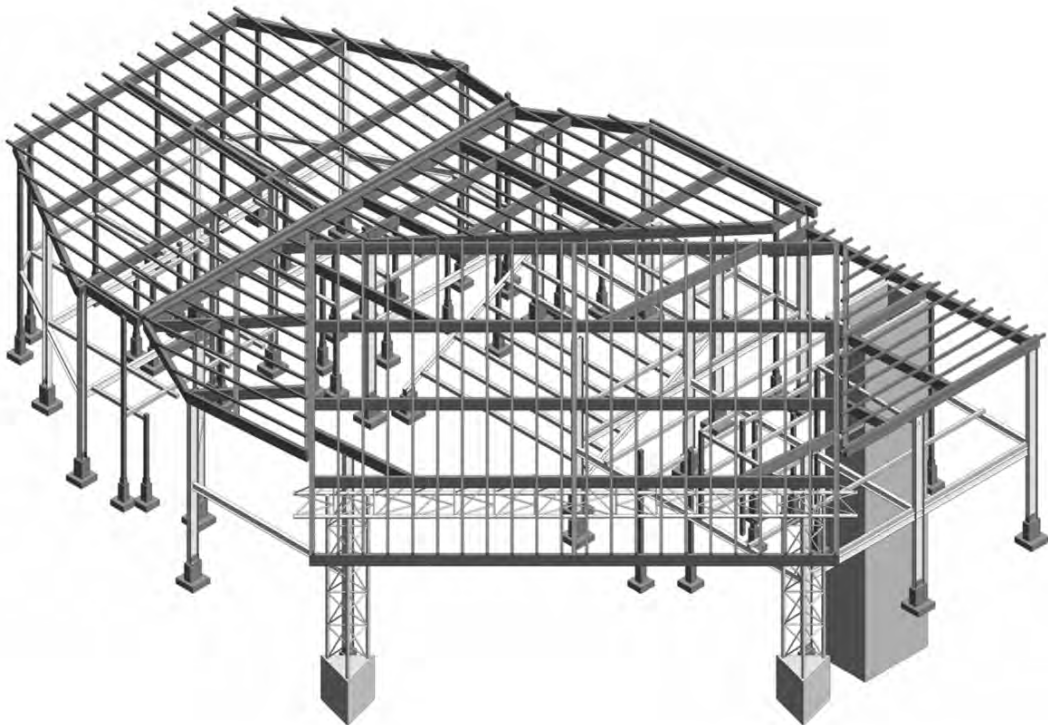
Guided by the availability of salvaged materials and the need for functional adaptability, the architectural form is sculpted in harmony with the site’s distinct triangular geometry. A steel-framed structure incorporates exposed trusses, perforated steel panels, and generous openings to promote transparency, passive ventilation, and a strong visual connection between interior and exterior spaces. A bold roof cantilever, supported by the truss system, extends toward the site’s busiest pedestrian intersection, drawing the public in, encouraging interaction, and activating the greenspace. Designed for flexibility, the building supports multiple modes of use and includes adaptable doors and openings that reflect both its modular, repurposed material language and the traditions of Queensland architecture, where openness, large spanning eaves, and ventilation play a defining role.

Informed by insights from Populous design sprints, the concept prioritises universal accessibility and equitable experiences, whilst also weaving greenery throughout and aligning user journeys with key site features. Notably, it frames views of the Queen Victoria monument, a significant element often used by protesters, offering respectful, inclusive spectator spaces.

This is not just a venue for the games, it is a living demonstration of how temporary civic architecture can be sustainable, inclusive, and deeply connected to place and people.









JEREMY ZHAO

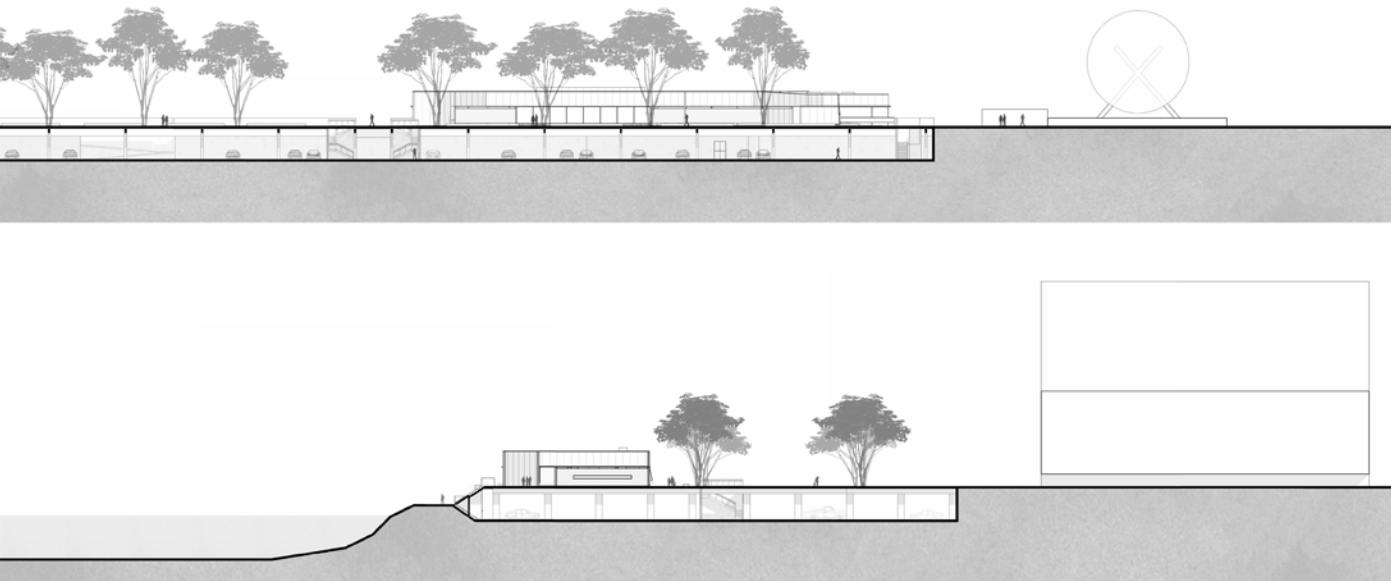
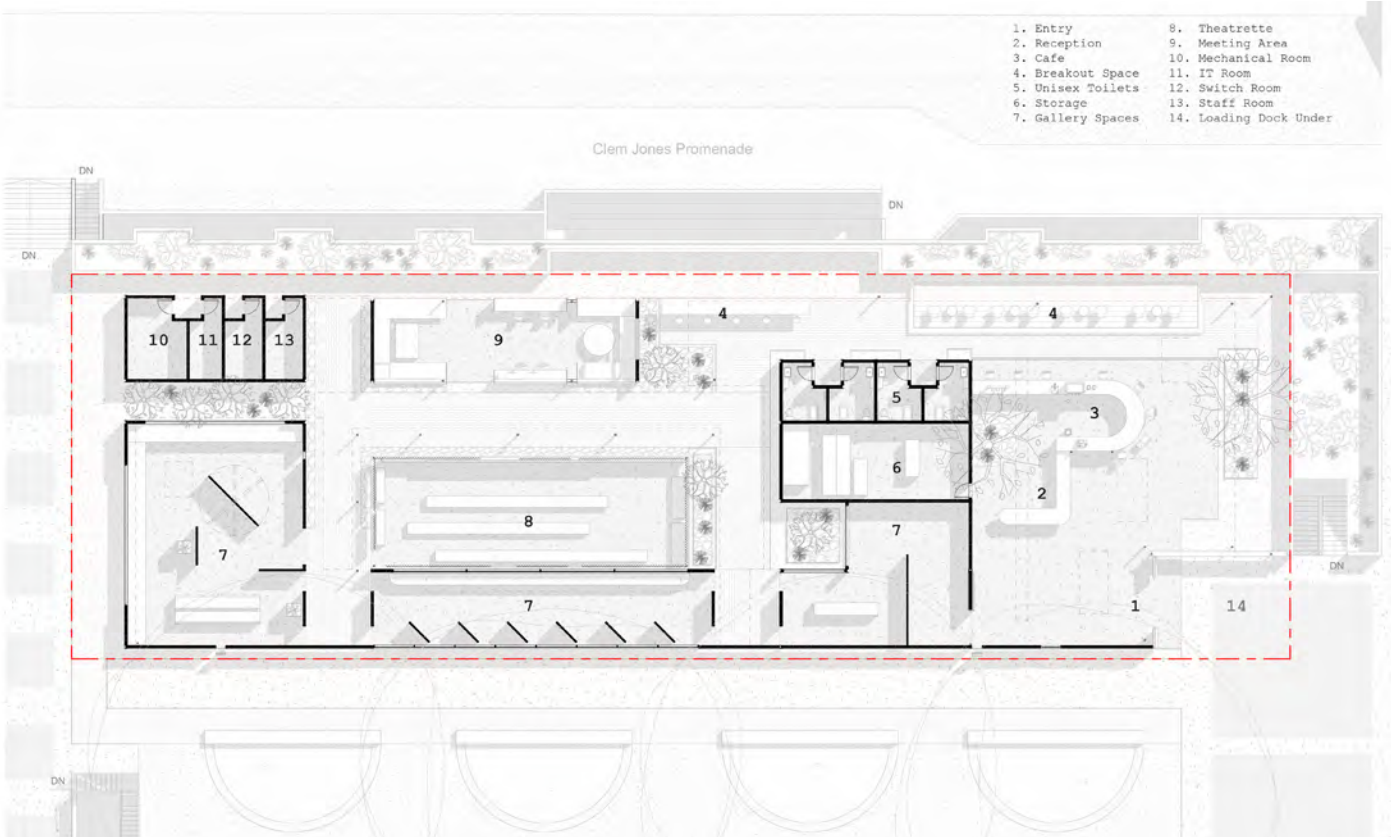
PROJECT STATEMENT

The 2032 Information & Exhibition Centre is located within Brisbane’s South Bank Cultural Forecourt—a prominent riverside setting known for its vibrant pedestrian activity and urban energy. Conceived as a modular and temporary structure, the project responds to the temporary nature of the Olympic and Paralympic Games while integrating meaningfully into the existing urban context.

