PART 2: ENTERTAINMENT, CONVENTION AND EXHIBITION CENTRE

BUILDING

1.1 INTRODUCTION

BACKGROUND

This Design Brief is prepared for the purposes of establishing a Concept Design that will inform the feasibility for the Sunshine Coast Entertainment Convention and Exhibition Centre (SCECEC). Together the brief and the concept design will be used as a basis for seeking schematic designs for the project and its procurement. The brief is fundamentally a series of functional requirements and excludes a detailed services brief.

The brief and resultant Concept Design establish the general scope of the Project and the land area required to deliver it. The brief should be read in conjunction with the Urban Design Principles document that establishes the proposed relationship of the facility to its context.

The brief concentrates on describing the requirements and special relationship of each space in broad terms.

It should be noted the space brief does not recommend consideration of expansion potential and this brief and the land area proposed for assigning to the brief also does not include allowance for expansion. This is a result of the business model being supported by conventions up to 2500 people.

1.2 PROJECT OBJECTIVES

The objective of the Project is to provide the Sunshine Coast Entertainment Convention and Exhibition Centre with a facility of high quality capable of serving the region.

The facility will be emblematic of the civic ambitions of the region and reflective of the unique architectural regional language of the Sunshine Coast.

The design must create a Sunshine Coast Entertainment Convention and Exhibition Centre that takes advantage of its central location so that the area can be marketed and experienced as a world-class convention and entertainment precinct.

It is envisaged that by engagement and design within the heart of the proposed Principal Activity Centre the Sunshine Coast Entertainment, Convention and Exhibition Centre will contrasts with conventional 20th century venues to be a vibrant integrated public resource.

The design should be embraced by the community and be a focus for celebration and civic events.

The Sunshine Coast Entertainment, Convention and Exhibition Centre:

- will be a key catalyst project for development of the Maroochydore principal activity centre
- is integral to the planning and design of the Principal Activity Centre
- is a rare opportunity to weave civic, cultural and community facilities, programs and activities into and around a major Entertainment, Convention and Exhibition Centre
- should fit with Sunshine Coast community values and aspirations

1.3 SITE CONTEXT AND STRUCTURE PLAN

The proposed site is within the former Maroochydore Horton Park Golf Club.

The proposed site has an approximate area of 2.4ha.

This site area has been determined based on the requirements of functional arrangement required for the project rather than being an existing land parcel.

The site boundary is undefined at time of preparation of the brief. It is expected that the brief and concept design inform the ongoing preparation of the Masterplan to adequately maintain the general site arrangement to allow the development of the proposal.

1.4 PROPOSED CONTEXT

The Project is considered to form an integral part of the Maroochydore Structure Plan and the City Heart.

The Project is of a scale where the relationship of the facility to its context is critical and means of ensuring this connectedness are considered fundamental to the project.

Principally there are two spaces; the urban plaza and landscaped plaza that the building is immediately adjacent to.

Whilst it is considered important to locate the SCECEC within the Heart of the future City Plan, the project brief of itself does not necessarily contain functions that provide fundamental activation required for the City heart. Because of this, fundamental to the design of the building is its integration with other adjacent or connected uses that can form a sleeve to the building edge.

The Sunshine Coast Entertainment, Convention and Exhibition Centre is intended to be integrally linked with key civic, community and cultural facilities.

- It is intended to be immediately associated with community spaces including - library (learning centre), gallery spaces, community meeting and performance spaces, community garden, recreation and sports areas, health services, child care centre, playgrounds, plazas and boulevard to the beach...
- It is intended to be immediately associated with commercial spaces including - offices, retail outlets, hotel, enterprise incubator, markets, restaurants, cafes, design centre, recording studio, Council customer service centre

1.5 OVERVIEW OF REQUIREMENTS

The Project is based around a flexible Auditorium and separate Exhibition Hall. The project is accompanied by a range of flat floor meeting rooms to support conference breakout sessions and banqueting. Support spaces are provided to allow independent and concurrent operation of the major spaces.

The Auditorium is capable of holding 4500 seats and subdividable to 2 x 1000 seat and 1 x 2500 seat arrangements.

The Exhibition Hall is a flat floor space of 3000m2 sub dividable into 4 equal Halls.

The general arrangement of the facility is for the floor of the two main rooms, the Auditorium and the Exhibition Hall is to be arranged for direct loading access with loading vehicles capable of entering the rooms.

The upper level of the facility will provide access to the upper tier of auditorium seating as well as meeting rooms and support foyer, amenities and bars.

FUNCTION

The functional designs of the venues and the open space areas are to be developed to

provide public gathering and celebration spaces for the regional communities' numerous civic and

cultural celebrations and events. The SCECEC will be based upon principles of inclusiveness and equity of access.

The venue is to be designed to accommodate world class performances and events.

ARCHITECTURAL RESPONSE- BUILT FORM

The built form together with the open space should enhance the visual identity of Maroochydore and be a memorable addition to the Community.

The architectural response should respond to Climate and recognise the specific regional architectural language developed on the Sunshine Coast.

The SCECEC must demonstrate excellence in environmentally sustainable design in a sub tropical condition.

OPERATIONS

The different facilities and uses at the SCECEC require detailed consideration be given to the varying operational requirements of the specific venues.

Facilities management may be undertaken by specialist staff engaged by Council, or may be outsourced. It is intended to make these decisions as early as possible so that a cohesive and coordinated management structure

for the whole of the site is in place, well prior to the opening of the building. The input of venue and facilities managers will also be required during the design phases.

CARPARK
While the operation of the carpark supports the entire facility, it may be managed as a separate facility by a specialist operator or as a subcontract by a specialist venue manager, or alternatively may be managed directly by Council.

Council has yet to determine the preferred options for carpark management and operations to support the objectives of all uses. However design should be suitable for the carparking to be considered as public carparking in terms of system controls and access and egress points.

1.6 FUNCTIONAL REQUIREMENTS

KEY SPACES

1.6.1.FOYERS OVERVIEW

The foyer/s are a large important public space shared between all hireable spaces.

These spaces act as the main interface with the public and a welcoming and accessible arrangement encouraging engagement without necessarily attending paid events is required.

These spaces should be attractive of high quality finishes and spatially sophisticated, capable of providing appropriate drama both day and night.

Evening functions and potential for foyers to project drama to the outside precinct is a key aspect based on considered lighting and glazing solutions.

The main function is to provide a socialising space before, during breaks in convention, exhibition and performance and post events.

It is a potential revenue source and hireable space in its own right capable of accommodating live performances and multimedia presentations.

The foyers should have sufficient sound absorption in the ceiling planning to reduce noise built up during high levels of occupancy.

All external entrances to foyers and public spaces must be provided with protection from torrential rain and strong winds.

1.6.2 FOYERS

A Reception Foyer will be located on the lower level. The Foyer will have a Reception desk, Cloak facilities and access to BOH office / storage area, controlled from the Reception desk. Entry to the foyer must provide the public with a sense of arrival. Limited toilet facilities will be available in this area. A semi enclosed area to be provided for use as a client Internet space. This area could be as small as 4 m2.

Foyer space and facilities will be sufficient to handle capacities of the adjacent Meeting rooms. Foyers will be able to accommodate construction of shell scheme exhibition booths and poster display panels. Escalators should be located to one side of the foyer or in a location that will not interfere with exhibition setups or pre function cocktail events. Motorised vehicles will be able to access foyers of all levels via a car lift with capacity of 5 tonne.. Foyers should maximise views externally.

A Registration area and Convenors Office and will be included in the Foyer at each Convention level.

1.6.3 RECEPTION

Reception desk will be located in the main foyer on Street level. Cloakroom facilities will be provided in this area. BOH access to be controlled from this location. Toilet and parenting room facilities to be available in this area. Limited Business Centre facilities, e.g. photocopying etc will be available from this location. A semi-enclosed room that can be equipped for client Internet use should be located adjacent to the Information Business Centre.

NB: ALL MEETING ROOMS, GREEN ROOMS, REHEARSAL ROOMS AND VIP ROOMS SHOULD BE MULTIFUNCTIONAL WITHOUT LOSING THE PRINCIPAL PURPOSE/DESIGN OF EACH ROOM.

1.6.4 MEETING ROOMS

1.6.5 BANQUET ROOMS

Two separate flat floor Banquet rooms are to be included on the upper Plaza level. These rooms can be used for breakout spaces to compliment the Auditorium or exhibition Halls, or used separately to stage Gala Events. These rooms should be separated by an operable wall. These rooms will be equipped with higher feature ceilings designed with permanent lighting and rigging facilities.

1.6.6 OTHER MEETING ROOMS

A number of smaller Meeting and Boardrooms could be included if space allows. It will not be necessary to allow for direct service access to these rooms. All meeting rooms should be as close to square in shape as possible to enable full flexibility, however designed to operate with a standard stage positioning. Long narrow rooms and rooms with diagonally cut off walls should be avoided.

1.6.7 MEETING ROOM CONCOURSE AREAS

Meeting room concourse areas are to be located on the south of the building. These concourse areas must have a minimum width of 8 metres, between meeting room entry wall and glass wall. There must be a clear and definable foyer area for each room.

1.6.8 BLACKOUT

All Meeting rooms need to have full blackout capability. Glass walls in meeting room's should be equipped with electronically controlled screens or black out blinds. Ideally all flat floor rooms should have the ability to allow natural daylight into the room.

1.6.9 PARENTING ROOMS

Provide one parenting room in the Main Foyer at the lower level. Baby change facilities to be provided with disabled facilities on all Convention levels.

1.6.10 REGISTRATION ORGANISERS OFFICE & STORE ROOM

A Registration desk and Organisers Office will be located on each Convention level.

The Registration area of approximately 12m2 will include a service desk with roller shutter door to allow use for conference registration, ticketing or cloakroom.

An Organisers office of approximately 16 square metres will adjoin the Registration area and have a kitchenette attached or included. This kitchenette will allow organisers to prepare coffee and to store cold food and drinks. A storeroom for the exclusive use of the event organiser should also be included adjacent to the Organisers office. This area should measure approximately 12 square metres and may be used for product storage or additional office space.

1.6.11 PERFORMERS/SPEAKERS

A Speakers Dressing Room of approximately 16 sqm will be provided with each tiered seating plenary room. These rooms should have direct access to the stage at floor level. These rooms should be fitted with mirrors, toilet and shower facilities.

1.6.12 SPEAKERS PRESENTATION CENTRE

A Speakers Presentation Centre of approximately 16 sqm will be provided with each tiered seating plenary room. These rooms should be adjacent to the client office and registration area on the two main event levels. The Speakers presentation room will have fixed workstations around the room to enable several speakers to concurrently view and modify presentations. Ideally the Speaker will be able to travel from the Speakers Presentation Centre through a dedicated BOH corridor down to stage level.

1.6.13 HOUSEKEEPING

Housekeeping Storerooms equipped with slop hoppers to be available on all levels.

1.6.14 LOADING DOCK AREA

Loading Areas are required for direct semi-trailer loading to the Auditorium and Exhibition Hall including entry to Halls. A Minimum 4.5m Clearance is required.

1.6.15 STAFF AMENITIES

Limited toilet facilities will be provided BOH behind the main foyer reception area.

1.6.16 STAGING

Temporary staging required for Auditorium, Exhibition Halls and meeting rooms.

1.6.17 STORE ROOMS

A stage storeroom to be provided with direct access to the stage is required for Auditorium and Exhibition Hall . Storerooms adjacent meeting rooms should have access to service corridor and service lift.

1.6.18 TOILETS

Sufficient toilets to be included on each level within disabled facilities to cater to occupancy of meeting rooms on that level. Baby change facilities to be provided on each level.

1.6.19 WATER STORAGE

The basement level of the development should be considered for possible collection and storage of storm water. Cooling functionality should be incorporated within the waste storage area.

16.20 CLOAK ROOM

The Cloak Room will be available in the Main Foyer accessible from the Information/Reception Desk. This cloak room must be able to handle luggage for at least 150 delegates. Registration desks and organisers offices on other levels of the development may also be used for cloaking when required.

1.6.21 EXTERNAL TERRACE AREAS

TERRACES

The design should seek to include External Terrace Areas on the upper level.

VERANDAH

A covered ground floor terrace extending the length of the foyer is proposed fronting the park space.

1.6.22. FOOD & BEVERAGE

BARS

Foyer bars are required on both levels of the development.

Bars will be fully equipped with post mix and beer reticulation, cold display cabinets and coffee facilities.

1.6.23 SERVERIES

All flat floor-banqueting rooms with have a direct access from a Servery. Each Servery will have direct access to a service lift. Smaller breakout meeting rooms do not need to have direct access to a service lift. Serveries will be appointed with cool rooms, beer reticulation, post-mix and coffee making facilities similar to all serveries in existing building. Sufficient power must be provided at each Servery to operate finishing ovens to capacities of adjacent meeting rooms.

1.7 ACCESS AND TRANSPORT

1.7.1 PUBLIC TRANSPORT

This site is centrally located within the proposed new City Heart of the Maroochy Structure Plan and is expected to be well served by bus routes that are not yet resolved. The site is within 300m of the future Rail Station

1.7.2 TAXI AND PRIVATE VEHICLES

A covered drop off area adjacent to the front reception entry will allow private vehicles and taxis to deliver and collect visitors at this location. Private vehicles can then proceed to the proposed basement carpark ideally without re-entering the street network.

1.7.3 COACHES

Coaches must have access to a drop off area adjacent the entry and additionally may be allowed use of the

civic plaza area for short term drop off and pick up. It is proposed that the layoff area will accommodate two coaches at a time.

1.7.4 PEDESTRIAN ACCESS

Major Pedestrian access is proposed at either end of the linear foyer space on the southern (park) edge of the facility. Entry along the length of the foyer from the "Verandah" space is also proposed.

Appropriate access to the facility from the carpark is required. This must be direct and secure but also take into consideration potential for the carpark to serve the wider precinct and therefore direct access to and from outside to the carpark is required.

1.7.5 PARKING

Basement parking for 750 cars is proposed. The parking area is based on an assumed efficiency of 1 space/32m on a single level. A full traffic and demand analysis should be undertaken to determine appropriateness of this number in the context of other proposed parking facilities within the Masterplan and appropriate access and egress configurations as the masterplan street network is developed.

1.7.6 BACK OF HOUSE ACCESS

Back of House access should occur without access through foyer or reception. It should be provided independent of the loading zone for the major spaces with separate loading dock for deliveries and waste collection.

A dock manager/security location should be provided.

The location should provide direct access to back of house corridor and lifts to enable goods movement to all levels via service lifts. Routes for movement of cars, scissor lifts, pallet jacks and other items will need to be provided to connect to foyers. BOH corridors need to be a minimum of 3 metres to enable passing of trolleys.