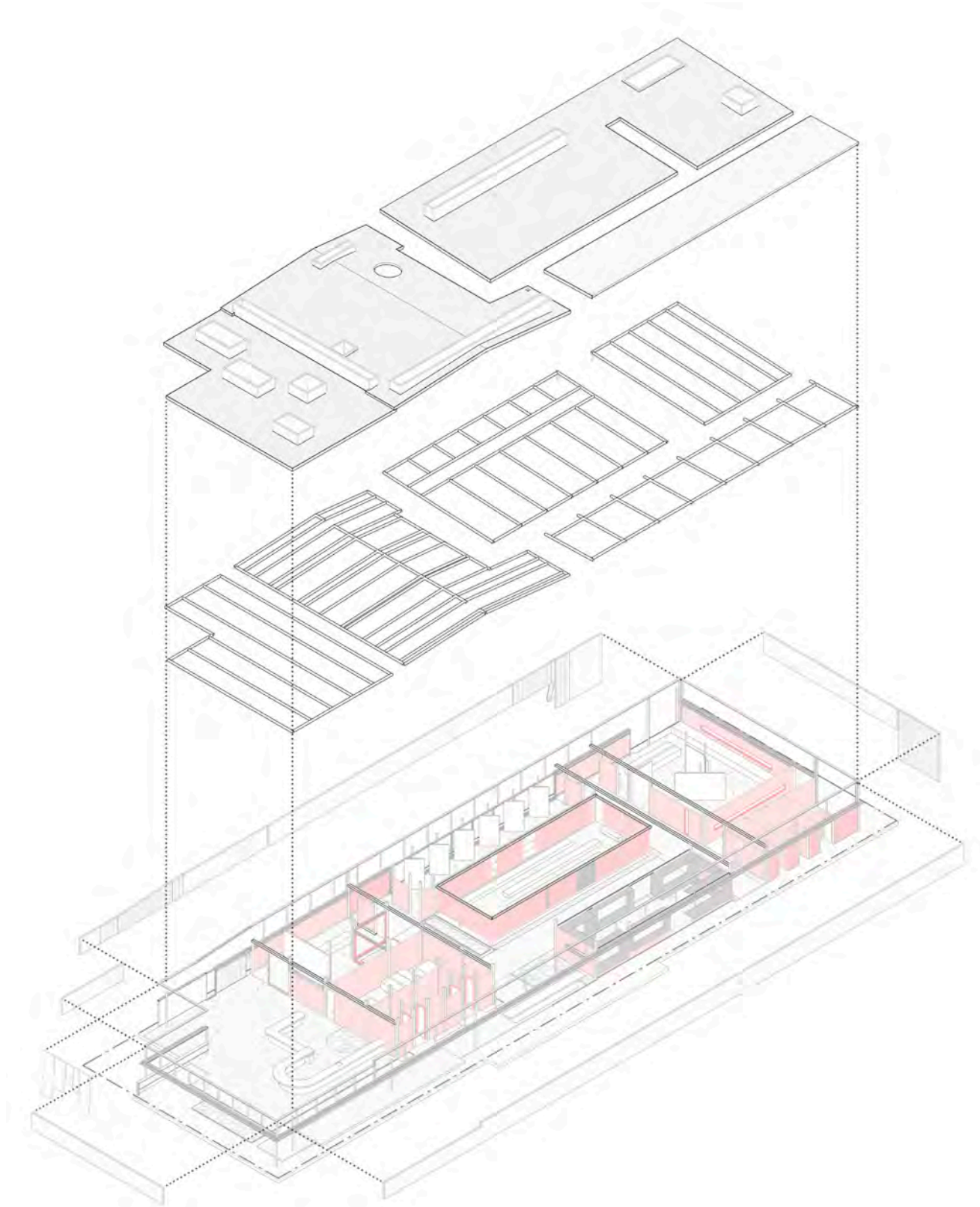
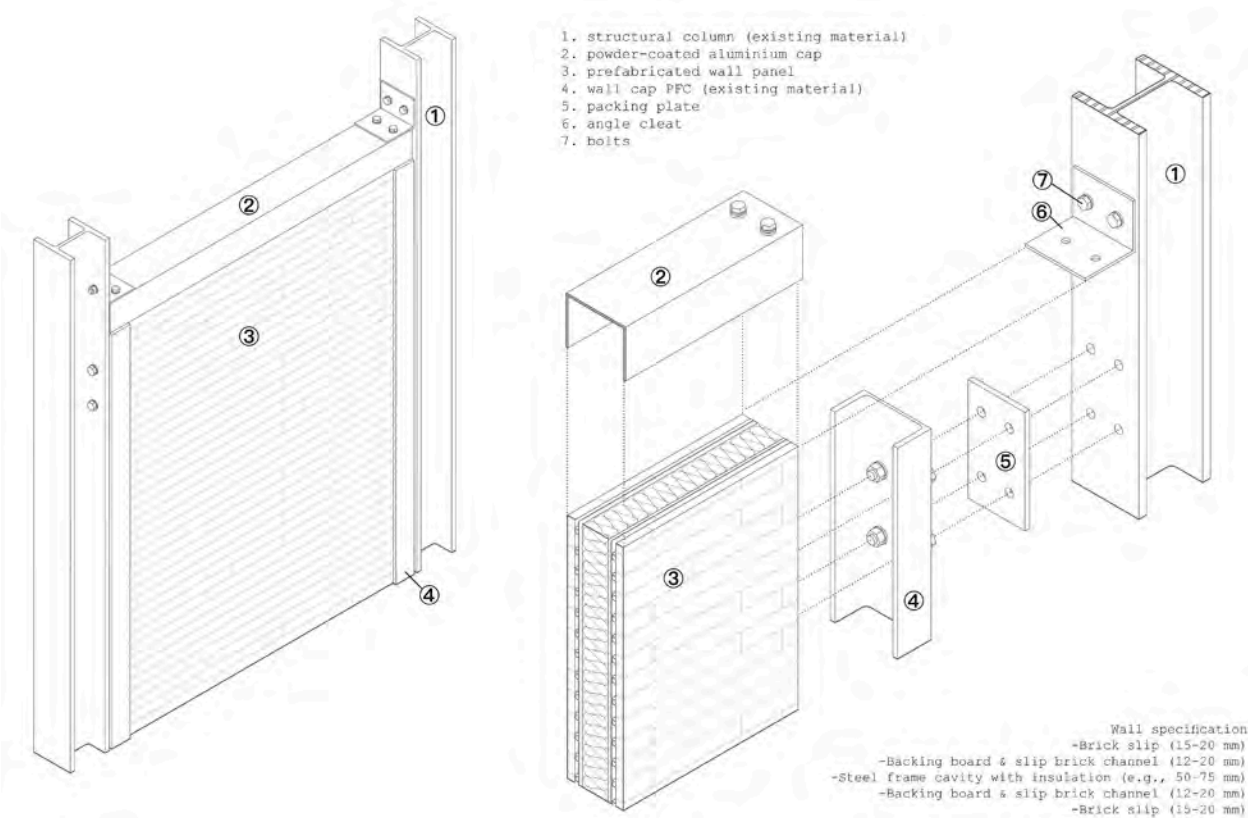
The architecture is assembled from prefabricated wall panels and steel-framed components, using materials sourced from a designated Material Bank. Reused elements—including structural steel members, polycarbonate panels, brick, and crushed concrete—form the core of the construction. This approach reduces material waste and ensures the building can be disassembled and repurposed, aligning with long-term sustainability goals.

Internally, the Centre balances functionality with spatial quality and circulation. Gallery spaces, a theatrette, café, and breakout zones are arranged around a linear circulation spine. Leisure spaces views across the Brisbane River, drawing visitors through the site with ease. Skylights and open ends bring natural light into the interior, creating a breathable, porous spaces that connects with the surrounding cultural precinct.

The Centre acts as both a functional hub for Olympic operations and a public-facing platform that engages with the cultural and civic life of Brisbane during and beyond the event.





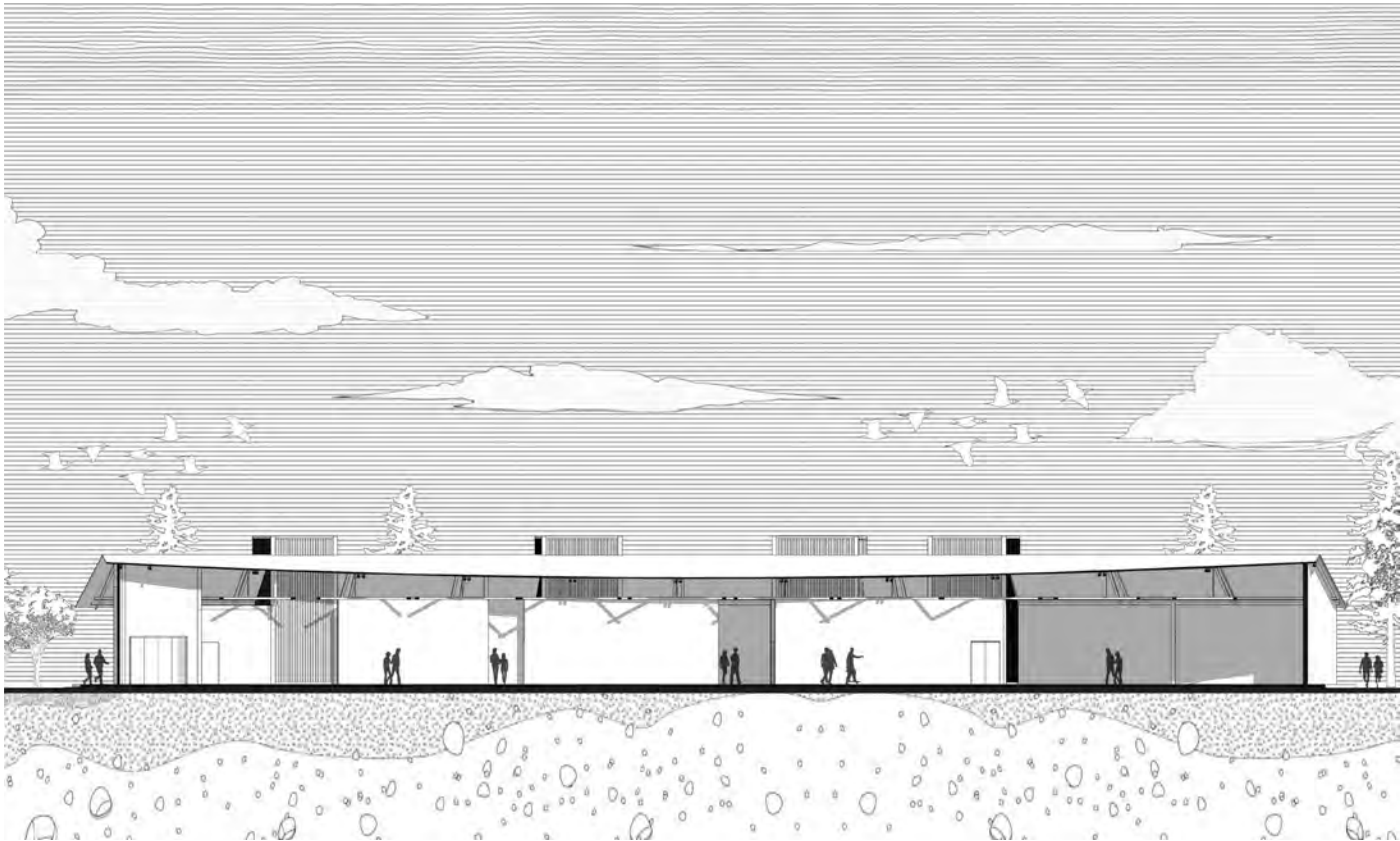
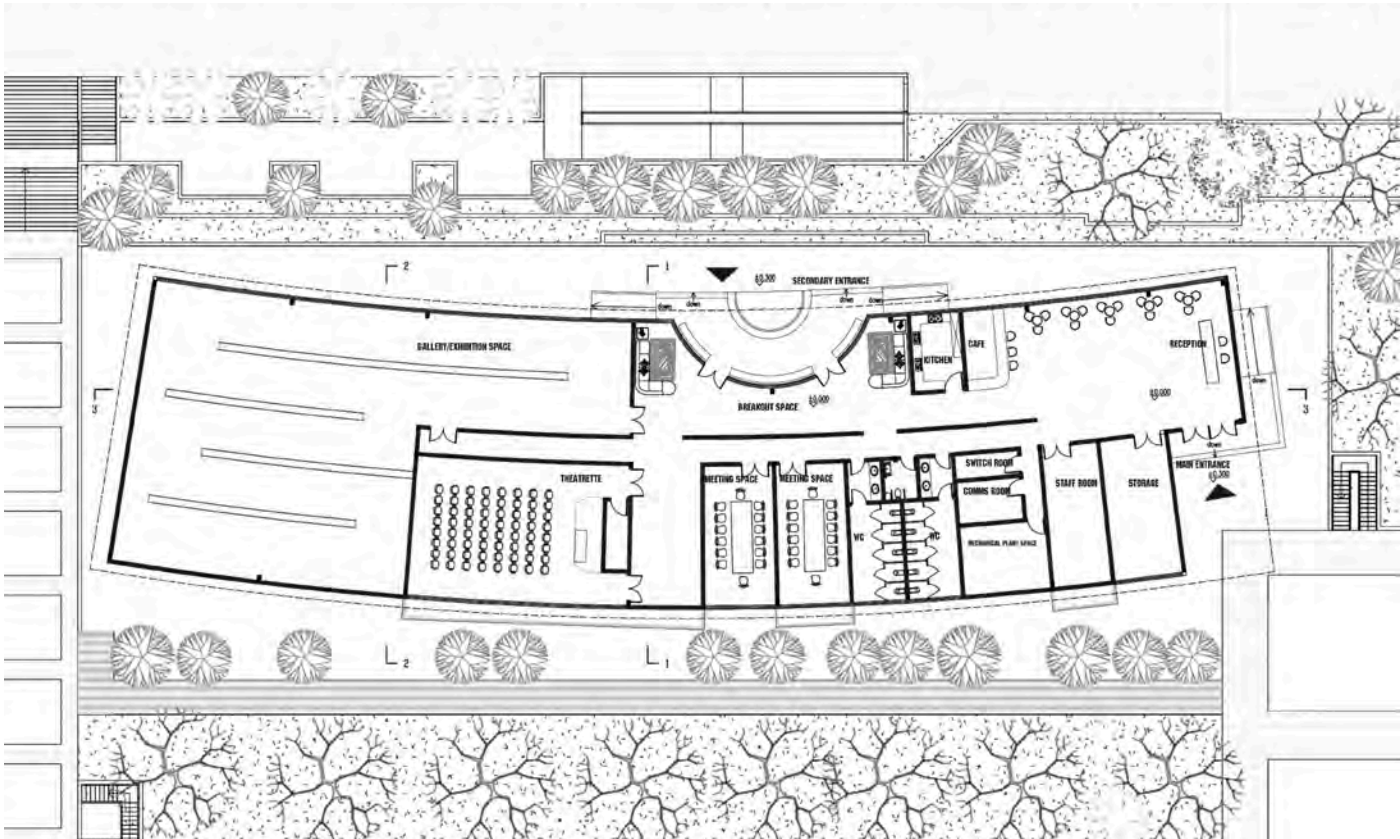