1.7.7 GENERAL PUBLIC ACCESS

The public must be able to access the entry foyer and reception desk. This area will be used as box office and potentially as an external operator ticketing facility. Consideration should be given to locating this facility to operate outwards of the facility when venue is "closed".

Wayfinding for events should be clear and obvious.

1.7.8 DELEGATE ACCESS

Delegates must be able to find the level of their event and easily find rooms registration and facilities on each level.

1.7.9 PERFORMERS ACCESS

A green room and stage door is required for access via front of house and back of house. Performers will need access to backstage dressing rooms.

1.7.10 SPEAKER ACCESS

Speakers will need access to back stage dressing rooms and speakers presentation areas. Speakers may also be offered access to the VIP suite.

1.7.11 VIP ACCESS

VIPs will be allowed access to the VIP suite on invite only usually escorted by a staff member or Client.

1.7.12 CLIENT ACCESS

The client will need to have access to public, delegate, performer, VIP and speaker areas in addition to their registration, client office and store. All client areas will need to be secured with swipe controls.

1.7.13 EVENT CONTRACTOR ACCESS

Event contractors will need to access the loading dock and car lift. They will need to access the backstage areas and all foyer areas although this access may be controlled with the electronic security system.

1.7.14 SUNSHINE COAST ENTERTAINMENT CONVENTION AND EXHIBITION CENTRE SERVICE

Sunshine Coast Entertainment Convention and Exhibition Centre staff will have access to all FOH and BOH areas. Client, VIP and speaker areas will be controlled with swipe control and access may be restricted during events.

1.7.15 VERTICAL TRANSPORT

Public Lifts will be available to the public to access all levels of the new building. Goods and service lifts will be required to allow sets and deliveries access to upper meeting spaces. The service lift providing access to the food and beverage serveries needs to be large enough to handle large queen Mary trollies and loaded pallet jacks. Service lifts will require proximity card controlled access. Escalators will be included to link all foyer levels. These should be located close to lifts and in an area away from the centre of the foyer. Public movement via escalators through any level should not disrupt cocktail, exhibition or catering events that may be underway. Escalators will ideally be located adjacent to a stairway.

1.8 ACCESSIBILITY AND ACCESSIBLE DESIGN

1.8.1 OVERVIEW

This section should is intended as a guide for the masterplanning rather than a definitive and exhaustive list of requirements. A Brief for accessibility and accessible design is intended to be developed separately.

Sunshine Coast Regional Council is committed to providing equitable and accessible opportunities for the community, and access and equity issues require a considered regional response.

The Council has created the Sunshine Coast Access Advisory Group. The purpose of this group is to advise council on access and equity issues in the Sunshine Coast region and expand upon the themes and suggestions from the forum.

This group is expected to provide commentary on the Project.

Commonwealth Disability Discrimination Act 1992 (DDA)

It is expected that Council will prepare an Access and Equity Action Plan to provide a framework to enable Council to comply with the goals of the Commonwealth Disability Discrimination Act 1992 (DDA), the Queensland Anti Discrimination Act 1991 and the new Disability Access to Premises Standard.

Compliance with the above legislation is mandatory.

The AS1428.2 Access to premises Standard must also be complied with. It is suggested that every 4th seat in the Arena be able to be removed in any section of seating to accommodate a venue-designated wheel chair.

ACCESSIBLE DESIGN REQUIREMENTS

The following minimum requirements are to be integrated with the architectural design of the facilities.

The list is not exhaustive and provided as a guide only.

1.8.2 BUILDING AND PUBLIC OPEN SPACE ACCESS

The integrated design of the SCECEC should allow a person with special needs access throughout the site. As a patron enters the site, clear paths of travel are to be designed from the street through the open spaces, into the foyers, to the entrances of the performance venues from maximum ease of engagement with the built form. The building entrances and exits should be designed to allow a seamless flow of patrons from the building out into open space in the event of an emergency evacuation.

1.8.3 DESIGN ELEMENTS

The following design elements that relate to space planning are to be included:

(A) GENERAL

-Independent access to the buildings through powered doors should be provided in all available areas.

-Wheelchair access is to be provided at every principal entry point into the precinct and venues.

-There is to be convenient lift access from accessible parking bays.

-Public stairways are to be designed in accordance with AS 1428.2.

-Provision is to be made for wider doors and door circulation space for easier access than required by the BCA.

-Lift access to all public levels and back stage areas is to be included to enable full

participation of the people with disabilities, including employment opportunities.

-Access to landscaped areas is to be provided wherever practical.

-Drinking fountains are to be accessible by people in wheelchairs,

(B) CARERS' FACILITIES

-The needs of carers must be acknowledged and addressed in the design, including the provision of seating, facilities and appropriate support spaces.

-Parents / baby rooms are required.

(C) SAFETY

-Places of refuge within fire isolated exits with communication systems are to be provided

-Storage locations for evacuation wheelchairs are to be provided within the places of refuge, consistent with the DDA.

-Places of refuge are to be fitted with an emergency communications system enabling people with a physical disability to communicate with emergency services

(F) THEATRES AND PERFORMANCE SPACES, FOYERS

-A variety of wheelchair spaces, together with seating for carers, should be provided in different locations in each auditorium and access to seating to comply with AS142 8.2, the Access to Premises Standard, and the BCA.

-Sightlines to the stages are to be maintained for wheelchair positions.

-There are to be removable seats to provide accessible seating positions and for children's shows.

-There are to be a variety of seating widths to accommodate larger bodied patrons.

-A clear path of travel should be provided from the auditorium to the stage for people using wheelchairs.

-Back of house facilities are to be completely accessible for performers

-Wide corridors for greater access in back of house and stage areas

-Accessible showers are to be provided for performers in all dressing room levels and close to the rehearsal room.

(G) TOILETS

-Accessible toilets adjacent to each group of male and female toilets, including back stage areas.

-Toilet cubicles in either gender specific toilets to include features that people with an ambulant physical disability.

-Powered sliding doors to all accessible toilets

-A small children's toilet in both male and female toilets is to be provided, a lower height

basin in each and a lower height urinal in the male toilets suitable for use by a child.

(H) PARKING IS TO INCLUDE:

-Accessible parking bays positioned close to lifts.

-Bicycle and motor bike facilities

-End of trip facilities for cyclists

-Motorised scooter parking

-Parking ticket dispensing machines are to accommodate limited reach and pull ability.

-The help button should be within easy reach, stand out (not flush with) the fixture, with hearing augmentation.

1.9 SERVICES

A brief for the key electrical services and building management system, power and lighting, communications, audiovisual and emergency warning systems, and security services, will be developed separately by appointed consultants during the final stages of detailed design.

1.10 SPACE BRIEF- SCHEDULE OF AREAS

Ref	Space	Design Requirements	Area (m2)	Height (m)
1.0	Auditorium			
		-Capacity - approximately 4,500 seats		To underside of structure (ceiling) - 14-15m
		-Seating on four sides		To underside of gantries - 10-11m
		-Upper levels tiered and fixed		
		-Lower levels tiered retractable seating with balance on flat floor		
		-Space dividable into three sections (by curtaining) at approximately half to two thirds to provide 2 x 1000 and 1 x 2500 capacity modes		
		-Floor space to allow for central regulation size basketball court (could be with approximately 6 rows of lower level seating retracted)		
		-Subject to above, flat floor space to allow for banquet mode capacity of approximately 100 booths		
		-Column free, clear span and high ceiling space		
		-Modular Staging facilities capable of various positions		
		-Technical Balconies/Gantries		
2.0	Exhibition Hall		3000	
		-flat floor space		To underside of structure (ceiling) - 10m
		space based on 9 x 9m module to make four rooms each of 27 x 27m for total hall area of 54 x 54m.		To underside of gantries - N/A
		-Column free, clear span and high ceiling space		
		-Indicative capacities:		
		Banquet mode 1300		
		Booths 120-130		
		-Divisible into four equal spaces by ceiling height operable acoustic walls		
3.0	Meeting Rooms			
		12-15 Meeting rooms of varying capacities as indicated with capability to combine rooms (acoustic operable walls to increase capacity up to maximum of below range.		
		Indicative Capacity range:		
		Theatre 60-360		
		Banquet 50-260		
		Classroom 30-180		
		Boardroom (U shaped) 20-60		

4.0	Front of House			
4.1		Foyer Spaces to suit capacity for each component i.e. Main auditorium and 4 x exhibition halls potentially joined around 3 edges of structure		
4.2		Registration Desk/Area x 2		
4.3		Cloakroom x 2		
4.4		Box Office- minimum 3 x service positions, located in entry foyer such that service positions face/access to outside of facility with dedicated rear room for safe, money counting and administration.		
4.5		Multiple servery and bars in foyer areas to accommodate stated capacities		
4.6		Assume one serving point per 300 patrons, i.e., minimum 15 serving points for Auditorium and more are preferable if space allows. patron flow through foyers, highest patron density per area, etc.		
		No of serving points per bar location to be determined by access, patron flow through foyers, highest patron density per area, etc.		
		Some bars closest in location to the Exhibition Halls could service both areas if required though separate facilities would be good if available. Bars that service the Exhibition Halls will normally have a more steady traffic flow compared to the intense time restrictions of pre-show and interval rush of the Arena so fewer positions can be considered for the same number of patrons in this area.		
		Passenger and Service Lifts		
4.7		Consideration required for escalators to access first level seating from foyer level.		
		Consideration required for escalators form basement to foyer level.		
		Full traffic analysis required for nomination of adequate numbers.		

5.0	Support Areas/ Other			
5.1		4-6 Commercial kitchens(including satellite kitchens) and servery per function space plus associated support rooms (e.g. Chiller, wet and dry storage, etc)		
		Sick room		
5.2		Principal Conference Organiser (PCO) room	22	
5.3		Media room	15	
5.4		Green rooms- minimum 2-3 with various capacities up to approximately 60 pax	120	
5.5		VIP Suites		
5.6		Support Rooms- minimum 2-3 various capacities up to approximately 100 pax (dressing rooms)	200	
5.7		Administration offices and reception -accommodate 15-20 workstations	300	
5.8		Front of House and Technical offices 6 x separate rooms accommodating 2 workstations each	96	
5.9		Toilets- to suit capacities per BCA requirements. (Ideally double BCA female toilet requirement to accommodate peak times)	?	
5.10		Storage rooms/spaces - multiple capacities e.g. Storage of chairs, staging modules etc.)	?	
		Loading Docks/Bays (minimum 4)	100	
		2 x Main Auditorium		
		2 x Exhibition Hall		
		Each of minimum indicative size of approximately 15m long x 3.5m wide with direct access. Loading Bays need to be securable externally and internally whilst containing vehicle.		
		Allow additional 4 x 3.5m at the end of each bay for material handling		
5.11		Separate pedestrian entry requirement and a security office/ reception area (minimum one workstation)		

5.12		Deliveries		
5.13		Waste Store	15	4
5.14		Holding area/temporary store	25	9
5.15		Rostra and chair store	60	9
5.16		General storage	40	3
5.17		Lighting store and workshop	30	3
5.18		Rack rooms	45	3
5.19		Dimmer Room	30	4
5.20		Sound, Video, Electronics workshop	30	3
5.21		Laundry	40	3
5.22		Plant Rooms as required.		
5.23		Staff wardrobe space		
6.0	Car parking			
		Public 750 spaces Efficiency of parking layout will determine parking area. Greater than 1/32m2 efficiency will significantly reduce floor area required.	24000	
		Private-Functional 30 spaces	1000	
7.0	External Works			
		Porte Cochere to Civic Entry		
		Porte Cochere to Drop Off		
		“Verandah”		

2.1 CENTRE BUILT FORM

The Sunshine Coast Entertainment Convention and Exhibition Centre intends to host events of great celebration and the gathering community. The building should be embraced by the community and be considered fondly. The building should be accessible in all senses of the word and be a place of activity and independent of ticketed events.

The Sunshine Coast has a very strong tradition of responsive local architecture. The traditions have built upon the local climate, landscape and coastal setting and have been generated from engagement with the landscape expressed through materials and spatial engagement epitomised by the unique beach houses of the region.

The Sunshine Coast Entertainment Convention and Exhibition Centre is a very large building by most measures, certainly for the Sunshine Coast and obviously in comparison to the iconic beach house.

Notwithstanding thus a response to the South East Queensland region is possible and desirable. The guiding planning document for the Centre, the Maroochydore Principal Activity Centre Structure Plan makes reference to urban design approaches which the concept design has sought to address. These include the appropriate provision of civic facilities, plazas and green spaces. Provision of public promenades and links to open spaces and waterways.

The structure plan makes reference to the sub tropical values and principles document. This document has been superseded by the Subtropical Design Handbook for planners, developers and decision makers in South East Queensland.

It is worth reproducing the 12 principles here that might inform the design strategy for the project.

2.1.1 SUBTROPICAL DESIGN PRINCIPLES

1 Recognise sub-regions

2 Respect topography

3 Diversity the build environment

4 Consider local character and design

5 Integrate with nature

6 Acknowledge informality

7 Use vegetation

8 Ensure open space diversity

9 Incorporate access to open space

10 Design for water

11 Develop outdoor centres

12 Develop outdoor meeting places

Although the project is informed greatly by the fairly conventional spatial program requirements and that effectively the spaces are inherently flexible sheds, the above principles can and should apply to the resolution of the scheme.

The concept planning scheme has been developed to demonstrate that the program is consistent with the parcel of land nominated for the site, however it is noted that these boundaries may have some flexibility, at the western and southern edge to the design and the conjunction with the integrated Town Centre development and landscape space.

Typically the large space required for convention centres has meant the roof expression is a strong contributor to the identity of the building. The silhouette of the roof form is often linked strongly to the branding and recognition of the project.

There is often a tendency for a repeated structural solution for simplicity. These solutions can manifest in several ways but structurally expressive solution is often one of these. The project is intended to be developed based on design competition and this method is best served by allowing the designers freedom to develop schemes without prescriptive parameters.

The images are based principally upon the concept plan configuration with some consideration of potential modification of the plan form.

In general schemes that respond to the qualities of the Sunshine Coast are thought not to be not machine-like nor high modernist glass boxes.

The sense is that schemes that are organic and sculptural or fractured/articulated rather than machine-like are potentially more suited.