GREY - Existing material from material bank  
RED - New material & Reused material

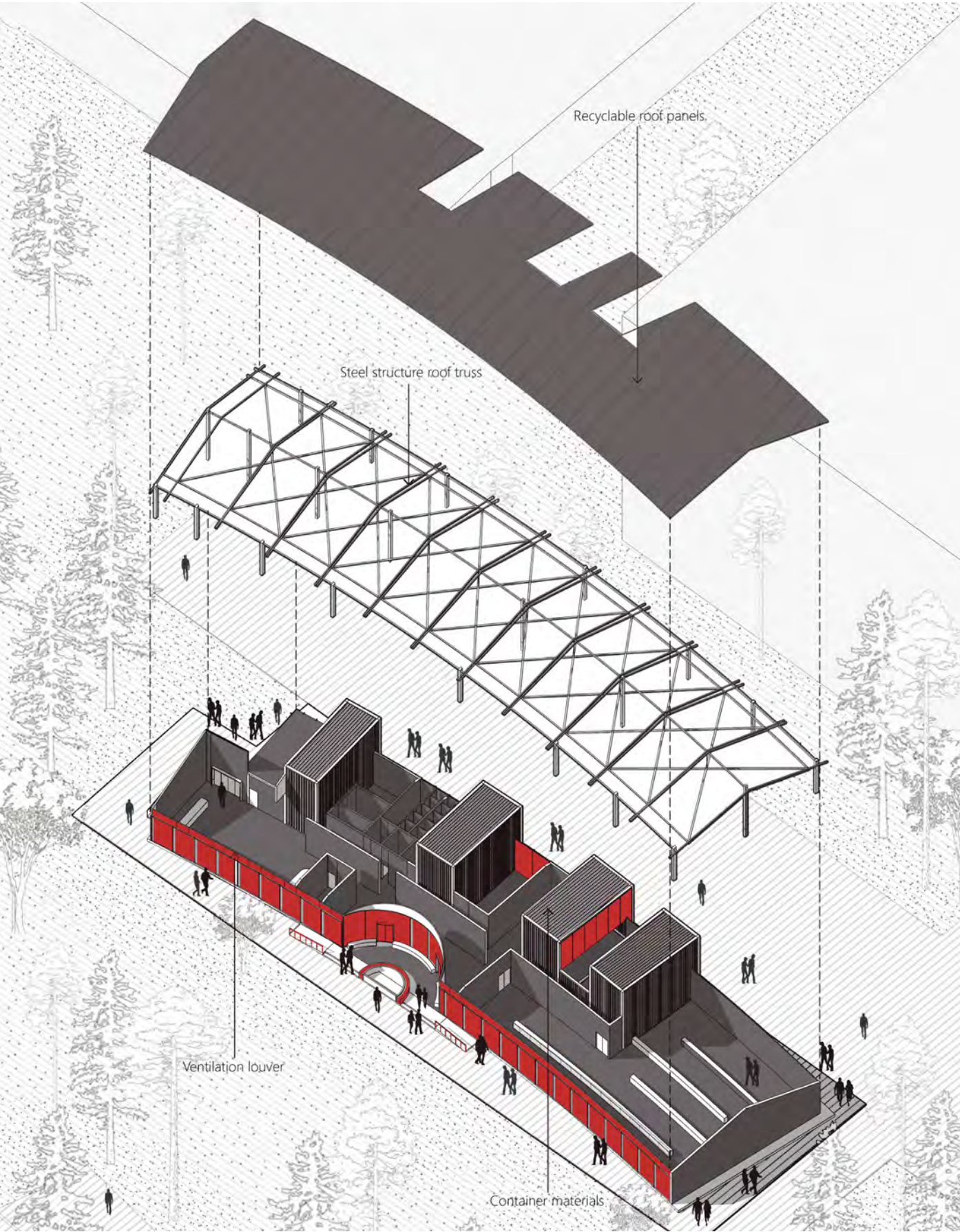


PROJECT STATEMENT

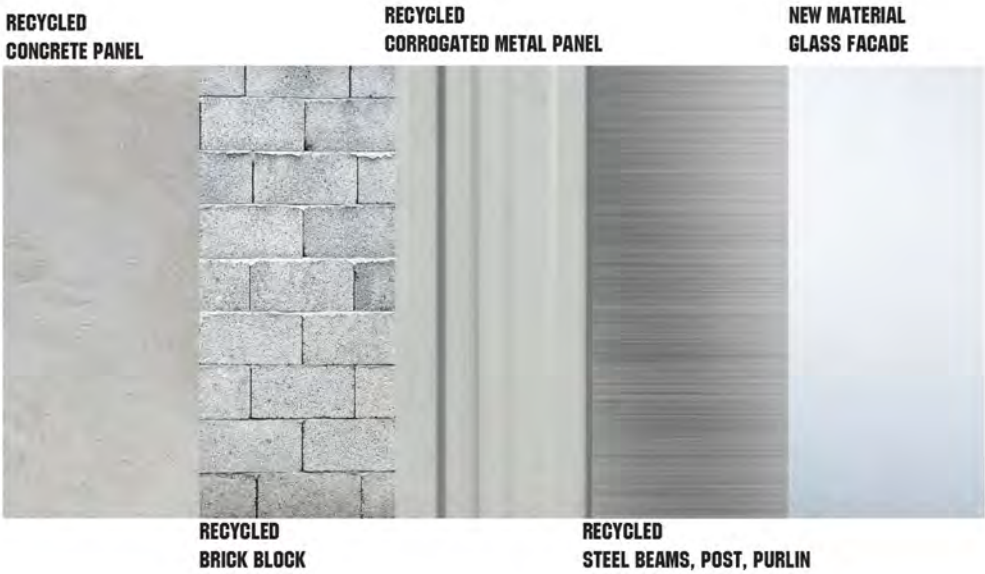
Brisbane is one of Australia’s fastest growing cities, known for its multicultural background and pleasant riverside lifestyle. Thanks to the traditional territory of the Aboriginal peoples, Brisbane is now an example of a diverse city that brings together different groups, cultures and languages. Therefore, the objective of this project Echoes Along the River is to create an information and exhibition center for the Brisbane 2032 Olympic Games based on the concepts of circularity and inclusivity. The Information and Exhibition Center is designed to be located in South Bank Park which is at the central of Brisbane. The building not only carries cultural and social functions but also serves as an opportunity to introduce the city’s vision and appearance to the world. The design located within South Bank Parklands, which attracts millions of visitors annually. Therefore, the building is designed to balances open and enclosed spaces to accommodate high foot traffic and surrounding activities. Based on noise levels and pedestrian flow patterns, the centre provides protected areas with natural feature for visitors to rest, learn and communicate creating a peaceful haven within the urban environment. The main pathways of the building extend along the riverbank, guiding visitors through a narrative experience that include Olympic history, Indigenous stories, and nature. As visitors wander through the exhibition halls, the building materials, structures, and historical landmarks along both banks of the Brisbane River will come together to form a link between the past and the future, between the land and its history. The building’s curved form symbolises the extension of the riverbank, like a spatial projection of the Brisbane River itself. Through spacious open spaces and outdoor platforms, the design reinforces the deep connection between people and nature. The shape of open corridors guild visitors vision to sense their connection to the water, history, and surrounding city. The construction of the centre utilises over 80% recycled materials sourced from dismantled buildings. Key materials include recycled bricks, steel columns, bolted steel roof panels, and cement flooring, all drawn from a curated material bank. All steel components are bolted rather than welded, enabling full disassembly and future reuse.



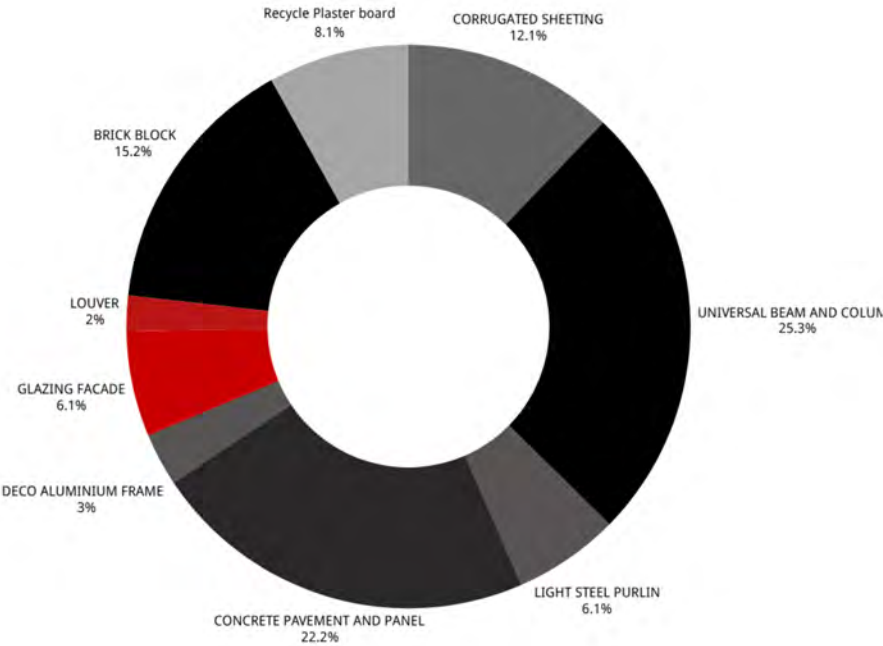




MATERIAL ANALYSIS



COMPARISON OF RECYCLED MATERIALS AND NEW MATERIALS  
NEW MATERIAL 8.1% REUSE RECYCLED MATERIALS 83.8% NEW RECYCLED MATERIALS 8.1%