3.1 GENERAL

Construction and finishing materials shall be selected based on the following considerations:

1. Availability in both quality and quantity
2. Availability of skilled trades persons to work with those materials
3. Suitability of application
4. Frequency and type of maintenance required, noting that finishes should, as far as possible, require minimum maintenance
5. Unusual testing requirements or construction techniques
6. Weathering and ageing properties
7. Ensuring that weather staining of materials is kept to a minimum by careful detailing
8. Vulnerability and resistance to vandalism
9. Performance in extreme weather conditions
10. Fire resistant performance.

Note that no materials containing asbestos in any form are to be specified or use.

Finishes are to be designed, detailed and constructed to allow refurbishment or replacement at minimal cost.

Building finishes used externally shall have a minimum design life of 20 years. Finishes used internally shall have a minimum design life of 10 years.

3.2 PUBLIC AREAS

Finishes in public areas must be appropriate to their function and in accordance with authority requirements.

Arena floor finishes shall be P.V.C. backed antron fibre carpet tile yarn weight, 949 gms/sq m to seating areas and broadloom carpet: 48 oz 100% wool level loop pile tufted dual-bonded underlay to aisles, meeting and breakout rooms. Exhibition Hall floors may be steel trowel finished concrete with appropriate application of hardeners. Any special floor finishes will be the responsibility of the exhibition organiser.

Foyer floors shall be hard finishes such as tile or stone in principle entrance areas and P.V.C. backed antron fibre carpet tile to the concourse areas and meeting rooms, lobbies and all office areas.

Wall finishes shall be generally serviceable, rather than glamorous. Convention, meeting and breakout rooms shall have high standard, acoustically appropriate walls. Exhibition hall walls shall be impact resistant, particularly to a height of 2 metres, and must perform as a background to rather than in competition with exhibits. Foyer wall finishes shall be ‘people resistant’ but appropriate for a facility of ‘world class’ standard. Ceiling finishes shall also be serviceable and in particular be acoustically appropriate.

3.3 PUBLIC SERVICE AREAS

Finishes in public service areas such as public toilets shall be ‘people resistant’, water resistant, safe, non-slip, minimum maintenance and in accordance with authority requirements. Generally walls and floors shall by fully tiled. Ceiling shall provide necessary maintenance access.

Finishes in public service areas shall be aesthetically appropriate for use in a public place.

3.4 OTHER SERVICE AREAS

Finishes in other service areas such as staff toilets, staff rooms, food service areas etc shall be low maintenance, water resistant and in accordance with industrial and authority requirements.

Finishes shall be selected for appropriateness of use, such as tiles to food service area walls and floors. Ceilings shall provide necessary maintenance access.

Finishes in these service areas shall be aesthetically appropriate to create a satisfactory and positive work environment.

3.5 ADMINISTRATION AREAS

Administration areas will function as would equivalent commercial office space. Floor finishes shall be P.V.C. backed antron fibre carpet tiles yarn weight, 949 gms/sq m. Wall finishes shall be painted render or plasterboard.

Ceiling finishes shall be appropriate removable acoustic ceiling tile.

3.6 CARPARK AND PLANT AREAS

Generally floors shall be steel trowel concrete finish with appropriate application of surface hardener and be oil resistant.

Walls shall be hard surface painted for serviceability, and to improve the 'service area' environment.

No ceilings are required in these areas.

3.7 OPERABLE WALLS

Operable walls shall comply with authority requirements, perform to acoustic standards and shall be corrosion and vandal resistant, able to resist a 4kg timber plank of 50 x 100mm mass section fired at 15mm/sec.

All operable walls shall be capable of being operated by one person for setting up and stacking. They shall be overhead supported, adjustable and stacked in concealed storage enclosures. Operable walls shall accommodate necessary building movements and tolerances and shall be structurally stable over their full height.

Finishes shall be appropriate to the area of use, with paint finishes to exhibition halls and fabric or timber veneer to the convention facilities.

3.8 FLEXIBLE TIERED SEATING SYSTEMS

Flexible tiered seating systems shall be designed to provide a variety of plenary hall configurations in the lower level of the Arena for 2456 people. The operable walls in the Arena can divide the space in to three areas: Arena A (1000m2), Arena B (1000m2) and Arena C (2500m2). Fixed seating in the upper level of the Arena will seat 2044 people. In total, the Arena can provide 4500 seats.

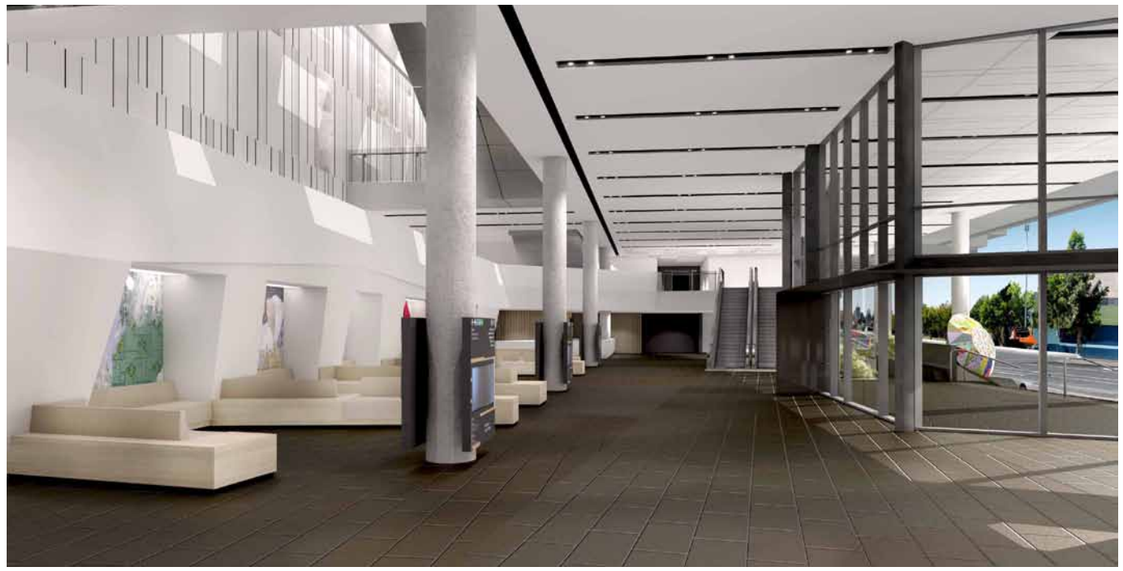
The system shall be fully automatic and shall be capable of storing away into walls, floor or ceiling as necessary. Seating shall be designed to create an atmosphere of interaction, with occupants able to communicate with each other as well as the stage.

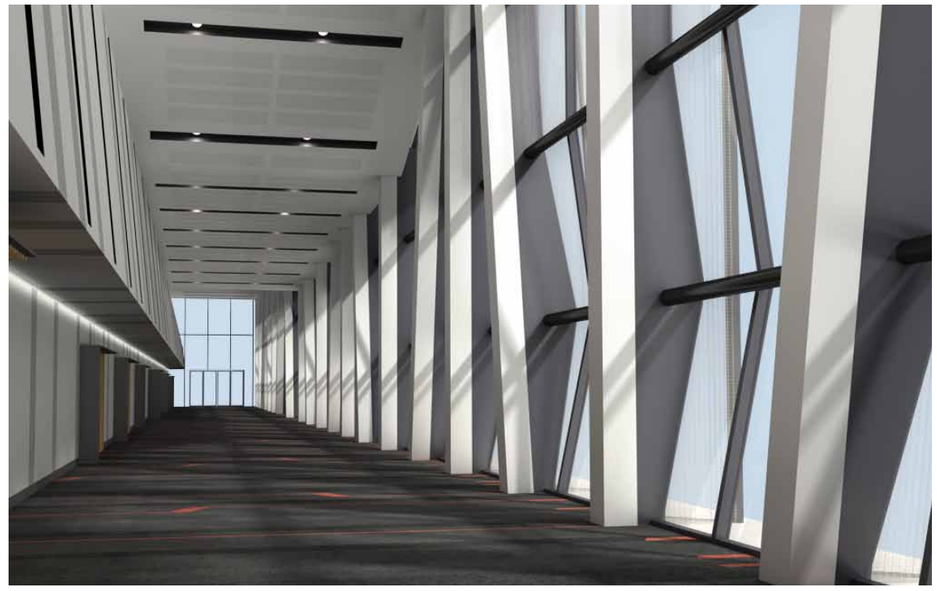
Chairs shall be fully upholstered with arm rests and floors shall be carpet. Chairs shall be a minimum 1000mm back to back and 525mm centres.

Systems shall be completed with aisle lights, access stairs and gap closures where necessary.

EXAMPLE OF FINISHES - FOYER AREAS

BRISBANE CONVENTION AND EXHIBITION CENTRE PROJECTIONS





4.1. INTRODUCTION

The new Sunshine Coast Entertainment, Convention and Exhibition Centre (SCECEC) will be a key catalyst project for development of the Maroochydore Principal Activity Centre within the Sunshine Coast Council's Maroochy Plan 2000. The objective of the project is to provide the region with a world class facility that will be emblematic of the civic ambitions of the region and reflective of the unique architectural language of the Sunshine Coast.

The Ecologically Sustainable Development (ESD) approach for the proposed development aims to go beyond Queensland's current regulatory requirements and standard practices and guidelines. The target outcome for this project is a 6 star Green Star rating. Although this is the target rating, the following issues present a major challenge in achieving this goal:

- Building on a greenfield site
- QLD Government's restrictions on blackwater recycling and reuse
- Re-alignment of creek (part of MPAC strategic plan)
- Proposed east – west building orientation and street alignment.

Due to these issues, the project may only reach a Green Star rating of 5. However, a rating of 6 stars is the ultimate target.

Although a Green Star rating is the goal, the SCECEC is a unique development and is not covered under existing ESD rating and Green Star rating schemes. In light of this, a Green Plan has been formulated based on a combination of the following documents:

- Australian Government ESD Design Guide (Office and Public Building),
- Sunshine Coast Principles for Ecologically Sustainable Buildings (draft),
- QLD Government Climate Smart Buildings Carbon Reduction Strategy and Energy Efficiency Policy
- And the Melbourne Convention Centre Environmental Initiatives as a case study.

The key ESD philosophy for the project is to provide an innovative design response that aligns with the functional and operational requirements for a development of this nature. The principles in this Green Plan should be embraced by the design team, at all stages of development – from briefing, through design, construction and, ultimately, the long-term operation of the buildings. The Green Plan principles fall under the following categories:

1. Climate Change
2. Energy
3. Emissions
4. Waste
5. Water
6. Transport
7. Indoor environmental quality
8. Materials
9. Land use and ecology
10. Management
11. Integration

In accordance with good practice it is intended that sensible and appropriate levels of technology and design be applied to achieve the above principles, without reducing the necessary functional standards.

4.2 OBJECTIVES

4.2.1 CLIMATE CHANGE

Objective	Source
The buildings will be designed to protect occupants from the impacts of climate change such as increased wind loadings, severe hail events, increased flooding, sea level rise and higher temperatures (SC ESB).	SC ESB

4.2.2 ENERGY

Objective	Source
PASSIVE DESIGN	
Energy usage efficiencies will be pursued through a combination of technological solutions as well as changes to business operations and procedures. Strategies for reducing energy consumption will adopt recognised 'best-practice' methods, without adversely impacting on service delivery outcomes.	QLD SEEP
Facade must be designed to allow natural light into the foyer and pre-function spaces. This reduces the need for artificial light and provides good thermal qualities in the winter months.	MEI
Solar hot water systems will be included, offsetting a minimum of 40 per cent of general hot water requirements and providing 100 per cent of public amenity hot water requirements.	MEI
For mechanical air conditioning: use the latest energy efficient air conditioning using air chilled or water chilled technology interated with water cycling	
Minimise energy use by maintaining any installed air-conditioning temperatures at 24 degrees Celsius for summer operations.	QLD CRS
Orientation – where possible, the building should be designed with windows facing north, with care taken to ensure overheating and glare will not occur. Cooling breezes should be captured where appropriate.	AG ESD DG
Thermal cooling – thermal mass can be used to absorb excessive day time air temperature.	AG ESD DG
Thermal heating – use thermal mass to absorb solar heat and then radiate that into a space if the air in that space is cooler than the mass.	AG ESD DG
Thermal resistance – use materials with the highest R value possible.	AG ESD DG
Night purge – if the diurnal range permits; use night air to cool parts of the building where appropriate.	AG ESD DG
Displacement ventilation – low level air delivery and high level air exhaust in the plenary hall and foyer areas provide will provide effective air flow with high indoor are quality at low energy consumption.	MEI
Natural ventilation – use natural ventilation in place of energy consuming ventilation equipment wherever possible.	AG ESD DG
Natural lighting – use glazing to let natural light in whilst maintaining views. Consider glazing types, reflective films, shading and rationalising the amount of glazing required.	AG ESD DG
Minimisation of infiltration – use quality seals, effective airlocks, effective HVAC ductwork installation and good quality facades.	AG ESD DG
Effective external shading – use in conjunction with glazing to reduce heat load while providing natural light and views.	AG ESD DG
Insulation – use appropriate insulation for the climate and building type. Ensure ducts and pipes are well insulated if required.	AG ESD DG
Thermal stacks – include thermal stacks into the design to draw hot air out of the building by means of the natural buoyancy of air.	AG ESD DG
Floor plates – design to ensure that closed rooms receive natural ventilation. Partitions should be limited to 1200mm height, or if full height to be located perpendicular to the air flow.	AG ESD DG
Climatic design – ensure that thorough analysis of the site, solar access, wind direction and speed and climate type is carried out to influence the design response.	AG ESD DG
Lighting – must be optimised for the tasks that will be performed. Use energy efficient fluorescent tubes T5 or T8 where suitable, use natural light wherever possible, use electronic ballasts where possible and include LEDs where possible.	AG ESD DG, MEI
Zoning, sensors and controls – provide heating, cooling and lighting only when and where needed. Use light lux level sensors, timers, movement sensors, carbon dioxide sensors and temperature sensors where appropriate. Allow user control over ventilation direction and task lighting while maintaining standard background lighting, heating and cooling levels.	AG ESD DG, MEI

Design the roof to be as northerly facing as possible and install 30kW solar PV systems wherever possible.	
Renewable energy – use solar water heating to provide 40% of building hot water needs and 100% of public amenity hot water needs. Use PV system of solar energy to generate electricity to power appliances and lights where appropriate.	AG ESD DG
Solar electricity collected during daylight hours will be stored in a large battery for use during the evening and night	