MATTHEW WOOD

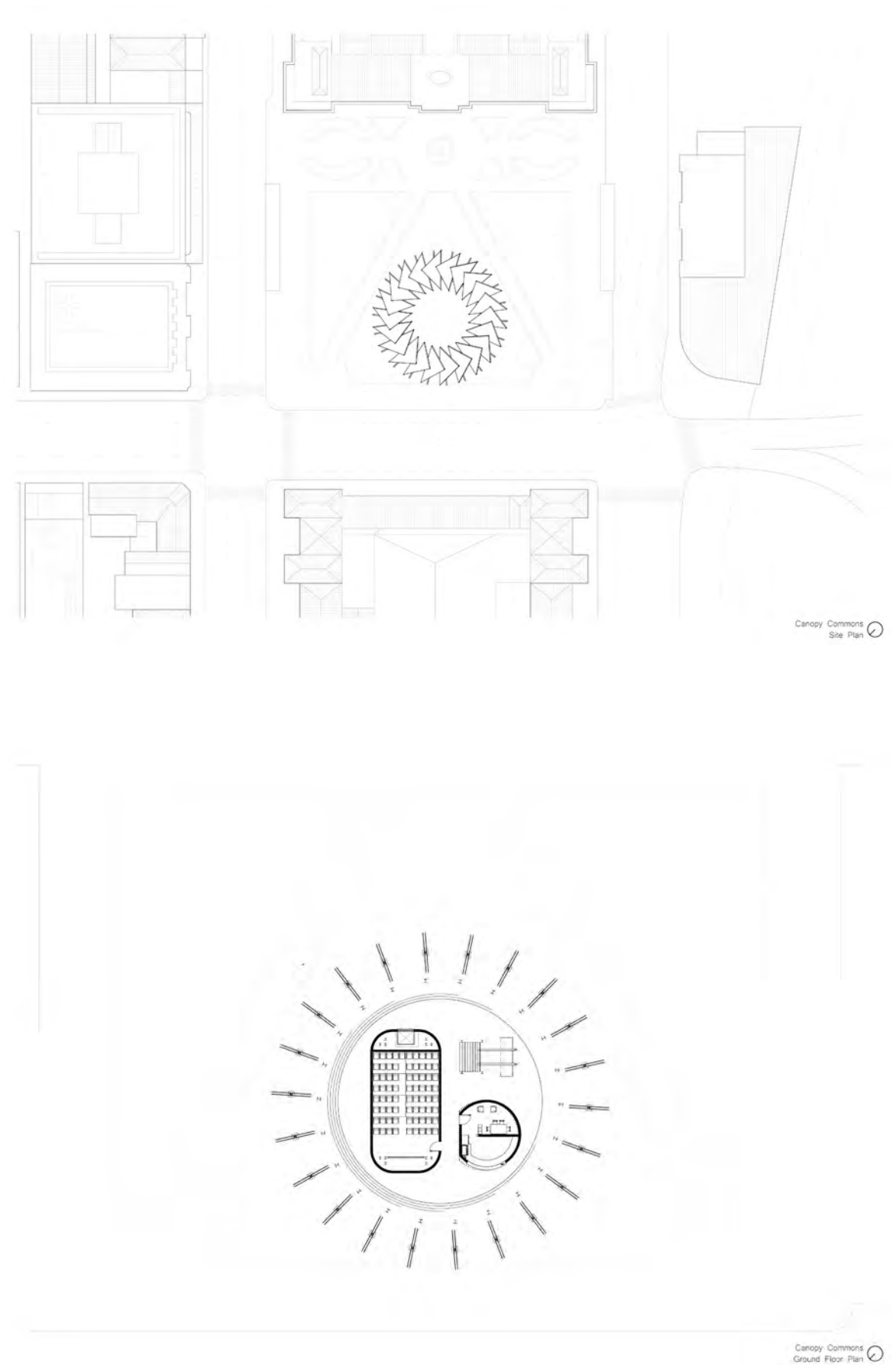
PROJECT STATEMENT

The Canopy Commons Pavilion, designed as the Olympic Information and Exhibition Centre for the 2032 Brisbane Olympics, is a temporary, circular structure in Queens Gardens, Brisbane’s only city-centre park without permanent buildings. Inspired by the subtropical ambiance of sitting under a bunya pine or Moreton Bay fig, the pavilion features a canopy of I-Beams mimicking intertwined branches, creating dappled light and natural ventilation. This design celebrates Brisbane’s subtropical identity, blending seamlessly with the park’s heritage and surrounding listed buildings while fostering a sustainable Olympic legacy.

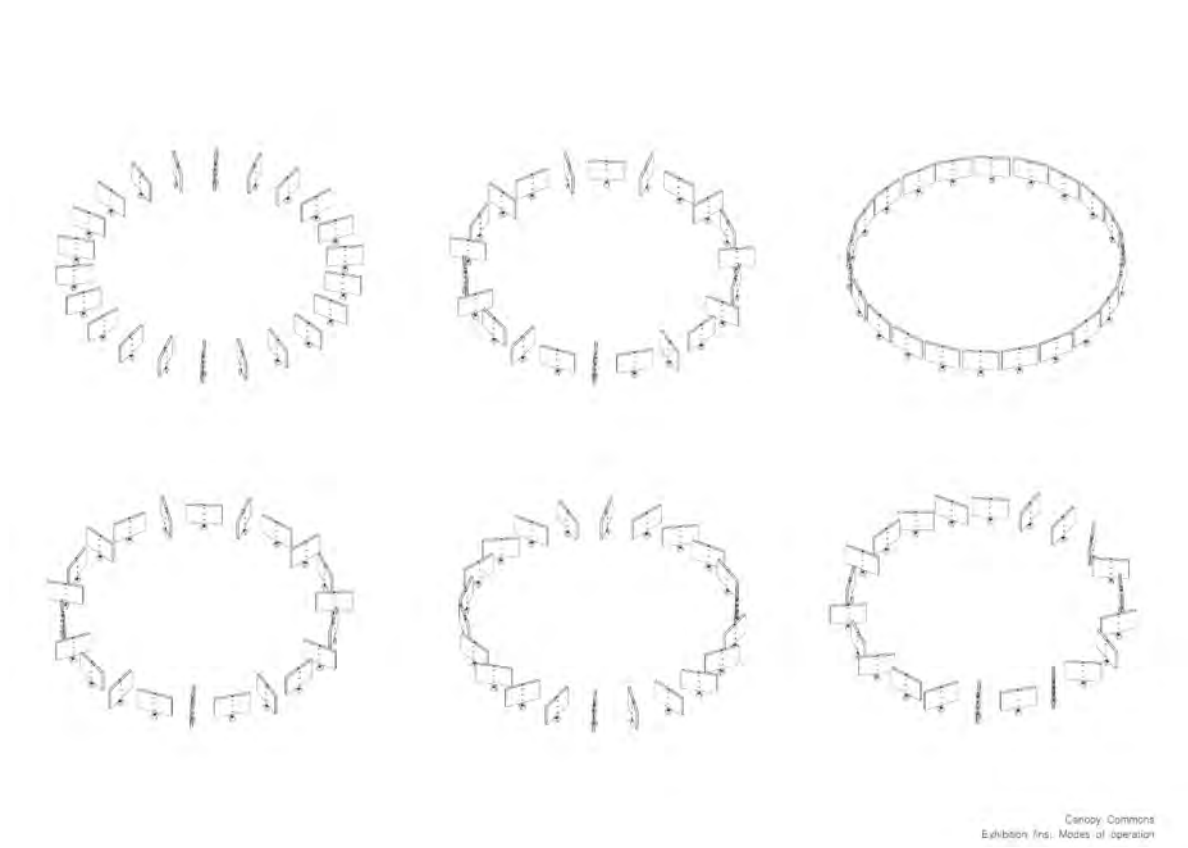
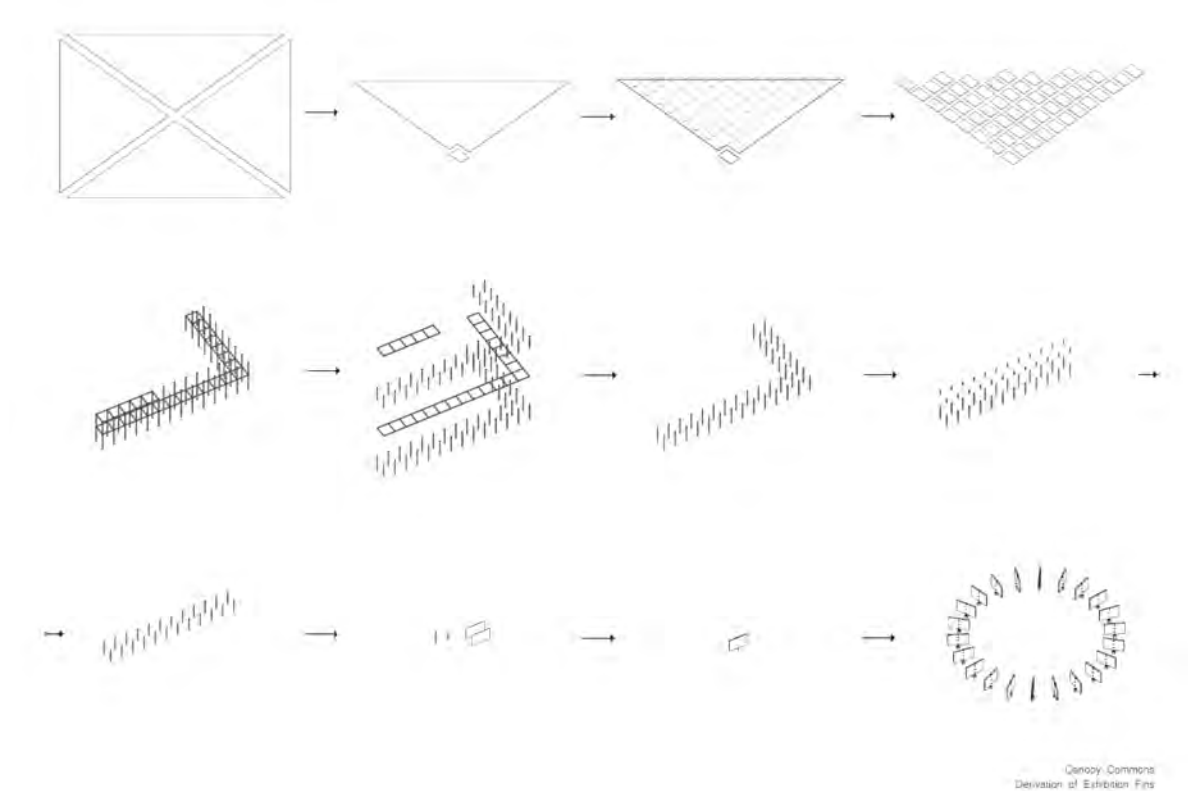
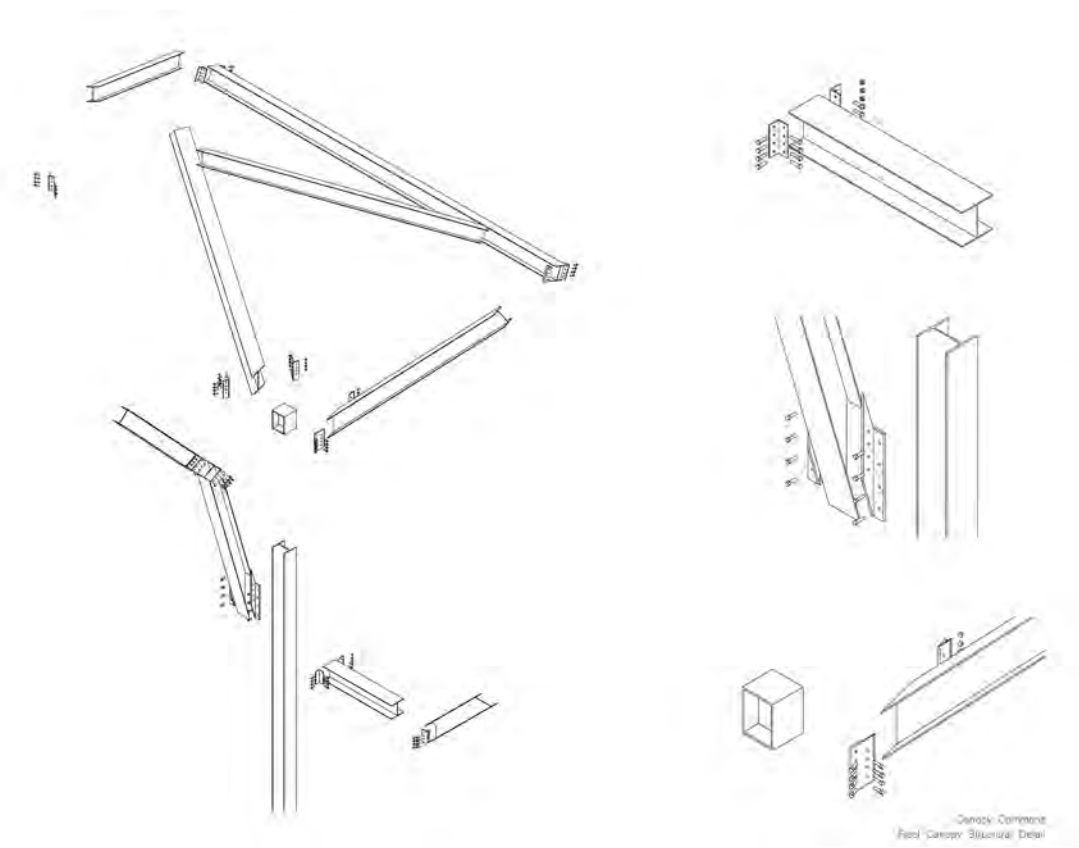
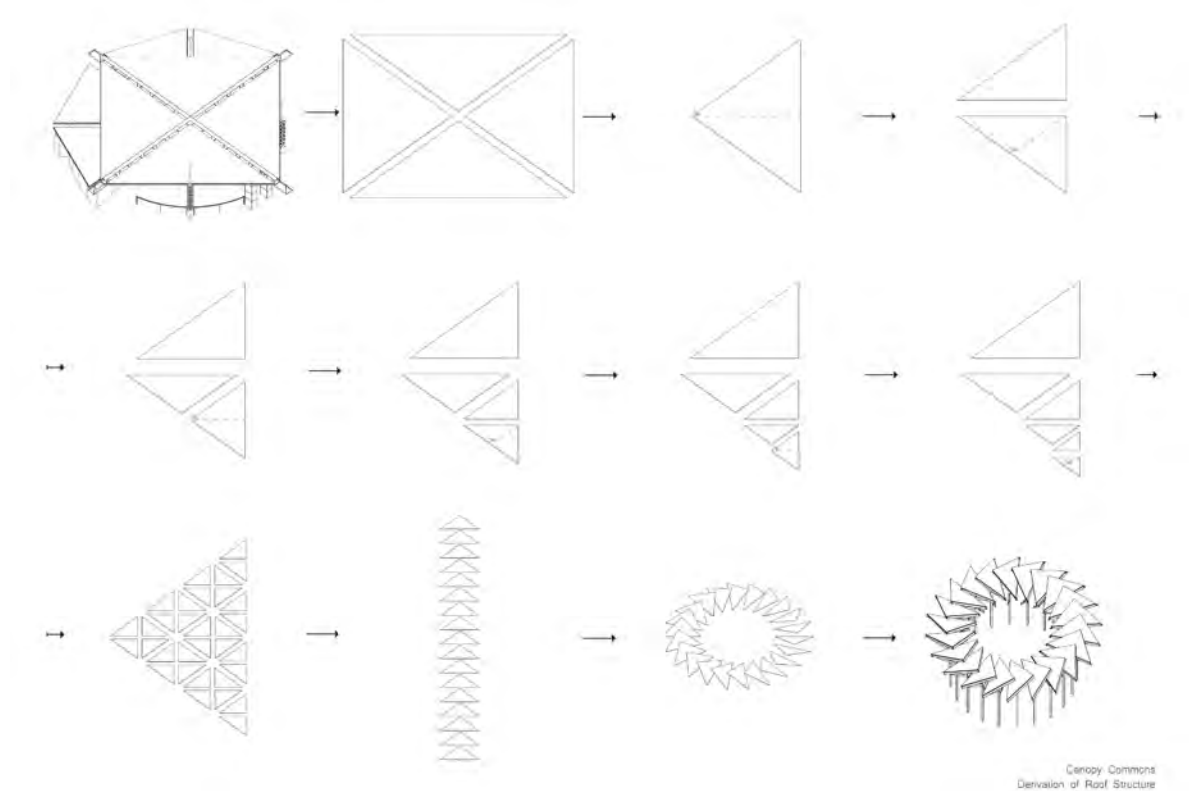
Respecting the park’s cultural and physical constraints, the pavilion minimises its impact on the underlying multi-storey carpark through lightweight materials like cross-laminated timber and a distributed structural system. Its open typology allows exhibition and communal spaces to spill into the park, reducing material use and maintaining the park’s green character. The structure’s components—exhibition fins, roof, and central form—are separable, enabling disassembly and reuse, enhancing sustainability.

The pavilion’s adaptable design encourages fluid movement, with rotating exhibition fins creating varied, interactive experiences without a fixed entry point. Dropped walls ensure natural light and ventilation, while sensory interplay between interior and exterior spaces fosters a dynamic, communal atmosphere reflective of the Olympic spirit. The upper level serves as a viewing platform, amplifying the performative experience.

Sustainability is central, with the pavilion showcasing circular design through design for disassembly and use of carbon sequestering materials such as CLT. Its photogenic canopy and passive cooling align with Olympic sustainability goals, presenting Brisbane as a vibrant, green city. Canopy Commons harmonizes innovation, heritage, and ecology, leaving a lasting legacy of community and sustainability without a permanent footprint.









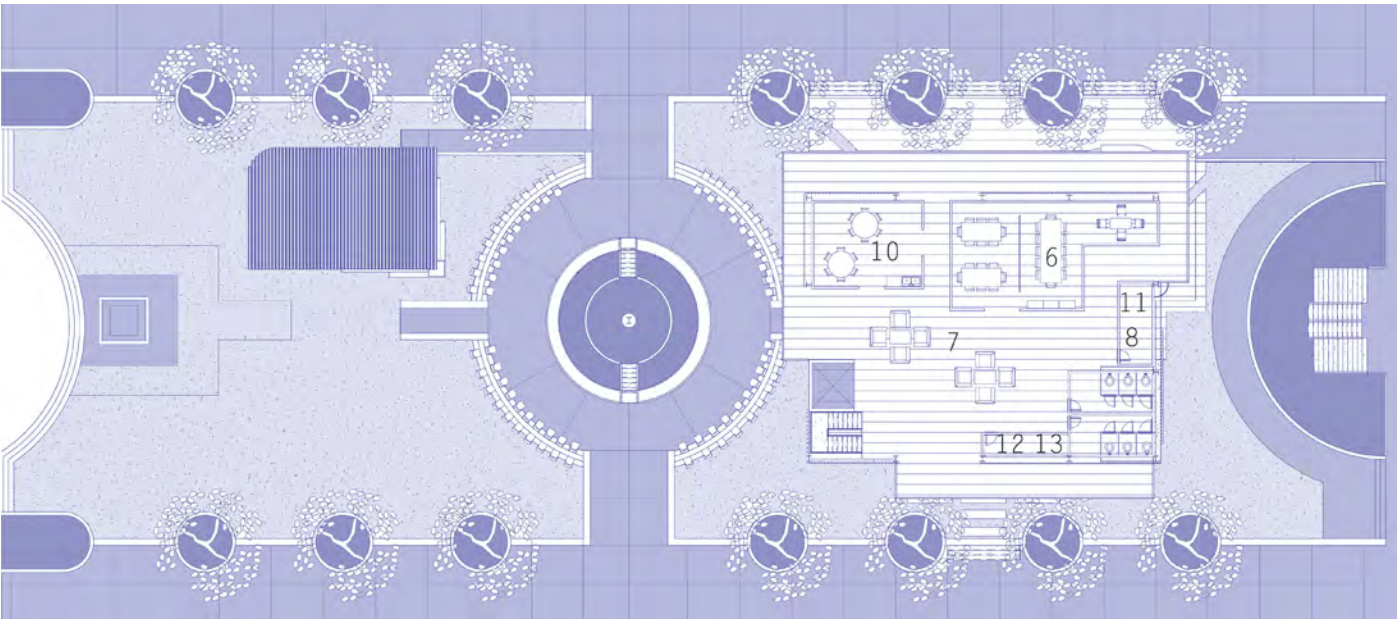
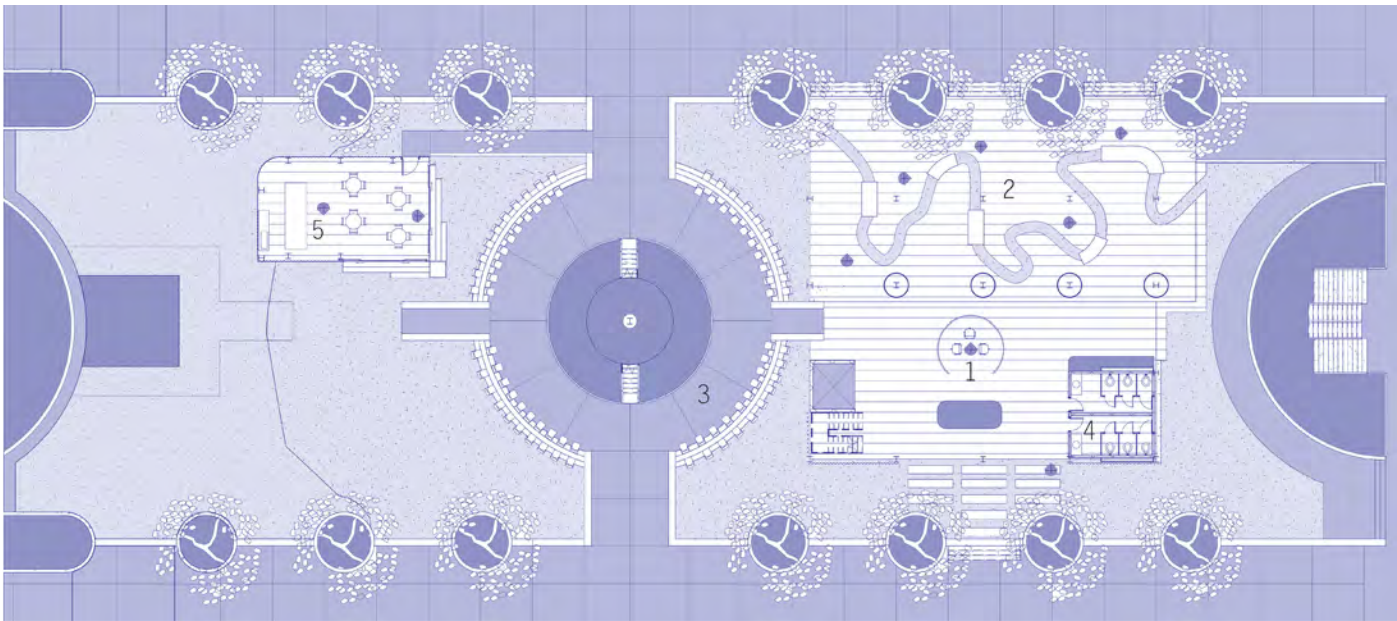
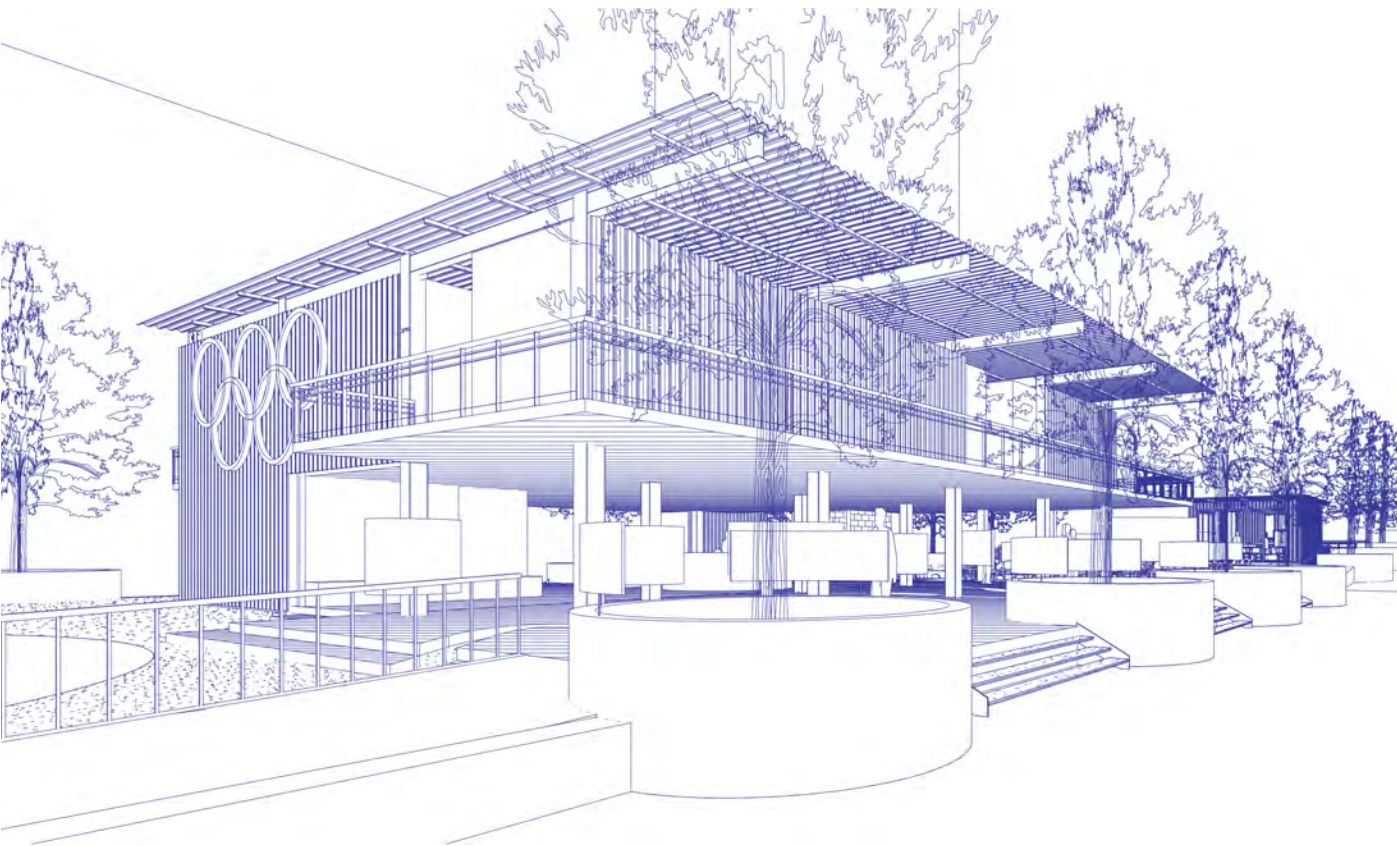
AIDEN ASHFORD