4.2.3 EMISSIONS

Objective	Source
Increased emissions are causing climate change and potential impacts to the Sunshine Coast lifestyle. To mitigate these impacts, buildings will be designed for the Sunshine Coast subtropical climate. Greenhouse gas emissions are minimised through consideration of passive design elements of building orientation, shading and ventilation. Energy saving devices, renewable energy innovations and end of trip facilities for alternative and blended forms of travel such as public transport and bikes, also assists in reducing greenhouse gas emissions.	SC ESB
The Queensland Government has a commitment to playing its part in reducing national greenhouse emission levels by 60% by 2050. It is therefore mandatory that a building of this scale and nature must achieve minimal greenhouse gas emission levels.	QLD SEEP
Use non-ozone depleting refrigerants (such as water, air, CO2, ammonium and hydrocarbons) and ensuring there are systems in place to minimise or eliminate refrigerant leaks.	AG ESD DG
Minimise greenhouse gas emissions associated with operational energy consumption	GBCA - PB
Minimise greenhouse gas emissions associated with the construction process	GBCA - PB
Select refrigerants that do not contribute to long-term damage of the Earth's stratospheric ozone layer or have minimal potential to contribute to global warming.	GBCA - PB

4.2.4 WASTE

Objective	Source
Waste will be minimised throughout the building construction, operation and demolition phases of the building life cycle. Buildings will be designed for convenient transfer of waste, recycled materials and compost. This will reduce the amount of waste entering landfill and lessen the impacts on our natural resources.	AG ESD DG
DESIGN PHASE	AG ESD DG
Design ceiling dimensions to make best use of material dimensions	"
Design spaces and systems that can be easily adapted to change in management and company structures	"
Design for disassembly and reuse of building materials where possible	"
Design using prefabricated components which are then assembled on site	"
Encourage recycling during building operation	"
DOCUMENTATION PHASE	AG ESD DG
In preparing the specifications and contracts for a new building or refurbishment, ensure that there are requirements for waste minimisation.	"
A waste management plan is required with periodic reporting, set minimum performance targets, induction programme for staff on site and negotiate with the contractors that they minimise over-ordering.	"
Include waste receptacles that have been standardised across SCRC.	
CONSTRUCTION STAGE	AG ESD DG
Reuse materials where possible to reduce waste going to landfill.	"
Require contractors to have a plan of what waste they expect to be generated by the project, how they will divert it from landfill and where it will be sent for reuse or recycling.	"
Contractor must have ISO 14001 certification.	"
Conduct regular reviews on performance.	"

OPERATION STAGE	AG ESD DG
Implement a waste and recycling reporting, auditing and management programme as part of the everyday management of the building.	"
Ensure easy access to recycling facilities for patrons	"
End-of-life Stage	"
Reuse the part or all of building if possible	"

4.2.5 WATER

Objective	Source
An integrated water management approach is required to reduce water consumption and minimise sewer and stormwater discharge. This will be less demanding on water infrastructure and helps protect Sunshine Coast water catchments.	SC ESB
MANAGEMENT AND MONITORING	
Conduct regular monitoring of meters and sub-meters, either manually or by connection to the Building Management System in order to establish base flow rates and then identify leaks when flow rates vary from the standard.	AG ESD DG
LEAK AVOIDANCE	AG ESD DG
Leaks to be reported to building management – building occupants to be aware of where and whom they can report to.	"
Regularly inspect toilets, urinals, taps and showers for leaks	"

EFFICIENT FIXTURES AND FITTINGS	AG ESD DG, MEI
Toilet and urinal adjustment – adjust floater to use minimal water	"
Install ¾ litre or dual flush toilets	"
Install sensors for urinal flush control or use waterless urinals	"
Install AAA or AAAA showerheads	"
Install flow restrictors on tap aerators	"
Install automatic cut-off and sensor operated taps where appropriate	"
Capture sprinkler testing water for reuse	"
Use captured water for potable uses where possible	"
COOLING TOWERS	AG ESD DG
Install a conductivity meter and automate the blow-down system to a pre-set conductivity level (total dissolved solids concentration) of the re-circulation water	"
Implement 'performance-based' maintenance	"
LANDSCAPE (XERISCAPE)	AG ESD DG, GBCA PB
Use native and indigenous plants that require less water than exotic varieties (AG and GBCA)	"
Use mulch to minimise the evapouration of water from the soil.	"
Irrigate after sunset to minimise evapouration	"
Install soil moisture sensors	"

SOURCE SUBSTITUTION	AG ESD DG, GBCA PB
Collect rainwater where possible and store in tanks	"
Apply for blackwater treatment re-use trial with the QLD government Department of Local Government and Planning and Building Codes Queensland to set up a trial system that can eventually be used for treating blackwater to Grade A standard for reuse in the building.	AG ESD DG, MEI
Implement a water recycling system	GBCA PB
STORMWATER	AG ESD DG
use landscaping to absorb stormwater runoff from paths	"
use semi permeable surfaces	"
Separate first-flush water (often contaminated by dust, oil and pollutants) from later flows. First-flush water can be used on landscaping or be treated.	"
Install screens on outlets to closely control flow rates and capture litter, debris and sediment.	"
Use frequency-staged storage systems that employ 'storage' in lawns and garden soils, depressions in public open spaces, and open and covered pavements such as car parks, but designed in a staged fashion, so that each storage comes into operation when the preceding one is full.	"

Use tail water compensation to control discharge when the bed of the water storage facility lies below the water surface in the receiving drain.	"
Use pump discharge regulation for controlling pumping from basement tanks in buildings	"

4.2.6 TRANSPORT

Objective	Source
Include enough space for secure bicycle parking	GBCA PB
Provide facilities that encourage the use of bicycles.	GBCA PB
Facilitate the use of mass transport (public transport)	GBCA PB
Limit the facilities provided to vehicle users (disabled excepted)	GBCA PB
Include electric vehicle charging points	

4.2.7 INDOOR ENVIRONMENT QUALITY

Objective	Source
Buildings will be designed to be comfortable, utilising natural lighting and ventilation. Building interiors will be designed to maximise indoor environmental quality, which is more healthy and productive for occupants (SC ESB).	SC ESB
Carbon dioxide monitoring and control must be part of air conditions systems to ensure fresh air is continually delivered to the building.	MEI
Displacement ventilation – low level air delivery and high level air exhaust in the plenary hall and foyer areas provide will provide effective air flow with high indoor are quality at low energy consumption.	MEI
Enhanced indoor air quality will be achieved through using materials that are low in Volatile Organic Compounds (VOCs) and low emission building materials.	MEI
provide control over airflow and direction (see Energy)	AG ESD DG
Radiant slab heating and cooling in the foyer (heated or cooled using pipes carrying water) will provide a more comfortable internal environment with good thermal comfort levels.	MEI
Provide task lighting (see Energy)	AG ESD DG
optimise the amount of natural light entering the building interior while minimising glare, and ensuring views to the outside	AG ESD DG
use holistic measures to achieve thermal comfort, including radiant temperature, symmetry, internal air temperature ranges related to external ambient conditions, air movement, activity levels and occupant clothing. Carry out thermal modelling to design for appropriate comfort levels.	AG ESD DG
Meet the International Standard for thermal comfort ISO 7730.	AG ESD DG
Ensure that asbestos and other mineral fibres are eliminated from the occupied space.	AG ESD DG
Minimise materials that emit Volatile Organic Compounds (VOC) including formaldehyde emissions.	AG ESD DG
Use water based paints , glues and caulking	AG ESD DG
Ensure combustion plants are maintained to minimise pollution and greenhouse gas emissions.	AG ESD DG
Ensure cooling plan is maintained to eliminate water borne atmospheric pathogens and that the plant refrigerant has zero Ozone Depleting Potential (ODP) and a Global Warming Potential (GWP) of below 10.	AG ESD DG
Provide occupants with a visual connection to the external environment.	AG ESD DG

4.2.8 MATERIALS

Objective	Source
A whole-of-life cycle approach is required to select materials from renewable, recycled, local and ethical sources. Materials will be non-polluting and no-toxic, low impact and durable, with minimal embodied energy and water. Wise selection of materials reduces the ecological footprint of the building.	SC ESB
Environmentally friendly, locally sourced materials from renewable sources are to be used wherever possible.	MEI, AG ESD DG, GBCA PB
PVC based materials will be substituted for more environmentally friendly materials where possible.	MEI

Use Life Cycle Analysis (LCA) to compare materials holistically in order to choose materials that have a minimal impact.	AG ESD DG
Choose materials with low embodied energy and water and have been independently certified by a third party.	AG ESD DG
Use renewable, sustainably harvested natural materials, recycled or recyclable materials and consider biodiversity protection.	AG ESD DG
Include facilities that allow for the recycling of resources used within buildings to reduce waste going to landfill.	GBCA DG
Use high quality materials with long life spans and implement systems that prolong the life of products and materials	GBCA DG

Optimise orientation, fenestration and sun-shading requirements to minimise the impact of climate	GBCA PB
Use indigenous plants and/or plants that provide no threat to the local ecology and maintain or enhance biodiversity on site	GBCA PB
Protect significant environmental elements during construction and operation	GBCA PB
Minimise the disturbance to offsite areas	GBCA PB
Where possible, vegetation plantings should be contiguous, to provide for safe movement for urban fauna	

An Energy Management Plan is required.	QLD SEEP
A NABERS rating assessment will be carried out every 3 years.	
Monitor the overall carbon footprint of the building.	QLD CRS
COMMISSIONING STAGE	AG ESD DG
1. Ensure that the construction documentation includes requirements for pre-commissioning, commissioning and quality processes	AG ESD DG
2. Ensure that knowledge transfer is facilitated by documenting the design intent and outcomes, and communicating these with the design and construction teams and the client	AG ESD DG
3. Ensure that a uses manual is written – for owner/building manager, permanent staff and event organisers	AG ESD DG
4. Plan for a 12 month commissioning period to ensure that there is time for fine-tuning and assessment of performance over the differing seasons	AG ESD DG
5. Plan for the appointment of an independent commissioning agent to support the contractor commissioning process and to audit the process and outcomes.	AG ESD DG

4.2.9 LAND USE AND ECOLOGY

Objective	Source
Available land will be used effectively and ecological values around buildings will be protected. The natural ecology of the site, such as vegetation communities, significant species, wetland areas and ecological corridors, are featured within the building development.	AG ESD DG
Choose native landscaping and promote biodiversity.	AG ESD DG
Remediate land if possible.	AG ESD DG
Utilise construction practices that conserve the ecological integrity of topsoil on site	GBCA PB
Utilise construction processes which maintain or increase the ecological value of the site	GBCA PB

4.2.10 MANAGEMENT

Objective	Source
The building design will include management and monitoring systems to inform and encourage occupants to operate in a sustainable manner. Fostering ecologically sustainable behaviour contributes to resource efficiency and healthier lifestyles for occupants.	SC ESB
The building will be designed to cater for the needs of different occupants throughout the building life cycle. There is a growing importance to cater for a wide variety of occupants and activities and to minimise retrofitting and relocation costs.	SC ESB
A Green Star accredited professional will be consulted during all stages of the project.	GBCA

OPERATION	
The project must satisfy the needs of targeted stakeholders in order for the development to be sufficiently used now and in the future	AG ESD DG
Ensure that the development fits into the context and surrounding urban fabric	AG ESD DG
Ensure that the development adheres to universal access design requirements	AG ESD DG
Assist clients in creating sustainable events with low carbon footprints and provide the opportunity for carbon neutral events	
Encourage the reuse of event materials	
Include Building Management Systems (BMS) that integrate with SCRC systems for monitoring energy and water.	
Provide a manual on the sustainable operational management of the building	
EDUCATION	
Education: Provide an LCD screen in the foyer displaying energy and water consumption and solar power generation.	
Include recycling signs at bin stations.	

4.2.11 INTEGRATION

Objective	Source
Buildings and places will be designed to have a positive relationship with adjoining public spaces and properties. Smart neighbourhood design improves accessibility, protects public space, and provides opportunities for local initiatives such as community gardens. The benefits are protection of public open space, utilisation of local resources and minimisation of noise and environmental pollutants.	SC ESB

Sources:
AG ESD DG - Australian Government ESD Design Guide
SC ESB - Sunshine Coast Principles for Ecologically Sustainable Buildings
QLD SEEP - Queensland Government Strategic Energy Efficiency Policy
QLD CRS - Queensland Government Carbon Reduction Strategy
MEI - Melbourne Convention Centre Environmental Initiatives
GBCA PB - Green Building Council Australia - Public Building

4.3 KEY ESD OPPORTUNITIES

This section outlines significant opportunities within the scope of the project that can be utilised to achieve the best possible ESD outcomes.

4.3.1 ENERGY

The large roof area proposed in this development (approximately 19 000m2), typical to any entertainment, convention and exhibition centre development, can be a major asset when designing to achieve minimal non-renewable energy usage. Due to the climatic conditions of Australia and specifically the Sunshine Coast, solar energy is a viable source of renewable energy. Including solar panels in the design of the development would help to achieve the following objectives from the Energy section of this Green Plan:

- Minimise greenhouse gas emissions associated with operational energy consumption
- Reduce reliance on non-renewable energy sources.

4.3.2 TRANSPORT

The project is located in close proximity to major bus lines and a future public transport hub. This creates opportunities to encourage visitors to access the site using public transport. This in turn reduces private vehicular usage and subsequently reducing green house gas emissions. The design of the building would benefit from providing end of trip facilities for cyclists, prioritising pedestrian access to the site and reducing the amount of vehicle facilities.

4.3.3 WATER

The large roof area proposed in this development (approximately 19 000m2), typical to any entertainment, convention and exhibition centre development, can be a major asset when considering the water consumption and water waste of the building during operation. A roof area of this size could provide a significant amount of water for secondary uses (i.e. toilets) or filtered to a potable state. This would address the following objectives from this Green Plan:

- The building design should minimise potable water consumption.
- Capture rain water where possible
- Implement a water recycling system

4.3.4 LAND USE AND ECOLOGY

Previously a golf course, this site also has a large number of established trees, dams and well-maintained grassed areas. This presents an opportunity to utilise the existing environmental characteristics of the site to achieve the following objectives:

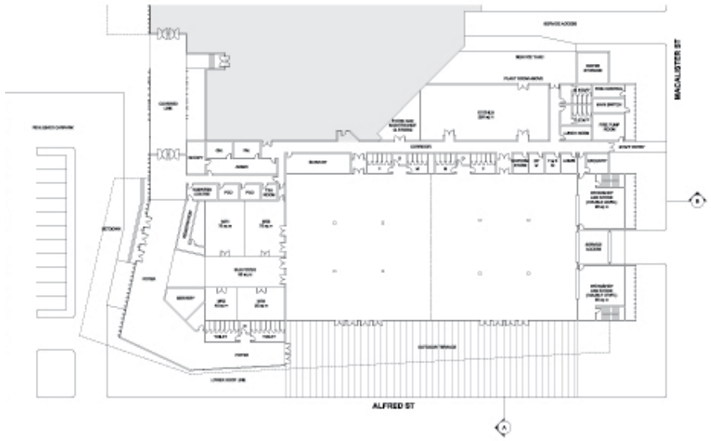
- Protect significant environmental elements during construction and operation
- Provide occupants with a visual connection to the external environment.