PROJECT STATEMENT

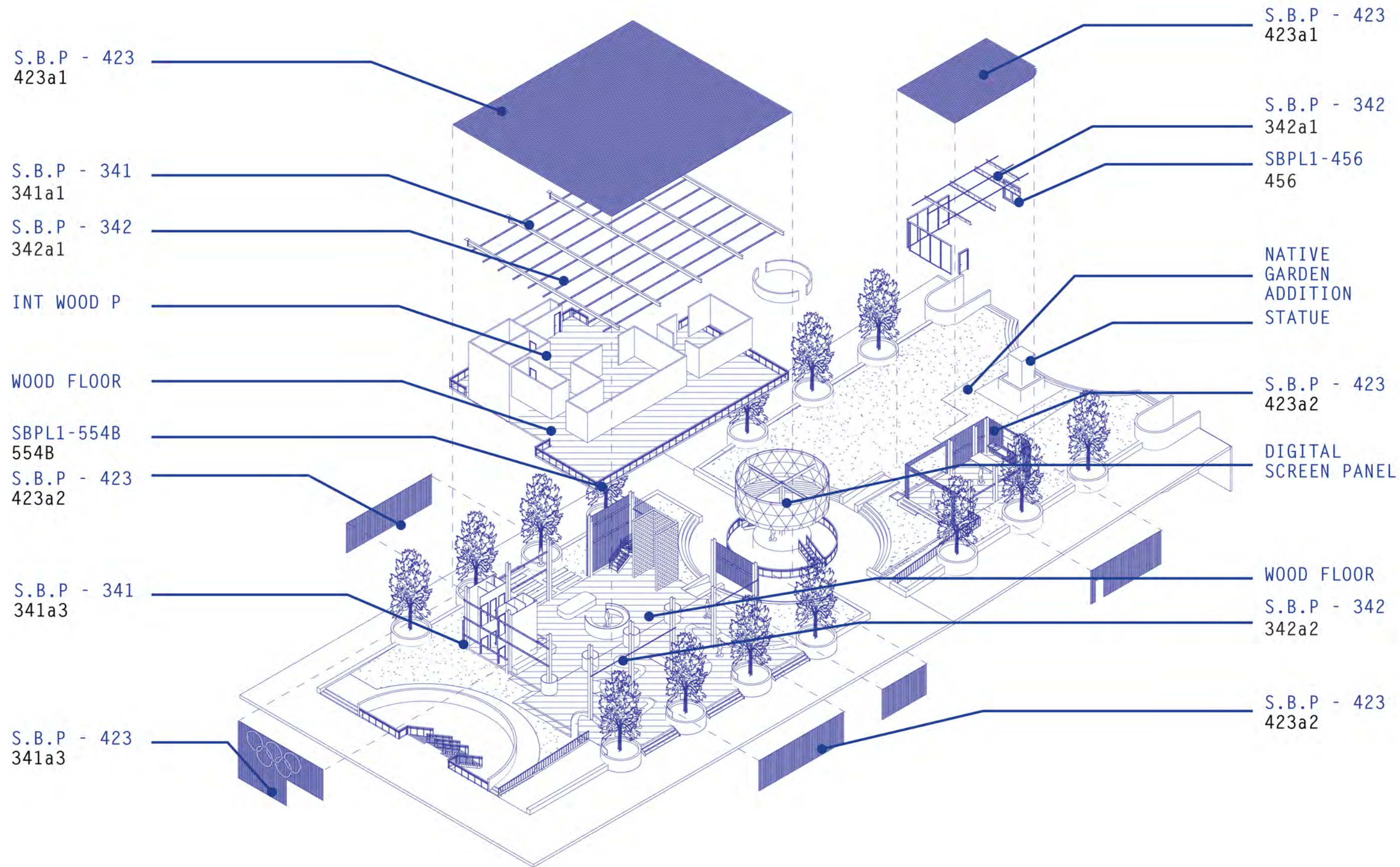
The proposed project is the design of an Information and Exhibition Centre for the Brisbane 2032 Olympic and Paralympic Games. This facility will serve as a central hub for real-time updates, event scheduling, transport coordination, and communication. The Centre will also function as a cultural and educational venue, featuring exhibition space that illustrates the history and legacy of the Olympic games, as well as connection to Australian culture and First Nations populations.

The project will be constructed using a circular design approach, using materials from: (1) specified donor buildings; (2) sourced reclaimed construction materials; and (3) sustainably sourced new materials.

The design must prioritize adaptability, longevity (minimum 5 years post-Games use), and future disassembly, ensure minimal waste and maximal reuse or repurpose of elements at end of life. This commission reflects Brisbane’s commitment to sustainable development and cultural celebration, and civic legacy as it prepares for the 2032 Games. Through discourse with the associated architectural practices involved in this brief: McGregor Coxall, Blaklash and Populous, further investigation into sustainable design practices were developed. The key areas expressed in this project are Sustainability strategies, Design of temporary structures, Design for equity, Designing for biodiversity and Spatial experience design. These sustainable design strategies were used to inform the overall design of the project, the cultivation of new flora on the site to increase biodiversity, provide equitable programs and circulation through the site, inform the interaction between users and the exhibition flow, and the overall modular form that lowers site impact and makes deconstruction for effective.









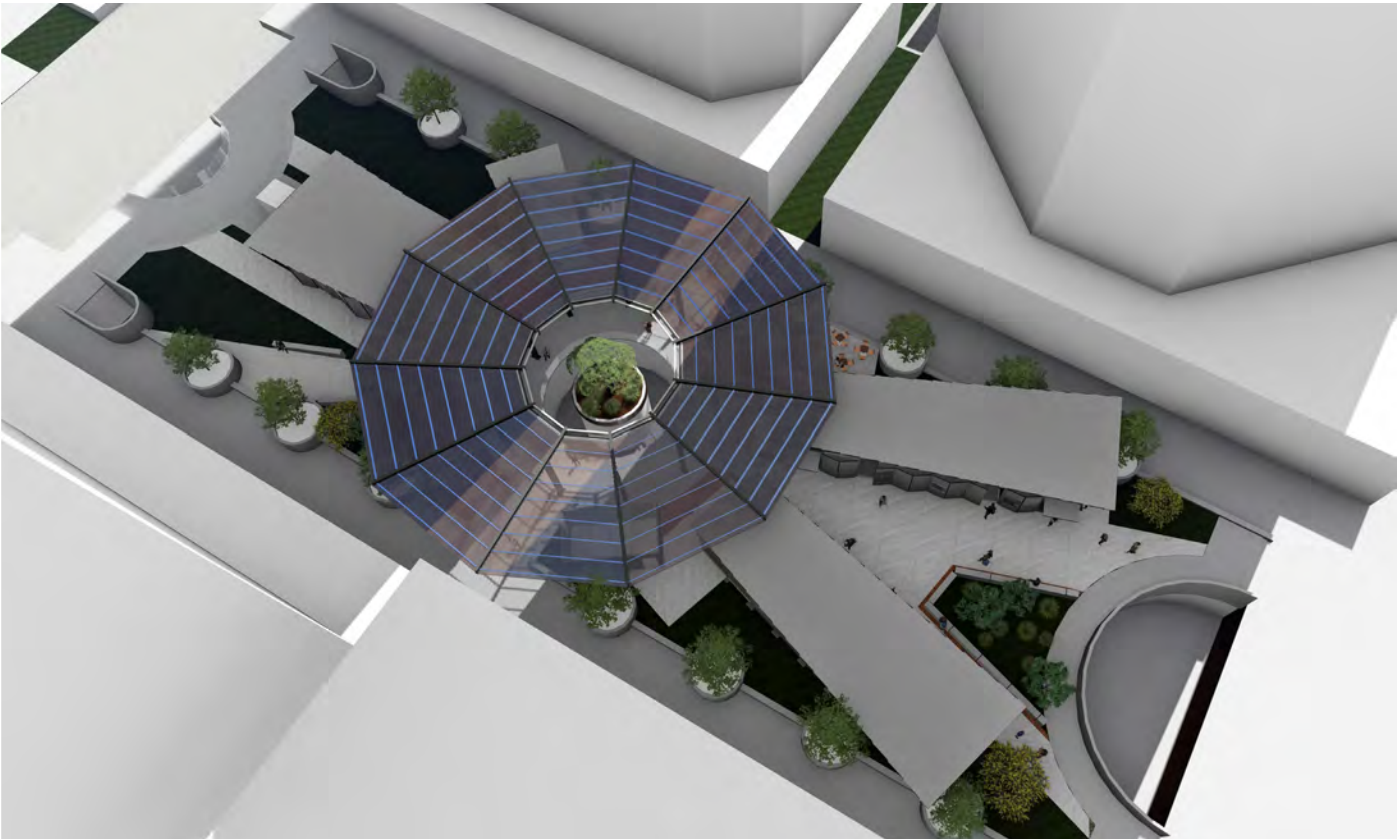
LACHLAN WILSON

PROJECT STATEMENT

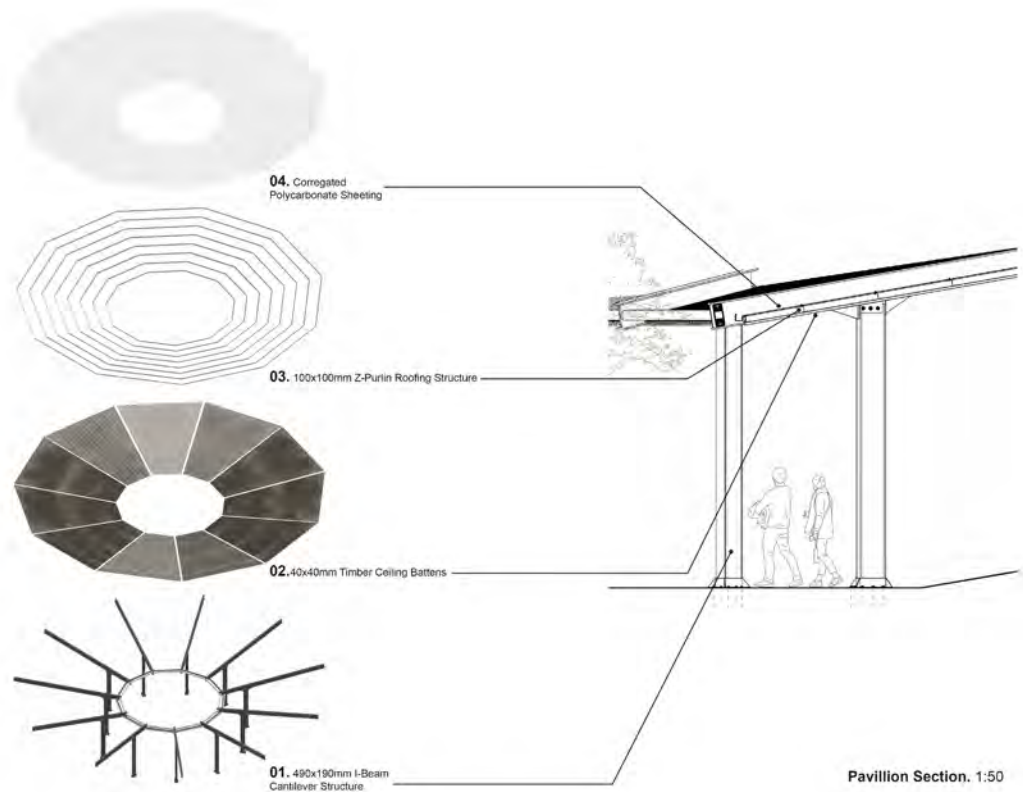
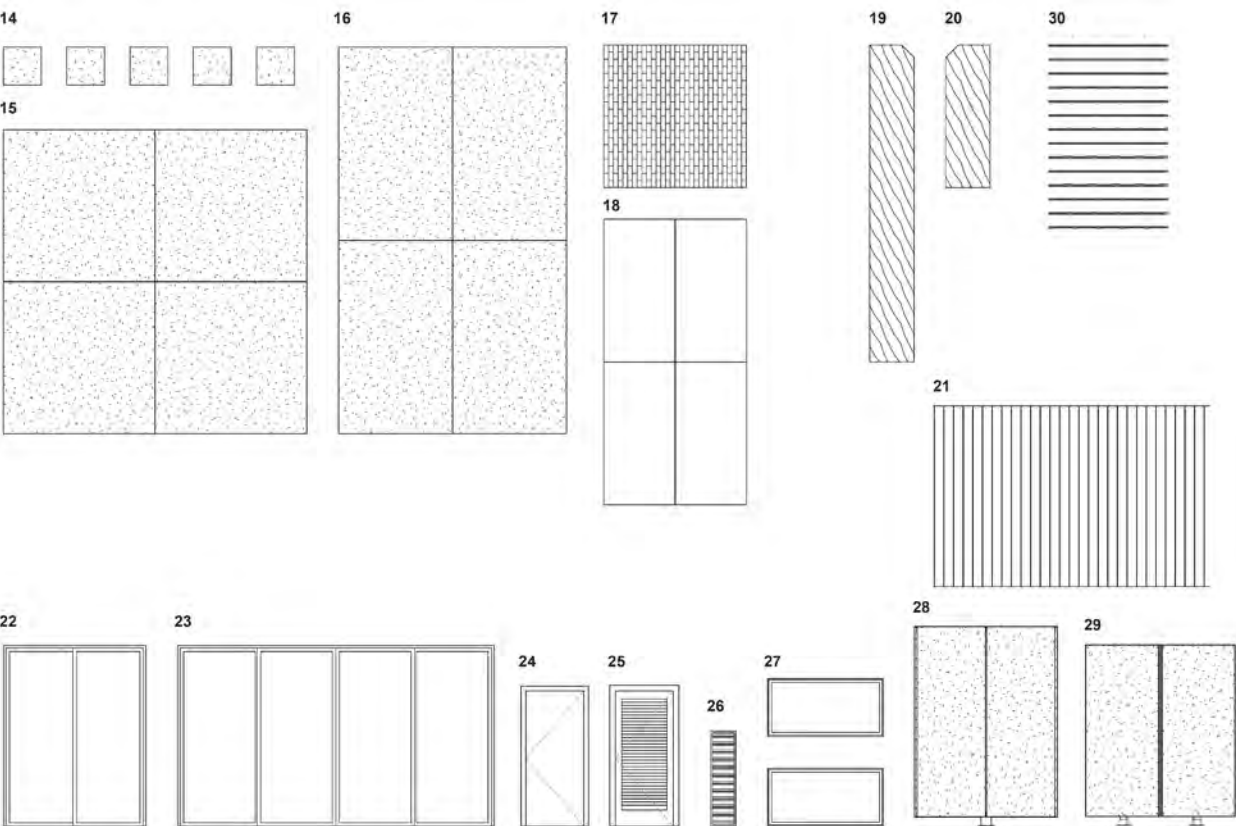
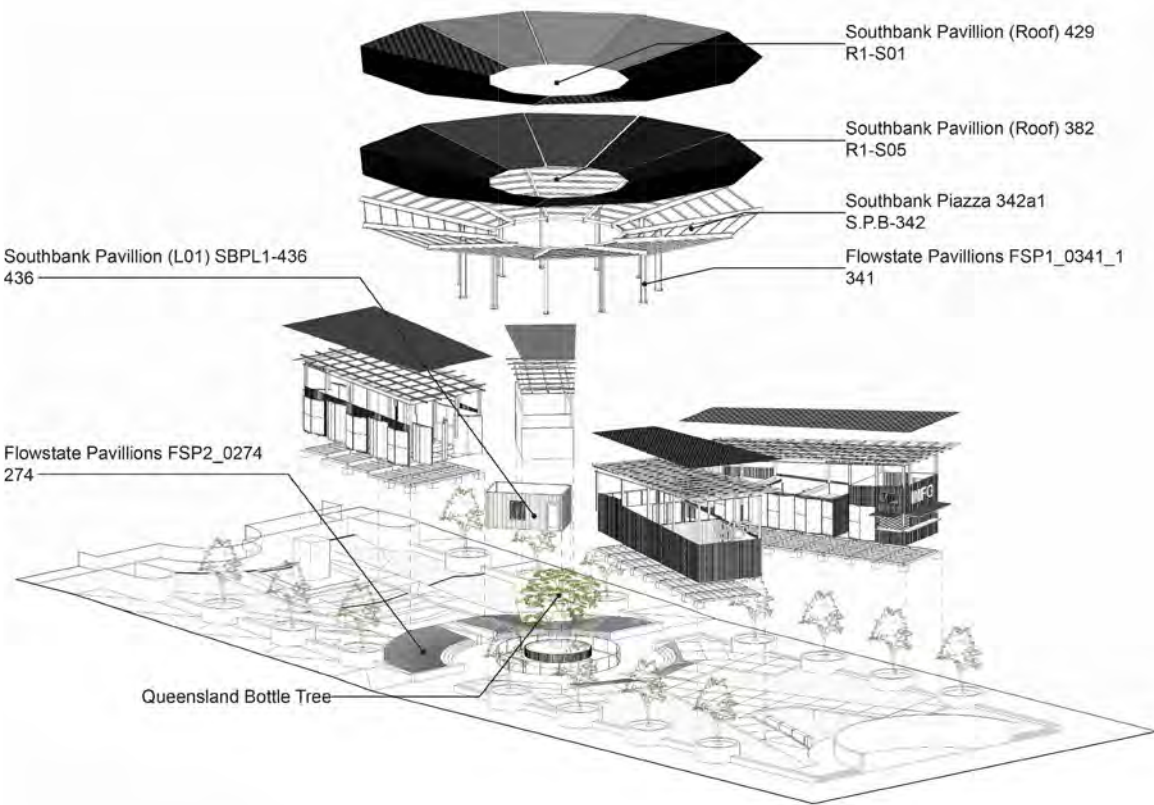
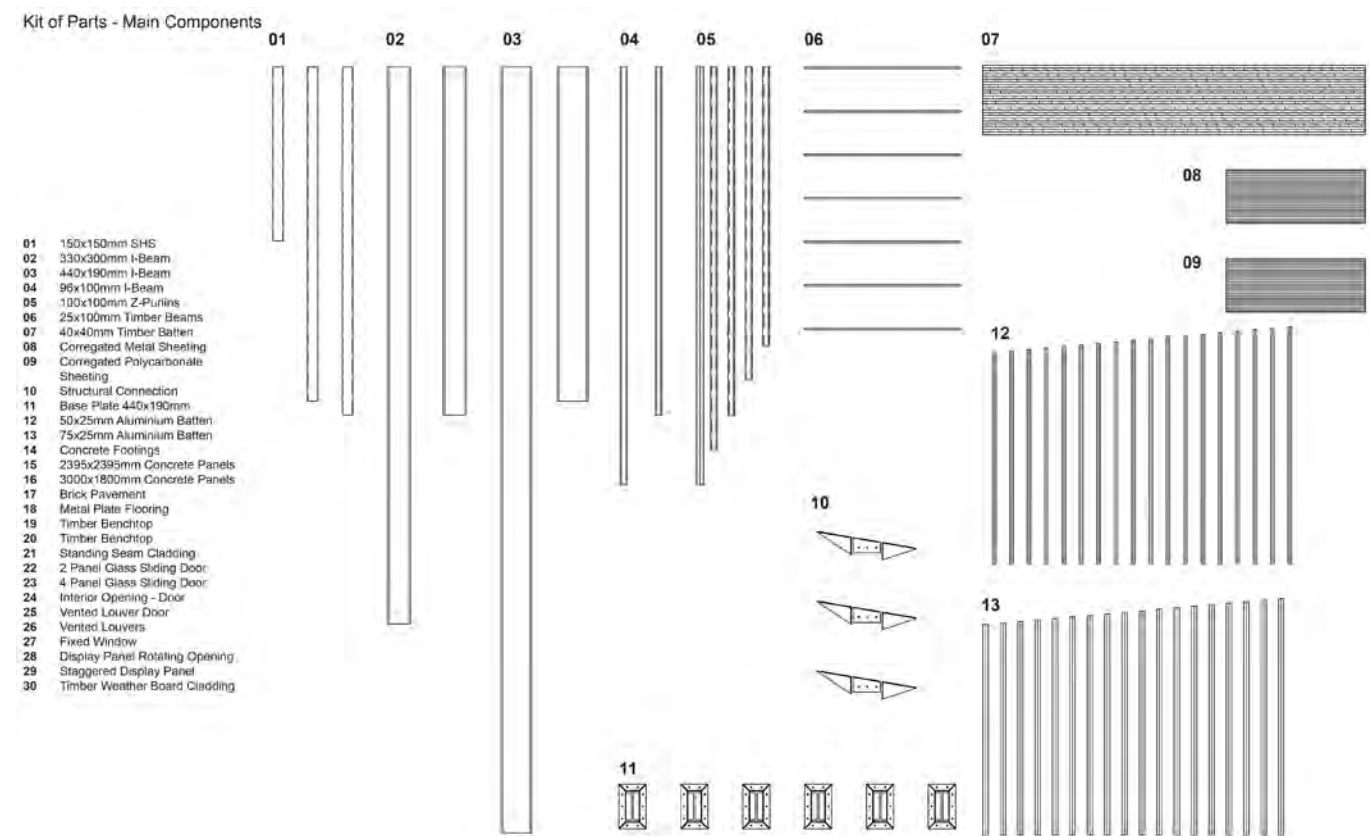
Post Office Square is situated amongst a strong heritage strip within the Brisbane CBD, bordered by Anzac Square and Brisbane’s General Post Office. The site offers an accessible space amongst the city scape. The process for developing the design of the Olympic Information and Exhibition Centre embraces the use of recycled building components and systems, with the intent and ability of future deconstruction. The project aims to create a structure of an adaptable nature that not only serves as an information and exhibition hub but can also adapt and service Brisbane after the Olympics.