The project site is intersected by a creek that flows directly into the ocean to the east of the site. This adds to the visual amenity of the site, however, also presents a challenge to reduce pollution in run-off from the site that will enter the waterway and potentially damage elements of this ecosystem.

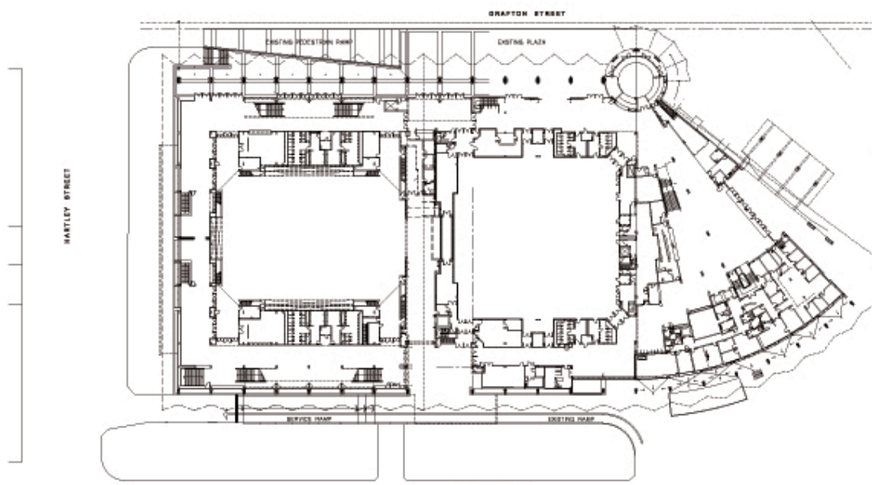
The large roof area also provides the opportunity to create a 'green roof' that will assist in reducing the project's carbon footprint, provide insulation and temperature regulation, filter rain water and prolong the life of building materials used for the roof structure. Incorporating a green roof into the building design would assist in meeting the following objectives:

- Encourage the balancing of excessive solar heat gain and collect natural lighting within the building
- Use high quality materials with long life spans and implement systems that prolong the life of products and materials
- Minimise peak stormwater flows and protect receiving waters from pollutants.

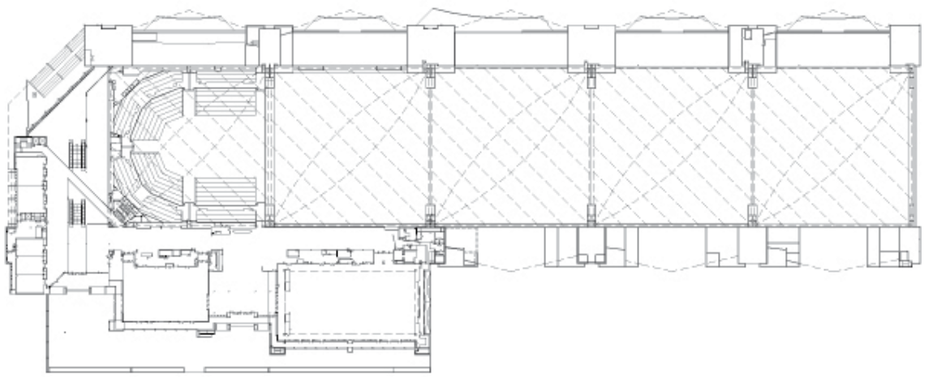
COMPARISONS



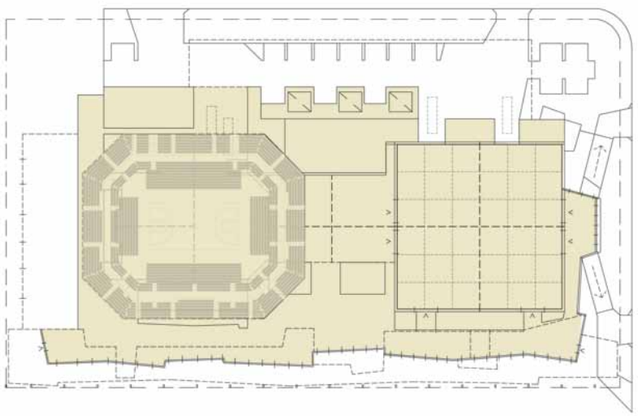
MACKAY ENTERTAINMENT + CONVENTION CENTRE