The use of deconstructed materials reflects the aim to develop a progressive structure and ability to support the developing information regarding the movement of the Games along with celebrating cultural heritage and progression of the buildings future. Reclaimed, repurposed, and locally sourced materials form the basis of the project, promoting a circular economy by minimising waste and reducing the building’s environmental footprint.

Nucleus is conceived as the connective core of the 2032 Brisbane Olympic experience, an urban compass, inspired by the idea of Brisbane as the central host, the design harnesses the physical and symbolic axis of surrounding sports precincts, translating these directional lines into a series of forms that converge and diverge across the site. Consisting of a series of interlinked structures, each responding to different Olympic venues or cultural nodes across the city. As visitors move through the centre, they experience narratives of sport, culture, and Brisbane’s evolving urban identity. Lightweight shading systems, breathable facades, and open-air courtyards invite natural ventilation and gathering. More than an information hub, this structure acts as a spatial metaphor for connection and a living exhibition that reflects Brisbane’s Olympic journey while anchoring its future beyond 2032.









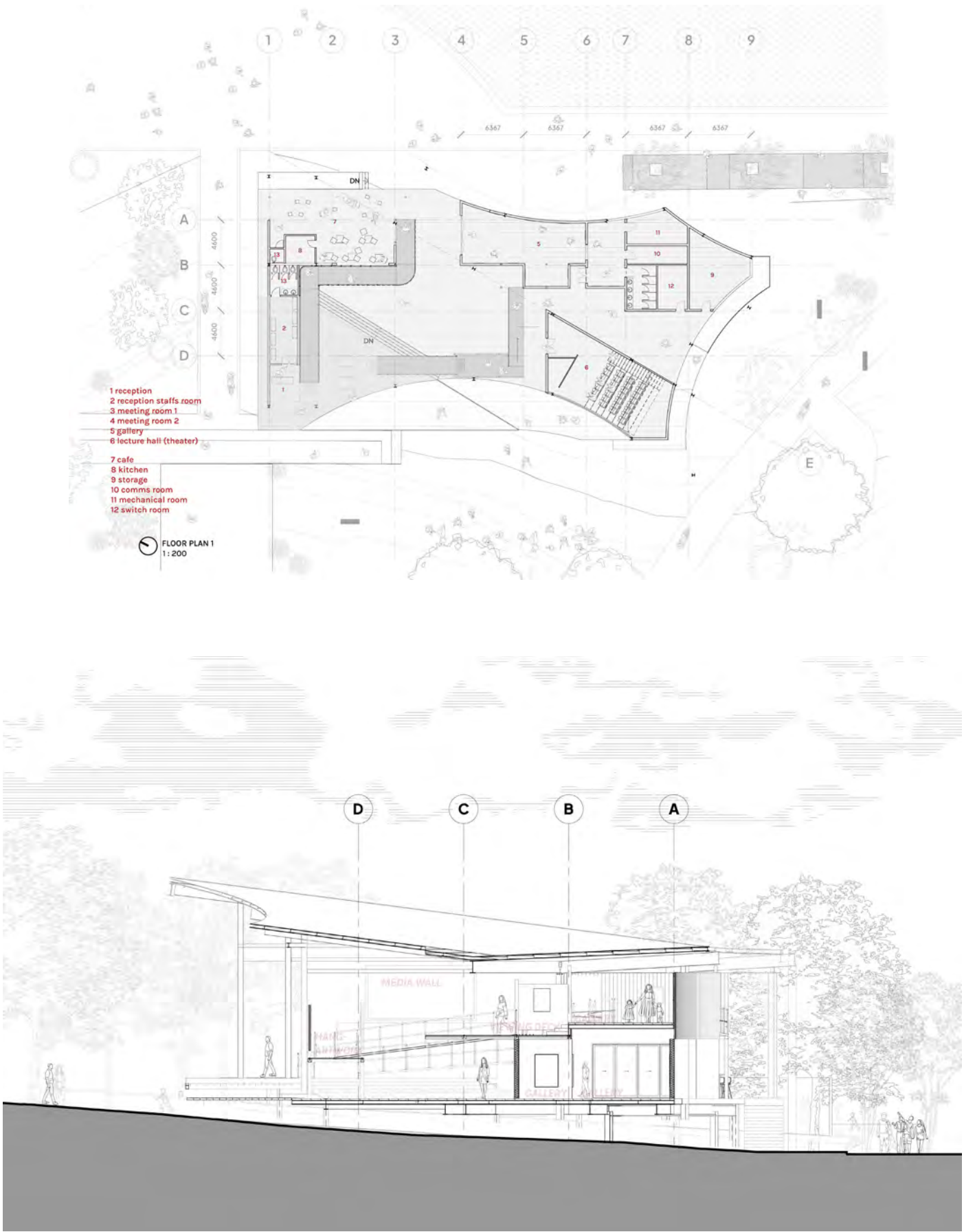
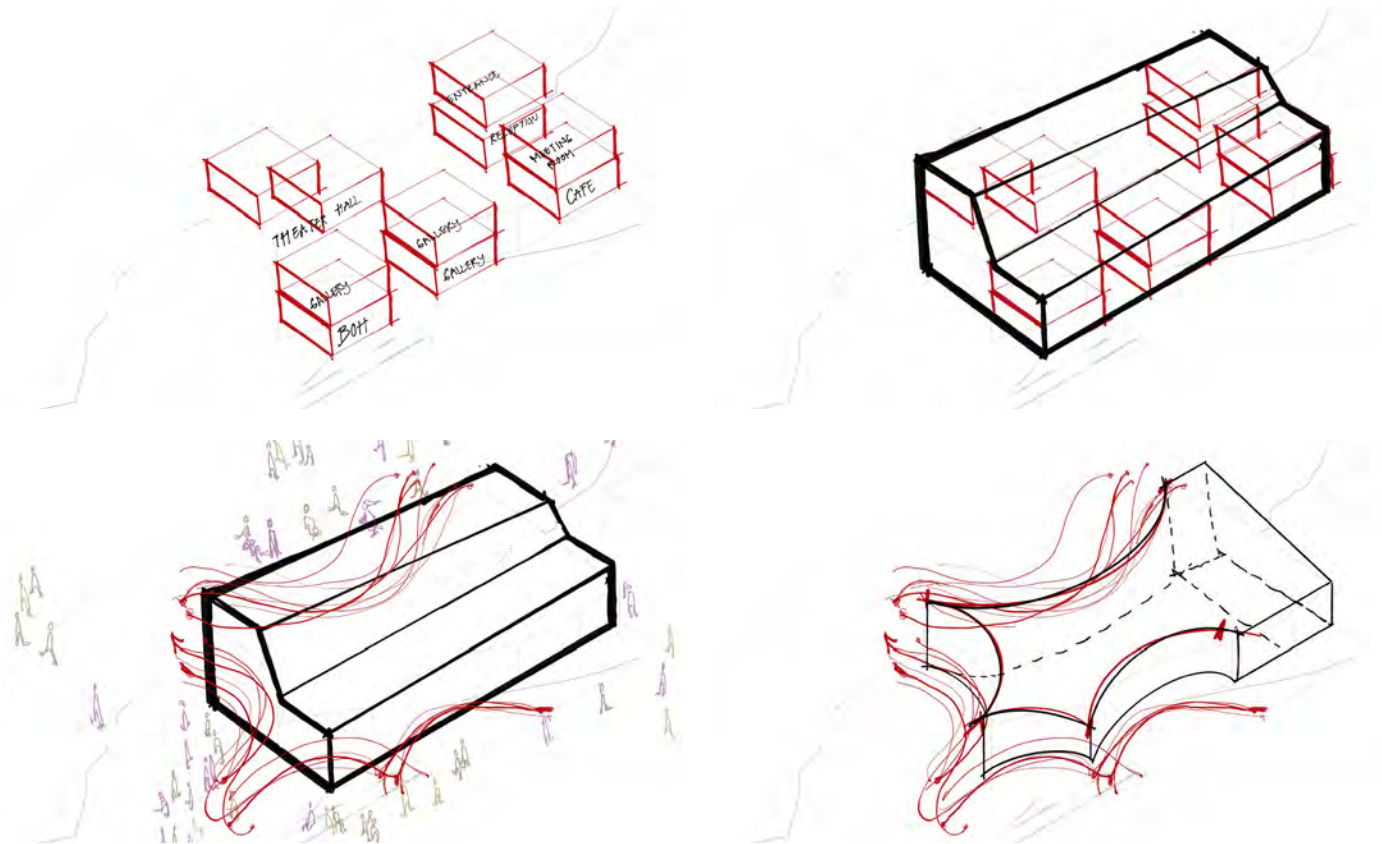
CANNA NITIMANTA

PROJECT STATEMENT

Rooted in the spirit of regeneration, inclusivity, and cultural continuity, this Olympic Pavilion for South Bank is a temporary yet transformative structure designed for both celebration and legacy. The project embraces circular design thinking, with 60% of materials sourced from a collection of material bank from 4 structure, bolted steel framing for disassembly, and responsibly sourced CLT timber decking. Its lightweight, modular system enables reconfiguration or relocation post-event, allowing it to evolve into a community learning space, cultural venue, or sports hub.

The architecture responds sensitively to the park buzzing area, where upon its original location it has already used by the people and community. The curved ramp acts not only as an accessible circulation spine but also as an exhibition path—framing views, inviting pause, and embedding art along the journey. The pavilion integrates into South Bank’s vibrant pedestrian network without disrupting the park’s everyday usage, maintaining its role as a democratic public space.

Beyond structure and material, the pavilion is a platform for knowledge exchange, equity, and ecological awareness. It is a space for gathering, reflection, and transition—a place that reflects the values of Brisbane 2032 while championing a sustainable and community-driven urban future.





CANNA NITIMANTA