CAIRNS ENTERTAINMENT + CONVENTION CENTRE

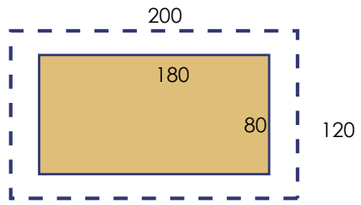


BRISBANE ENTERTAINMENT + CONVENTION CENTRE



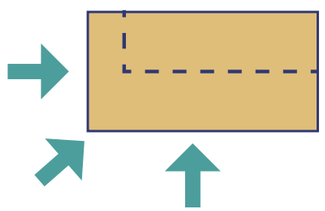
SUNSHINE COAST ENTERTAINMENT, CONVENTION + EXHIBITION CENTRE

SCALE

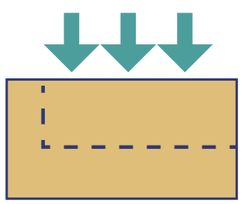


EXPANSION

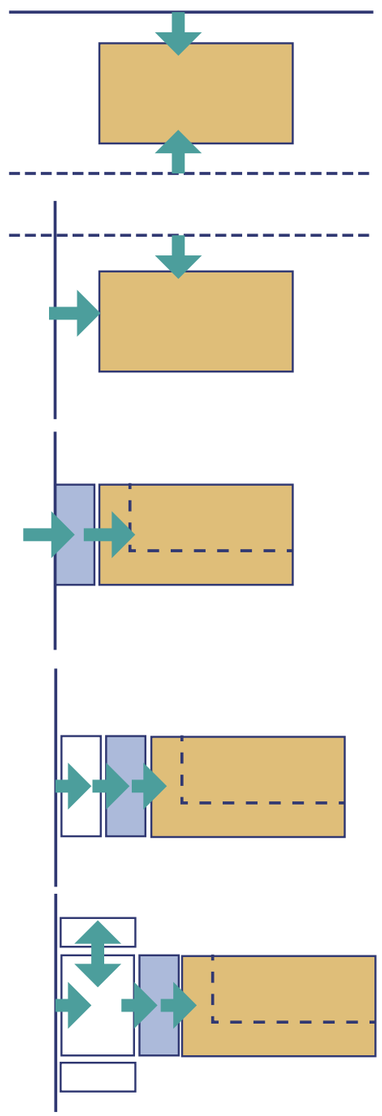
ACCESS



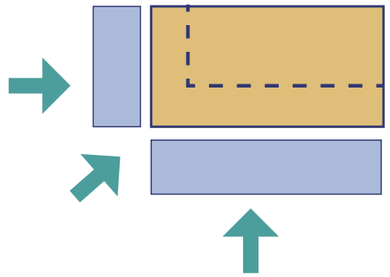
SERVICING



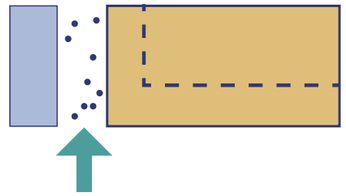
ADDRESS



ACTIVATION

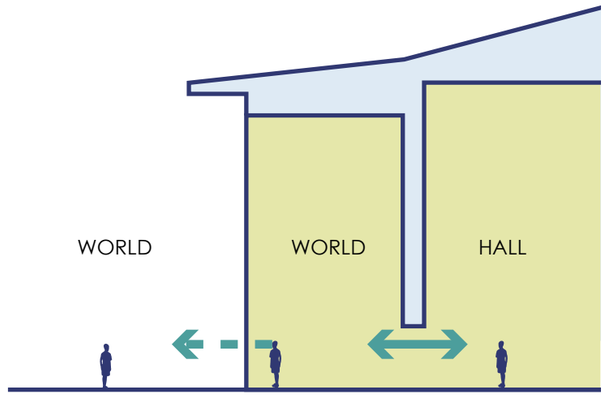


Activation By Addition

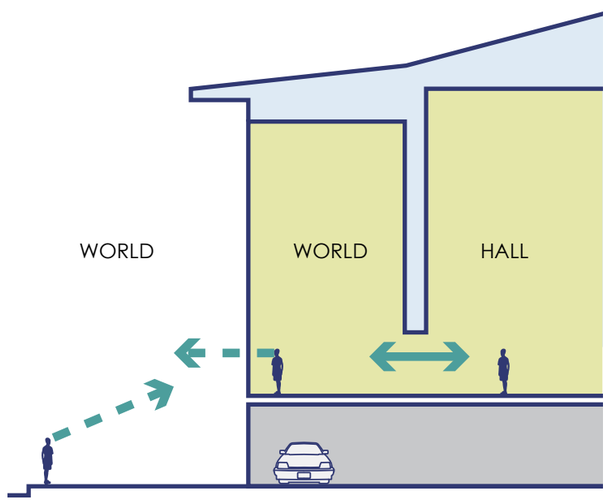


Activation By Adjacency

SECTIONAL DIAGRAM



Basic Condition



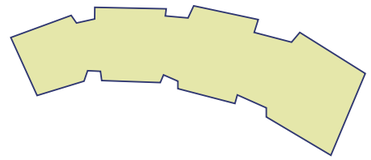
Other Condition

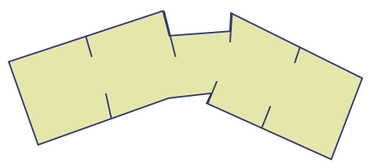
ROOF + EXPRESSION

Section

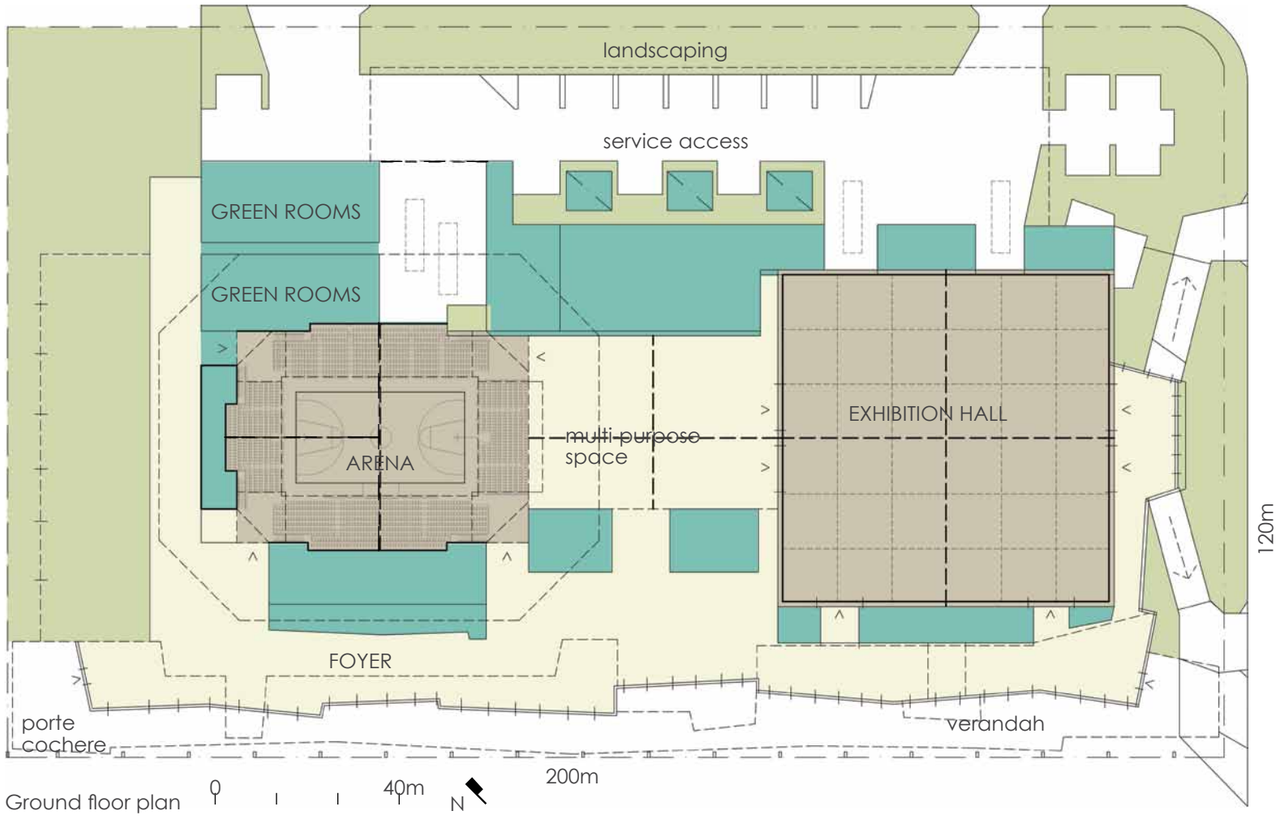
Expressive Roof

Green Roof

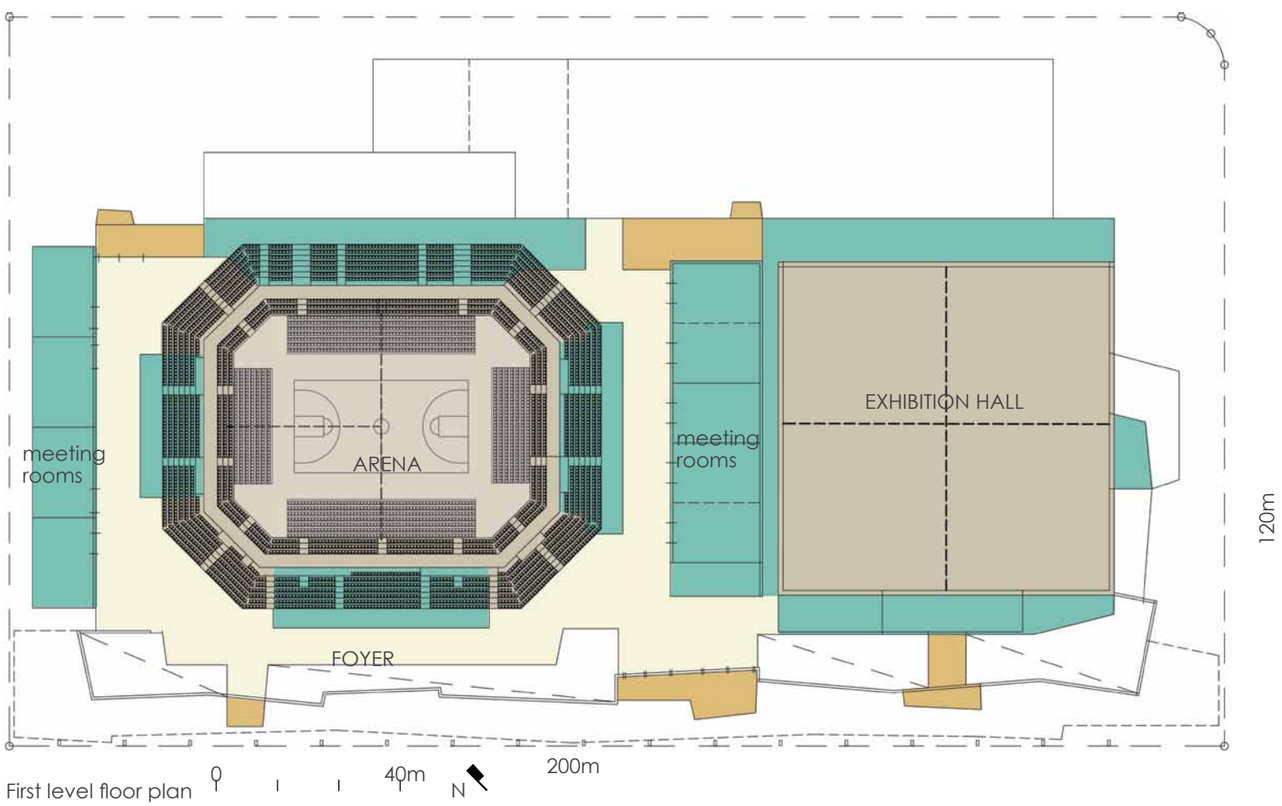




7.0 PLANS + SECTIONS



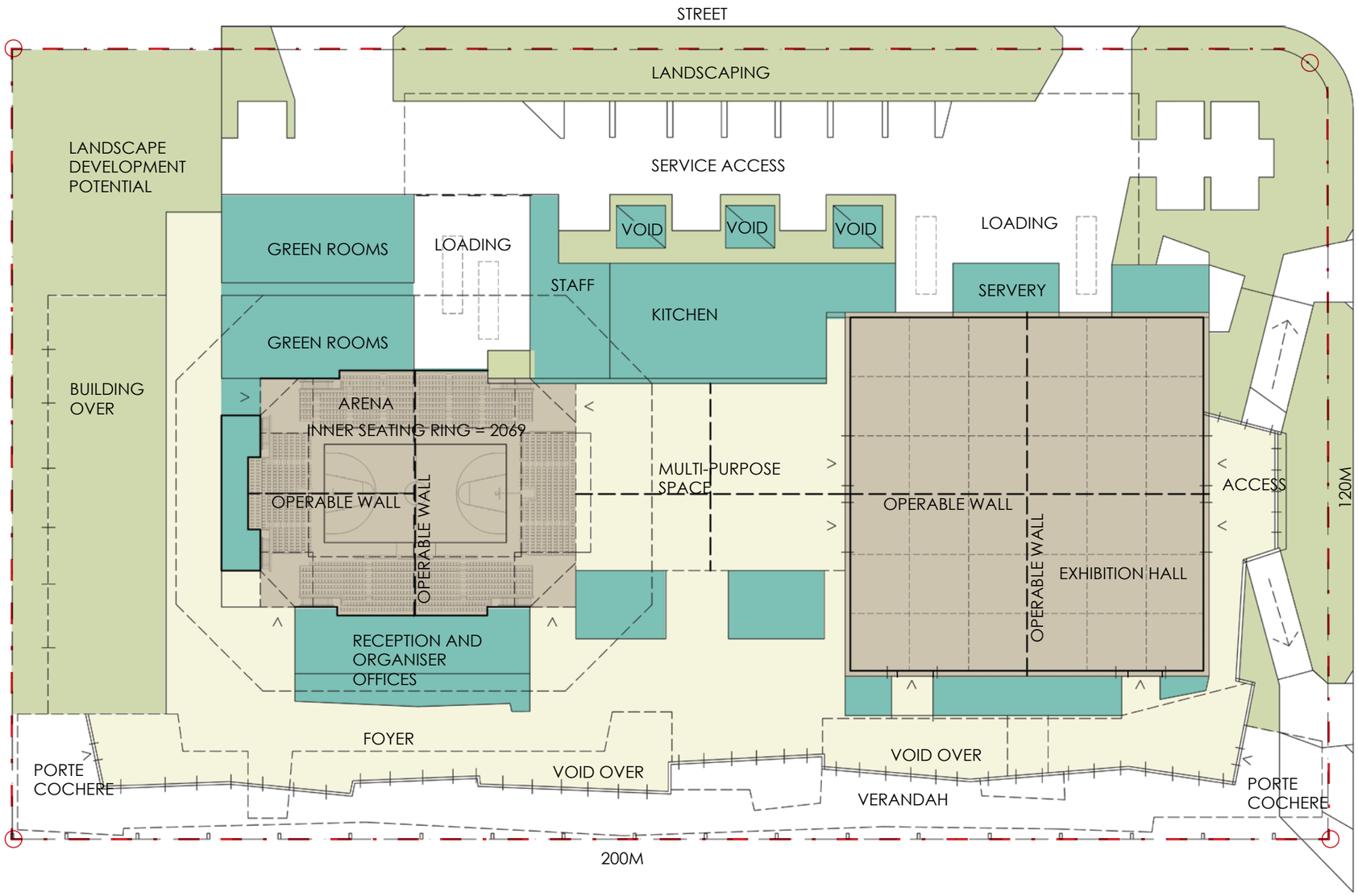
Ground floor plan



First level floor plan

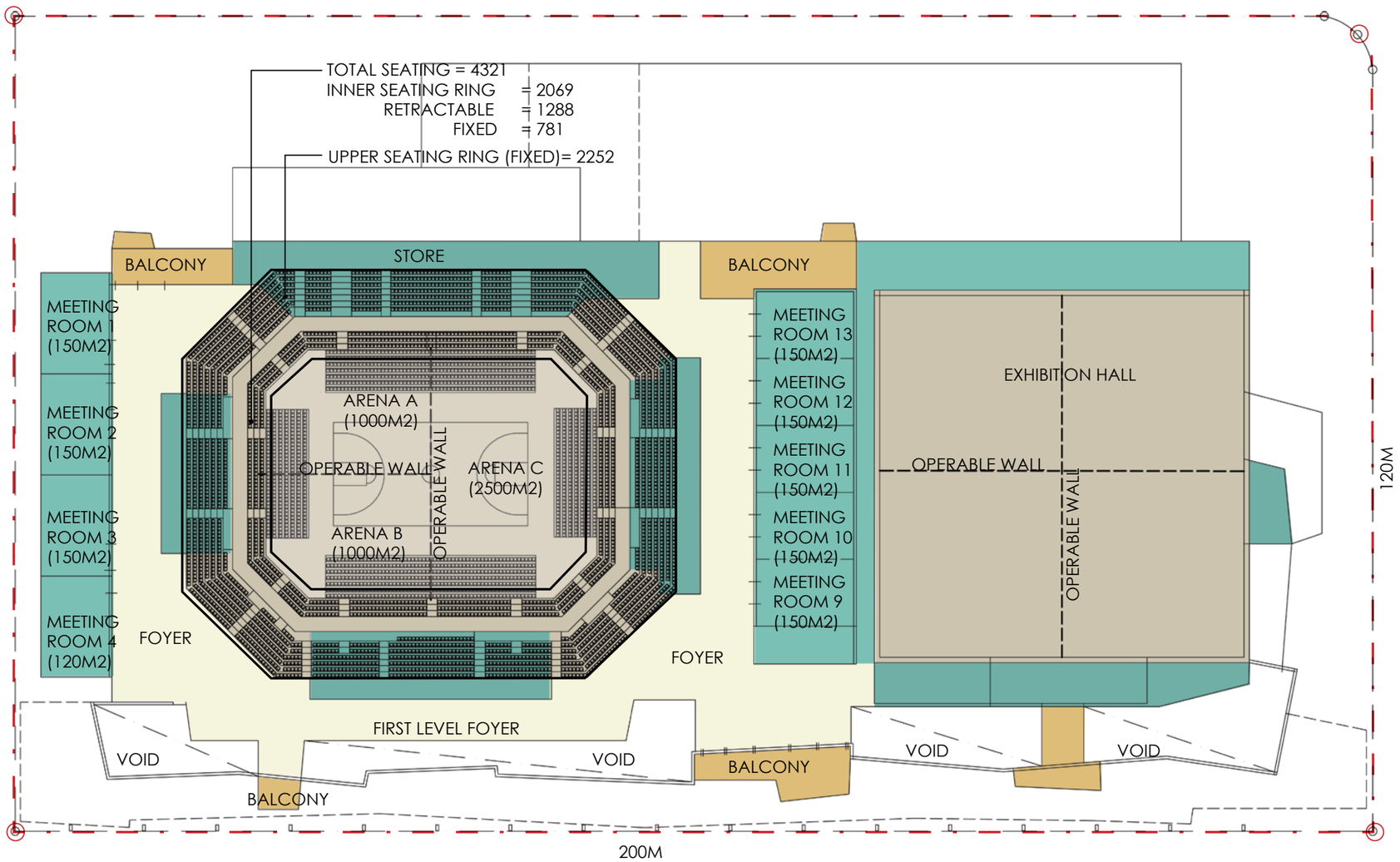
INDICATIVE CONCEPT DRAWING - GROUND LEVEL FLOOR PLAN

1:750 @A3 0 5 10 N



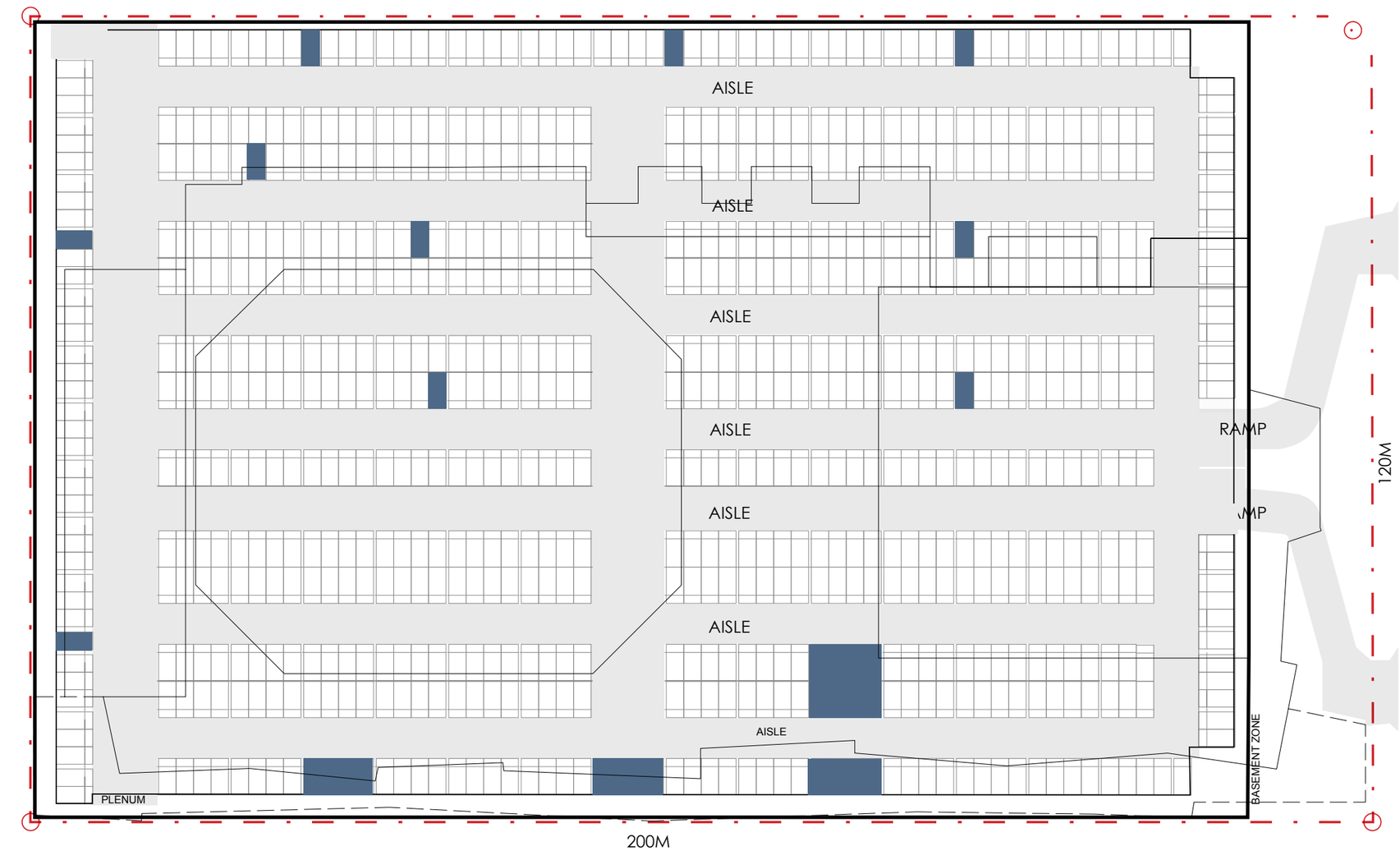
INDICATIVE CONCEPT DRAWING - FIRST LEVEL FLOOR PLAN

1:750 @A3 0 5 10 N

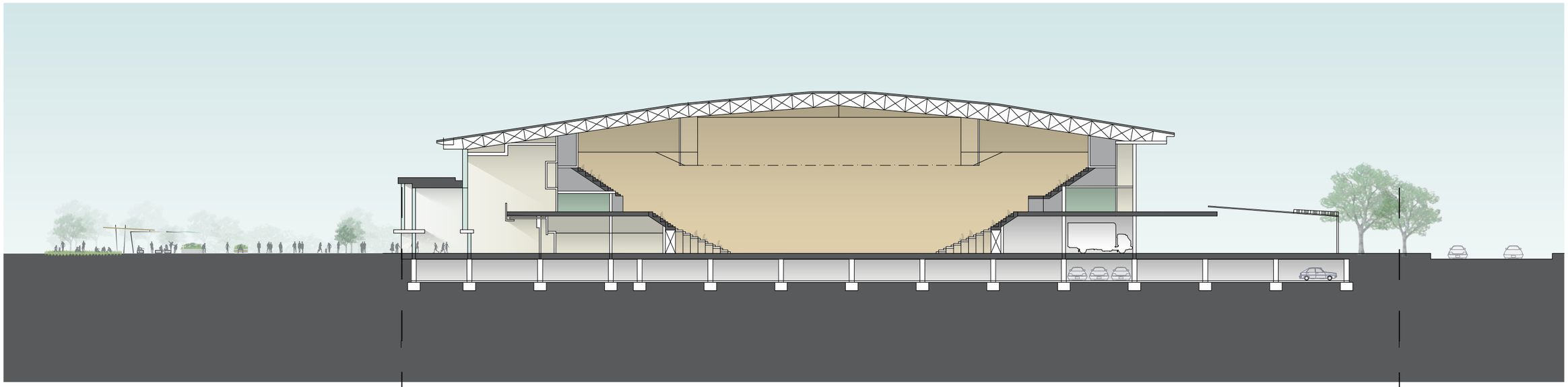


INDICATIVE CONCEPT DRAWING - BASEMENT CARPARK

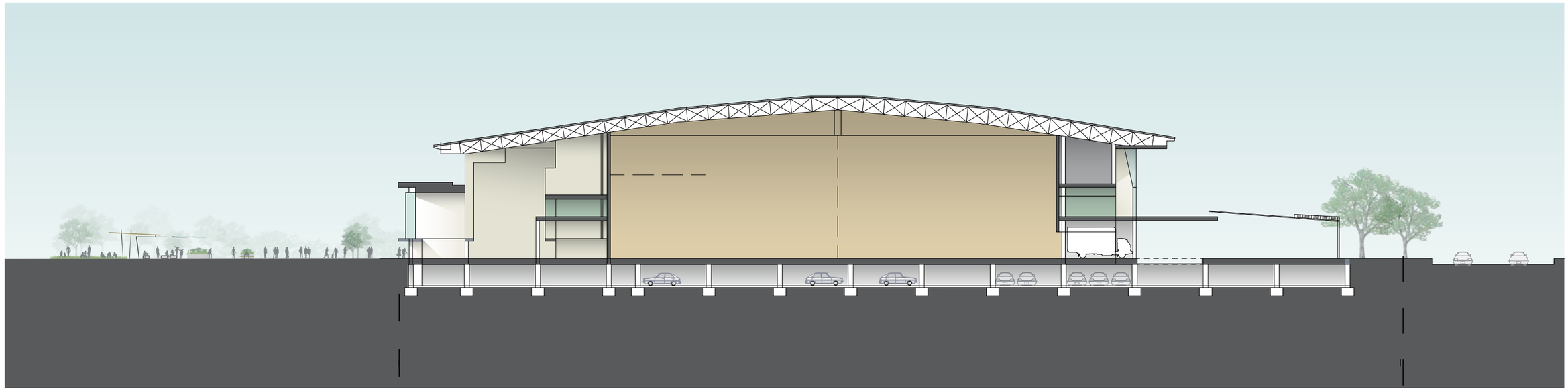
1:750 @A3 0 5 10 N



INDICATIVE SECTIONS - ENTERTAINMENT, CONVENTION + EXHIBITION CENTRE BUILDING

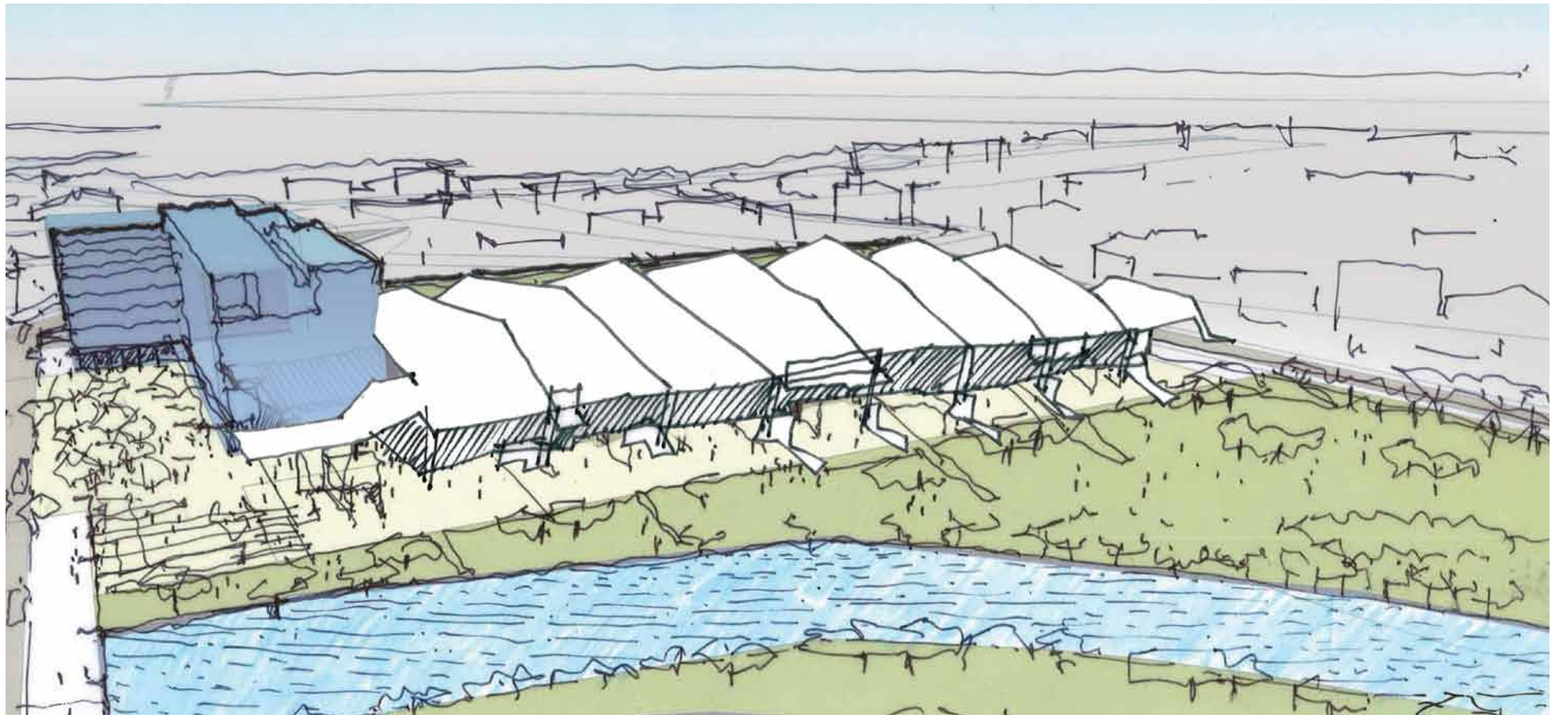


Cross Section Through Auditorium

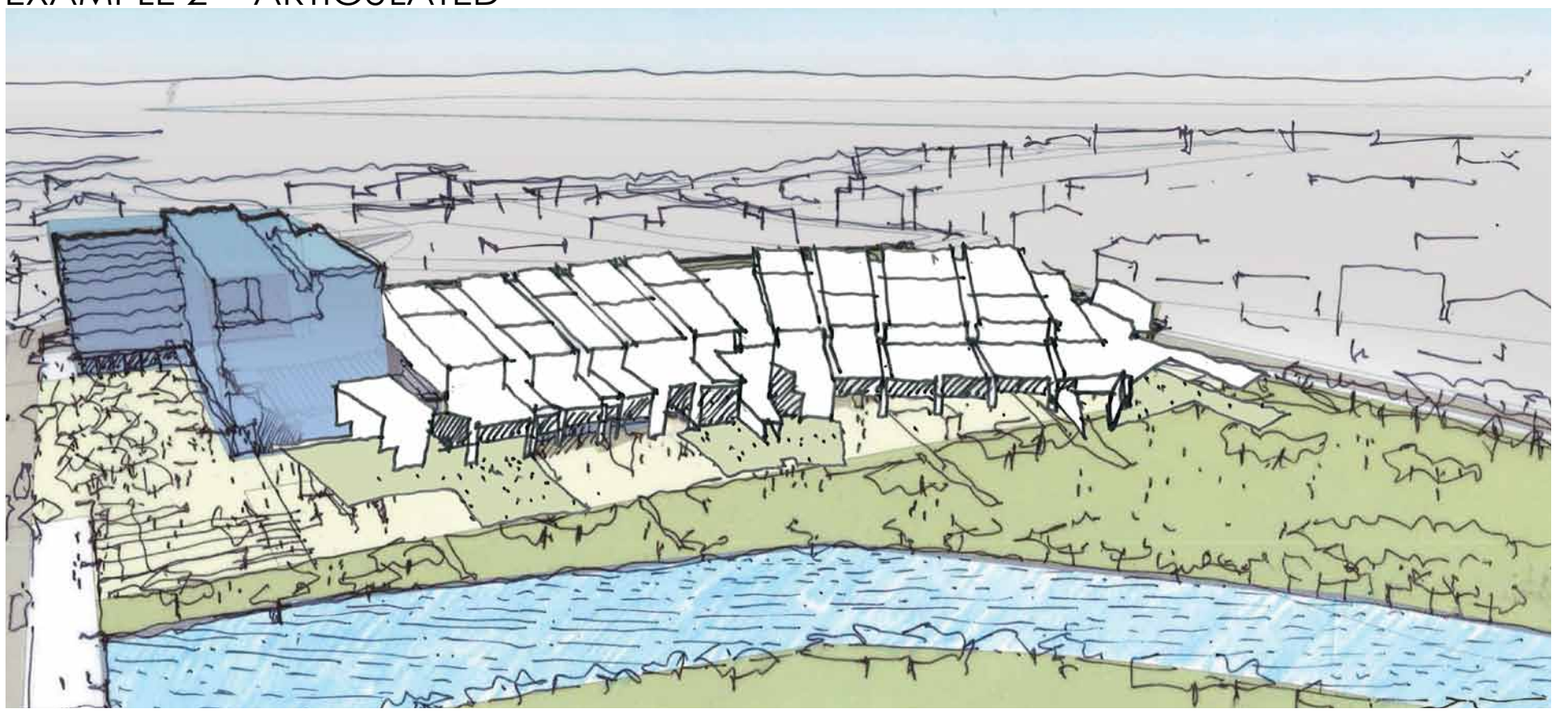


Cross Section Through Exhibition Halls

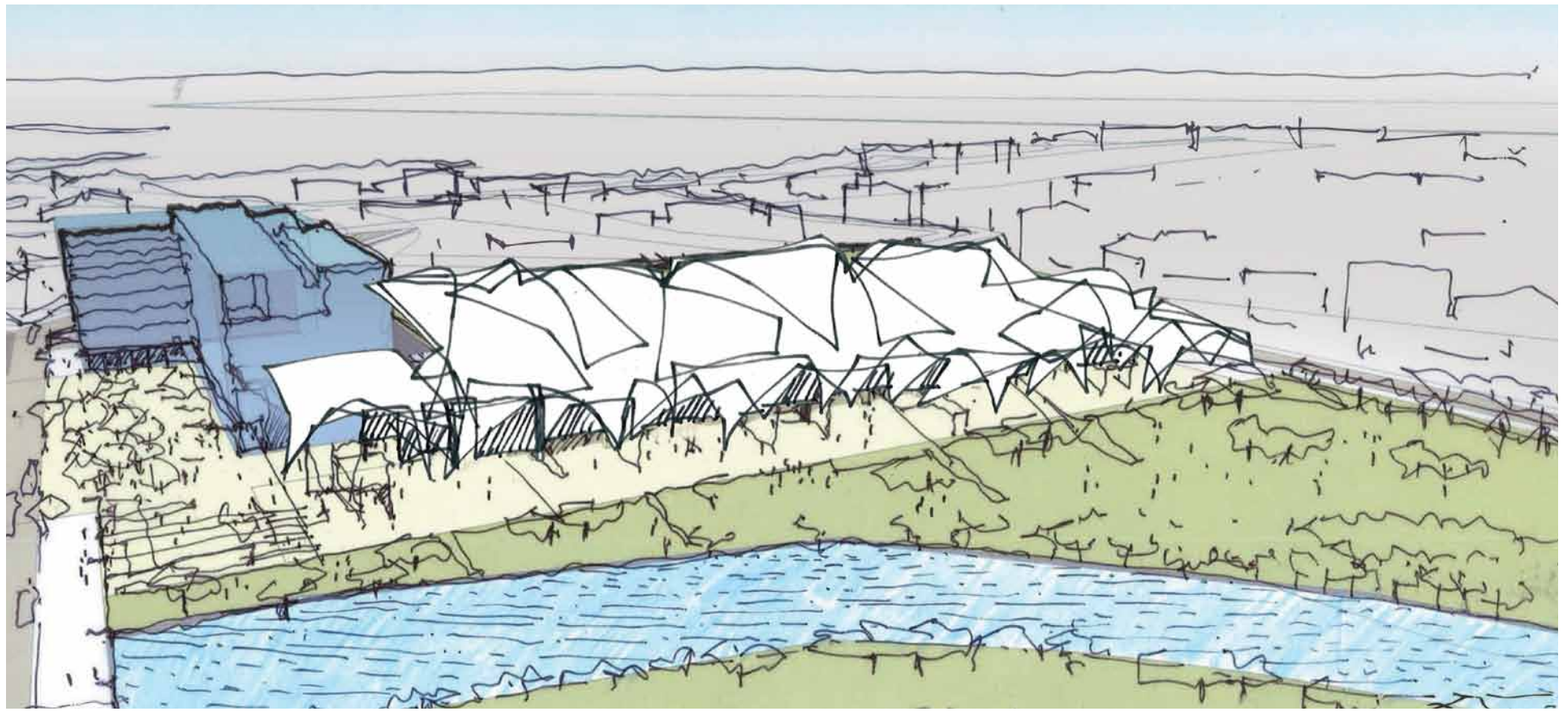
EXAMPLE 1 - SCULPTURAL ROOF



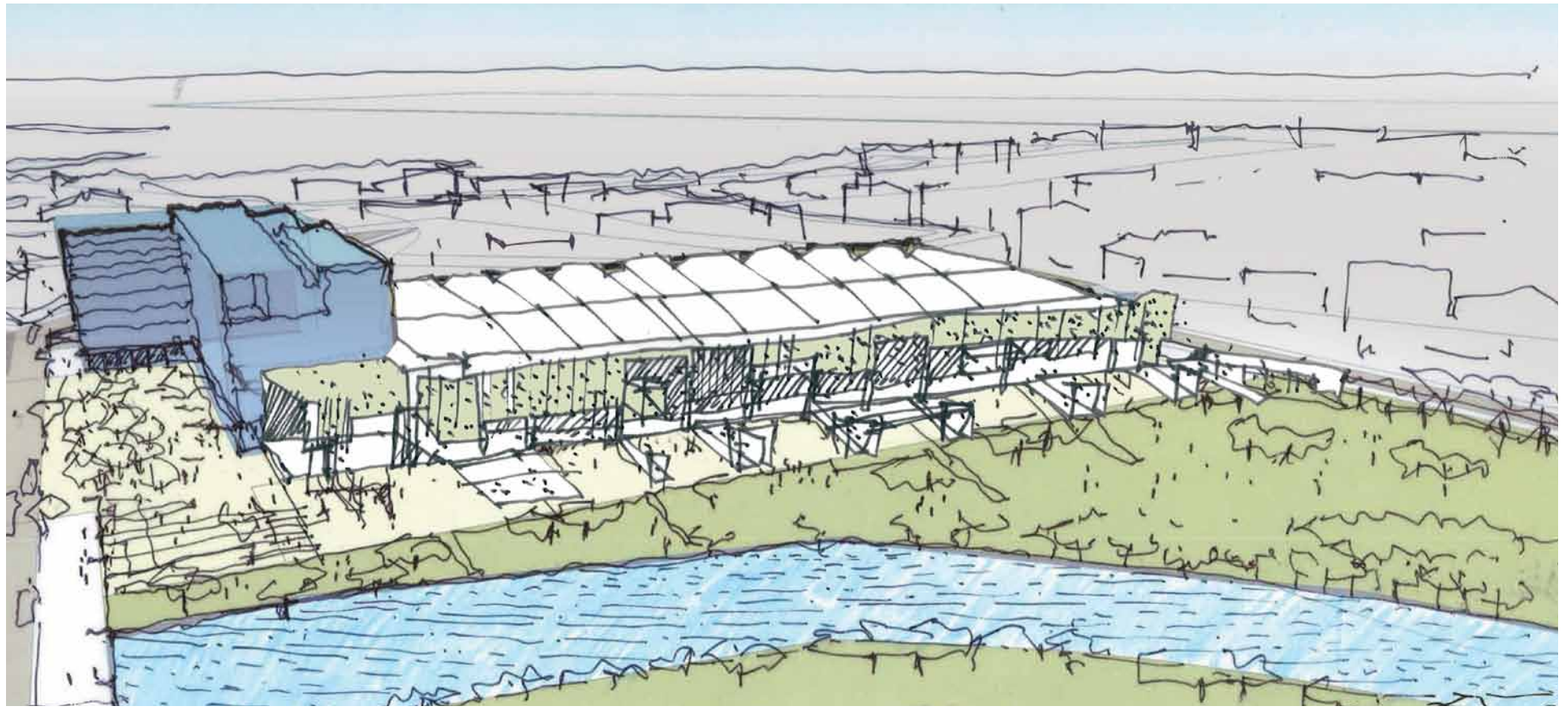
EXAMPLE 2 - ARTICULATED



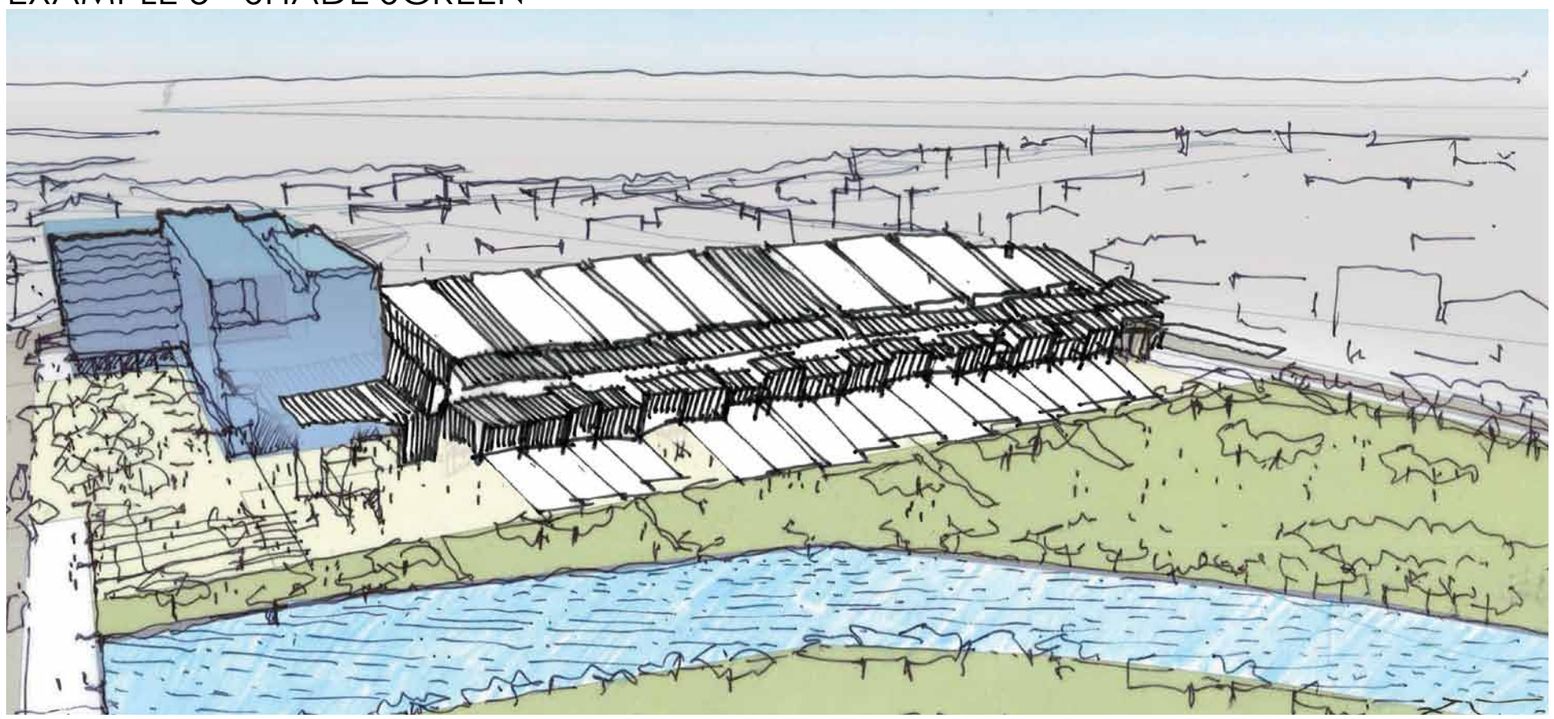
EXAMPLE 3 - CRYSTALLINE



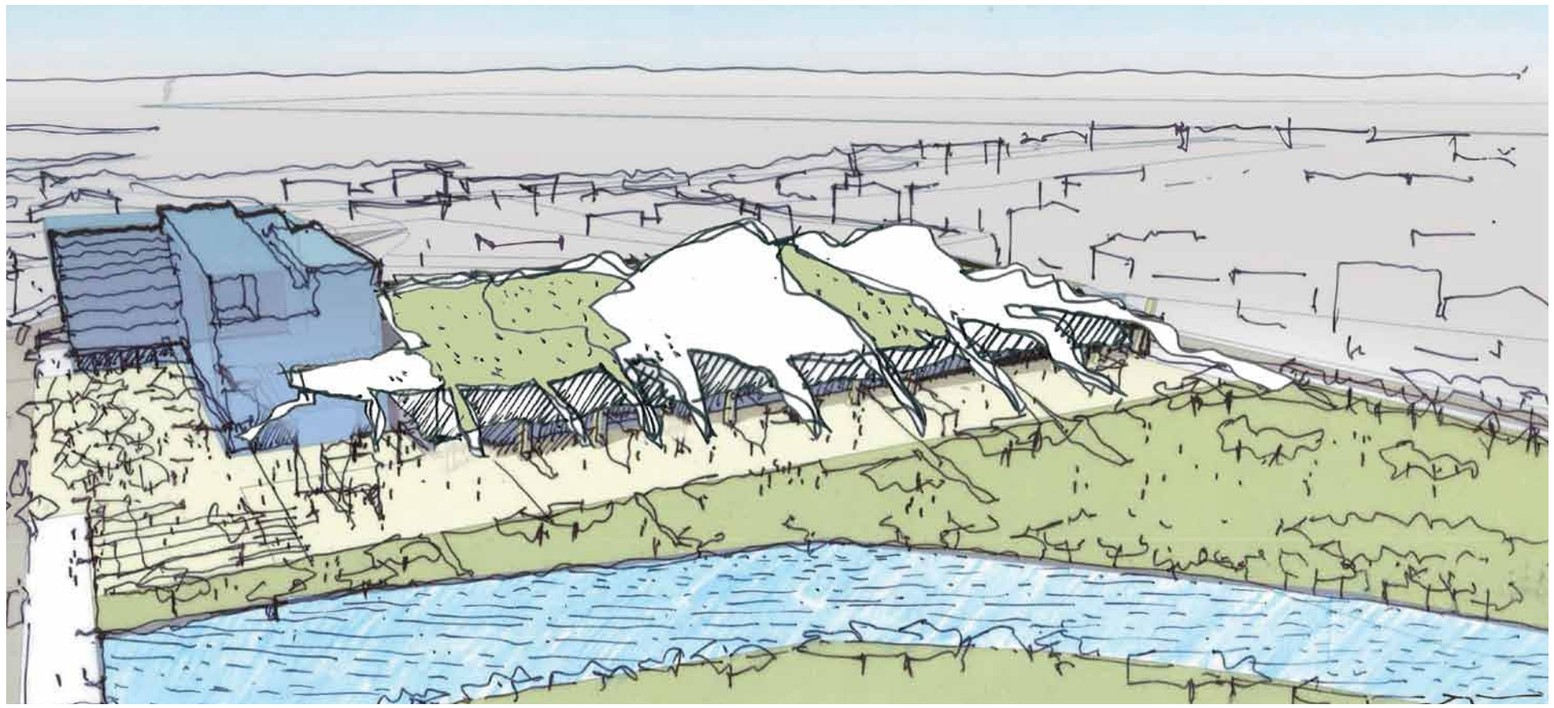
EXAMPLE 4 - GREEN SCREEN



EXAMPLE 5 - SHADE SCREEN

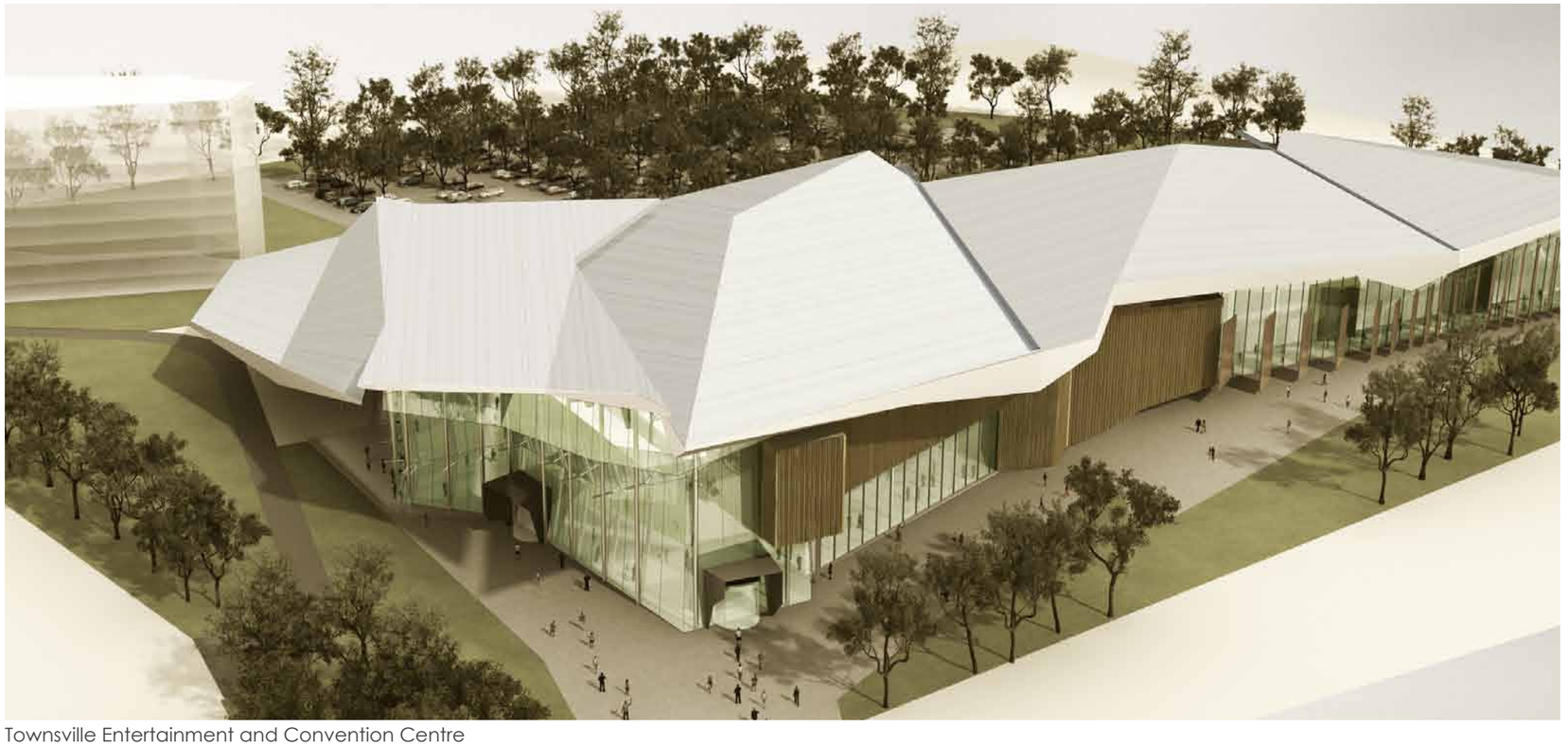


EXAMPLE 6 - ORGANIC FORM



9.0 EXEMPLAR PROJECTS

A 3D generation of the potential design of the Townsville Entertainment and Convention Centre. An example of strong interaction between the internal and external space.



Townsville Entertainment and Convention Centre

The Kuala Lumpar Entertainment and Convention Centre is an example of how this type of facility can interact and engage with adjacent parkland and urban open space.

Kuala lumpar Entertainment and convention centre